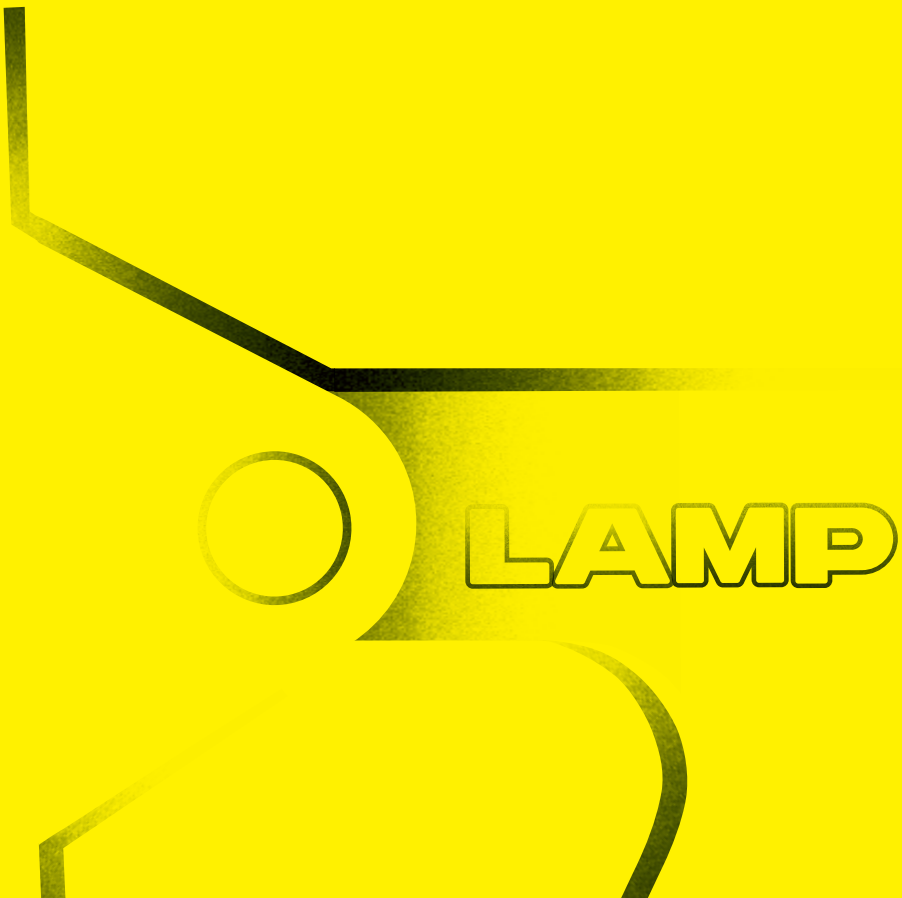
SUGATSUNE

Industrial Component Hardware



June 2022

No.400

INDEX

HINGES
LID SUPPORTS
CATCHES, LATCHES & FASTENERS
DRAWER SLIDES
HANDLES, PULLS & KNOBS
HOOKS & BRACKETS
MONITOR MOUNTS
CABINET DOOR HARDWARE & SHUTTER DOORS
LOCKS
CASTERS
LEVELLING GLIDES & BASE
MISCELLANEOUS

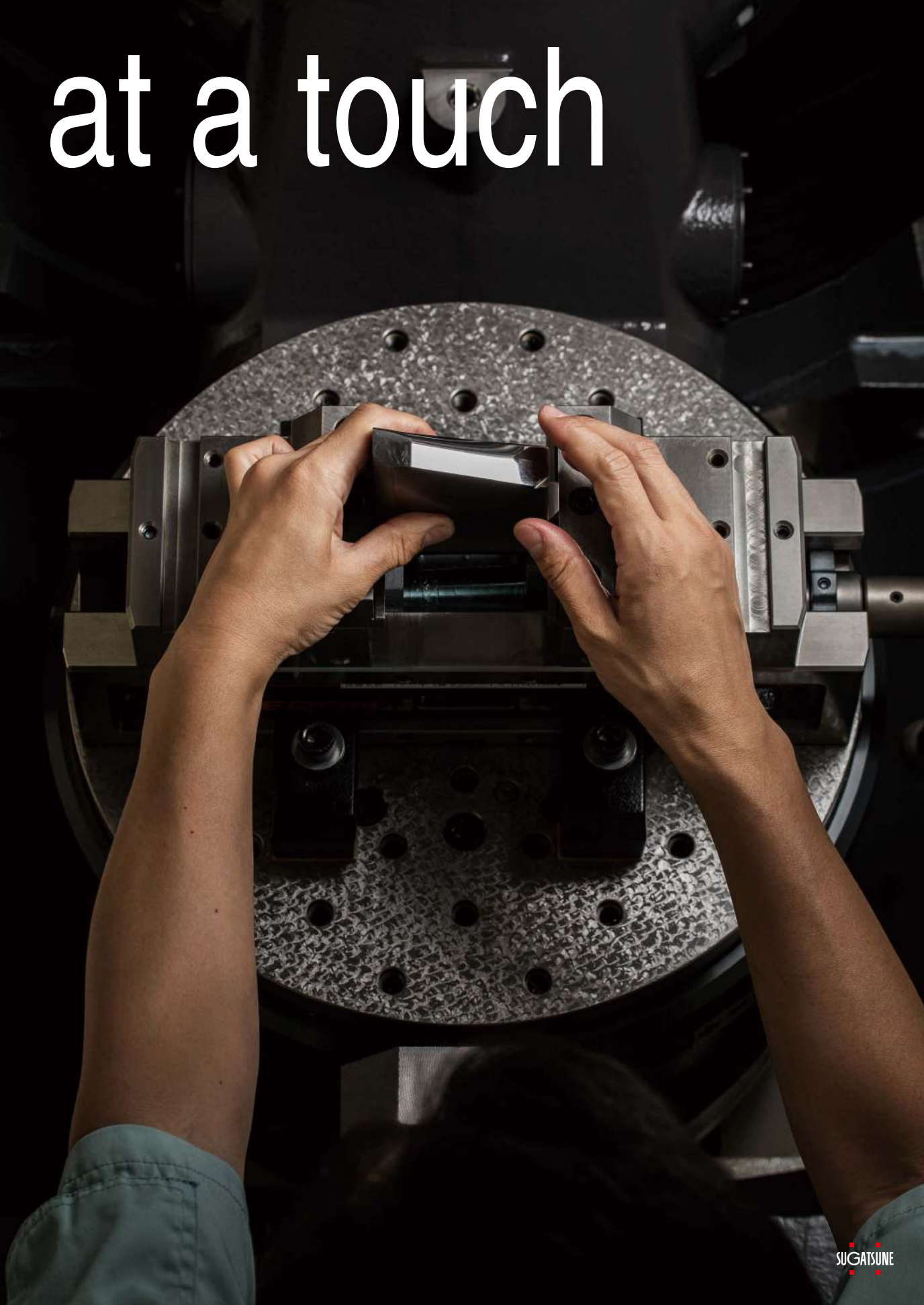
Motion Design Tec

Feel the quality

Function × Design × Reliable quality

We mean business when we make our customers' dreams come true. Since our founding, we have continually pursued new challenges with a constant production spirit.

at a touch



SUGATSUNE

Motion DesignTec®

What is Sugatsune's "Motion Design Tech"?

Motion = **New motion**

Design = **Developed**

Tech = **With technology**

Motion Design Tech is Sugatsune's unique product concept to provide specialist movement solutions for your flaps and doors.

The operability of doors or lids can be improved by choosing from the 5 types of motion suitable for work environment.
It can also improve the efficiency of work involving opening and closing movements, increasing the added value of the device and equipment.

So where should they be used separately?
We will introduce them below one by one.

Motion Design Tech Lab (Development laboratory)
Mr. ISHIGAYA, researcher

For smooth movement

Soft Motion

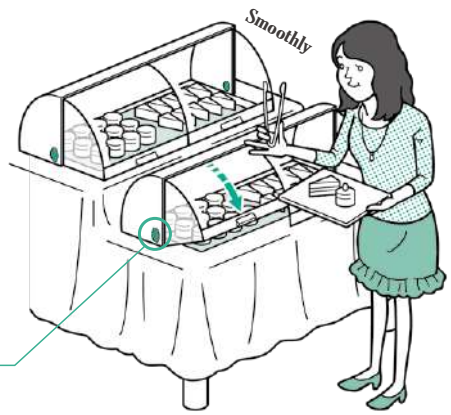
Reduces the opening/closing speed of doors, lids or drawers.

Video

Applicable Places

This is ideal for wall-storage or information terminals in hospitals.
Once used and the flap is lightly pushed up, it will slowly and naturally close.
This is a perfect solution for quiet environments.

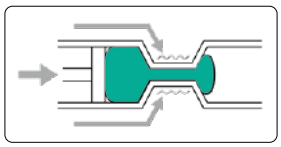
Self-close Stay
HDS-10S P.336



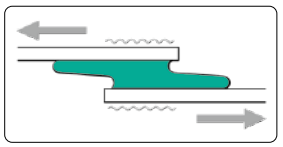
Disk Damper
UDD P.119

This is suitable for food display cases such as self-serve bakery cases and candy or sweet cases, etc.
If the flap is pushed down slightly, it will close naturally and slowly by itself.
(It isn't necessary to hold the flap until it closes completely)

Reduces speed by means of resistance



Orifice Structure
Resistance develops when a viscous medium flows from a thick diameter to a thin diameter.



Shear Structure
Resistance develops when moving the two plates with the viscous medium between.

Lapcon

"Lapcon" refers to Sugatsune's patented damper mechanism using left structures.

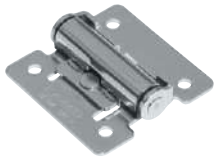
Hold in any position

Free Stop Motion

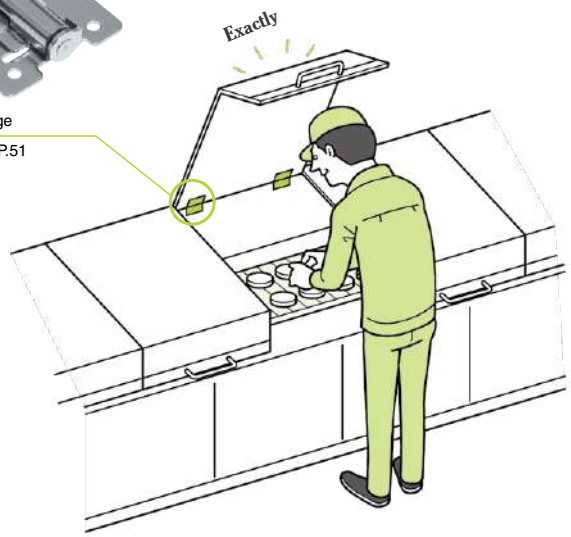
It can hold the door, lid or cover in any position during opening or closing.

Video

Applicable Places



Torque Hinge
HG-TS P.51

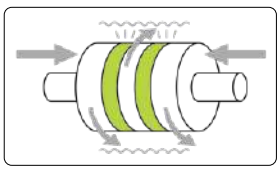


Ideal for top-opening covers in a production line, as it allows for the cover to be held open in any position. Because no stopper is necessary, speedy checks and maintenance is possible.
No stay is needed, clearing additional space inside the machine.
Users don't have to worry about slamming the lid closed, bringing additional safety and ensuring it remains damage-free.

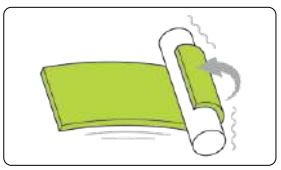
Suitable for displays of airplane seats. Enables a monitor to be adjusted to a level of adults or children's eyes.

Torque Hinge
HG-TB P.74

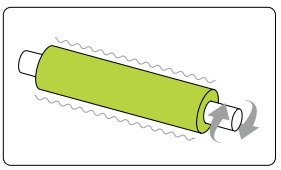
Stops by means of friction



Disk Structure
Friction occurs when rotating the movable disks with the fixed disk inserted between them.



Curl Structure
Friction occurs when rotating the shaft with the leaf spring twined on it.



Pipe structure
A shaft press-fitted into a plastic pipe is rotated.

Helps you open

Power Assist Motion

Assists in opening/closing heavy doors, lids or covers.

Video

Applicable Places

Lift Assist Hinge

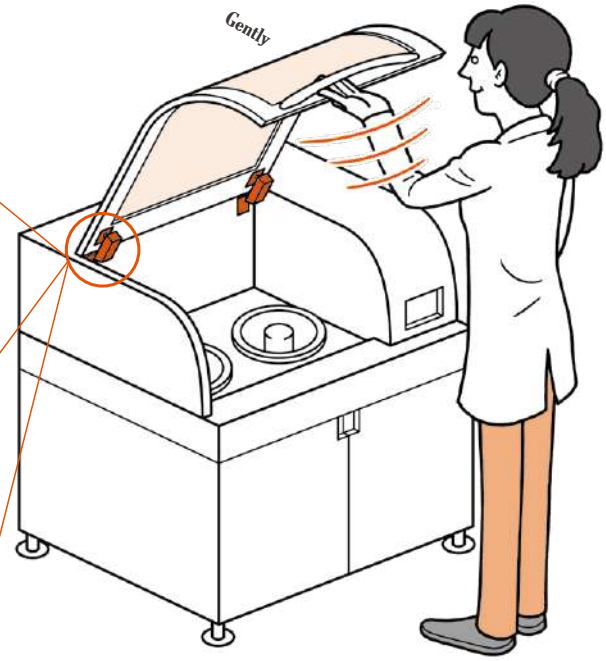
HG-PA Series P.122

Heavy Duty Spring Loaded Lid Stay

S-AT02W P.306

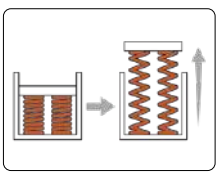
Stainless Steel Lift Assist Hinge

HG-JH210 P.133



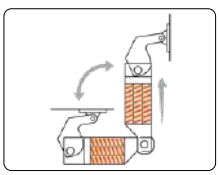
Ideal for a large sized analysing device and enables a heavy flap to be opened using little power.
Anyone can easily handle it with one hand - neither the opening nor closing operation will burden users.

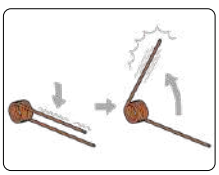
Lifts by means of reaction force



Compression Spring

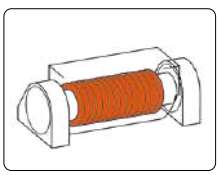
Reaction force is generated when the shrunken spring returns to its original shape.





Torsion Spring

Reaction force is generated when the curled spring returns to its original shape.



Easy and fine operation can be achieved by using a spring suitable for the application.

Snap and stop

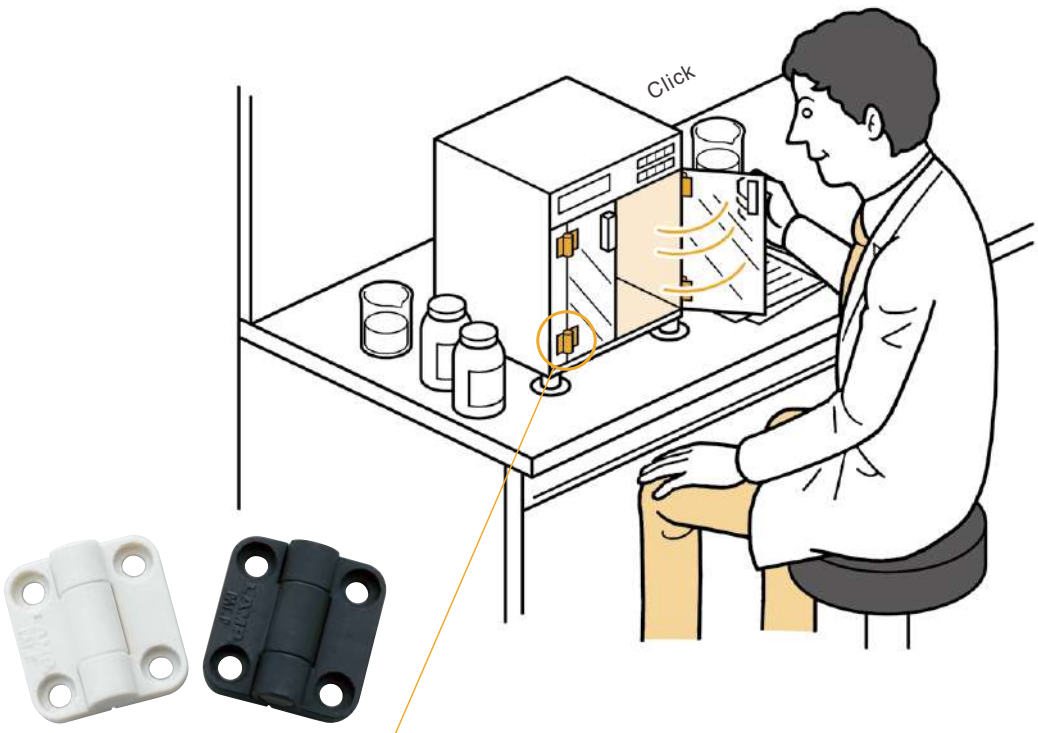
Click Motion

Temporarily holds door, lid or cover during opening/closing at a certain angle with a unique feel.

Video

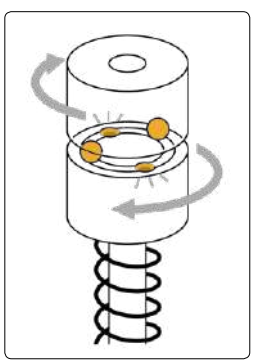
Applicable Places

Ideal for a measuring device in a laboratory and enables a flap to be held at a certain angle. It also prevents a flap moving freely so users don't have to worry about it knocking down an instrument.



Detent Hinge

HG-MPS2 P.138



Temporarily holds with detent mechanism

When rotating two grooved parts with balls between them, the moving balls will fall into the grooves, realising temporary holding.

New openings

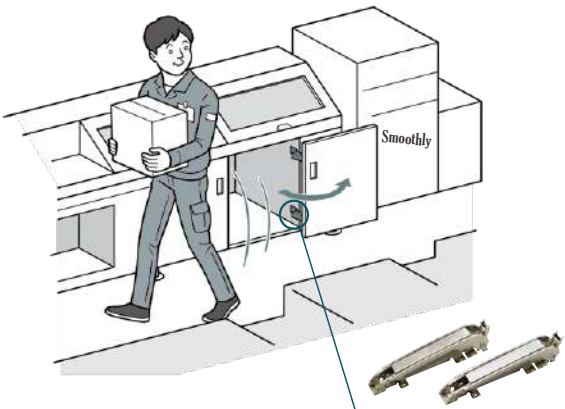
Unique Motion

Video

Expand variations of opening/closing locus.

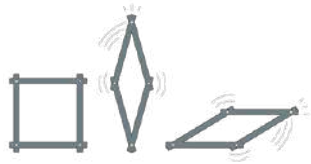
Applicable Places

Ideal for large-size machines such as in food processing or printing.
It enables a flap to move parallel to a body and decreases the space needed to open the door.
By using this mechanism, an open door will not obstruct narrow corridors in a factory where several machines are operating. The wide opening makes it easier to take something in and out.



LIN-X450 P.804

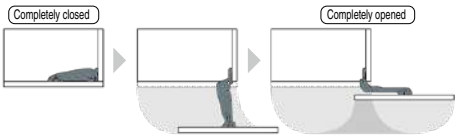
Moves by using link mechanism



Combining multiple shafts and arms creates more versatile locus than moving with one shaft.

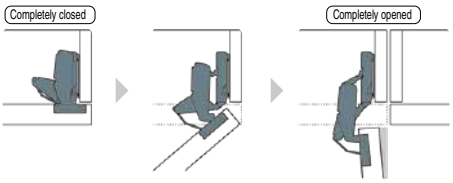
Example 1 Locus of MonoFlat LIN-X hinge

Door projection is less than that of common swing doors.



Example 2 Locus of concealed hinge

Even for overlay doors, the door hinge side moves inward and will not hit the door next.



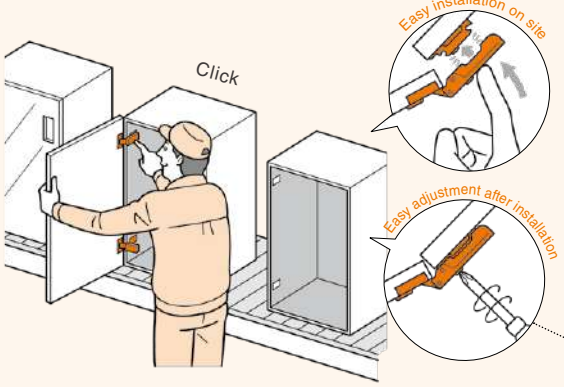
One major advantage of "Motion Design Tech" supporting 5 types of motion

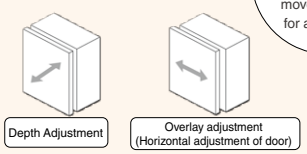
Easy Installation & Adjustment Function

Proper installation is very important for the functioning of the industrial components.
Since "Motion Design Tech" is a technology of motion, to further improve that "motion", installation support function is incorporated in various products.
Easy installation and possible door adjustment after installation realises a comfortable fine opening and closing operation.

Example of applicable products

CONCEALED HINGE FOR SHEET METAL **HT160THV2** P.222





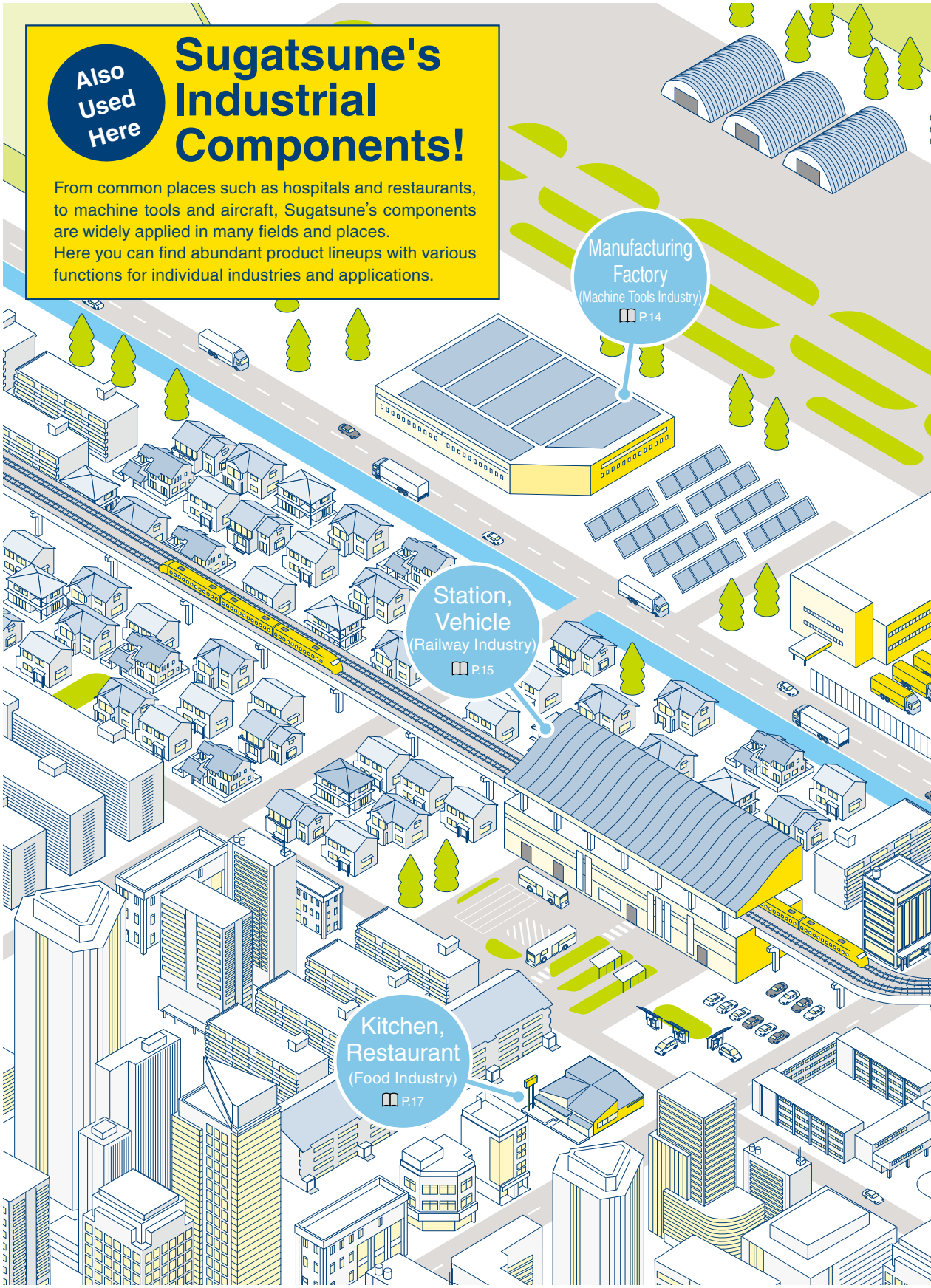
Adjustable in various directions.

High durability is also proprietary to Sugatsune. Comfortable movement lasts for a long time.

Also Used Here

Sugatsune's Industrial Components!

From common places such as hospitals and restaurants, to machine tools and aircraft, Sugatsune's components are widely applied in many fields and places.
Here you can find abundant product lineups with various functions for individual industries and applications.



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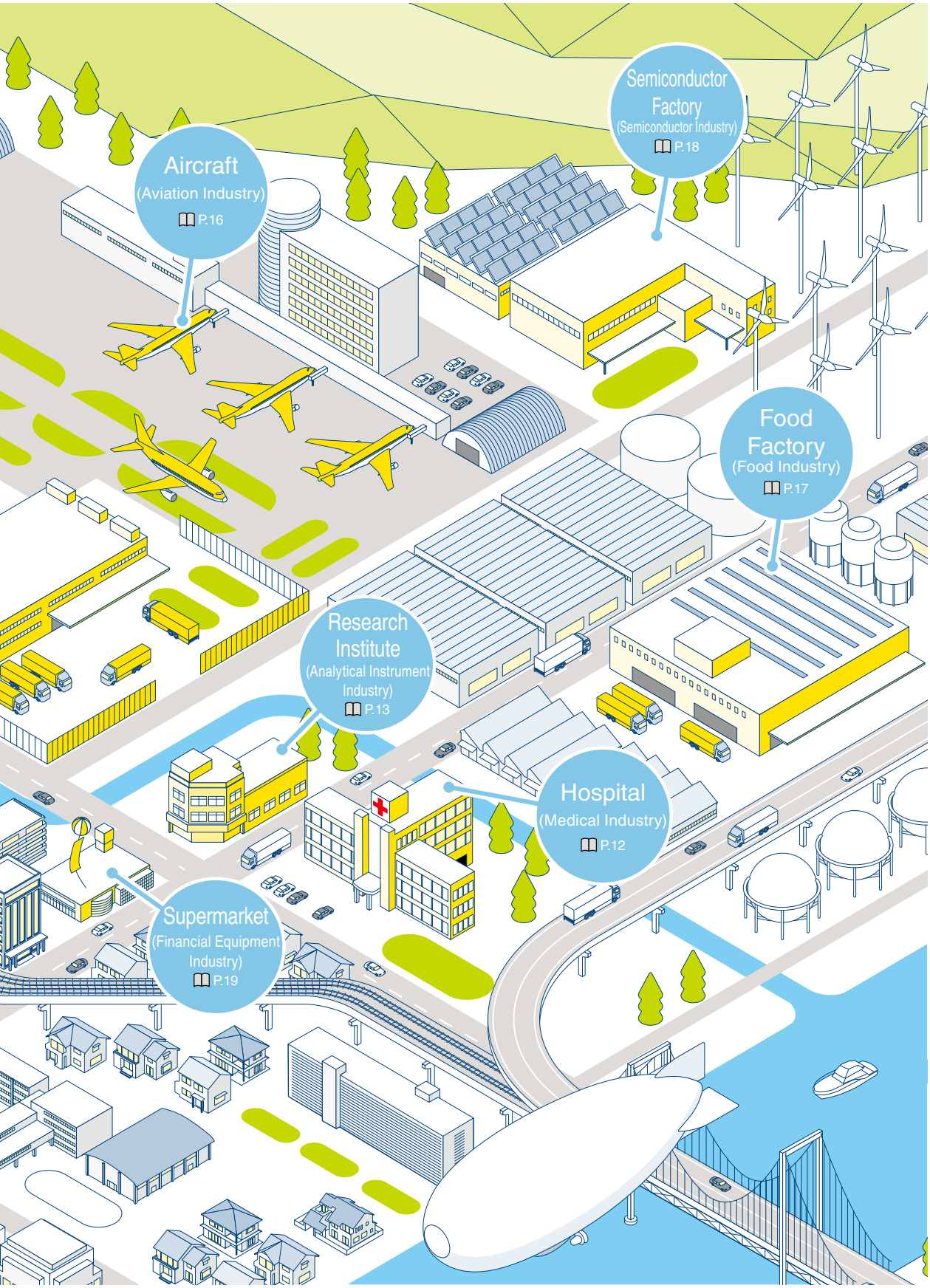

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Hospital

From the equipment of the operation room to the cabinets for the wards.
Our products enhance the safety and comfort of both patients and staff.

Operation Room

For biological information monitor

Exactly stopping in an easy-to-view direction
Torque Hinge (Dual Axis)
P.65

For anaesthesia machine

Easy lock lever operation
Dual Brake System Caster
P.886

Ward

For cabinet

Silent & soft closing
Soft-close Slide
P.554

Corridor

For nurse cart

Easy lock lever operation
Dual Brake System Caster
P.885

For information terminal

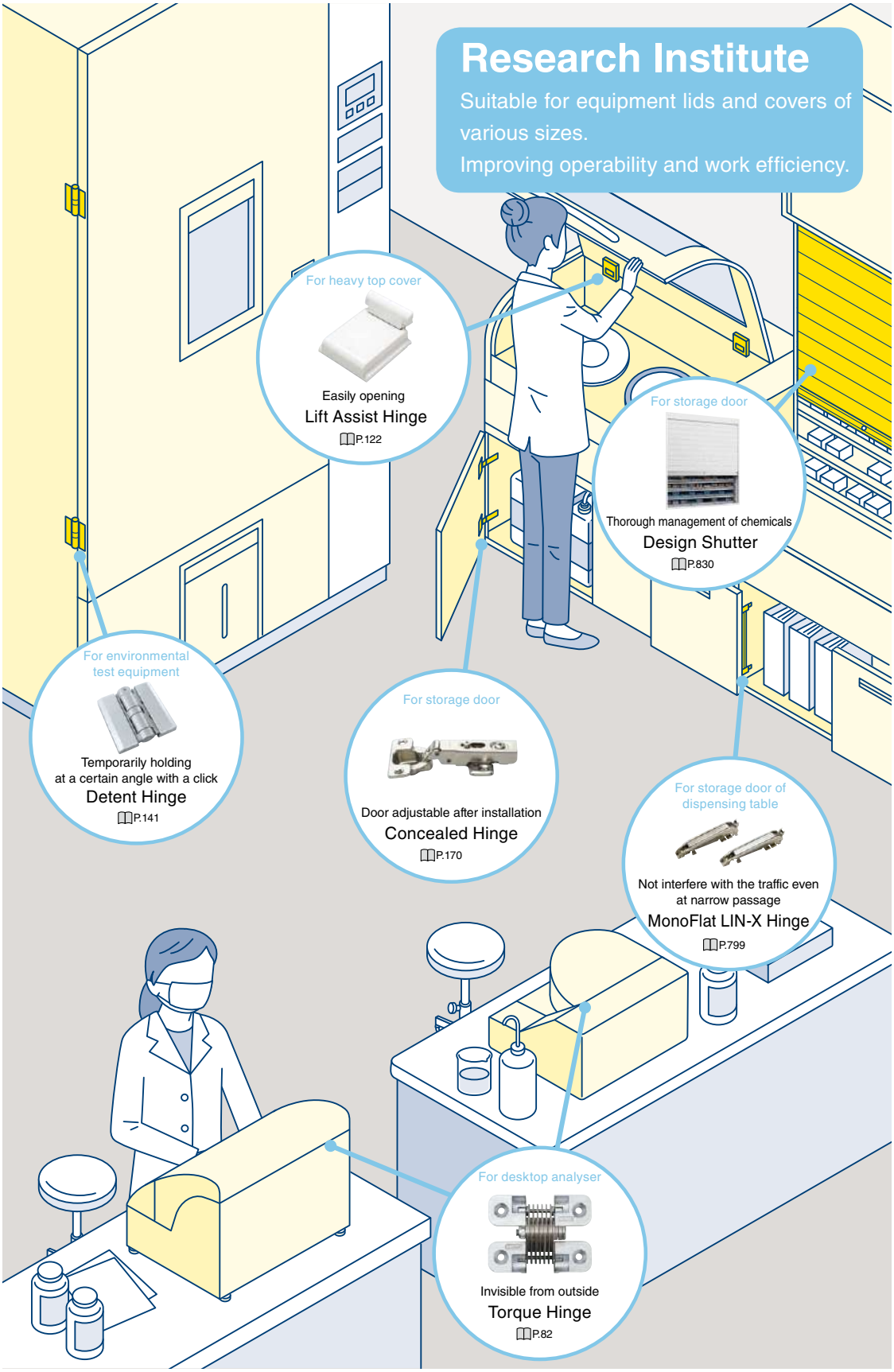
Slowly closing once lifted a little
Self-close Stay
P.336

For drip stand

Easy-to-clean flat surface
Base
P.957

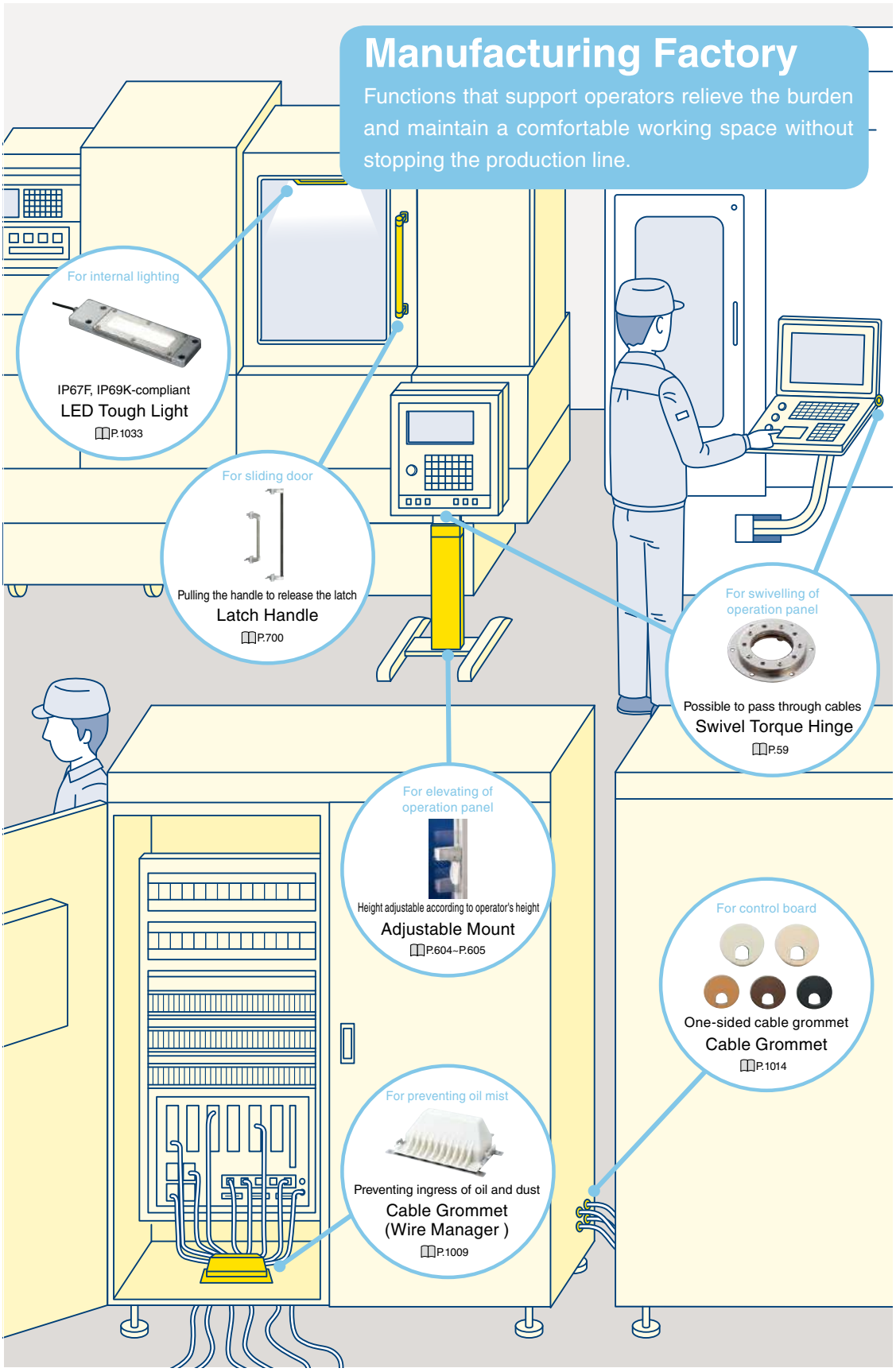
Research Institute

Suitable for equipment lids and covers of various sizes.
Improving operability and work efficiency.



Manufacturing Factory

Functions that support operators relieve the burden and maintain a comfortable working space without stopping the production line.



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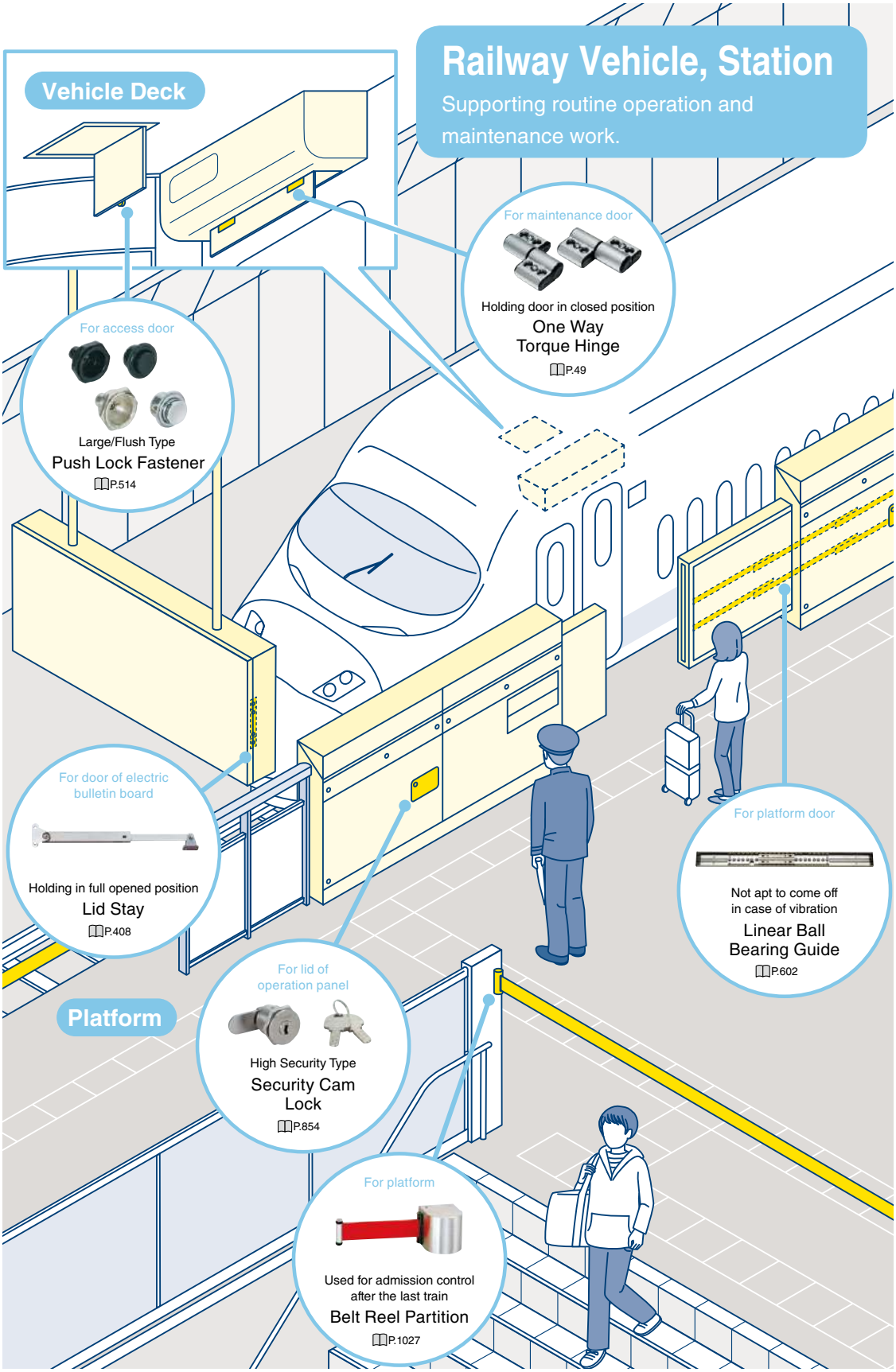
Railway Vehicle, Station

Supporting routine operation and maintenance work.



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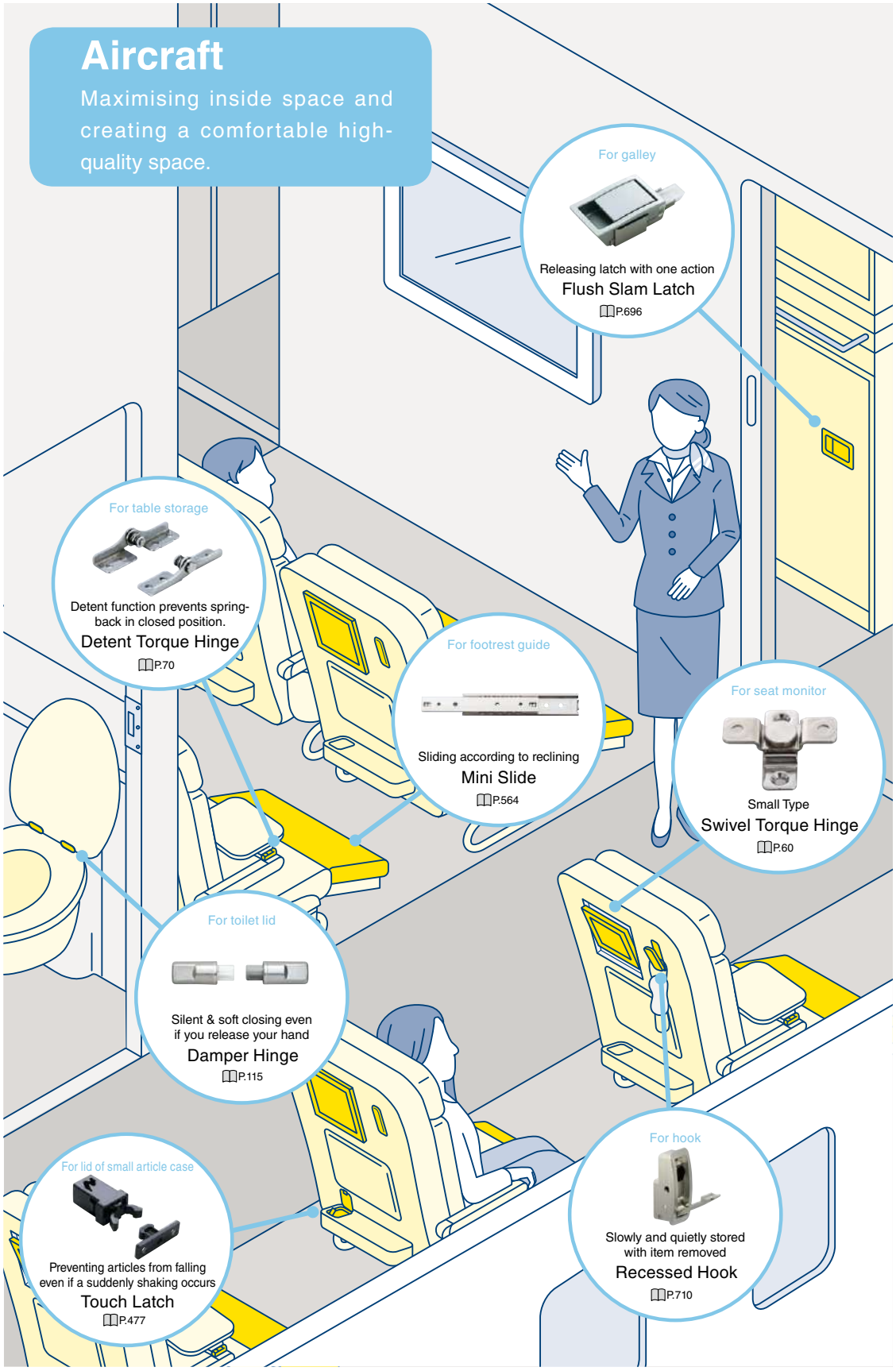
Aircraft

Maximising inside space and creating a comfortable high-quality space.



For galley

Releasing latch with one action
Flush Slam Latch
P.696

For table storage

Detent function prevents spring-back in closed position.
Detent Torque Hinge
P.70

For footrest guide

Sliding according to reclining
Mini Slide
P.564

For seat monitor

Small Type
Swivel Torque Hinge
P.60

For toilet lid

Silent & soft closing even if you release your hand
Damper Hinge
P.115

For lid of small article case

Preventing articles from falling even if a suddenly shaking occurs
Touch Latch
P.477

For hook

Slowly and quietly stored with item removed
Recessed Hook
P.710

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Food Factory, Kitchen

Reducing the risk of foreign matter ingress for the sake of hygiene.

Food Factory

For production line cover

Covered with blue rubber for easy finding

Sealed Magnetic Catch

P.447

For control board

Stopping door exactly in any position

Torque Hinge (Concealed)

P.54

For slicer cover

Highly corrosion-resistant stainless steel + anti-rust coating

Magnetic Catch

P.444

For oven door

Suitable for up to about 250℃

Magnetic Catch

P.432

For door of cooking table

No outward projection of door secures the traffic line.

MonoFlat LIN-X Hinge

P.804

For refrigerator door

Smooth and beautiful shape

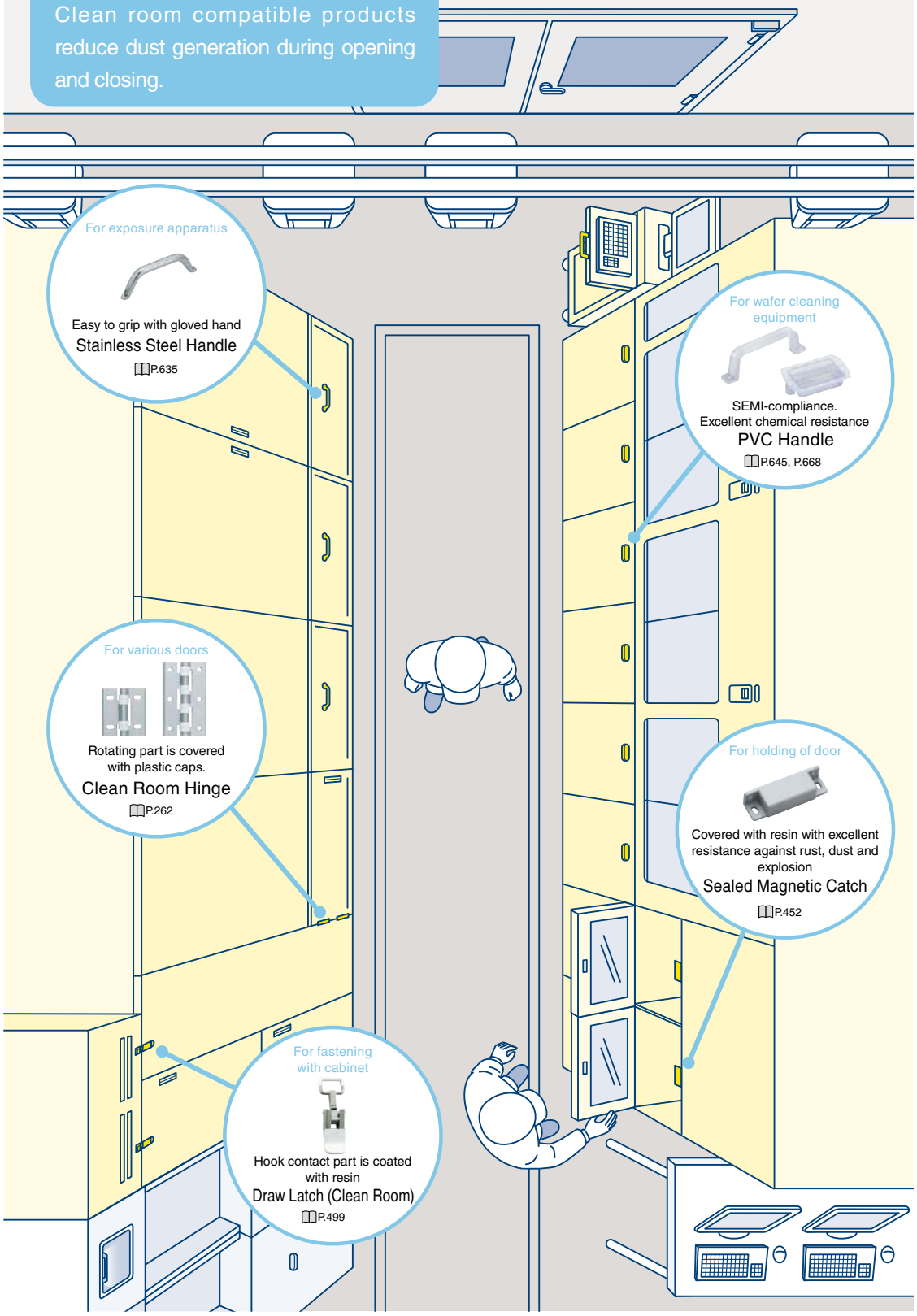
Aluminium Door Handle

P.627

Kitchen

Semiconductor Factory

Clean room compatible products reduce dust generation during opening and closing.



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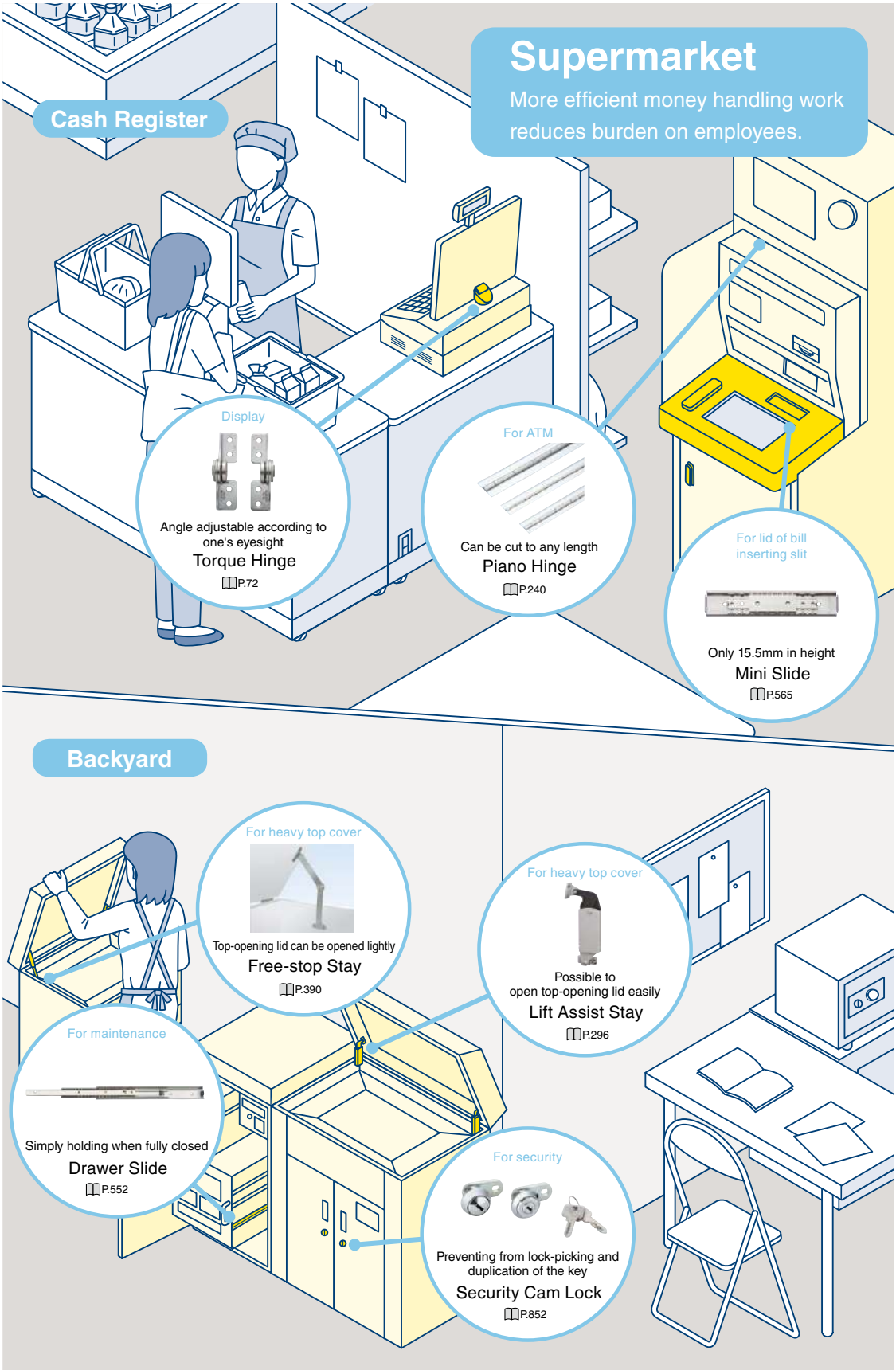
Supermarket

More efficient money handling work reduces burden on employees.



Aluminium Frame × Industrial Components

Exclusive design for aluminium frame provides easy installation!
With these parts, equipment and workbenches can be used more easily!

Aluminium Frame Support System AS Series

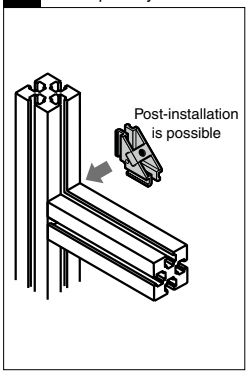
※Aluminium frame not included.

For aluminium frame assembly and reinforcement.

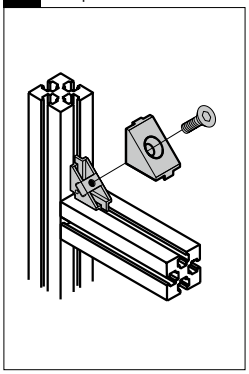
Aluminium frames can be easily fastened with only 1 screw! Corner Connector PJ One-touch Connector (Post-installation Type)

1 Pick up the supplied inner connector

2 Simply fit it in the groove to temporarily fasten

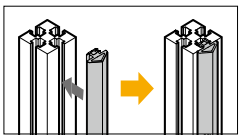


3 Fix the cover with screw to complete the installation



For preventing injury and product damage. Easy installation with 1 screw!
Corner Cap AS-C

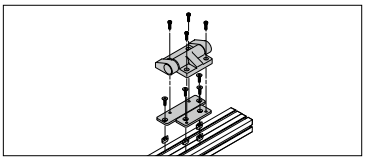
Just fit it in the groove of the aluminium frame
Rubber Gasket AS-PAA



Reduces noise when closing the sliding door.

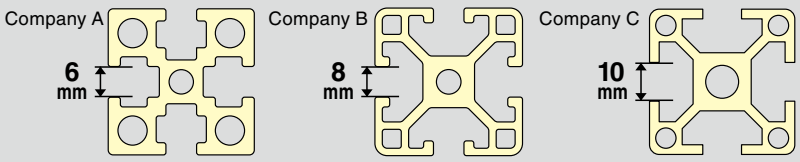
For installation of industrial components.

Just this, firmly fixed! Stainless Steel AS Nut (Post-installation Type)



Applicable Groove Width and Shape

Possible to install to aluminium frames other than the ones on the right. Please contact us.



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Application Example of Aluminium Frame Support System As Series

1 Select Parts

Select the industrial components to be installed to the aluminium frame. Refer to 📖 P.22~23 for the system construction example.
AS parts set (brackets, mounting screws, AS nuts, etc.) used for installing to aluminium frame and single parts are available.

■Installation Parts (Example)

Sealed Magnetic Catch MC-JM63G
AS Parts Set (📖 P.453)

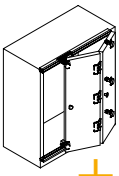
Clean Room Hinge HG-CV-65N
AS Parts Set (📖 P.263)

Threaded Bolt
Type Caster
(📖 P.885~)

Levelling Glide
(📖 P.928~)

+

Glide Base AS Parts Set
(📖 P.954)

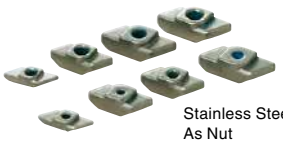


Folding Door System
KF111-MH
(📖 P.816)
(When installed to other position than the frame)

+

Bracket for
Centre Hinge CH-75
AS-CH-75
(📖 P.819)

+



Stainless Steel
As Nut
(📖 P.526)

2 Assemble aluminium frames

Use corner connector PJ to assemble aluminium frames.

■Corner Connector PJ

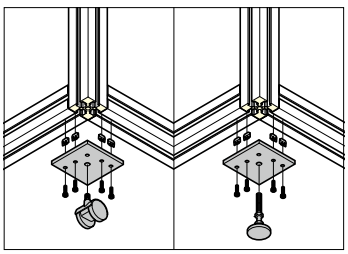
One-touch Connector Post-installation Type (📖 P.524)

[Parts]

3 Completed

Install the industrial components to the aluminium frame.

■Installation Example



Refer to the next page for parts suitable for aluminium frames.

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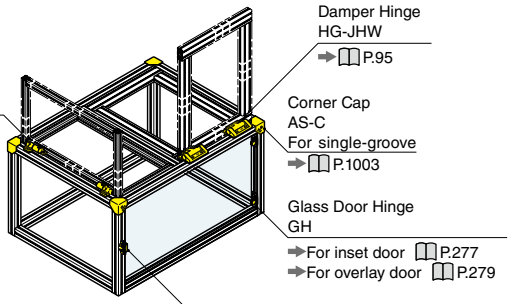
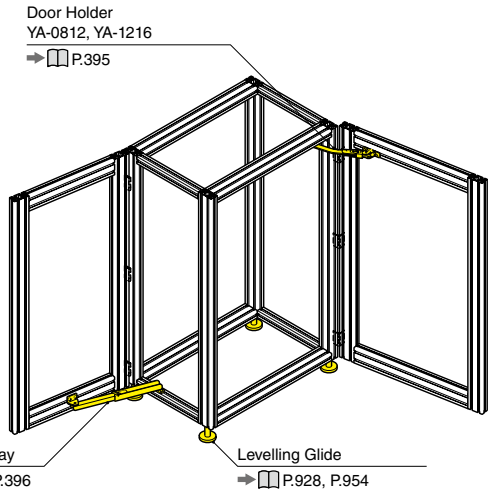
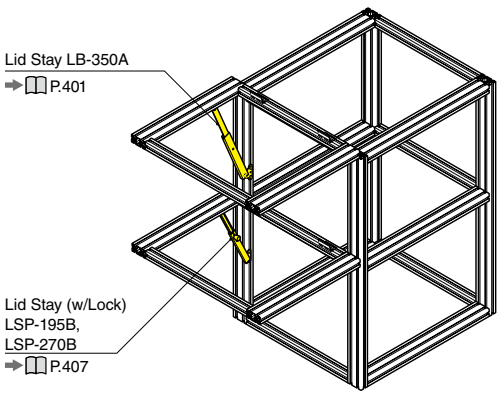
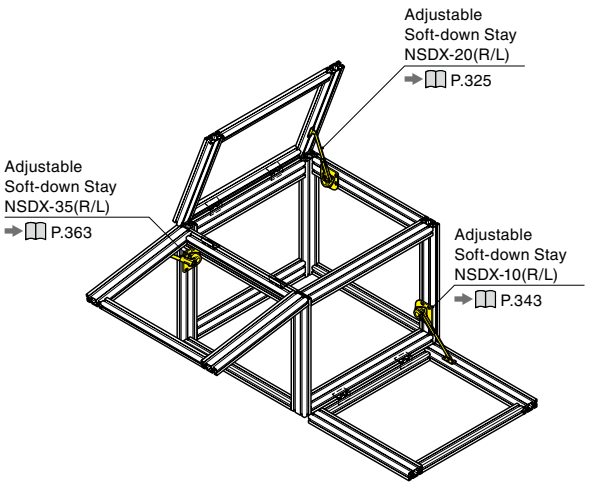
AS SYSTEM SERIES INDEX
OUTLINE INDEX
ITEM NAME INDEX

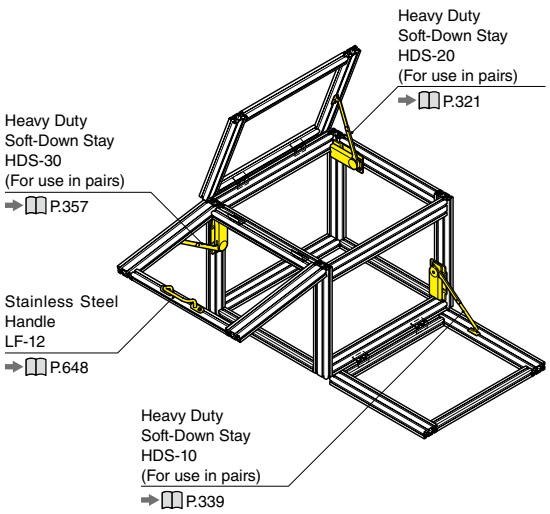
System Construction Example

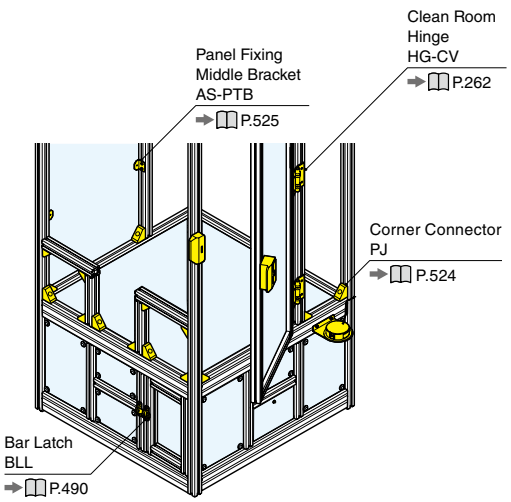












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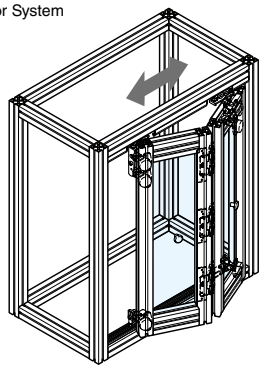
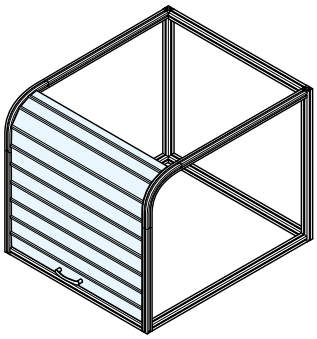
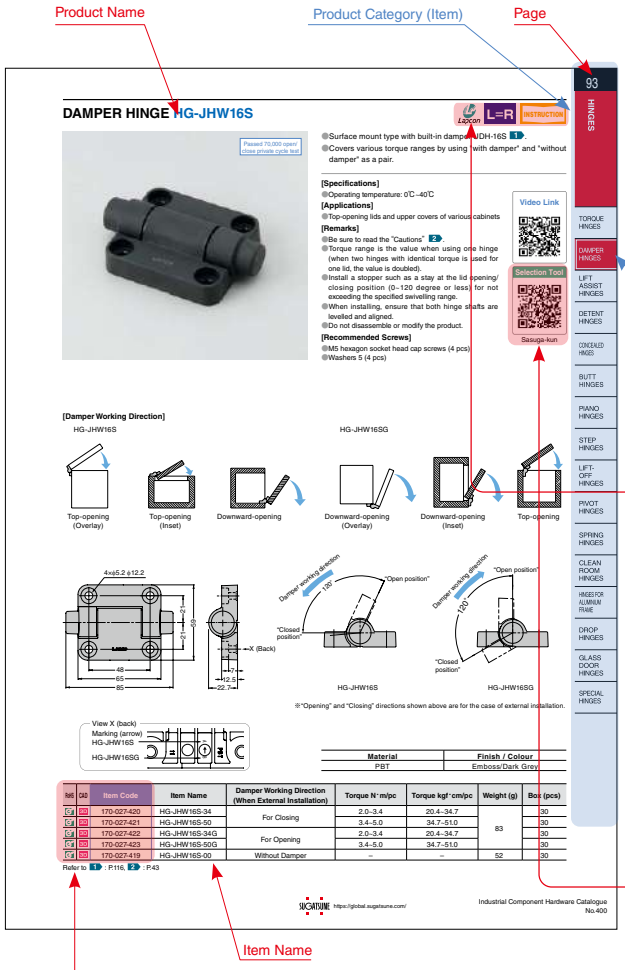
Slidable Folding Door System
KF111-R
➡ P.820



AS High Rigidity Cabinet Shutter
➡ P.836



Description of Main Text



Main features displayed by icons.

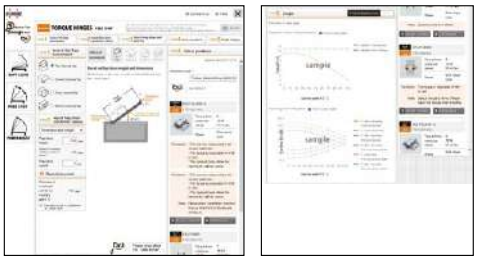
Refer to P.25 for icon definitions.

Lapcon L=R INSTRUCTION

Scan the QR code to view the videos of product features and movement, etc.

Video Sugatsune Channel

Selection Tool Sasuga-kun Corresponding Icon



Selection results Graphs

With the selection tool Sasuga-kun, you can select the "Motion Design Tech" products meeting your requirements simply by entering values such as the size and weight of the lid or door. You can use it on our website.

RoHS	CAD	Item Code
G	3D	170-027-420
G	3D	170-027-421

Please specify the item code and quantity when ordering.
For each item name, it is possible to confirm if it is RoHS-compliant product and whether it has 3D CAD data.

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HOW TO USE THIS CATALOGUE

- All items, unless specified, are made to exact metric dimension.
- Changes in dimensions, finishes, packing, etc., and suspension of production may occur without notice.
- Our liability is limited to the replacement of the merchandise.

Icon Definitions

Icons are meant to symbolise the following content. They do not directly indicate the specifications or details.

Standard Icons

Products compliant with RoHS Directive (2011/65/EU&(EU)2015/863).
It is based on in-house analysis and verification. Packing materials are excluded.
Products without this icon may be applicable.
For further details, please contact us.

Products with 3D CAD data.

TEST METHOD 1
E.g.
Reference number: In this case, test 1 is shown.

Products tested under specific conditions.
Refer to P.1035 for details of the test method and use conditions.

L=R

Products usable as both right ad left types.

NSF

PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE.

Lapcon

Product series equipped with Sugatsune's patented damper mechanism “Lapcon” .

AS

Product series (AS series) used for aluminium frame.
For the AS series, please refer to P.20.

ANTIBACTERIAL

Products that have been processed to suppress the growth of bacteria.

INSTRUCTION

Products with installation instructions.

TITANIUM

Products made of titanium.

SUS316

Products made of SUS316 stainless steel or equivalent materials.

SUS

Products made of stainless steel other than SUS316 or stainless cast steel.

TEMPERED GLASS

Products for tempered glass.

HEX KEY

Products supplied with a hex key.

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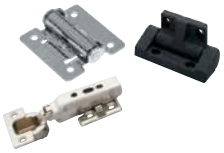
HINGES

P.30

- Torque Hinges
- Damper Hinges
- Lift Assist Hinges
- Detent Hinges
- Concealed Hinges
- Butt Hinges
- Piano Hinges
- Step Hinges
- Lift-off Hinges
- Pivot Hinges
- Spring Hinges
- Clean Room Hinges
- Hinges for Aluminium Frame
- Drop Hinges
- Glass Door Hinges
- Special Hinges



LID SUPPORTS

P.286

- Lift Assist Stays
- Soft Closing Stays
- Torque Stays
- Heavy Duty Locking Stays
- Foot Stays
- Lid Stays
- Other Stays
- Top-Opening
- Downward-Opening
- Upward-Opening
- Bottom-Opening
- Swing Door
- Lift-Up
- Lift-Down
- Up & Over
- Bi-Folding
- Over the Top

CATCHES, LATCHES & FASTENERS

P.424

- Magnetic Catches
- Knuckle Catches & Tension Catches
- Touch Latches
- Lever Latches
- Slide / Barrel Bolts
- Draw Latches
- Push Lock Fasteners & Knob Fasteners
- Aluminium Frame Corner Connectors
- Door Dampers

DRAWER SLIDES

P.542

- Soft-Close Slides
- Push-to-Open Slides
- Mini Slides
- Medium Size Slides (Stainless Steel)
- Medium Size Slides (Aluminium)
- Medium Size Slides (Others)
- Linear Slides
- Stainless Steel
- Aluminium
- Steel
- Others

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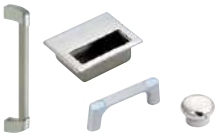
HANDLES, PULLS & KNOBS

P.608

- Large Handles
- Handles (Front Screw Mount)
- Handles (Back Screw Mount)
- Recessed Pulls
- Pulls & Knobs
- Latch Handles



HOOKS & BRACKETS

P.704

- Recessed Hooks
- Latch Hooks
- Swing Hooks
- Small Hooks
- Large Hooks
- Panel Hanger
- Brackets
- Shelving Systems

MONITOR MOUNTS

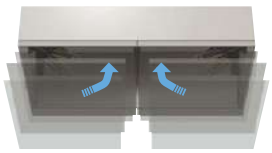
P.784

- Monitor Brackets
- Monitor Arms

CABINET DOOR HARDWARE & SHUTTER DOORS

P.796

- Flush / Lateral Opening Door Systems
- Sliding Door Systems
- Folding Door Systems
- Shutter Door Systems



LOCKS

P.848

- Cam Locks
- Dial Locks
- Glass Door Locks
- Cabinet Door Locks
- Other Locks

CASTERS

P.876

- Heavy Duty Casters
- Single Wheel Casters
- Twin Wheel Casters
- Casters with Levelling Glides
- Ball Casters
- Sliding Door Rollers

LEVELLING GLIDES & BASE

P.926

- Special Levelling Glide
- Heavy Duty Levelling Glides
- Medium-sized Levelling Glides
- Small Levelling Glides
- Base for Levelling Glides
- Case Feet
- Base

MISCELLANEOUS

P.962

- Bearings
- Swivels
- Multi-Purpose Lids
- Ventilators
- Multi-Purpose Caps
- Grommets
- Cable Grommets
- Gasket
- Belt Reel Partition
- Glass Point Fix
- Others
- LED Lights

The best solutions for each industry summarised here!

Sugatsune's "Proposal by Industry"

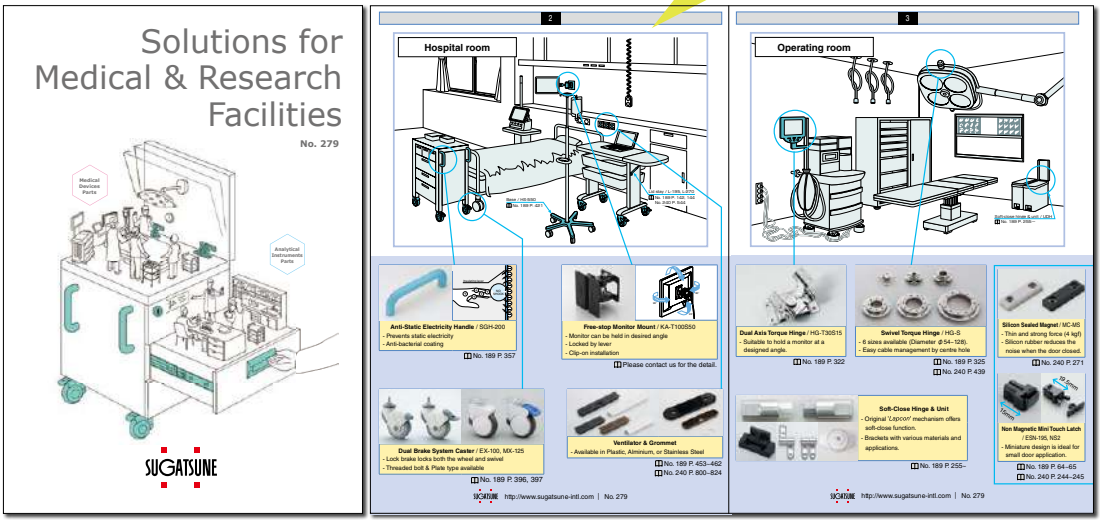
Please refer to the website and catalogues.

https://global.sugatsune.com/

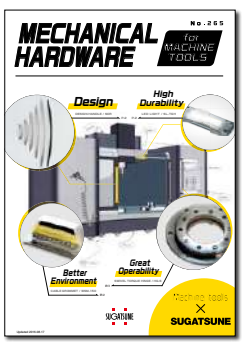
Sugatsune Proposal by Industry

Solutions for Medical & Research Facilities No.279

The answer to such questions as "Is there such a product...?" "Can be used for that!" is immediate!



Mechanical Hardware for Machine Tools No.265



Component Hardware Catalogue for Rail Industry No.269

Please refer to the digital web catalogues in the "catalogue list" on our website.

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LAMP®

HINGES

Hinges are a kind of hardware used for opening and closing doors or lids.
It is said that they look like butterflies, so they are also known as “CHOUTSUGAI (paired butterflies)” in Japanese.
A typical hinge consists of two leaves and one shaft, where the leaves revolve around the shaft.
In recent years, various kinds of hinges are developed, such as hinges with increased opening angle by increasing the number of axes (multiaxis), and hinges which can stop at any position or rotate slowly by introducing friction or resistance at the shaft, etc.

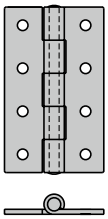
SUGATSUNE

June 2022

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Types of Hinges

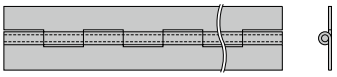
Butt Hinges



LSB P.230

Leaves are flat.

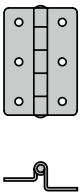
Piano Hinges



LSN P.240

Leaves are long in the axial direction.

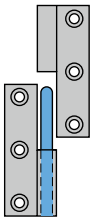
Step Hinges

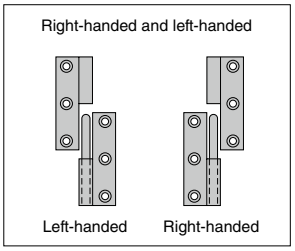


DH-60C P.243

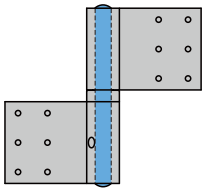
Can be used for overlay doors.

Lift-off Hinges





KN P.244



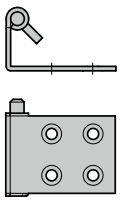
HG-KH P.251

Doors can be attached and detached, convenient for maintenance and door installation.

Pivot Hinges

Installed at the upper and lower ends of a door to reduce visible range of hinge.

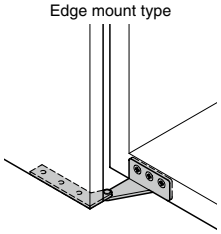
Detachable type



HG-PV-30C P.253

Doors are detachable on the action of spring.

Edge mount type



PL-65 P.254

Installed at the edge of door or cabinet.

Sugatsune Also Offers Made-to-order Products!

Function Addition

Adding detent mechanism on torque hinge

Specification Change

Changing to antibacterial material, adding antibacterial coating

Size Change

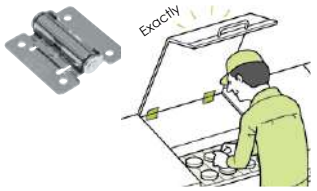
Extending piano hinge to 3000mm

For OEM and ODM request form with required items at consultation, refer to P.1047~P.1049

■Outline INDEX

Realising motion functions

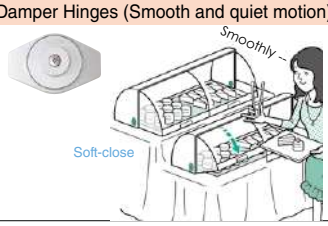
Torque Hinges (Free stop)



Freely stop doors, lids or covers at any position.

P.44~

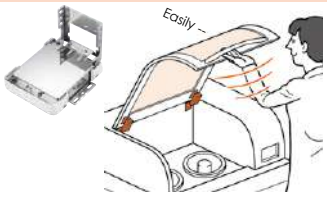
Damper Hinges (Smooth and quiet motion)



Lower opening/closing speed of doors or lids.

P.90~

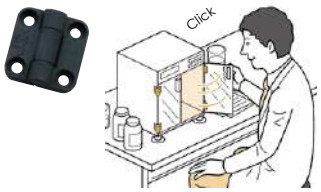
Lift Assist Hinges



Assist in opening/closing heavy lids or covers.

P.122~

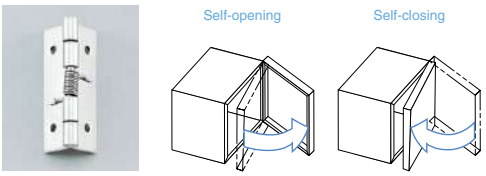
Detent Hinges



Temporarily hold doors, lids or covers at a certain angle.

P.113, P.137~

Spring Hinges

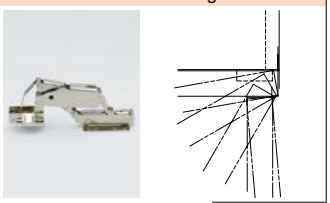


Automatically close or open.

P.256~

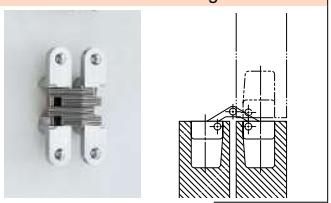
Designing opening/closing locus

Concealed Hinges



P.170~

Concealed Hinges



P.150~

Multi-shaft mechanism draws a unique locus in which the rotation centre moves.
Hinges are invisible from outside.

Search by Application

Clean Room Hinges

Prevent metal-to-metal wear and metal powder scattering.

P.261~

Hinges for Aluminium Frame

Special hinges fitting with the mounting groove of aluminium frame.

P.264~

Glass Door Hinges

Types for inset/overlay doors and types with/without catch are available.

P.271~

Butt Hinges	P.230~
Piano Hinges	P.240~
Step Hinges	P.243~
Lift-off Hinges	P.244~
Pivot Hinges	P.253~
Drop Hinges	P.268~
Special Hinges	P.284~

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

INDEX by Types of Hinges

Torque Hinges

Picture	Item Name	Torque N·m	Feature	Page
	HG-VH8-T15	$0.15^{\pm0.05}$	Damper hinges and spring hinges of the same type also available.	P.44
	HG-VH8-T35	$0.35^{\pm0.1}$		
	HG-TQS15	$1.5^{+40\%}_{-20\%}$	Friction in one direction only.	P.47
	HG-TQJ100	0~10	Friction in one direction only. Torque adjustable.	P.48
	HG-TQA90	$9.0^{+40\%}_{-20\%}$	Friction in one direction only.	P.49
	HG-TQW8080	$8.0^{\pm20\%}$	One way torque hinge with operation range of 0~180˚.	P.50
	HG-TS03	$0.35^{+40\%}_{-20\%}$	Greaseless.	P.51
	HG-TS07	$0.7^{+40\%}_{-20\%}$		
	HG-TS15	$1.5^{+40\%}_{-20\%}$		
	SFTH-02-5	0.49	All Stainless.	P.51
	SFTH-03-9	0.88		
	SFTH-03-19	1.86		
	SFTH-05-35	3.43		
	SFTH-05-58	5.68		
	HG-TP20	$2^{\pm25\%}$	Greaseless.	P.52
	HG-TP30	$3^{\pm25\%}$		
	HG-TP45	$4.5^{\pm25\%}$		
	HG-TE03	$0.3^{+40\%}_{-20\%}$	Can be used horizontally or vertically.	P.53
	HG-TE08	$0.8^{+40\%}_{-20\%}$		
	HG-TE15	$1.5^{+40\%}_{-20\%}$		
	HG-TU03	$0.35^{+40\%}_{-20\%}$	Hinge is hidden when door is closed. Can be used horizontally or vertically.	P.54
	HG-TU07	$0.7^{+40\%}_{-20\%}$		
	HG-TQU15	$1.5^{+40\%}_{-20\%}$	Concealed one way torque hinge.	P.55
	HG-TUWA07	$0.7^{+40\%}_{-20\%}$	Greaseless.	P.56
	HG-TUWA15	$1.5^{+40\%}_{-20\%}$		
	HG-TQWA15	$1.5^{+40\%}_{-20\%}$	Wide opening version of HG-TQU.	P.57

Picture	Item Name	Torque N·m	Feature	Page
	HG-ITJ4080	$4^{\pm20\%}$~8	Torque adjustable.	P.66
	HG-ITS25	$2.5^{\pm20\%}$	Supplied with mounting hole cover.	P.67
	HG-ITS35	$3.5^{\pm20\%}$		
	HG-ITM50	$5.0^{\pm20\%}$		
	HG-ITM70	$7.0^{\pm20\%}$		
	HG-ITSF	–		
	HG-ITMF			
	HG-ITHP07	$0.7^{\pm30\%}$	Heat resistant.	P.68
	HG-ITHP15	$1.5^{\pm20\%}$		
	HG-ITHP30	$3.0^{\pm20\%}$		
	HG-TLS30-50-300	$3^{\pm30\%}$	Greaseless.	P.69
	HG-DTA4	$0.4^{\pm20\%}$	No reaction (spring-back).	P.70
	HG-DTA8	$0.8^{\pm20\%}$		
	HG-DTB4	$0.4^{\pm20\%}$	No reaction (spring-back).	P.71
	HG-DTB8	$0.8^{\pm20\%}$		
	HG-TA20	$2.0^{\pm20\%}$	Types with wire hole also available.	P.72
	HG-TA30	$3.0^{\pm20\%}$		
	HG-TA45	$4.5^{\pm20\%}$		
	HG-TAC20	$2.0^{\pm20\%}$	Black version of HG-TA.	P.73
	HG-TAC30	$3.0^{\pm20\%}$		
	HG-TAC45	$4.5^{\pm20\%}$		
	HG-TB7	$0.7^{\pm20\%}$	Provides torque stability in both directions.	P.74
	HG-TB20	$2.0^{\pm20\%}$		
	HG-TB30	$3.0^{\pm20\%}$		
	HG-TB45	$4.5^{\pm20\%}$		
	HG-TBC20	$1.5^{\pm20\%}$	Black version of HG-TB.	P.75
	HG-TBC30	$2.5^{\pm20\%}$		
	HG-TBC45	$4.0^{\pm20\%}$		
	HG-TA45H	$4.5^{\pm20\%}$	With wire hole.	P.76
	HG-TC45H	$4.5^{\pm20\%}$		P.77

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Torque Hinges

Picture	Item Name	Torque N•m	Feature	Page
	HG-TAS15	1.5±20%	All stainless.	P.78
	HG-TAS25	2.5±20%		
	HG-TAS40	4.0±20%		
	HG-TASJ40	0~4.0	Torque adjustable.	P.79
	HG-TBS15	1.5±20%	All stainless.	P.80
	HG-TBS25	2.5±20%		
	HG-TBS40	4.0±20%		
	HG-TBSJ40	0~4.0	Torque adjustable.	P.81
	HG-RT30	3±20%	Hinge is hidden when door is closed.	P.82
	HG-RT50	5±20%		
	HG-TMH1530	Shaft A 1.5±20% Shaft B 3.0±20%	Dual axis torque hinge for folding table.	P.83
	HG-TMH2030	Shaft A 2.0±20% Shaft B 3.0±20%		
	H95TSH-F	–	Concealed torque hinge.	P.84
	HG-KNT3	0.3±67%	Lift-off type, easy to detach.	P.88
	HG-KNT7	0.7±36%		
	HG-KNT16	1.6±20%		
	HG-MF08	0.0784±25%	Small plastic torque hinge.	P.89
	HG-MF15	0.147±20%		
	HG-MF25	0.245±20%		
	HG-S50-HR50	5.0±20%	High rigidity torque hinge.	P.58
	HG-S7-MN	0.7±20%	Rotates 360˚. Centre hole for easy cable management (except for HG-S-MN).	P.60
	HG-S20-MN	2.0±20%		
	HG-S30-12	3.0±20%		P.60
	HG-S50-12	5.0±20%		
	HG-S30-21	3.0±20%		P.61
	HG-S50-21	5.0±20%		

Picture	Item Name	Torque N•m	Feature	Page
	HG-S50-34	5.0±20%	Rotates 360˚. Centre hole for easy cable management (except for HG-S-MN).	P.61
	HG-S70-34	7.0±20%		
	HG-S70-50	7.0±20%		P.62
	HG-S100-50	10.0±20%		
	HG-S50-75	5.0±20%		P.62
	HG-S70-75	7.0±20%		
	HG-T70S30	7.0±20% (Tilting) 3.0±20% (Swivelling)	Can hold in tilting or swivelling direction.	P.64
	HG-T30S15	3.0±20% (Tilting) 1.5±20% (Swivelling)		P.65
	HG-RNM30	3.0±20%	For transom window. Window detachment without tools.	P.86
	HG-RNM30-SET			
	HG-PTH30	3.0±20%	Pivot torque hinge.	P.87
	HG-CVT65-15	1.5±25%	Torque hinge for clean room.	P.261
	HG-CVT100-20	2.0±25%		

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Damper Hinges (Smooth and quiet motion)

Picture	Item Name	Torque N・m	Feature	Page
	HG-VH8-D3	0.022~0.038	Torque hinges and spring hinges of the same type also available.	P.44
	HG-JV65	–	For vertical use. With self-close function which can hold doors closed.	P.90
	HG-JV65-U-LGR	–	Concealed type. For vertical use. Hidden from view when closed.	P.91
	HG-JG150	–	Self and soft close.	P.92
	HG-JHW16S-34	2.0~3.4	Surface mount type.	P.93
	HG-JHW16S-50	3.4~5.0		
	HG-JHW16S-00	–		
	HG-JHW50(G)	3~5		P.94
	HG-JHW70(G)	5~7		
	HG-JH25	3~5		P.96
	HG-JH35	5~7		
	HG-JHM20T-80	6~8		P.99
	HG-JHM20-80	6~8	Recess mount type.	P.100
	HG-JHM16-34	2~3.4		P.101
	HG-JHM16-50	3.4~5		
	HG-JHM14-S-8	0.5~0.8		P.102
	HG-JHM14-S-15	0.8~1.5		
	HG-JHM14-S-20	1.5~2.0		
	HG-JHM11-1	0.05~0.1		P.104
	HG-JHM11-2	0.1~0.2		
	HG-JHM11-3	0.2~0.29		
	HG-JHM11-4	0.29~0.4		
	HG-JHS11-2	0.1~0.25		P.106
	HG-JHS11-4	0.25~0.4		
	HG-JHM9-S HG-JHM9-S4	0.054~0.086 0.027~0.043	Built-in bidirectional damper, Side mount type.	P.108
	HG-JHM9-U HG-JHM9-U4	0.054~0.086 0.027~0.043	Built-in bidirectional damper, Under mount type.	P.109
	HG-JHS9-S	0.027~0.043	Self-opening. Side mount type.	P.110
	HG-JHS9-U	0.027~0.043	Self-opening. Under mount type.	P.111
	HG-JH14-50	3~5	Surface mount type. Supplied with stainless steel bracket.	P.112

Picture	Item Name	Torque N・m	Feature	Page
	HG-CSH63	–	Can hold at two opening angles of 0˚ and 100 ˚ where detent function works.	P.113
	HG-CSH63A(B)M	1~1.7		
	HG-CSH63A(B)H	1.7~2.5		
	UDH-A(B)MS-G	1.5~2.5	Can be detached as a single unit.	P.115
	UDH-A(B)HS-G	2.5~3.5		
	UDH-A(B)GS-G	3.0~4.0		
	UDH-A(B)MP-G	1.5~1.8		
	UDH-A(B)HP-G	1.8~3.5		
	UDH-16SA(B)MS UDH-16A(B)MS-G	1~1.7		P.116
	UDH-16SA(B)HS UDH-16A(B)HS-G	1.7~2.5		
	UDH-16NA(B)MS	1.7~2.4		P.117
	UDH-16NA(B)HS	2.2~3		
	UDH-14A(B)LS	0.5~0.8		P.117
	UDH-14A(B)MS	0.8~1.5		
	UDH-14A(B)TS	1.5~2.0		
	URD8-3	0.022~0.038	Recess mount type.	P.118
	UDD-S	0.5~1.0	Can be mounted at the shaft of rotating lid, etc.	P.119
	UDD-M	1.0~2.0		
	UDD-H	2.0~3.0		

Lift Assist Hinges

Picture	Item Name	Torque N・m	Feature	Page
	HG-PA270-35	$35^{\pm 10\%}$	Outside mount type. Torque adjustable.	P.124
	HG-PA270-45	$45^{\pm 10\%}$		
	HG-PA200(201)-15	$15^{\pm 10\%}$		P.125
	HG-PA200(201)-20	$20^{\pm 10\%}$		
	HG-PA200(201)-25	$25^{\pm 10\%}$		
	HG-PA230(231)-15	$15^{\pm 10\%}$	Inside mount type. Torque adjustable.	P.126
	HG-PA230(231)-20	$20^{\pm 10\%}$		
	HG-PA230(231)-25	$25^{\pm 10\%}$		
	HG-PA202-15	$15^{\pm 10\%}$	Outside Back mount type. Torque adjustable.	P.127
	HG-PA202-20	$20^{\pm 10\%}$		
	HG-PA202-25	$25^{\pm 10\%}$		
	HG-PA300-15	$15^{\pm 10\%}$	Outside mount type. Torque adjustable.	P.128
	HG-PA180-9	$9^{\pm 10\%}$		P.131
	HG-PA210-9	$9^{\pm 10\%}$	Inside mount type. Torque adjustable.	P.132
	HG-JH210	–	Outside mount type.	P.133
	HG-TLAJ25	Retaining Torque 0~3.5	Torque adjustable.	P.134
	HG-TLAJ40			
	HG-PA182-9	$9^{\pm 10\%}$	Outside Back mount type. Torque adjustable.	P.136

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Detent Hinges

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Picture	Item Name	Retaining Torque N·m	Detent Angle	Page
	HG-MPS2	0.26 0.145	–10˚ 120˚ 170˚	P.138
	HG-YJ50	Approx. 0.49	90˚ each	P.139
	HG-CHJ70	2	–3˚ –90˚ 90˚ 177˚	P.140
	HG-FH128	10	60˚ 120˚	P.141
	CH-75	–	0˚ 90˚ 180˚	P.144
	HG-RCT12-C	40	0˚ 90˚ Ratchet range 5˚ increment	P.144
	HG-RCT1S-90	Moment Load Capacity/set 40	90˚	P.145
	HG-MA95A	Max Torque N.m/pc 45	0˚~180˚ in 10˚ increments	P.146
	HG-MA95AF	–		
	HG-MA95B	Max Torque N.m/pc 45		P.147
	HG-MA95BF	–		

Recess Mount

Picture	Item Name	O. D.	Remarks	Page
	MPH-30	ϕ6	High Torque Type	P.137
	MPH-30-5TN	ϕ5	High Torque Type	P.137

Others (Special Type)

Picture	Item Name	Retaining Torque N·m	Page
	HG-YC105	Approx. 1.18	P.142
	KA-60	Load Capacity 14	P.143
	LNR	–	P.148

Concealed Hinges

Picture	Item Name	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Page
	R	–	Max. 4 Max. 7	–	P.150
	RK-50	Min. 15	Max. 2.6	–	P.151
	INO-66N	–	Max. 30	Max. 50	P.151
	HES3D-W190	Min. 42	Max. 100	Max. 125	P.154
	HES3D-E190	Min. 38	Max. 100	Max. 125	P.156
	HES3D-E160	Min. 36	Max. 55	Max. 70	P.157
	HES3D-120	Min. 29	Max. 30	Max. 40	P.158

Picture	Item Name	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Page
	HES3D-120-A100	Min. 29	Max. 30	Max. 40	P.160
	HES3D-90	Min. 23	Max. 12	Max. 16	P.161
	HES3D-70	Min. 19	Max. 9	Max. 12	P.163
	HES3D-V135LGR	Min. 30	Max. 40	Max. 55	P.164
	HES2S-140-A125	Min. 38	Max. 50	Max. 65	P.165
	HGS3D-S160SH	Min. 36	Max. 80	–	P.168

Glass Door Bracket HES3D-G120BKT ····· P.159
Glass Door Bracket HES3D-G90BKT ····· P.162
Bracket for Sheet Metal HES3D-E190BKT ····· P.166
Bracket for Sheet Metal HES3D-120BKT ····· P.166
Installation Template HES3D-TMP ····· P.167

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Picture	Series	Recommended Door Thickness	Overlay	Quick Detachment	Page
	360	15~20	19 14 9 Inset	○	P.174 ~
	H360	18~30	26 16 Inset	○	P.178 ~
	J95	18~30	25 16 Inset	○	P.188 ~
	J160	18~36	25	○	P.196
	100	15~20	19 14 9	–	P.202 ~

Picture	Series	Recommended Door Thickness	Overlay	Quick Detachment	Page
	170	15~20	19 9 Inset	–	P.208 ~
	H160	18~34	28 23 18 Inset	–	P.211 ~
	HT160	30	15	○	P.222 ~
	H95	30	13.6	○	P.224 ~
	T-90-200	15~18	15~18	–	P.228

Door Dimensions and Number of Hinges ····· P.200
How to Use the Locus Chart ····· P.201
Examples of Installation to Sheet Metal ····· P.221

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Picture	Item Name	Load Capacity N/2 pcs		Page
	HG-VH8-N	–		P.44
	LSA, LSB	69 88 157	186 333 363	P.230
	LSF	275 353 500 667		P.230
	KHA	49 59 69 88 108	118 137 147 167 186	P.231
	KHB	49 59 78 98 118	127 147 157 177 206	P.231
	F-A	20 29 39	59 69	P.232
	28300, 28400	167 226		P.232
	50704, 50706	118		P.232
	D-S-A	78 98 137	196 226 284	P.233
	D-S-B	49 59 88	127 186 235	P.233
	D-S-C	20 29 49 59		P.234
	HG-BF1	157		P.234
	28000, 28500	167		P.234
	27800, 27900	167		P.235
	SYR140	69		P.235

Picture	Item Name	Load Capacity N/2 pcs		Page
	LSS	245		P.235
	SBR40	69		P.236
	SR75	186		P.236
	3535SS, 4040SS	333 431		P.236
	3535WSS, 4040WSS	245 294		P.236
	4545BSS	481		P.237
	SR	69 88		P.237
	FHS	186 226 275	490 569 637	P.237
	LSK-1157	127 235 284 333	500 579 647	P.238
	HG-LSC210	1960		P.238
	D-CH	177 275 294		P.239
	OLYA	127 245		P.239
	YHS	59 98		P.239
	HG-CV	147 226		P.262
	HG-P100	98		P.264
	AS-HG-IS	69 157 333		P.264

Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-AL	147	P.266
	AS-HG-SUS	294	P.267

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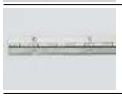
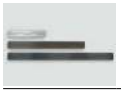
Piano Hinges

Picture	Item Name	Load Capacity N/pc		Page
	LSN	137 255 275 304 392 461 520 598	628 667 716 745 981 1370 1770 2550	P.240

Picture	Item Name	Load Capacity N/pc		Page
	LH	216 255 324 431	539 569 598 618	P.241
	LHN	549 588 745 834		P.241

Picture	Item Name	Load Capacity N/pc	Page
	HG-MH	–	P.242

Step Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	ROH-80	–	P.243
	KOH-80	127	P.243

Picture	Item Name	Load Capacity N/2 pcs	Page
	DH60N	147	P.243
	DH-60C	108	P.243

Picture	Item Name	Load Capacity N/2 pcs	Page
	28100	167	P.244

Lift-off Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	LSX-100	294	P.244
	KN	78 108 167	P.244
	NH-40	69	P.245
	SNR65	177	P.245
	BN	88 118	P.246
	SKH	78 118 284	P.246
	HNH	127 177 245 422	P.247
	HG-STN	88 196 284	P.247
	TS-243	275 333	P.248

Picture	Item Name	Load Capacity N/2 pcs	Page
	ZL-1701	314 559	P.249
	HG-LSH	1961 2177	P.250
	HG-LSW	1960 2180	P.250
	HG-KM	2940 4810	P.251
	HG-KH	2940 4810	P.251
	HG-OT	29 59 69	P.252
	HG-CV-127	981	P.261
	HG-CV-65N	108	P.263
	AS-HG-AL-N	78	P.265

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Pivot Hinges

Detachable Type

Picture	Item Name	Material	Page
	HG-PV-30C	Stainless Steel	P.253
	HG-PV60AC	Stainless Steel	P.253

Edge mount type

Picture	Item Name	Material	Page
	PL-65	Stainless Steel	P.254
	WP1, WP3	Stainless Steel	P.254
	PL-60	Stainless Steel	P.255
	PP-60	Stainless Steel	P.255

Spring Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-VH8-OP HG-VH8-CL	–	P.44
	HG-SHL	39 59 78 186 225 284	P.256
	SH-C	88 157 196	P.257
	HG-BF3-2	69	P.257
	HG-SH	9.8 29 59 69	P.258

Picture	Item Name	Load Capacity N/2 pcs	Page
	SA	196 392	P.258
	ST150-6314-05	400	P.259
	PM120	200	P.259
	DA	–	P.260

Clean Room Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-CV-127	981	P.261
	HG-CVT	—	P.261
	HG-CV	147 226	P.262

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-CV-65N	108	P.263
	HG-P100	98	P.264

Hinges for Aluminium Frame

Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-IS	69 157 333	P.264
	AS-HG-AL-N	78	P.265

Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-AL	147	P.266
	AS-HG-SUS	294	P.267

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Drop Hinges

Picture	Item Name	Door Thickness	Page
	SDH-P	16~20	P.268
	SDH-001	16~20	P.269

Picture	Item Name	Door Thickness	Page
	MH-30	Max. 21	P.270
	MH-40	Max. 21	P.270

Glass Door Hinges

Picture	Item Name	Door Size	Page
	XL-GH03-48-0	Door Width: Max. 650 Door Height: Max. 900 Glass Thickness: 5, 6, 8	P.271
	XL-GH03-48-8	Door Width: Max. 650 Door Height: Max. 900 Glass Thickness: 5, 6, 8	P.271
	GH-456C	Door Width: Max. 600 Door Height: Max. 1200 Glass Thickness: 5, 6, 8	P.272
	GH-456N	Door Width: Max. 600 Door Height: Max. 1200 Glass Thickness: 5, 6, 8	P.272
	GH36-NCR	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.273
	GH34-0	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.274
	GH34-0CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.274

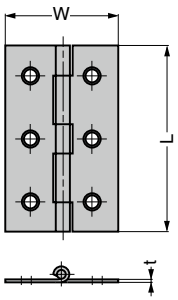
Picture	Item Name	Door Size	Page
	GH34-8CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.275
	GHC34-8CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.275
	GH34-0SS	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.276
	GH34-8SS	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.278
	GH34-8	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.280
	GHC34-8	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.282

Special Hinges

Picture	Product Name	Page
	Double Action Hinge HG-BH	P.284
	Corner Fastener Hinges(W/ Lock) STH-C64	P.284

Size and Load Capacity Table by Material and Thickness

Butt Hinges



Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
0.8	25.5 × 21	20	D-S-25C	P.234
	31.5 × 22.5	29	D-S-32C	P.234
	38 × 26	29	D-S-38C	P.234
	51 × 31	49	D-S-51C	P.234
	51 × 34.5	49	D-S-51B	P.233
	64 × 33	59	D-S-64C	P.234
	64 × 40	59	D-S-64B	P.233
1	76 × 46	88	D-S-76B	P.233
1.2	38 × 82	59	YHS-38	P.239
	89 × 56	127	D-S-89B	P.233
1.3	51 × 39	78	D-S-51A	P.233
	64 × 42.5	98	D-S-64A	P.233
1.5	25 × 32	49	KHA-25C(N)	P.231
	30 × 32	59	KHA-30C(N)	P.231
	32 × 90	59	YHS-32	P.239
	40 × 35	69	AS-HG-IS40	P.264
	40 × 32	69	KHA-40C(N)	P.231
	40 × 35	69	LSA(B)-40	P.230
	40 × 35	69	SBR40	P.236
	40 × 35	69	SR40	P.237
	50 × 32	88	KHA-50C(N)	P.231
	50 × 35	88	LSA(B)-50	P.230
	50 × 35	88	SR50	P.237
	51 × 116	98	YHS-51	P.239
	60 × 32	108	KHA-60C(N)	P.231
	65 × 32	118	KHA-65C(N)	P.231
	75 × 32	137	KHA-75C(N)	P.231
	76 × 50	137	D-S-76A	P.233
	80 × 32	147	KHA-80C(N)	P.231
	90 × 32	167	KHA-90C(N)	P.231
	100 × 32	186	KHA-100C(N)	P.231
	102 × 66.5	186	D-S-102B	P.233
	127 × 82	235	D-S-127B	P.233
1.8	89 × 56.5	196	D-S-89A	P.233
	102 × 70	226	D-S-102A	P.233
	127 × 82	284	D-S-127A	P.233
2	28 × 140	69	SYR140	P.235
	51 × 128	127	OLYA-128S	P.239
	65 × 50	157	LSA(B)-65	P.230
	65 × 50	157	AS-HG-IS65	P.264
	65 × 50	157	HG-BF1	P.234
	75 × 50	186	LSA(B)-75	P.230
	75 × 50	186	SR75	P.236

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
2.5	51 × 50	127	LSK-1157-1	P.238
	89 × 89	245	3535WSS	P.236
	101.6 × 101.6	294	4040WSS	P.236
3	50 × 50	186	FHS-50	P.237
	60 × 64	226	FHS-60	P.237
	64 × 64	235	LSK-1157-2	P.238
	65 × 56	245	LSS-H(Z)-A(N)65	P.235
	65 × 185	245	OLYA-185S	P.239
	75 × 70	275	FHS-75	P.237
	76 × 74	284	LSK-1157-3	P.238
	89 × 87	333	LSK-1157-4	P.238
	89 × 89	333	3535SS	P.236
	90 × 60	333	LSA(B)-90	P.230
	90 × 60	333	AS-HG-IS90	P.264
	100 × 60	363	LSA(B)-100	P.230
3.4	101.6 × 101.6	431	4040SS	P.236
	114.3 × 114.3	481	4545BSS	P.237
4	100 × 100	490	FHS-100	P.237
	101.6 × 99	500	LSK-1157-5	P.238
	125 × 100	569	FHS-125	P.237
	127 × 119	579	LSK-1157-6	P.238
	150 × 120	637	FHS-150	P.237
	152 × 143	647	LSK-1157-7	P.238
	38 × 39	167	28300	P.232
	50 × 50	226	28400	P.232
	58 × 38	167	27900	P.235
	68 × 43	294	AS-HG-SUS-M3020	P.267
	68 × 50	294	AS-HG-SUS-M3030	P.267
	68 × 57	294	AS-HG-SUS-M3040	P.267
	68 × 64	294	AS-HG-SUS-M4040	P.267
	72 × 38	167	27800	P.235
	74 × 38	167	28500	P.234
	104 × 38	167	28000	P.234
	105 × 26.5	118	50704	P.232
	158 × 26.5	118	50706	P.232
5	50 × 50	275	LSF-50	P.230
	65 × 65	353	LSF-65	P.230
6	75 × 75	500	LSF-75	P.230
	100 × 100	618	LSF-100	P.230
	210 × 150	1960	HG-LSC210(N)	P.238

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
0.8	25 × 20	20	F-25A	P.232
	32 × 22	20	F-32A	P.232
	38 × 26	29	F-38A	P.232
	51 × 30	39	F-51A	P.232
1	64 × 33	59	F-64A	P.232
	76 × 41	69	F-76A	P.232
3	60 × 50	177	D-CH-60	P.239
	90 × 60	275	D-CH-90	P.239
	100 × 80	294	D-CH-100	P.239

Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3.5	65 × 60	147	HG-CV-65(TNS)	P.262
	65 × 60	147	AS-HG-CV-65	P.262
	65 × 60	–	HG-CVT65-15	P.261
	100 × 60	226	HG-CV-100(TNS)	P.262
	100 × 60	226	AS-HG-CV-100	P.262
	100 × 60	–	HG-CVT100-20	P.261
3.8	68 × 43	147	AS-HG-AL-M3020	P.266
	68 × 50	147	AS-HG-AL-M3030	P.266
	68 × 57	147	AS-HG-AL-M3040	P.266
	68 × 64	147	AS-HG-AL-M4040	P.266

Thickness (t)	Material: Brass			
	L × W	Load Capacity N/2 pcs	Item Name	Page
2.3	25 × 32	49	KHB-25CR	P.231
	30 × 32	59	KHB-30CR	P.231
	40 × 32	78	KHB-40CR	P.231
	50 × 32	98	KHB-50CR	P.231
	60 × 32	118	KHB-60CR	P.231
	65 × 32	127	KHB-65CR	P.231
	75 × 32	147	KHB-75CR	P.231
	80 × 32	157	KHB-80CR	P.231
	90 × 32	177	KHB-90CR	P.231
	100 × 32	206	KHB-100CR	P.231

Thickness (t)	Material: Resin			
	L × W	Load Capacity N/2 pcs	Item Name	Page
8	100 × 80	98	HG-P100	P.264

Size and Load Capacity Table by Material and Thickness

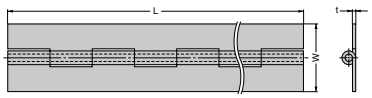
Piano Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/pc	Item Name	Page
0.8	300 × 25	137	LSN8-25-300	P.240
	300 × 32	137	LSN8-32-300	P.240
	600 × 25	275	LSN8-25-600	P.240
	600 × 32	275	LSN8-32-600	P.240
	1000 × 25	461	LSN8-25-1000	P.240
	1000 × 32	461	LSN8-32-1000	P.240
	1000 × 38	461	LSN8-38-1000	P.240
	1200 × 32	549	LHN-32-1200	P.241
	1200 × 38	549	LHN-38-1200	P.241
	1500 × 32	588	LHN-32-1500	P.241
	1500 × 38	588	LHN-38-1500	P.241
	1800 × 25	716	LSN8-25-1800	P.240
	1800 × 32	716	LSN8-32-1800	P.240
	1800 × 38	716	LSN8-38-1800	P.240
	1872 × 32	745	LHN-32-1872	P.241
	1872 × 38	745	LHN-38-1872	P.241
	2100 × 32	834	LHN-32-2100	P.241
	2100 × 38	834	LHN-38-2100	P.241

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/pc	Item Name	Page
1.5	300 × 32	255	LSN15-32-300	P.240
	350 × 32	304	LSN15-32-350	P.240
	450 × 32	392	LSN15-32-450	P.240
	600 × 32	520	LSN15-32-600	P.240
	750 × 32	598	LSN15-32-750	P.240
	850 × 32	628	LSN15-32-850	P.240
	900 × 32	667	LSN15-32-900	P.240
	1000 × 32	745	LSN15-32-1000	P.240
	1000 × 38	745	LSN15-38-1000	P.240
	1000 × 50	745	LSN15-50-1000	P.240
	1800 × 38	1370	LSN15-38-1800	P.240
	1800 × 50	1370	LSN15-50-1800	P.240
2	1000 × 50	981	LSN20-50-1000	P.240
3	1000 × 100	1370	LSN30-100-1000	P.240
	2000 × 100	2550	LSN30-100-2000	P.240
4	500 × 100	981	LSN40-100-500	P.240
	1000 × 100	1770	LSN40-100-1000	P.240

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/pc	Item Name	Page
1.6	300 × 32	216	LH-30A	P.241
	350 × 32	255	LH-35A	P.241
	450 × 32	324	LH-45A	P.241
	600 × 32	431	LH-60A	P.241
	750 × 32	539	LH-75A	P.241
	850 × 32	569	LH-85A	P.241
	900 × 32	598	LH-90A	P.241
	1000 × 32	618	LH-100A	P.241

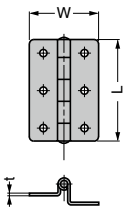
Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/pc	Item Name	Page
3.5	400 × 70	–	HG-MH400S(BR/BL)	P.242
	800 × 70	–	HG-MH800S(BR/BL)	P.242
	1100 × 70	–	HG-MH1100S(BR/BL)	P.242



Step Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.5	60 × 40	108	DH-60C	P.243
2	60 × 36.3	147	DH60N	P.243
4	39 × 43	167	28100	P.244

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.6	80 × 57	–	ROH-80	P.243
	80 × 69.5	127	KOH-80	P.243



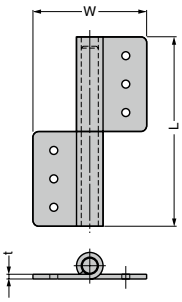
Lift-off Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.5	40 × 30	69	NH-40CL(R)	P.245
	45 × 50	29	HG-OTA45L(R)	P.252
	45 × 50	29	HG-OTB45L(R)	P.252
	50 × 30	88	BN-50S	P.246
	50 × 32	78	KN-50CL(R)	P.244
	64 × 36	108	KN-64CL(R)	P.244
	64 × 36	118	BN-64S	P.246
	75 × 50	59	HG-OTA(B)75	P.252
	100 × 50	69	HG-OTA(B)100	P.252
2	75 × 38	167	KN-75CL(R)	P.244
2.5	50 × 40	127	HNH-50CL(R)	P.247
	51 × 11	78	SKH-51S	P.246
	65 × 40	177	SNR65L(R)	P.245
	65 × 50	177	HNH-65CL(R)	P.247
	100 × 60	294	LSX-100L(R)	P.244
3	60 × 13	118	SKH-60S	P.246
	75 × 70	245	HNH-75CL(R)	P.247
	103 × 28.3	333	TS-243-30S	P.248
	125 × 100	981	HG-CV-127L(R)	P.261
	108 × 96	314	ZL-1701-10	P.249

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
4	100 × 82	422	HNH-100CL(R)	P.247
	144 × 104	559	ZL-1701-12	P.249
4.5	80 × 14.5	284	SKH-80S	P.246
5	80 × 36	88	HG-STN-40L(R)	P.247
6	60 × 46	196	HG-STN-60L(R)	P.247
	154 × 116	1961	HG-LSH-154L(R)	P.250
	154.5 × 116	1960	HG-LSW-154L(R)	P.250
	204 × 160	2177	HG-LSH-204L(R)	P.250
	204.5 × 160	2180	HG-LSW-204L(R)	P.250
8	75 × 66	284	HG-STN-75L(R)	P.247
12	268 × 300	2940	HG-KH12-268L(R)	P.251
	268 × 350	2940	HG-KM12-268L(R)	P.251
19	275 × 300	4810	HG-KH19-275L(R)	P.251
	275 × 350	4810	HG-KM19-275L(R)	P.251

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3.2	103 × 28.5	275	TS-243-30	P.248

Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3.5	65 × 60	108	HG-CV-65NR(L)	P.263
	65 × 60	108	AS-HG-CV-65NR(L)	P.263
3.8	63 × 43	78	AS-HG-AL-NL(R)3020	P.265
	63 × 50	78	AS-HG-AL-NL(R)3030	P.265
	63 × 50	78	AS-HG-AL-NL(R)4020	P.265
	63 × 57	78	AS-HG-AL-NL(R)3040	P.265
	63 × 64	78	AS-HG-AL-NL(R)4040	P.265



[Concept of Moment]

When selecting Motion Design Tech products, such as torque hinges and damper hinges, etc., the criterion is the moment of the door or cover. Moment refers to the action of the force tending to make the object rotate around a point. If the moment matches the torque (※) of the hinge, it means that the hinge is applicable.

※ Torque refers to the action of the force making the object rotate around the rotation axis. When using multiple hinges, its value is the torque multiplied by the number of hinges being used.

Formula for Calculating the Moment

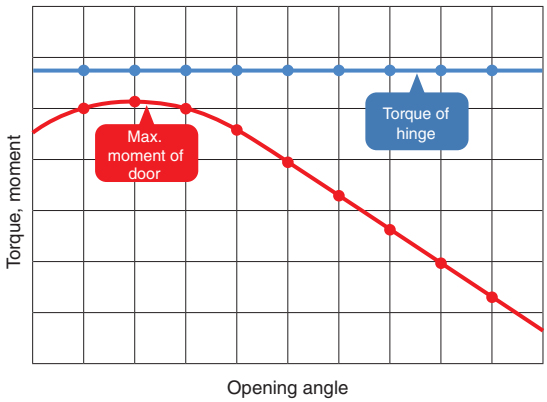
Moment of door or lid = Horizontal distance from rotation centre to centre of gravity × Weight of door or lid

Maximum moment of door or lid = Maximum horizontal distance from rotation centre to centre of gravity × Weight of door or lid

Relationship between Applicable Hinge and Moment of Door

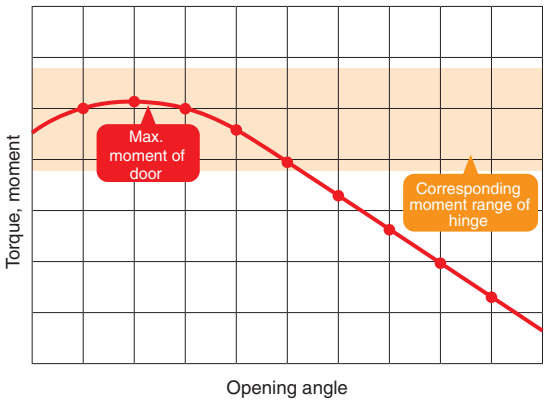
● In case of a torque hinge (Free stop)

If the torque of the hinge is more than the maximum moment of the door, then the hinge is applicable.



● In case of a damper hinge (soft motion)

If the maximum moment of the door is within the torque range of the hinge, then the hinge is applicable.

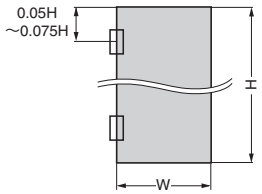


※ The moment of the door is calculated as per the horizontal distance from the rotation centre to the centre of gravity. Therefore, it changes with the opening angle.

[Concept of Load-bearing]

The load-bearing of individual hinge is calculated as per “Door width : Door height = 1:2” .

Wherein, the mounting position of the hinge is determined according to the situation that the distance from the upper end surface or lower end surface of the door to the hinge centre in longitudinal direction is within the range of 0.05 H ~ 0.075 H (H is the height of the door).



[Precautions for Use]

Torque Hinge

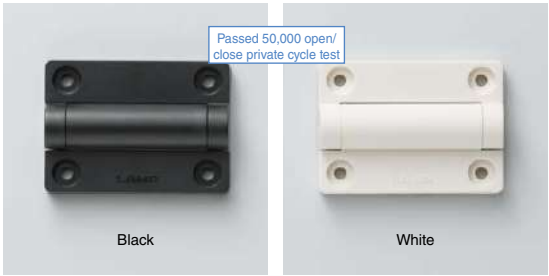
- 2 hinges per door (lid) is recommended.
- Continuous action (repeated action within short time) is not allowed.
- Avoid eccentric load on the hinge.
- Do not contact with water, oil and lubricants, etc.
- Torque refers to the torque at delivery, rather than the torque after durability test.
- Do not use in the outdoor or at dusty places to avoid significantly degrading of performance.
- Do not open beyond the specified opening angle.If force may be applied beyond the opening angle, provide a separate stopper.Failure to do so may result in damage to the hinge.

Damper Hinge

- 2 hinges per door (lid) is recommended.
- Use within the torque range.
- Do not open beyond the specified opening angle.If force may be applied beyond the opening angle, provide a separate stopper.Failure to do so may result in damage to the hinge.

COMBINATION HINGE HG-VH8

Lapcon INSTRUCTION



- Hinges with built-in damper, spring or torque unit, etc.
- Various motions by using hinges with different built-in parts in combination.
- For hinges with built-in springs, the spring tension can be adjusted with a hex key.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Lightweight lids of small equipment, etc.

[Reference door mass for vertical installation (side-opening)]
- 0.96 kg (door size: W 230 × H 350 × t 10 mm, hinge installation pitch: 280 mm. Passed 20,000 open/close private cycle test)

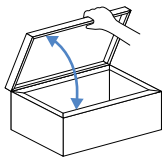
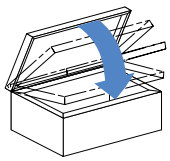
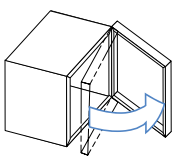
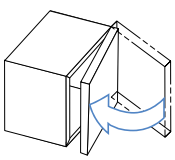
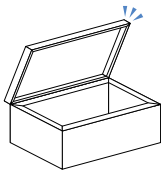
[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are aligned.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

Video Link

Selection Tool — Sasuga-kun (Soft-close)

Selection Tool — Sasuga-kun (Free stop)

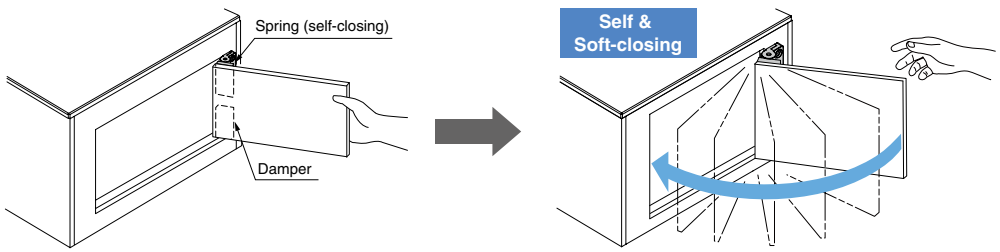
[Hinge Motions] For top-opening lid

Part Built-in		Without Part Built-in	Damper	Spring (self-opening)	Spring (self-closing)	Torque
Motions		 Freely opens and closes as normal hinges.	Soft-close  Slowly closes.	Self-opening  Always tries to open.	Self-closing  Always tries to close.	Free stop  Stops at any position.
Possible Combinations (built-in unit)	Without Part Built-in	Yes	Yes	Yes	Yes	Yes
	Damper	Yes	Yes	Yes	Yes	No
	Spring (self-opening)	Yes	Yes	Yes	No	It depends
	Spring (self-closing)	Yes	Yes	No	Yes	It depends
	Torque	Yes	No	It depends	It depends	Yes

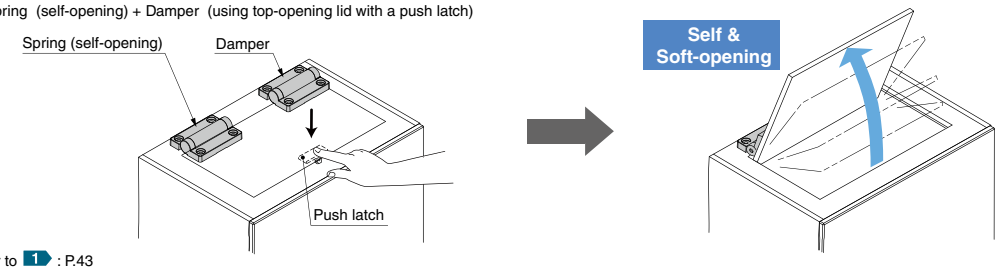
(It depends) Please carry out thorough tests before using since performance with these combinations might vary depending on door size and weight.

[Combination Example]

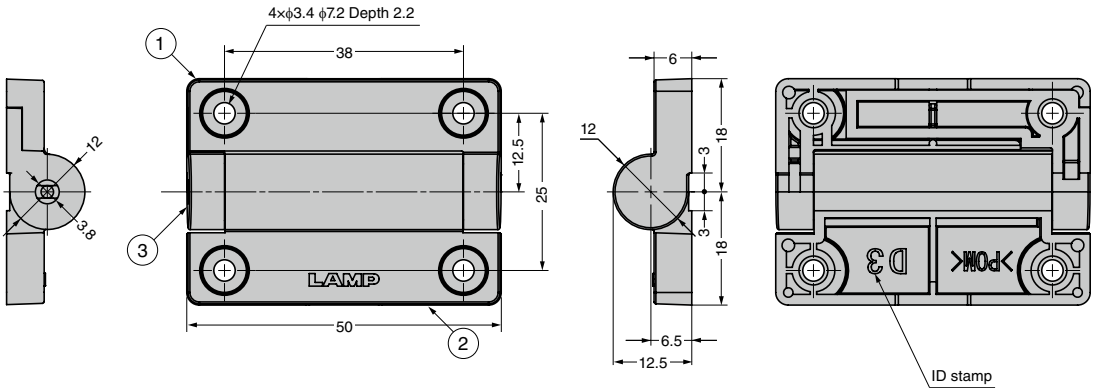
● Spring (self-closing) + Damper (lateral-opening)



● Spring (self-opening) + Damper (using top-opening lid with a push latch)



Refer to 1 : P.43



No.	Part Name	Material	Colour
①	Bracket A	POM	Black, White
②	Bracket B		
③	Bracket C		
–	Damper URD8-3	POM, etc.	–
–	Spring Unit URS8	–	–
–	Torque Unit URT8	–	–

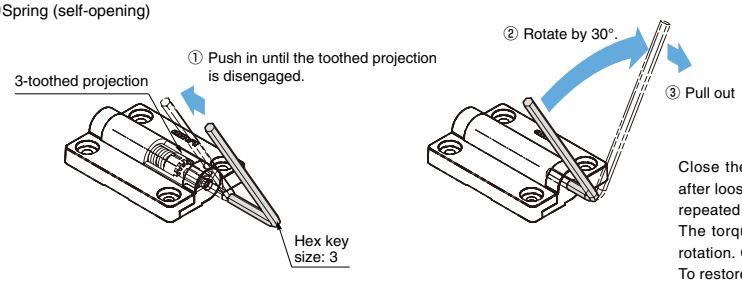
Lateral-opening door weight: Max. 810g
Reference door size: W300×H450×t 5 mm
Acrylic plate, Density 1.2 g/cm³

RoHS	CAD	Item Code	Item Name	Part Built-in	ID Stamp	Colour	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-032-616	HG-VH8-N-BL	–	N	Black	–	–	270°	11	40	640
G	3D	170-032-617	HG-VH8-N-WT			White					40	640
G	3D	170-032-618	HG-VH8-D3-BL	Damper	D3	Black	0.022~0.038	0.22~0.39		14	40	640
G	3D	170-032-619	HG-VH8-D3-WT			White					40	640
G	3D	170-032-620	HG-VH8-OP-BL	Spring (self-opening)	OP	Black	※	※		18	40	640
G	3D	170-032-621	HG-VH8-OP-WT			White					40	640
G	3D	170-032-622	HG-VH8-CL-BL	Spring (self-closing)	CL	Black					40	640
G	3D	170-032-623	HG-VH8-CL-WT			White					40	640
G	3D	170-032-624	HG-VH8-T15-BL	Torque	T1	Black	0.15±0.05	1.53±0.51		19	40	640
G	3D	170-032-625	HG-VH8-T15-WT			White					40	640
G	3D	170-032-626	HG-VH8-T35-BL		T3	Black	0.35±0.1	3.57±1.02			40	640
G	3D	170-032-627	HG-VH8-T35-WT			White					40	640

※ Increased by 0.0153N・m (0.16kgf・cm) by adjusting the spring tension. The initial value of the spring tension is 0N・m.

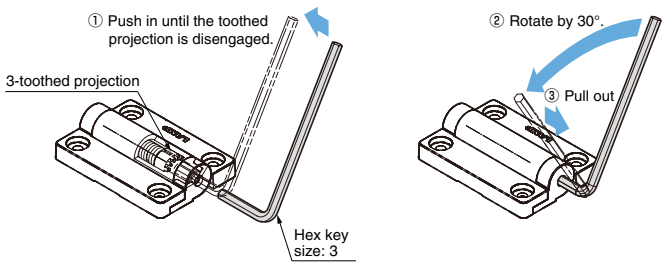
[How to Adjust Spring Tension]

●Spring (self-opening)



Close the lid, and check if the lid can be opened smoothly after loosing your hand(s). If the spring tension is not enough, repeated steps ① ~ ③.
The torque will be increased by 0.0153N・m at each 30° of rotation. Generally no more than 4 times (120°) are required. To restore to the initial state, rotate in the direction opposite to above.

●Spring (Self-closing)

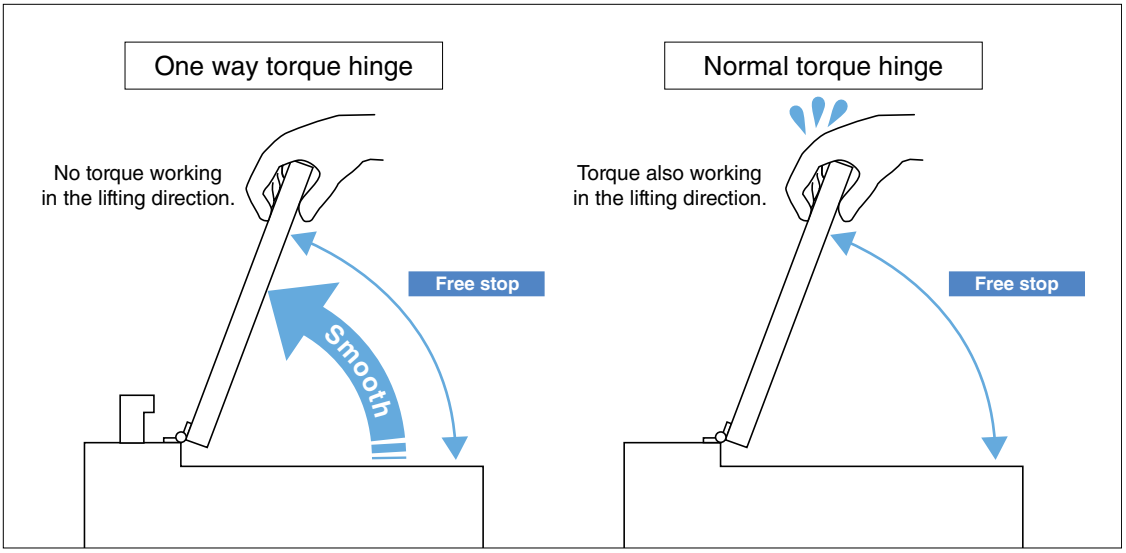


Open the lid and check if the lid can be closed smoothly after loosing your hand(s). If the spring tension is not enough, repeated steps ① ~ ③.
The torque will be increased by 0.0153N・m at each 30° of rotation. Generally no more than 4 times (120°) are required.To restore to the initial state, rotate in the direction opposite to above.

ONE WAY TORQUE HINGE

Free stop + Easy operation

Friction in one direction only (free stop): Allows for frictionless handling of the door or lid in the opposite direction.



[List of One Way Torque Hinges]

Item Name			
	HG-TQS15	HG-TQJ100	HG-TQA
Torque N · m	$1.5^{+40\%}_{-20\%}$	0~10 (Adjustable)	$9.0^{+40\%}_{-20\%}$
Page	P.47	P.48	P.49
Item Name			
	HG-TQW8080	HG-TQU15	HG-TQWA15
Torque N · m	$8.0^{\pm 20\%}$	$1.5^{+40\%}_{-20\%}$	$1.5^{+40\%}_{-20\%}$
Page	P.50	P.55	P.57

[Other One Way Torque Products]

FREE STOP STAY (ONE WAY) S-TAR P.386

- Torque stay for upward-opening, downward-opening and top-opening.
- Friction in one direction only, realising smooth opening.
- Torque adjustable with a hex key (included).
- Torque: 0 ~ 7N · m (adjustable)

ONE WAY TORQUE HINGE HG-TQS15

Free stop
Passed 20,000 open/close private cycle tests

- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

[Applications]
- Medical equipment, inspection equipment, various automatic devices

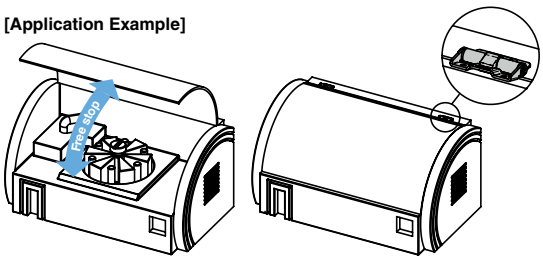
[Reference door mass for vertical installation (side-opening)]
- 7 kg (door size: W 450 × H 700 × t15 mm, hinge installation pitch: 300 mm. Passed 20,000 open/close private cycle test)

[Remarks]
- Be sure to read the "Cautions" 1.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

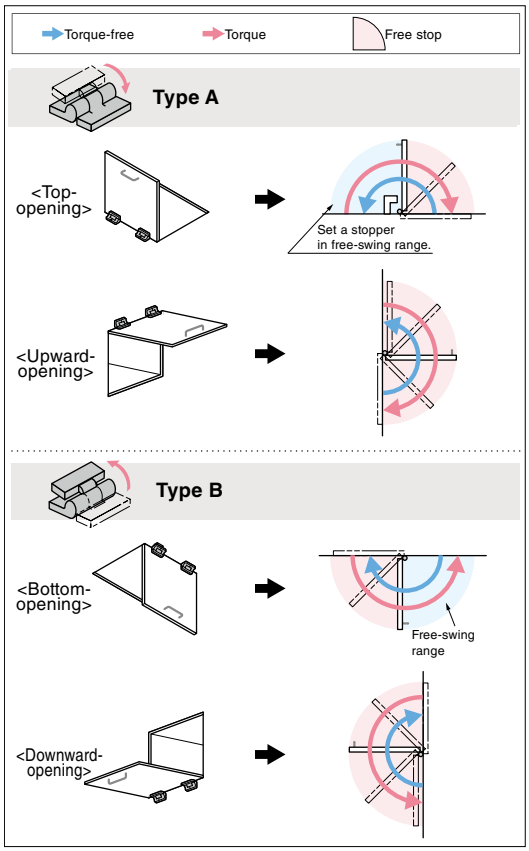
[Recommended Screws]
- M5 screws

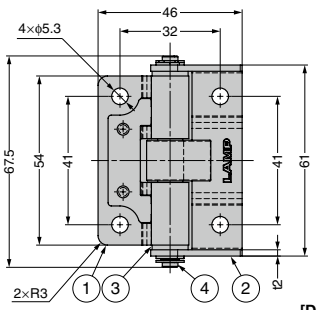
Selection Tool
Sasuga-kun

[Application Example]

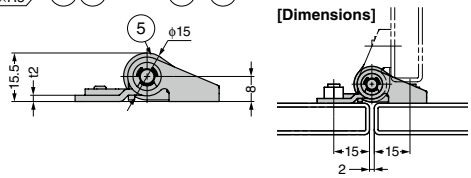


[Torque Direction and Free-stop Range]



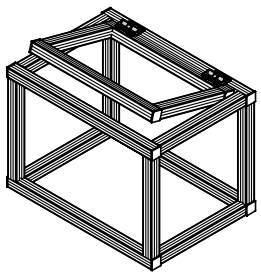


[Dimensions]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polyacetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Aluminium Installation Frame]



Available for installation on aluminium frames of □30 or less.

RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N·m	Torque kgf·cm	Weight (g)
G	3D	170-049-851	HG-TQS15-A	Hinge Opening Direction	1.5 $^{+40\%}_{-20\%}$	15.3 $^{+40\%}_{-20\%}$	89
G	3D	170-046-655	HG-TQS15-B	Hinge Closing Direction			

Refer to 1: P.43

ADJUSTABLE ONE WAY TORQUE HINGE HG-TQJ100

INSTRUCTION

- Friction in one direction only: Allows for frictionless handling of the door in the opposite direction.
- Torque adjustable from 0 to 10N・m.
- High torque type with max. torque up to 10N・m.
- Two types (friction in opening direction and in closing direction) available.
- Torque is stable.
- Cover attached to torque adjustment part for clean appearance.

[Specifications]

- Operating temperature: 0℃~40℃

[Applications]

- Impact-free opening and closing of door.Medical equipment, FA equipment, and OA equipment, etc.

[Remarks]

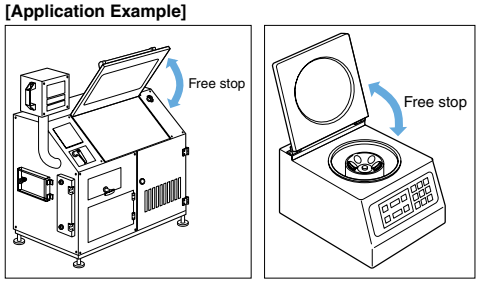
- Be sure to read the “Cautions” 1.
- Use all mounting holes.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not remove the torque adjustment screw.
- Use a hex key (nominal size 5) for torque adjustment.
- Readjust the torque moment when it lowers.
- Be sure to fix the slit on the opposite shaft when turning the torque adjustment nut.

Video Link

Selection Tool

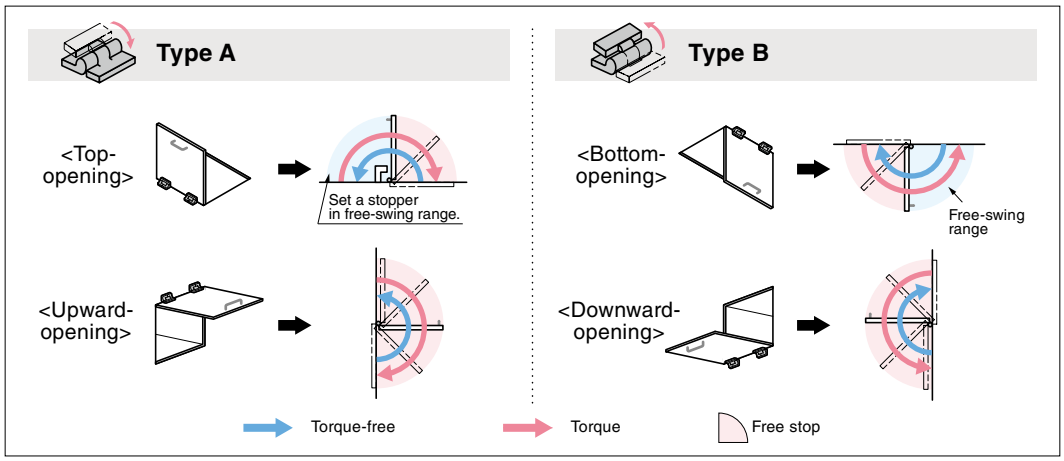
Sasuga-kun

[Application Example]

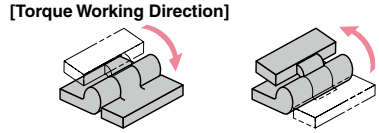


Since torque is adjustable from 0 to 10N・m, applicable to various doors.

[Torque Direction and Free-stop Range]



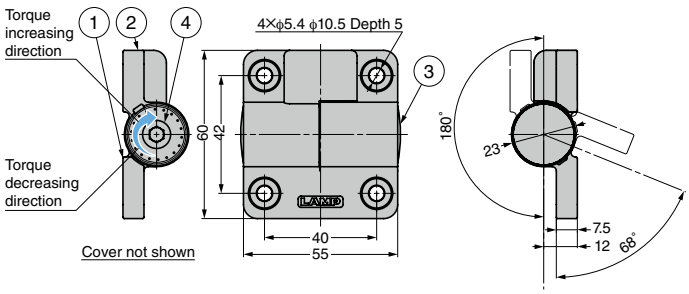
[Torque Working Direction]



Opening direction — Item name suffixed with “A”

Closing direction — Item name suffixed with “B”

No.	Part Name	Material	Finish / Colour
①	Bracket A	Zinc Alloy	Silver (baking paint)
②	Bracket B		
③	Cover	PP	Dark Grey
④	Torque Adjustment Nut	Steel	–



RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-032-969	HG-TQJ100-A	Hinge Opening Direction	0~10	0~102	242	12	96
G	3D	170-032-970	HG-TQJ100-B	Hinge Closing Direction				12	96

Refer to 1 : P.43

ONE WAY TORQUE HINGE HG-TQA

Sold in pairs.

- Friction in one direction only: Allows for frictionless handling of the door in the opposite direction.
- Torque is stable.

[Specifications]

- Operating temperature: 0℃~50℃

[Applications]

- Impact-free opening and closing of door.Medical equipment, FA equipment, and OA equipment, etc.

[Remarks]

- Be sure to read the "Cautions" 1.
- Use the door at less than 80% of torque (7.2N・m or less).
- Torque will decrease at low temperature.
- Not suited to vibration environment.
- Hexalobular socket head screw (shown below as ◎) may not be used for torque adjustment.Do not tighten or loosen.
- Install an external stopper to hold the door within the range where torque is not effective (Refer to the lower left diagram for details).
- Install a catch to keep the door closed.
- Before installation, check if the installing position is strong enough.
- Install the torque unit (male) at the fixed side while the clutch unit (female) at the movable side.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

Video Link

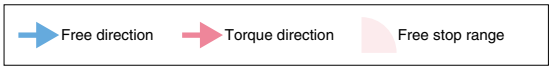
Selection Tool

Sasuga-kun

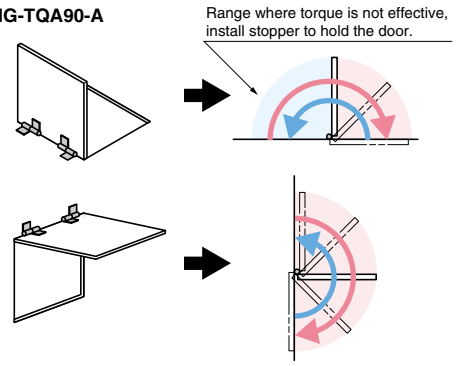
[Recommended Screws]

- M5 binding head screws

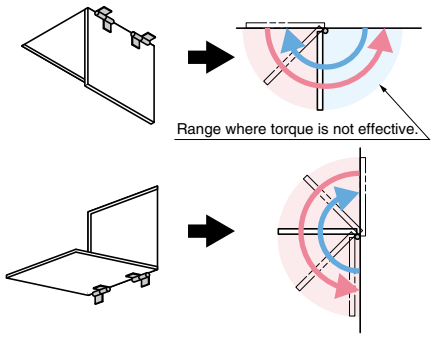
[Torque and Free Stop Range]

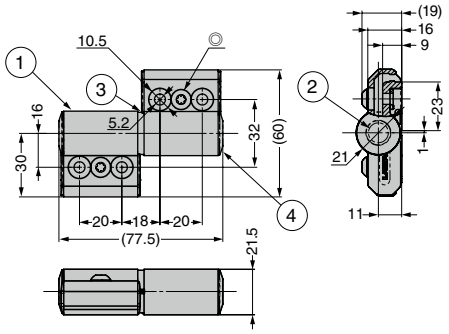


●HG-TQA90-A



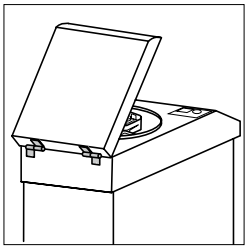
●HG-TQA90-B



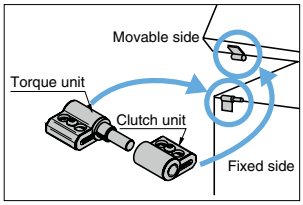


No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Anodised Silver
②	Shaft	Stainless Steel	Plain
③	Sleeve	POM	Black
④	Cover		

[Application Example]



[Installation]



RoHS	CAD	Item Code	Item Name	Torque N·m / pair※	Torque kgf·cm / pair※	Weight (g / pair)	Box (pairs)	Carton (pairs)
G	3D	170-021-244	HG-TQA90-A	$9.0^{+40\%}_{-20\%}$	$91.8^{+40\%}_{-20\%}$	270	1	10
G	3D	170-021-245	HG-TQA90-B				1	10

Refer to 1 : P.43

※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

TWO STEPS ONE WAY TORQUE HINGE HG-TQW8080

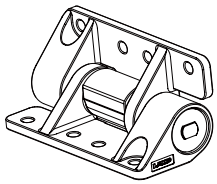
- Generates torque in downward direction only. (Operation range: 0 - 180˚)
- The torque direction reverses when the hinge opens at over 90˚. This allows a flap to hold in position at all angles of 180˚ with smooth and light operation.

[Specifications]
- Operating temperature: 0˚C~40˚C

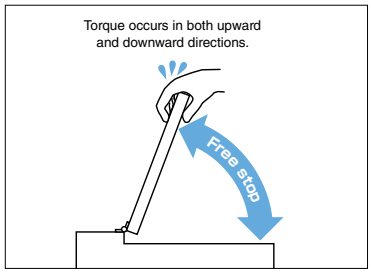
[Application]
- Doors that should not be subjected to impact when opening and closing. Medical equipment, FA equipment, OA equipment, etc.

[Remarks]
- Use all installation holes.
- Keep the centre of the hinge shafts level to prevent misalignment during installation.

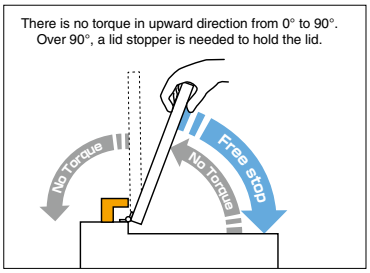
Factory setting



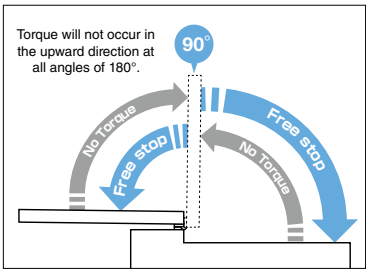
Video Link



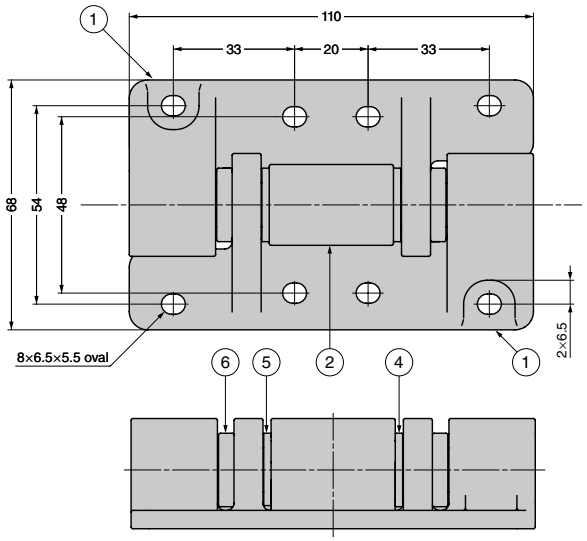
Conventional torque hinge

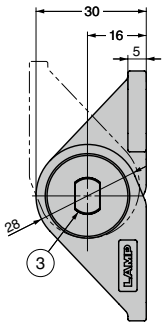


Conventional one-way torque hinge



HG-TQW8080 hinge





Operation range (180˚)

Selection Tool

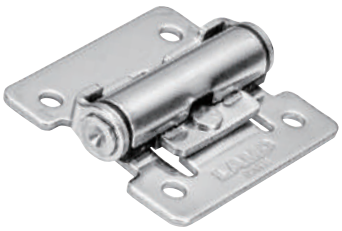
Sasuga-kun

No.	Part Name	Material	Finish/Colour
①	Base	Zinc Alloy	Satin Chrome
②	Bracket		
③	Shaft	Stainless Steel (SUS)	—
④	Plug	Polyacetal (POM)	Black
⑤	Washer A		
⑥	Washer B		

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-041-284	HG-TQW8080	8.0±20%	81.6±20%	625	8	16

TORQUE HINGE HG-TS

SUS



Free stop
Greaseless
Passed 20,000 open/ close private cycle test

- Sugatsune's patented technology reduces the number of parts for a cost-effective solution.
- Can be installed to aluminium frame.

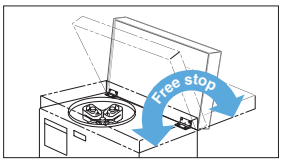
[Specifications]
- Operating temperature: -10°C~50°C
- Operating humidity: 90%RH or less

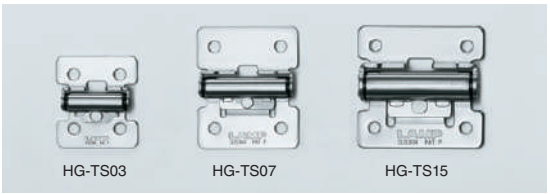
[Applications]
- Stereo equipment, FA equipment, and various automatic equipment

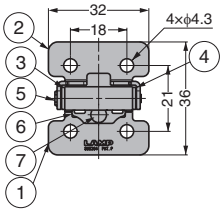
[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool
Sasuga-kun

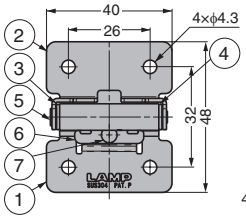
[Application Example]



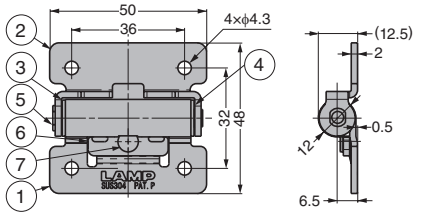




HG-TS03



HG-TS07



HG-TS15

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Rotating Tube L	POM	Black
④	Rotating Tube R		

No.	Part Name	Material	Finish / Colour
⑤	Shaft	Stainless Steel (SUS303)	–
⑥	Press Washer	Stainless Steel (SUS304)	Barrel Polished
⑦	Pin	Stainless Steel	–

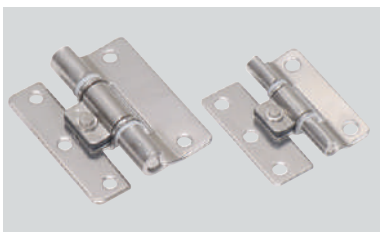
RoHS	CAD	Item Code	Item Name	Torque N·m/pc※	Torque kgf·cm/pc※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-018-501	HG-TS03	0.35 +40% −20%	3.6 +40% −20%	15.0	50	500
G	3D	170-018-502	HG-TS07	0.7 +40% −20%	7.1 +40% −20%	27.5	50	500
G	3D	170-018-503	HG-TS15	1.5 +40% −20%	15.3 +40% −20%	64.1	20	200

Refer to 1 : P.43

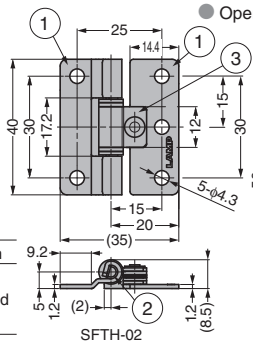
※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

STAINLESS STEEL TORQUE HINGE SFTH

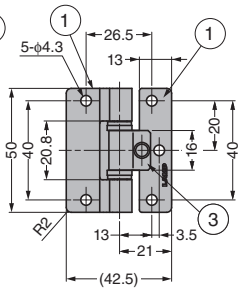
SUS

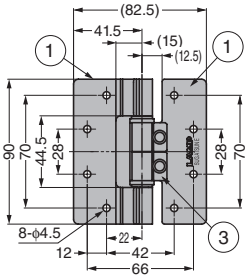


- Hinge with friction torque holds lid/door in desired position.
- Stainless steel material ideal for corrosive environments.
- Operating temperature: 5°C~40°C.



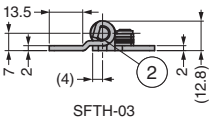
SFTH-02



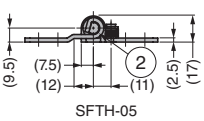


No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Shaft	Stainless Steel (SUS303)	
③	Body B	Stainless Steel (SUS301)	

RoHS	CAD	Item Code	Item Name	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-199	SFTH-02-5	5±1	21	50	500
G	3D	170-098-198	SFTH-03-9	9±2	51	30	300
G	3D	170-098-197	SFTH-03-19	19±2			
G	3D	170-098-196	SFTH-05-35	35±5	195	10	100
G	3D	170-098-200	SFTH-05-58	58±5			



SFTH-03



SFTH-05

TORQUE HINGE HG-TP

Free stop
Greaseless
Passed 20,000 open/ close private cycle test

HG-TP20 HG-TP30 HG-TP45

- A combination of plastic and metal is used for friction in order to prevent metallic dust caused by metal to metal contact.

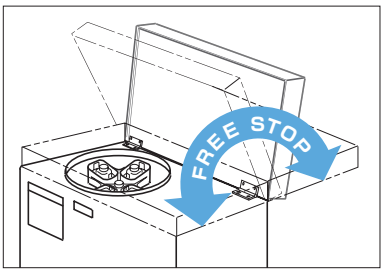
[Specifications]
- Operating temperature: -10°C~40°C
- Can be used in both vertical and horizontal directions.

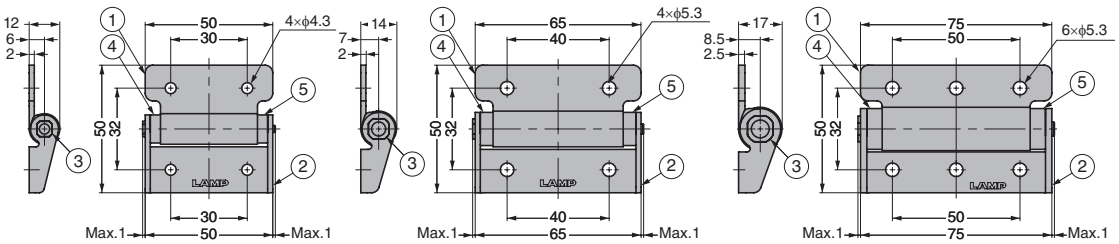
[Applications]
- Stereo equipment, FA equipment, and various automatic equipment

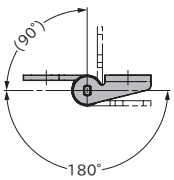
[Reference door mass for vertical installation (side-opening)]
- 10 kg (door size: W 900 × H 1800 × t 25 mm, hinge installation pitch: 980 mm. Passed 30,000 open / close private cycle test)
- Be sure to read the "Cautions" 1.
- Ensure that hinge shafts are leveled and aligned.
- Install a lid to the bracket A.

[Remarks]
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

[Application Example]







Torque working range

No.	Part Name	Material	Finish / Colour
①	Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	—
④	Plug	POM	Black
⑤	Washer		

Selection Tool

Sasuga-kun

RoHS	CAD	Item Code	Item Name	Torque N.m/pc	Torque kgf.cm/pc	Weight (g)	Box (pc)	Carton (pc)
G	3D	170-043-653	HG-TP20	$2^{\pm 25\%}$	$20.3^{\pm 25\%}$	60	50	200
G	3D	170-043-654	HG-TP30	$3^{\pm 25\%}$	$30.5^{\pm 25\%}$	90	25	100
G	3D	170-043-655	HG-TP45	$4.5^{\pm 25\%}$	$45.8^{\pm 25\%}$	150	25	100

Refer to 1 : P.43

TORQUE HINGE HG-TE

Free stop

Passed 20,000 open/close private cycle test

- Holds the lid or cover at any angle.
- Can be used horizontally or vertically.
- Optional cover conceals the screw part.

HG-TE03

HG-TE08

HG-TE15

With optional cover mounted

[Specifications]

- Operating temperature: -10˚ C ~ 50˚ C

[Reference door mass for vertical installation (side-opening)]

- 15 kg (door size: W300 × H600mm, hinge installation pitch: 300 mm. Passed 20,000 open/close private cycle test)

[Applications]

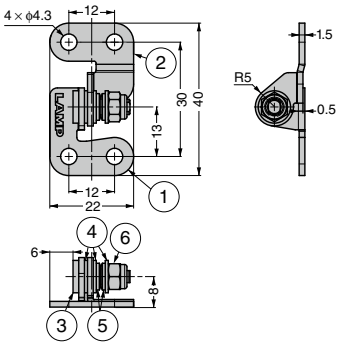
- Acoustic equipment, FA equipment, various automatic devices, medical equipment, analytical instruments

[Remarks]

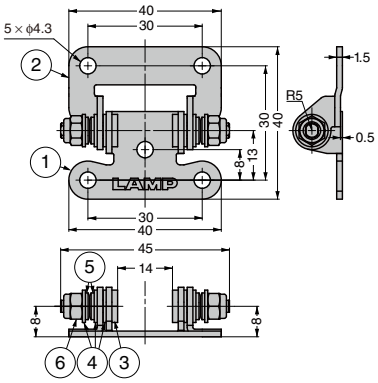
- Be sure to read the “Cautions” 1 .
- When installing, ensure that both hinge shafts are aligned.
- Mount the lid on the movable body.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

[Optional Parts]

- Cover

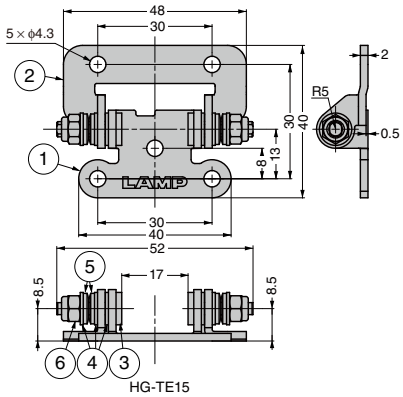


HG-TE03



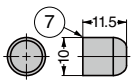
HG-TE08

[Application Example]

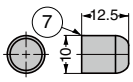


HG-TE15

[Options] Cover

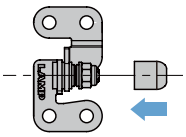


HG-TEC1



HG-TEC2

[Cover Installation Dimensions]



Mount covering the screw part

No.	Part Name	Material	Finish/Colour
①	Body A	Stainless Steel (SUS304)	Barrel Polished
②	Body B		
③	Shaft	Steel	–
④	Friction Plate	Stainless Steel (SUS304)	
⑤	Disc Spring	Steel	
⑥	Lock Nut M4	Stainless Steel (SUS304)	
⑦	Cover	PBT Resin	Grey

[Body]

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)
G	3D	170-048-663	HG-TE03	$0.3^{+40\%}_{-20\%}$	$3.1^{+40\%}_{-20\%}$	13
G	3D	170-048-664	HG-TE08	$0.8^{+40\%}_{-20\%}$	$8.2^{+40\%}_{-20\%}$	25
G	3D	170-048-665	HG-TE15	$1.5^{+40\%}_{-20\%}$	$15.3^{+40\%}_{-20\%}$	34

[Cover] Optional Parts

Sold in units of 1 pc. When using on the right and left screw parts of HG-TE08 and HG-TE15, purchase 2 pcs.

RoHS	CAD	Item Code	Item Name	Corresponding Hinge	Weight (g)
G	3D	170-048-666	HG-TEC1	HG-TE03, HG-TE08	0.4
G	3D	170-048-667	HG-TEC2	HG-TE15	0.4

Refer to 1 : P.43

CONCEALED TORQUE HINGE HG-TU

SUS

- Installation on the back side of the door for clean appearance.
- Can be used horizontally or vertically.
- A torque-free type (HG-TUF) is newly available. The total torque force can be adjusted by using both torque and torque-free types.

[Specifications]

- Tempreture: -10 ℃ ~ 50 ℃

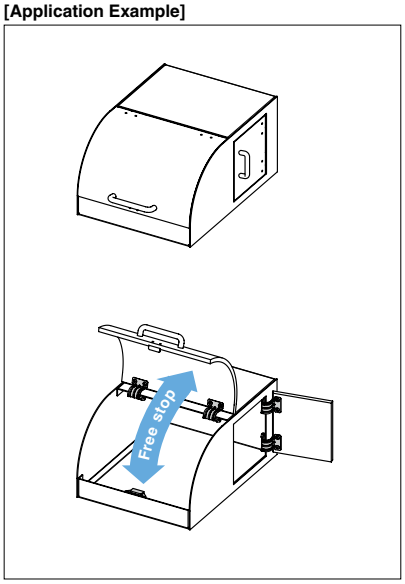
[Reference door mass for vertical installation (side-opening)]

- 4 kg (door size: W 500 × H 500 × t 2 mm, hinge installation pitch: 300 mm. Passed 20,000 open / close private cycle test)

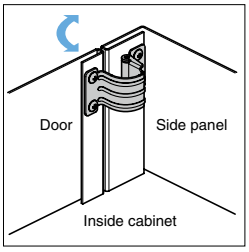
[Remarks]

- Be sure to read the “Cautions” 1.
- When installing, ensure that both hinge shafts are aligned.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

[Application Example]



[Installation]



Selection Tool

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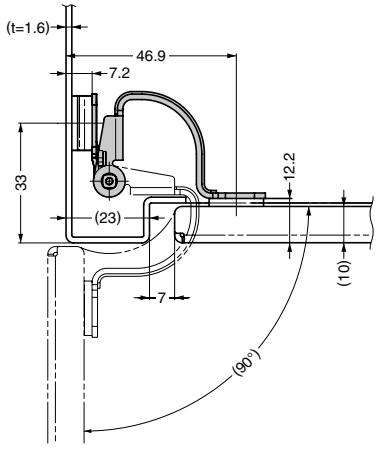
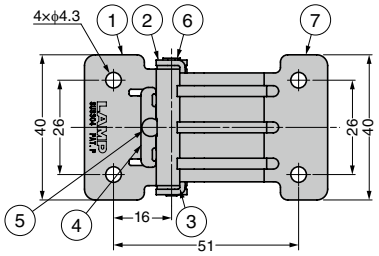
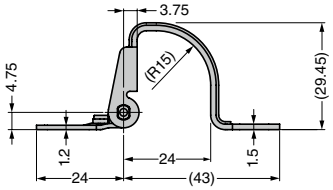
[Dimensions]







No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Fixing Tube L	POM	Black
③	Fixing Tube R		
④	Press Washer	Stainless Steel (SUS304)	Barrel Polished
⑤	Pin	Stainless Steel	–
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Base	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Torque N·m/pc※	Torque kgf·cm /pc※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-304	HG-TU03	0.35 +40% −20%	3.6 +40% −20%	50	20	200
G	3D	170-022-305	HG-TU07	0.7 +40% −20%	7.1 +40% −20%			
G	3D	170-052-628	HG-TUF	–	–			

Refer to 1 : P.43

※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

ONE WAY CONCEALED TORQUE HINGE HG-TQU15

Free stop
Passed 20,000 open/ close private cycle tests

- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

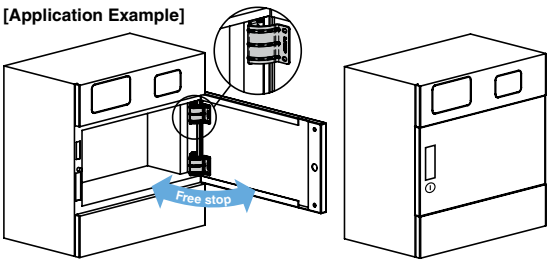
[Applications]
- Medical equipment, inspection equipment, various automatic devices

[Reference door mass for vertical installation (side-opening)]
- 7 kg (door size: W 450 × H 700 × t 15 mm, hinge installation pitch: 300 mm. Passed 20,000 open / close private cycle test)

[Remarks]
- Be sure to read the "Cautions" 1.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

[Recommended Screws]
- M5 screws

[Application Example]



[Torque Direction and Free-stop Range]

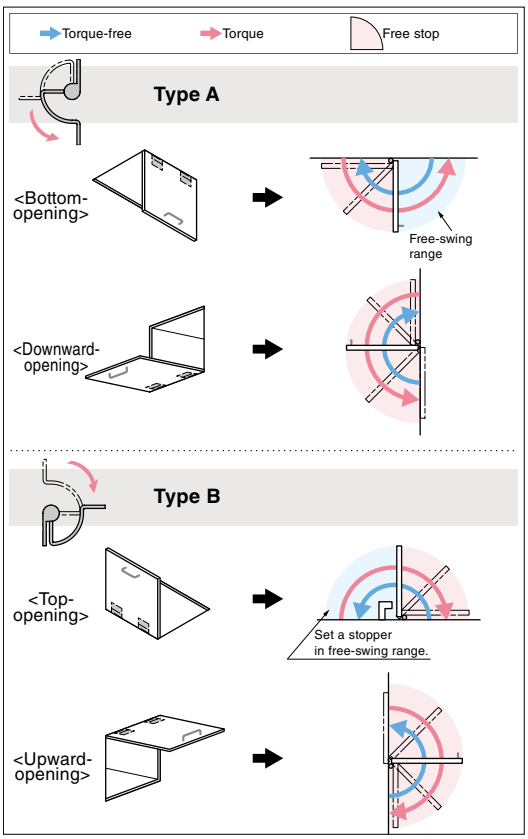
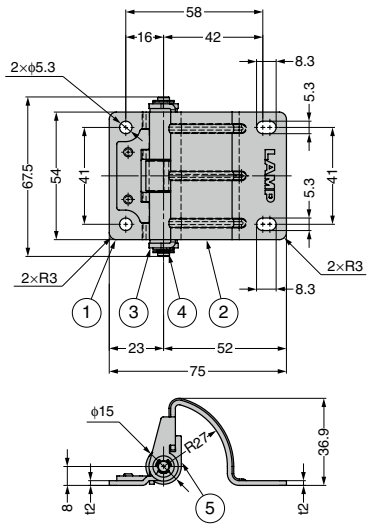
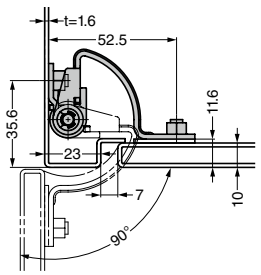


*Figure shows torque direction.
Check the actual opening and closing angles in the Reference Dimensions.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polyacetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Reference Dimensions]



Selection Tool
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RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N·m	Torque kgf·cm	Weight (g)
G	3D	170-049-852	HG-TQU15-A	Hinge Opening Direction	$1.5^{+40\%}_{-20\%}$	$15.3^{+40\%}_{-20\%}$	145
G	3D	170-046-656	HG-TQU15-B	Hinge Closing Direction			

Refer to 1: P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED TORQUE HINGE HG-TUWA Wide-opening

- High torque and wide opening angle (130˚) type of HG-TU 1.
- Installation on the back side of the door for clean appearance.
- Can be used horizontally or vertically.

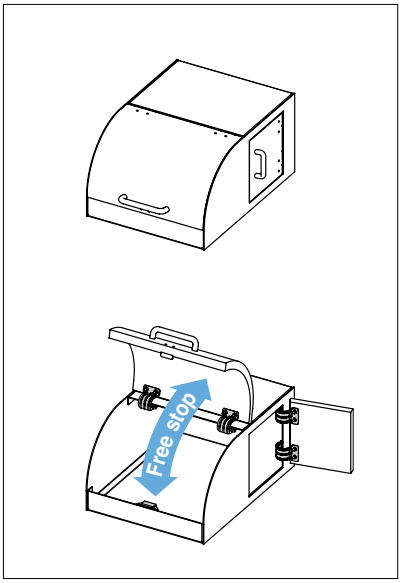
[Reference door mass for vertical installation (side-opening)]

- 7.5 kg (door size: W 550 × H 1100 × t 20 mm, hinge installation pitch: 935 mm. Passed 20,000 open / close private cycle test)

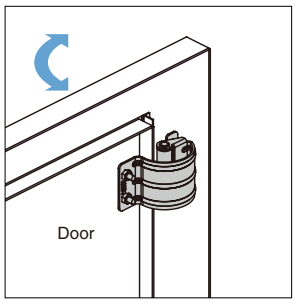
[Remarks]

- Be sure to read the “Cautions” 2.
- When installing, ensure that both hinge shafts are aligned.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

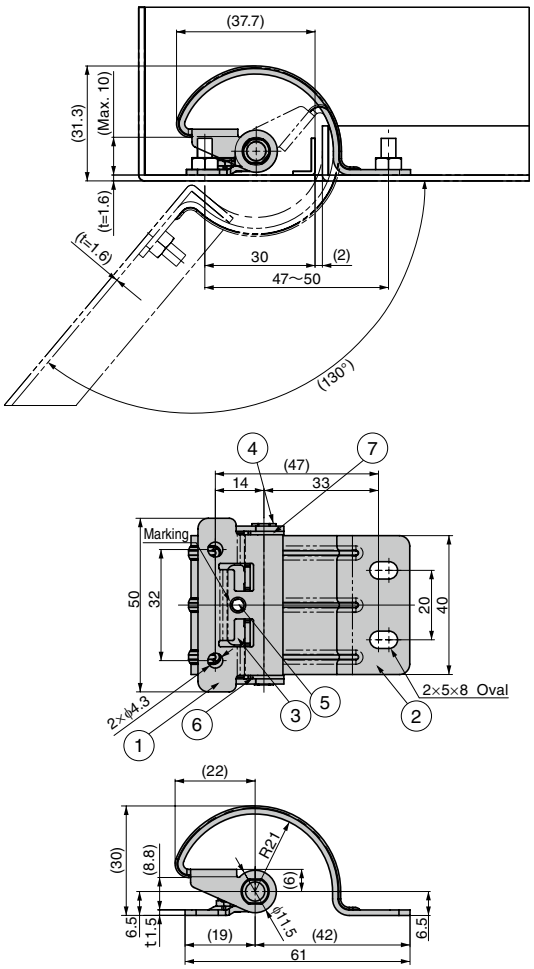
[Application Example]



[Installation]



[Dimensions]



Selection Tool

Sasuga-kun

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Press Washer		
④	Shaft	Stainless Steel (SUS303)	–
⑤	Pin	Stainless Steel	
⑥	Fixing Tube L	POM	Black
⑦	Fixing Tube R		

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-313	HG-TUWA07	0.7 +40% −20%	7.1 +40% −20%	88	20	100
G	3D	170-034-314	HG-TUWA15	1.5 +40% −20%	15.3 +40% −20%		20	100

Refer to 1 : P.54, 2 : P.43

ONE WAY CONCEALED TORQUE HINGE HG-TQWA15 Wide-opening

Free stop
Passed 20,000 open/ close private cycle tests

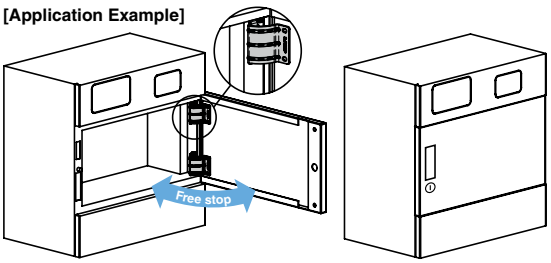
- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

[Applications]
- Medical equipment, inspection equipment, various automatic devices

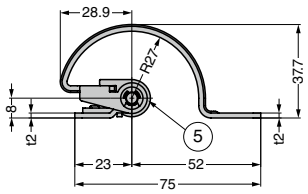
[Reference door mass for vertical installation (side-opening)]
- 7 kg (door size: W 450 × H 700 × t 15 mm, hinge installation pitch: 300 mm. Passed 20,000 open / close private cycle test)

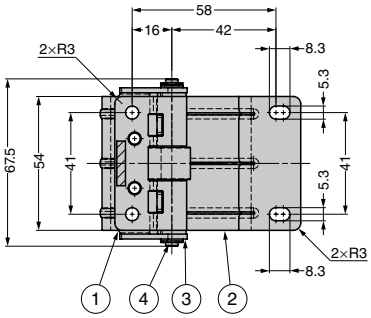
[Remarks]
- Be sure to read the "Cautions" 1.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

[Application Example]



[Recommended Screws]
- M5 screws





No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polyacetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Torque Direction and Free-stop Range]

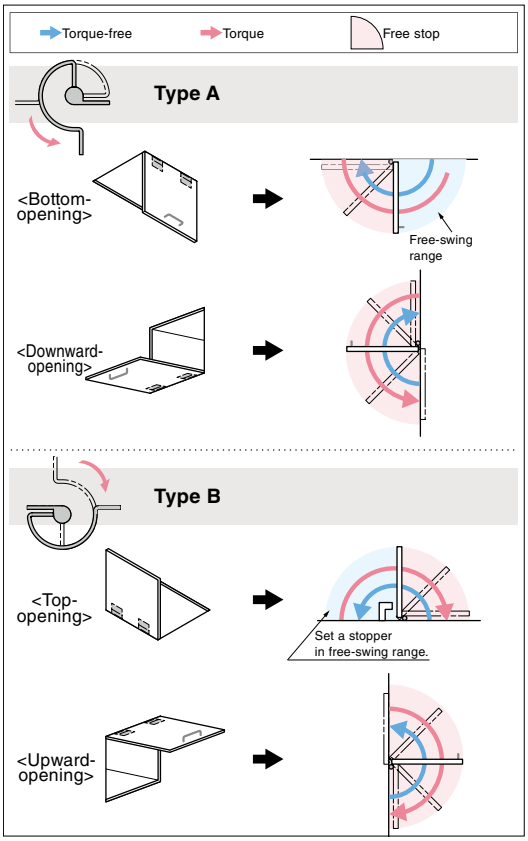
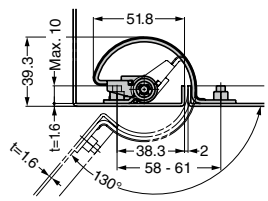


*Figure shows torque direction.
Check the actual opening and closing angles in the Reference Dimensions.

[Reference Dimensions]



Selection Tool
Sasuga-kun

RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N·m	Torque kgf·cm	Weight (g)
G	3D	170-049-853	HG-TQWA15-A	Hinge Opening Direction	1.5 +40% −20%	15.3 +40% −20%	183
G	3D	170-046-657	HG-TQWA15-B	Hinge Closing Direction			

Refer to 1: P.43

HIGH-RIGIDITY SWIVEL TORQUE HINGE HG-S50-HR50 Unbalanced Load Type

Free stop

Passed 30,000 open/close private cycle test

- Has high rigidity and can handle unbalanced load.
- Can rotate 360° and hold at any angle.
- Centre hole for cable management.
- Rotation angle can be controlled with the supplied angle control bolt.

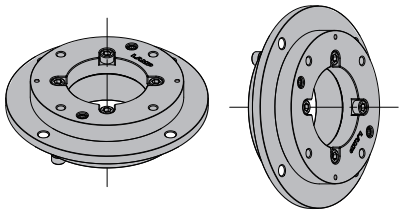
[Applications]
- Operation panel of machine tools and LCD, etc.

[Others]
- Usage conditions for vertical mounting is under verification.

[Remarks]
- Be sure to read the "Cautions" 1.
- Never turn top flange screws (6 pcs), at risk of malfunction.

[Parts Included]
- Hexagon Socket Head Cap Screw M5x12 (2 pcs) for angle control
- Spring washer 5 (2 pcs)

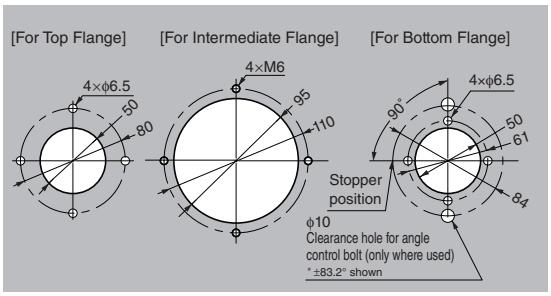
[Mounting Direction]



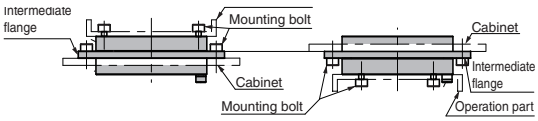
Horizontal Mounting　　Vertical Mounting

Video Link

[Cut Out Dimensions]



[Horizontal Installation Example]

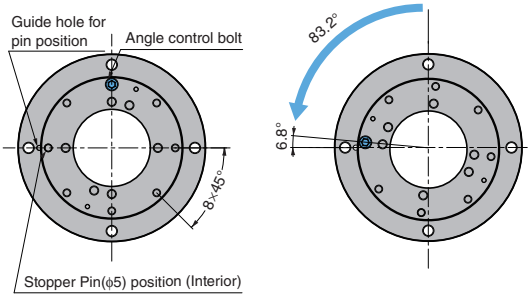


When mounting the operation part on the top flange

When mounting the operation part on the bottom flange

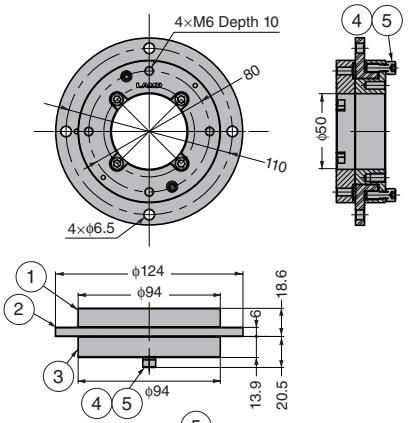
[Rotation Angle Control Function]

Rotation angle can be controlled by mounting the supplied angle control bolt.

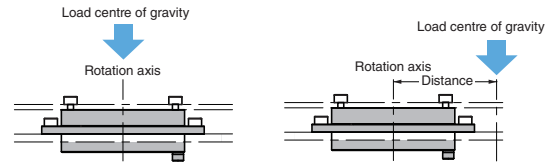


Before Rotation　　After Rotation

There are 8 angle control screw holes at 45° intervals; the actual rotation angles are 6.8° narrower because the stopper pins are blocked by bolts.



[Vertical Load Capacity & Allowable Moment]



Vertical Load Capacity (Load centre of gravity and rotation axis aligned)

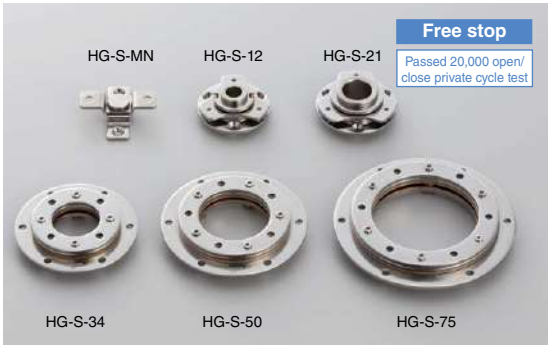
Allowable Moment (Load centre of gravity and rotation axis misaligned)

No.	Part Name	Material	Finish / Colour
①	Top Flange	Steel	Clear Zinc Chromate
②	Intermediate Flange		
③	Bottom Flange		
④	Spring Washer Embedded Hexagon Socket Head Cap Screw M5x12	SUS304	–
⑤	Spring washer 5	Steel	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m	Vertical Load Capacity N	Allowable Moment N·m Horizontal	Allowable Moment N·m Vertical	Weight (g)
G	ab	170-051-124	HG-S50-HR50	124	50	5.0±20%	600	80	60	1330

Refer to 1 : P.43

SWIVEL TORQUE HINGE HG-S



- HG-S-MN, HG-S-21 and HG-S-75 are newly launched.
- Rotation angle: 360°
- Centre hole for easy cable management (except for HG-S-MN). Five types of hole diameters (φ12, φ21.5, φ34, φ50, and φ75) are available.

[Applications]

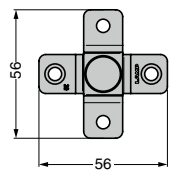
- Operation panel of machine tools and LCD, etc.

[Remarks]

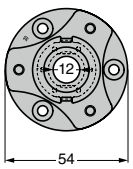
- Be sure to read the "Cautions" 1.
- Hinges can be used upside down. However, fix the screws from the mounting surface (refer to the "Installation" in relevant pages). Otherwise, the products will not function.
- Install in a position where the hinge will not make contact, except on the mounting surface.
- ⋆ is horizontal use only.

[Selection Guide]

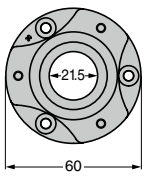
RoHS	CAD	Item Code	Item Name	No.	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Page
G	3D	170-029-726	HG-S7-MN	1	56	–	$0.7^{\pm 20\%}$	$7.1^{\pm 20\%}$	2
G	3D	170-029-727	HG-S20-MN				$2.0^{\pm 20\%}$	$20.4^{\pm 20\%}$	
G	3D	170-021-976	HG-S30-12	2	φ54	12	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$	
G	3D	170-021-975	HG-S50-12				$5.0^{\pm 20\%}$	$51.0^{\pm 20\%}$	
G	3D	170-029-728	HG-S30-21	3	φ60	21.5	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$	3
G	3D	170-029-729	HG-S50-21				$5.0^{\pm 20\%}$	$51.0^{\pm 20\%}$	
G	3D	170-023-959	HG-S50-34	4 ⋆	φ87	34	$5.0^{\pm 20\%}$	$51.0^{\pm 20\%}$	
G	3D	170-023-960	HG-S70-34				$7.0^{\pm 20\%}$	$71.4^{\pm 20\%}$	
G	3D	170-023-961	HG-S70-50	5 ⋆	φ103	50	$7.0^{\pm 20\%}$	$71.4^{\pm 20\%}$	4
G	3D	170-023-962	HG-S100-50				$10.0^{\pm 20\%}$	$102.0^{\pm 20\%}$	
G	3D	170-029-730	HG-S50-75	6 ⋆	φ128	75	$5.0^{\pm 20\%}$	$51.0^{\pm 20\%}$	
G	3D	170-029-731	HG-S70-75				$7.0^{\pm 20\%}$	$71.4^{\pm 20\%}$	



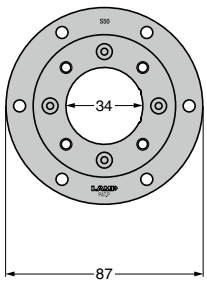
1 HG-S-MN



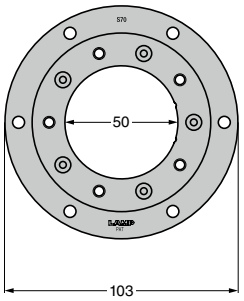
2 HG-S-12



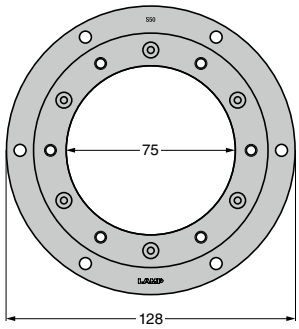
3 HG-S-21



4 HG-S-34

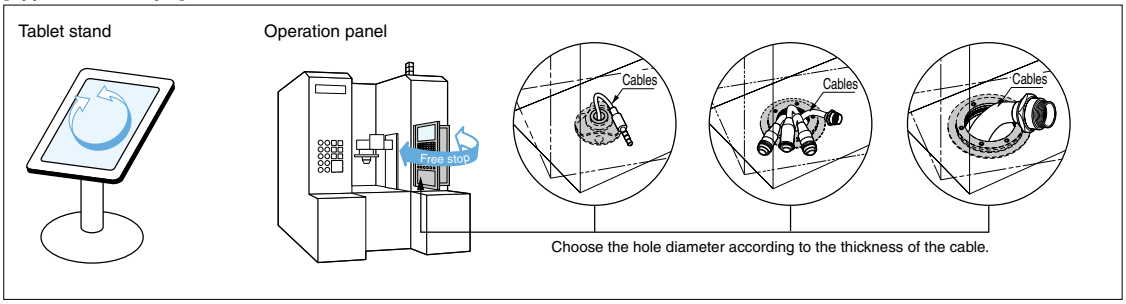


5 HG-S-50



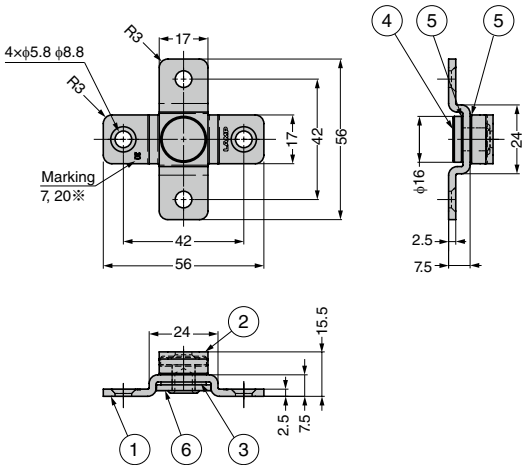
6 HG-S-75

[Application Example]



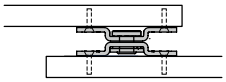
Refer to 1 : P.43, 2 : P.60, 3 : P.61, 4 : P.62

SWIVEL TORQUE HINGE HG-S-MN Small Type



※7: HG-S7-MN, 20: HG-S20-MN.

[Installation]

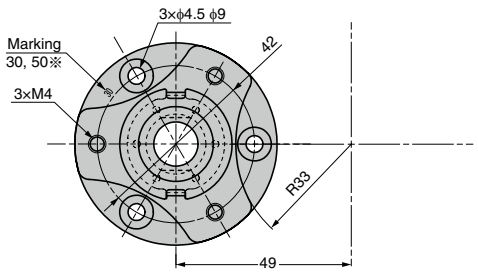


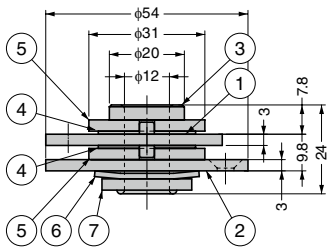
Video Link

No.	Part Name	Material	Finish
①	Bracket B	Stainless Steel (SUS430)	Barrel Polished
②	Bracket A		
③	F Plate	Bronze	–
④	Shaft	Stainless Steel (SUS303)	
⑤	Spring Washer	Stainless Steel	
⑥	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Size	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-726	HG-S7-MN	56	$0.7^{\pm 20\%}$	$7.1^{\pm 20\%}$	48	25	200
G	3D	170-029-727	HG-S20-MN		$2.0^{\pm 20\%}$	$20.4^{\pm 20\%}$	49	25	200

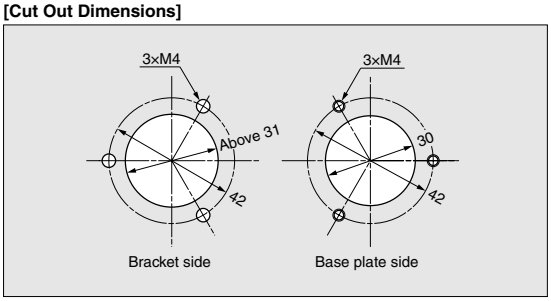
SWIVEL TORQUE HINGE HG-S-12 Hole Dia. ϕ12



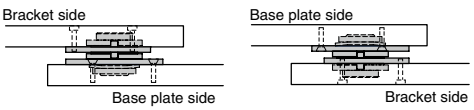


※30: HG-S30-12, 50: HG-S50-12.

[Cut Out Dimensions]



[Installation]



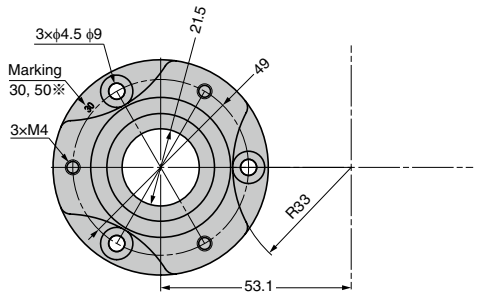
Video Link

No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base plate		
③	Sleeve	Stainless Steel (SUS303)	–
④	F Plate	Bronze	
⑤	Washer	Stainless Steel (SUS430)	Barrel Polished
⑥	Spring Washer	Steel	–
⑦	Washer	Stainless Steel (SUS430)	

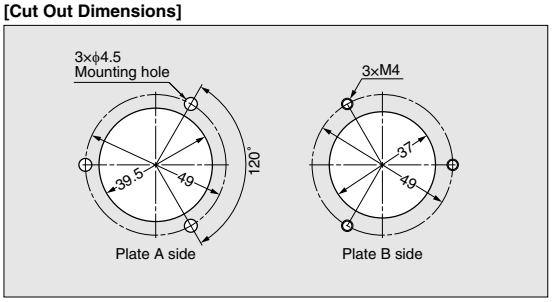
Max. load capacity : 200N (20.4kgf)/pc

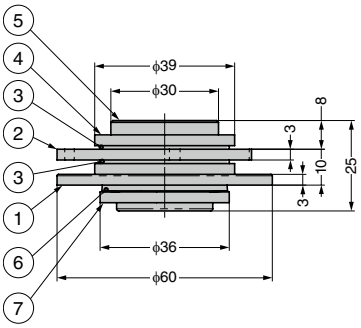
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-021-976	HG-S30-12	54	12	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$	129	100	10
G	3D	170-021-975	HG-S50-12			$5.0^{\pm 20\%}$	$51.0^{\pm 20\%}$	132	100	10

SWIVEL TORQUE HINGE HG-S-21 Hole Dia. ϕ21.5



[Cut Out Dimensions]





※30: HG-S30-21, 50: HG-S50-21.

[Installation]

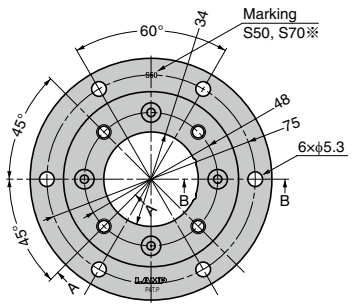
Video Link

No.	Part Name	Material	Finish
①	Plate B	Stainless Steel (SUS430)	Barrel Polished
②	Plate A		
③	F Plate	Bronze	Barrel Polished
④	Washer	Stainless Steel (SUS430)	Barrel Polished
⑤	Sleeve	Stainless Steel (SUS303)	Plain
⑥	Spring Washer	Stainless Steel	–
⑦	Washer	Stainless Steel (SUS430)	

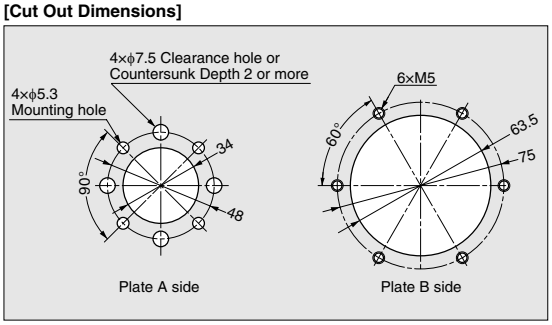
Max. load capacity : 200N (20.4kgf)/pc

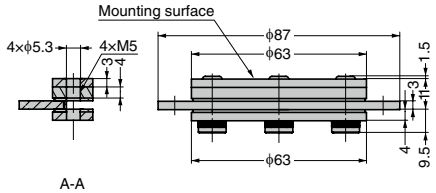
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-728	HG-S30-21	60	21.5	3.0±20%	30.6±20%	175	10	80
G	3D	170-029-729	HG-S50-21			5.0±20%	51.0±20%	174	10	80

SWIVEL TORQUE HINGE HG-S-34 Hole Dia. ϕ34



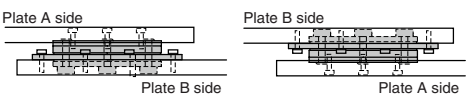
[Cut Out Dimensions]





※S50: HG-S50-34, S70: HG-S70-34.

[Installation]



Video Link

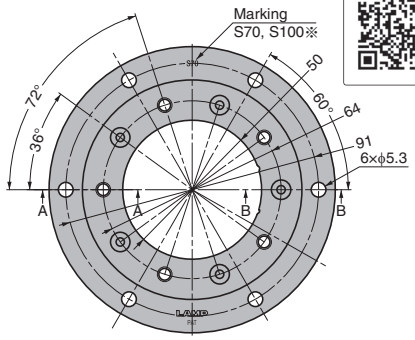
No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–
⑤	Bush	Stainless Steel (SUS303)	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	

Max. load capacity : 400N (40.8kgf)/pc

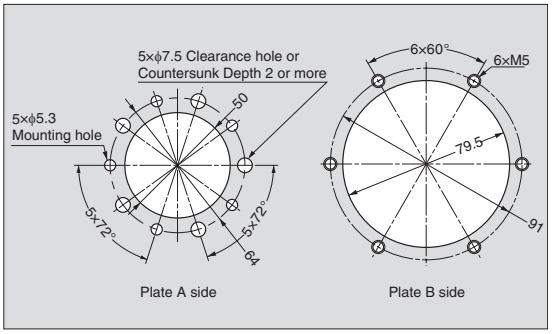
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-959	HG-S50-34	87	34	5.0±20%	51.0±20%	280	5	40
G	3D	170-023-960	HG-S70-34			7.0±20%	71.4±20%	282	5	40

SWIVEL TORQUE HINGE HG-S-50 Hole Dia.φ50

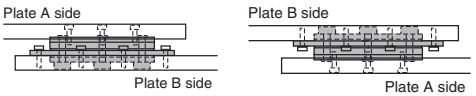
Video Link

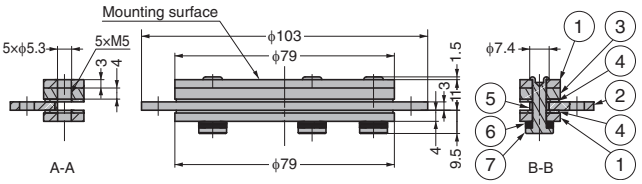


[Cut Out Dimensions]



[Installation]





※S70: HG-S70-50, S100: HG-S100-50.

No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–
⑤	Bush	Stainless Steel (SUS303)	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	

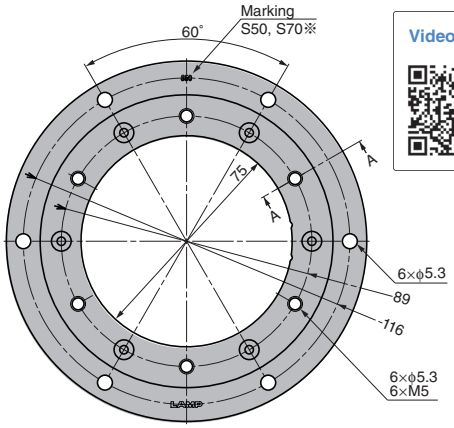
Max. load capacity : 400N (40.8kgf)/pc

RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-961	HG-S70-50	103	50	7.0±20%	71.4±20%	400	40.8	365	5	40
G	3D	170-023-962	HG-S100-50			10.0±20%	102.0±20%			371	5	40

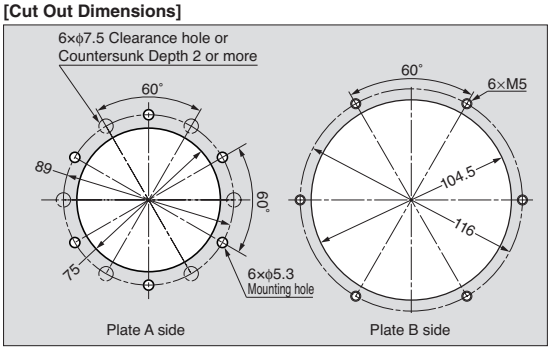
*Horizontal installation only.

SWIVEL TORQUE HINGE HG-S-75 Hole Dia.φ75

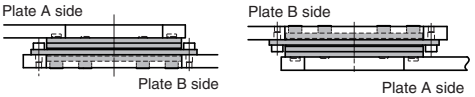
Video Link

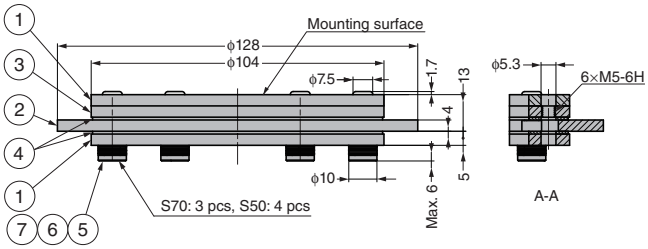


[Cut Out Dimensions]



[Installation]





No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–
⑤	Bush	POM	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	

※ S50: HG-S50-75, S70: HG-S70-75.

The material of the bush will change to stainless steel (SUS303) when the current stock runs out.

RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-730	HG-S50-75	128	75	5.0±20%	51.0±20%	400	40.8	545	5	40
G	3D	170-029-731	HG-S70-75			7.0±20%	71.4±20%			575	5	40

*Horizontal installation only.

ANGLE LIMITER PLATE FOR SWIVEL TORQUE HINGE HG-S-ARP

HG-S-34-ARP　HG-S-50-ARP　HG-S-75-ARP

- Plate and stopper form a set which can be installed to control the swivel angle of Swivel Torque Hinge HG-S 1.
- Two swivel directions and five angles can be selected according to the stopper installation position.

[Other]

- Contact Sugatsune for angles other than 30˚, 60˚, 90˚, 120˚, or 150˚.

[Remarks]

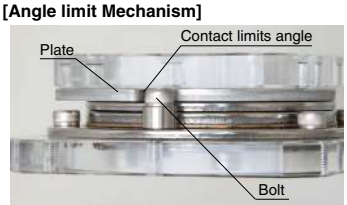
- Use screw loosening prevention adhesive when mounting screws.
- To fix the HG-S body, use hex socket head cap bolts (JIS B 1176).

[Parts Included]

- Stopper

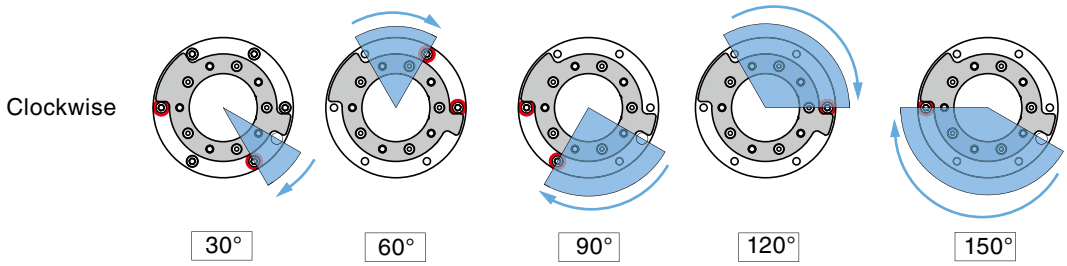
HG-S-34-ARP: Height 6.2 mm/2 pcs
HG-S-50-ARP: Height 6.2 mm/2 pcs
HG-S-70-ARP: Height 7.2 mm/2 pcs (height differs from other models. Cannot be used together.)

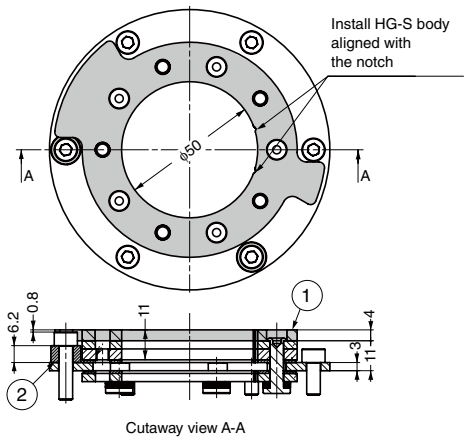
[Angle limit Mechanism]



The angle is limited by contact between the stopper co-fastening bolt (to be prepared by the customer) and the plate.

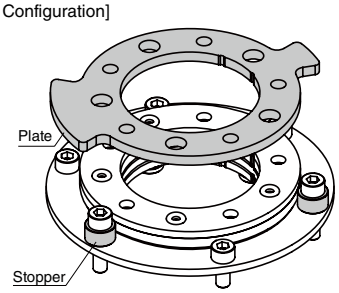
[Stopper Installation Position, Swivel Direction & Control Angle]





Cutaway view A-A

[Part Configuration]



No.	Part Name	Material	Finish
①	Angle limitter Plate	Stainless Steel (SUS430)	Barrel Polished
②	Angel limitter Stopper	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	Corresponding Hinge	Weight (g)
G	3D	170-046-597	HG-S-34ARP	HG-S-34	77.6
G	3D	170-046-598	HG-S-50ARP	HG-S-50	99.7
G	3D	170-046-599	HG-S-75ARP	※HG-S-75	148.5

Refer to 1 : P.59~P.62

※ Correspoding to HG-S50-75 Only (Not to HG-S75-75).

TORQUE HINGE (Dual Axis / Swivel and Tilt) HG-T70S30

- Dual Axis: Can hold at any angle in tilt & swivel.
- Swivels 360˚.
- Able to limit swivel angle and tilt angle by inserting a screw in ※1 hole and a pin in ※2 hole shown in the figure below, respectively. (The screw and pin not included)
  Limited opening and closing angle
  : Tilting ··· 0˚~120˚
  : Swivelling ··· ±30˚, ±90˚
- Provides torque stability in both directions.

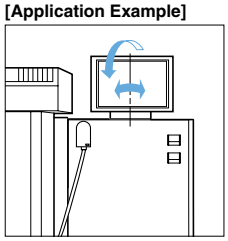
[Specifications]
- Operating temperature: 0℃~40℃

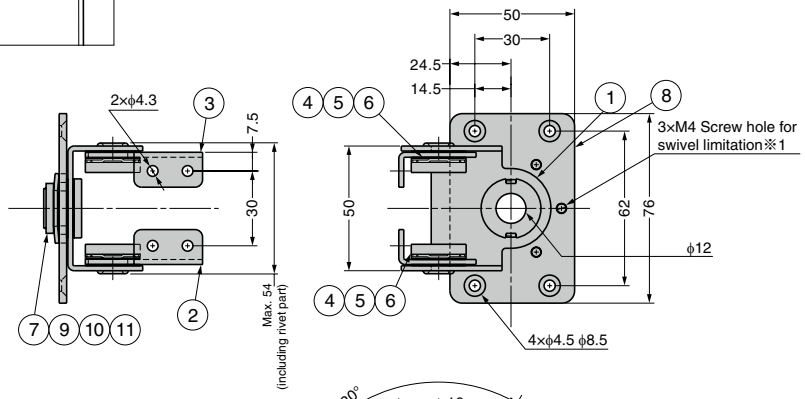
[Applications]
- LCD, monitoring camera, etc.

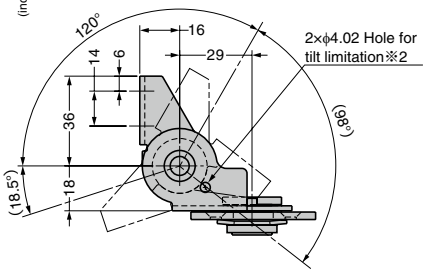
[Remarks]
- Be sure to read the "Cautions" 1.
- Tilt angle and swivel angle may decrease depending on the size, shape and installation method of the monitor used.
- Do not use in water splash environment.

Video Link

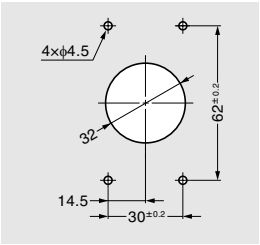
[Application Example]



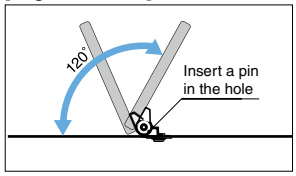


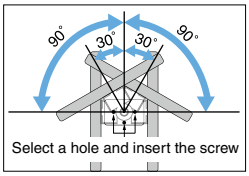


[Cut Out Dimensions]



[Angle Limitation]





No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS430)	Barrel Polished
②	Bracket L		
③	Bracket R		
④	Spring Washer	Steel (SK85)	–
⑤	F Plate B	Bronze	
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Sleeve		
⑧	Base plate	Stainless Steel (SUS430)	Barrel Polished
⑨	F Plate	Bronze	–
⑩	Washer	Stainless Steel (SUS430)	Barrel Polished
⑪	Spring Washer	Steel	–

RoHS	CAD	Item Code	Item Name	Torque N·m/pc (Tilting)	Torque kgf·cm/pc (Tilting)	Torque N·m/pc (Swivelling)	Torque kgf·cm/pc (Swivelling)	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-012-419	HG-T70S30	7.0±20%	71.4±20%	3.0±20%	30.6±20%	229	5	40

Refer to 1 : P.43

TORQUE HINGE (Dual Axis / Swivel and Tilt) HG-T30S15

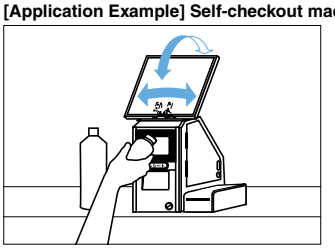
- Dual Axis: Can hold at any angle in tilt & swivel.
- Swivels 360˚.
- Surface mount base provides easy installation on cabinets.
- Provides torque stability in both directions.

[Specifications]
- Operating temperature: 0℃~40℃

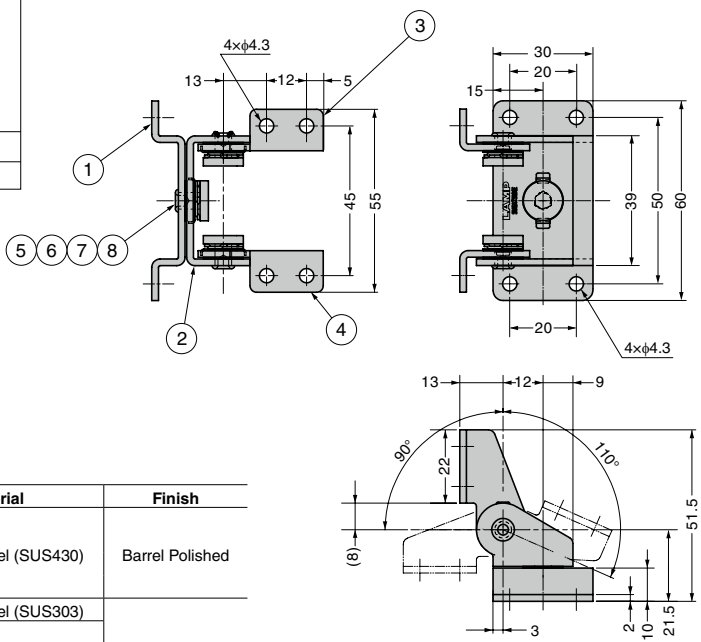
[Applications]
- Self-checkout machine and small monitor, etc.

[Remarks]
- Be sure to read the “Cautions” 1.
- Tilt angle and swivel angle may decrease depending on the size, shape and installation method of the monitor used.
- Do not use in water splash environment.

[Application Example] Self-checkout machine



Video Link



No.	Part Name	Material	Finish
①	Base plate	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	Bracket L		
④	Bracket R		
⑤	Shaft	Stainless Steel (SUS303)	–
⑥	F Plate A	Bronze	
⑦	F Plate B		
⑧	Spring Washer	Steel (SK)	

RoHS	CAD	Item Code	Item Name	Torque N·m/pc (Tilting)	Torque kgf·cm/pc (Tilting)	Torque N·m/pc (Swivelling)	Torque kgf·cm/pc (Swivelling)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-826	HG-T30S15	3.0±20%	30.6±20%	1.5±20%	15.3±20%	87	12	96

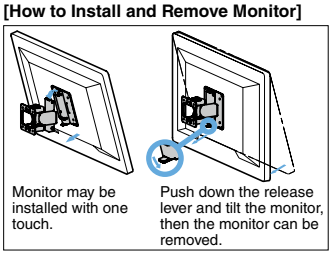
Refer to 1 : P.43

MONITOR BRACKET DIGEST

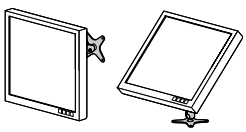
MONITOR BRACKET KA-T100S50 WITH TORQUE & AUXILIARY LOCK 1

Refer to 1 : P.786, 2 : P.793

[How to Install and Remove Monitor]



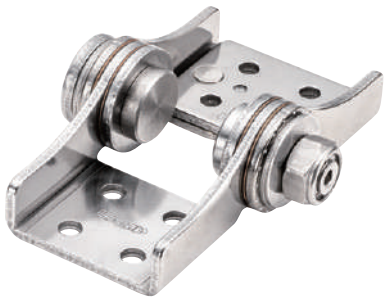
MONITOR BRACKET KA-150 2



TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

ADJUSTABLE TORQUE HINGE HG-ITJ4080

Free stop
Passed 20,000 open/close private cycle test



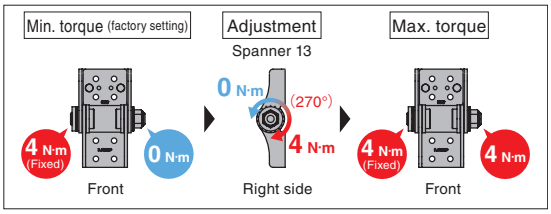
- Torque adjustable from 4 to 8 N・m.
- To prevent accidental fall of door or lid, minimum torque is set at 4 N・m.
- High torque and space-saving type.

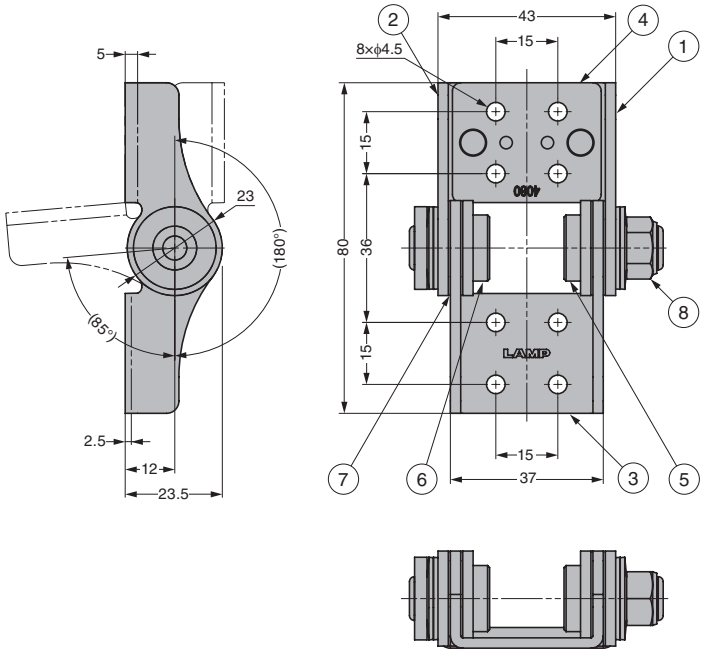
[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.

Video Link

Selection Tool
Sasuga-kun





No.	Part Name	Material	Finish
①	Bracket A	Stainless Steel (SUS430)	Barrel Polished
②	Bracket B		
③	Bracket C		
④	Connecting Plate		
⑤	Shaft A	Stainless Steel	–
⑥	Shaft B		
⑦	Washer	Bronze	Barrel Polished
⑧	Torque Adjustment Nut M8	Stainless Steel (SUSXM7)	–

RoHS	CAD	Item Code	Item Name	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-029-802	HG-ITJ4080	$4^{\pm 20\%}$~8	$41^{\pm 20\%}$~82	163	10	80

Refer to 1 : P.43

TORQUE HINGE HG-IT

- Cover of the same colour with body hides mounting holes for clean appearance (sold separately).
- With a label to recognise the torque value.
- Torque free type (HG-ITSF, HG-ITMF) also available. Covers various torque ranges by using "torque type" and "torque free type" as a pair.

[Specifications]
- Operating temperature: -10℃~50℃

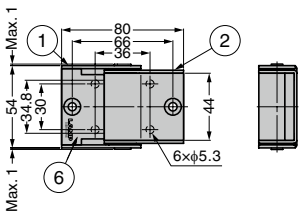
[Applications]
- LCD, monitoring camera, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.

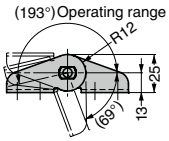
[Sold Separately]
- Cover

Selection Tool
Sasuga-kun

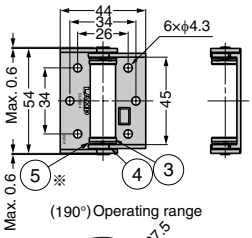
Video Link



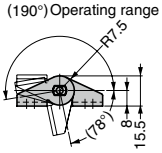
(193°)Operating range



HG-ITM (With cover shown)

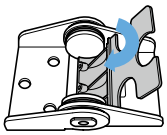


(190°)Operating range

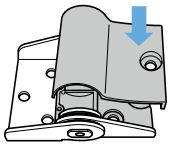


HG-ITS (Without cover shown)

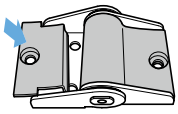
[How to Install Cover]



1. Insert the cover A under the hinge shaft.



2. Put the cover B on the cover A.

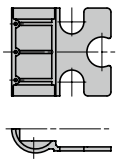


3. Put the cover C.

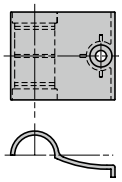
No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	Plain
④	Washer	Bronze	Barrel Polished
⑤	Spring Washer	Steel	Nickel
⑥	Cover	ABS	Metallic Silver Paint / Clear

※⑤: Only for HG-ITS and HG-ITM (Not provided for the torque free type).

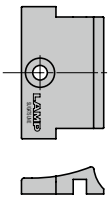
Refer to 1 : P.43



Cover A



Cover B



Cover C

[Hinge]

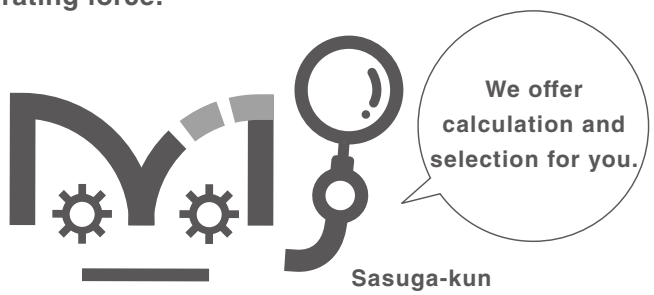
RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-090-106	HG-ITS25	2.5±20%	25.49±20%	190°	50	20	160
G'	3D	170-090-115	HG-ITS35	3.5±20%	35.69±20%			20	160
G'	3D	170-090-114	HG-ITM50	5.0±20%	50.98±20%	193°	130	10	80
G'	3D	170-090-113	HG-ITM70	7.0±20%	71.38±20%			10	80
G'	3D	170-090-999	HG-ITSF	–	–	190°	50	20	160
G'	3D	170-090-998	HG-ITMF			193°	130	10	80

[Cover] Sold Separately

RoHS	CAD	Item Code	Item Name	Cover for	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-091-002	HG-ITSC	HG-ITS	10	40	960
G'	3D	170-091-001	HG-ITMC	HG-ITM	18	20	480

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

TORQUE HINGE HG-ITHP Heat Resistance

- Suitable for use in heat-generating environment.

[Specifications]

- Operating temperature: 0℃~100℃

For applications beyond the operating temperature range above, please contact local representatives.

[Applications]

- Dryer, lighting equipment, temperature chamber

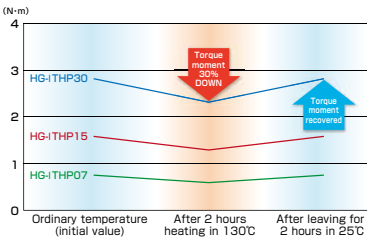
[Remarks]

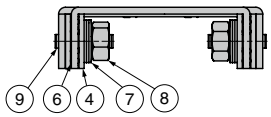
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Torque may decrease during and after heating. And it will restore when returning to normal temperature.

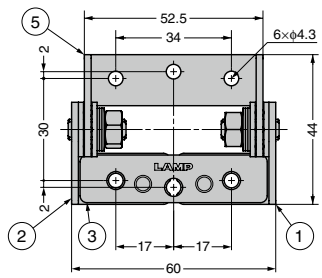
Selection Tool

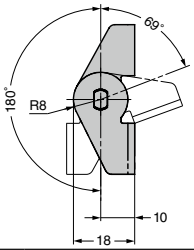
Sasuga-kun

[Torque Transition] (in high temperature)









No.	Part Name	Material	Finish
①	Base L	Stainless Steel (SUS304)	–
②	Base R		
③	Connecting Bracket		
④	Thrust Plate	Carbon Steel	Nickel
⑤	Movable Bracket	Stainless Steel (SUS304)	–
⑥	Ball	Steel	
⑦	Spring Washer	Stainless Steel	
⑧	Hexagon Nut	Steel (SWCH)	Clear Chromate (Trivalent)
⑨	Shaft	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-312	HG-ITHP07	$0.7^{\pm 30\%}$	$7.1^{\pm 30\%}$	70	25	100
G	3D	170-037-313	HG-ITHP15	$1.5^{\pm 20\%}$	$15.3^{\pm 20\%}$	70	25	100
G	3D	170-037-314	HG-ITHP30	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$	72	25	100

Refer to 1 : P.43

TORQUE PIANO HINGE HG-TLS30-50-300

Free stop
Greaseless
Passed 30,000 open/ close private cycle test

Selection Tool

Sasuga-kun

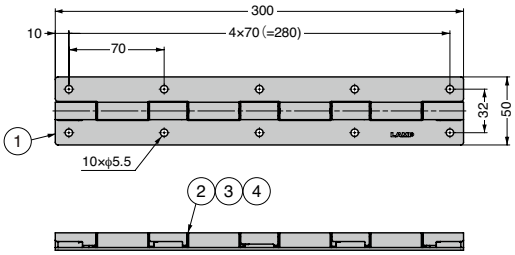
- Long type torque hinge.
- Possible to install in vertical and horizontal.

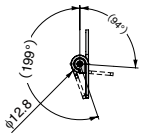
[Reference door mass for vertical installation (side-opening)]

- 10 kg (door size: W 900 × H 1800 × t 25 mm, hinge installation pitch: 990 mm. Passed 30,000 open / close private cycle test)

[Remarks]

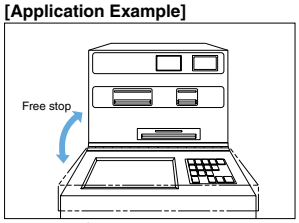
- Be sure to read the “Cautions” 1.
- When using multiple hinges, ensure that both hinge shafts are levelled and aligned.
- Can not be used by cutting the length.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.





Operation Range

[Application Example]



For opening/closing of cash machine maintenance door.

No.	Part Name	Material
①	Hinge	Stainless Steel (SUS304)
②	Shaft	
③	Plug	POM
④	Holder	PA

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-037-315	HG-TLS30-50-300	3±30%	31±30%	388	5	20

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETENT TORQUE HINGE HG-DTA

SUS

●Detent function prevents spring-back in closed position.

[Specifications]
●Operating temperature: 0℃~40℃

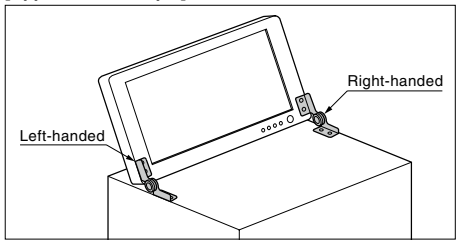
[Applications]
●Small device with cover, folding machine, etc.

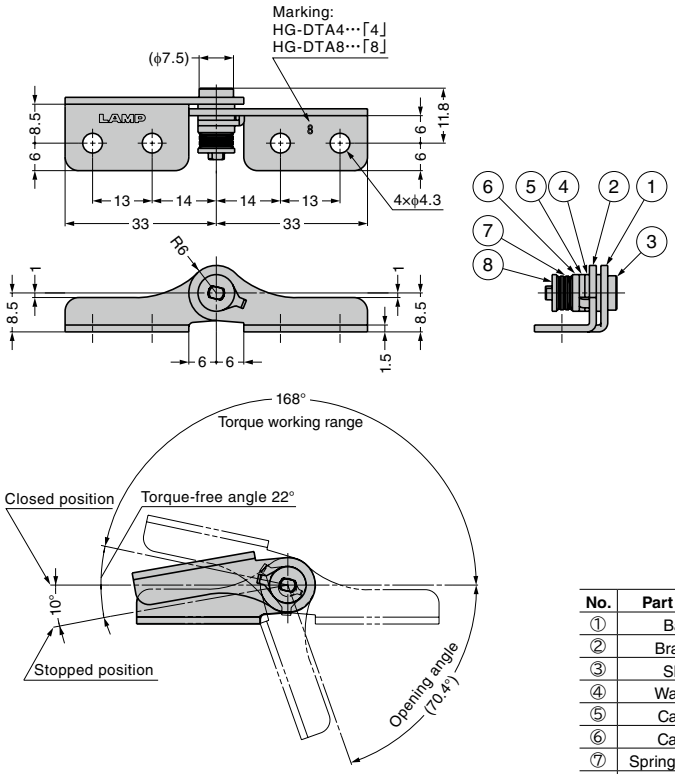
[Remarks]
●Be sure to read the "Cautions" 1.
●For pair using: Please use the same torque in both hinges.
●When installing, ensure that both hinge shafts are levelled and aligned.

Video Link

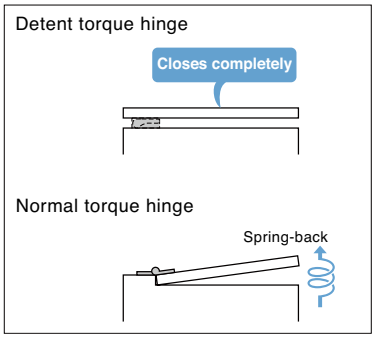
Selection Tool
Sasuga-kun

[Application Example]





Left-handed type shown. Right-handed type is symmetrical.



●Detent function prevents spring-back in closed position.

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	–
④	Washer	Stainless Steel	
⑤	Cam A		
⑥	Cam B		
⑦	Spring Washer		
⑧	Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Torque		Release Torque※		Weight (g)	Box (pcs)	Carton (pcs)
					N·m/pc	kgf·cm/pc	N·m/pc	kgf·cm/pc			
GT	3D	170-026-457	HG-DTA4-R	Right-handed	0.4±20%	4.08±20%	0.7±20%	7.14±20%	19	50	500
GT	3D	170-026-458	HG-DTA4-L	Left-handed						50	500
GT	3D	170-026-459	HG-DTA8-R	Right-handed	0.8±20%	8.16±20%	1.5±20%	15.31±20%		50	500
GT	3D	170-026-460	HG-DTA8-L	Left-handed						50	500

Refer to 1 : P.43

※Torque required to release detent.

DETENT TORQUE HINGE HG-DTB

SUS

●Detent function prevents spring-back in closed position.

[Specifications]

●Operating temperature: 0℃~40℃

[Applications]

●Small device with cover, folding machine, etc.

[Remarks]

●Be sure to read the "Cautions" 1.

●For pair using: Please use the same torque in both hinges.

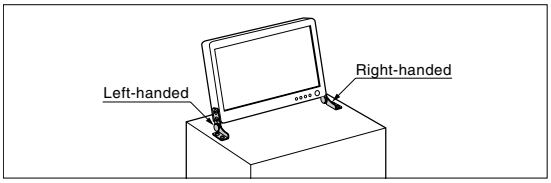
●When installing, ensure that both hinge shafts are levelled and aligned.

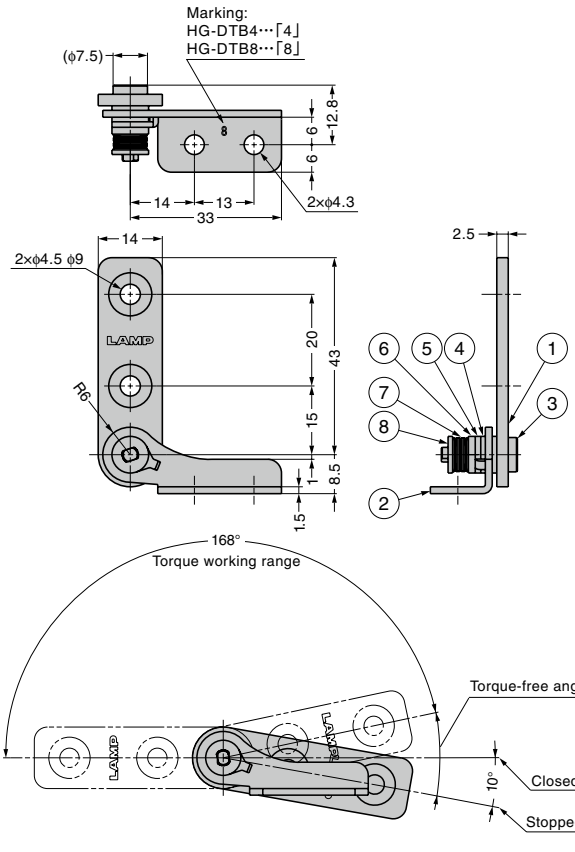
Video Link

Selection Tool

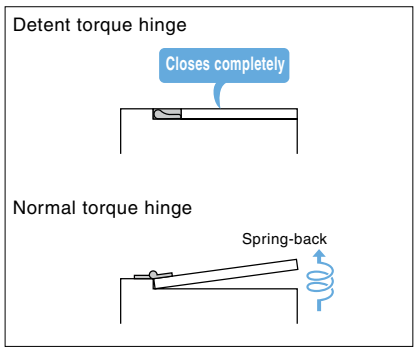
Sasuga-kun

[Application Example]





Left-handed type shown. Right-handed type is symmetrical.



●Detent function prevents spring-back in closed position.

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	–
④	Washer	Stainless Steel	
⑤	Cam A		
⑥	Cam B		
⑦	Spring Washer		
⑧	Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Release Torque※ N·m/pc	Release Torque※ kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-026-461	HG-DTB4-R	Right-handed	0.4±20%	4.08±20%	0.7±20%	7.14±20%	22	50	500
G	3D	170-026-462	HG-DTB4-L	Left-handed						50	500
G	3D	170-026-463	HG-DTB8-R	Right-handed	0.8±20%	8.16±20%	1.5±20%	15.31±20%	23	50	400
G	3D	170-026-464	HG-DTB8-L	Left-handed						50	400

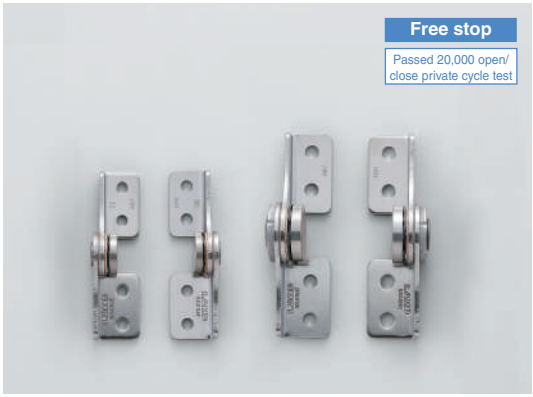
Refer to 1 : P.43

※Torque required to release detent.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE HG-TA

SUS



●Highly durable HG-TA45H with wire hole is newly launched 1.

[Specifications]
●Operating temperature: 0℃~40℃

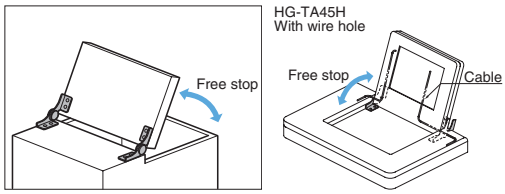
[Applications]
●LCD, monitoring camera, etc.

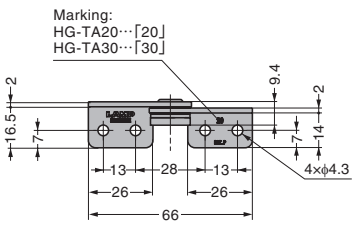
[Remarks]
●Be sure to read the "Cautions" 2.
●For pair using: Please use the same torque in both hinges.
●When installing, ensure that both hinge shafts are levelled and aligned.

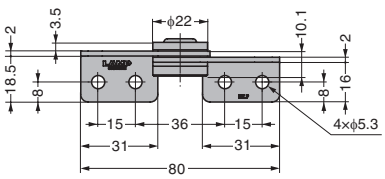
Selection Tool
Sasuga-kun

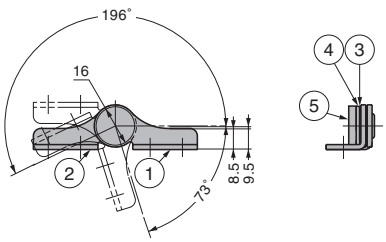
Video Link

[Application Example]

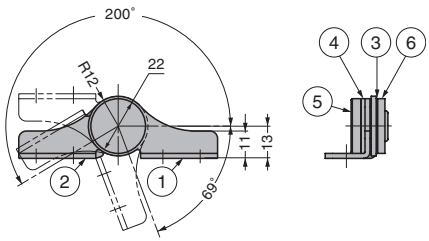




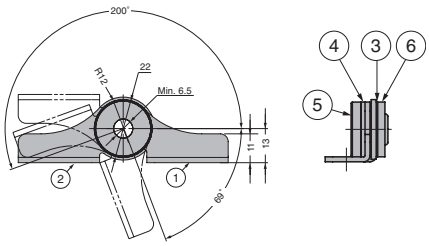




HG-TA20L, HG-TA30L



HG-TA45L



HG-TA45HL
Left-handed type shown. Right-handed type is symmetrical.

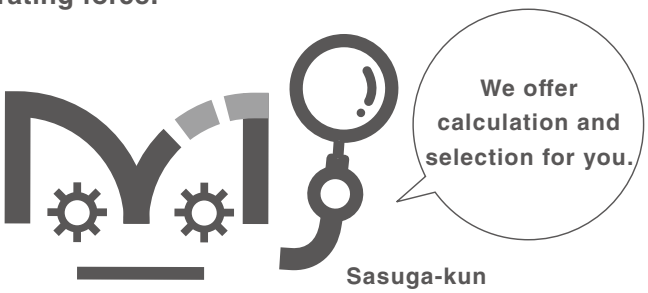
No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	F Plate	Bronze	–
④	Spring Washer	Steel	
⑤	Shaft	Stainless Steel (SUS303)	
⑥	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Description	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
✓	3D	170-012-403	HG-TA20R	Without wire hole	Right-handed	2.0±20%	20.4±20%	30	40	320
✓	3D	170-012-404	HG-TA20L		Left-handed				40	320
✓	3D	170-012-405	HG-TA30R		Right-handed	3.0±20%	30.6±20%		40	320
✓	3D	170-012-406	HG-TA30L		Left-handed				40	320
✓	3D	170-012-407	HG-TA45R		Right-handed	4.5±20%	45.9±20%	65	20	160
✓	3D	170-012-408	HG-TA45L		Left-handed				20	160
✓	3D	170-034-215	HG-TA45HR		Right-handed			60	20	160
✓	3D	170-034-216	HG-TA45HL		Left-handed				20	160

Refer to 1 : P.76, 2 : P.43

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



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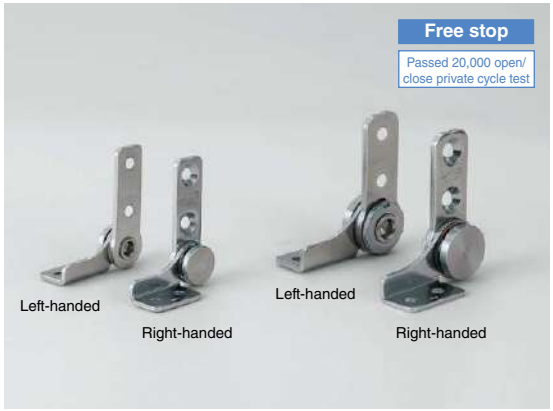
https://cont.sugatsune.co.jp/motion/en/

TORQUE HINGE HG-TB



- Provides torque stability in both directions.

[Specifications]

- Operating temperature: 0℃~40℃

[Applications]

- LCD, monitoring camera, etc.

[Remarks]

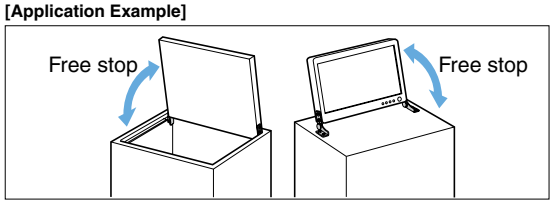
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Can not be used around water because not all parts are made of stainless steel.
- Be sure to machine a slightly oversized hole for alignment tolerance (C0.5) on the mounting surface for this product.

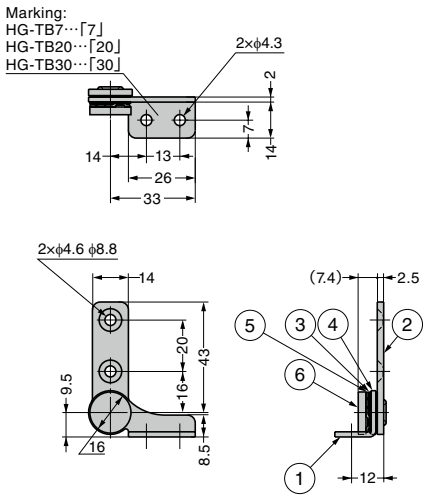
Video Link

Selection Tool

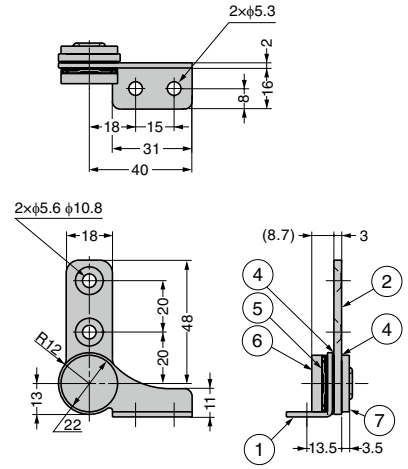
Sasuga-kun

[Application Example]





HG-TB7L, G-TB20L, HG-TB30L



HG-TB45L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	F Plate A	Bronze	–
④	F Plate B		
⑤	Spring Washer	Steel	
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Washer	Stainless Steel (SUS430)	Barrel Polished

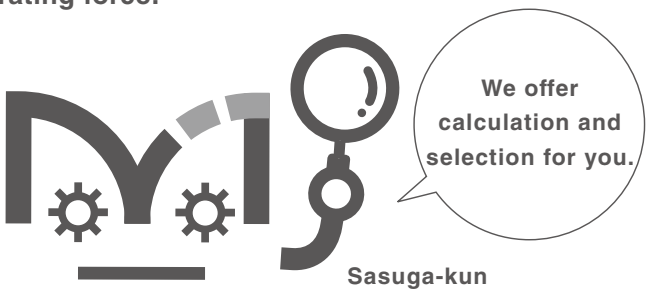
RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-142	HG-TB7R	Right-handed	$0.7^{\pm 20\%}$	$7.1^{\pm 20\%}$	360°	31	40	320
G	3D	170-022-143	HG-TB7L	Left-handed					40	320
G	3D	170-012-413	HG-TB20R	Right-handed	$2.0^{\pm 20\%}$	$20.4^{\pm 20\%}$		32	40	320
G	3D	170-012-414	HG-TB20L	Left-handed					40	320
G	3D	170-012-415	HG-TB30R	Right-handed	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$			40	320
G	3D	170-012-416	HG-TB30L	Left-handed					40	320
G	3D	170-012-417	HG-TB45R	Right-handed	$4.5^{\pm 20\%}$	$45.9^{\pm 20\%}$		67	20	160
G	3D	170-012-418	HG-TB45L	Left-handed					20	160

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



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Update: 02.14.2023

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
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SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

・Check new product information

・View product introduction video

・Browse digital web catalogue

Refer to Back Cover

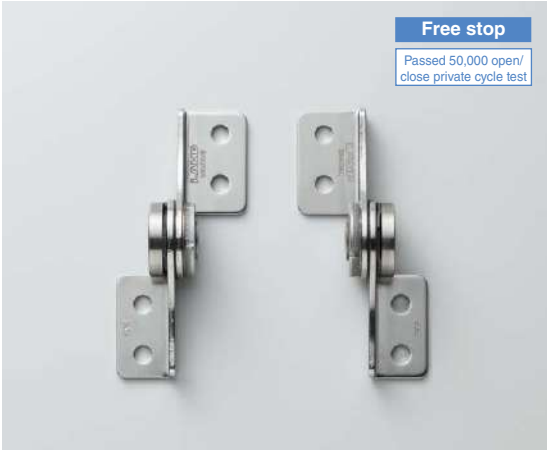
・Use product selection tool

Refer to Back Cover

・Download installation instructions

SUGATSUNE **Search**

TORQUE HINGE HG-TC45H



- With wire hole.
- Excellent durability.

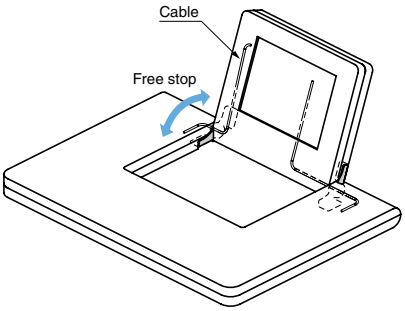
[Specifications]
- Operating temperature: 0℃~40℃

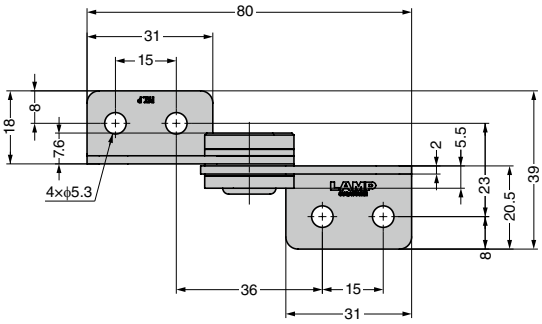
[Applications]
- LCD, monitoring camera, etc.

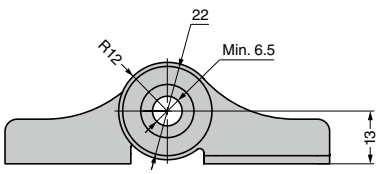
[Remarks]
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

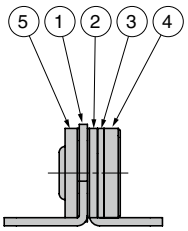
Selection Tool
Sasuga-kun

[Application Example]









Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish / Colour
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	Spring Washer	Steel	–
④	Shaft	Stainless Steel (SUS303)	
⑤	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Description	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-217	HG-TC45HR	With wire hole	Right-handed	4.5±20%	45.9±20%	60	20	160
G	3D	170-034-218	HG-TC45HL		Left-handed				20	160

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
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SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

STAINLESS STEEL TORQUE HINGE HG-TAS

SUS

- Stainless steel construction suitable for corrosive environments.

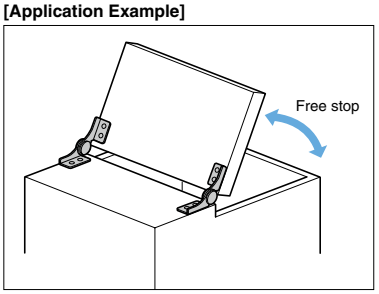
[Specifications]
- Operating temperature: 0℃~40℃

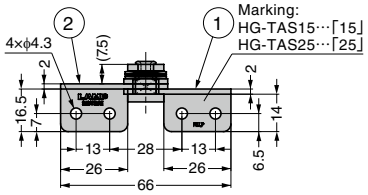
[Applications]
- LCD, monitoring camera, etc.

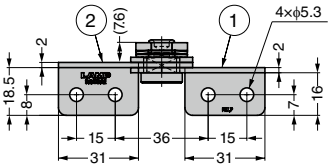
[Remarks]
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

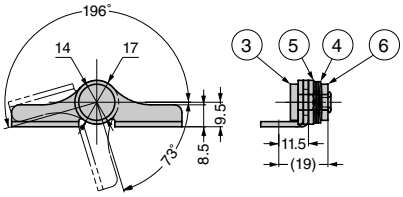
Selection Tool
Sasuga-kun

[Application Example]

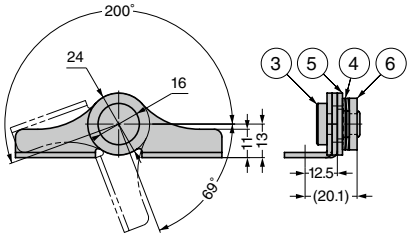








HG-TAS15L, 25L



HG-TAS40L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Washer	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-294	HG-TAS15R	Right	$1.5^{\pm 20\%}$	$15.3^{\pm 20\%}$	37	40	320
G	3D	170-037-295	HG-TAS15L	Left			37	40	320
G	3D	170-037-296	HG-TAS25R	Right	$2.5^{\pm 20\%}$	$25.5^{\pm 20\%}$	38	40	320
G	3D	170-037-297	HG-TAS25L	Left			38	40	320
G	3D	170-037-298	HG-TAS40R	Right	$4.0^{\pm 20\%}$	$40.8^{\pm 20\%}$	64	20	160
G	3D	170-037-299	HG-TAS40L	Left			64	20	160

Refer to 1 : P.43

ADJUSTABLE TORQUE HINGE HG-TASJ40

SUS

- Torque adjustable from 0 to 4 N・m.
- Stainless steel construction suitable for corrosive environments.

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

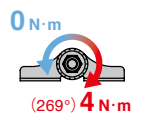
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.
- The factory setting of torque is 4.0N・m. Adjust if necessary.

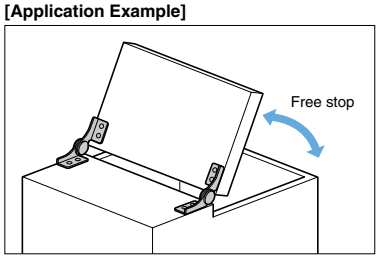
Selection Tool

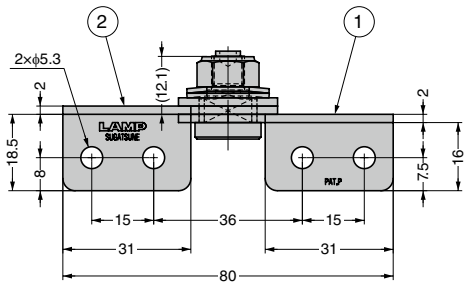
Sasuga-kun

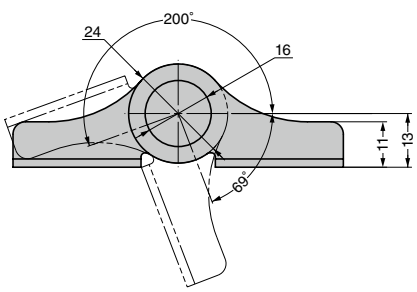
[Application Example]

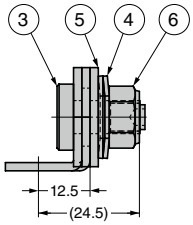
Adjustable with wrench (a nominal diameter 13).

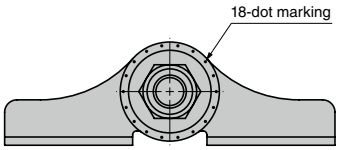












Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Lock Nut	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-306	HG-TASJ40R	Right	0~4.0	0~40.8	64	20	160
G	3D	170-037-307	HG-TASJ40L	Left			64	20	160

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

STAINLESS STEEL TORQUE HINGE HG-TBS

SUS

- Stainless steel construction suitable for corrosive environments.

[Specifications]
- Operating temperature: 0℃~40℃

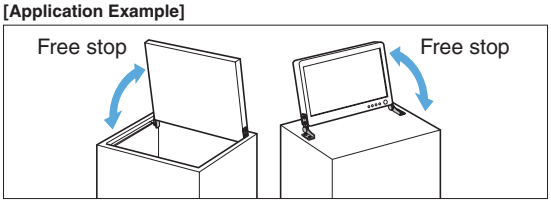
[Applications]
- LCD, monitoring camera, etc.

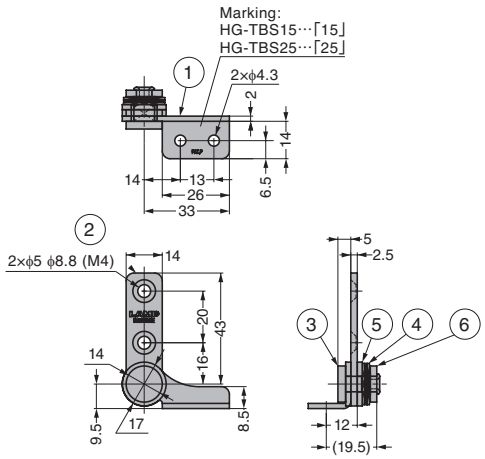
[Remarks]
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Be sure to machine a slightly oversized hole for alignment tolerance (C0.5) on the mounting surface for this product.

Selection Tool

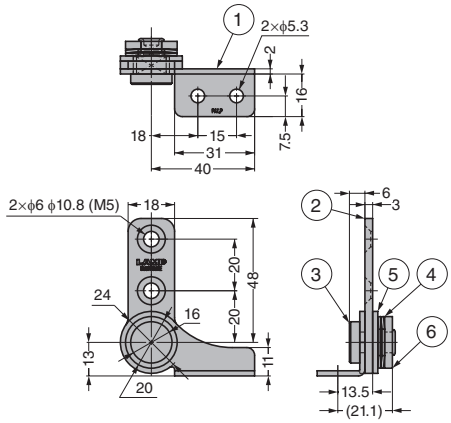
Sasuga-kun

[Application Example]





HG-TBS15L, HG-TBS25L



HG-TBS40L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Washer	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-300	HG-TBS15R	Right	$1.5^{\pm 20\%}$	$15.3^{\pm 20\%}$	360°	37	40	320
G	3D	170-037-301	HG-TBS15L	Left				37	40	320
G	3D	170-037-302	HG-TBS25R	Right	$2.5^{\pm 20\%}$	$25.5^{\pm 20\%}$		38	40	320
G	3D	170-037-303	HG-TBS25L	Left				38	40	320
G	3D	170-037-304	HG-TBS40R	Right	$4.0^{\pm 20\%}$	$40.8^{\pm 20\%}$		67	20	160
G	3D	170-037-305	HG-TBS40L	Left				67	20	160

Refer to 1 : P.43

ADJUSTABLE TORQUE HINGE HG-TBSJ40

SUS

- Torque adjustable from 0 to 4 N・m.
- Stainless steel construction suitable for corrosive environments.

[Specifications]

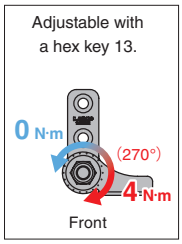
- Operating temperature: 0℃~40℃

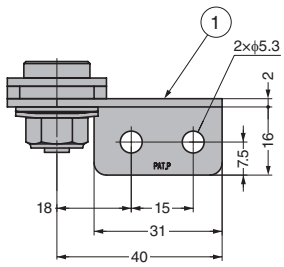
[Remarks]

- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.
- The factory setting of torque is 4.0N・m. Adjust if necessary.
- Be sure to machine a slightly oversized hole for alignment tolerance (C0.5) on the mounting surface for this product.

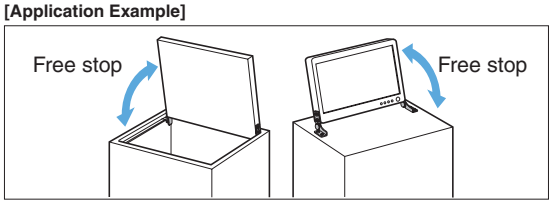
Selection Tool

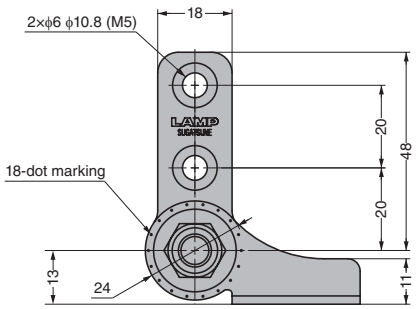
Sasuga-kun



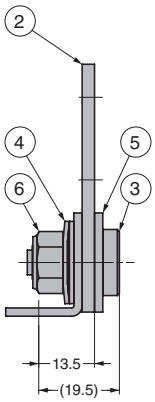


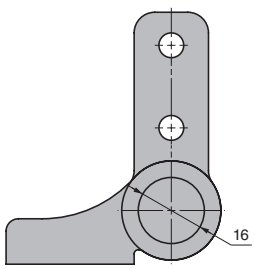
[Application Example]





Left-handed type shown. Right-handed type is symmetrical.





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Lock Nut	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-308	HG-TBSJ40R	Right	0~4.0	0~40.8	360°	67	20	160
G	3D	170-037-309	HG-TBSJ40L	Left				67	20	160

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE (CONCEALED) HG-RT

- Hinge is completely hidden when the door is closed.
- Torque decreases as the opening angle increases, making easier to open the lid (refer to "Torque Curve" at the lower left).
- Use with top-opening lids (opening angle 0˚~100˚) (free stop range).

[Specifications]

- Operating temperature: 0℃~40℃

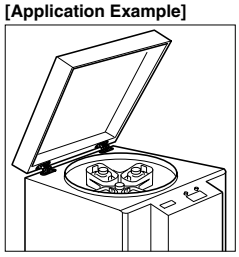
[Remarks]

- Be sure to read the “Cautions” . 1
- Torque changes with the opening angle (refer to "Torque Curve" at the lower left).
- When selecting, ensure that the maximum torque of lid (door) is less than half of the torque at the hinge closed position (see the table below).
- Set a stopper in the Range where torque is not effective (refer to "Free Stop Range" at the left)
- When installing, ensure that both hinge shafts are levelled and aligned.

[Recommended Screws]

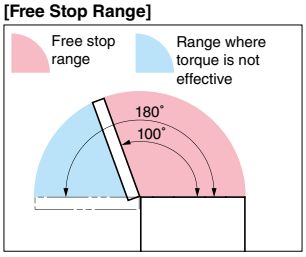
- Countersunk head tapping screw 4 or Countersunk head screw M4

[Application Example]



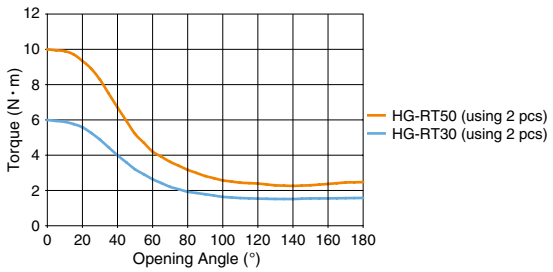
Use with top-opening lids (opening angle 0 ˚ ~100˚).

[Free Stop Range]

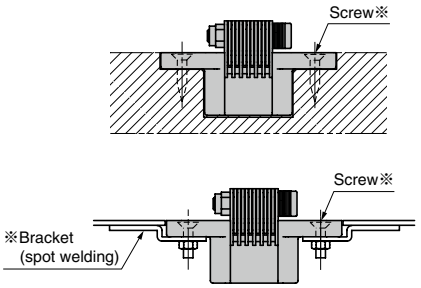


Install stopper to hold the door within the range where torque is not effective.

[Torque Curve]

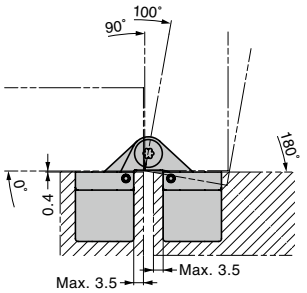


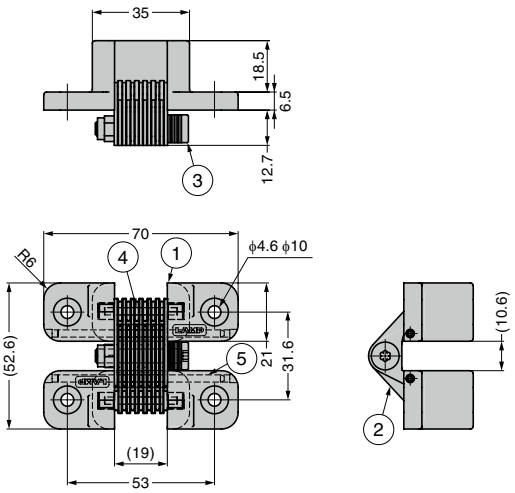
[Installation]



※Screws and brackets not included.

[Locus Chart]





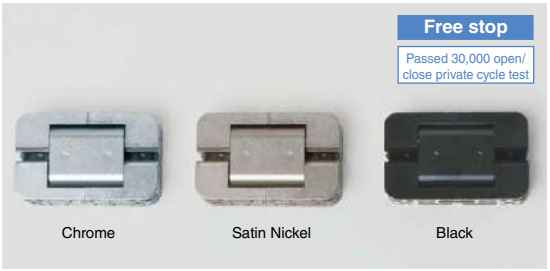
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Chrome
②	Arm	Stainless Steel (SUS304)	Plain
③	Shaft 1		
④	Shaft 2		
⑤	Shaft 3		

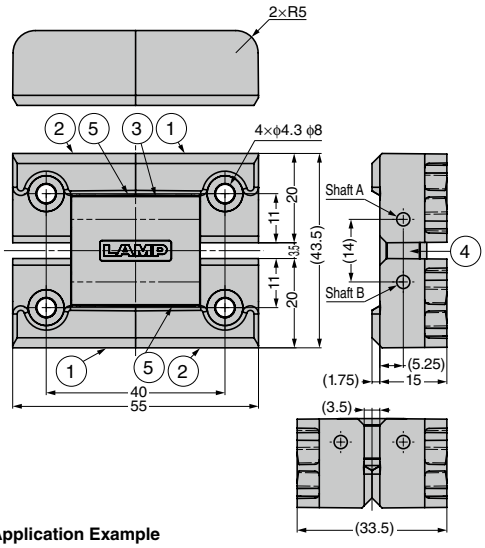
RoHS	CAD	Item Code	Item Name	Max. Lid (Door) Moment		Torque N・m (Closed Position)	Torque kgf・cm (Closed Position)	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
				Max. N・m/2 pcs	Max. kgf・cm/2 pcs						
G	3D	170-026-478	HG-RT30	3	31	$3^{\pm 20\%}$	$31^{\pm 20\%}$	180˚	160	12	72
G	3D	170-021-889	HG-RT50	5	51	$5^{\pm 20\%}$	$51^{\pm 20\%}$			12	72

Refer to 1 : P.43

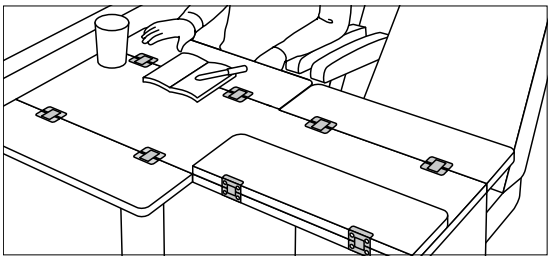
DUAL AXIS TORQUE HINGE HG-TMH

INSTRUCTION





Application Example



When fully opened

Flat and shafts do not protrude.

- Can be opened 180˚.
- Shafts do not protrude when the hinge is fully open or closed.
- Different torque of two shafts provides easy operation.

[Applications]

- Folding tables in shops, trains, caravans, etc.

[Remarks]

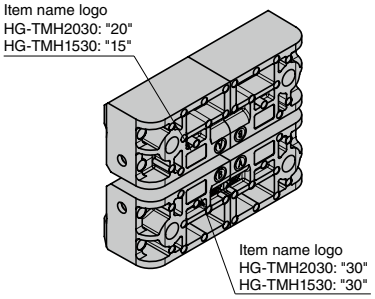
- Swivel use only. Ensure that both hinge shafts are aligned when installing.
- Use hard wood or similar strong material and make sure to tighten the screw.

[Recommended Screws]

- Countersunk head screw M4 (for sheet metal)
- Countersunk head tapping screw 4 (for wood)

Video Link

Video Link



Hinge Motions

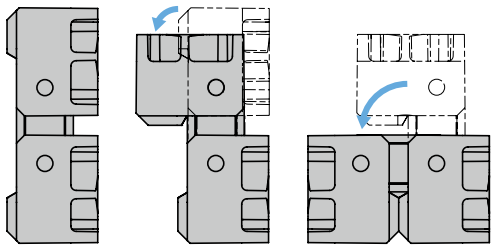
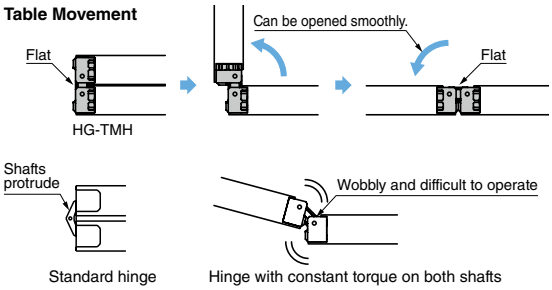


Table Movement



No.	Part name	Material	Finish/Colour
①	Body A	Zinc Alloy (ZDC)	As below
②	Body B		
③	Intermediate Body		
④	Sleeve	PBT	Black
⑤	Bumper		

RoHS	CAD	Item Code	Item Name	Finish/Colour	Shaft A		Shaft B		Weight (g)	Box (pcs)	Carton (pcs)
					Torque (N·m)	Torque (kgf·cm)	Torque (N·m)	Torque (kgf·cm)			
G	3D	170-034-907	HG-TMH1530-CR	Chrome	1.5±20%	15.3±20%	3.0±20%	30.6±20%	165	10	50
G	3D	170-034-908	HG-TMH2030-CR		2.0±20%	20.4±20%				10	50
G	3D	170-045-006	HG-TMH1530-SN	Satin Nickel	1.5±20%	15.3±20%				10	50
G	3D	170-045-007	HG-TMH2030-SN		2.0±20%	20.4±20%				10	50
G	3D	170-045-008	HG-TMH1530-BL	Plain/Black	1.5±20%	15.3±20%				10	50
G	3D	170-045-009	HG-TMH2030-BL		2.0±20%	20.4±20%				10	50

TORQUE CONCEALED HINGE H95TSH-F

- Has free-stop torque mechanism with 95˚ opening.
- Gives no spring-back and backlash.
  When the angle is near 0˚, the torque will be released.
- Easy installation and detachment.
- Hinge can be easily fixed onto the mounting plate by pressing down.
- Less interference with adjacent objects due to wide throw opening.
- The safety pin prevents accidental unlocking of the lock lever.

[Application]

- Vending machines, ticket machines, continuous doors, small cabinet door embedded in the walls.

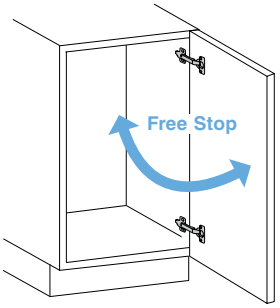
[Sold Separately]

- Mounting Plate H95TSZ

[Remarks]

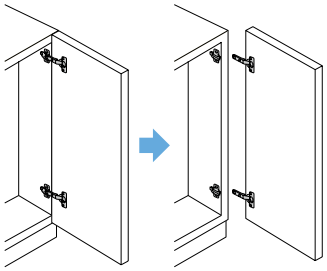
- When the angle is near 0˚, the torque will be released.

[Torque Mechanism]



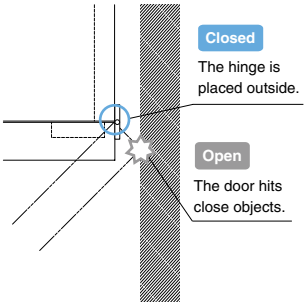
Holds in position even if the door is inclined.

[Easy Installation and Detachment]

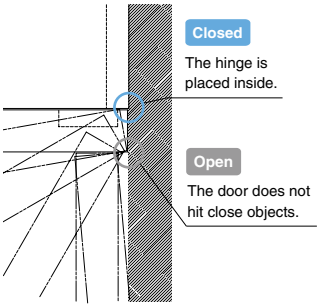


[Door Locus Comparison]

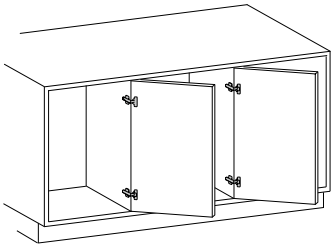
Butt Hinge



Concealed Hinge

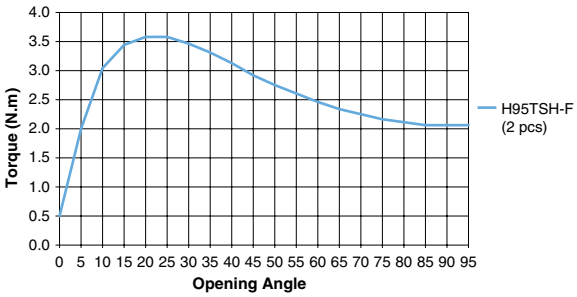


[Alternative Installations]



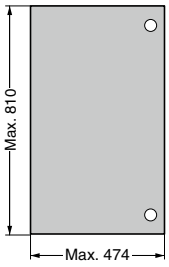
Can be used on doors lined up side by side.

[Torque Graph]



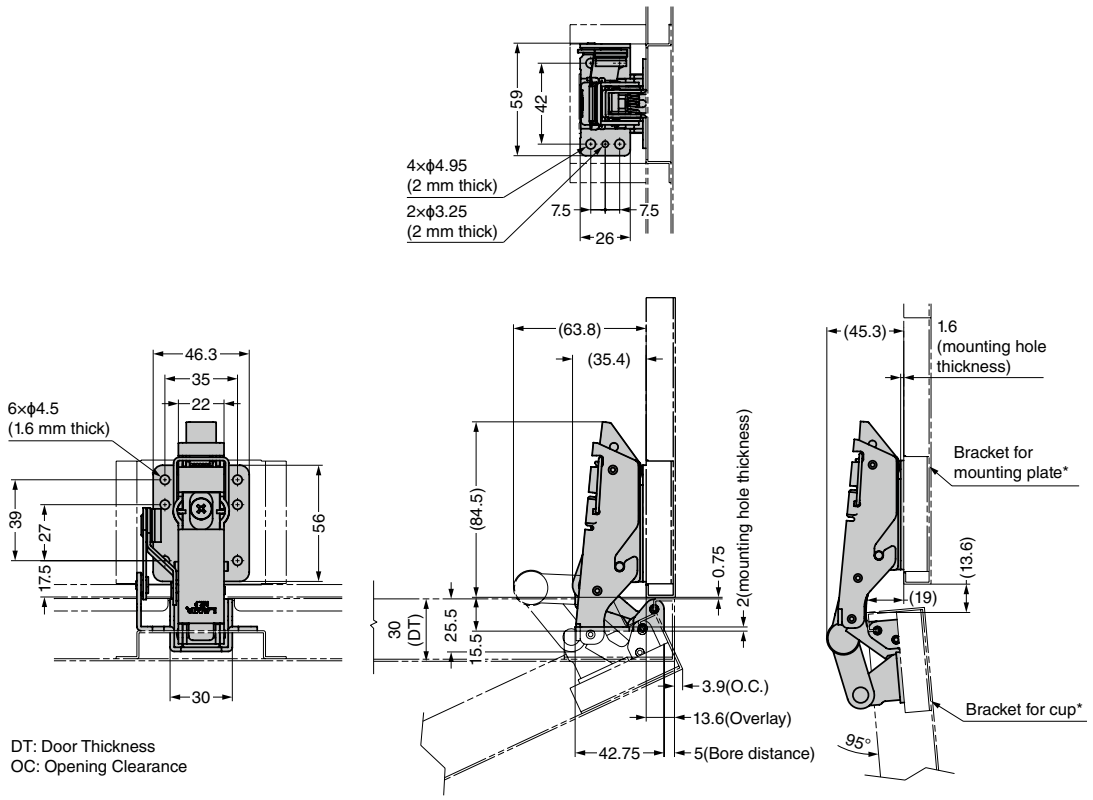
Although the torque will be released to prevent "spring-back" at a nearly closed angle, the door will not be firmly kept closed. If detent function is needed, please use with catches.

[Example Door Spec]



- Height : Max. 810 mm
- Width : Max. 474 mm
- Thickness : Max. 92 mm
- Weight : Max. 20 kg

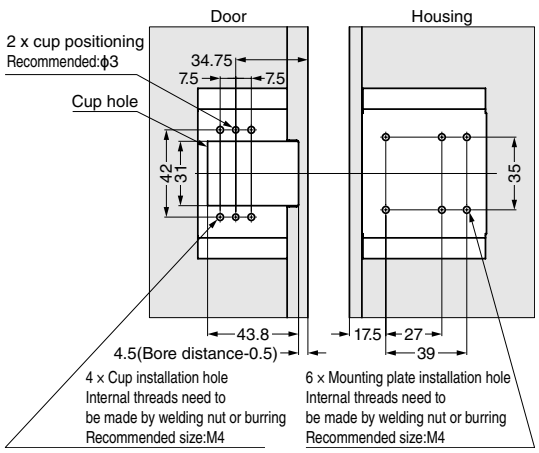
* 2 hinges used



DT: Door Thickness
OC: Opening Clearance

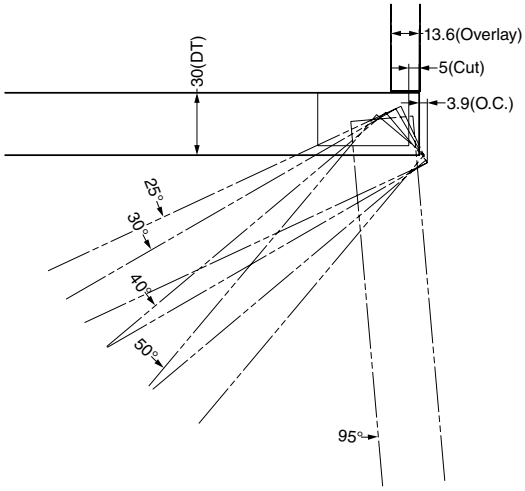
* Please prepare "Bracket for mounting plate" and "Bracket for cup" by yourself.

[Cut Out Dimensions]



The drawing shows the installation position in the conditions below:
- Bore distance : 5 mm
- Door thickness : 30 mm
- Overlay : 13.6 mm

[Locus Chart]



Reference door weight: 20 kg
(In case of door size W450 x H800, pitch 550, vertical use)

[Hinge Body]

RoHS	CAD	Item Code	Item Name	Main Material	Finish	Weight (g)	Box (pcs)
G	3D	160-046-391	H95TSH-F	Steel	Nickel	180	60

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Main Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-591	H95TSZ	Steel	Nickel	94	100

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETACHABLE TORQUE HINGE HG-RNM30

INSTRUCTION

- Window attachment and detachment without tools, easy to maintain.
- Lock mechanism prevents the window from falling off.

[Remarks]

- Be sure to read the "Cautions" 1.
- Sold in set (hinge and strike each 2 pcs).
- When installing, ensure that both hinge shafts are levelled and aligned.
- Force for operating window varies depending on use environment (air temperature, wind).
- Do not use with window enduring strong wind pressure.
- Use mohair separately if air tightness is required.

Video Link

[Parts Included]

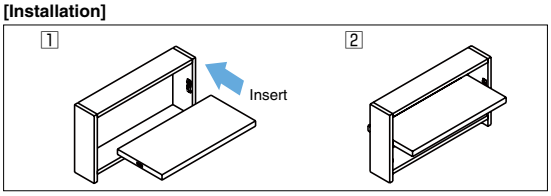
Only for HG-RNM30-SET

- Pan head tapping screw 4×20 (strike side)
- Countersunk head tapping screw 4×20 (hinge side)

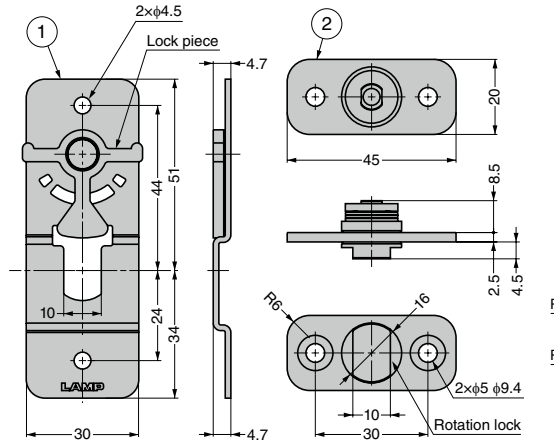
[Recommended Screws]

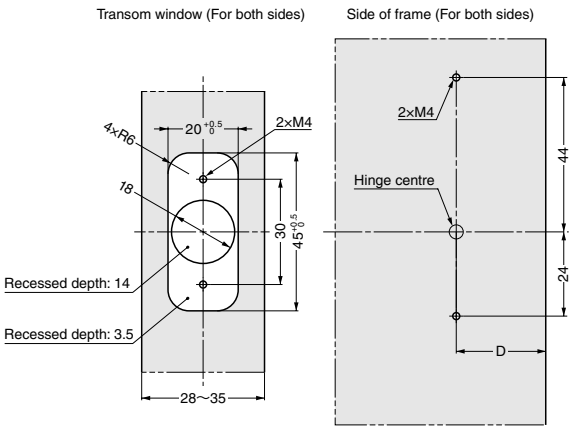
- Pan head screw M4 (strike side)
- Countersunk head screw M4 (hinge side)

[Installation]



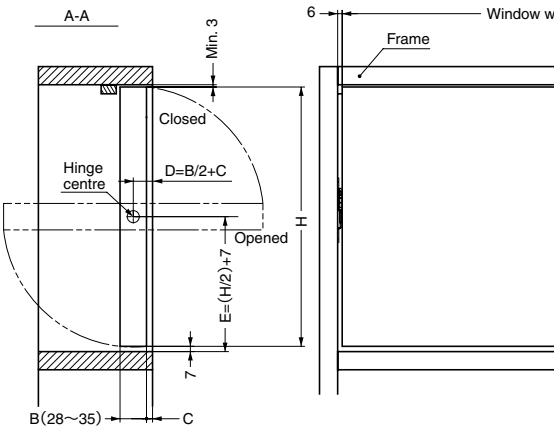
[Cut Out Dimensions]



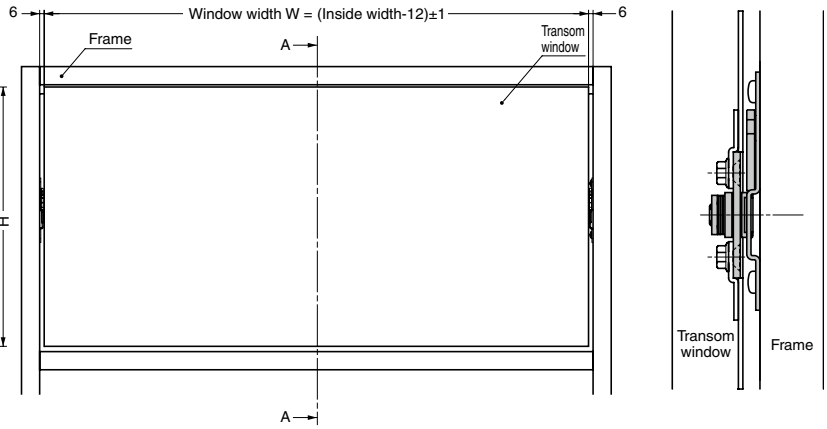


No.	Part Name	Material	Finish
①	Strike	Stainless Steel, POM	–
②	Hinge	Stainless Steel, etc.	

[Cut Out Dimensions]



[Installation Reference]



RoHS	CAD	Item Code	Item Name	Screw	Torque N·m/set	Torque kgf·cm/set	Weight (g)	Box (sets)	Carton (sets)
G	3D	170-029-733	HG-RNM30	w/o	3.0 ±20%	30.6 ±20%	112	15	120
G	3D	170-033-319	HG-RNM30-SET	w/				15	120

Refer to 1 : P.43

PIVOT TORQUE HINGE HG-PTH30

INSTRUCTION SUS

Free stop

Passed 30,000 open/ close private cycle test

- No tools are needed to attach and detach doors, allowing for easy maintenance.
- The safety retainer prevents doors and windows from falling off.

[Remarks]

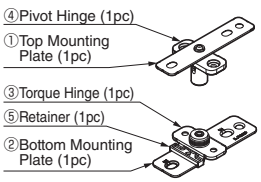
- 90˚ round trip is counted as one cycle in the test.
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are leveled and aligned.
- Force for operation varies depending on use environment, including air temperature and wind.
- Do not use with a door and window enduring strong wind pressure.

[Parts Included]

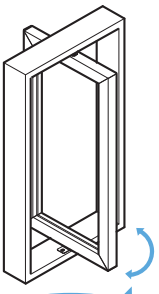
- Binding head tapping screw 4×20 (for the pivot hinge)
- Countersunk head tapping screw 4×20 (for the mouting plates and torque hinge)

Video Link

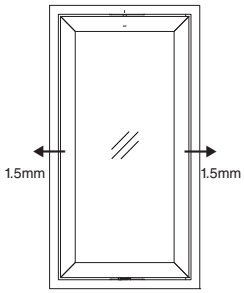
[Component Parts]



[Holds in any position]

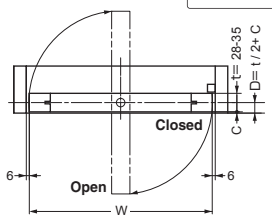


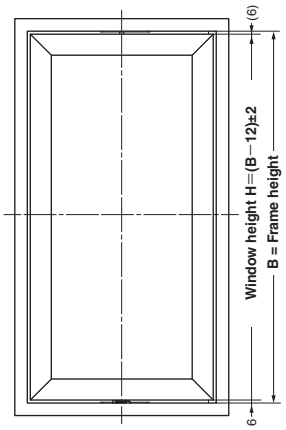
[Adjustable Side Spaces]



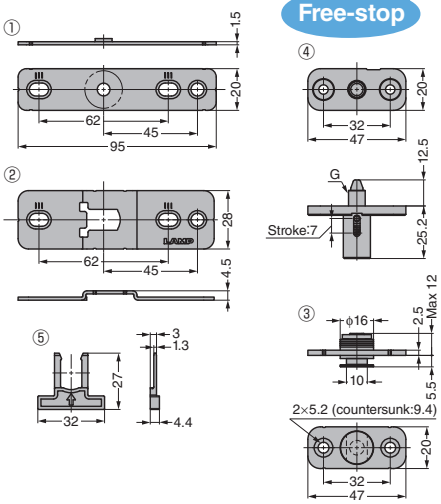
Can be adjusted horizontaly after installation.

[Installation]

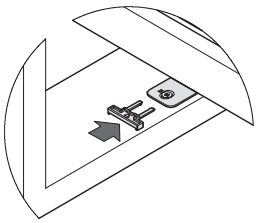




*Dimension (B-H) should be within 10-14mm.

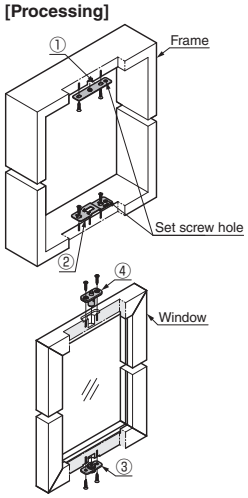


[Prevents Doors From Falling Off]

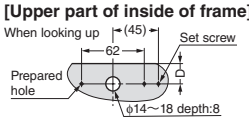


The retainer prevents doors from falling off. It only needs to be inserted into the bottom plate.

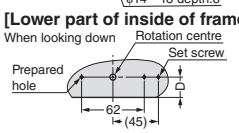
[Processing]

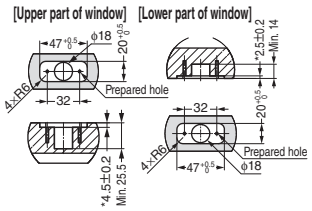


[Upper part of inside of frame]



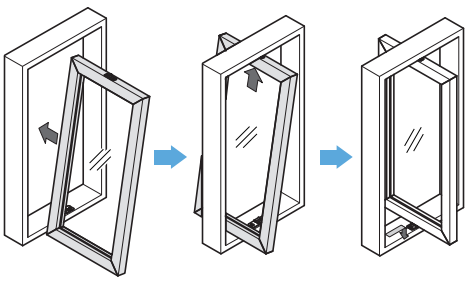
[Lower part of inside of frame]





*Determine the mortice depth so that the component is flush with the surface.

[Easy Installation]



Insert the window into the frame.

Insert the hinge into the top plate while holding the window at an incline.

Insert the hinge into the bottom plate.

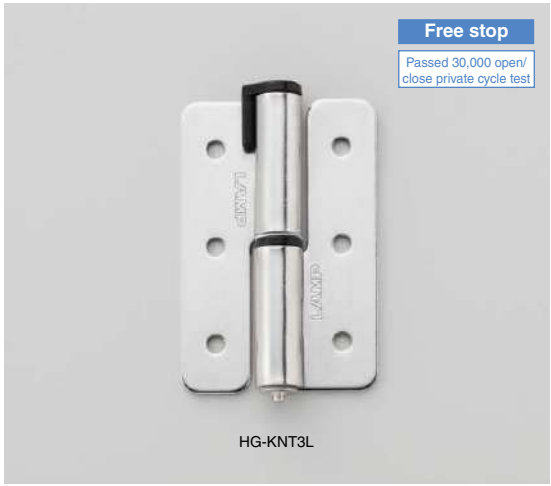
Sold in sets of two hinges.

RoHS	CAD	Item Code	Item Name	Material	Door Width	Door Height	Door Thickness	Door Weight kg/set	Torque N·m	Torque kgf·m	Weight (g)	Box (set)	Carton (set)
G	3D	170-043-673	HG-PTH30	Stainless Steel	350-500	700-1200	28-35	Max. 10	$3.0^{\pm 20\%}$	$30.6^{\pm 20\%}$	95	15	120

Refer to 1 : P.43

LIFT-OFF TORQUE HINGE HG-KNT

INSTRUCTION



HG-KNT3L

- Can be used vertically and horizontally.
- Lift-off type, easy to detach doors.

[Applications]

- Laboratory equipment, OA equipment, FA equipment, and various automatic equipment.

[Reference door mass for vertical installation (side-opening)]

- 18.9 kg (door size: W 300 × H 600 × t 20 mm, hinge installation pitch: 400 mm. Passed 30,000 open / close private cycle test)
- Reference door mass is verified using model HG-KNT16.

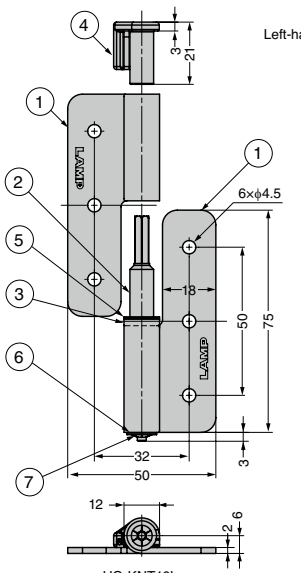
[Remarks]

- Be sure to read the “Cautions” 1.
- When installing, ensure that both hinge shafts are aligned.
- Insert into holder following installation of the door. Infirm insertion may cause damage.
- When using the hinges horizontally, set the holders opposite each other to prevent them being inserted or removed.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.

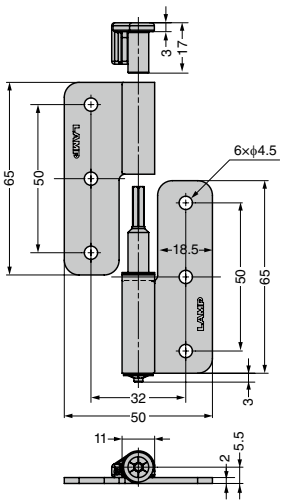
Selection Tool
Sasuga-kun

Video Link

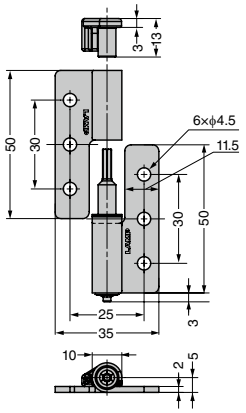
Left-handed type shown. Right-handed type is symmetrical.



HG-KNT16L

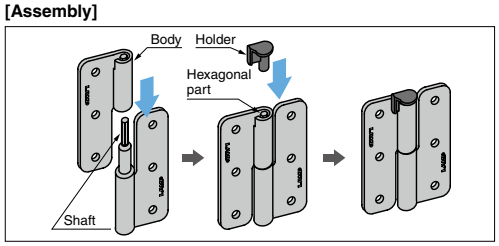


HG-KNT7L



HG-KNT3L

[Assembly]



Insert the body into shaft, and then insert the holder into the hexagonal part of shaft to generate torque. To detach, use a tool to push the holder out.

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft	Stainless Steel (SUS303)	–
③	Plug	POM	Black
④	Holder	PA	
⑤	Washer	PTFE	Natural
⑥	Washer	POM	
⑦	Push Nut	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-035-380	HG-KNT3L	Left-handed	$0.3^{\pm 67\%}$	$3.1^{\pm 67\%}$	42	50	200
G	3D	170-035-381	HG-KNT3R	Right-handed				50	200
G	3D	170-035-382	HG-KNT7L	Left-handed	$0.7^{\pm 36\%}$	$7.1^{\pm 36\%}$	76	40	160
G	3D	170-035-383	HG-KNT7R	Right-handed				40	160
G	3D	170-035-384	HG-KNT16L	Left-handed	$1.6^{\pm 20\%}$	$16.3^{\pm 20\%}$	96	30	120
G	3D	170-035-385	HG-KNT16R	Right-handed				30	120

Refer to 1 : P.43

MINI TORQUE HINGE HG-MF

●Small plastic torque hinge.

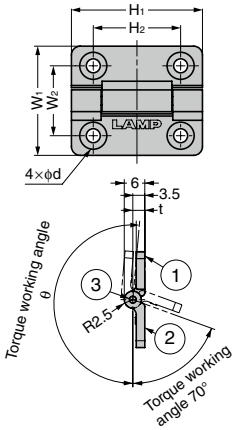
[Applications]

●Small and lightweight doors such as office equipment and shop furniture

[Remarks]

●Be sure to read the "Cautions" 1.

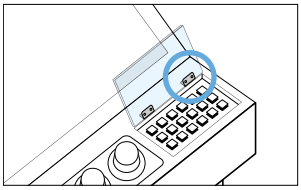
●When installing, ensure that both hinge shafts are levelled and aligned.



Selection Tool

Sasuga-kun

[Application Example]



No.	Part Name	Material	Colour
①	Body A	POM	Black, White
②	Body B		
③	Shaft	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	Colour	W_1	W_2	H_1	H_2	t	θ	dϕ	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-854	HG-MF08-BL	Black	25	16	20	10	2	190°	ϕ2.4, ϕ4.2	0.0784±25%	0.8±25%	2	400	1800
G	3D	170-023-855	HG-MF08-WT	White										2	400	1800
G	3D	170-023-856	HG-MF15-BL	Black			30	20			ϕ3.2, ϕ6.2	0.147±20%	1.5±20%	3	300	1200
G	3D	170-023-857	HG-MF15-WT	White										3	300	1200
G	3D	170-023-858	HG-MF25-BL	Black	28	18	40	25	2.5	185°		0.245±20%	2.5±20%	5	200	600
G	3D	170-023-859	HG-MF25-WT	White										5	200	600

Refer to 1 : P.43

SOFT-CLOSE HINGE HG-JV65-S For Vertical Use

Lapcon INSTRUCTION

Passed 50,000 open/ close private cycle test

- Closing speed of doors is adjustable with a hex key.
- Comes with self-close function which can hold doors closed.

HG-JV65-S-BL

HG-JV65-S-LGR

Comes with screw covers

[Specification]

- Temperature: 0˚C~40˚C

[Remarks]

- Please use with stoppers to prevent doors from opening over 180˚.

[Parts Included]

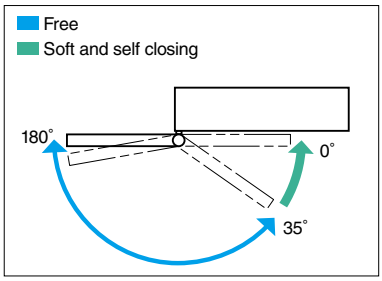
- Screw cover

[Recommended Screw]

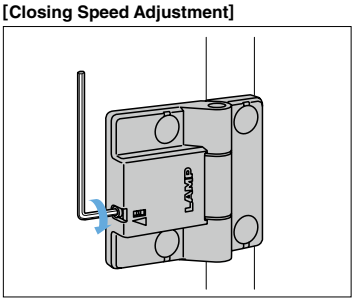
- For wood:
  - Binding head tapping screw M5
  - Pan head tapping screw M5
- For sheet metal:
  - Binding head screw M5
  - Pan head screw M5
  - Button bolt M5

Video Link

[Operating Range]

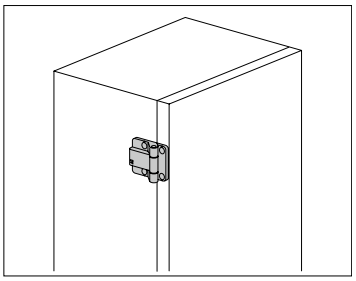


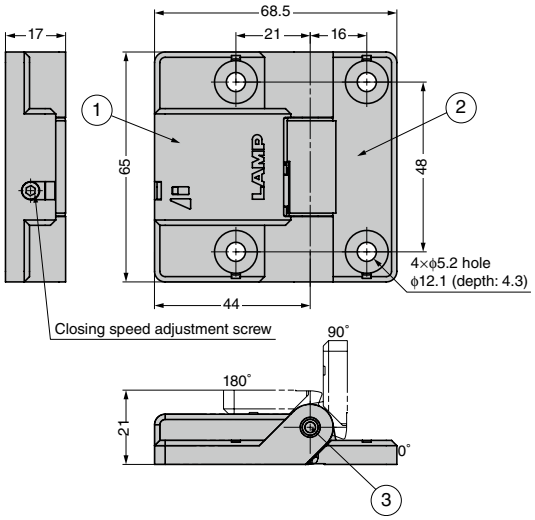
[Closing Speed Adjustment]



Closing speed of doors is adjustable with a hex key (size: 2.5).

[Installation]





No.	Part Name	Material	Finish/Colour
①	Body A	Polyamide (PA)	Black, Light Grey
②	Body B	Steel	
③	Shaft	Brass	Nickel
–	Screw Cover	Elastomer (SPE)	Black, Light Grey

RoHS	CAD	Item Code	Item Name	Finish	Available Door Specs				Weight (g)	Box (pcs)	Carton (pcs)
					Width	Height	Weight (kg/2pcs)	Weight (kg/3pcs)			
G	3D	170-046-272	HG-JV65-S-BL	Black	Max. 700	Max. 2400	1.0~7.0	7.0~12.0	85	1	60
G	3D	170-046-273	HG-JV65-S-LGR	Light Grey						1	60

SOFT-CLOSE HINGE HG-JV65-U-LGR Concealed Type / For Vertical Use

Lapcon INSTRUCTION

Passed 50,000 open/close private cycle test

- Will be hidden from view when closed. (The hinge is installed inside of enclosures.)
- Automatically and slowly closes doors from 35˚. (Self and soft closing)
- Closing speed of doors is adjustable with a hex key.

[Specification]
- Temperature: 0℃~40℃

[Remarks]
- Set door stopper to prevent doors from opening over 95˚.

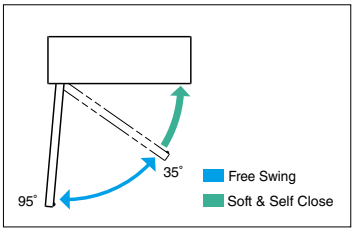
[Parts Included]
- Body cover

[Recommended Screw]
- M5 binding head screw
- M5 pan head screw
- M5 button bolt
- M5 truss head screw

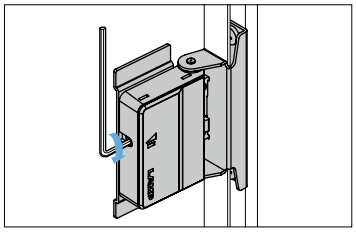
Video Link

[Installation Inside Cabinet]

[Operating Range]

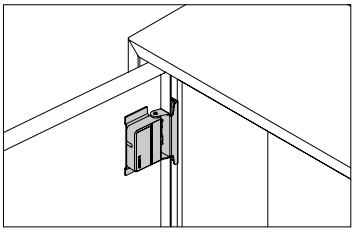


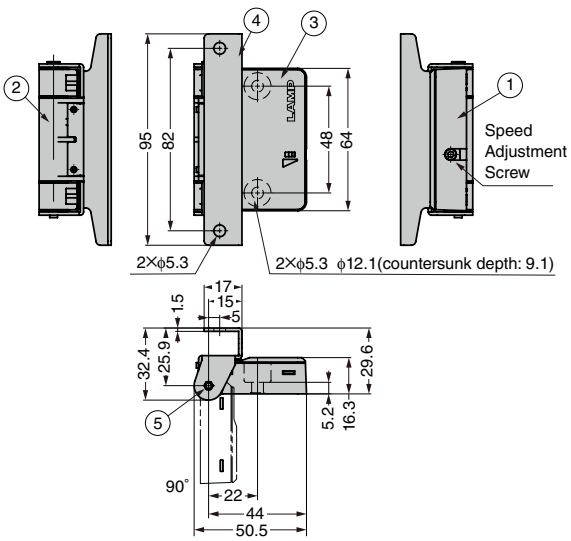
[Closing Speed Adjustment]



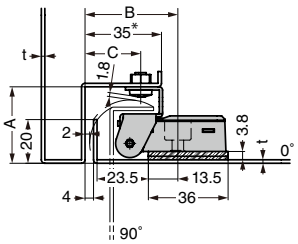
Closing speed is adjustable with a hex key. (size: 2.5)

[Installation]





[Installation and Dimensions]



*The nut and bending section might be close depending on the thickness of the sheet metal.

Thickness	A	B	C
t = 1.6	35	42.5	25.5
t ≦ 3.2	35+(t-1.6)	42.5+(t-1.6)	25.5+(t-1.6)

No.	Part Name	Material	Finish/Colour
①	Body A	Polyamide	Light Grey
②	Body B		
③	Body Cover	Polyacetal	
④	Press Arm	Stainless Steel (SUS304)	Plain
⑤	Shaft	Steel (SUM)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	Door Specs				Weight (g)
					Width	Height	Weight (kg/2pcs)	Weight (kg/3pcs)	
G	3D	170-049-813	HG-JV65-U-LGR	Light Grey	Max. 700	Max. 2400	1.0~7.0	7.0~12.0	135

GRAVITY SOFT-CLOSE HINGE HG-JG150 Self and Soft Close

Lapcon INSTRUCTION

Passed 50,000 open/close private test

Self-close Hinge (for lower) | Soft-close Hinge (for upper) | Self-close Hinge (for lower) | Soft-close Hinge (for upper)

Left-hand type shown.

- Automatically and slowly close doors from 65 degrees. (The self-close feature uses gravity, and the soft-close feature is du to a built-in damper.)
- Can separate into two parts for easy installation and disassembly.
- The closing speed of doors is adjustable.
- Doors cannot be removed when closed for security purposes. (0°)
- Door position can be adjusted for depth and in a horizontal direction (± 3 mm).
- Black Nickel finish is now available.

[Specification]

- Temperature : 0℃~40℃

[Remarks]

- Set door stopper to prevent doors from opening over 180°.
- Sold in set of two hinges. (soft-close hinge and self-close hinge)

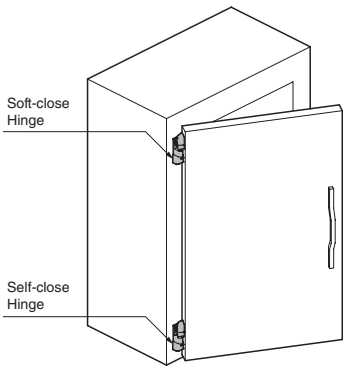
[Parts Included]

- Cover
- Adjustment Plate

[Recommended Screw]

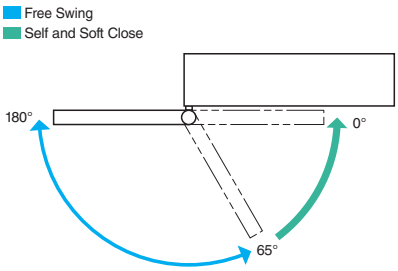
- M6 Binding head screw / Pan head screw
- M6 Hexagon socket head bolt / Button bolt

[Installation of Left-handed Type]

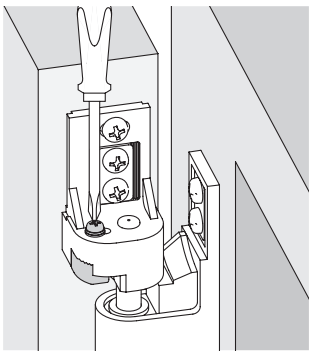


* Pitch between hinges: Min. 1200 mm

[Door Motion]

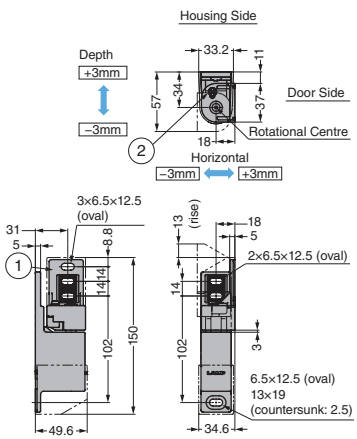


[Speed Adjustment]

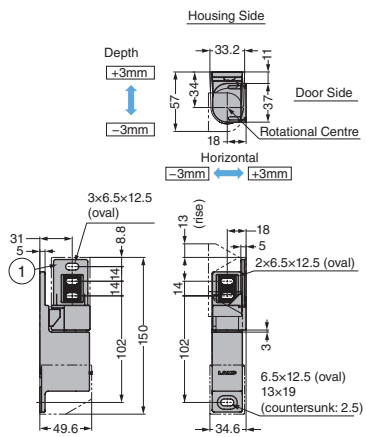


Closing speed can be adjusted with the screw of the soft-close hinge which is for the upper side.

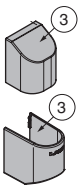
[Soft-close Hinge]



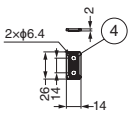
[Self-close Hinge]



[Covers]



[Adjustment Plate]



Video Link

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Chrome , Baking Finish
②	Speed Adjustment Screw	Steel	Nickel Plated
③	Cover	ABS	Chrome / Baking Finish
④	Adjustment Plate	Zinc Alloy (ZDC)	Chrome / Black Nickel

* Left-handed type is shown.

Sold in set of two hinges. (soft-close hinge and self-close hinge)

RoHS	CAD	Item Code	Item Name	Position	Finish/Colour	Door Width	Door Height	Load Capacity kgf / set	Weight (g)	Carton (set)
G	3D	170-048-340	HG-JG150R-CR	Right-handed	Chrome	Max. 900	Max. 2400	10 to 20	995	10
G	3D	170-048-341	HG-JG150L-CR	Left-handed						10
G	3D	170-057-778	HG-JG150R-BL	Right-handed	Baking Finish / Black					10
G	3D	170-057-779	HG-JG150L-BL	Left-handed						10

DAMPER HINGE HG-JHW16S

Lapcon L=R INSTRUCTION

- Surface mount type with built-in damper UDH-16S 1.
- Covers various torque ranges by using "with damper" and "without damper" as a pair.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Top-opening lids and upper covers of various cabinets

[Remarks]
- Be sure to read the "Cautions" 2.
- Torque range is the value when using one hinge (when two hinges with identical torque is used for one lid, the value is doubled).
- Install a stopper such as a stay at the lid opening/closing position (0~120 degree or less) for not exceeding the specified swivelling range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not disassemble or modify the product.

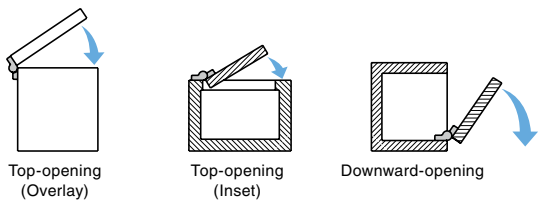
[Recommended Screws]
- M5 hexagon socket head cap screws (4 pcs)
- Washers 5 (4 pcs)

Video Link

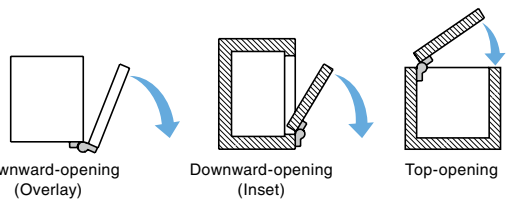
Selection Tool
Sasuga-kun

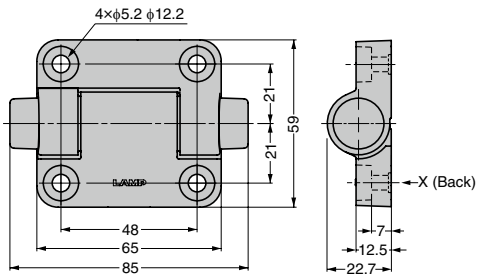
[Damper Working Direction]

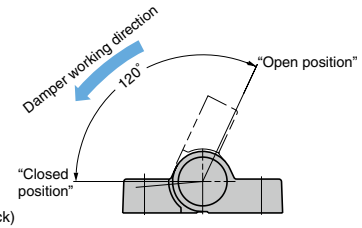
HG-JHW16S



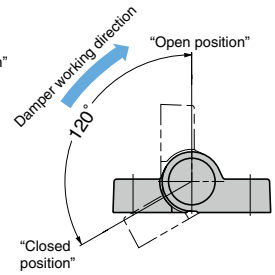
HG-JHW16SG





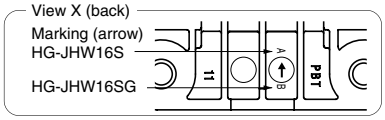


HG-JHW16S



HG-JHW16SG

※"Opening" and "Closing" directions shown above are for the case of external installation.



Material	Finish / Colour
PBT	Emboss/Dark Grey

RoHS	CAD	Item Code	Item Name	Damper Working Direction (When External Installation)	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	170-027-420	HG-JHW16S-34	For Closing	2.0~3.4	20.4~34.7	83	30
G	3D	170-027-421	HG-JHW16S-50		3.4~5.0	34.7~51.0		30
G	3D	170-027-422	HG-JHW16S-34G	For Opening	2.0~3.4	20.4~34.7		30
G	3D	170-027-423	HG-JHW16S-50G		3.4~5.0	34.7~51.0		30
G	3D	170-027-419	HG-JHW16S-00	Without Damper	–	–	52	30

Refer to 1 : P.116, 2 : P.43

DAMPER HINGE HG-JHW, HG-JHWG

Lapcon AS INSTRUCTION

HG-JHW

HG-JHWG

- Hinge with built-in dampers UDH 1.
- AS parts set for installing to aluminium frame also available. 2

[Applications]

- Top-opening lids and upper covers of various cabinets.

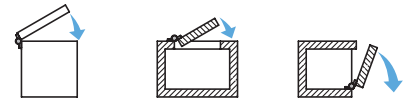
[Remarks]

- Be sure to read the "Cautions" 3.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified swivelling range.
- When installing, ensure that both hinge shafts are levelled and aligned.

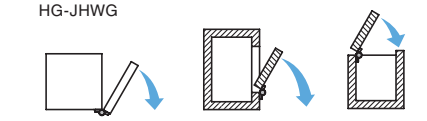
[Damper Working Direction]

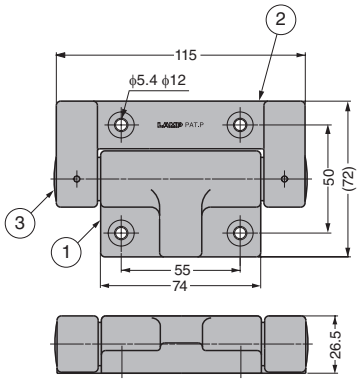
Selection Tool
Sasuga-kun

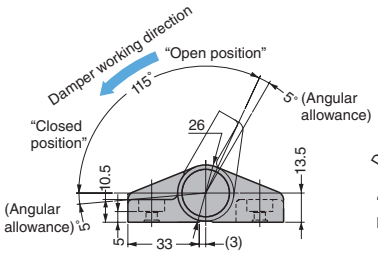
HG-JHW



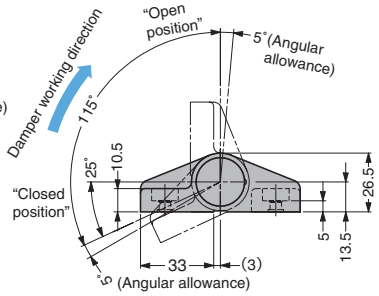
HG-JHWG







HG-JHW



HG-JHWG

Note: The "open" and "close" directions in the diagram are for when it is externally attached.

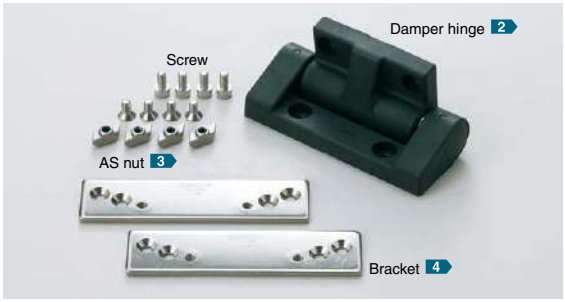
No.	Part Name	Material	Finish / Colour
①	Bracket (body side)	PBT	Emboss/Dark Grey
②	Bracket (shaft side)		
③	Cap	PP	

RoHS	CAD	Item Code	Item Name	Damper Working Direction	Torque N·m/pc	Torque kgf·cm/pc	Marking Colour	Box (pcs)	Carton (pcs)
G	3D	170-092-212	HG-JHW50	For Closing	3~5	30.6~51	White	4	64
G	3D	170-092-211	HG-JHW70		5~7	51~71.4	w/o	4	64
G	3D	170-092-215	HG-JHW50G	For Opening	3~5	30.6~51	White, Red	4	64
G	3D	170-092-216	HG-JHW70G		5~7	51~71.4	Red	4	64

Refer to 1 : P.115, 2 : P.95, 3 : P.43

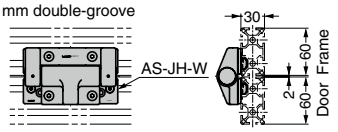
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

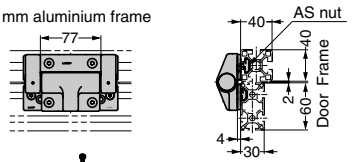


[Dimensions]

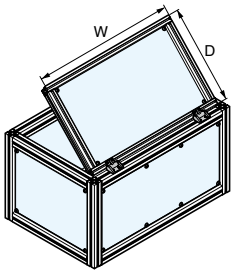
In case of 30×60 mm double-groove aluminium frame



In case of 40×40 mm aluminium frame



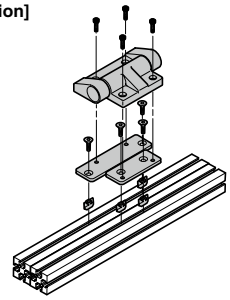
[Criterion of Door Weight]



Item Name	W	D	Door Weight kg
HG-JHW50	600	500	3.4
HG-JHW70	1000		5

※ In case of using two hinges for one door.

[Installation]

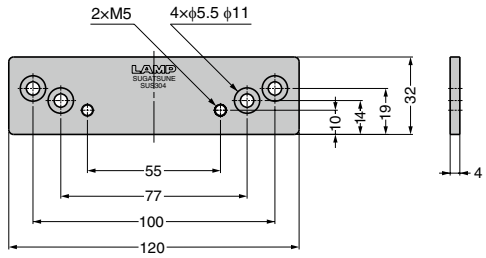


[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-554	AS-HG-JHW50-30-8	Groove Width 8 mm	Damper Hinge HG-JHW50 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 4pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-555	AS-HG-JHW70-30-8		Damper Hinge HG-JHW70 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 4pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-556	AS-HG-JHW50-40-10-30-8	Groove Width 8 mm Groove Width 10 mm	Damper Hinge HG-JHW50 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Head Cap Screw M5×12 : 4pcs	–
G	–	170-041-557	AS-HG-JHW70-40-10-30-8		Damper Hinge HG-JHW70 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Head Cap Screw M5×12 : 4pcs	–

Refer to 1 : P.20, 2 : P.94, 3 : P.526, 4 : P.95

AS BRACKET FOR HG-JHW AS-JH-W



- Used for installing damper hinge HG-JHW to aluminium frame.
- Use AS nuts for installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-692	AS-JH-W	Stainless Steel (SUS304)	Barrel Polished	105	25	250

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DAMPER HINGE HG-JH

Lapcon AS INSTRUCTION

Sold in pairs.

- Hinge with built-in dampers hinge UDH 1.
- Smooth movement in the opening direction.
- Left-handed…Damper works when rotating counterclockwise.
  Right-handed…Damper works when rotating clockwise.
- AS parts set for installing to aluminium frame also available. 2

[Applications]

- Top-opening lids and upper covers of various cabinets.

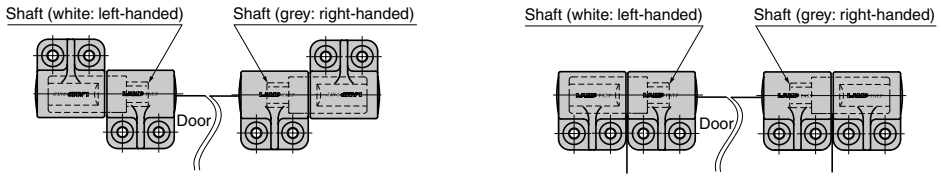
[Remarks]

- Be sure to read the “Cautions” 3.
- Torque range is the value when using two hinges for one door.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified rotation range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Sold in pairs.

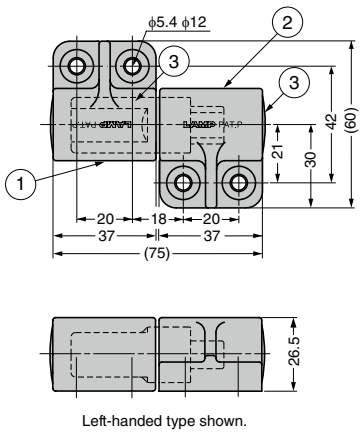
Selection Tool

Sasuga-kun

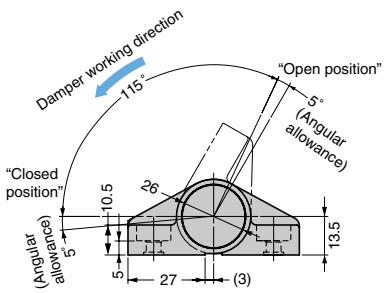
[Installation]



When viewing door from lower side as shown above, install the left-handed type damper (white) on the left side and the right-handed type (grey) on the right side.



Left-handed type shown.



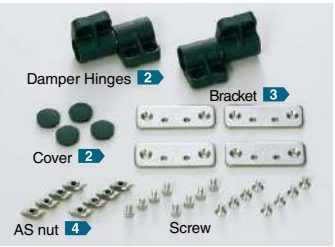
No.	Part Name	Material	Finish / Colour
①	Bracket	PBT	Emboss/Dark Grey
②	Damper		
③	Cap	PP	

RoHS	CAD	Item Code	Item Name	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-092-209	HG-JH25	3~5	30.6~51	Blue	200	4	64
G	3D	170-092-210	HG-JH35	5~7	51~71.4	Red	193	4	64

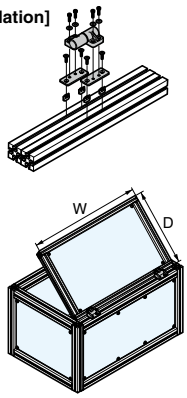
Refer to 1 : P.115, 2 : P.97, 3 : P.43

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

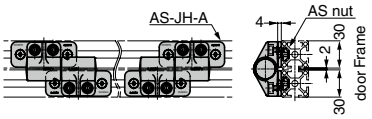


[Installation]

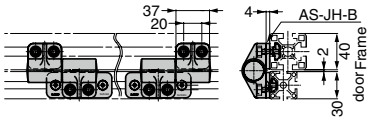


[Dimensions]

In case of 30×30 mm aluminium frame



In case of 40×40 mm aluminium frame



[Criterion of Door Weights]

Item Name	W	D	Door Weight kg
HG-JH25	400	400	2.3
HG-JH35	700	400	3.2

※ In case of using two hinges for one door.

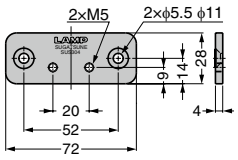
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
–	–	170-041-550	AS-HG-JH25-30-8	Groove Width 8 mm	Damper Hinge HG-JH25 : 1set Bracket AS-JH-A : 4pcs AS Nut AS-8M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 8pcs M5×12 Hexagon Socket Countersunk Head Screw : 8pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-551	AS-HG-JH35-30-8		Damper Hinge HG-JH35 : 1set Bracket AS-JH-A : 4pcs AS Nut AS-8M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 8pcs M5×12 Hexagon Socket Countersunk Head Screw : 8pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-552	AS-HG-JH25-40-10-30-8	Groove Width 8 mm Groove Width 10 mm	Damper Hinge HG-JH25 : 1set Bracket AS-JH-A : 2pcs Bracket AS-JH-B : 2pcs AS Nut AS-8M5 : 8pcs AS Nut AS-10M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 4pcs M5×20 Hexagon Socket Head Cap Screw : 4pcs M5×12 Hexagon Socket Countersunk Head Screw : 4pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-553	AS-HG-JH35-40-10-30-8		Damper Hinge HG-JH35 : 1set Bracket AS-JH-A : 2pcs Bracket AS-JH-B : 2pcs AS Nut AS-8M5 : 8pcs AS Nut AS-10M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 4pcs M5×20 Hexagon Socket Head Cap Screw : 4pcs M5×12 Hexagon Socket Countersunk Head Screw : 4pcs M5 Washers (size 5) : 8pcs	–

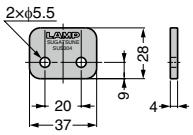
Refer to 1 : P.20, 2 : P.96, 3 : P.97, 4 : P.526

AS BRACKET FOR HG-JH AS-JH

AS SUS



AS-JH-A



AS-JH-B

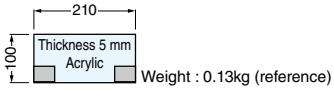
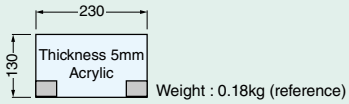
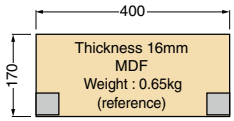
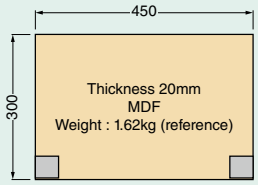
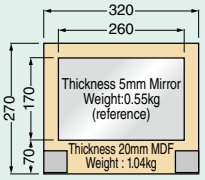
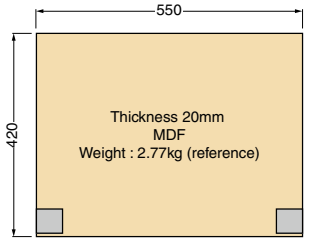
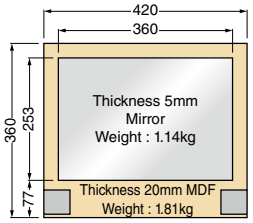
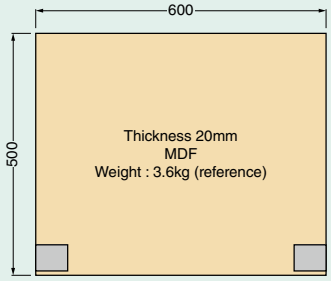
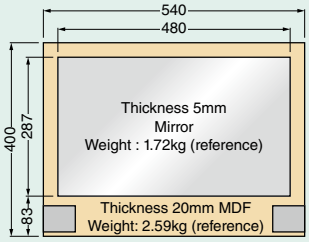
- Used for installing damper hinge HG-JH to aluminium frame.
- Use AS nuts for installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-690	AS-JH-A	Stainless Steel (SUS304)	Barrel Polished	60	50	500
G	3D	170-090-691	AS-JH-B			30	100	1000

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

HG-JHM Damper hinges series - Supported lid digest

- This table gives a general guideline of the different lid weight and measurements that can be used with HG-JHM series.
- Lid measurements have been calculated using the maximum torque available for the product model. (for example, for HG-JHM16 series we used HG-JHM16-50)
- The lid measurements are just an example of the various possible combinations of length, width and thickness.
- The torque value is calculated using one pair of HG-JHM installed on one lid.

Model	Torque force	Lid size (example)
HG-JHM9-S4(U4) 1	0.027 ～ 0.043 N・m (0.275 ～ 0.44 kgf・cm)	
HG-JHM9-S(U) 2	0.027 ～ 0.086 N・m (0.275 ～ 0.88 kgf・cm)	
HG-JHM11 3	0.05 ～ 0.4 N・m (0.51 ～ 4.08 kgf・cm)	
HG-JHM14 4	0.5 ～ 2 N・m (5.1 ～ 20.4 kgf・cm)	  Lid with internal mirror
HG-JHM16 5	2 ～ 5 N・m (20.4 ～ 51 kgf・cm)	  Lid with internal mirror
HG-JHM20 6 HG-JHM20T 7	6 ～ 8 N・m (61.2 ～ 81.6 kgf・cm)	  Lid with internal mirror

【How to calculate the maximum torque moment】

$$T = m \times 9.80665 \times L \times \frac{1}{1000}$$

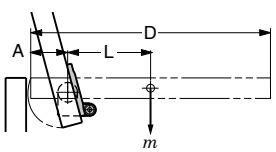
T = Maximum moment of the lid
m = Lid weight [kg]
L = Distance from the rotation point to the centre of gravity of the lid (mm)
(In case the centre of gravity is situated in the middle of the lid)

$$L = \frac{D}{2} - A \quad (\text{For HG-JHM20T, } L = \frac{D}{2} - A + 20)$$

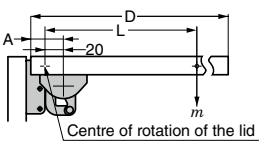
D = Lid length [mm]
A = Distance from the rotation point to the back edge of the lid [mm]
(For HG-JHM20T, A : Installation measurements of the bracket)

Calculation example (for HG-JHM14)

If D = 180mm, A = 26mm, m = 0.96kg… $T = 0.96 \times 9.80665 \times (\frac{180}{2} - 26) \times \frac{1}{1000} = 0.6$ [N・m]



Model	A
HG-JHM9	18
HG-JHM11	26
HG-JHM14	26
HG-JHM16	32
HG-JHM20	36



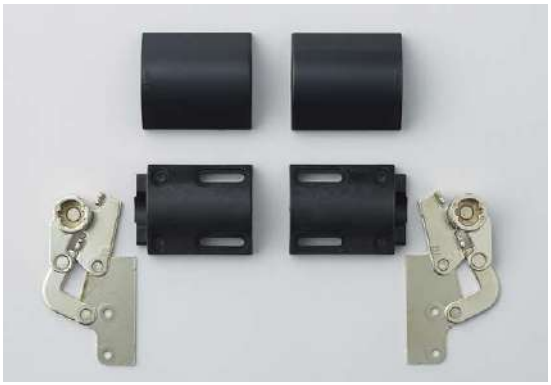
Model	A
HG-JHM20T	36～38

Material	Specific gravity
Acrylic	1.2
MDF	0.6
Mirror	2.5

Refer to 1 2 : P.108, P.109, 3 : P.104, 4 : P.102, 5 : P.101, 6 : P.100, 7 : P.99

DAMPER HINGE HG-JHM20T Surface Mount Type

INSTRUCTION



W/ black cover　　Sold in pairs.

W/ white cover

Assembly example

- Newly-added surface mount type: Easy to install without the need of recessing.
- Hinge with built-in damper UDH 1.
- Soft-close and smooth-open features.
- For Inset Lid.
- Cover hides mounting screws.

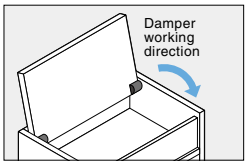
[Remarks]

- Sold in pairs.
- Below torque range is the value when using a pair of hinges (left and right) per lid.
- Be sure to read the "Cautions" 2.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the top-opening lid by about 60˚ or more. Otherwise, the damper may not work.

[Parts Included]

- Hinge plate mounting screws: binding head tapping screw 3.5 x 14 (nickel) 4 pcs
- Bracket mounting screws: binding head tapping screw 3.5 x 20 (nickel) 8 pcs

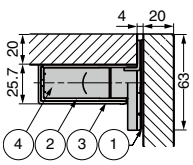
Chrome finished cover



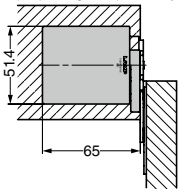
No.	Part Name	Material	Finish/Colour
①	Hinge Plate	Steel (SPCC)/Zinc Alloy (ZDC)	Nickel
②	Bracket	POM	Black
③	Cover	ABS	Black/White/Chrome
④	Damper	–	Bearing Right-handed: Grey, Left-handed: Natural

[Front View]

Top-opening lid closed



Top-opening lid opened by 90˚



※Right-handed type shown. Left-handed type is symmetrical.

Door thickness	Standard		Chamfered Lid Edge	
	Size A	Gap	Size A	Gap
16	36	4	38	2
18			37	3
20			–	–

Selection Tool

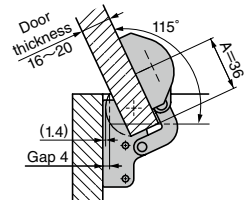
Sasuga-kun

[Door Weight Selection]

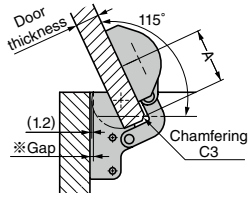
Door Length (D)	Door Weight (m)
250	5.61~7.48 kg
300	4.57~6.09 kg
350	3.85~5.13 kg
400	3.33~4.43 kg
450	2.93~3.90 kg

[Installation]

Standard

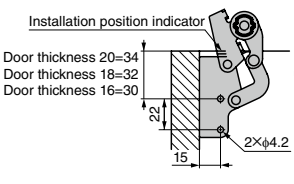


Chamfered lid edge

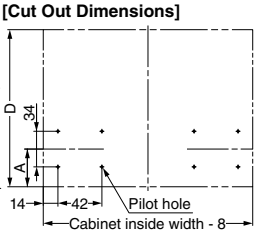


※Gap is decreased compared with standard when chamfered.

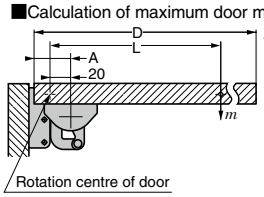
[Hinge Plate Installation Position]



[Cut Out Dimensions]



■Calculation of maximum door moment (for homogeneous material)



$$T = m \times 9.80665 \times L \times \frac{1}{1000}$$

T : Max. door torque (N・m)

m : Door weight (kg)

L : Distance from rotation centre to door centre of gravity (mm)

$$L = \frac{D}{2} - A + 20 \text{ ※}$$

D : Door length (mm)

A : Bracket installation dimension (mm) (The range of A is about 36mm ~38mm)

※(Formula for assuming that the centre of gravity is in the centre of door)

※For heterogeneous door (e.g., attached with a mirror), please refer to our website > Selection Tool Sasuga-kun > "What is the centre of gravity? What is moment?" page.

RoHS	CAD	Item Code	Item Name	Finish/Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-036-328	HG-JHM20T-80BL	Black	6~8	61.2~81.6	Yellow	–	–	–
G	3D	170-036-329	HG-JHM20T-80WT	White				–	–	–
G	3D	170-036-839	HG-JHM20T-80CR	Chrome				–	–	–

Refer to 1 : P.115, 2 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DAMPER HINGE HG-JHM20

Lapcon INSTRUCTION

Sold in pairs.

W/ black cover

Sold in pairs.

W/ white cover

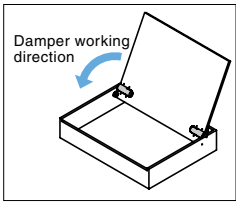
- Hinge with built-in dampers UDH 1.
- Smooth movement in the opening direction.
- Mortise mount type.
- Easy to cut out with a router.
- Cover hides mounting screws for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60° or more.

[Parts Included]

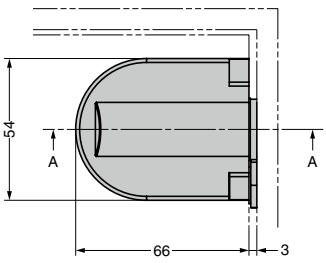
- Countersunk head tapping screw 4×20 (For wooden door)



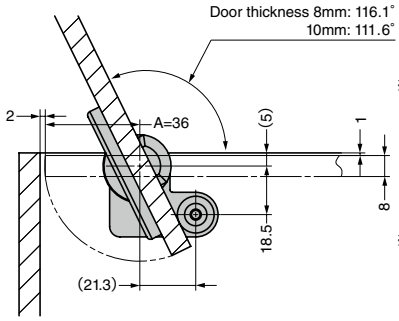
Selection Tool

Sasuga-kun

[Top View]



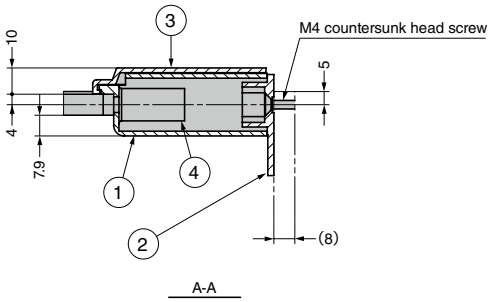
[Installation]



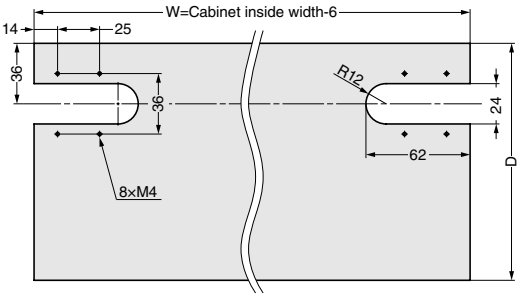
※If the distance from the screw hole to the edge is 5mm, a level difference of 1mm is generated.

※Min. door thickness 8mm

[Cross-section Drawing]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	POM	Black
②	Bracket	Aluminium Alloy (ADC)	Black Enamel Finish
③	Cover	ABS	Black/White
④	Damper	–	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-012-854	HG-JHM20-80BL	Black	6~8	61.2~81.6	Yellow	206	–	–
G	3D	170-012-855	HG-JHM20-80WT	White				206	–	–

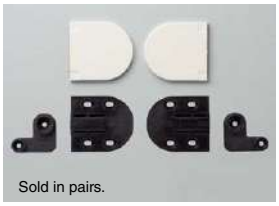
Refer to 1 : P.115, 2 : P.43

DAMPER HINGE HG-JHM16

Lapcon INSTRUCTION

Sold in pairs.

W/ black cover



Sold in pairs.

W/ white cover

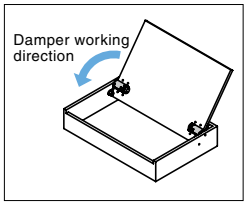
- Hinge with built-in damper UDH-16 1.
- Smooth movement in the opening direction.
- Mortise mount type.
- Easy to cut out with a router.
- Cover hides mounting screws for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60˚ or more.

[Parts Included]

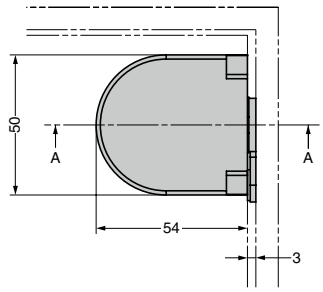
- Countersunk head tapping screw 4×20 (For wooden door)



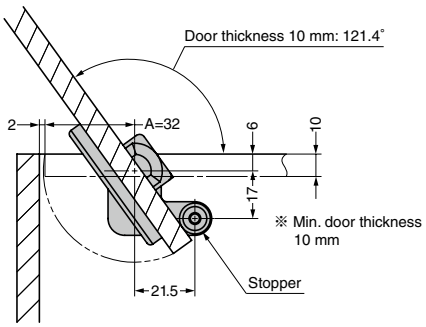
Selection Tool

Sasuga-kun

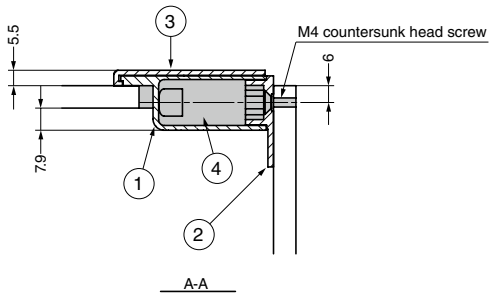
[Top View]



[Installation]

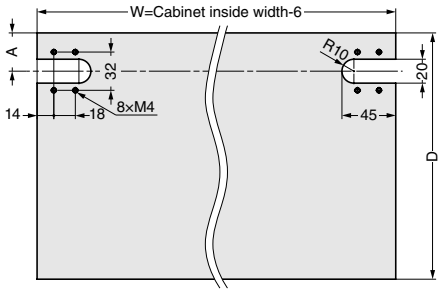


[Cross-section Drawing]



A-A

[Cut Out Dimensions]



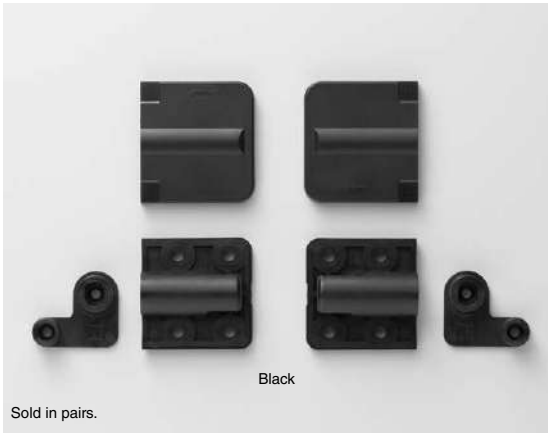
No.	Part Name	Material	Finish / Colour
①	Body	POM	Black
②	Bracket	Aluminium Alloy (ADC)	Black Enamel Finish
③	Cover	ABS	Black/White
④	Damper	–	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-092-221	HG-JHM16-34BL	Black	2~3.4	20.4~34.7	Green	126	–	–
G	3D	170-092-222	HG-JHM16-34WT	White				126	–	–
G	3D	170-092-223	HG-JHM16-50BL	Black	3.4~5	34.7~51	Black	126	–	–
G	3D	170-092-224	HG-JHM16-50WT	White				126	–	–

Refer to 1 : P.116, 2 : P.43

DAMPER HINGE HG-JHM14

Lapcon INSTRUCTION



Sold in pairs.

- Hinge with built-in damper UDH-14 1.
- Smooth movement in the opening direction.
- Cover hides mounting screws for clean appearance.
- Easy to cut out with a router.

[Specification]

- Operating temperature: 0℃~40℃

[Remarks]

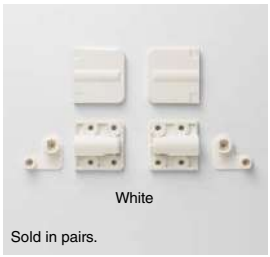
- Be sure to read the "Cautions" 2.
- The installation example in the Manual Instruction is for wooden lid.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60° or more.

[Sold Separately]

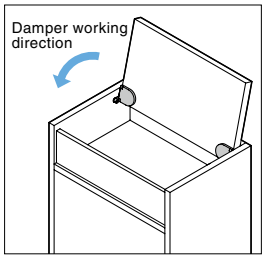
- Bracket for under mount (UKZ14) also available 3.

Selection Tool

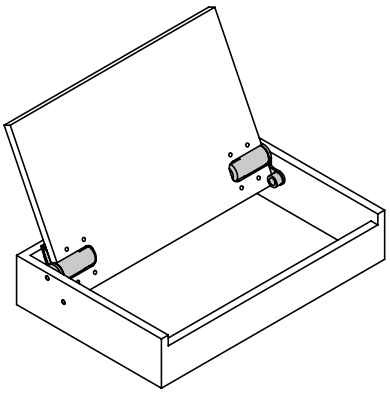
Sasuga-kun



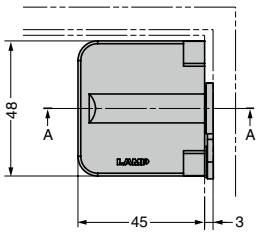
Sold in pairs.



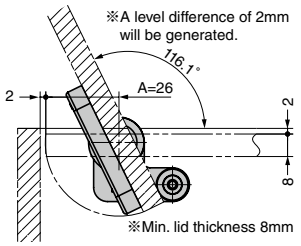
■Side Mount Type



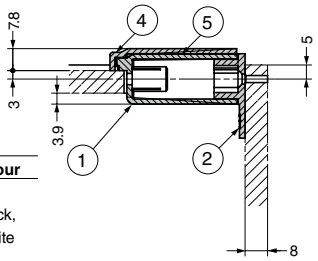
[Top View]



[Installation]

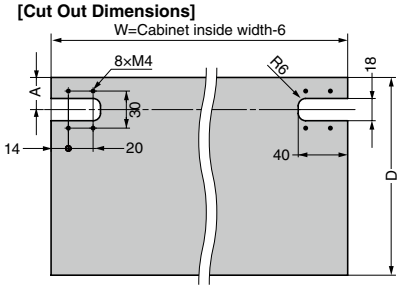


[Cross-section Drawing]



A-A

[Cut Out Dimensions]

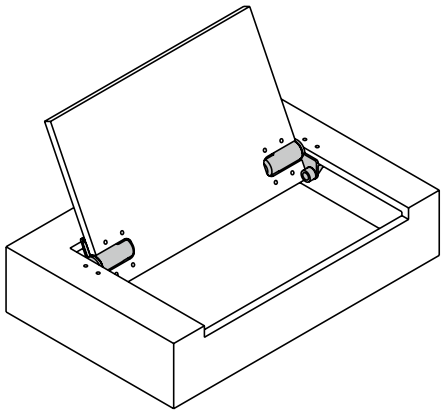


No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket for side mount R	Reinforced	
③	Bracket for side mount L	PBT	
④	Cover	ABS	
⑤	Damper	–	–

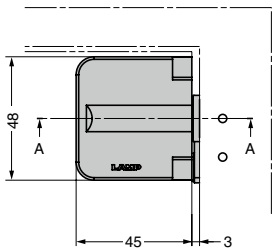
RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-031-930	HG-JHM14-S-8BL	Black	0.5~0.8	5.1~8.2	Purple	105°	51.4	20	220
G	3D	170-031-931	HG-JHM14-S-8WT	White					51.4	20	220
G	3D	170-031-932	HG-JHM14-S-15BL	Black	0.8~1.5	8.2~15.3	Blue		51.4	20	220
G	3D	170-031-933	HG-JHM14-S-15WT	White					51.4	20	220
G	3D	170-031-934	HG-JHM14-S-20BL	Black	1.5~2	15.3~20.4	Green		51.4	20	220
G	3D	170-031-935	HG-JHM14-S-20WT	White					51.4	20	220

Refer to 1 : P.117, 2 : P.43, 3 : P.103

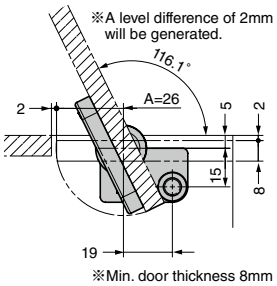
■Under Mount Type (optional bracket 1 for under mount is required)



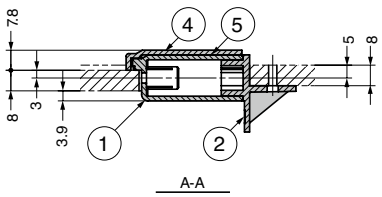
[Top View]



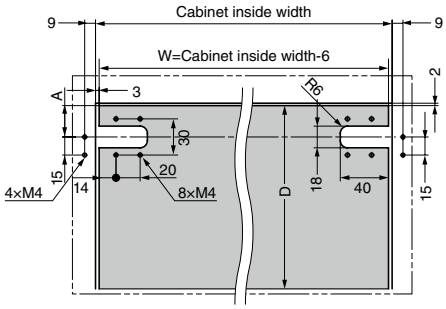
[Installation]



[Cross-section Drawing]



[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket for Side Mount R	Reinforced PBT	
③	Bracket for Side Mount L		
④	Cover	ABS	
⑤	Damper	–	–

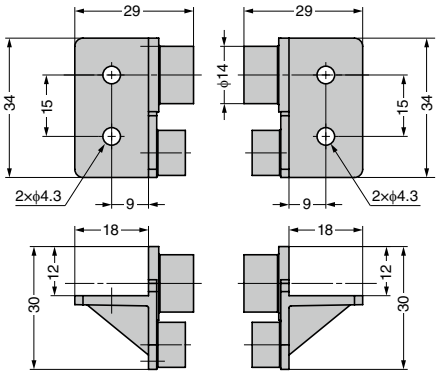
Refer to 1 : P.103

BRACKET FOR HG-JHM14 UNDER MOUNT UKZ14

INSTRUCTION

UKZ14-BL

UKZ14-WT



Bracket for under mount L Bracket for under mount R

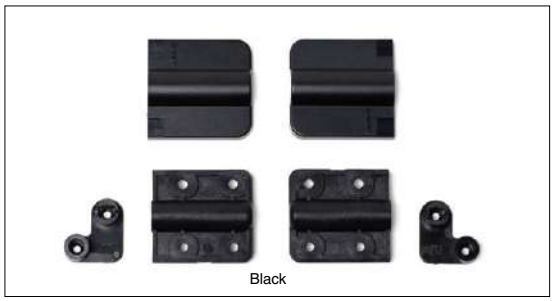
[Bracket for Under Mount]

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pairs)	Carton (pairs)
GT	3D	170-031-936	UKZ14-BL	Reinforced PBT	Black	13	40	440
GT	3D	170-031-937	UKZ14-WT		White	14	40	440

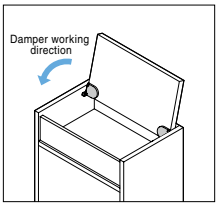
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DAMPER HINGE HG-JHM11

Lapcon INSTRUCTION


Black

White



- Hinge with built-in damper.
- Damper unit works to close door softly. Smooth movement in opening direction.
- Mounted in sideboard and installed in inset door.
- Applicable into surface mount with Bracket UTZ11-BL.
- Cover hides mounting screws for clean appearance.
- Easy to cut out with a router.

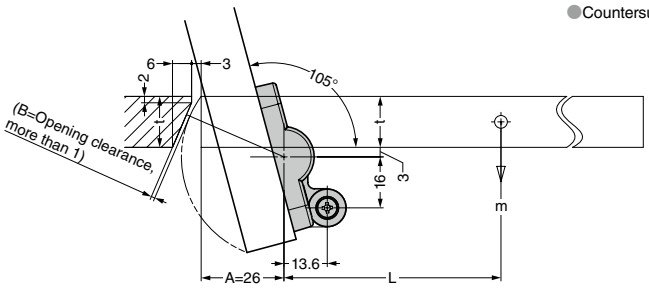
[Specification]
- Operation temperature: 0˚C~40˚C

[Application]
- Small covers for machine or wire manager.

[Remarks]
- Applicable moment of door: 0.05-0.4N·m. Use a pair/door.
- When installing, ensure that both hinge shafts are levelled and alighted.
- Damper mechanism works when opening the lid by about 60˚ or more. Otherwise, damper may not work.
- Prepare stopper separately to keep the lid closed.
- Closing speed may change depending on operating temperature.

[Sold Separately]
- Bracket for Surface Mount UKZ11-BL

[Recommended Screw]
- Countersunk tapping screw 3, bind tapping screw 4

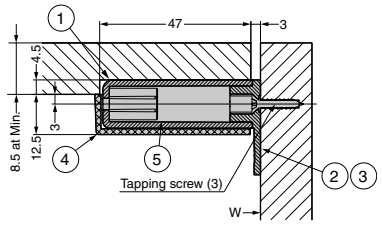


*t =16. Prepare more than 1 for Gap B of Opening clearance.

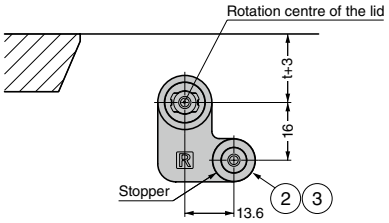
Selection Tool
Sasuga-kun

Installation

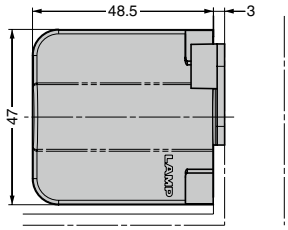
[Cross-section Drawing]



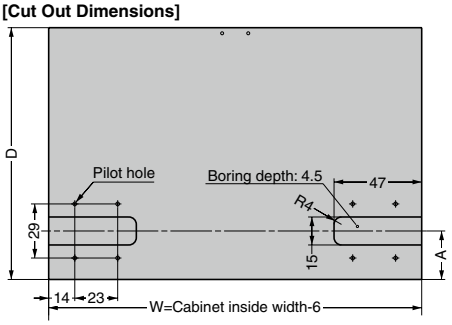
[Installed Position of Bracket]



[Top View] When closed door



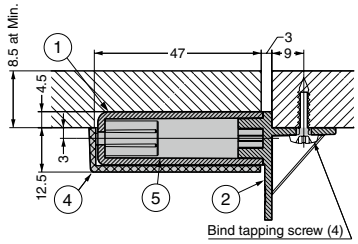
[Cut Out Dimensions]



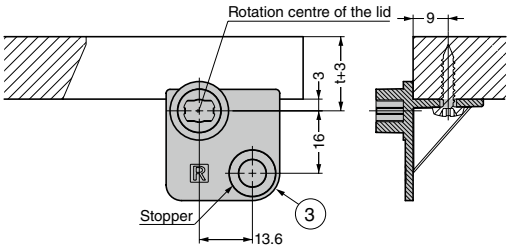
No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black/White
⑤	Damper	–	–

[Surface Mount Type]
(Installed with Bracket for Surface Mount UKZ11-BL)

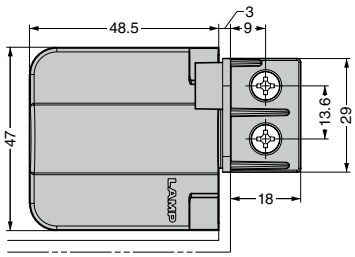
[Cross-section Drawing]



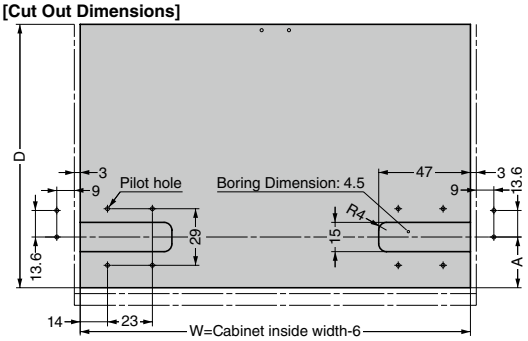
[Installation Position of Bracket]



[Top View]



[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black/White
⑤	Damper	–	–

[Hinge]

Sold by set.

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g)	Box	Carton
G	3D	170-041-206	HG-JHM11-1BL	Black	0.05-0.1	0.51-1.02	105°	43.9	25 set	275 set
G	3D	170-041-207	HG-JHM11-1WT	White						
G	3D	170-041-208	HG-JHM11-2BL	Black	0.1-0.2	1.02-2.04				
G	3D	170-041-209	HG-JHM11-2WT	White						
G	3D	170-041-210	HG-JHM11-3BL	Black	0.2-0.29	2.04-2.96				
G	3D	170-041-211	HG-JHM11-3WT	White						
G	3D	170-041-212	HG-JHM11-4BL	Black	0.29-0.4	2.96-4.08		46.8		
G	3D	170-041-213	HG-JHM11-4WT	White						

[Bracket for Surface Mount]

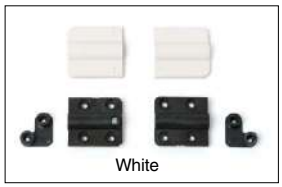
RoHS	CAD	Item Code	Item Name	Colour	Box	Carton
G	3D	170-041-218	UKZ11-BL	Black	50 set	500 set

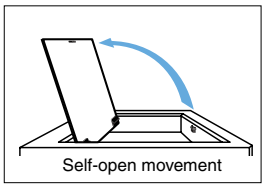
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SELF-OPEN DAMPER HINGE HG-JHS11

Lapcon INSTRUCTION

Black


White


Self-open movement

- Small damper hinge with self-opening function for top-opening lids. Using with a touch latch enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Applicable into surface mount with Bracket UKZ11-BL (sold separately).
- Cover hides mounting screws for clean appearance.
- Easy to cut out with a router.

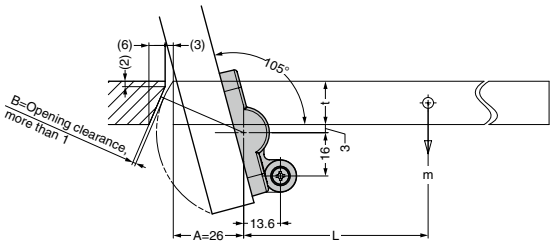
[Specification]
- Operation temperature: 0˚C~40˚C

[Application]
- Small covers for machine or wire manager, etc.

[Remarks]
- Applicable moment of door: 0.25~0.4N · m. Use a pair/door.
- Install Spring unit on left side and damper unit for right side of the door.
- When installing, ensure that both hinge shafts are levelled and alighted.
- Please install with touch latch separately to keep the door closed.

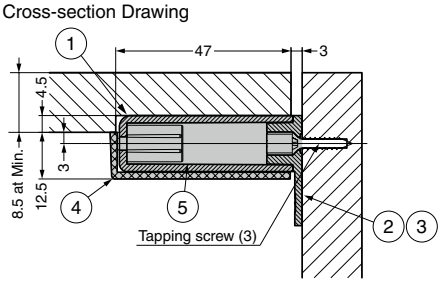
[Sold Separately]
- Bracket for HG-JHS11 Surface Mount UKZ11-BL

[Recommended Screws]
- Countersunk tapping screw3, bind tapping screw 4

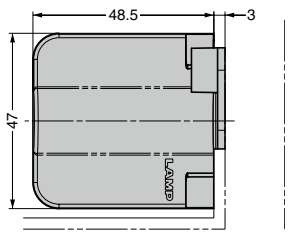


*t =16. Prepare more than 1 for Gap B of Opening clearance.

[Installation]
Cross-section Drawing



[Top View]
When closed door



[Calculation of maximum door moment]

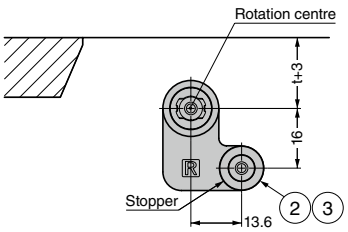
$T = m \times 9.80665 \times L$

T:Max. door torque (N/mm)
m:Door weight (kg)
L:Disrance from rotation centre to door centre of gravity (mm)
$L = \frac{D}{2} - A$ (Formula for assuming that the centre of gravity is in the centre of door)
D:Door length (mm)
A:Bracket installation dimension (mm)

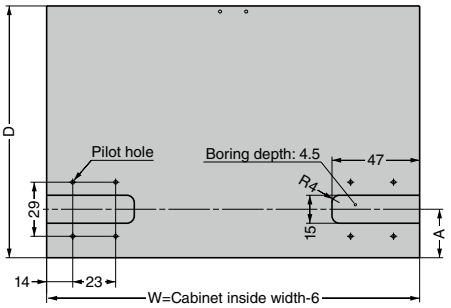
[Example] D=180 mm、A=26 mm、m=0.63kg

$T = 0.63 \times 9.80665 \times (\frac{180}{2} - 26) = 395 (mN \cdot m)$
$= 0.395 (N \cdot m)$

[Installation]
Bracket



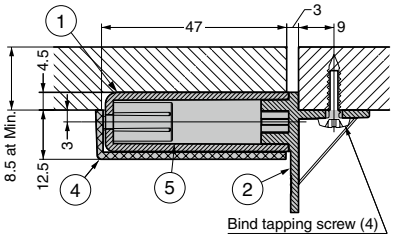
[Cut Out Dimensions]



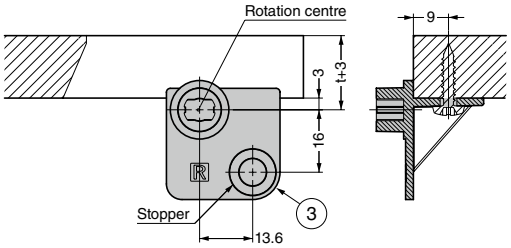
No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black/White
⑤	Damper	–	–

[Surface Mount Type]
(Installed with Bracket for Surface Mount UKZ11-BL)

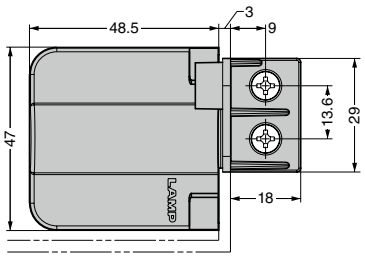
[Cross-section Drawing]



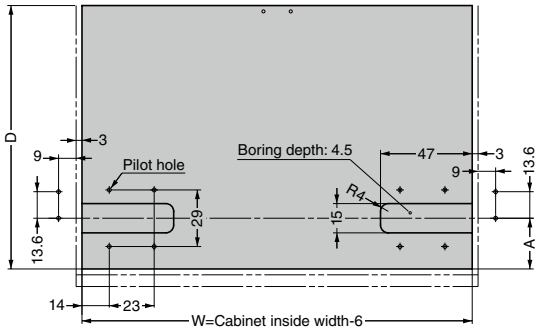
[Installation Position of Bracket]



[Top View]



[Cut Out Dimensions]

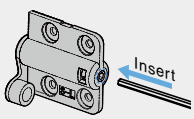


No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black / White
⑤	Damper	–	–

[Adjustment of Lid Opening Speed]

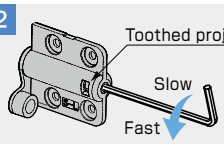
When increasing lid opening speed

1



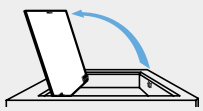
Insert a hex key (size 3) into the hole of spring unit (L side)

2



Push in the hex key *until toothed projection is disengaged, while rotating counter clockwise by 30°, and then pull it out.

3



Close the lid, and check if the lid can be opened smoothly. Repeat steps 1-3 (maximum 5 times) if the lid opening speed is still slow.

When decreasing lid opening speed (returning to the speed before adjustment)

Loosen the force following the hex key rotating clockwise.

*Make sure to rotate counter clockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

[Hinge]

Sold by set.

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf/pair	Opening Angle	Weight	Box	Carton
–	3D	170-041-214	HG-JHS11-2BL	Black	0.1 – 0.25	1.02 – 2.55	105°	56 g	12 set	50 set
–	3D	170-041-215	HG-JHS11-2WT	White					12 set	50 set
–	3D	170-041-216	HG-JHS11-4BL	Black	0.25 – 0.4	2.55 – 4.08			12 set	50 set
–	3D	170-041-217	HG-JHS11-4WT	White					12 set	50 set

[Bracket for Surface Mount]

Sold by set.

RoHS	CAD	Item Code	Item Name	Colour	Weight	Box	Carton
G	3D	170-041-218	UKZ11-BL	Black	12 g	50 set	500 set

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

MINI DAMPER HINGE HG-JHM9-S Side Mount

INSTRUCTION

HG-JHM9-S-BL

- Hinge with built-in damper.
- Can be used for top-opening, upward-opening, downward-opening and bottom-opening.
- Under mount type 1 also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

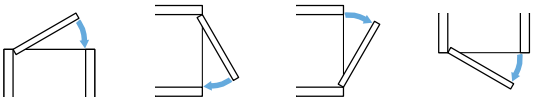
[Recommended Screws]
- Countersunk head screw M3, Binding head screw M3, Countersunk head tapping screw 3, Binding head tapping screw 3, etc.

Video Link

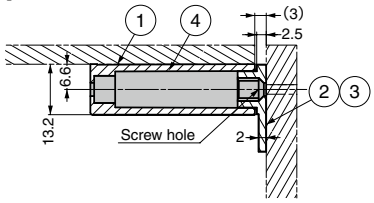
Selection Tool
Sasuga-kun

[Application Example]

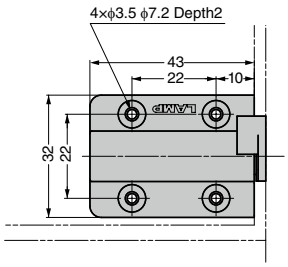
[Damper Working Direction]


Top-opening Upward-opening Downward-opening Bottom-opening

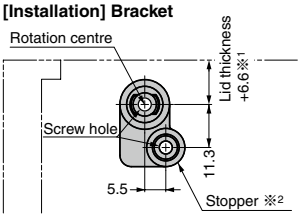
[Front View] Cross-section



[Bottom View]

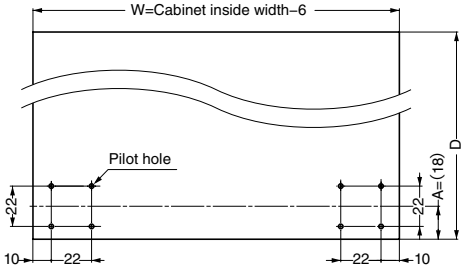


[Installation] Bracket

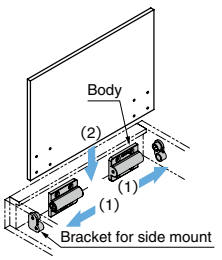


※1 Dimension when side board is flush with top surface of lid.
※2 To increase the opening angle of lid, rotate the stopper then fix it.

[Cut Out Dimensions]



[How to Install Body and Lid]
(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.



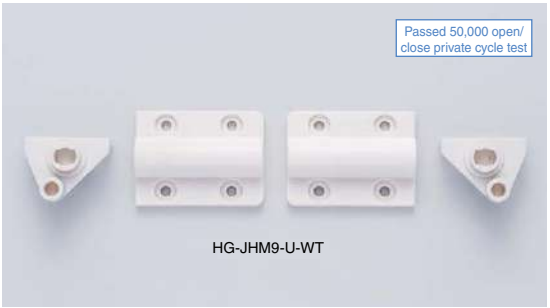
No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper	POM	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-025-895	HG-JHM9-S-BL	Black	0.054~0.086	0.55~0.88	105°	29	40	440
G	3D	170-025-896	HG-JHM9-S-WT	White				28	40	440
G	3D	170-037-326	HG-JHM9-S4-BL	Black	0.027~0.043	0.275~0.44		26	40	440
G	3D	170-037-327	HG-JHM9-S4-WT	White				26	40	440

Refer to 1 : P.109, 2 : P.43

MINI DAMPER HINGE HG-JHM9-U Under Mount

INSTRUCTION



- Hinge with built-in damper.
- Can be used for top-opening, upward-opening, downward-opening and bottom-opening.
- Side mount type 1 also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

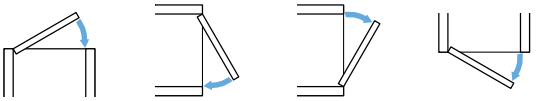
[Recommended Screws]
- Binding head screw M3, Binding head tapping screw 3, etc.

Video Link

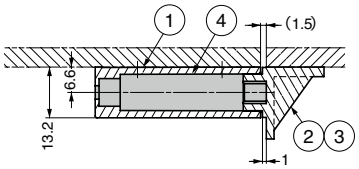
Selection Tool
Sasuga-kun

[Application Example] Shown below is HG-JHM9-S 1

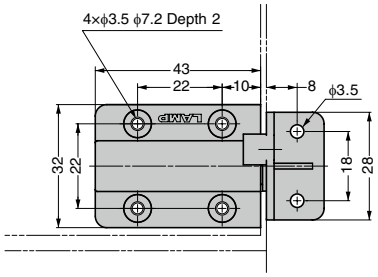
[Damper Working Direction]



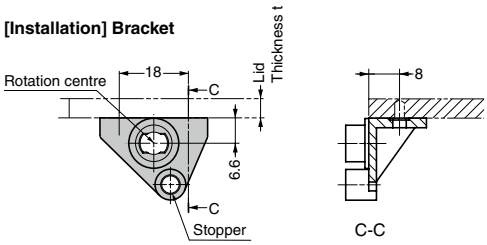
[Front View] Cross-section



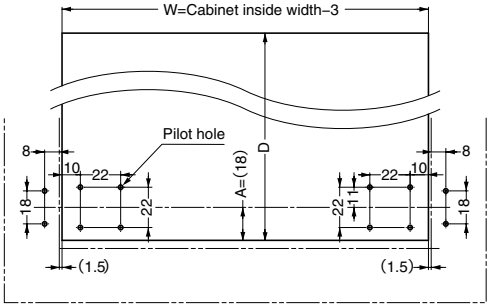
[Bottom View]



[Installation] Bracket

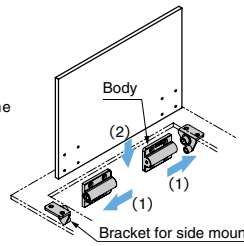


[Cut Out Dimensions]



[How to Install Body and Lid]

(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.



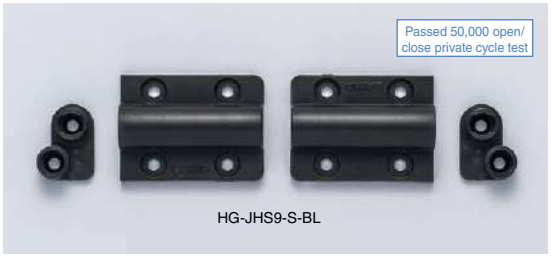
No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper	POM	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-025-897	HG-JHM9-U-BL	Black	0.054~0.086	0.55~0.88	105°	31	35	385
G	3D	170-025-898	HG-JHM9-U-WT	White				31	35	385
G	3D	170-037-328	HG-JHM9-U4-BL	Black	0.027~0.043	0.275~0.44		28	35	385
G	3D	170-037-329	HG-JHM9-U4-WT	White				28	35	385

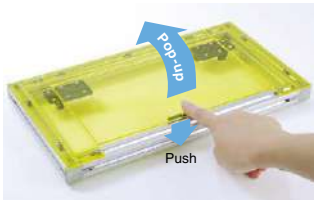
Refer to 1 : P.108, 2 : P.43

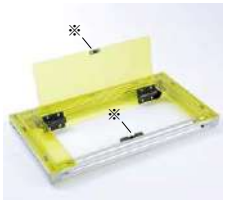
SELF-OPEN MINI DAMPER HINGE HG-JHS9-S Side Mount

INSTRUCTION



HG-JHS9-S-BL





※: Optional push latch ESN-195/BLK 1 (Picture above is HG-JHS9-U 2).

- Small damper hinge with self-opening function for top-opening lids. Using with a push latch 1 enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Under mount type 2 also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

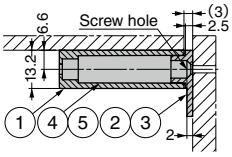
[Remarks]
- Be sure to read the "Cautions" 3.
- Sold in pairs.
- Make sure to mount spring unit at L side of the body. Check if damper is mounted at R side.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a push latch (sold separately) to keep the lid at closed position.

[Recommended Screws]
- Countersunk head screw M3, Binding head screw M3, Countersunk head tapping screw 3, Binding head tapping screw 3, etc.

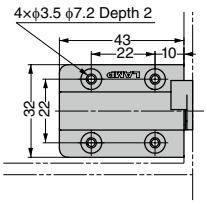
Video Link

Video Link

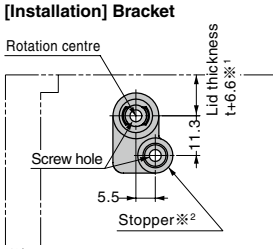
[Front View] Cross-section



[Bottom View]

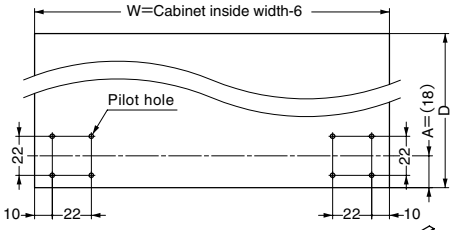


[Installation] Bracket



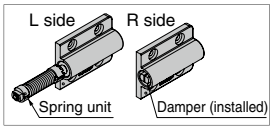
※1 Dimension when side board is flush with top surface of lid.
※2 To increase the opening angle of lid , rotate the stopper then fix it.

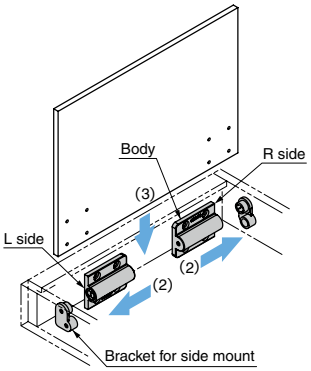
[Cut Out Dimensions]



[How to Install Body and Lid]

(1) Mount spring unit at L side of the body. Check if damper is mounted at R side.
(2) Insert the body into fixed bracket.
(3) Align mounting holes of lid with the body, and then fix with screws.



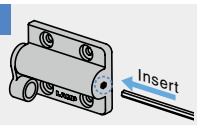


No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper (R side)	POM	–
⑤	Spring Unit (L side)	Zinc Alloy (ZDC)/Stainless Steel	Chromate/-

[Adjustment of Lid Opening Speed]

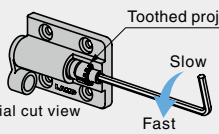
When increasing lid opening speed

1



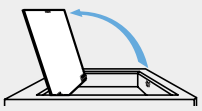
Insert a hex key (size 2.5) into the hole of spring unit (L side)

2



Push in the hex key※ until toothed projection is disengaged, while rotating counterclockwise by 30°, and then pull it out.

3



Close the lid, and check if the lid can be opened smoothly. Repeat steps 1~3 (maximum 1~2 times) if lid opening speed is still slow.

When decreasing lid opening speed (returning to the speed before adjustment)

Loosen the force following the hex key rotating clockwise.

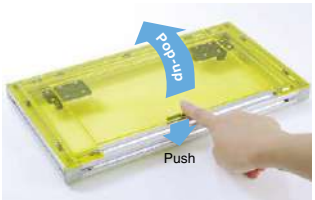
※Make sure to rotate counterclockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

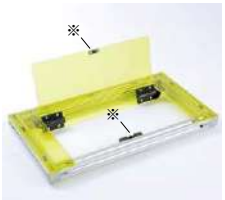
RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-028-293	HG-JHS9-S-BL	Black	0.027~0.043	0.275~0.44	105°	38	40	440
G	3D	170-028-294	HG-JHS9-S-WT	White					40	440

Refer to 1 : P.477, 2 : P.111, 3 : P.43

SELF-OPEN MINI DAMPER HINGE HG-JHS9-U Under Mount

INSTRUCTION





※: Optional push latch ESN-195/BLK 1 .

- Small damper hinge with self-opening function for top-opening lids. Using with a push latch 1 enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Side mount type 2 also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

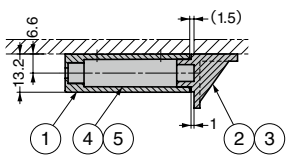
[Remarks]
- Be sure to read the "Cautions" 3.
- Sold in pairs.
- Make sure to mount spring unit at L side of the body. Check if damper is mounted at R side.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a push latch (sold separately) to keep the lid at closed position.

[Recommended Screws]
- Binding head screw M3, Binding head tapping screw 3, etc.

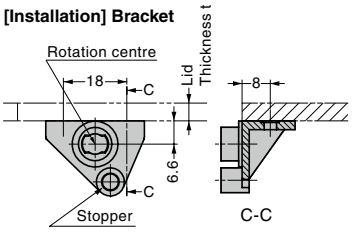
Video Link

Video Link

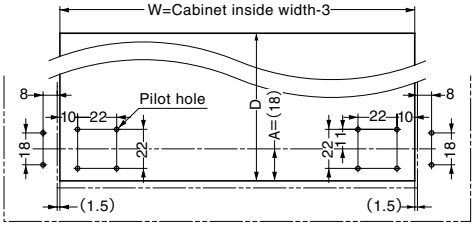
[Front View] Cross-section



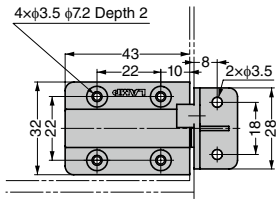
[Installation] Bracket



[Cut Out Dimensions]



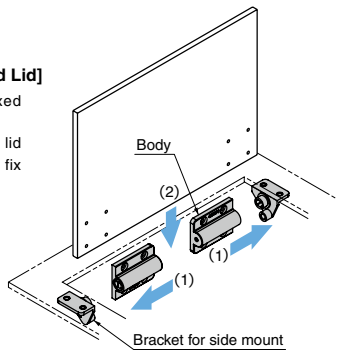
[Bottom View]



No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper (R side)	POM	–
⑤	Spring Unit (L side)	Zinc Alloy (ZDC) /Stainless Steel	Chromate/-

[How to Install Body and Lid]

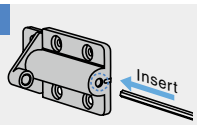
(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.



[Adjustment of Lid Opening Speed]

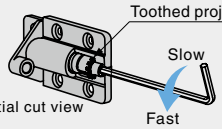
When increasing lid opening speed

1



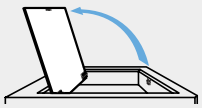
Insert a hex key (size 2.5) into the hole of spring unit (L side)

2



Push in the hex key※ until toothed projection is disengaged, while rotating counterclockwise by 30°, and then pull it out.

3



Close the lid, and check if the lid can be opened smoothly. Repeat steps 1~3 (maximum 1~2 times) if lid opening speed is still slow.

※Make sure to rotate counterclockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

When decreasing lid opening speed (returning to the speed before adjustment)

Loosen the force following the hex key rotating clockwise.

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-028-295	HG-JHS9-U-BL	Black	0.027~0.043	0.275~0.44	105°	38	35	385
G	3D	170-028-296	HG-JHS9-U-WT	White					35	385

Refer to 1 : P.477, 2 : P.110, 3 : P.43

DAMPER HINGE HG-JH14-50 Stainless Steel Bracket

Lapcon INSTRUCTION SUS

Sold in pairs.

- Hinge with damper UDH-14 1 with stainless steel bracket.
- Light and smooth opening and soft closing.
- Left-handed…Damper works when rotating counterclockwise.
  Right-handed…Damper works when rotating clockwise.
- Low torque type (1.6~3.0N・m) also available by made to order.

[Applications]

- Top-opening lids of various cabinets for soft closing.

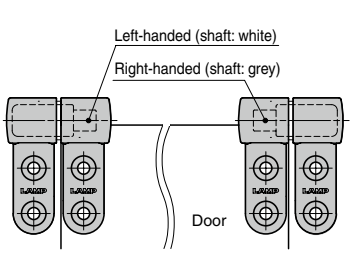
[Remarks]

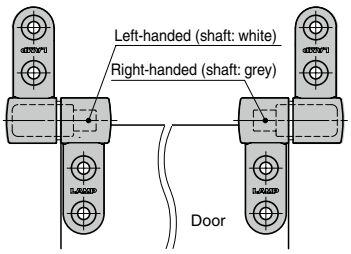
- Be sure to read the “Cautions” 2.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified rotation range. Damper may be damaged if exceeding the rotation range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Sold in pairs.

Selection Tool

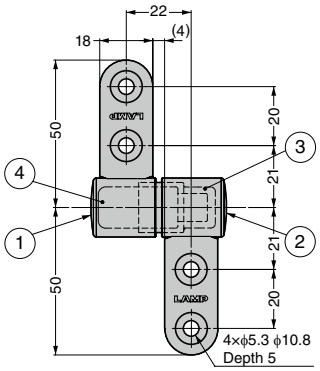
Sasuga-kun

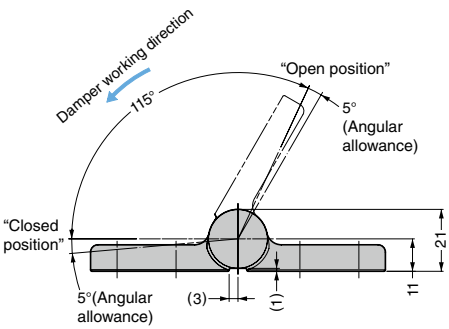
[Installation]

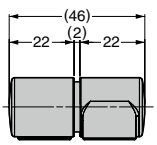




When viewing door from lower side as shown above, install the left-handed type damper (white) on the left side and the right-handed type (grey) on the right side.







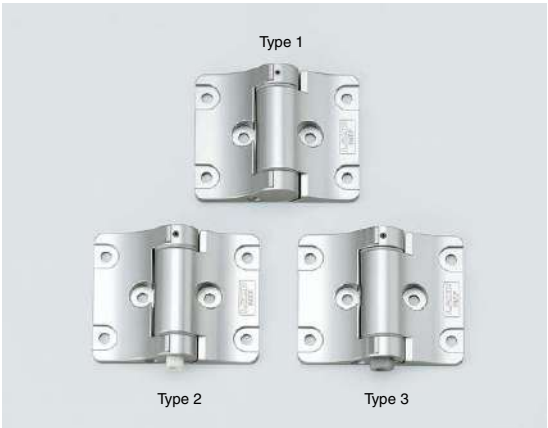
Left-handed type shown.

No.	Part Name	Material	Finish / Colour
①	Bracket (L)	Stainless Steel (SCS13)	Mirror
②	Bracket (R)		
③	Bush	POM	White
④	Damper	Stainless Steel/PBT	–

RoHS	CAD	Item Code	Item Name	Torque N・m/pair	Torque kgf・cm/pair	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-021-173	HG-JH14-50	3~5	30.6~51	254	8	48

Refer to 1 : P.117, 2 : P.43

DETENT HINGE HG-CSH63 With Damper



- Detent at both 0˚and 100˚.
- Also available without damper type.
- Damper works clockwise or counterclockwise.

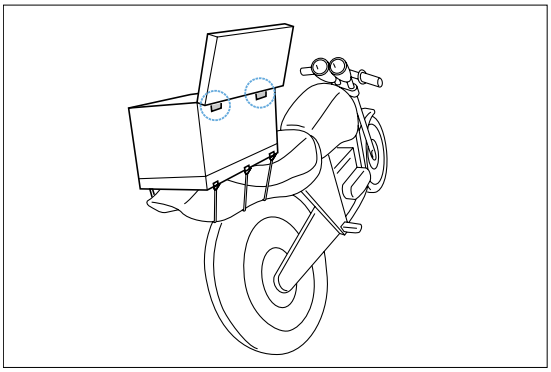
[Applications]

- Carrying box of motorcycle courier, etc.

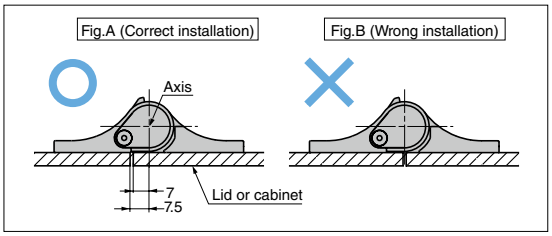
[Remarks]

- Be sure to read the “Cautions” 1 .
- When installing, ensure that both hinge shafts are levelled and aligned.
- Torque not adjustable.

[Installation]



[Installation]

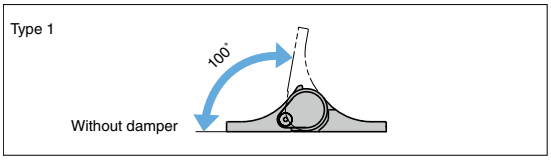


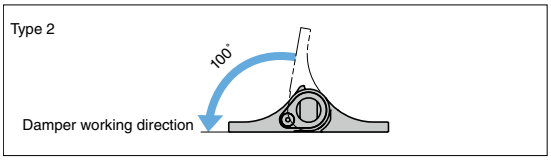
As shown in Fig. A, shift the axis of hinge and the edge of lid or cabinet.

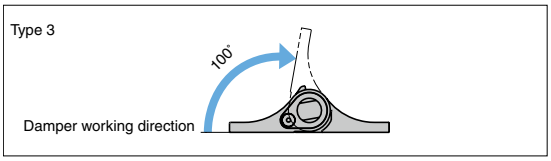
Selection Tool

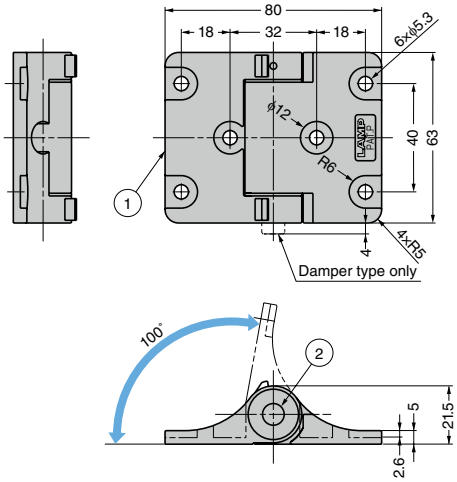
Sasuga-kun

[Types]









No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Silver Enamel Finish
②	Shaft・Spring	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Retaining Torque N·m/pc	Retaining Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-044	HG-CSH63	1 (Without Damper)	–	–	0.98	10	100˚	98.7	10	120
G	3D	170-090-109	HG-CSH63AM	2	1~1.7	10.2~17.3				114.3	10	120
G	3D	170-090-108	HG-CSH63AH		1.7~2.5	17.3~25.5					10	120
G	3D	170-090-111	HG-CSH63BM	3	1~1.7	10.2~17.3					10	120
G	3D	170-090-110	HG-CSH63BH		1.7~2.5	17.3~25.5					10	120

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE DAMPER UDH SERIES

Picture	Item Name	Diameter	Length	Damping direction	Torque	Page
	UDH-A	20mm	55mm		150 - 400N·cm	P.115
	UDH-B	20mm	55mm		150 - 400N·cm	P.115
	UDH16N-A	16mm	51mm		170 - 300N·cm	P.117
	UDH16N-B	16mm	51mm		170 - 300N·cm	P.117
	UDH16-A	16mm	37mm		100 - 250N·cm	P.116
	UDH16-B	16mm	37mm		100 - 250N·cm	P.116
	UDH16S-A	16mm	37mm		100 - 250N·cm	P.116
	UDH16S-B	16mm	37mm		100 - 250N·cm	P.116
	UDH14-A	14mm	37mm		50 - 200·cm	P.117
	UDH14-B	14mm	37mm		50 - 200·cm	P.117

TORQUE DAMPERS

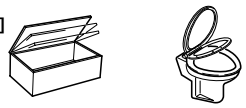
Item Name	Torque (N.cm)	Torque range (N.cm) 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400	Page
UDD-S	50 - 100		P.119
UDD-M	100 - 200		P.119
UDD-H	200 - 300		P.119
UDH-M	150 - 250		P.115
UDH-H	250 - 350		P.115
UDH-G	300 - 400		P.115
UDH16N-M	170 - 240		P.117
UDH16N-H	220 - 300		P.117
UDH16-M	100 - 170		P.116
UDH16-H	150 - 250		P.116
UDH16S-M	100 - 170		P.116
UDH16S-H	150 - 250		P.116
UDH14-T	150 - 200		P.117
UDH14-M	80 - 150		P.117
UDH-14L	50 - 80		P.117

TORQUE DAMPER UDH

- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- With marking colour at the body to recognise the torque moment. Refer to the following for details.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.
- Standard and progressive models available.

Video Link

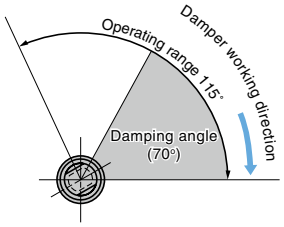
[Application Example]



[Applications]
- Toilet seat / lid, cover for maintenance, etc.

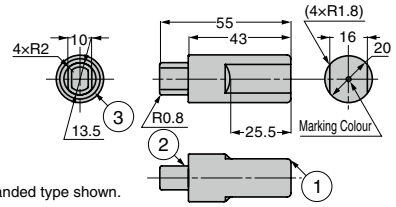
[Remarks]
- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply and vertical load on the shaft.

[Damper Operating Angle]



Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise (symmetrical to this figure)

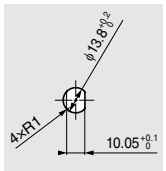
Selection Tool
Sasuga-kun



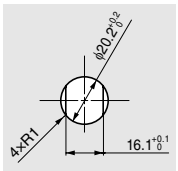
Right-handed type shown.

[Cut Out Dimensions]

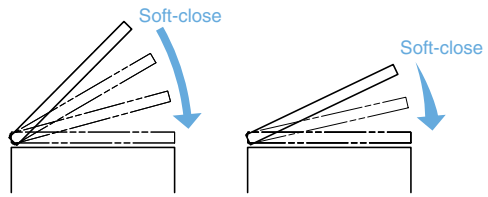
Shaft side hole size



Body side hole size



[Difference Between Standard Type and Progressive Type]



No.	Part Name	Material	Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	Black	–

[Standard Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-820	UDH-AMS-G	Left-handed	Counterclockwise	Blue	1.5~2.5	15.3~25.5	38	200
G	3D	170-090-822	UDH-BMS-G	Right-handed	Clockwise					200
G	3D	170-090-821	UDH-AHS-G	Left-handed	Counterclockwise	Red	2.5~3.5	25.5~35.7		200
G	3D	170-090-823	UDH-BHS-G	Right-handed	Clockwise					200
G	3D	170-090-824	UDH-AGS-G	Left-handed	Counterclockwise	Yellow	3.0~4.0	30.6~40.8		200
G	3D	170-097-955	UDH-BGS-G	Right-handed	Clockwise					200

[Progressive Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-825	UDH-AMP-G	Left-handed	Counterclockwise	Green	1.5~1.8	15.3~18.4	38	200
G	3D	170-090-827	UDH-BMP-G	Right-handed	Clockwise					200
G	3D	170-090-826	UDH-AHP-G	Left-handed	Counterclockwise	Black	1.8~3.5	18.4~35.7		200
G	3D	170-090-828	UDH-BHP-G	Right-handed	Clockwise					200

TORQUE DAMPER UDH-16

- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour of shaft. In addition, slow rotation type changed the shape of shaft.
- With marking colour at the body to recognise the torque moment. Refer to the following for details.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.
- Standard and progressive models available.

Video Link

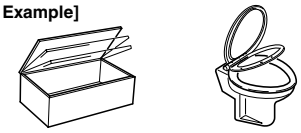
[Applications]

- Toilet seat / lid, cover for maintenance, etc.

[Remarks]

- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

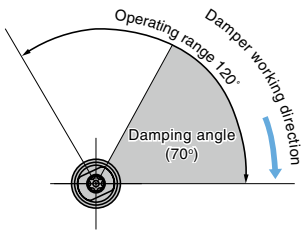
[Application Example]



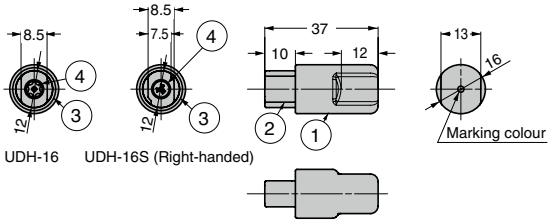
Selection Tool

Sasuga-kun

[Damper Operating Angle]

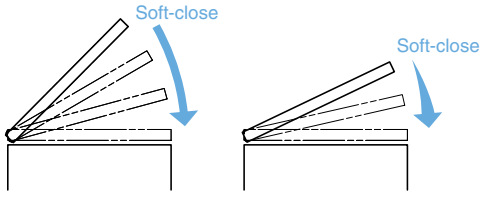


Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise
(symmetrical to this figure)



UDH-16 UDH-16S (Right-handed)

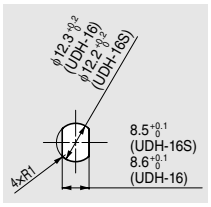
[Difference Between Standard Type and Progressive Type]



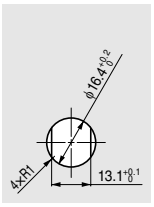
Standard Type Progressive Type

[Cut Out Dimensions]

Shaft side hole size



Body side hole size



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring		Black
④	Screw	Stainless Steel	–

[Standard Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-011-717	UDH-16SAMS	Left-handed	Counterclockwise	Blue	1~1.7	10.2~17.3	16	200
G	3D	170-011-719	UDH-16SBMS	Right-handed	Clockwise					200
G	3D	170-011-718	UDH-16SAHS	Left-handed	Counterclockwise	Red	1.7~2.5	17.3~25.5		200
G	3D	170-011-720	UDH-16SBHS	Right-handed	Clockwise					200

[Progressive Type]

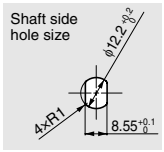
RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-829	UDH-16AMS-G	Left-handed	Counterclockwise	Green	1~1.7	10.2~17.3	16	200
G	3D	170-090-831	UDH-16BMS-G	Right-handed	Clockwise					200
G	3D	170-090-830	UDH-16AHS-G	Left-handed	Counterclockwise	Black	1.7~2.5	17.3~25.5		200
G	3D	170-090-832	UDH-16BHS-G	Right-handed	Clockwise					200

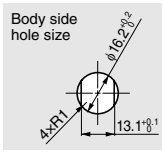
TORQUE DAMPER UDH-16N

- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour and shape of shaft.
- With marking colour at shaft to recognise the torque moment.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.

Video Link

[Cut Out Dimensions]





[Applications]

- Toilet seat / lid, cover for maintenance, etc.

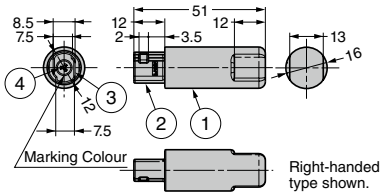
[Remarks]

- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

Selection Tool

Sasuga-kun

[Damper Operating Angle]



Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise
(symmetrical to this figure)

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	PPS	Black
④	Screw	Stainless Steel	–

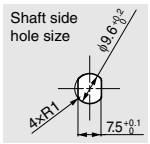
RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-833	UDH-16NAMS	Left-handed	Counterclockwise	Blue	1.7~2.4	17.3~24.5	25	200
G	3D	170-090-834	UDH-16NBMS	Right-handed	Clockwise					200
G	3D	170-090-835	UDH-16NAHS	Left-handed	Counterclockwise	Red	2.2~3	22.4~30.6		200
G	3D	170-090-836	UDH-16NBHS	Right-handed	Clockwise					200

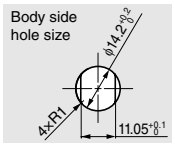
TORQUE DAMPER UDH-14

- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour and shape of shaft.
- With marking colour at shaft to recognise the torque moment.
- Excellent in corrosion resistance and rigidity due to stainless steel body.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.

Video Link

[Cut Out Dimensions]





[Applications]

- Toilet seat / lid, cover for maintenance, etc.

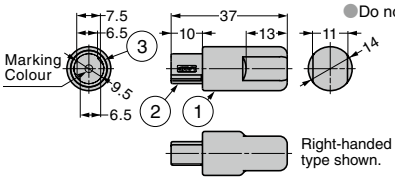
[Remarks]

- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

Selection Tool

Sasuga-kun

[Damper Operating Angle]

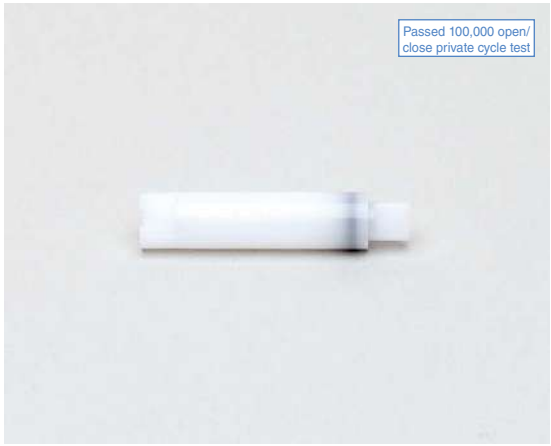


Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise
(symmetrical to this figure)

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	POM	Black

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	170-028-472	UDH-14ALS	Left-handed	Counterclockwise	Purple	0.5~0.8	5.1~8.2	10	400
G	3D	170-028-473	UDH-14BLS	Right-handed	Clockwise					400
G	3D	170-017-538	UDH-14AMS	Left-handed	Counterclockwise	Blue	0.8~1.5	8.2~15.3		400
G	3D	170-017-539	UDH-14BMS	Right-handed	Clockwise					400
G	3D	170-024-697	UDH-14ATS	Left-handed	Counterclockwise	Green	1.5~2.0	15.3~20.4		400
G	3D	170-025-678	UDH-14BTS	Right-handed	Clockwise					400

ROTARY DAMPER URD8-3



- Insert type rotary damper.
- Unlimited rotation angle and rotation direction, suitable for various opening modes. In addition, combining with springs further expands application.
- Small outer diameter realises space-saving and downsizing of equipment.

[Specifications]

- Operating temperature: 0℃~50℃

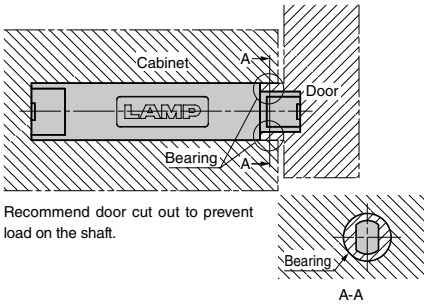
[Applications]

- Switch cover of equipment
- Wire hole cover of table

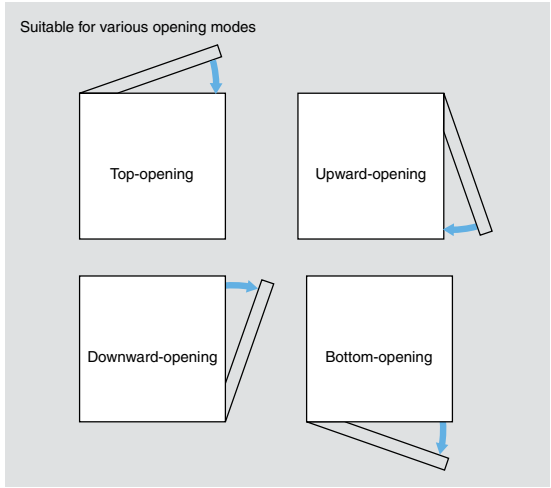
[Remarks]

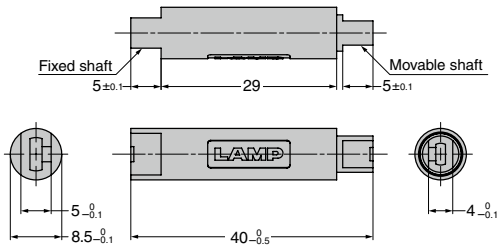
- Be sure to read the "Cautions" 1.
- Measurement conditions of torque value: ambient temperature 23℃, rotation speed 20rpm.
- For use beyond the operating temperature range above, please contact local representatives.

[Installation]

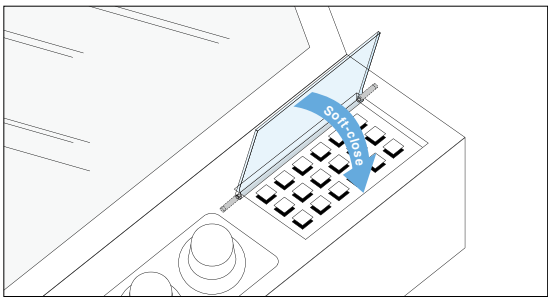


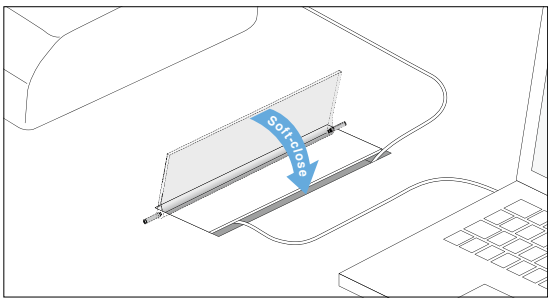
Suitable for various opening modes



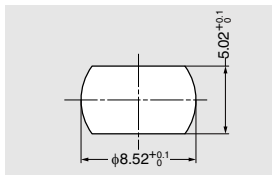


[Application Example]

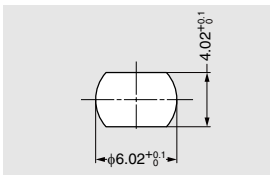




[Cut Out Dimensions]



Fixed shaft



Movable shaft

RoHS	CAD	Item Code	Item Name	Material	Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-026-907	URD8-3	POM	Natural	0.022~0.038	0.22~0.39	2.5	100	2000

Refer to 1 : P.43

DISK DAMPER UDD®

Lapcon INSTRUCTION

- Keeps lids/doors from slamming shut.
- Simple design does not affect cabinet appearance.
- Choose from 3 torques according to door size.
- Ideal for food showcase, etc.

[Specifications]

- Operating temperature: 5℃~35℃

[Remarks]

- Spacer or L-shaped bracket may be required depending on the shape of display.
- Customer should provide spacer according to board thickness in the application below.
- Use types (S, M, H) with identical torque on the left and right sides.
- Use indoors.
- Do not use impact screwdriver for mounting.
- Do not use in water splash environment.
- Use 2 pcs in one set.

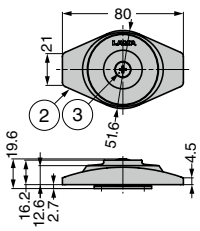
Video Link

Selection Tool

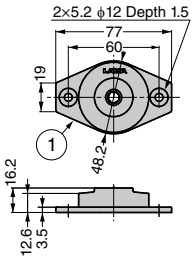
Sasuga-kun

[Assembled State]

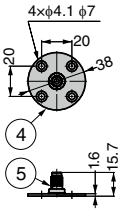
(Body+Cover+Mounting plate)



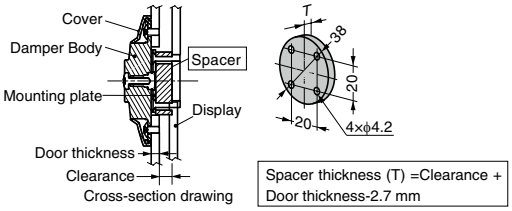
[Damper Body]



[Mounting Plate]



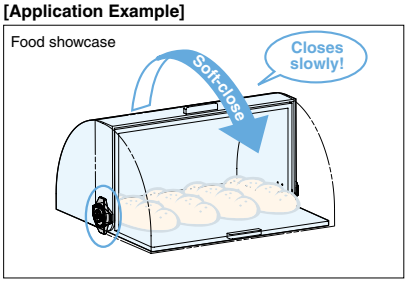
[Spacer]



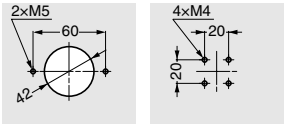
Spacer thickness (T) =Clearance + Door thickness-2.7 mm

No.	Part Name	Material	Finish / Colour
①	Damper Body	–	–
②	Cover	ABS	Emboss/Light Grey
③	Screw	Steel	Nickel
④	Mounting Plate		
⑤	Shaft		Zinc Chromate

[Application Example]

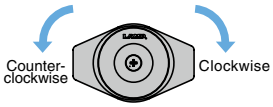


[Cut Out Dimensions]

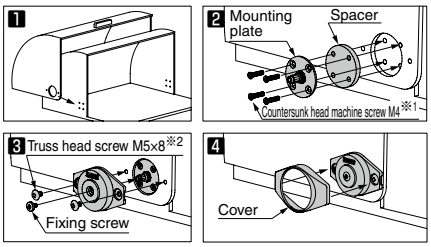


Door side Fixed side

[Damper Working Direction]



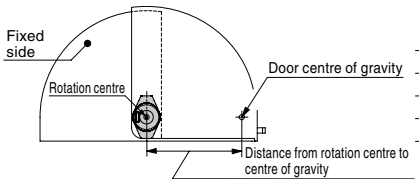
[How to Install]



※1, ※2 screws not included.
In case of wooden display, please prepare countersunk head tapping screw 3.5 for ※1, and truss head tapping screw 5x12 for ※2.

[Selection of Damper]

Choose from 3 types according to door moment.
Max. door moment = Door weight kg × 9.80665 × Distance from rotation centre to centre of gravity (m)



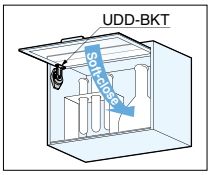
Door Moment	Type	Qty
1.0~2.0 N・m	S	2 pcs
2.0~4.0 N・m	M	2 pcs
4.0~6.0 N・m	H	2 pcs

RoHS	CAD	Item Code	Item Name	Damper Working Direction	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-022-306	UDD-S-L	Counterclockwise	0.5~1.0	5.1~10.2	90	20	20
G	3D	180-022-307	UDD-S-R	Clockwise				20	20
G	3D	180-022-308	UDD-M-L	Counterclockwise	1.0~2.0	10.2~20.4		20	20
G	3D	180-022-309	UDD-M-R	Clockwise				20	20
G	3D	180-022-310	UDD-H-L	Counterclockwise	2.0~3.0	20.4~30.6		20	20
G	3D	180-022-311	UDD-H-R	Clockwise				20	20

BRACKET FOR DISK DAMPER UDD-BKT

L=R SUS

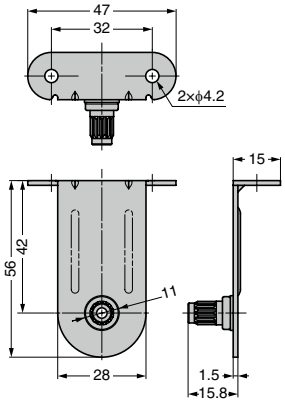
[Application Example]



- Bracket of disk damper UDD 1 for upward-opening doors.

[Remarks]

- Chamfer edge of top board to reduce the gap between the door and top board by referring to Fig.2 and Table 2 (recommended).
- Install a stopper on the cabinet (Fig.3).
- Catch is needed for holding door in opened position.
- Face plate SDS for glass door and spacer SDS-50G 2 available for glass/acrylic doors.



[Installation]

Fig.1

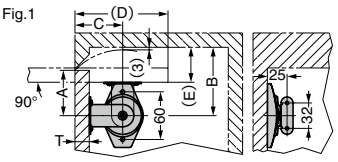


Fig.2

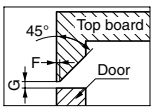


Fig.3

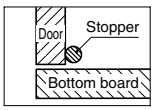


Table 1

No.	Door Thickness T	A	B	C	D	E
①	5	46	70	49	(95)	(26)
②	15	54	82	57	(111)	(40)
③	18	57	86	60	(117)	(44)

Table 2

Chamfering Allowance F	Gap G
1	3
2	4
3	5

※① is the value when using acrylic or glass door with a door thickness of 5 mm, a face plate SDS for glass door, and spacer SDS-50G.
②③ are the values when using wooden doors with door thicknesses given in the above table.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Carton (pcs)
G!	3D	180-026-764	UDD-BKT	Stainless Steel (SUS304)	Plain	33	60

Refer to 1 : P.119, 2 : P.369

LIFT-ASSIST DAMPER LAD®, LAD®-ST DIGEST

- Ideal for the top board of counter entrance.
- Supplied with LAPCON mechanism, damper works during closing and top board slowly closes.Damper works even at a slight opening angle.
- Lift-assist function allows opening the top board easily.
- Can be retrofitted to existing counters without machining.
- Installation position can be easily determined with the supplied template.

Selection Tool

Sasuga-kun

LAD 1

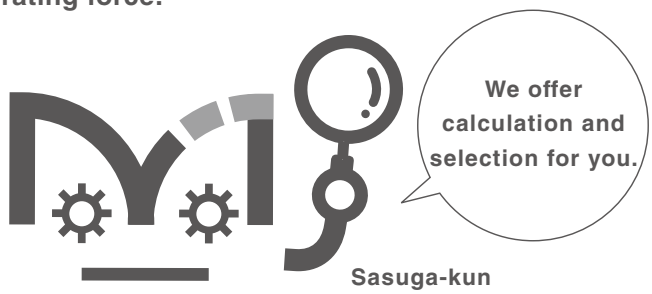
LAD-ST (with stopper) 2
Stops at 95° opening.

Refer to 1 : P.330, 2 : P.328

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



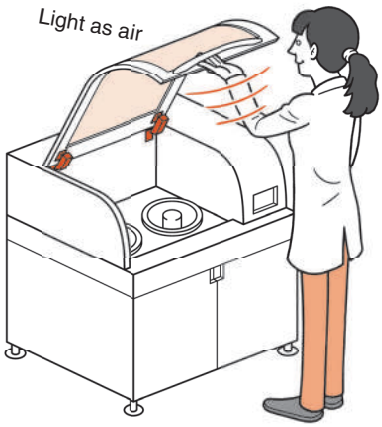
Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

LIFT-ASSIST HINGE SERIES INTRODUCTION

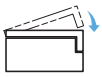
Power Assist Motion



What is the LIFT-ASSIST HINGE?

This hinge uses spring reaction force to reduce weight and assist with the opening and closing of heavy doors.

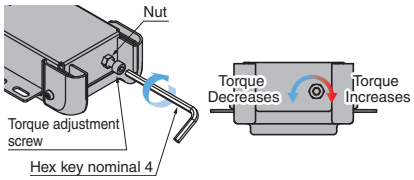
With soft-closing function



The use of a damper enables slow, safe closing after letting go of the top lid.

[How to Adjust Torque]

Torque is adjustable by turning the adjustment screw.



Loosen the end nut with a spanner, and then turn the torque adjustment screw with a hex key.
Tighten the nut again after adjustment.

[Specifications]

- Operating temperature: 0˚ C~40˚ C

[Application]

- Medical equipment, analytical instruments, semiconductor equipment, etc.

[Remarks]

- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a stopper (not included) on the cabinet to avoid exceeding the operating angle when opening or closing.
- Do not use outdoors or in an environment directly exposed to water.
- Check that the cabinet has sufficient strength and rigidity before use.
- For inside mount type, check the torque adjustment screw position, and turn the screw with cabinet and lid already mounted.

Video Link

Video Link

[Series Products]

Mounting Specifications			Torque (N·m)	Torque Adjustment Range	Peak Torque	Page
Outside Mount		HG-PA270	45 ±10 % 35 ±10 %	±5%	35	P.124
		HG-PA200 HG-PA201	25 ±10 % 20 ±10 % 15 ±10 %	±5%	35 20	P.125
		HG-PA300-15	15 ±10 %	±10 %	60~80 Balance Adjustable	P.128
		HG-PA180-9	9 ±10 %	±11 %	35	P.131
		HG-JH210	20.58	–	–	P.133
Back Mount		HG-PA202	25 ±10 % 20 ±10 % 15 ±10 %	±5 %	20	P.127
		HG-PA182-9	9 ±10 %	±11 %	20	P.136
Inside Mount		HG-PA230 HG-PA231	25 ±10 % 20 ±10 % 15 ±10 %	±5%	35 20	P.126
		HG-PA210-9	9 ±10 %	±11 %	35	P.132

For product selection, please use the "SASUGA-kun" selection tool.
Simulations using multiple hinges are available.

Click the banner on the website

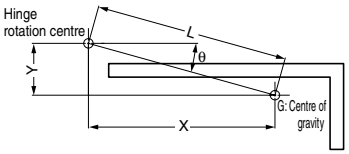
Selection Tool "Sasuga-kun"

[How to Select a Model] Refer to 1~3 below for model selection.

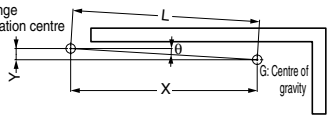
1. Calculating lid moment

Equation: Mu=m × g × L × cos θ

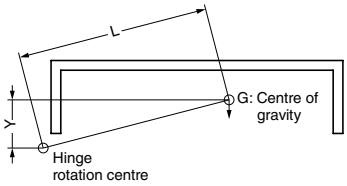
●Outside mount (HG-PA180, HG-PA200, HG-PA201, HG-PA270)



●Inside mount (HG-PA210, HG-PA230, HG-PA231)



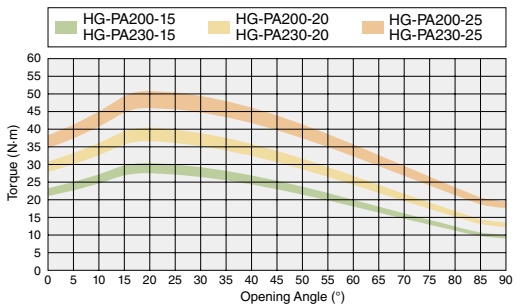
●Back mount (HG-PA182-9, HG-PA202)

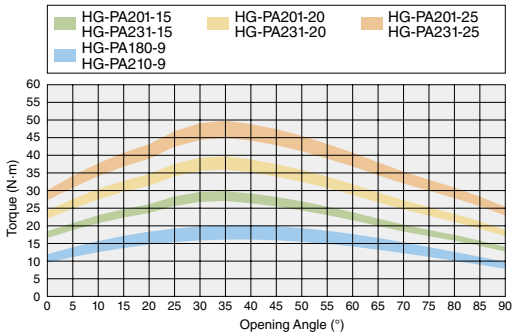


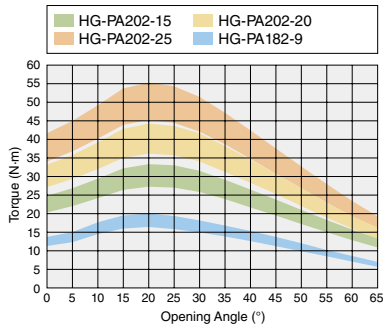
X	Horizontal distance from hinge rotation centre to centre of gravity
Y	Vertical distance from hinge rotation centre to centre of gravity
L	Distance from hinge rotation centre to centre of gravity

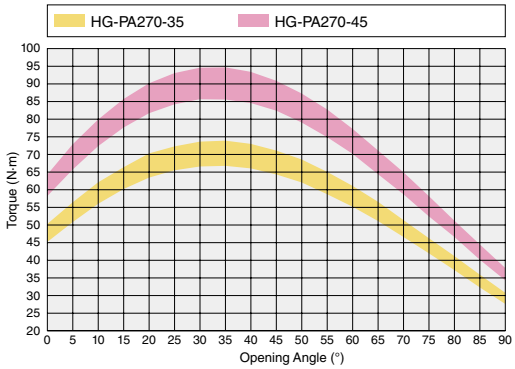
θ	Angle from horizontal line at hinge rotation centre to centre of gravity
m	Lid weight
G	Lid centre of gravity

2. Checking hinge torque (2 pcs)



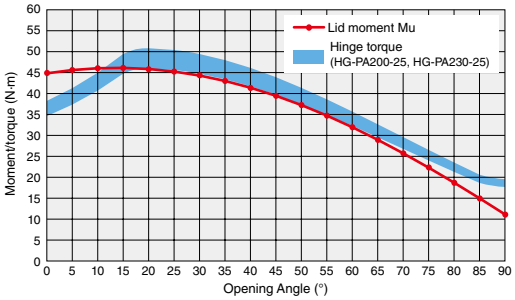






3. Selecting model

Example of overlapping lid moment and hinge torque (2 hinges)



As in the graph, lid moment and hinge torque overlap in models with appropriate specifications.

Lid moment Mu > Hinge torque: Force is applied in lid closing direction.
Lid moment Mu < Hinge torque: Force is applied in lid opening direction.

*Confirm movement with the actual product when lid moment Mu is at the upper or lower limit of the LIFT-ASSIST HINGE torque range.

Application example conditions: X=43 cm, Y=10.5 cm, L=44.3 cm, W=10.8 kg
Application example hinges: HG-PA200-25 or HG-PA230-25 (2 pcs)

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

LIFT-ASSIST HINGE HG-PA270 Outside Mount

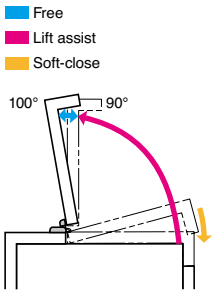
INSTRUCTION SUS

- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- With plastic cover for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 1 .
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

[Operating Range]

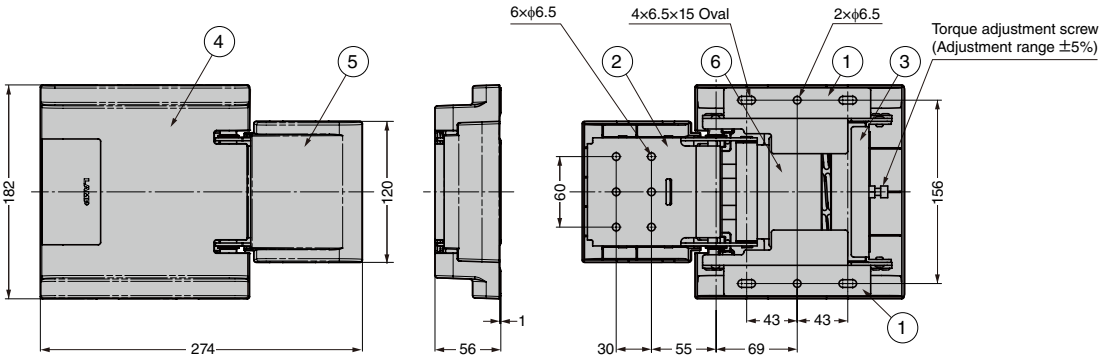


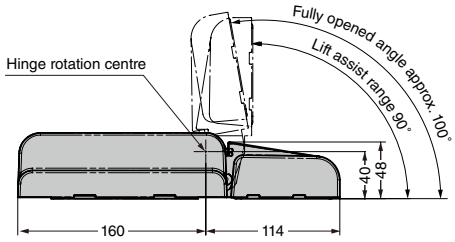
Video Link

Selection Tool

Sasuga-kun

Video Link





No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover A	PBT/Light Grey
⑤	Cover B	
⑥	Slider	POM
–	Spring	Steel (SWO)

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-307	HG-PA270-35	$35^{\pm 10\%}$	$357^{\pm 10\%}$	2500	1	4
G	3D	170-034-308	HG-PA270-45	$45^{\pm 10\%}$	$459^{\pm 10\%}$		1	4

Refer to 1 : P.122

LIFT-ASSIST HINGE HG-PA200, HG-PA201 Outside Mount

SUS

- The torque peaks at 20˚ or 35˚ depending on the lid shape (see diagram below).
- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- With plastic cover for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 1 .
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.
- For HG-PA200 and HG-PA201, centre-of-gravity positions of the applicable doors are different.
  Please refer to How to Select 2 for model selection.

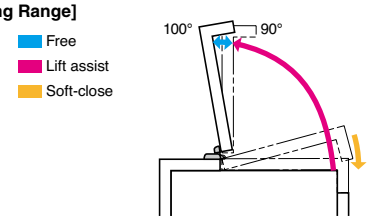
Video Link

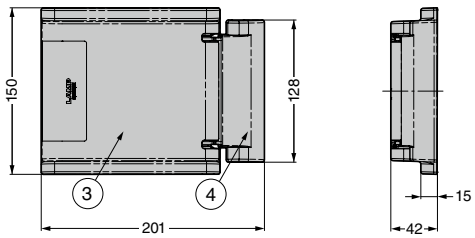
Selection Tool

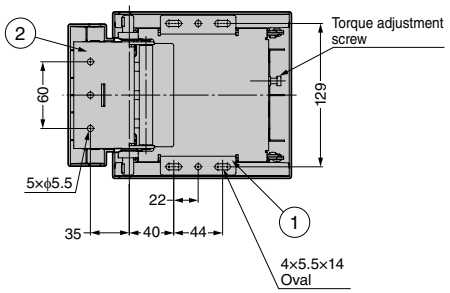
Sasuga-kun

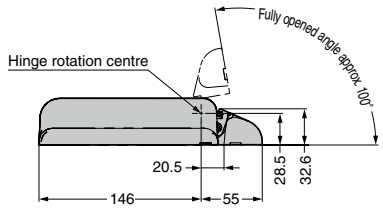
Video Link

[Operating Range]



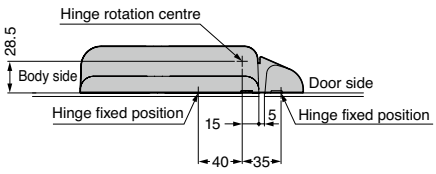






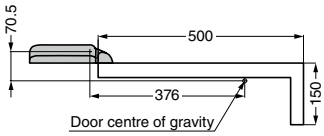
No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover A	PBT/Light Grey
④	Cover B	
–	Slider	POM
–	Spring	Steel (SWO)

[Installation]

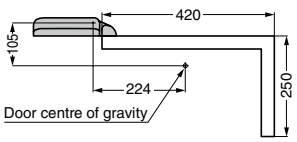


[Installation]

HG-PA200 (Peak torque angle 20˚)



HG-PA201 (Peak torque angle 35˚)



RoHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-668	HG-PA200-15	Peak torque angle 20˚	$15^{\pm 10\%}$	$153^{\pm 10\%}$	1385	1	8
G	3D	170-025-669	HG-PA200-20		$20^{\pm 10\%}$	$204^{\pm 10\%}$		1	8
G	3D	170-025-670	HG-PA200-25		$25^{\pm 10\%}$	$255^{\pm 10\%}$		1	8
G	3D	170-029-741	HG-PA201-15	Peak torque angle 35˚	$15^{\pm 10\%}$	$153^{\pm 10\%}$		1	8
G	3D	170-029-742	HG-PA201-20		$20^{\pm 10\%}$	$204^{\pm 10\%}$		1	8
G	3D	170-029-743	HG-PA201-25		$25^{\pm 10\%}$	$255^{\pm 10\%}$		1	8

Refer to 1 : P.122, 2 : P.123

LIFT-ASSIST HINGE HG-PA230, HG-PA231 Inside Mount

SUS

Lift assist
Soft-close

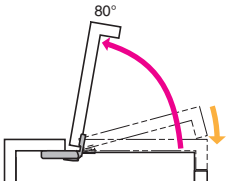
- The torque peaks at 20˚ or 35˚ depending on the lid shape (see diagram below).
- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- Able to limit the 140˚ opening angle to 55˚ or 80˚ with use of the included stopper plate.
- Opening angle can also be restricted between 15˚ and 90˚ (made to order).

[Remarks]

- Be sure to read the "Cautions" 1 .
- For HG-PA230 and HG-PA231, centre-of-gravity positions of the applicable doors are different. Please refer to How to Select 2 for model selection.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.
- When not installing the angle-regulating fitting, ensure that a separate stopper (not included) is installed on the cabinet to prevent the door from opening or closing beyond the operating angle.

[Operating Range]

Lift assist
Soft-close

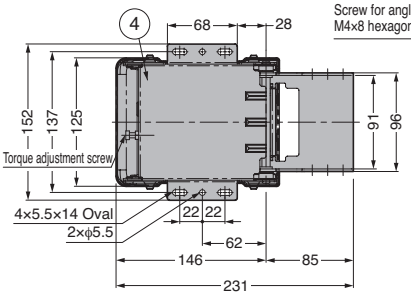


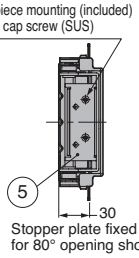
Selection Tool
Sasuga-kun

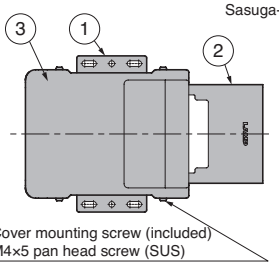
Video Link

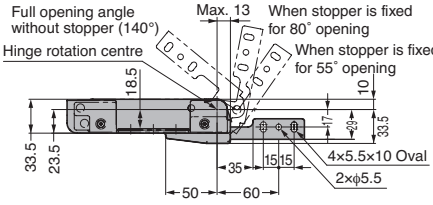
Video Link

No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover	PP/Light Grey
④	Case	Stainless Steel (SUS430)
⑤	Stopper Plate	
–	Slider	POM
–	Spring	Steel (SWO)



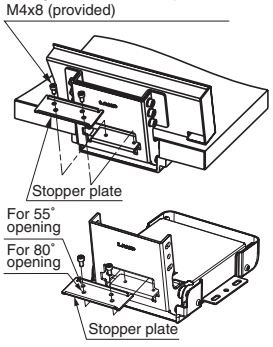






[Setting of Opening angle]

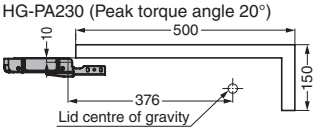
Opening angle can be limited to 55˚ or 80˚ with the included stopper plate.



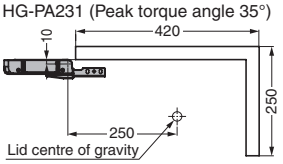
*Opening angle can be limited to 55° or 80° with the included stopper plate.

[Installation]

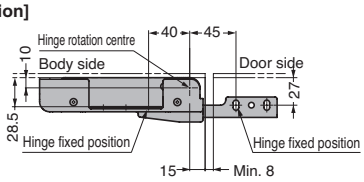
HG-PA230 (Peak torque angle 20°)



HG-PA231 (Peak torque angle 35°)



[Installation]



RoHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-671	HG-PA230-15	Peak torque angle 20˚	15±10%	153±10%	1296	1	8
G	3D	170-025-672	HG-PA230-20		20±10%	204±10%		1	8
G	3D	170-025-673	HG-PA230-25		25±10%	255±10%		1	8
G	3D	170-029-744	HG-PA231-15	Peak torque angle 35˚	15±10%	153±10%		1	8
G	3D	170-029-745	HG-PA231-20		20±10%	204±10%		1	8
G	3D	170-029-746	HG-PA231-25		25±10%	255±10%		1	8

Refer to 1 : P.122, 2 : P.123

LIFT-ASSIST HINGE HG-PA202 Outside Back Mount

INSTRUCTION

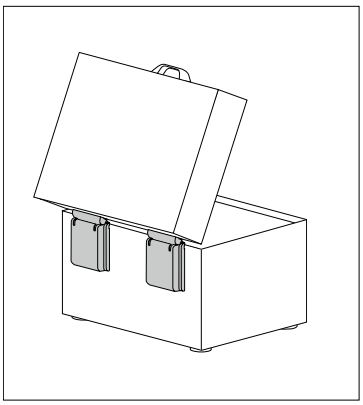
Lift assist
Soft-close

- Easy to lift heavy top-opening lids due to spring tension. (Lift-assist)
- The built-in damper prevents lids from slamming shut. (Soft-close)
- Torque is adjustable by turning the adjustment screw. (±5 %)
- Comes with a cover to hide the mounting screws.
- Designed for use under the condition that lid's centre of gravity is at a higher position than the rotational centre. (The angle of torque peak is about 20°.)

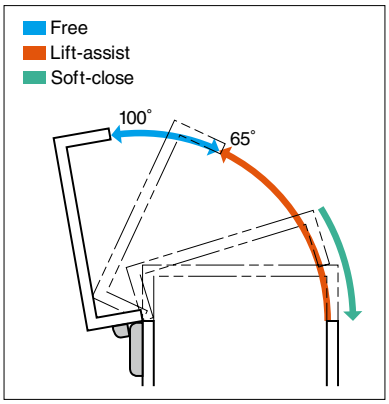
[Remarks]

- Be sure to read the "Cautions" 1.
- Please make sure that the lid will not fall backward when fully opened.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

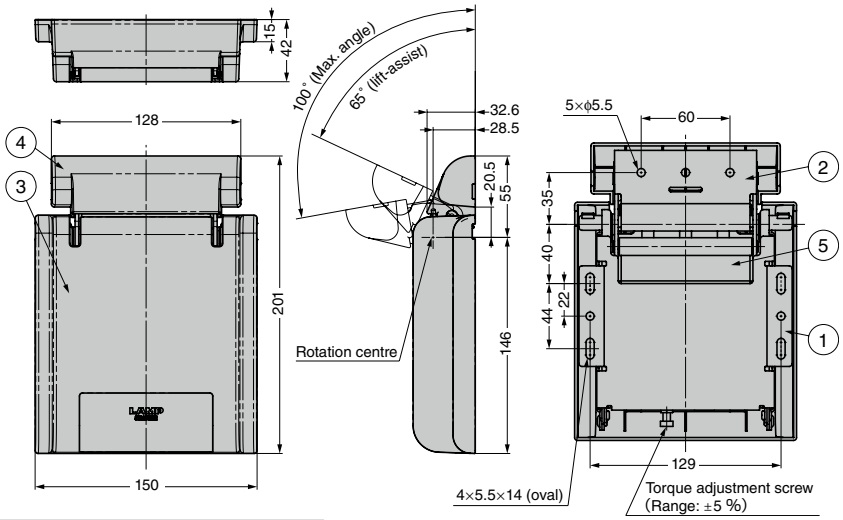
[Outside Back Mount]



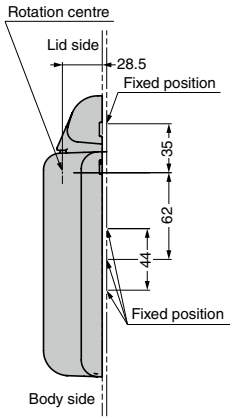
[Operating Range]



[Example of Stopper]



[Installation]



No.	Part Name	Material/Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover A	PBT/ Light Grey
④	Cover B	
–	Slider	POM
–	Spring	Steel (SWO)

Video Link

Selection Tool

Sasuga-kun

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-045-365	HG-PA202-15	15±10%	153±10%	1385	1	8
G	3D	170-045-366	HG-PA202-20	20±10%	204±10%		1	8
G	3D	170-045-367	HG-PA202-25	25±10%	255±10%		1	8

Refer to 1 : P.122

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

BALANCE-ADJUSTABLE LIFT-ASSIST HINGE HG-PA300-15 OUTSIDE MOUNT

INSTRUCTION SUS

- Easy to lift heavy top-opening lids due to spring tension (lift-assist).
- Balance adjustment allows for use in a wider range of lids than conventional lift-assist hinges.
- The built-in damper prevents lids from slamming shut (soft-close).
- Torque is adjustable by turning the adjustment screw (±10%).
- Comes with a plastic cover for clean appearance.

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment.

[Remarks]

- Be sure to read the "Cautions" 1.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

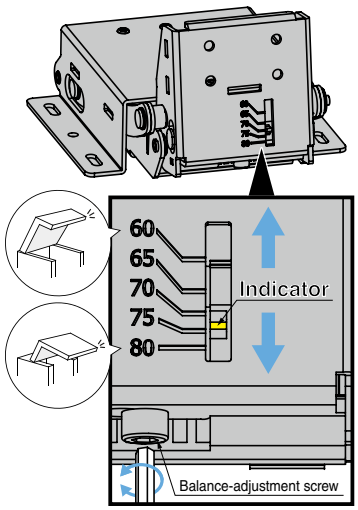
Video Link

Video Link

Selection Tool

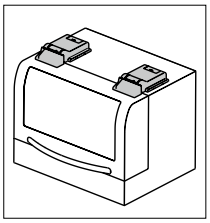
Sasuga-kun

[Balance Adjustment]

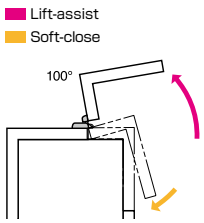


Angle of peak torque is adjustable with hex key 5. This feature allows adjustment to the location of center of gravity

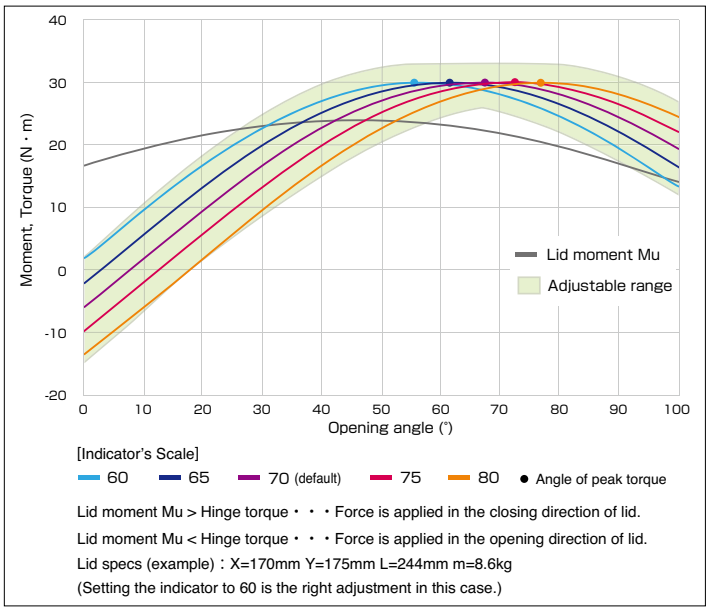
[Installation]



[Working range]



[Torque-Angle Graph] showing the adjustable range of peak torque's angle



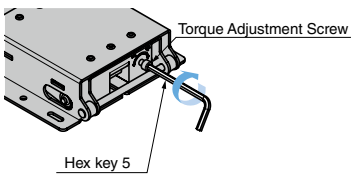
Lid moment Mu > Hinge torque・・・Force is applied in the closing direction of lid.

Lid moment Mu < Hinge torque・・・Force is applied in the opening direction of lid.

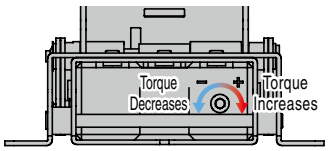
Lid specs (example)：X=170mm Y=175mm L=244mm m=8.6kg

(Setting the indicator to 60 is the right adjustment in this case.)

[How to Adjust Torque]

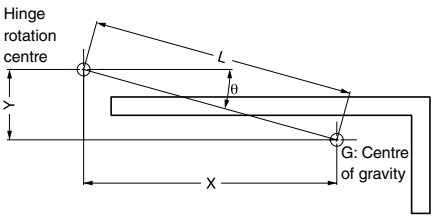


Turn the screw with a hex key



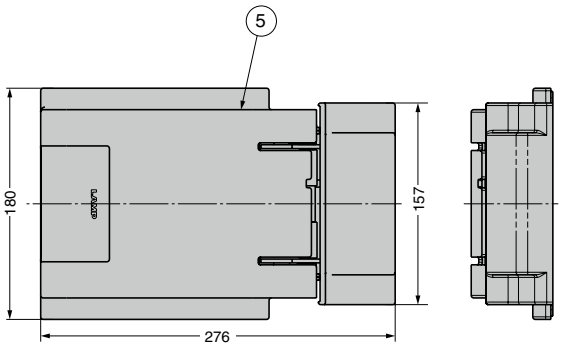
[Calculating Lid Moment]

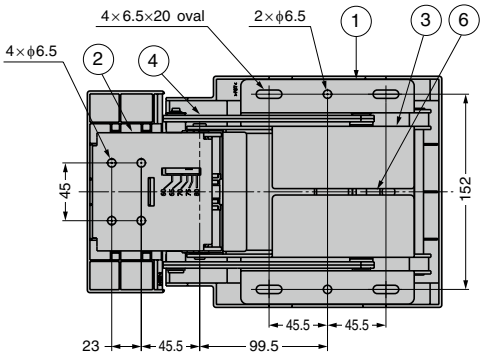
Calculation formula $Mu=m \times L \times \cos\theta$

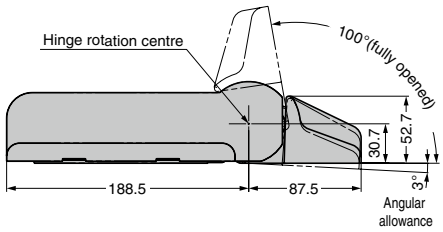


X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

Refer to 1 : P.122

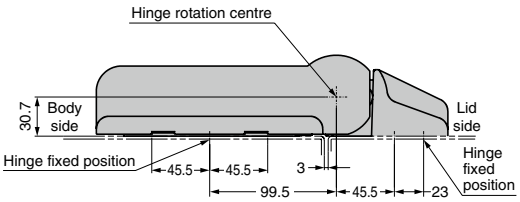




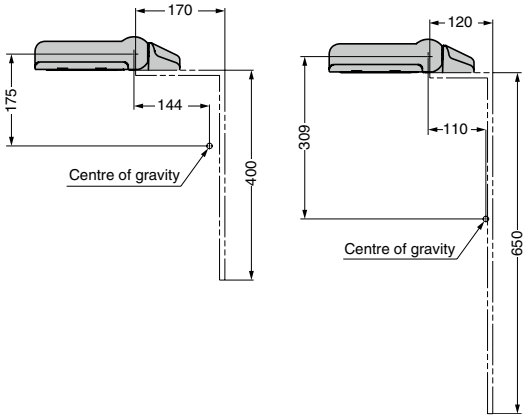


No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Link Arm	
⑤	Plastic Cover	PBT / Light Grey
⑥	Slider	POM
⑦	Spring	Steel (SWO)

[Installation]



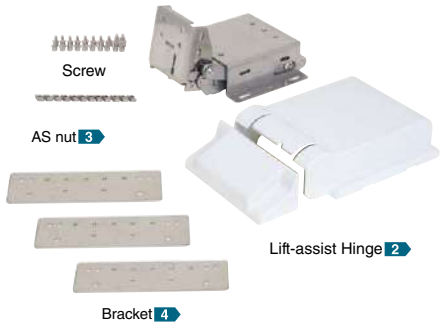
[Installation Example]



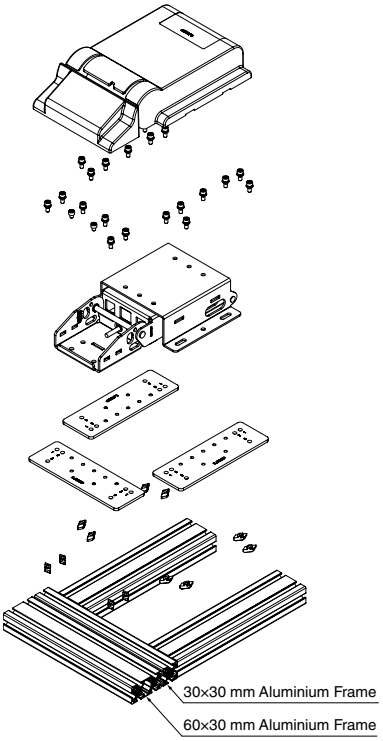
RoHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-044-367	HG-PA300-15	Peak torque 60°~80°	$15^{\pm 10\%}$	$153^{\pm 10\%}$	3400	1	–

AS Parts Set for Installing to Aluminium Frame

Refer to the series introduction page 1 for details about the AS series.

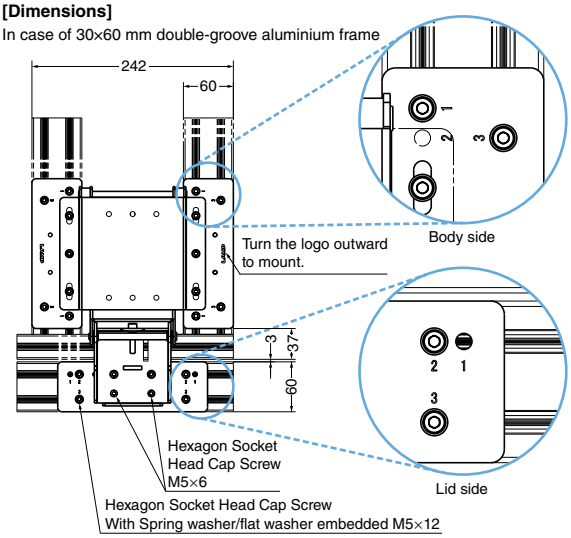


[Installation Dimensions]



[Dimensions]

In case of 30×60 mm double-groove aluminium frame



Use holes 2 and 3 when mounting on the lid side aluminium frame, and holes 1 and 3 on the body side aluminium frame.

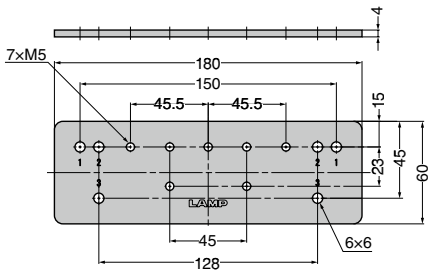
[AS Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Compatible Aluminium Frame	Parts
G	–	170-051-068	AS-HG-PA300-30-8	Groove width 8 mm	Lift-assist Hinge HG-PA300-15 : 1 pc Bracket AS-HG-PA300 : 3 pcs AS Nut AS-8M5 : 12 pcs Hexagon Socket Head Cap Screw With Spring washer/flat washer embedded M5×12 : 20 pcs Hexagob Socket Head Cap Screw M5×6 : 2 pcs

Refer to 1: P.20, 2: P.128, 3: P.526, 4: P.130

AS BRACKET FOR HG-PA300 AS-HG-PA300

AS SUS



- Bracket for installing the Balance-Adjustable Lift-Assist Hinge HG-PA300 to aluminium frame.
- Use AS nuts for installation.

Sold in units of 1 set (3 pcs).

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g/set)
G	3D	170-050-285	AS-HG-PA300	Stainless Steel (SUS304)	Barrel Polished	950

LIFT-ASSIST HINGE HG-PA180-9 Outside Mount

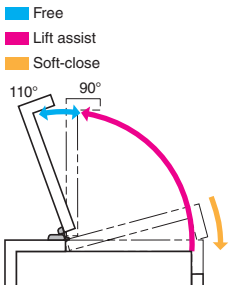
INSTRUCTION SUS

- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±11%).
- With plastic cover for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 1 .
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

[Operating Range]

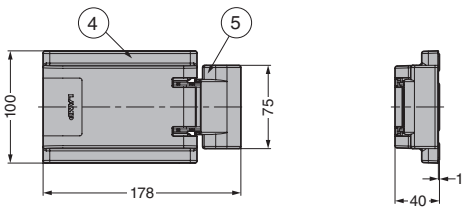


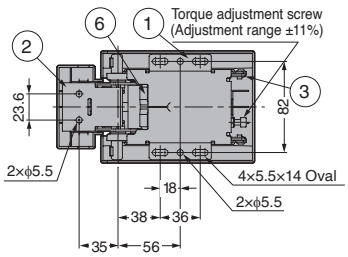
Video Link

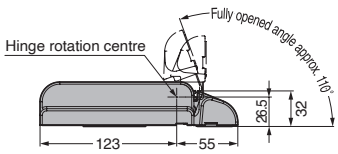
Selection Tool

Sasuga-kun

Video Link

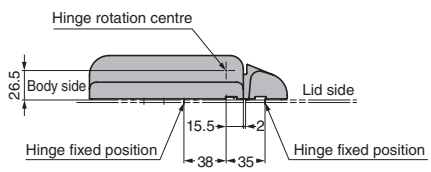






No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover A	PBT/Light Grey
⑤	Cover B	
⑥	Slider	POM
–	Spring	Steel (SWO)

[Installation]



RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-739	HG-PA180-9	9±10%	91±10%	800	1	12

Refer to 1 : P.122

LIFT-ASSIST HINGE HG-PA210 Inside Mount

INSTRUCTION SUS

Lift assist
Soft-close

Light Grey

Black

- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±11%).
- Able to limit the 140° opening angle to 55°or 80°with use of the included stopper plate.
- Opening angle can also be restricted between 15°and 90°(made to order).

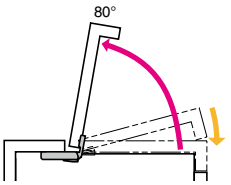
[Remarks]

- Be sure to read the "Cautions" 1 .
- When not mounting the angle restricting piece, Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

Video Link

[Operating Range]

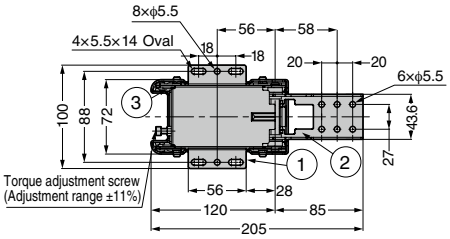
Lift assist
Soft-close

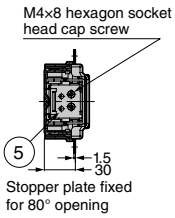


Selection Tool

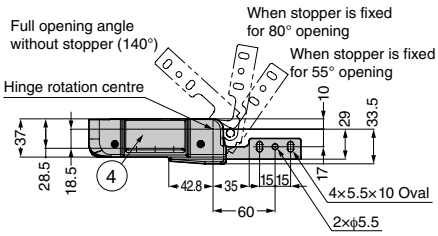
Sasuga-kun

Video Link



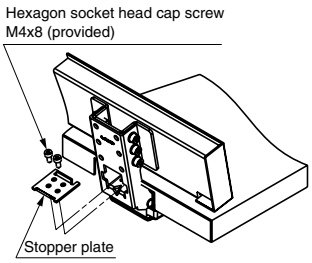


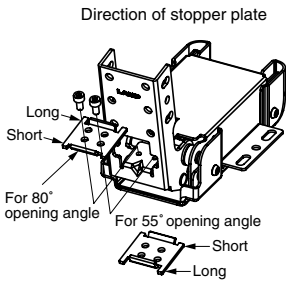
No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover	PP/Light Grey,Black
⑤	Stopper Plate	Stainless Steel (SUS430)
–	Slider	POM
–	Spring	Steel (SWO)



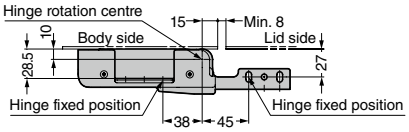
[Setting of Opening angle]

Opening angle can be limited to 55°or 80°with the included stopper plate.





[Installation]



[Torque 9N·m Type]

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Cover Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-740	HG-PA210-9	9±10%	91±10%	Light Grey	770	1	12

[Torque 12N·m Type]

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Cover Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-058-130	HG-PA210-12LGR	12±10%	122±10%	Light Grey	800	1	12
G	3D	170-058-131	HG-PA210-12BL			Black		1	12

Refer to 1 : P.122

STAINLESS STEEL LIFT-ASSIST HINGE HG-JH210

Lapcon INSTRUCTION SUS316

- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Supplied damper prevents top-opening lid from slamming shut. (Damper effective angle approx. 30˚ or more).
- Built-in helical torsion spring makes lid feel lighter when opening.

[Specifications]

- Assist torque: 20.58N・m (210kgf・cm) (when using 1 pc)
- Built-in damper max. load torque: 7N・m (71.4kgf・cm)
- Built-in damper operating temperature: 0℃~ 40℃
- Hinge operating angle: 0˚ ~ 110˚

Selection Tool
Sasuga-kun

Video Link

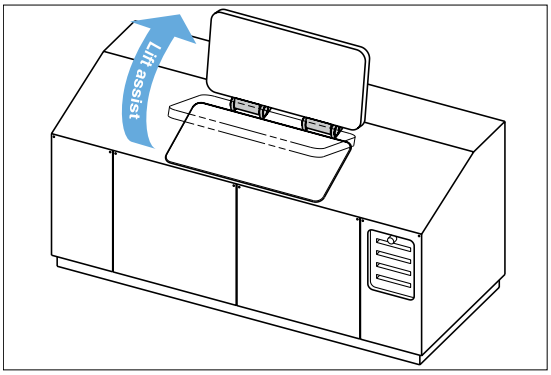
[Applications]

- Heavy top-opening lids of environmental equipment, testing equipment, etc.

[Remarks]

- When installing, ensure that both hinge shafts are levelled and aligned.

[Application Example]



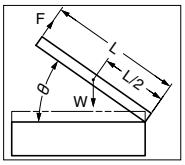
[Calculation Formula and Graph of Moment]

Lid moment $Mt = W \times \cos\theta \times \frac{L}{2}$

Hinge moment $Mh = Mm \times (1 - \frac{\theta}{115})$

Residual moment $Mz = Mh - Mt$

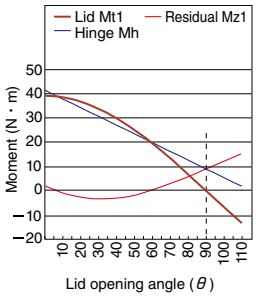
Operating force $F = \frac{Mt - Mh}{L}$



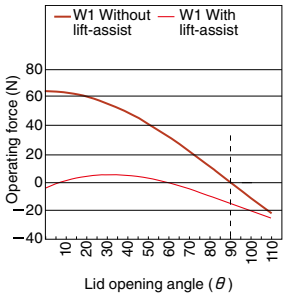
W : Weight at lid centre of gravity
θ : Lid opening angle
L : Lid length
Mm : Torque value of lift-assist hinge

The meaning of residual moment Mz= (Mh–Mt) is as follows.
・"–" means that the force is applied in the closing direction of lid.
・"+" means that the force is applied in the opening direction of lid.

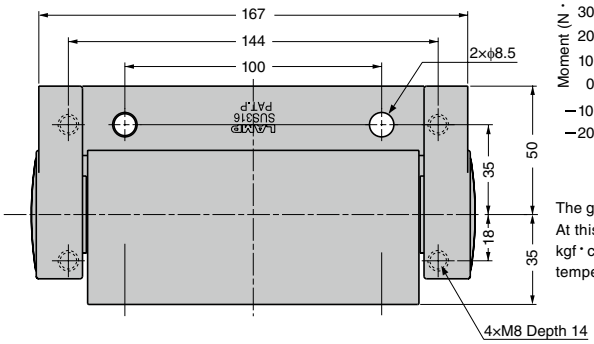
Relationship between lid opening angle and moments

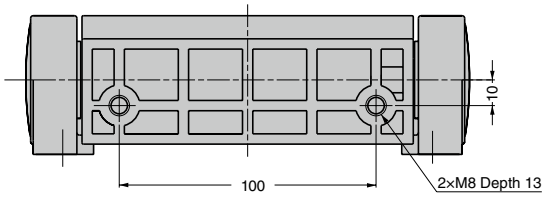


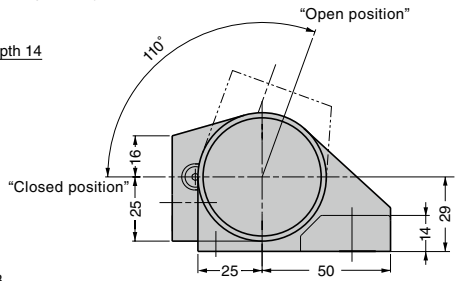
Relationship between lid opening angle and operating forces



The graph is an example when L=60cm, W1=12kg, and two HG-JH210 are used. At this time, the maximum load torque of built-in damper is 7×2=14N・m(142.8 kgf・cm).Damper works when the residual moment is 14N・m or less. (Room temperature)







RoHS	CAD	Item Code	Item Name	Material	Finish	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-535	HG-JH210	Stainless Steel (SCS14)	Polished	110˚	2350	1	6

※SCS14 is equivalent to SUS316.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SPRING-ASSIST TORQUE HINGE HG-TLAJ Torque Adjustment

Lift assist **Free stop** Passed 50,000 open/close private test

GOOD DESIGN

Cover
(sold separately)

Cover (Light Grey)

Cover (Black)

Selection Tool

Sasuga-kun

- The built-in spring makes lids feel lighter to open and close. (The hinge is for top-opening lids.)
- The retaining torque is adjustable with a hex key. (0 to 3.5 N.m)
- Optional cover is sold separately.

[Specifications]

- Operating temperature: -0°~40°.

[Application]

- Medical equipment, analytical instruments

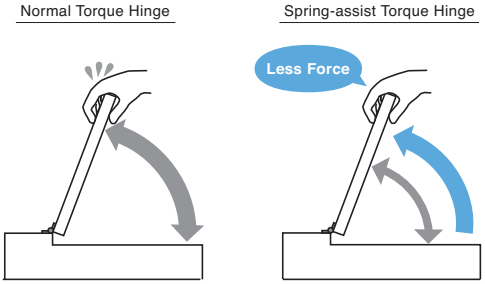
[Remarks]

- Do not open/close the hinge before installation. The spring could accidentally pinch fingers.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not detach the torque adjustment nut.
- Do not tighten the torque adjustment nut with a force of over 10 N.m. It may damage the hinge.

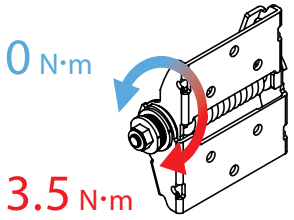
[Sold Separately]

- Cover

[Smoother than ever before]



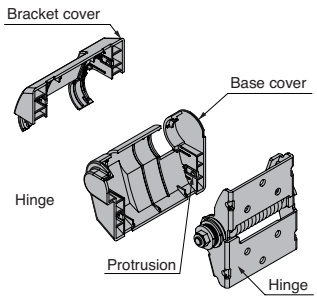
[Retaining Torque Adjustment]

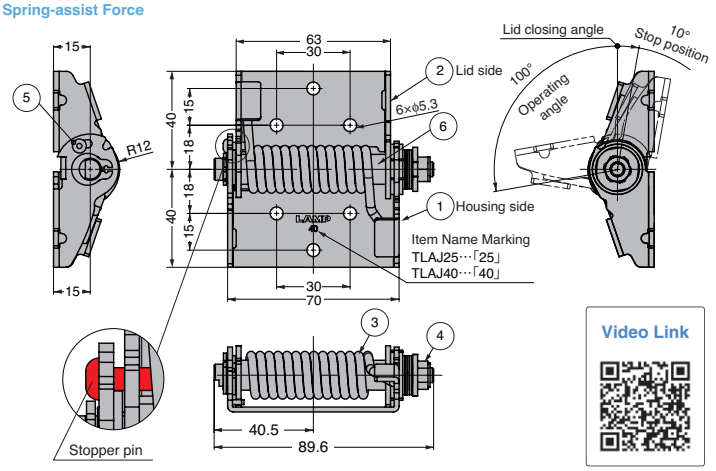


[Application]

A hex key is needed (size: 10). 0 N.m is the factory preset.

[Component Parts]





Video Link

[How to Attach the Covers]

1. Install the hinge to a lid.
2. Close the lid.
3. Attach the covers to the hinge.
4. Make sure the protrusion properly fits into the hinge.

The hinge is delivered with the pin attached.
It keeps the hinge open. Please do not detach it until the hinge is installed.

[Hinge]

RoHS	CAD	Item Code	Item Name	Spring-assist Force N·m	Spring-assist Force kgf·cm	Retaining Torque N·m	Retaining Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-045-749	HG-TLAJ25	2.2 - 2.9	22 - 30	0~3.5	0~36	218	10	40
G	3D	170-045-750	HG-TLAJ40	3.5 - 4.4	36 - 45			222	10	40

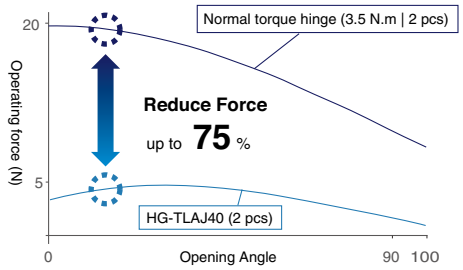
*Spring-assist force is not adjustable. Remaining torque is adjustable.

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket	Stainless Steel (SUS430)	
③	Spring	Stainless Steel	–
④	Torque Adjustment Nut M6	–	
⑤	Stopper Pin	Stainless Steel	
⑥	Shaft	Stainless Steel (SUS303)	

[Cover] Sold separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-043-831	HG-TLAJC	PBT	Light Grey	41	10	40
G	3D	170-058-881	HG-TLAJC-BL	PBT	Black	41	10	40

[Compare Required Force]

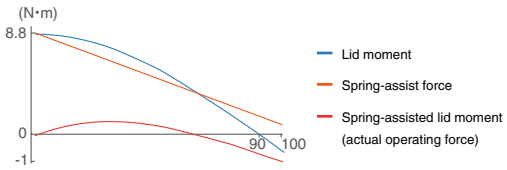


[Conditions]

- Height: 400 mm
- Weight: 4 kg
- Centre of gravity: centre of lid

[Lift Assist Mechanism]

The spring-assist force offsets the lid moment.

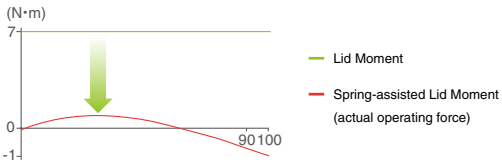


Force Formula

"Spring-assisted lid moment" = "Lid moment" – "Spring-assist force"

[Free-stop Mechanism]

The retaining torque keeps the lid in position.



Free-stop Formula

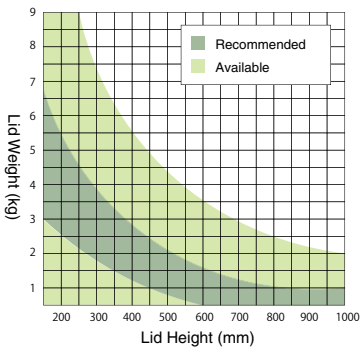
"Retaining Torque" – "Spring-assisted Lid Moment" > 0

Tips for Smoother Movement

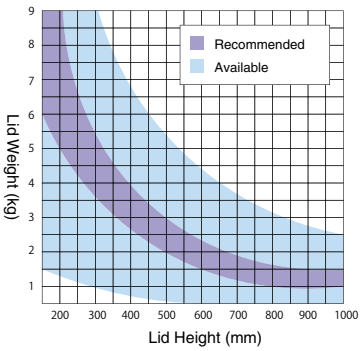
The closer retaining torque is to spring-assisted lid moment, the more lightly a lid moves. (The retaining torque is adjustable.)

[Available Lid Size]

HG-TLAJ25 (2 pcs)



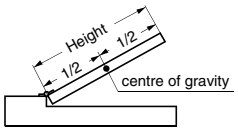
HG-TLAJ40 (2 pcs)



Available Range
- Free-stop: 0° to 100°

Recommended Range
- Free-stop: 0° to 100°
- Moves very llightly: 1° to 99°

* Spring-assisted lid moment is close to 0 N.m.



Calculation Condition:
The centre of gravity is at the centre of the lid.

Product Selection Tool Sasuga-kun

You can easily find suitable products on the webste.
This can simulate moment, force, and more.

Access here

LIFT-ASSIST HINGE HG-PA182-9 Outside Back Mount

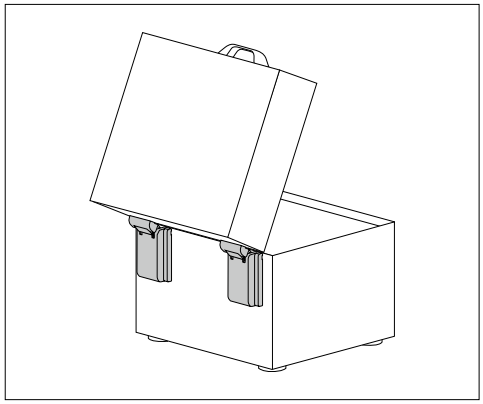
INSTRUCTION

- Easy to lift heavy top-opening lids due to spring tension. (Lift-assist)
- The built-in damper prevents lids from slamming shut. (Soft-close)
- Torque is adjustable by turning the adjustment screw. (±11%)
- Comes with a cover to hide the mounting screws.
- Designed for use under the condition that lid's centre of gravity is at a higher position than the rotational centre. (The angle of torque peak is about 20˚.)

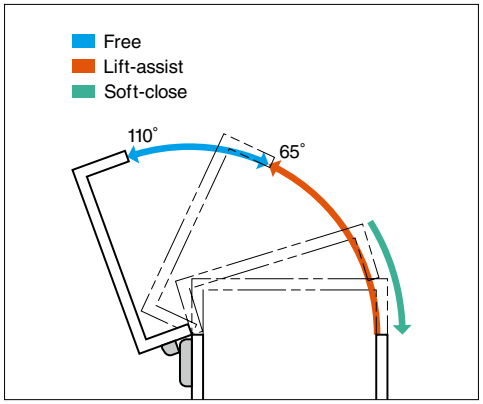
[Remarks]

- Be sure to read the "Cautions" 1.
- Please make sure that the lid will not fall backward when fully opened.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

[Outside Back Mount]



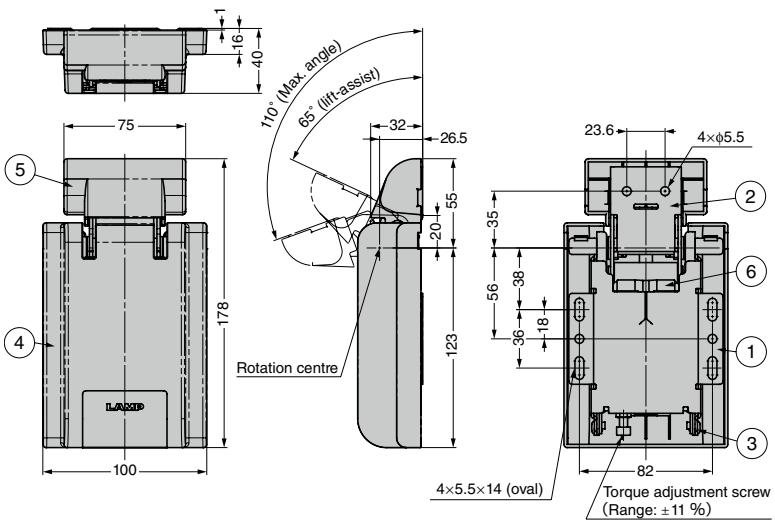
[Operating Range]



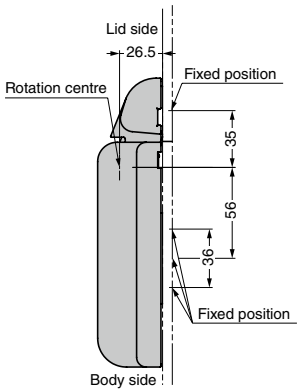
Video Link

Selection Tool

Sasuga-kun



[Installation]



No.	Part Name	Material/Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover A	PBT/ Light Grey
④	Cover B	
–	Slider	POM
–	Spring	Steel (SWO)

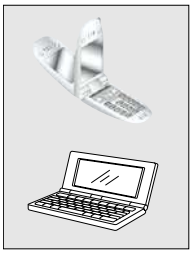
RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-045-364	HG-PA182-9	9±10%	91±10%	800	1	12

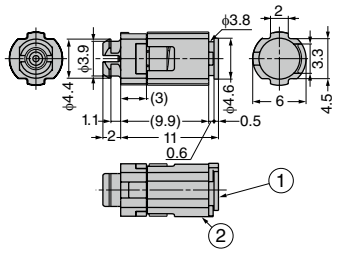
Refer to 1 : P.122

MICRO DETENT HINGE MPH-30 High Torque Type

- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- With the torque of a single hinge equal to that of two conventional hinges, you can design various casings as there is no need for hinge space on the other side.
- Designed for 160˚ opening, and detent catch in open and closed position.
- Easy snap-in for quick assembly.

[Application Example]





[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using one hinge.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details , please contact local representatives.

Video Link

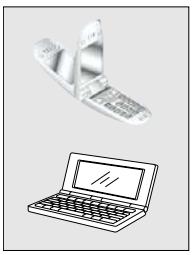
No.	Part Name	Material	Finish
①	Spindle	Steel	Clear Zinc Chromate
②	Body	POM	Black

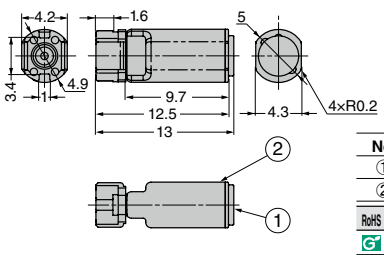
RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G'	3D	170-090-024	MPH-30	160˚	0.98	4000

MICRO DETENT HINGE MPH-30-5TN High Torque Type

- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- With the torque of a single hinge equal to that of two conventional hinges, you can design various casings as there is no need for hinge space on the other side.
- Small outer diameter of ϕ5 realises space-saving and downsizing of casing.
- Designed for 160˚ opening, and detent catch in open and closed position.

[Application Example]





[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using one hinge.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details , please contact local representatives.

Video Link

No.	Part Name	Material	Finish
①	Spindle	Steel	Nickel
②	Body	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G'	3D	170-097-888	MPH-30-5TN	160˚	0.86	4000

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETENT HINGE HG-MPS2

- Holds at 3 positions: -10˚ , 120˚ and 170˚ .
- Can be used horizontally or vertically.

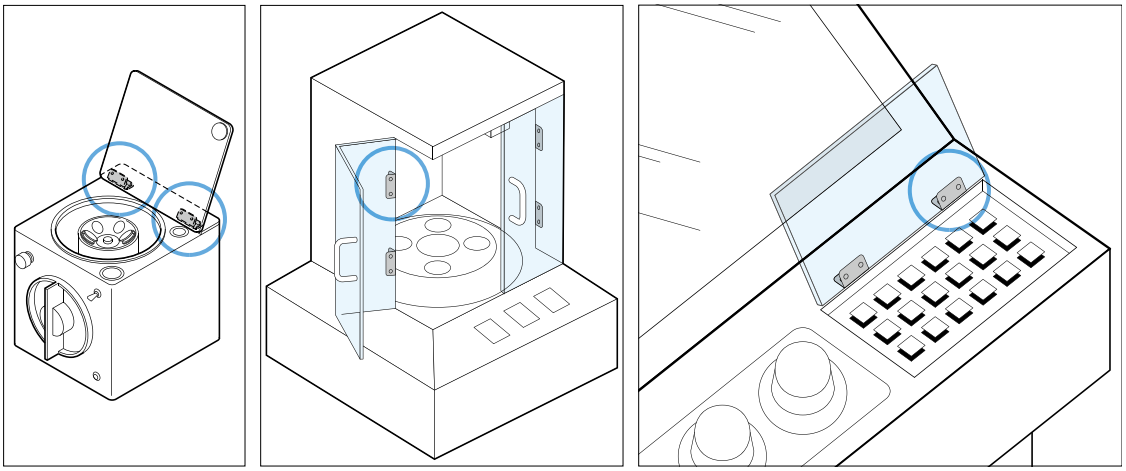
[Applications]
- Small and light doors of medical equipment, measuring equipment, analytical equipment, etc.

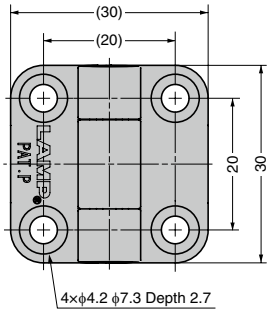
[Remarks]
- Additional stopper is recommended at 0˚ (fully closed) and 170˚ (fully opened).
- For indoor use only. Not suitable for wet applications.
- Do not use impact screwdriver for mounting.

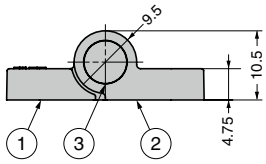
[Recommended Screws]
- Pan head screw M4 or pan head tapping screw 4

Video Link

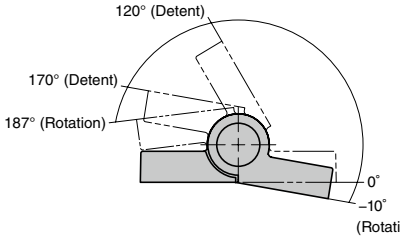
[Installation]

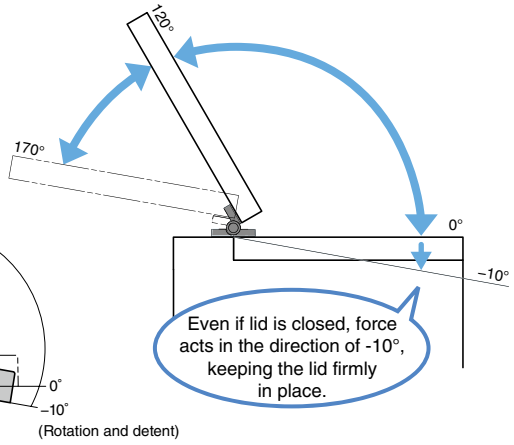






[Rotation and Detent Angle]





No.	Part Name	Material	Colour
①	Fixed Bracket	PBT	Black (BL), White (WT)
②	Movable Bracket		
③	Cap	ABS	

[Criterion of Door or Lid Size] Using 2 pcs vertically]

Width	Height	Weight
Max. 370	Max. 460	Max. 1.0kg

When using horizontally, design the door and lid sizes not to exceed the following torque.

RoHS	CAD	Item Code	Item Name	Colour	Retaining Torque -10˚, 170˚		Retaining Torque 120˚		Weight (g)	Box (pcs)	Carton (pcs)
					N·m/pc	kgf·cm/pc	N·m/pc	kgf·cm/pc			
G	3D	170-023-908	HG-MPS2-BL	Black	0.26	2.65	0.145	1.48	6.9	50	500
G	3D	170-023-909	HG-MPS2-WT	White						50	500

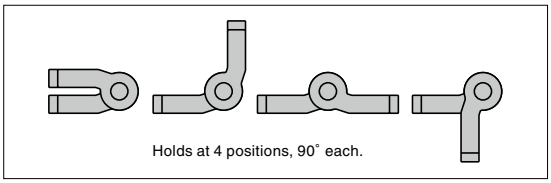
DETENT HINGE HG-YJ50

With cap.

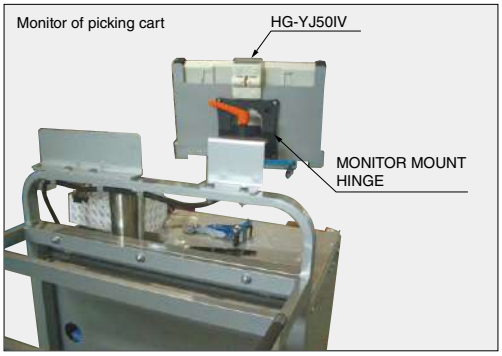
- Holds at 4 positions, 90˚ each.
- Lightweight plastic hinge.
- Plastic parts and metal parts can be separated for easy recycling.
- Caps for the screw holes are included. Caps (Ivory: KD-772-3I, Black: KD-772-3B) also available separately. 1

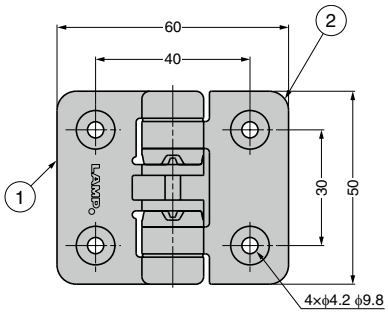
[Applications]

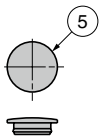
- Plastic doors or small metal doors of medical equipment, measuring equipment, food machinery, etc.

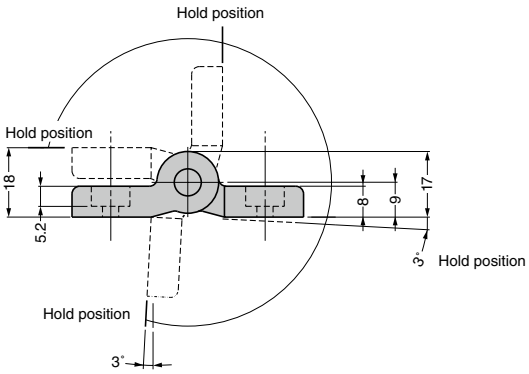


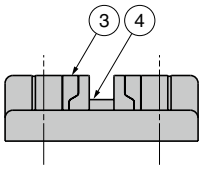
[Application Example]











No.	Part Name	Material	Finish / Colour
①	Body A	POM	Emboss/Ivory (IV), Black (BL)
②	Body B		
③	Stopper Plate	PA	
④	Shaft	Stainless Steel (SUS303)	–
⑤	Cap (included)	PP	Emboss/Ivory (IV), Black (BL)

[Criterion of Door Size] using 2 pcs vertically for plastic doors

Width	Height	Weight
Max. 400	Max. 500	Max. 1.2kg

RoHS	CAD	Item Code	Item Name	Colour	Retaining Torque N·m/pc	Retaining Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-000	HG-YJ50IV	Ivory	Approx. 0.49	Approx. 5	30	20	200
G	3D	170-090-002	HG-YJ50BL	Black				20	200

Refer to 1 : P.1004

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

ANGLE-ADJUSTABLE DETENT HINGE HG-CHJ70

INSTRUCTION

HG-CHJ70WT　　HG-CHJ70BL

- Holds at 4 angles: -3˚, -90˚, 90˚, and 177˚. (Factory setting)
- The holding angle of 90˚ can be switched to 45˚or 135˚.
- Can be used both vertically and horizontally.

[Applications]

- Environmental test equipment, laboratory equipment.

[Remarks]

- Adjustment of detent angles must be done when the hinge is open.
- The retaining torque may vary.

[Recommended Screw]

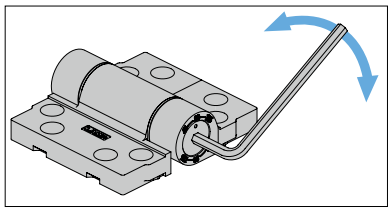
- Hexagon socket head bolt M5

[Without Covers]

[Application Example]

Detent angle: 45˚

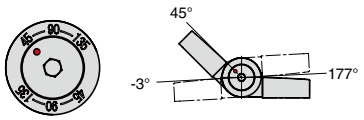
[Switching 45˚↔90˚↔135˚]



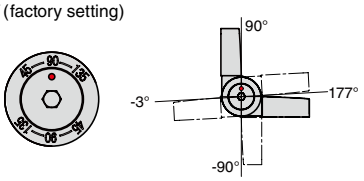
Can be adjusted by a hex key.

[Available Detent Angles]

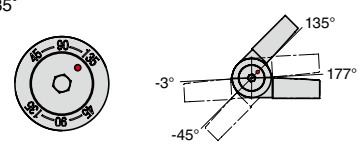
- 45˚



- 90˚(factory setting)

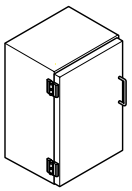


- 135˚



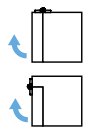
[Available Door Specs] When using two hinges

- Lateral opening



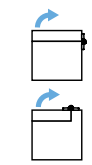
-Weight: Max. 8kg
-Width: Max. 500mm
-Height: Max. 1,000mm

- Upward opening

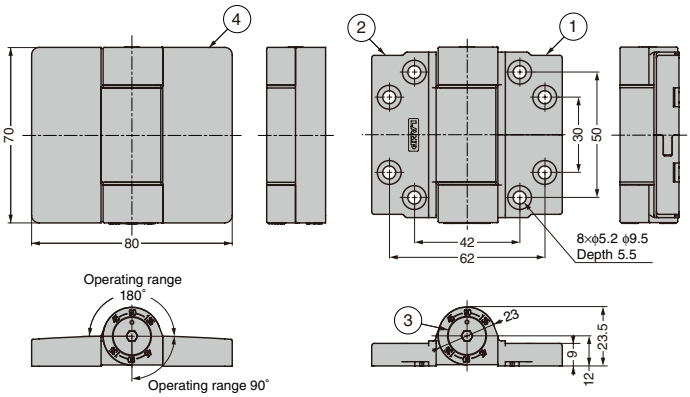


-Moment: Max. 1.7N·m
-Height: Max. 250mm

- Top opening



-Moment: Max. 2.4N·m
-Height: Max. 300mm



Video Link

No.	Part Name	Material
①	Fixed Bracket	POM
②	Movable Bracket	
③	Shaft	Stainless Steel
④	Cover	ABS

RoHS	CAD	Item Code	Item Name	Colour	Retaining Torque N·m/pc	Retaining Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-043-659	HG-CHJ70BL	Black	2	20.4	115	10	80
G	3D	170-043-660	HG-CHJ70WT	White				10	80

DETENT HINGE HG-FH128

Cover not shown

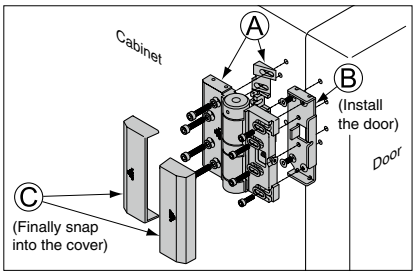
- Holds doors at 60˚ and 120˚ .
- Depth and horizontal adjustment can also be made after installation.
- Covers for the screw holes are included.
- Fluororesin washer at rotation part ensures smooth operation.

[Applications]
- Environmental test equipment, laboratory equipment, etc.

[Parts Included]
- Hexagon socket head cap screw M6×25 (SUS)
- Hexagon socket head cap screw M5×25 (SUS)
- Hexagon socket countersunk head screw M5×14 (SUS)
- Oval washer for M5 (SUS)
- Washer 6 (SUS)

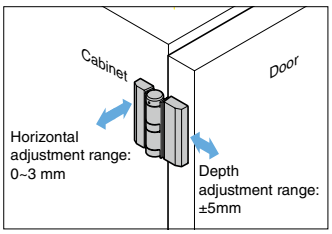
Video Link

[How to Install (Screws Included)]

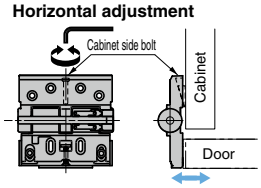


Install by steps Ⓐ～Ⓒ

[How to Adjust Position (With Cover Removed)]

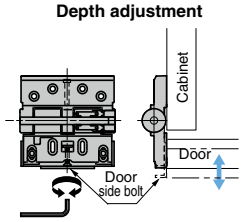


Horizontal adjustment

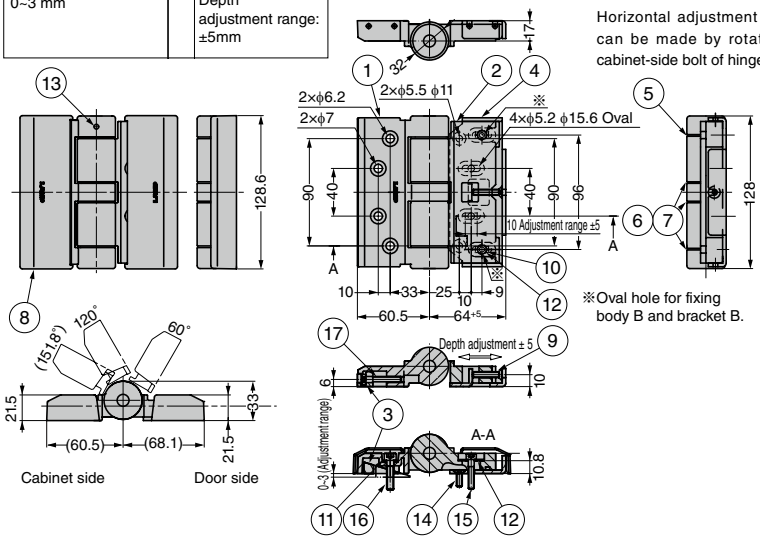


Horizontal adjustment of door can be made by rotating the cabinet-side bolt of hinge.

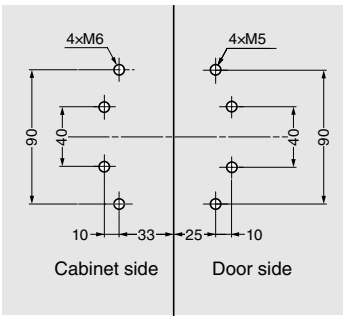
Depth adjustment



Depth adjustment of door can be made by rotating the door-side bolt of hinge.



[Cut Out Dimensions]

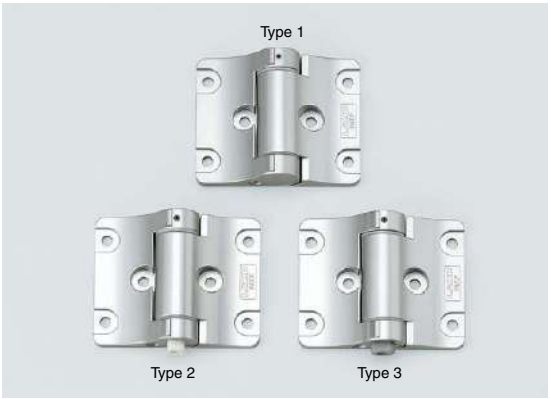


No.	Part Name	Material	Finish
①	Body A	Zinc Alloy (ZDC)	Dull Nickel + Clear Finish
②	Body B		
③	Bracket A		Nickel
④	Bracket B	Stainless Steel (SUS304)	Barrel Polished
⑤	Washer	PTFE	–
⑥		POM	
⑦		PS	
⑧	Cover	AES	Metallic Silver Paint

No.	Part Name	Material	Finish
⑨	Hexagon Socket Countersunk Head Screw M5×25	Stainless Steel	–
⑩	Hexagon Socket Head Cap Screw M5×12		
⑪	Washers 6		
⑫	Oval Washer for M5		
⑬	Spring Pin 4×32		
⑭	Hexagon Socket Countersunk Head Screw M5×14		
⑮	Hexagon Socket Head Cap Screw M5×25		
⑯	Hexagon Socket Head Cap Screw M6×25		
⑰	Hexagon Socket Low Head Screw M5×30		

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Weight kg/Pair	Retaining Torque N·m/Pair	Retaining Torque kgf·m/Pair	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-090-317	HG-FH128	600~900	900~1200	Max. 40	10	102	1500	1	6

DETENT HINGE HG-CSH63 DIGEST

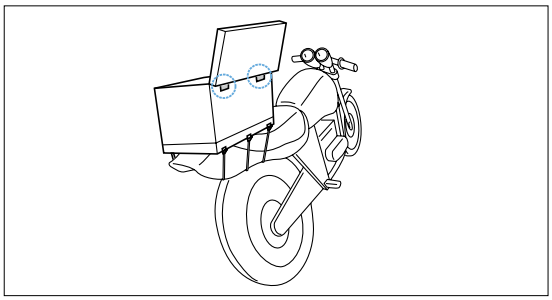


- Detent at both of 0˚and 100˚.
- Also available without damper type.
- Damper works clockwise or counterclockwise.
- Be sure to read the “Cautions” 1 .

Selection Tool

Sasuga-kun

[Installation]



Refer to 1 : P.43

DETENT HINGE HG-YC105

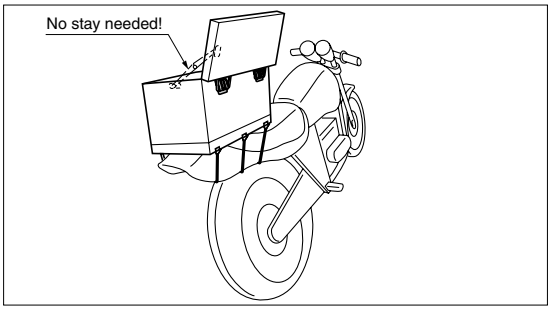
SUS

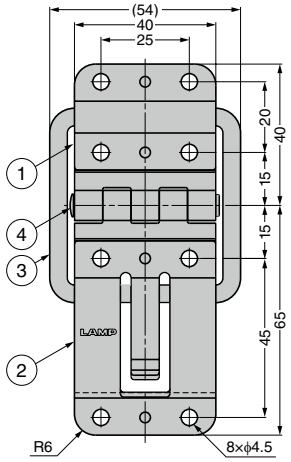
- Holds door open without secondary support.
- Easy installation and no damage to mounting surface with integrated back cover.

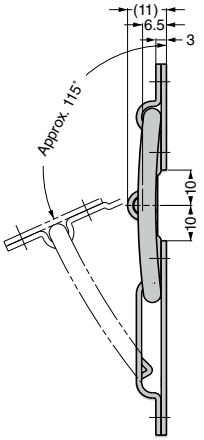
[Applications]
- Motorcycle carrying box, control box, etc.

[Remarks]
- Retaining torque varies. Not guaranteed value.
- Confirm with actual item before use.

[Application Example]





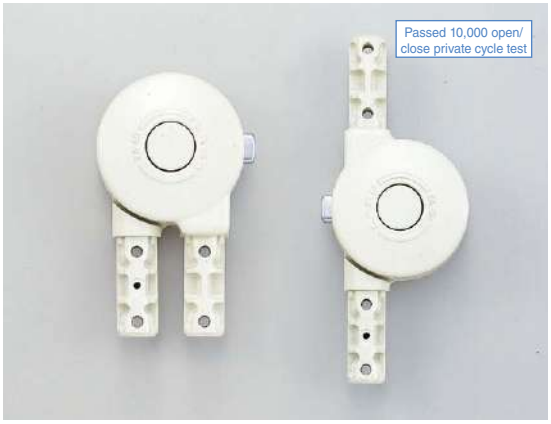


No.	Part Name	Material	Finish
①	Body (Fixed Side)	Stainless Steel (SUS304)	Barrel Polished
②	Body (Movable Side)		
③	Stopper		–
④	Shaft		

RoHS	CAD	Item Code	Item Name	Retaining Torque N·m/pc	Retaining Torque kgf·m/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-093	HG-YC105	Approx. 1.18	Approx. 12	122	10	100

MULTI ANGLE STAY KA-60 With Locking Mechanism

INSTRUCTION

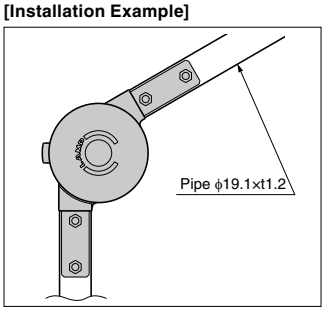


- Angle adjustment and locking is realised by simple button operation. Suitable for pipe joints for which angle adjustment is required.
- Angle can be adjusted from 0˚ ~180˚ by 10˚ increment.
- Completely locked when your hands are off the release button.

[Remarks]

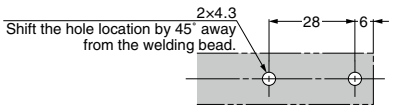
- Do not forcibly apply force in the locked position.
- Pipe not included.

[Installation Example]

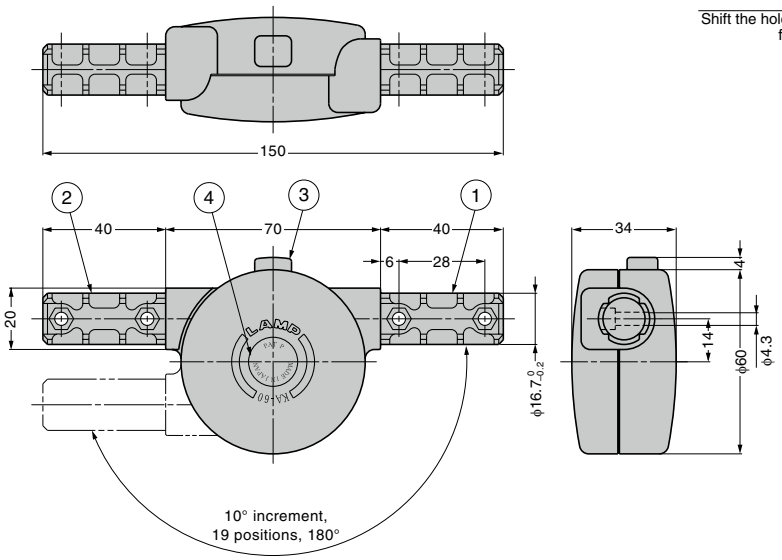


After releasing the lock by pushing the button, angle can be adjusted every 10˚ .

[Pipe Cut Out Dimensions]



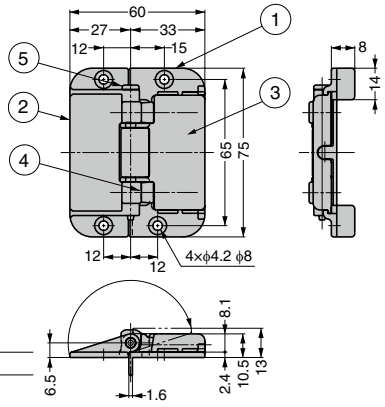
Pipe outer diameter : ϕ19.1
Pipe thickness : t1.2



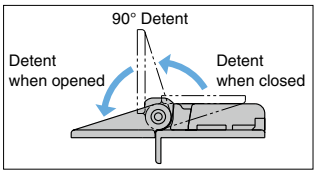
No.	Part Name	Material	Finish
①	Body A	Aluminium Alloy	Enamel Finish/Ivory
②	Body B		
③	Release Button		Chrome
④	Cap	ABS	Black

RoHS	CAD	Item Code	Item Name	Pipe	Load Capacity N·m/pc	Load Capacity kgf·m/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-890-570	KA-60	ϕ19.1×t1.2	14	1.4	170	6	60

CENTRE HINGE CH-75



- Cam and slide latch provide a detent function in opened and closed positions.
- Cushion function absorbs impact at full opening and unexpected external force.
- Removable hinge pin allows easy installation.
- AS Parts Set for installing to aluminium frame also available. Please contact local representative for more details.



No.	Part Name	Material	Finish / Colour
①	Body A	Zinc Alloy (ZDC)	Nickel (NI), Bronze (GB)
②	Body B		
③	Holder	POM	Brown
④	Latch		Black
⑤	Hinge Pin	Steel (SWCH)	Lubricant Coating/Black

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	250-129-208	CH-75NI	Nickel	101	42	168
–	3D	250-120-031	CH-75GB	Bronze	99	42	168

RATCHET HINGE WITH FRICTION HG-RCT12-C

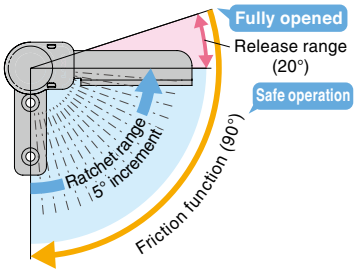
- Ratchet mechanism holds at angles in 5˚ increment from closed to opened position.
- Lift up to the fully open position to release the ratchet mechanism.
- The friction (resistance) function works even when released for safe operation.

[Applications]

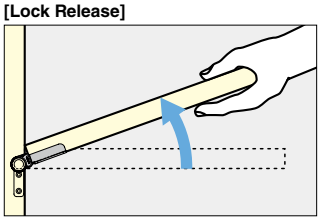
- For angle adjustment of folding table, touch panel, keyboard, etc.

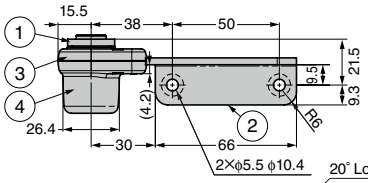
[Remarks]

- Use in pairs.
- Ensure the cabinet has enough rigidity. Otherwise, the ratchet mechanism may not function.
- When the mounting width of hinge is more than 400mm, the ratchet mechanisms may not work simultaneously on the left and right.

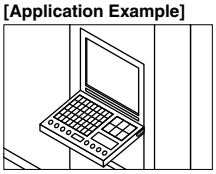


[Lock Release]

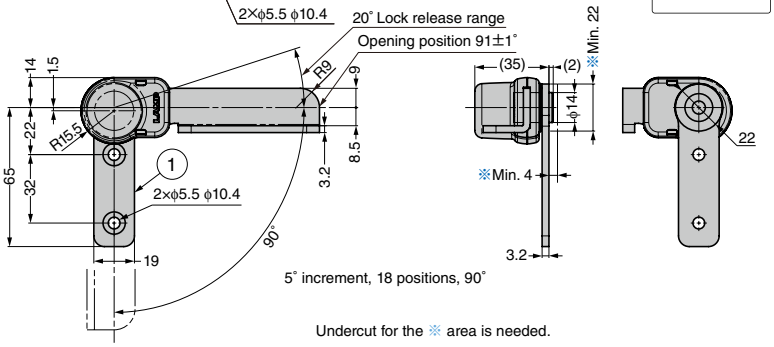




[Application Example]



Video Link



※ Undercut for the ※ area is needed.
Right-handed type shown. Left-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Bracket	Steel (SPCC)	Nickel
②	Arm (Right-handed)		
③	Cover (Right-handed)	PC	Light Grey
④	Cover (Right-handed)		

RoHS	CAD	Item Code	Item Name	Allowable Moment N·m/pair	Allowable Moment kgf·cm/pair	Weight (g)	Box (pairs)	Carton (pairs)
–	3D	170-036-333	HG-RCT12-C	40	408	350	8	32

FOLDING HINGE HG-RCT1S-90 90˚ Locking

- Locks at 90˚ . Produces click sound when locked.
- Unlocks when the angle goes over 90˚ and can be folded.
- Ratchet mechanism allows for high load capacity.
- HG-RCT12-C ratchet hinge with multiple locking angles is also available. 1

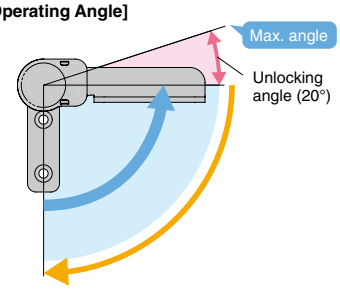
[Application]

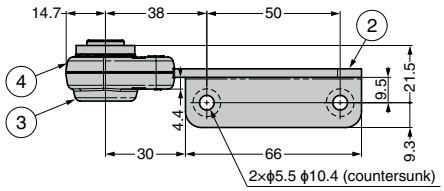
- Foldable tables and shelves.

[Remarks]

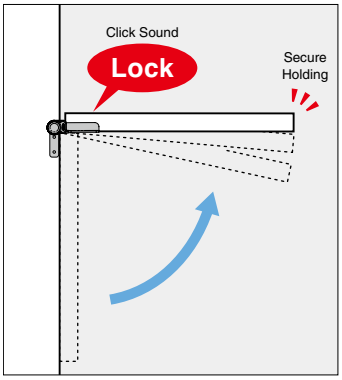
- Used in pairs. (right and left)
- Make sure the housing has sufficient strength so that the ratchet mechanism can function properly.
- If the length between two hinges is more than 400 mm, the ratchets may not activate at the same time.
- The hinge does not have free-stop mechanism. Please hold a shelf with hands when closing.

[Operating Angle]

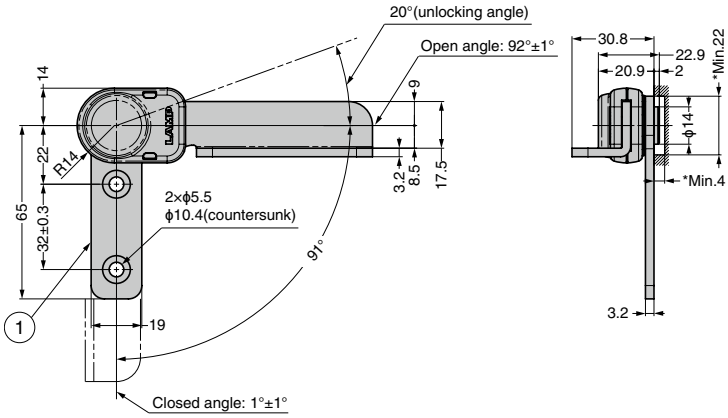




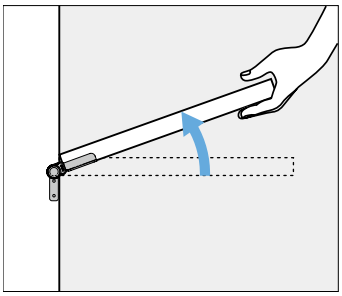
[Lock at 90˚]



Provides click sound with ratchet mechanism.



[Unlock]



The lock will be released if the angle is more than 90° .

- Right-handed type is shown. Right and left handed types are symmetrical.
- Make space indicated by * marks when installing.

No.	Part Name	Material	Finish/Colour
①	Bracket	Steel	Nickel
②	Arm		
③	Upper Cover	Polycarbonate (PC)	Light Grey
④	Lower Cover		

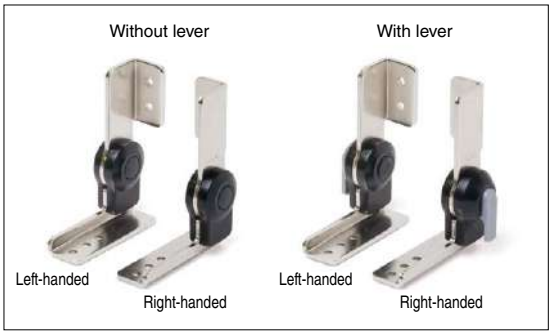
Sold in set of two hinges. (right and left)

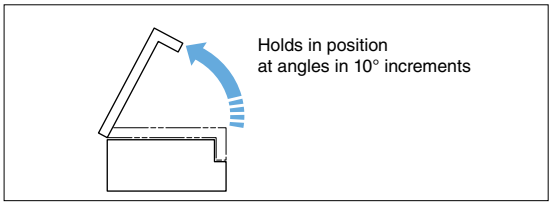
RoHS	CAD	Item Code	Item Name	Moment Load Capacity / set		Weight (g)	Box (set)	Carton (set)
				N.m	kgf.cm			
G	3D	170-048-682	HG-RCT1S-90	40	408	310	10	40

Refer to 1 : P.144

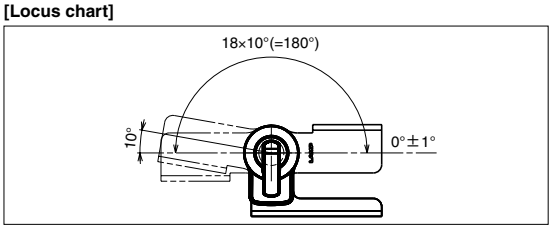
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

MULTI ANGLE LOCKING HINGE HG-MA95A





[Locus chart]



- Easily adjusts the flap angle by toggling the lever.
- Lock allows the hinge to be held in position from 0° to 180° in 10° increments.
- The flap is temporarily unlocked while the lever is pushed.
- The flap stays unlocked when the lever is lifted.
- Both hinge types can be used together.

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment.

[Remarks]

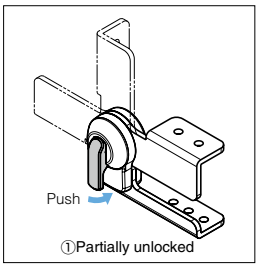
- Be sure to read the “Cautions” 1.

[Recommended screws]

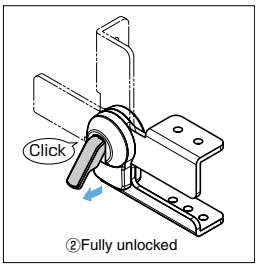
- M5 screw

Video Link

[Two ways to unlock]

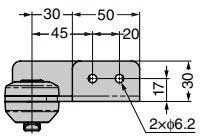


The flap is temporarily unlocked while the lever is pushed.

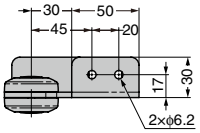


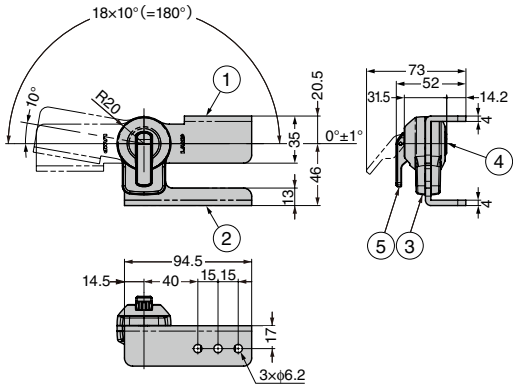
The flap stays unlocked when the lever is lifted.

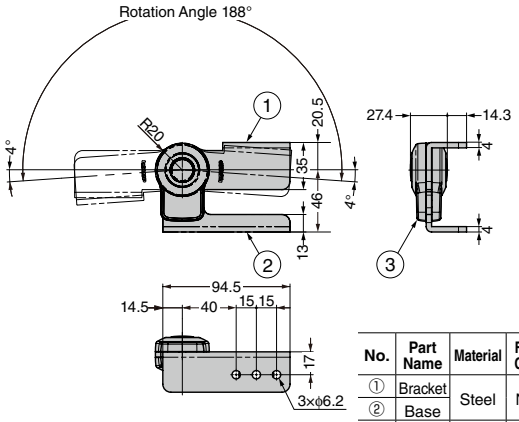
[HG-MA95A-L]



[HG-MA95AF-L]







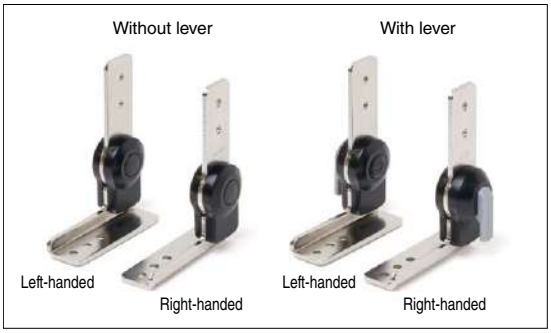
Left-handed shown. Right-handed is symmetrical.

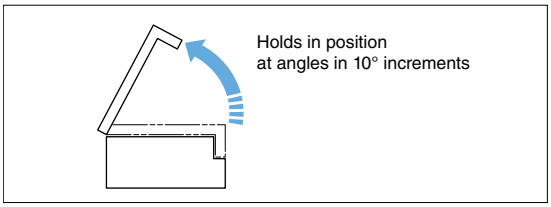
No.	Part Name	Material	Finish/ Colour
①	Bracket	Steel	Nickel
②	Base		
③	Plastic Cover	PC	Black
④	Pin	ABS	
⑤	Lever	PA	Light Gray

RoHS	CAD	Item Code	Item Name	Position	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pc)	Carton (pc)
G	3D	170-043-818	HG-MA95A-R	Right-handed	With lever	Max. 45	Max. 459	351	5	20
G	3D	170-043-819	HG-MA95A-L	Left-handed				351	5	20
G	3D	170-043-822	HG-MA95AF-R	Right-handed	Without lever	–	–	351	5	20
G	3D	170-043-823	HG-MA95AF-L	Left-handed				351	5	20

Refer to 1 : P.43

MULTI ANGLE LOCKING HINGE HG-MA95B





- Easily adjusts the flap angle by toggling the lever.
- Lock allows the hinge to be held in position from 0° to 180° in 10° increments.
- The flap is temporarily unlocked while the lever is pushed.
- The flap stays unlocked when the lever is lifted.
- Both hinge types can be used together.

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment.

[Remarks]

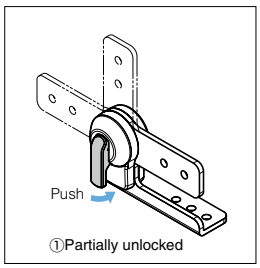
- Be sure to read the "Cautions" 1.

[Recommended screws]

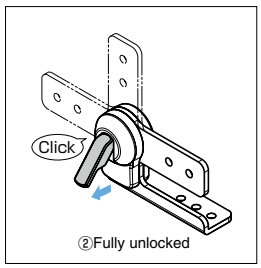
- M5 screw

Video Link

[Two ways to unlock]

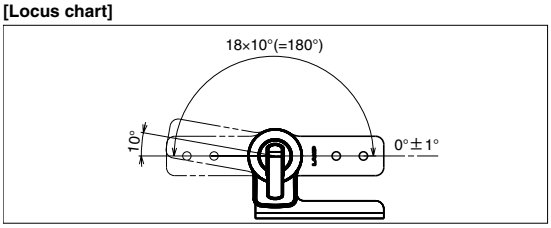


The flap is temporarily unlocked while the lever is pushed.

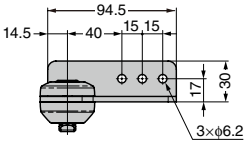


The flap stays unlocked when the lever is lifted.

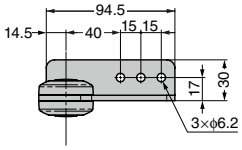
[Locus chart]

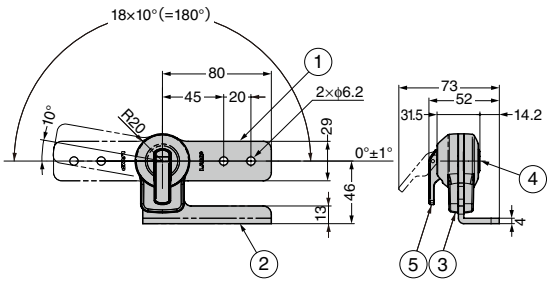


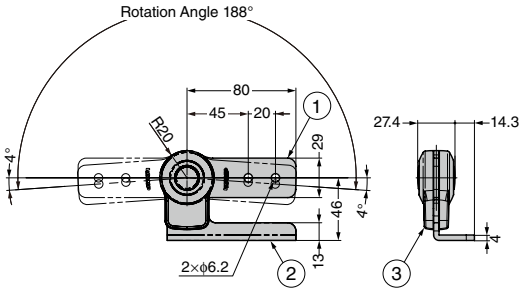
[HG-MA95B-L]



[HG-MA95BF-L]







Left-handed shown. Right-handed is symmetrical.

No.	Part Name	Material	Finish/Colour
①	Bracket	Steel	Nickel
②	Base		
③	Plastic Cover	PC	Black
④	Pin	ABS	
⑤	Lever	PA	Light Gray

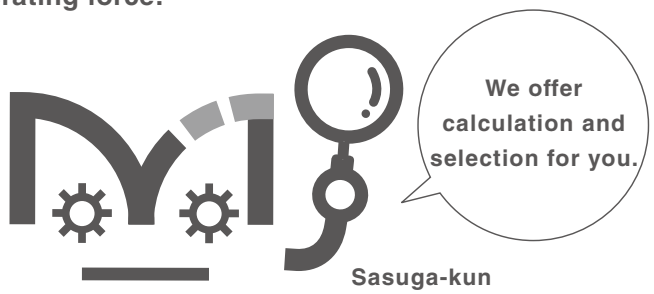
RoHS	CAD	Item Code	Item Name	Position	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pc)	Carton (pc)
G	3D	170-043-820	HG-MA95B-R	Right-handed	With lever	Max. 45	Max. 459	305	5	20
G	3D	170-043-821	HG-MA95B-L	Left-handed				305	5	20
G	3D	170-043-824	HG-MA95BF-R	Right-handed	Without lever	–	–	305	5	20
G	3D	170-043-825	HG-MA95BF-L	Left-handed				305	5	20

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun **Search**

https://cont.sugatsune.co.jp/motion/en/

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
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Product Selection Tool Sasuga-kun

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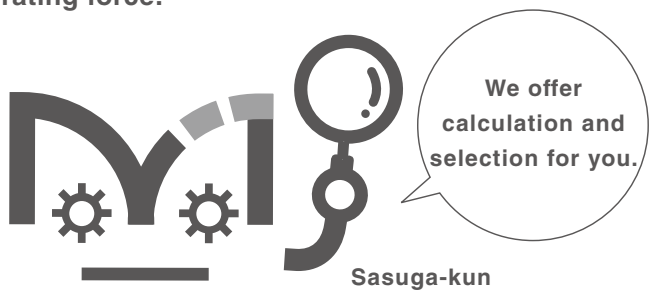

Sasuga-kun

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TORQUE HINGES
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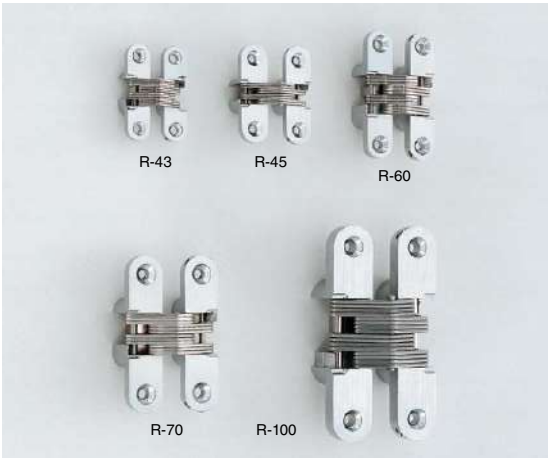
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED HINGE R



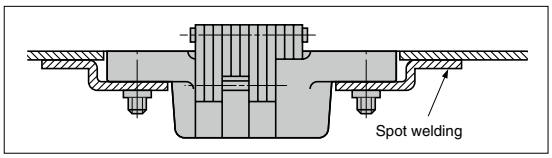
- Stainless steel (SUS304) arm has sufficient strength and superior corrosion resistance.
- R-100 adopts a roller as guide pin, making smooth movement even under high load.
- Can be widely used from wooden doors to sheet metal doors.
- Torque hinge types also available 1 .

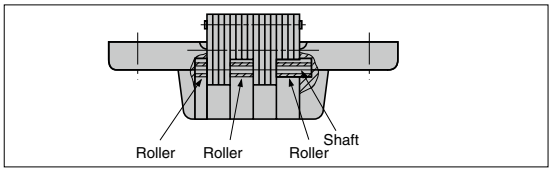
[Remarks]
- Distance to door edge must be less than Xmm.
- Roller is supplied to R-100 only.
- Recommended for use in pairs.

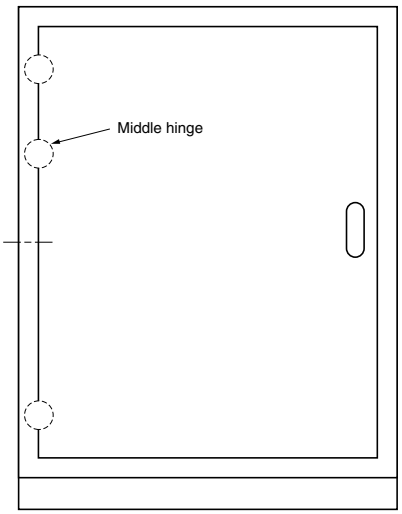
[Parts Included]
- Countersunk head wood screw (SUS)
- Countersunk head tapping screw (SUS) (R-70 only)

Video Link

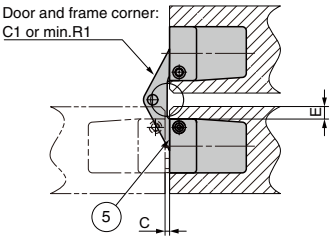
[Metal Door]

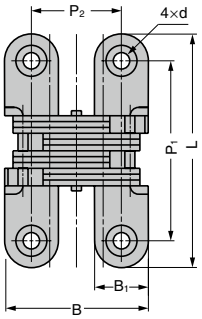


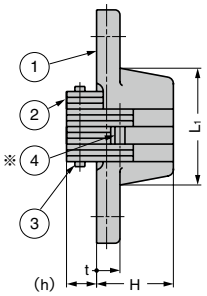




(Reference)
When hanging a door with 3 hinges, a large load is applied to the upper hinge, so the middle hinge is preferably set at about 1/2 of the distance from the midpoint of upper and lower hinges to the upper hinge.







No.	Part Name	Material					Finish
		R-43	R-45	R-60	R-70	R-100	
①	Body	Zinc Alloy					Satin Chrome
②	Arm	Stainless Steel (SUS304)					Plain
③	Shaft	Stainless Steel			Stainless Steel (SUS303)	Stainless Steel	
④	Shaft	Stainless Steel (SUS304)				Steel	
⑤	Shaft						
※	Roller (R-100 only)	–					Nickel

RoHS	CAD	Item Code	Item Name	L	L_1	B	B_1	P_1	P_2	H	h	t	d	C	E	Screw	Number of Arms	Door Width	Door Height	Door Weight kg/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-079	R-43	43	22	29	11	32	18	13	5	5	ϕ3.5 ϕ6.2	0.8	2.3	3.1×16	12	Max. 450	Max. 700	Max. 4	180°	37	30	300
G	3D	170-090-084	R-45	45	19	35.7	13		22.7	18.5	6		ϕ3.5 ϕ7		3	3.1×20	8					56	20	200
G	3D	170-090-081	R-60	60	33	35.2		47	22.2		6.5	6.5	ϕ4.3 ϕ8.3	1		3.5×20	12					94	10	100
G	3D	170-095-200	R-70	70	35	42.6	16.1	53	26.6	23	7.3	7	ϕ4.6 ϕ9.1	1.2	3.5	4×25				Max. 7		157	10	–
G	3D	170-095-201	R-100	100	52	53.2	20	80	33.2	27.5	9.5	9.5	ϕ5.3 ϕ10	1.8	4.8	4.5×32	16					342	10	60

Refer to 1 : P.82

CONCEALED HINGE RK-50

SUS

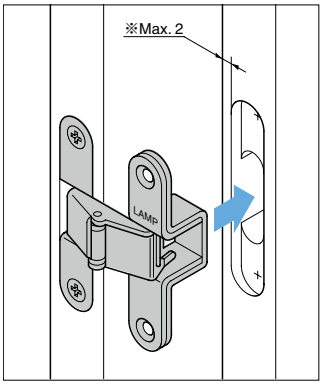
- High corrosion with stainless steel.
- For light door.

[Remarks]

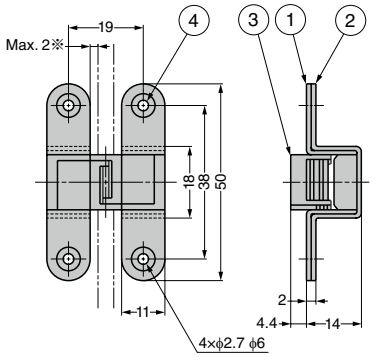
- When increasing the board thickness, be sure to keep the dimensions of ※ marked on bellow drawings and increase the remaining margins on the opposite side.
- Recommended for use in pairs.

[Parts Included]

- Countersunk head wood screw 2.4×13 (SUS)



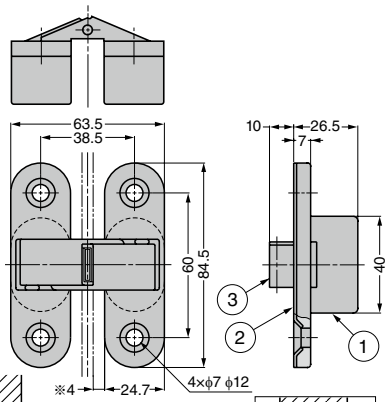
※Distance to door edge must be less than 2mm.



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Cover		Plain
③	Arm		Satin
④	Eyelet		Plain
–	Other Shaft Parts		

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-086	RK-50	Max. 450	Max. 700	Min. 15	Max. 2.6	180°	28	24	240

CONCEALED HINGE INO-66N



- Stainless steel front plate.

[Applications]

- Folding door or window, door of built-in furniture, etc.

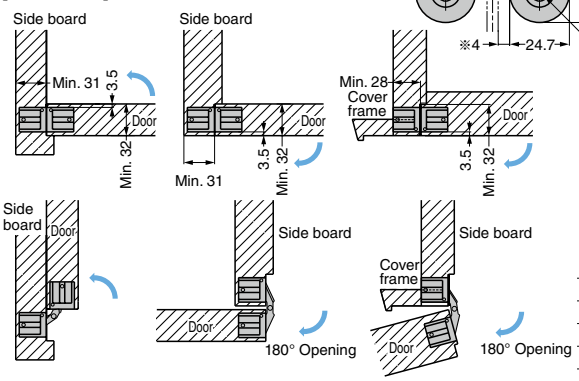
[Remarks]

- When using three hinges, install the middle one 200mm below the upper hinge.
- ※Distance to door edge must be less than 4mm.

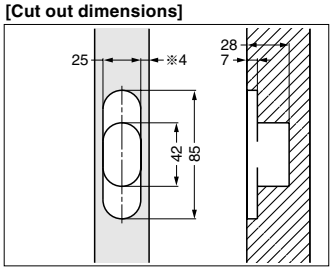
[Recommended Screws]

- Countersunk head wood screw 5.8

[Installation]



[Cut out dimensions]



No.	Part Name	Material	Finish
①	Body	PA	–
②	Front Plate	Stainless Steel (SUS304)	Satin
③	Arm		–

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-095-018	INO-66N	Max. 800	Max. 2100	Max. 30	Max. 50	180°	100	24	144

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED HINGE HES® SERIES

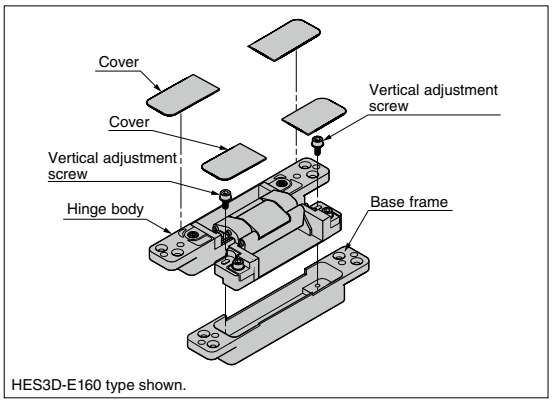
- Hinge is completely hidden when the door is closed. Original design of the door is maintained with improved security.
- Products with 3-way adjustment function (vertical, horizontal, and depth adjustment) and products with temporary holding feature to allow easy door installation are available. Refer to list 1 for applicable products.
- Can be used together with a door damper.
  - ・LAPCON DOOR DAMPER LDD-V 2
  - ・LAPCON DOOR DAMPER LDD-S 3

[Installation and Adjustment Procedure Using Temporary Holding Feature]

By using the temporary holding feature, you can easily install the door by one person.

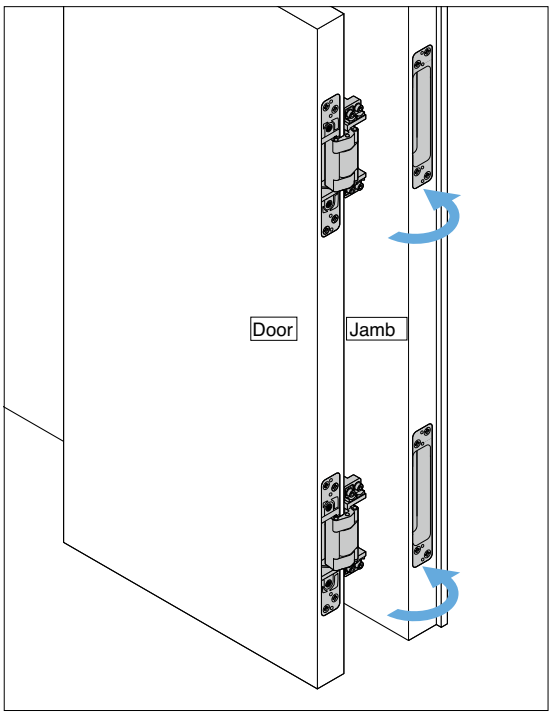
1. Remove screw covers and vertical adjustment screws to split the hinge into the hinge body and base frame as shown in Fig.a.
2. Secure the hinge body (the side with LAMP logo) to the bored hole of the door and the base frame to the bored hole of the jamb with mounting screws respectively
3. Push the hinge body horizontally into the base frame as shown in Fig. b. The temporary holding feature holds the door in the jamb even if you loosen your hands after pushing it in.
4. Replace and temporarily tighten the vertical adjustment screws that were removed in step 1.
5. Adjust the door positions in order one by one.
6. Loosen the vertical adjustment screws by one turn, and adjust the vertical position of the door.
7. After adjusting the vertical position, tighten the vertical adjustment screws.
8. Loosen the depth adjustment screws by one turn, and adjust the depth position of the door.
9. After adjusting the depth position, tighten the depth adjustment screws.
10. Turn the horizontal adjustment screws to adjust the horizontal position of the door. To do this, turn the left and right adjustment screws little by little, respectively. Turning them by force may cause failure or damage.
11. Finally, replace the screw covers to complete.

a. Exploded View

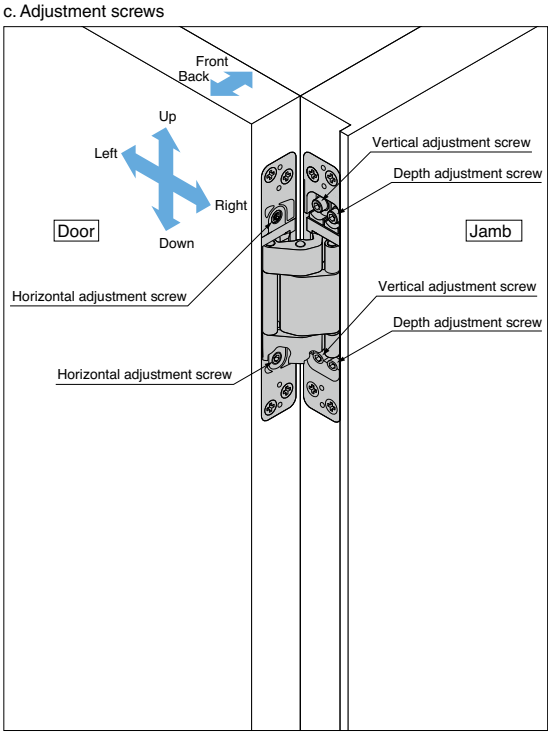


HES3D-E160 type shown.

b. Installation



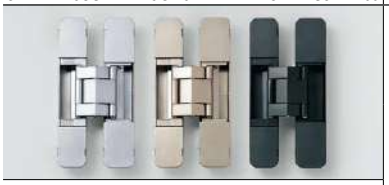
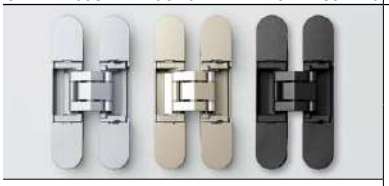
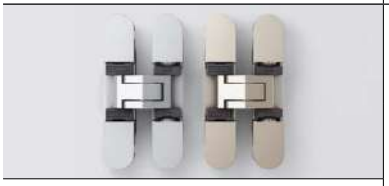
c. Adjustment screws



※ Adjustment directions are those when door is closed.

Refer to 1 : P.153, 2 : P.532, 3 : P.536

[HES Concealed Hinge Series Digest]

Picture, Item Name	Door Width	Door Height	Door Thickness	Door Weight	3-Way Adjustment Function	Temporary Holding Feature	Page
3-WAY ADJUSTABLE CONCEALED HINGE HES3D-W190	Max. 915	Max. 2440	Min. 42	Max. 100 kg/ 2 pcs Max. 125kg/ 3 pcs	Yes	Yes	P.154
3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E190	Max. 900	Max. 2400	Min. 38	Max. 100 kg/ 2 pcs Max. 125kg/ 3 pcs	Yes	Yes	P.156
3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E160	Max. 900	Max. 2400	Min. 36	Max. 45kg/ 2 pcs Max. 60kg/ 3 pcs	Yes	Yes	P.157
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120	Max. 900	Max. 2400	Min. 29	Max. 30kg/ 2 pcs Max. 40kg/ 3 pcs	Yes	Yes	P.158
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-90	Max. 600	Max. 1500	Min. 23	Max. 12kg/ 2 pcs Max. 16kg/ 3 pcs	Yes	Yes	P.161
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-70	Max. 600	Max. 1200	Min. 19	Max. 9kg /2pcs Max. 12kg /3pcs	Yes	Yes	P.163
3-WAY ADJUSTABLE CONCEALED HINGE HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Max. 40kg/ 2 pcs Max. 55kg/ 3 pcs	Yes	Yes	P.164
SURFACE-MOUNT CONCEALED HINGE HES2S-140-A125	Max. 900	Max. 2700	Min. 38	Max. 50kg/ 2 pcs Max. 65kg/ 3 pcs	Yes	Yes	P.165

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-W190 Wide Throw

INSTRUCTION HEX KEY

Silver Champagne Gold

Black Nickel

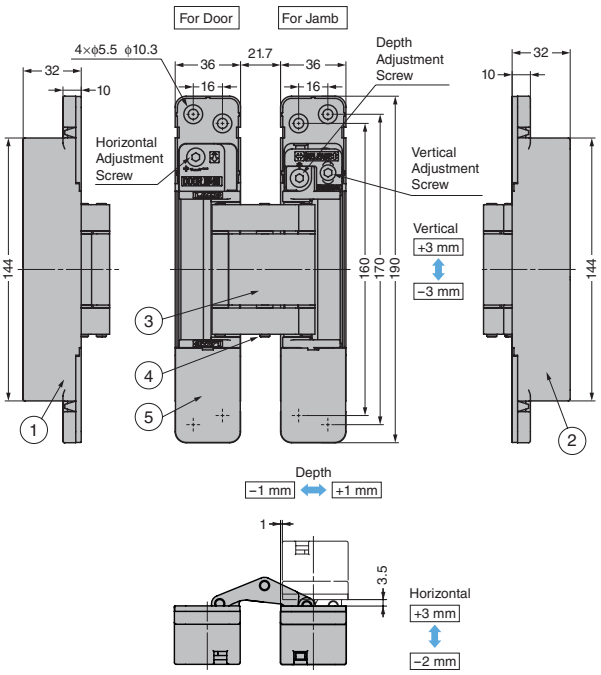
- Has a long arm for a wider throw. This allows for use on clad and thick doors.
- Thin profile allows for shallow mortise.
- Vertical, horizontal and depth adjustments are available.
- For simplified door hanging, the hinge divides into two parts: one for the door-side and one for the frame-side.
- Can temporarily be hung before fixing with screws.
- Custom colours are available.
- Replacement screw covers are also available. Please contact us.

[Remarks]
- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.

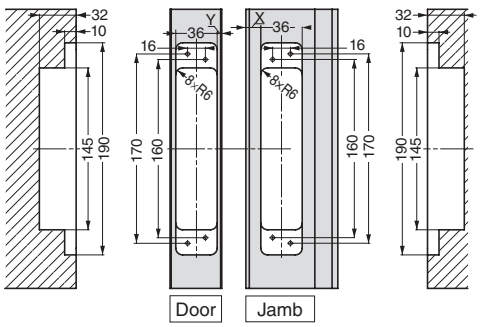
[Parts Included]
- Cross-recessed countersunk tapping screw 5 × 30 (8 pcs / hinge) stainless steel
- Hex key 4
- Cutout template

[Optional Parts]
- Installation jig HES3D-W190-TMP 1
- Stainless steel screw cover (made to order)

Selection Tool
Hinge Selection

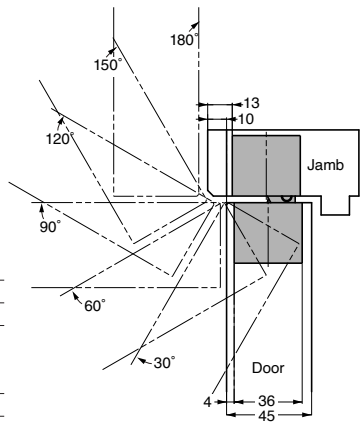


[Cut Out Dimension]



Please drill prepared holes for the tapping screws if the optional jig (HES3D-W190-TMP) is not used.

[Locus Chart]

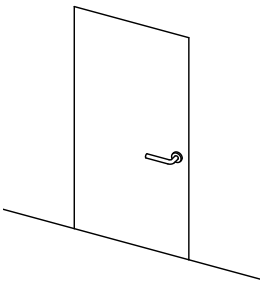


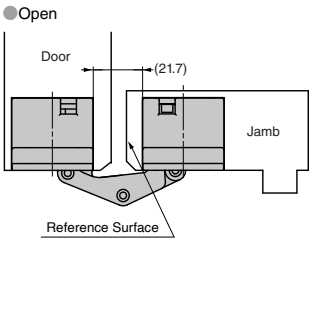
The example drawing shows the case that there is a step of 10 mm between the door and the jamb.

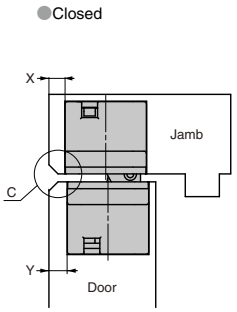
No.	Part Name	Material	Finish/Colour					
			DC	DN	BL	PN	WT	DGR
①	Body	Zinc Alloy (ZDC)	Satin	Nickel	Electroplating Black	Polished Nickel	White Paint	Dark Grey Plating
②	Base Frame							
③	Arm	Aluminium Alloy						
④	Shaft	Stainless Steel	Plain	Plain	Plain	Plain	Plain	Plain
⑤	Screw Cover	ABS	Silver	Champagne Gold	Black	Polished Nickel	White Paint	Dark Grey Plating

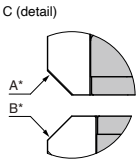
Refer to 1 : P.167

[Flush Installation]





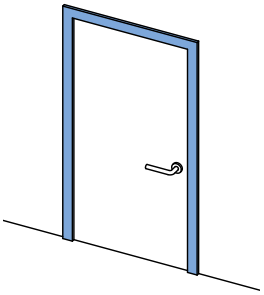




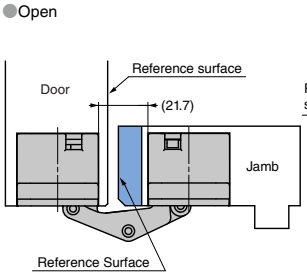
* Chamfering is required depending on clearance for proper door motion.

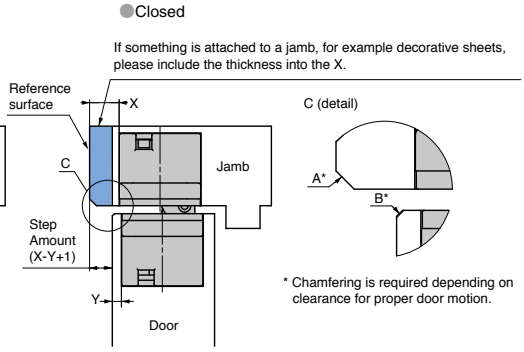
Y	B	X	A
Door Clearance	Door Chamfering	Jamb Clearance	Jamb Chamfering
4 and under	0	3 and under	0
5	1	4	1
6	2	5	2
7	3	6	3
8	4	7	4
9	6	8	6

[Cladded Installation]



Available on doors which are not aligned flush to the wall or jamb.





* Chamfering is required depending on clearance for proper door motion.

Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Jamb Clearance	Jamb Chamfering	Step Amount
3	0	3 to 12	0	1 to 10
		13	1	11
		14	2	12
		15	4	13
4	1	3 to 10	0	0 to 7
		11	1	8
		12	2	9
		13	3	10
		14	4	11
5	2	3 to 6	0	-1 to 2
		7	1	3
		8	2	4
		9	3	5
		10	4	6
	3	11	4	7
		12	5	8
		13	6	9

Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Jamb Clearance	Jamb Chamfering	Step Amount
6	3	3 to 6	0	-2 to 1
		7	1	2
		8	2	3
	4	9	3	4
		10	4	5
		11	5	6
		12	6	7
7	5	3 to 6	0	-3 to 0
		7	1	1
		8	2	2
		9	3	3
		10	5	4
		11	7	5
8	6	3 to 6	0	-4 to -1
		7	1	0
		8	3	1
		9	5	2
		10	7	3

RoHS	CAD	Item Code	Item Name	Colour	Door Size			Load Capacity				Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
					Width	Height	Thickness	N/2pcs	kgf/2pcs	N/3pcs	kgf/3pcs				
G	3D	170-045-738	HES3D-W190DC	Silver	Max. 915	Max. 2440	Min. 42	981	100	1230	125	180°	-	2	12
G	3D	170-045-739	HES3D-W190DN	Champagne Gold										2	12
G	3D	170-045-740	HES3D-W190BL	Black										2	12
G	3D	170-047-904	HES3D-W190NI	Nickel										2	12
—	3D	170-047-905	HES3D-W190WT	White										2	12
—	3D	170-058-507	HES3D-W190DGR	Dark Grey										2	12

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E190

INSTRUCTION HEX KEY

HES Hinge + Esprit

Passed 300K open/close private cycle test

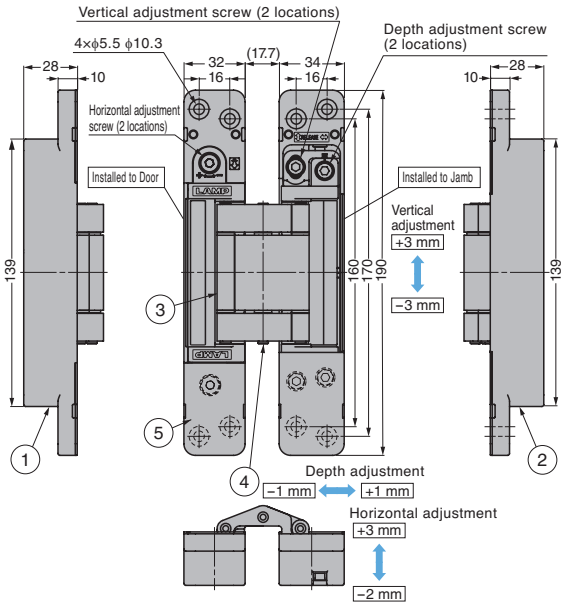
- Max. Door Weight: 100kg with 2 pcs, 125kg with 3 pcs.
- Small bore depth for compact assembly.
- 3D Adjustment Post Installation: Adjust vertically, horizontally, and in depth.
- For simplified door hanging, the hinge divides into two parts: one for the door-side and one for the jamb-side.
- Order-made colour available.

Selection Tool — Hinge Selection

Video Link

Video Link

Figure below shows the state with the upper screw covers removed.



[Remarks]

- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.

[Parts Included]

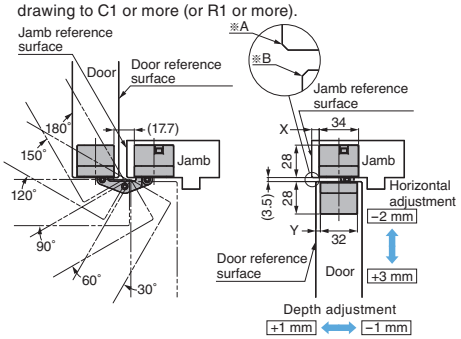
- Countersunk head tapping screw 5×30 (8 pcs/hinge) SUS
- Hex key 4

[Sold Separately]

- Installation template HES3D-E190-TMP 1
  ※ Can be reused, so door and jamb can be easily cut out with a router.

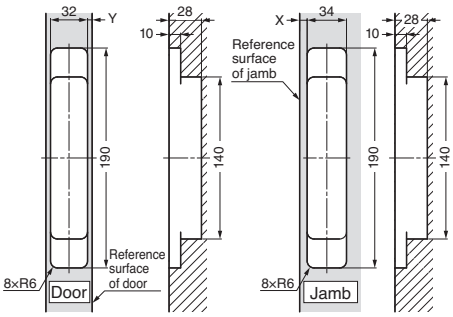
[Locus Chart]

Please process the part (corner of door/jamb) of ※ marked on the drawing to C1 or more (or R1 or more).



Y: Door machining margin	B: Door chamfering	X: Jamb machining margin	A: Jamb chamfering
4 and under	1	6.5 and under	1
	2	7	2
		8	3
5	3	6.5 and under	2
		7	3
		8	4

[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour					
			DC	DN	BL	NI	WT	DGR
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black	Nickel	White Paint	Dark Grey Plating
②	Base Frame							
③	Arm	Aluminium Alloy						
④	Shaft	Stainless Steel	Plain	Plain	Plain	Plain	Plain	Plain
⑤	Cover (2 pairs)	ABS	Silver	Champagne Gold	Black	Nickel	White Paint	Dark Grey Plating

RoHS	CAD	Item Code	Item Name	Colour	Door Specs				Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
					Width	Thickness	Weight kg/2pcs	Weight kg/3pcs				
G	3D	170-025-498	HES3D-E190DC	Silver	Max. 900	Min. 38	Max. 100	Max. 125	180°	1100	2	12
G	3D	170-025-499	HES3D-E190DN	Champagne Gold							2	12
G	3D	170-025-539	HES3D-E190BL	Black							2	12
G	3D	170-033-568	HES3D-E190NI	Nickel							2	12
—	3D	170-045-916	HES3D-E190WT	White							2	12
—	3D	170-058-506	HES3D-E190DGR	Dark Grey							2	12

Refer to 1 : P.167

For door height and width, please refer to the Reference Table (from the following pages) or Selection Tool.

CONCEALED HINGE LOAD VALUES

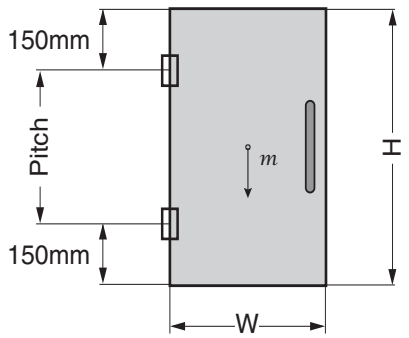
LAMP
HES3D-E190 : 2 pcs

Reference Table

Door Height (mm)	Door Width (mm) 750	800	850	900	950	1000	1050	1100	1150	1200	Hinge Pitch (mm)
2700	(kg) 100	100	100	100	100	100	100	100	100	100	2400
2650	100	100	100	100	100	100	100	100	100	100	2350
2600	100	100	100	100	100	100	100	100	100	100	2300
2550	100	100	100	100	100	100	100	100	100	90	2250
2500	100	100	100	100	100	100	100	100	100	90	2200
2450	100	100	100	100	100	100	100	100	90	90	2150
2400	**100**	**100**	**100**	**100**	100	100	100	100	90	90	2100
2350	**100**	**100**	**100**	**100**	100	100	100	90	90	80	2050
2300	**100**	**100**	**100**	**100**	100	100	100	90	90	80	2000
2250	**100**	**100**	**100**	**100**	100	100	90	90	80	80	1950
2200	**100**	**100**	**100**	**100**	100	100	90	90	80	80	1900
2150	**100**	**100**	**100**	**100**	100	90	90	80	80	80	1850
2100	**100**	**100**	**100**	**100**	100	90	80	80	80	70	1800
2050	**100**	**100**	**100**	**100**	90	90	80	80	70	70	1750
2000	**100**	**100**	**100**	**100**	90	80	80	80	70	70	1700
1950	**100**	**100**	**100**	90	90	80	80	70	70	70	1650
1900	**100**	**100**	90	90	80	80	70	70	70	60	1600
1850	**100**	**100**	90	90	80	80	70	70	70	60	1550
1800	**100**	90	90	80	80	70	70	70	60	60	1500
1750	**100**	90	80	80	70	70	70	60	60	60	1450

Indicates standard tested values present in our catalogue (passed 300,000 cycles in private cycle test).

Hinge position (for calculated load values):



The door's centre of gravity is assumed to be in the centre of the door. If a heavy handle is installed on the door, it will affect the calculation.

- The yellow section shows the HES3D-E190's standard specifications, as indicated in the Sugatsune catalogue.
- Values outside of the yellow section are for reference only, based on hinge resistance calculation. This does not guarantee optimal performance and Sugatsune recommends testing before final installation.
- Figures outside the standard specifications do not take durability or possible sagging of the door into account.
- In case of use outside the standard specifications, Sugatsune recommends leaving a larger gap between door and floor to allow for possible door sagging.
- Ensure that the door weight accounts for both the hinge and door closer specifications.
- The use of a door closer may significantly reduce the operational lifespan of the hinges and/or may cause them damage.

SUGATSUNE

CONCEALED HINGE LOAD VALUES

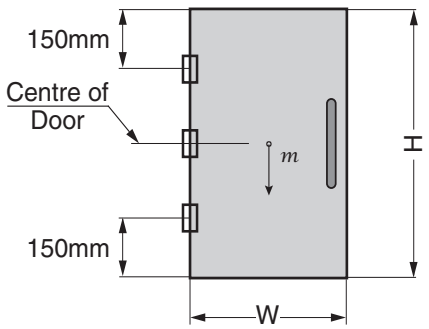
LAMP
HES3D-E190 : 3 pcs

Reference Table

Door Height (mm)	Door Width (mm) 750	800	850	900	950	1000	1050	1100	1150	1200	Hinge Pitch (mm)
2700	(kg) 125	125	125	125	125	125	125	125	125	125	2400
2650	125	125	125	125	125	125	125	125	125	125	2350
2600	125	125	125	125	125	125	125	125	125	125	2300
2550	125	125	125	125	125	125	125	125	125	120	2250
2500	125	125	125	125	125	125	125	125	125	120	2200
2450	125	125	125	125	125	125	125	125	120	110	2150
2400	**125**	**125**	**125**	**125**	125	125	125	125	110	110	2100
2350	**125**	**125**	**125**	**125**	125	125	125	120	110	110	2050
2300	**125**	**125**	**125**	**125**	125	125	125	110	110	100	2000
2250	**125**	**125**	**125**	**125**	125	125	120	110	110	100	1950
2200	**125**	**125**	**125**	**125**	125	125	110	110	100	100	1900
2150	**125**	**125**	**125**	**125**	125	120	110	110	100	100	1850
2100	**125**	**125**	**125**	**125**	125	110	110	100	100	90	1800
2050	**125**	**125**	**125**	**125**	120	110	100	100	90	90	1750
2000	**125**	**125**	**125**	**125**	110	110	100	100	90	90	1700
1950	**125**	**125**	**125**	120	110	100	100	90	90	90	1650
1900	**125**	**125**	120	110	110	100	90	90	90	80	1600
1850	**125**	**125**	110	110	100	100	90	90	80	80	1550
1800	**125**	120	110	100	100	90	90	80	80	80	1500
1750	**125**	110	110	100	100	90	90	80	80	70	1450

Indicates standard tested values present in our catalogue (passed 300,000 cycles in private cycle test).

Hinge position (for calculated load values):



The door's centre of gravity is assumed to be in the centre of the door. If a heavy handle is installed on the door, it will affect the calculation.

- The yellow section shows the HES3D-E190's standard specifications, as indicated in the Sugatsune catalogue.
- Values outside of the yellow section are for reference only, based on hinge resistance calculation. This does not guarantee optimal performance and Sugatsune recommends testing before final installation.
- Figures outside the standard specifications do not take durability or possible sagging of the door into account.
- In case of use outside the standard specifications, Sugatsune recommends leaving a larger gap between door and floor to allow for possible door sagging.
- Ensure that the door weight accounts for both the hinge and door closer specifications.
- The use of a door closer may significantly reduce the operational lifespan of the hinges and/or may cause them damage.

SUGATSUNE

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E160

INSTRUCTION HEX KEY

HES Hinge + Esprit®

Passed 300K open/close private cycle test

- Shallow drilling depth enables easy drilling of the door and jamb.
- 3D Adjustment Post Installation: Adjust vertically, horizontally, and in depth.
- For simplified door hanging, the hinge divides into two parts: one for the door-side and one for the jamb-side.
- The structure is designed to prevent the door from sagging.
- Screw covers can be purchased separately in the event that the original covers are broken or lost. Contact us for details.

[Remarks]

- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge. Verify all conditions before installation.

[Parts Included]

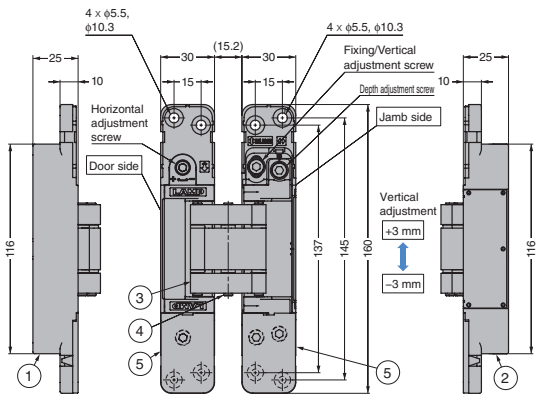
- Size 5 x 25 cross-recessed flat head tapping screws (stainless steel) (8 screws per hinge)
- Nominal size 4 hex bar spanner

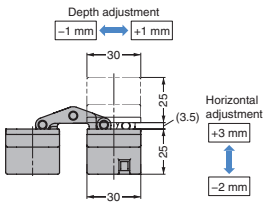
Selection Tool

Hinge Selection

Video Link

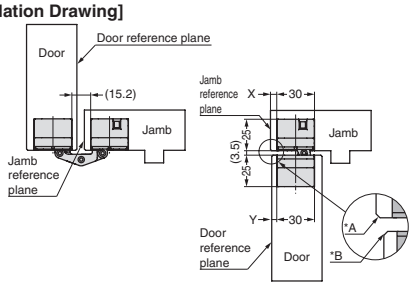
This figure shows this product with the upper screw cover removed.





No.	Part Name	Material	Finish/Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Baked Enamel Finish/ Black
②	Base Frame				
③	Arm	Aluminium Alloy			
④	Shaft	Stainless Steel	Plain	Plain	Plain
⑤	Screw Covers	ABS	Silver	Champagne Gold	Black

[Installation Drawing]

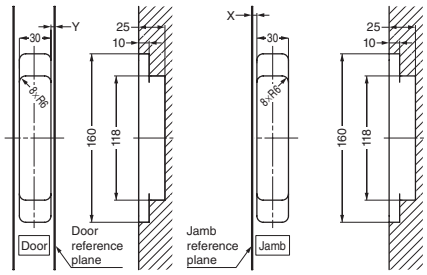


*The door and jamb need to be chamfered based on the machining margin.

Y: Door machining margin	B: Door chamfering	X: Jamb machining margin	A: Jamb chamfering
4 and under	1	5 and under	1
4 and under	2	6	2
4 and under	2	7	3
5	3	5 and under	3
5	3	6	4

(Reference values)

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Door Specs		Load Capacity				Opening Angle
					Width	Thickness	N/2pcs	kgf/2pcs	N/3pcs	kgf/3pcs	
G	3D	170-041-454	HES3D-E160DC	Silver	Max. 900	Min. 36	539	55	686	70	180°
G	3D	170-041-455	HES3D-E160DN	Champagne Gold							
G	3D	170-041-456	HES3D-E160BL	Black							

For door height and width, please refer to the Reference Table (from the following pages) or Selection Tool.

CONCEALED HINGE LOAD VALUES

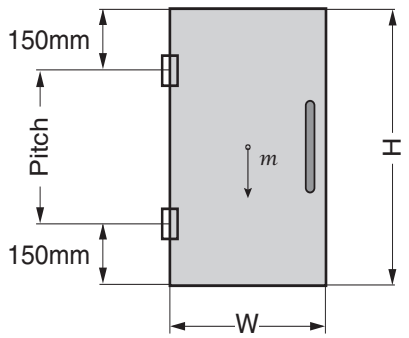
LAMP
HES3D-E160 : 2 pcs

Reference Table

Door Height (mm)	Door Width (mm) 750	800	850	900	950	1000	1050	1100	1150	1200	Hinge Pitch (mm)
2700	(kg) 55	55	55	55	55	55	55	55	55	55	2400
2650	55	55	55	55	55	55	55	55	55	55	2350
2600	55	55	55	55	55	55	55	55	55	55	2300
2550	55	55	55	55	55	55	55	55	55	50	2250
2500	55	55	55	55	55	55	55	55	55	50	2200
2450	55	55	55	55	55	55	55	55	50	50	2150
2400	**55**	**55**	**55**	**55**	55	55	55	55	50	50	2100
2350	**55**	**55**	**55**	**55**	55	55	55	50	50	40	2050
2300	**55**	**55**	**55**	**55**	55	55	55	50	50	40	2000
2250	**55**	**55**	**55**	**55**	55	55	50	50	40	40	1950
2200	**55**	**55**	**55**	**55**	55	55	50	50	40	40	1900
2150	**55**	**55**	**55**	**55**	55	50	50	40	40	40	1850
2100	**55**	**55**	**55**	**55**	55	50	40	40	40	40	1800
2050	**55**	**55**	**55**	**55**	50	50	40	40	40	40	1750
2000	**55**	**55**	**55**	**55**	50	40	40	40	40	40	1700
1950	**55**	**55**	**55**	50	50	40	40	40	40	40	1650
1900	**55**	**55**	50	50	40	40	40	40	40	30	1600
1850	**55**	**55**	50	50	40	40	40	40	30	30	1550
1800	**55**	50	50	40	40	40	40	30	30	30	1500
1750	**55**	50	40	40	40	40	40	30	30	30	1450

Indicates standard tested values present in our catalogue (passed 300,000 cycles in private cycle test).

Hinge position (for calculated load values):



The door's centre of gravity is assumed to be in the centre of the door. If a heavy handle is installed on the door, it will affect the calculation.

- The yellow section shows the HES3D-E160's standard specifications, as indicated in the Sugatsune catalogue.
- Values outside of the yellow section are for reference only, based on hinge resistance calculation. This does not guarantee optimal performance and Sugatsune recommends testing before final installation.
- Figures outside the standard specifications do not take durability or possible sagging of the door into account.
- In case of use outside the standard specifications, Sugatsune recommends leaving a larger gap between door and floor to allow for possible door sagging.
- Ensure that the door weight accounts for both the hinge and door closer specifications.
- The use of a door closer may significantly reduce the operational lifespan of the hinges and/or may cause them damage.

SUGATSUNE

CONCEALED HINGE LOAD VALUES

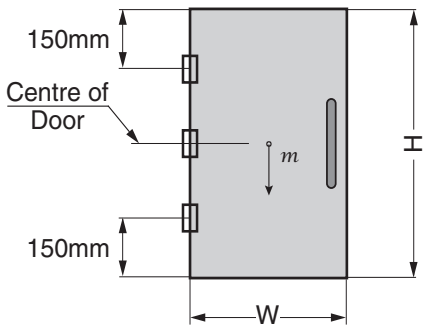
LAMP
HES3D-E160 : 3 pcs

Reference Table

Door Height (mm)	Door Width (mm)										Hinge Pitch (mm)
	750	800	850	900	950	1000	1050	1100	1150	1200	
2700	(kg) 70	70	70	70	70	70	70	70	70	70	2400
2650	70	70	70	70	70	70	70	70	70	70	2350
2600	70	70	70	70	70	70	70	70	70	70	2300
2550	70	70	70	70	70	70	70	70	70	60	2250
2500	70	70	70	70	70	70	70	70	70	60	2200
2450	70	70	70	70	70	70	70	70	60	60	2150
2400	70	70	70	70	70	70	70	70	60	60	2100
2350	70	70	70	70	70	70	70	60	60	60	2050
2300	70	70	70	70	70	70	70	60	60	60	2000
2250	70	70	70	70	70	70	60	60	60	50	1950
2200	70	70	70	70	70	70	60	60	60	50	1900
2150	70	70	70	70	70	60	60	60	50	50	1850
2100	70	70	70	70	70	60	60	60	50	50	1800
2050	70	70	70	70	60	60	60	50	50	50	1750
2000	70	70	70	70	60	60	50	50	50	50	1700
1950	70	70	70	60	60	60	50	50	50	50	1650
1900	70	70	60	60	60	50	50	50	50	40	1600
1850	70	70	60	60	60	50	50	50	40	40	1550
1800	70	60	60	60	50	50	50	50	40	40	1500
1750	70	60	60	60	50	50	50	40	40	40	1450

Indicates standard tested values present in our catalogue (passed 300,000 cycles in private cycle test).

Hinge position (for calculated load values):



The door's centre of gravity is assumed to be in the centre of the door. If a heavy handle is installed on the door, it will affect the calculation.

- The yellow section shows the HES3D-E160's standard specifications, as indicated in the Sugatsune catalogue.
- Values outside of the yellow section are for reference only, based on hinge resistance calculation. This does not guarantee optimal performance and Sugatsune recommends testing before final installation.
- Figures outside the standard specifications do not take durability or possible sagging of the door into account.
- In case of use outside the standard specifications, Sugatsune recommends leaving a larger gap between door and floor to allow for possible door sagging.
- Ensure that the door weight accounts for both the hinge and door closer specifications.
- The use of a door closer may significantly reduce the operational lifespan of the hinges and/or may cause them damage.

SUGATSUNE

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120

INSTRUCTION HEX KEY

HES Hinge + Esprit

Passed 300K open/close private cycle test

- Small bore depth for compact assembly.
- Black colour is newly launched.
- 3D Adjustment Post Installation: Adjust vertically, horizontally, and in depth.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Order-made colour available.

[Remarks]

- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.
- When used in combination with door restrictors, please use HES3D-120-A100 instead. (New product catalogue page: F22)

[Parts Included]

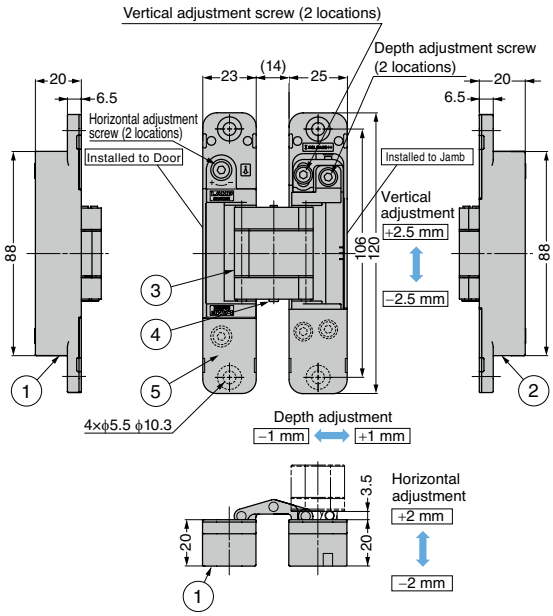
- Countersunk head tapping screw 5×20 (4 pcs/hinge) SUS
- Hex key 3
- Cutout template

[Sold Separately]

- Installation template HES3D-120-TMP 1

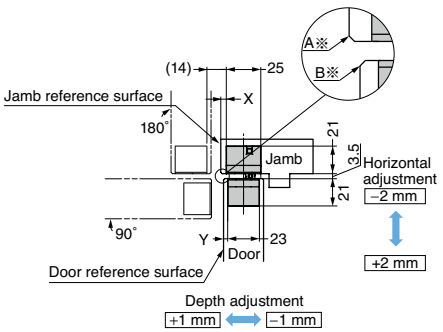
※Can be reused, so door and jamb can be easily cut out with a router.

Figure below shows the state with the upper screw covers removed.



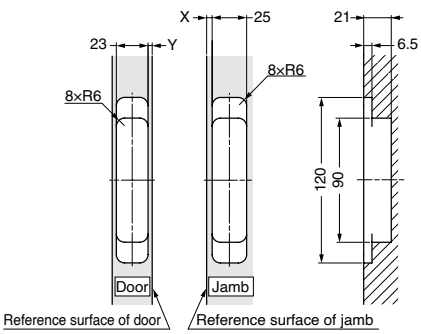
[Locus Chart]

Please process the part (corner of door/jamb) of ※ marked on the drawing to C1 or more (or R1 or more).



Y: Door machining margin	B: Door chamfering	X: Jamb machining margin	A: Jamb chamfering
4 and under	1	5 and under	1
	2	6	2
		7	
5	3	5 and under	3

[Cut Out Dimensions]



Selection Tool

Hinge Selection

Video Link

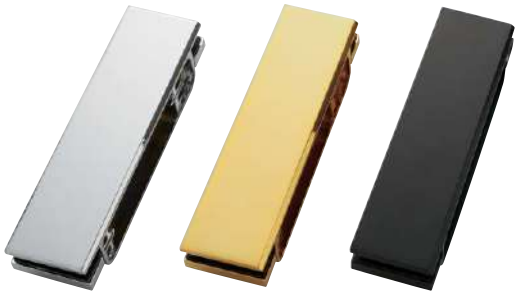
No.	Part Name	Material	Finish / Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Enamel Finish
②	Base Frame				
③	Arm				
④	Shaft	Stainless Steel	–	–	–
⑤	Cover (2 pairs)	ABS	Satin Chrome	Satin Nickel	Black

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-086	HES3D-120DC	Silver	Max. 900	Max. 2400	Min. 29	Max. 30	Max. 40	180°	410	2	24
G	3D	170-022-087	HES3D-120DN	Champagne Gold							415	2	24
G	3D	170-022-088	HES3D-120BL	Black							403	2	12

Refer to 1 :P.167

GLASS DOOR BRACKET HES3D-G120BKT

INSTRUCTION

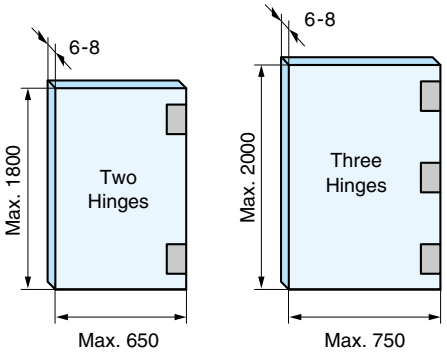


- Allows the HES3D-120 hinge 1 to be installed on glass doors.
- The silver and gold types come with screw covers in the same colours. For the black type, please use the ones included with HES3D-120BL.

[Parts Included]

- Hexagon scoket countersunk head screw M5 × 12
  Countersunk head screw M4 × 12
- Hex key (size: 3)

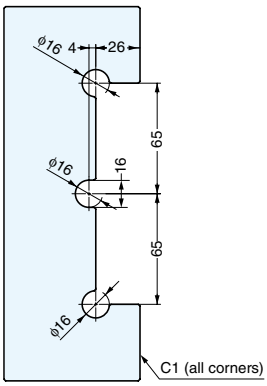
[Door Sizes and Number of Hinges]

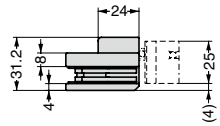


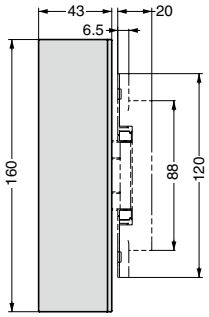
[Component Parts]

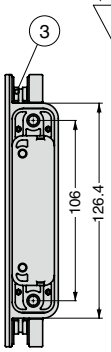
[Installation on Glass]

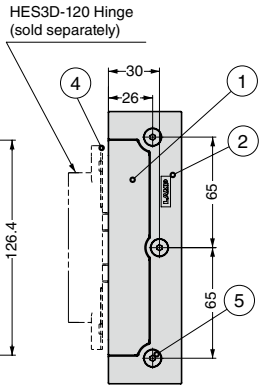
[Cut Out Dimensions]

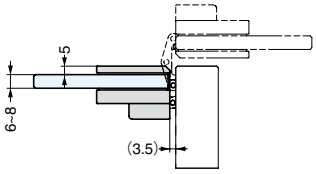












No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body	Zinc Alloy (ZDC)	Chrome	24K Gold Plating	Black Enamel
②	Back Plate				
③	Gasket	Chloroprene Rubber (CR)	–	–	–
④	Screw Cover	ABS	Chrome	24K Gold Plating	–
⑤	Hexagon Socket Countersunk Head Screw M5 x 14	Steel			Black Paint

RoHS	CAD	Item Code	Item Name	Colour	Glass Thickness	Box (pcs)	Carton (pcs)
G	3D	170-043-469	HES3D-G120BKT-CR	Silver	6-8	2	12
G	3D	170-043-470	HES3D-G120BKT-GP	Gold		2	12
G	3D	170-043-471	HES3D-G120BKT-BL	Black		2	12

Refer to 1: P.158

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120-A100 100˚ Opening

INSTRUCTION HEX KEY

HES Hinge + Esprit

Passed 300K open/close private cycle test

- Can limit opening angle when used in combination with door restrictors.
- The small bore depth (21 mm) allows for easy mortising of doors and jambs.
- 3D Adjustment Post Installation: Adjust vertically, horizontally, and in depth.
- For simplified door hanging, the hinge divides into two parts: one for the door-side and one for the jamb-side.
- Can temporarily be hung before fixing with screws.

[Remarks]

- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.
- Please use with door restrictors or door stoppers to prevent doors from opening over 100˚.

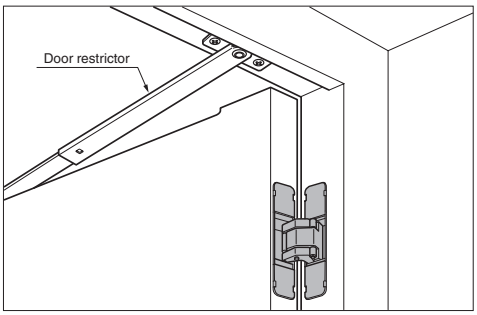
[Parts Included]

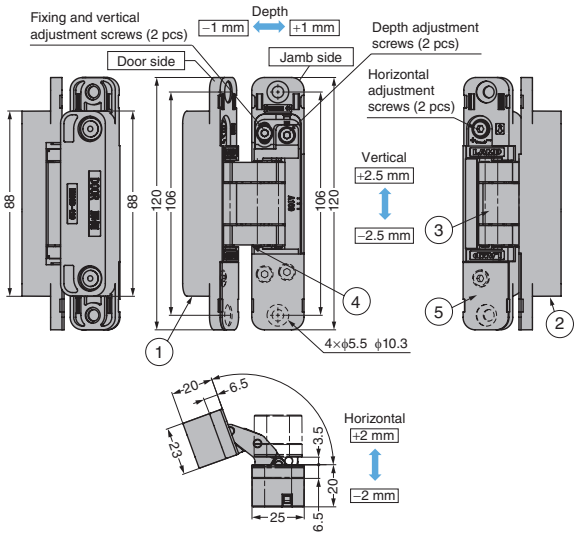
- Cross-recessed countersunk tapping screw 5×20 4 pcs (made of stainless steel)
- Hex key spanner 3

[Optional Parts]

- HES3D-120TMP, installation template 1
  (This reusable jig allows for easy mortising of doors and jambs using routers.)
- HES3D-120BKT, bracket for sheet metal 2

[Using with a Door Restrictor]

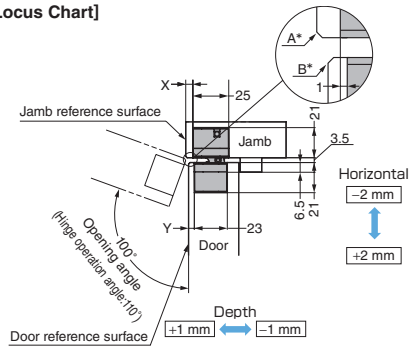




*The upper screw covers are removed in the drawing above.

No.	Part Name	Material	Finish/Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black
②	Base Frame				
③	Arm				
④	Shaft	Stainless Steel	–	–	–
⑤	Screw Cover (Door side: 2 pcs) (Jamb side: 2 pcs)	ABS	Satin Chrome	Satin Nickel	Black

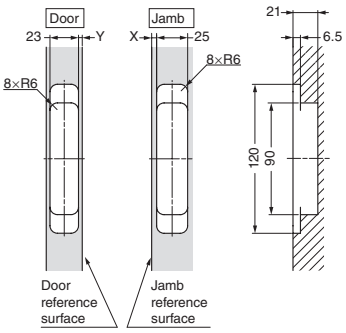
[Locus Chart]



Y : Door Clearance	B : Door Chamfering	X : Jamb Clearance	A : Jamb Chamfering
4	1	5	1
	2	6	2
		7	3
5	3	5	

The table above shows the clearance and chamfering required for the door to open properly.

[Cut Out Dimensions]



Selection Tool

Hinge Selection

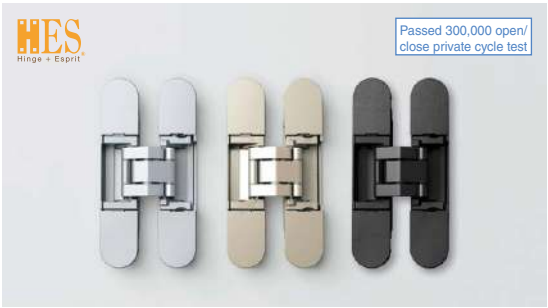
Video Link

RoHS	CAD	Item Code	Item Name	Finish	Door Specs			Load Capacity				Opening Angle	Box (pcs)	Carton (pcs)
					Width	Height	Thickness	N/2pcs	kgf/2pcs	N/3pcs	kgf/3pcs			
G	3D	170-044-569	HES3D-120-A100DC	Silver	Max. 900	Max. 2400	Min. 29	294	30	392	40	100˚	2	24
G	3D	170-044-570	HES3D-120-A100DN	Champagne Gold										
G	3D	170-044-571	HES3D-120-A100BL	Black										

Refer to 1 : P.167, 2 : P.166

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-90

INSTRUCTION



Selection Tool

Hinge Selection

Video Link

- Small HES series can be applied with Min. door thickness of 23mm.
- Small bore depth, easy to cut out the door and jamb.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Hinge can be split into the door side and the jamb side.
- Order-made colour available. For further details, please contact local representatives.

[Remarks]

- Can not be used with LAPCON DOOR DAMPER LDD 1 or LAPCON DOOR CLOSER LDC-N2.
- Can be used with DC-200 damper catch but can not be used with lid stays or other door damper.

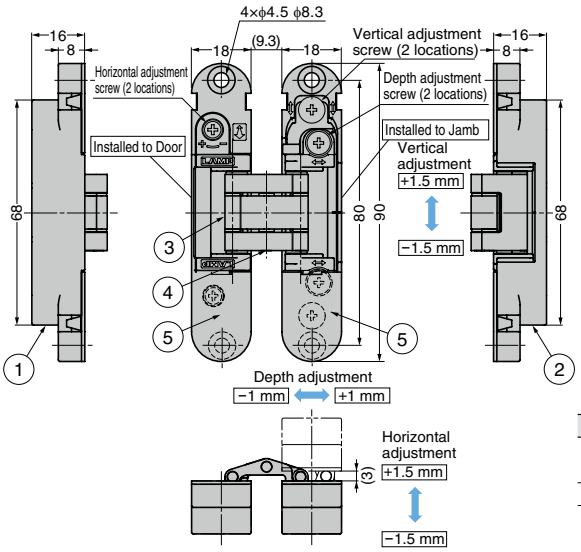
[Parts Included]

- Countersunk head tapping screw 4×20 (4 pcs/hinge) SUS
- Hex key 2

[Sold Separately]

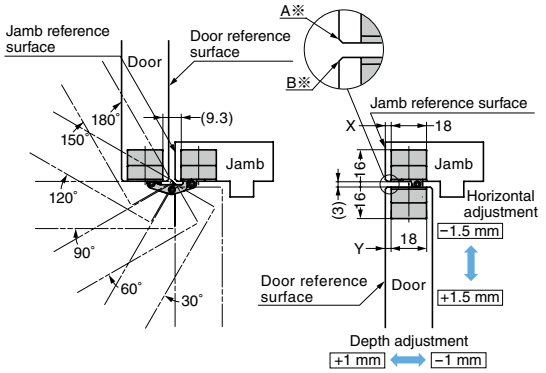
- Installation template HES3D-90-TMP
  ※Can be reused, so door and jamb can be easily cut out with a router.

Figure below shows the state with the upper screw covers removed.



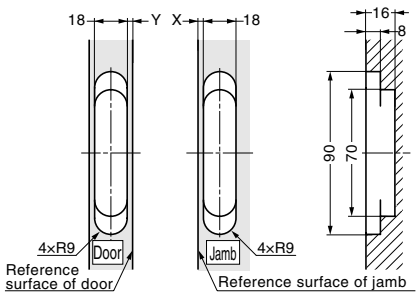
[Locus Chart]

Please process the part (corner of door/jamb) of ※ marked on the drawing to C1 or more (or R1 or more).



Y: Door machining margin	B: Door chamfering	X: Jamb machining margin	A: Jamb chamfering
3 and under	1	3 and under	1
	2	4	2
3.5		3.5	

[Cut Out Dimensions]



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Enamel Finish
②	Base Frame				
③	Arm				
④	Shaft	Stainless Steel	–	–	–
⑤	Cover (2 pairs)	ABS	Silver	Champagne Gold	Black

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-221	HES3D-90DC	Silver	Max. 600	Max. 1500	Min. 23	Max. 12	Max. 16	180°	195	2	48
G	3D	170-029-222	HES3D-90DN	Champagne Gold							195	2	48
G	3D	170-033-588	HES3D-90BL	Black							195	2	48

Refer to 1 : P.532, P.536

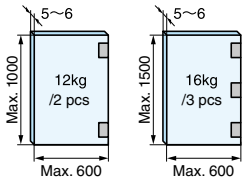
GLASS DOOR BRACKET HES3D-G90BKT

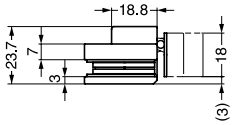
L=R INSTRUCTION

- Glass door bracket for HES3D-90 series.
- Screw covers match the bracket with the finish. For the black type, please use the covers which are included with the HES3D-90 hinge.

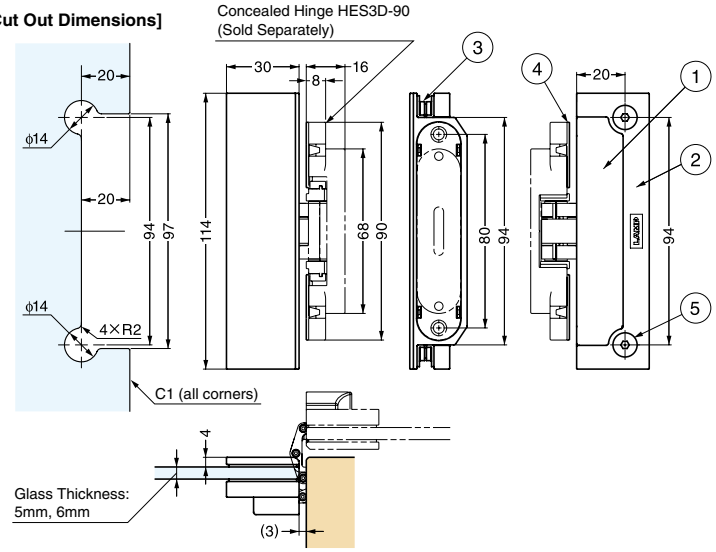
[Parts Included]
- Hexagon socket countersunk head screw M5 x 12
- Countersunk head screw M4×12
- Hex key size 3

[Door Dimensions and Number of Hinges]





[Cut Out Dimensions]

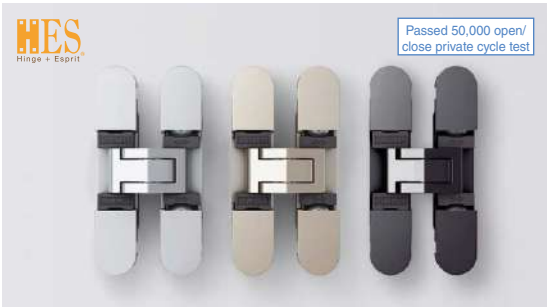


No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body	Zinc Alloy (ZDC)	Chrome	24K Gold plating	Black Enamel Finish
②	Back Plate				
③	Gasket	Chloroprene Rubber (CR)	–	–	–
④	Screw Cover	ABS	Chrome	24K Gold plating	–
⑤	Hexagon Socket Countersunk Head Screw M5 x 12	Steel			Black Enamel Finish

RoHS	CAD	Item Code	Item Name	Colour	Weight g	Box pcs	Carton pcs
G	3D	170-035-802	HES3D-G90BKT-CR	Silver	245	2	24
G	3D	170-035-803	HES3D-G90BKT-GP	Gold	245	2	24
G	3D	170-035-804	HES3D-G90BKT-BL	Black	245	2	24

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-70

INSTRUCTION



Selection Tool

Hinge Selection

Video Link

- Small HES series can be applied with Min. door thickness of 19mm.
- Small bore depth, easy to cut out the door and jamb.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Hinge can be split into the door side and the jamb side.

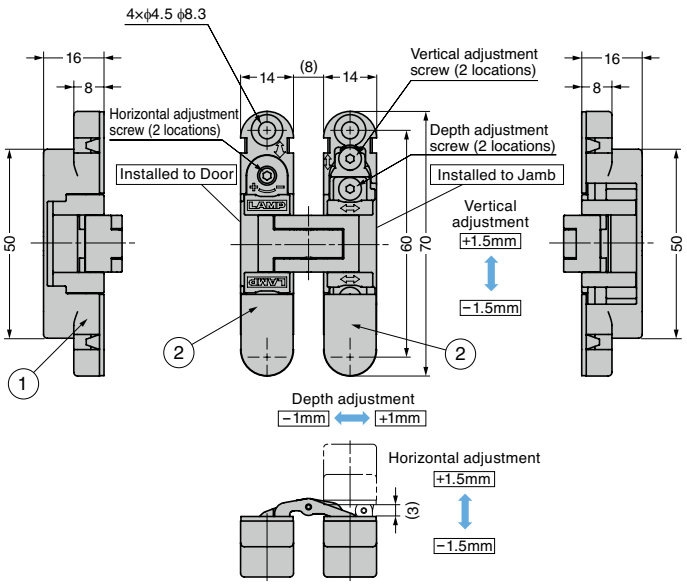
[Remarks]

- Can not be used with LAPCON DOOR DAMPER LDD 1 or LAPCON DOOR CLOSER LDC-N2.
- Use below opening angle 180˚ .
- Can not be used with lid stays or door damper.

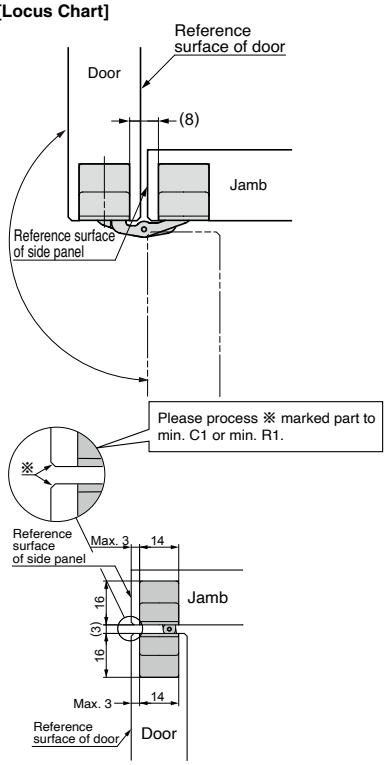
[Parts Included]

- Countersunk head tapping screw 4×20 (4 pcs/hinge) SUS
- Hex key 2

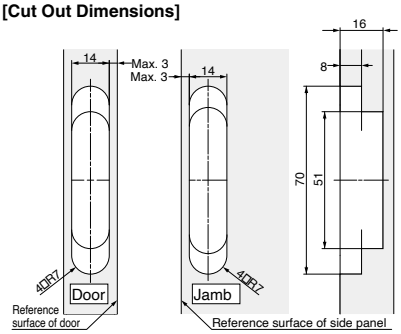
Figure below shows the state with the upper screw covers removed.



[Locus Chart]



[Cut Out Dimensions]



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Paint
②	Cover (2 pairs)	ABS	Silver Paint	Champagne Gold Paint	Black

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2pcs	Door Weight kg/3pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-035-441	HES3D-70DC	Silver	Max. 600	Max. 1200	Min. 19	Max. 9	Max. 12	180˚	95	2	48
G	3D	170-035-442	HES3D-70DN	Champagne Gold								2	48
G	3D	170-035-443	HES3D-70BL	Black								2	48

Refer to 1 : P.532, P.536

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-V135LGR

INSTRUCTION

HES Hinge + Esprit

Passed 300K open/close private cycle test

- Small bore depth for compact assembly.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the jamb side and has temporary door holding feature.

[Remarks]

- Read all remarks on handling thoroughly before use.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.

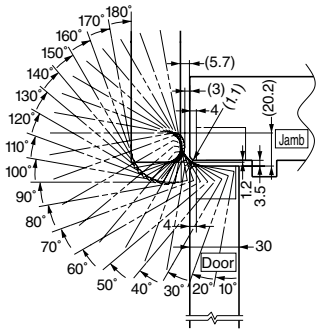
[Parts Included]

- Binding head tapping screw 5×15

[Sold Separately]

- Installation template HES3D-V135-TMP 1

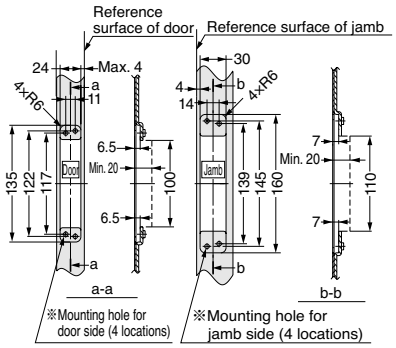
[Locus Chart]

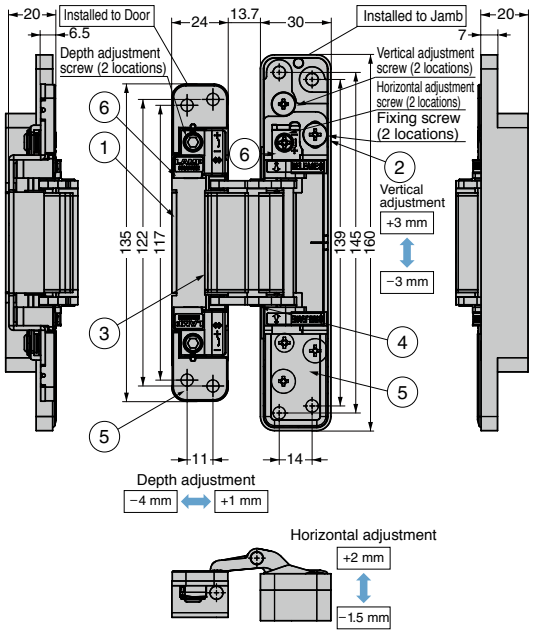


Selection Tool

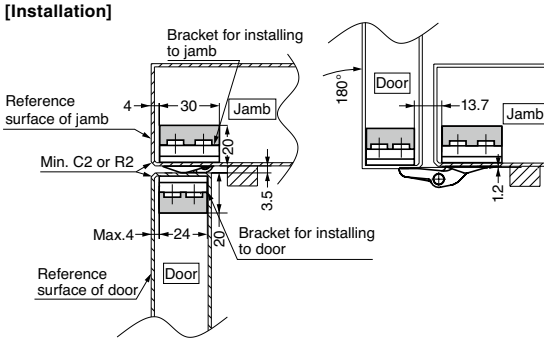
Hinge Selection

[Cut Out Dimensions]



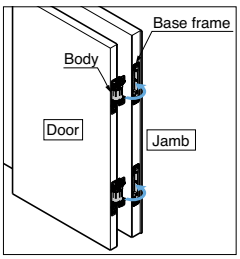


[Installation]



[Temporary Holding Feature]

1. Hinge can be split into the body and base frame. Install the body to the door and the base frame to the jamb.
2. Push the hinge body horizontally into the base frame in the direction of the arrow. The door is held to the jamb duo to the temporary holding feature.
3. Temporarily tighten the fixing screws and adjust the door position.
4. After adjustment, tighten the fixing screws completely to fix the hinge body.



No.	Part Name	Material	Finish / Colour
①	Body	Steel	Nickel
②	Base Frame	POM	Light Grey
③	Arm	Aluminium Alloy	Anodised Silver
④	Shaft	Steel	Nickel
⑤	Cover	POM	Light Grey
⑥	Adjustment Block	Zinc Alloy (ZDC)	Nickel

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Jamb Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-804	HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Min. 20	Max. 40	Max. 55	180°	400	2	24

Refer to 1 : P.167

SURFACE-MOUNT CONCEALED HINGE HES2S-140-A125 125° Opening

INSTRUCTION

HES Hinge + Esprit

Passed 300K open/close private cycle test

Black　Dark Grey　Light Grey

Closed　Back　With cover and plate removed

- Surface mount for door jamb enables easy installation.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.

[Remarks]

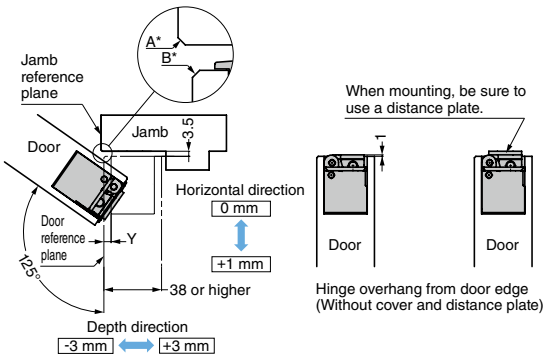
- Read all remarks on handling thoroughly before use.
- Use with a door stopper, etc. to prevent opening farther than 125°.

[Parts included]

- Countersunk head tapping screw 4×20 (8 pcs/hinge) Steel
- Door side drilling/jamb side mounting template

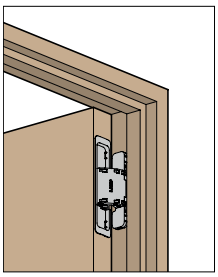
[Locus Chart]

Drill at the * mark in the figure (door/jamb corner).



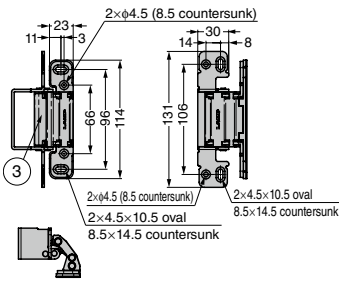
Y: Door Machining Margin	B: Door chamfering	A: Jamb chamfering
5	1 or higher	1 or higher

[Usage Image]

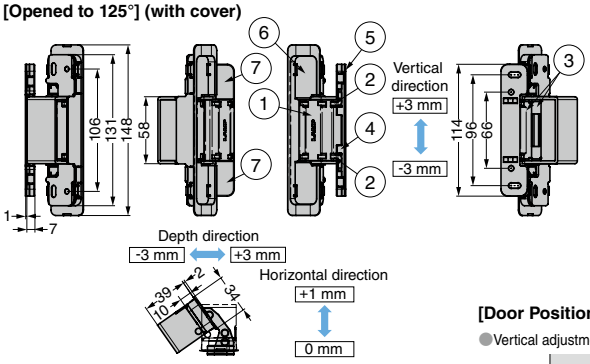


No mortising on the jamb side is required.

[Opened to 90°] (without cover)

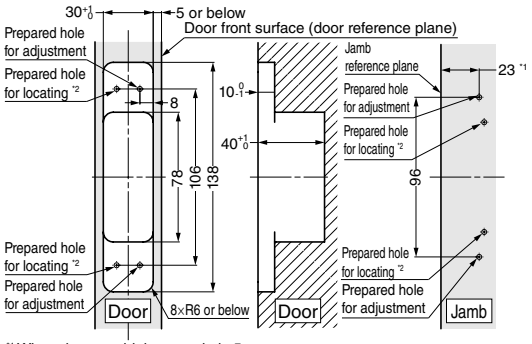


[Opened to 125°] (with cover)



[Cut Out Dimensions]

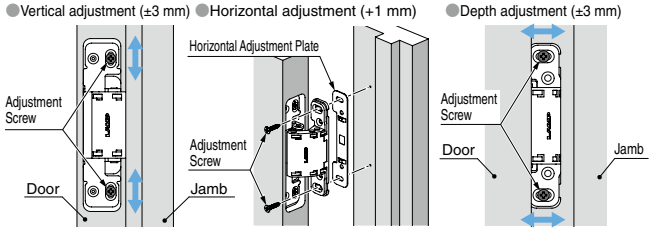
Drill pilot holes at the positions of the adjustment and locating screws.



*1 When door machining margin is 5 mm.
*2 The position of prepared hole for locating changes according to adjustment.

[Door Position Adjustment]

- Vertical adjustment (±3 mm)
- Horizontal adjustment (+1 mm)
- Depth adjustment (±3 mm)

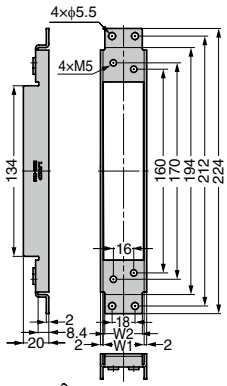


Adjust in the vertical/depth directions with oval hole screws and in the horizontal direction with the plate.

No.	Part Name	Material	Finish / Colour
①	Body	POM	Dark Grey, Light Grey, Black
②	Base Plate	SPCC	Nickel
③	Arm	Zinc Alloy (ZDC)	Chemical Treatment
④	Distance Plate	PBT	Dark Grey, Light Grey, Black
⑤	Horizontal Adjustment Plate	POM	
⑥	Socket Cover	ABS	
⑦	Base Plate Cover		

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kgf/2 pcs	Door Weight kgf/3 pcs	Opening Angle
●	●	170-053-252	HES2S-140-A125-DGR	Dark Grey	Max. 900	Max. 2700	Min. 38	50	65	125°
●	●	170-053-253	HES2S-140-A125-LGR	Light Grey						
–	●	170-050-758	HES2S-140-A125-BL	Black						

BRACKET FOR SHEET METAL HES3D-E190BKT For Hinge HES3D-E190



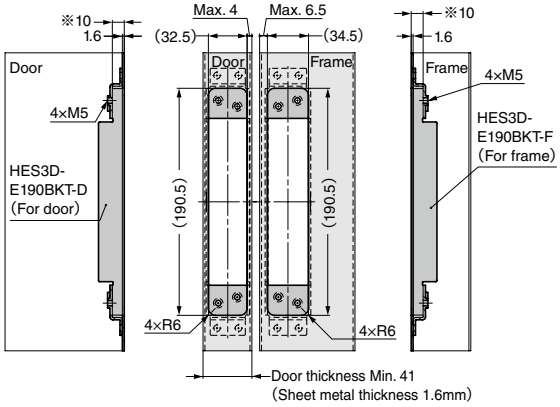
●Brackets for installing HES3D-E190 1 to steel door (SD) and steel frame.

[Remarks]

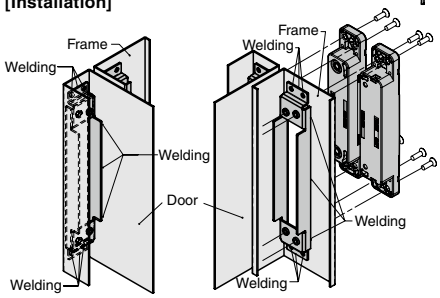
●When the sheet metal thickness of the installation side is 1.6 mm, screw cover surface becomes flush with cabinet surface. The surface may slightly protrude or retract, depending on the board thickness of the installation side.

●As a general-purpose bracket, additional processing may be required for the door and frame of the installation side and the bracket when installation.

[Cut Out Dimensions] ※Dimensions in case of 1.6 mm thick sheet metal.



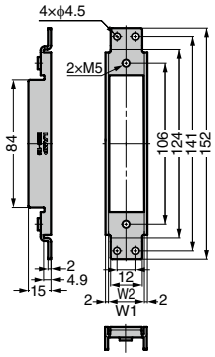
[Installation]



RoHS	CAD	Item Code	Item Name	Description	Material	Finish	W1	W2	Weight (g)	Box (pcs)
G	3D	170-032-741	HES3D-E190BKT-D	For Door	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	32.3	29.5	142	50
G	3D	170-032-742	HES3D-E190BKT-F	For Frame			34.3	31.5	144	50

Refer to 1 : P.156

BRACKET FOR SHEET METAL HES3D-120BKT For Hinge HES3D-120



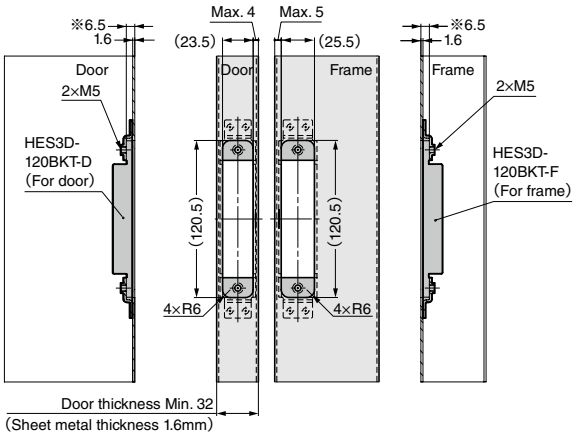
●Brackets for installing HES3D-120 1 to steel door (SD) and steel frame.

[Remarks]

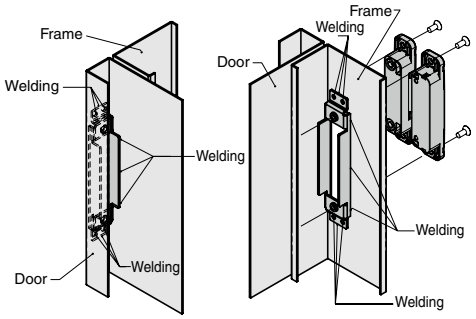
●When the sheet metal thickness of the installation side is 1.6 mm, screw cover surface becomes flush with cabinet surface.The surface may slightly protrude or retract, depending on the board thickness of the installation side.

●As a general-purpose bracket, additional processing may be required for the door and frame of the installation side and the bracket when installation.

[Cut Out Dimensions] ※Dimensions in case of 1.6 mm thick sheet metal.



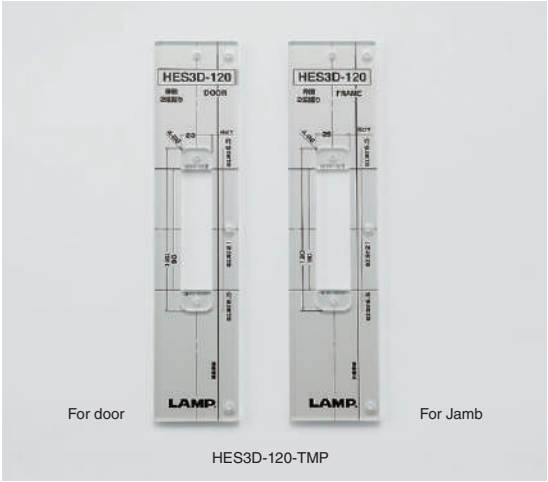
[Installation]



RoHS	CAD	Item Code	Item Name	Description	Material	Finish	W1	W2	Weight (g)	Box (pcs)
G	3D	170-032-739	HES3D-120BKT-D	For Door	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	23.3	20.5	66	50
G	3D	170-032-740	HES3D-120BKT-F	For Frame			25.3	22.5	68	50

Refer to 1 : P.158

INSTALLATION TEMPLATE HES3D-TMP For Hinge HES3D



HES3D-120-TMP

- Installation template for hinge HES3D included.
- Easy to cut out door and jamb with a router.
- Can be reused due to acrylic resin material.

[Remarks]

- The HES3D-120-TMP, HES3D-E190-TMP and HES3D-V135-TMP are sold in pairs, one for the door and one for the jamb.
- The HES3D-70-TMP, HES3D-90-TMP, HES3D-E160-TMP and HES3D-W190-TMP are sold singly, because they can be used on both the door and jamb.
- Recommended working tool is a straight bit with guide bearings of which guide diameter and bit diameter are the same.

[Parts Included]

- Parts for 2-step grooving (Each 2 pcs for door and for jamb)

Video Link

RoHS	CAD	Item Code	Item Name	Applicable Hinge (Page)	Material	Colour	Weight (g)
G	–	170-040-988	HES3D-70-TMP	HES3D-70 1	PMMA	Clear	–
G	–	170-029-034	HES3D-90-TMP	HES3D-90 2			–
G	–	170-024-569	HES3D-120-TMP	HES3D-120 3			186
G	–	170-056-825	HES3D-H120-TMP	HES3D-H120-36 4			
G	–	170-047-841	HES3D-E160-TMP	HES3D-E160 5			–
G	–	170-028-808	HES3D-E190-TMP	HES3D-E190 6			238
G	–	170-047-842	HES3D-W190-TMP	HES3D-W190 7			–
G	–	170-024-572	HES3D-V135-TMP	HES3D-V135LGR 8			220

Refer to 1 : P.163, 2 : P.161, 3 : P.158, 4 : New Products for no.400 Catalogue P.A36, 5 : P.157, 6 : P.156, 7 : P.154, 8 : P.164

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

STAINLESS STEEL CONCEALED HINGE HGS3D-S160SH With 3-way Adjustable Function

INSTRUCTION SUS HEX KEY

Passed 300K open/close private cycle test

With square screw cover (optional)

- Stainless steel construction with excellent corrosion resistance.
- With three-way adjustment function (vertical, horizontal, depth).
- The hinge can be split into two parts. (door and jamb sides)

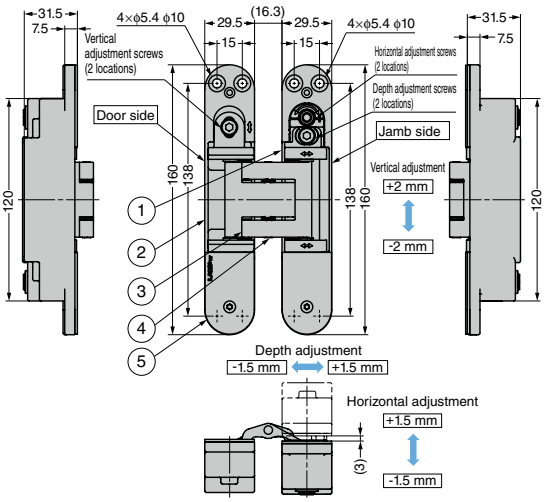
[Application]
- Residential doors, fire doors, facility doors, etc.

[Parts Included]
- Flat head tapping screw 5×40 (stainless steel)
- Hex key 4, 3, 2.5

[Optional Parts]
- Square screw cover: Order when cut out is square (steel fittings, etc.).

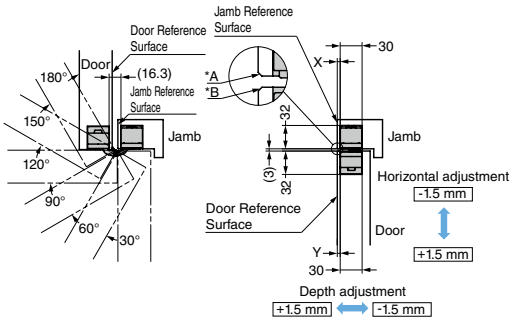
[Remarks]
- Be sure to read the "Cautions" 1.
- Please use the Selection Tool for HES Concealed Hinges to select a hinge.
- If noise is generated during use, apply lubricant (grease) as needed.

Figure shows top screw cover removed.



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Plain
②	Base frame		
③	Arm		
④	Rotating Shaft		
⑤	Screw Cover (round type)		Satin

[Locus Chart]

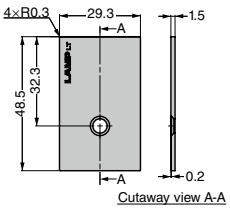


*The door and jamb must be chamfered in accordance with the machining margin, in order to open and close the door.

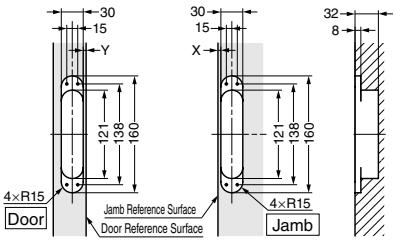
Y: Door machining margin	B: Door chamfering	X: Jamb machining margin	A: Jamb chamfering
4 or below	1	5 or below	1
	2	6	2
		7	3
5	3	5 or below	
		6	4

(Reference values)

[Square Screw Cover] Optional Parts



[Cut Out Dimensions]



Selection Tool

Hinge Selection

*When using the optional square screw cover, drill the first oval hole in both the door and the jamb as a square hole of width 30 × length 160 × depth 8.

[Body]

RoHS	CAD	Item Code	Item Name	Finish	Door Specs			Load Capacity				Opening Angle
					Width	Height	Thickness	N/2 pcs	kgf/2 pcs	N/3 pcs	kgf/3 pcs	
G	3D	170-050-961	HGS3D-S160SH	Satin	Max. 900	Max. 2400	Min. 36	784	80	981	100	180°

[Square Screw Cover] Optional Parts

Sold as a set (4 pcs).

RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish
G	3D	170-050-962	HGS3D-S160SH-SQPLATE	HGS3D-S160SH-SQCOVER	Stainless Steel (SUS304)	Satin

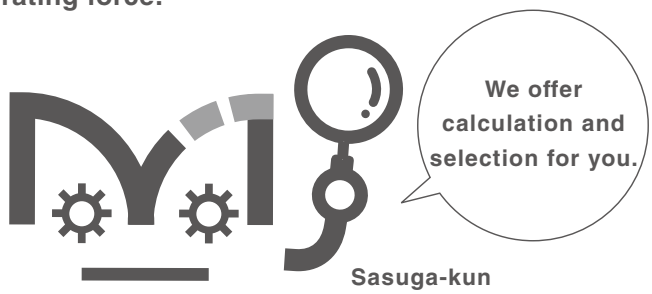
Refer to 1: P.43

Please contact your local agent or nearest Sugatsune subsidiary for detail and availability.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

A NEW STEP FOR HINGE TECHNOLOGY

OLYMPIA

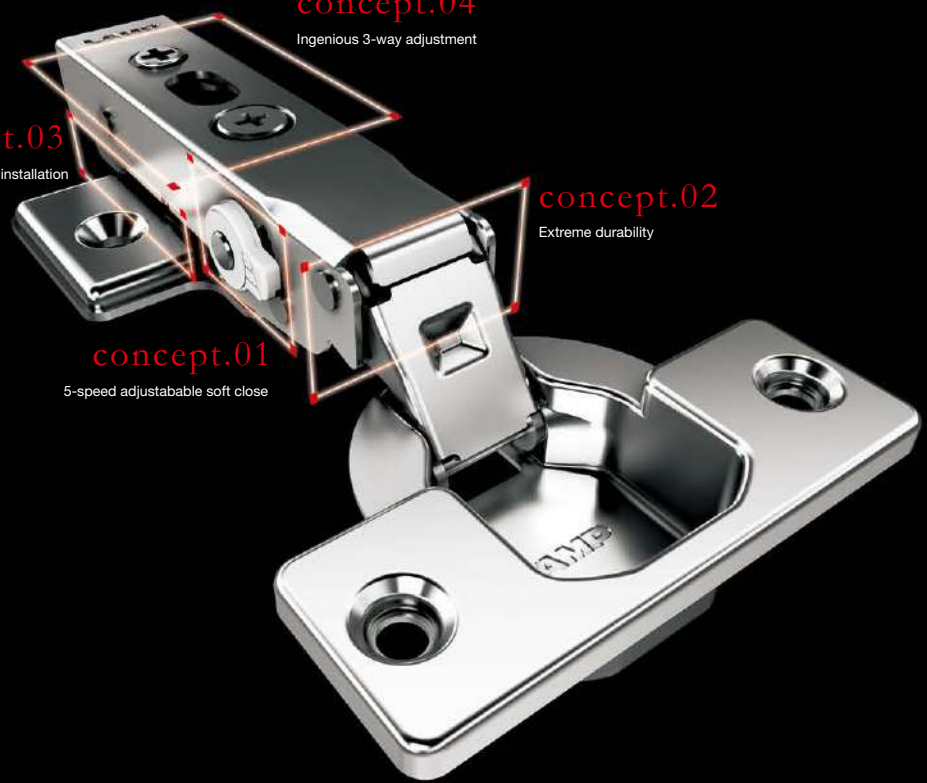
360 POWERED BY Lapcon

concept.04
Ingenious 3-way adjustment

concept.03
Easy, time-saving installation

concept.02
Extreme durability

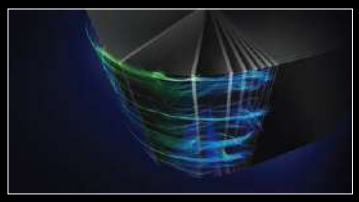
concept.01
5-speed adjustabable soft close



5-speed adjustable soft close.
The first Sugatsune concealed hinge ever built
with Lapcon technology.

Video Link

concept.01



5-speed adjustable soft close. The first Sugatsune concealed hinge ever built with Lapcon technology.

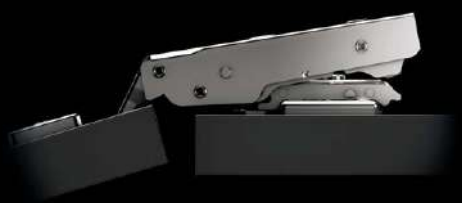
The first time Sugatsune's unique Lapcon technology has ever been used inside a concealed hinge. The innovative rotary damper is not only extremely compact, for sleek overall design, its force can also be adjusted in 5 steps for a perfect match regardless of the door size or weight.

concept.02

Successfully passed 200,000 cycles test.

For a piece of furniture to last a lifetime, the hinge must perform flawlessly the whole time. Despite official requirements by JIS (Japanese Standards) asking for only 40,000 cycles, the Olympia hinge has cleared 5 times as many to ensure that you will always be able to open and close your doors without worry.
(The H360 successfully passed 100,000 private cycle test)

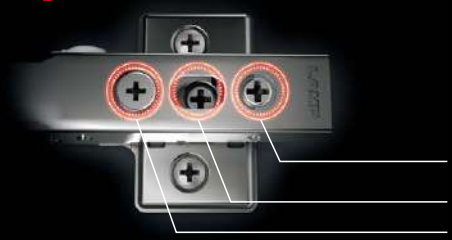
concept.03



Smooth assembly for a time-saving installation.

Using an original design of the Turn-Lock system, Olympia can be installed by simply pushing it from the top. This simplifies the installation compared to a traditional Front-First installation, especially in cases where multiple hinges are used.

concept.04



One screwdriver for a one-handed 3D adjustment.

Depth, vertical, horizontal adjustment screws are all located on top. This was made possible because of our original damper.

- Depth adjustment +1.5 mm, -2.5 mm (For standard doors, 360) / +1.7 mm, -2.8 mm (For thick doors, H360)
- Vertical adjustment ±2.5 mm
- Overlay (horizontal adjustment) +0 mm, -4 mm

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Thick doors(ϕ40) | 85°angle | Sprung-open | Glass door face plate are also available solutions.

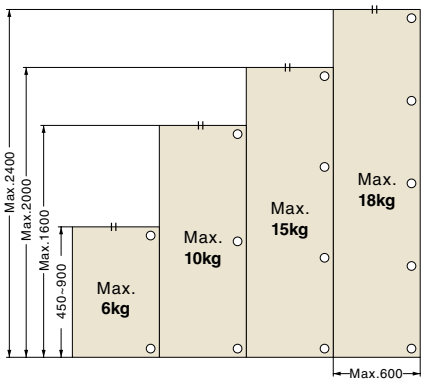
Application				Installation		Type		Item code	Item name	Page
Overlay	Thickness	Opening angle	Overlay range	Cup size	Cup depth	Damper	Catch			
Standard door ϕ35										
19mm	Wood door 15~20 Glass door 4~6	105°	15~19 *1	ϕ35	11	○		160-026-840	360-D26-19T	P.174
								160-026-836	360-26-19T	
							○	160-026-832	360-C26-19T	
								160-042-389	360- U26-19T (Sprung-open)	
		85°				○		160-034-889	360-D26-19T85	
								160-034-886	360-26-19T85	
							○	160-034-883	360-C26-19T85	
14mm		105°	10~14 *1			○		160-026-841	360-D26-14T	P.175
								160-026-837	360-26-14T	
							○	160-026-833	360-C26-14T	
								160-042-390	360-U26-14T (Sprung-open)	
		85°				○		160-034-890	360-D26-14T85	
								160-034-887	360-26-14T85	
							○	160-034-884	360-C26-14T85	
9mm		105°	5~9 *1			○		160-026-842	360-D26-9T	P.176
								160-026-838	360-26-9T	
							○	160-026-834	360-C26-9T	
								160-042-391	360-U26-9T (Sprung-open)	
		85°				○		160-034-891	360-D26-9T85	
								160-034-888	360-26-9T85	
							○	160-034-885	360-C26-9T85	
Inset		93°	Inset			○		160-026-843	360-D26-0T	P.177
								160-026-839	360-26-0T	
							○	160-026-835	360-C26-0T	
								160-042-392	360-U26-0T (Sprung-open)	
Thick door ϕ40										
26mm	Wood door 18~30	100°	22~26 *2	ϕ40	15	○		160-029-084	H360-D26-26T	P.178
								160-029-081	H360-26-26T	
							○	160-029-078	H360-C26-26T	
16mm			12~16 *2			○		160-029-085	H360-D26-16T	P.179
								160-029-082	H360-26-16T	
							○	160-029-079	H360-C26-16T	
Inset		93°	Inset			○		160-029-086	H360-D26-0T	P.180
								160-029-083	H360-26-0T	
							○	160-029-080	H360-C26-0T	

*1 For a Bore Distance (C) of 5mm. *2 For a Bore Distance (C) of 8mm.

Mounting plates P.181
Glass door face plate GH-360FP P.184
Installation jig 360-JIG P.185
85° Angle limiter 360-85 P.186
Countersunk head tapping screw 3.5×15NI *Sold in boxes of 400 pieces P.807

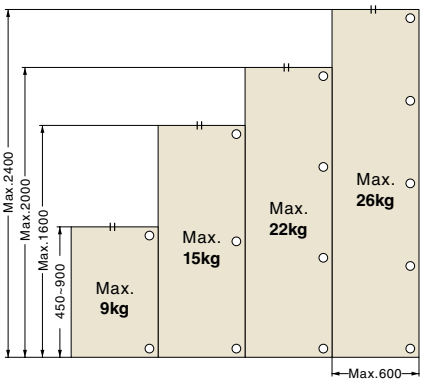
Door size and recommended hinge quantity

■Standard wood doors 360



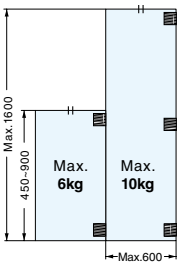
Door width	Door thickness	Material density	Installation pitch
Max. 600	Max. 20	Max. 0.6	Min. 300

■Thick wood doors H360



Door width	Door thickness	Material density	Installation pitch
Max. 600	Max. 30	Max. 0.6	Min. 300

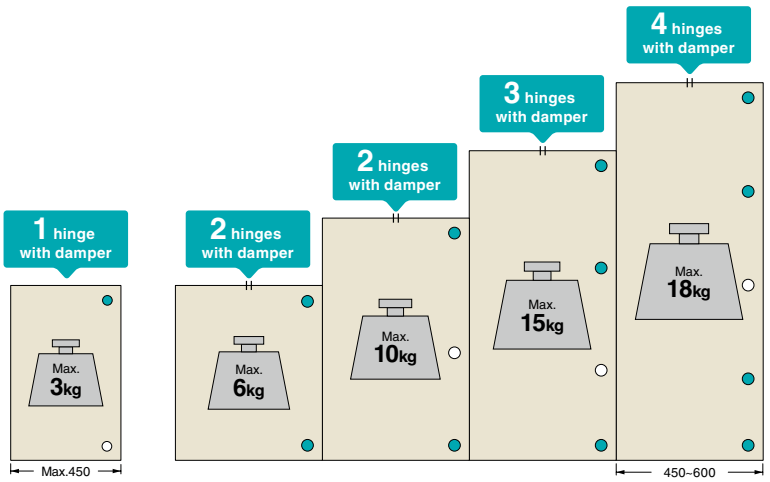
■Glass doors 360 and GH-360FP



Glass thickness	Installation pitch
4 - 6	Min. 300

Recommended type of damper per installation

● With damper
○ With catch



* The table on the right is for 360 hinge. Please contact us for the H360 hinge.
* Please refer to the table above for door sizes.

●Please set the door center of gravity as the door center. ●If you want to increase the door width, please increase the number of hinges accordingly. ●Attach the upper and lower hinges within 100 mm from the edge of the door. When using three or more, install at regular intervals. ●Figures shown in the tables above are only indicative. Please always test before finalizing your design. ●Please contact us for any other configuration. ●The dimensions of the door and the number of hinges mounted are the results of tests made according to the JIS standard. ●All screw holes should be used.

105° Opening | **19mm Overlay** | **Overlay 15~19mm (When Bore Distance is 5 mm)** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 19mm overlay / 105°opening

Lapcon

[Specifications]
- Overlay: 15~19 mm (when bore distance is 5 mm.)
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

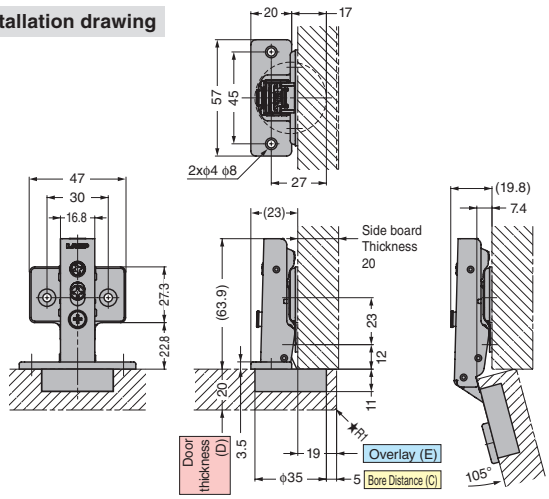
The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

Minor scratches may be visible but are not regarded as defects.

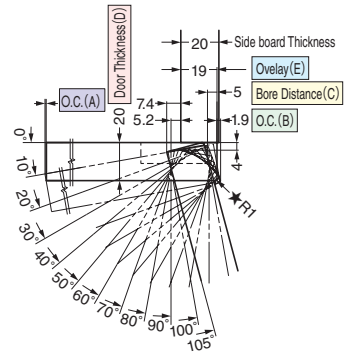
RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-026-840	360-D26-19T	105°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-026-836	360-26-19T		Without catch			200
G	3D	160-026-832	360-C26-19T		With catch			200
G	3D	160-042-389	360-U26-19T		Sprung-open			200
G	3D	160-059-816	360-D26-19T-BL		With damper (5 levels)		Black	200
G	3D	160-059-822	360-26-19T-BL		Without catch			200
G	3D	160-059-819	360-C26-19T-BL		With catch			200

▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, 19mm overlay and a 5mm bore distance.

Installation drawing



Locus chart S≒1/4



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0.6	0.6	0.6
16	0.8	0.8	0.8
17	1.0	1.0	1.0
18	1.4	1.3	1.3
19	1.7	1.6	1.6
20	2.0	2.0	1.9
21*	2.5	2.4	2.3
22*	2.9	2.8	2.7
	O.C. (B)		

• The table above shows O.C. (B) for ★R1 chamfering.
* Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Refer to 1: P.181~P.182

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	17	18	19

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

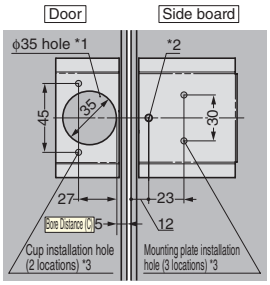
Opening Clearance (O.C.)

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

Cut out dimensions (steel doors)

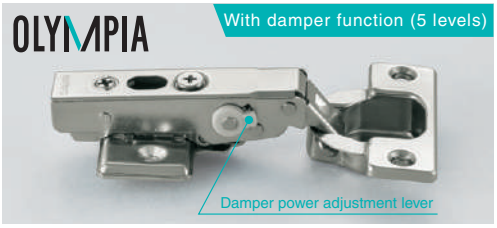


*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

85° Opening | **19mm Overlay** | **Overlay 15~19mm (When Bore Distance is 5 mm)** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 19mm overlay / 85°opening

Lapcon



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Overlay: 15~19 mm (when bore distance is 5 mm.)
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

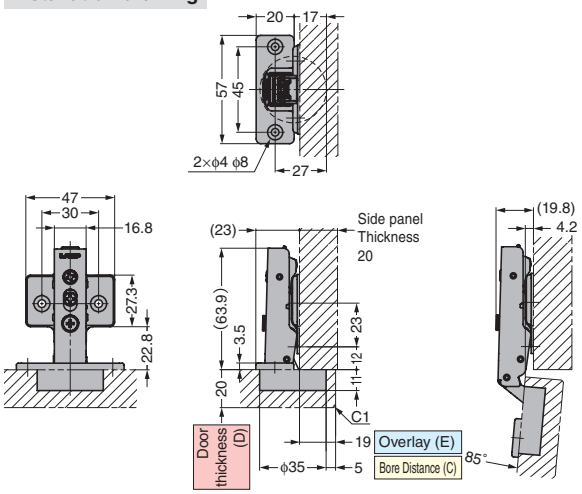
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

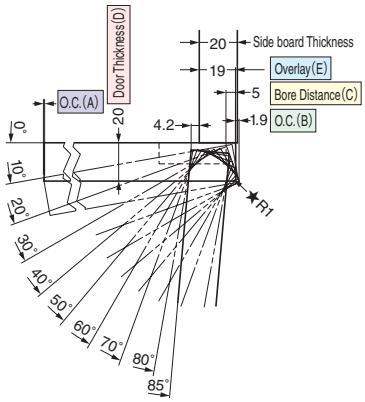
RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-034-889	360-D26-19T85	85°	With damper (5 levels)			100
G	3D	160-034-886	360-26-19T85		Without catch			200
G	3D	160-034-883	360-C26-19T85		With catch			200

▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, 19mm overlay and a 5mm bore distance.

Installation drawing



Locus chart S≒1/4



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Opening Clearance (O.C.)

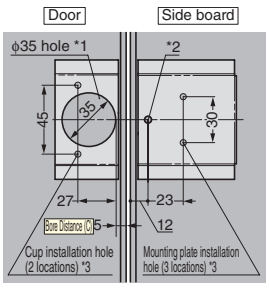
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.6
16	0.8	0.8	0.8
17	1.0	1.0	1.0
18	1.4	1.3	1.3
19	1.7	1.6	1.6
20	2.0	2.0	1.9
21*	2.5	2.4	2.3
22*	2.9	2.8	2.7
	O.C. (B)		

- The table above shows O.C. (B) for ★R1 chamfering.
- * Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	17	18	19

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Refer to 1: P.181~P.182

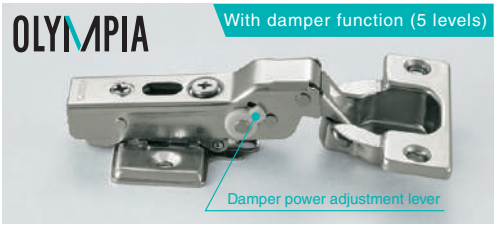
Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

105°, 85° Opening | **14mm Overlay** | **Overlay 10~14mm (When Bore Distance is 5 mm)** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 14mm overlay / 105°opening, 85°opening

Lapcon



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Overlay: 10~14 mm (when bore distance is 5 mm.)
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

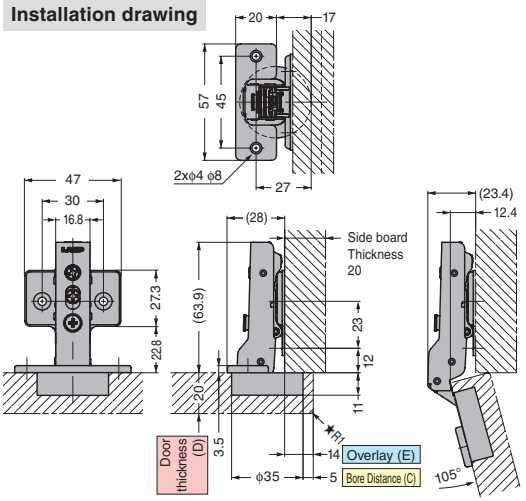
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

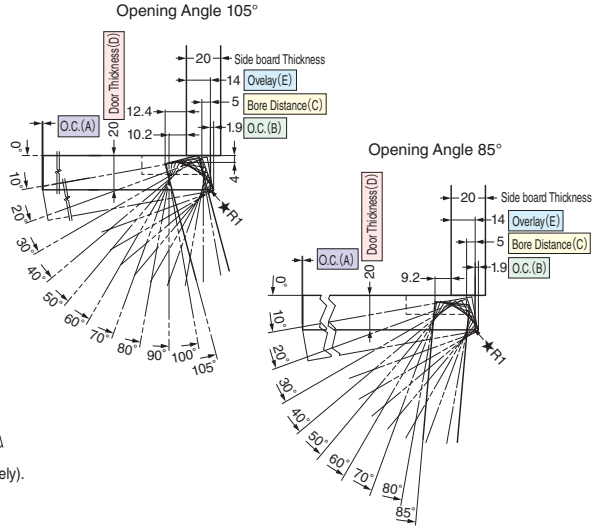
RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-026-841	360-D26-14T	105°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-026-837	360-26-14T		Without catch			200
G	3D	160-026-833	360-C26-14T		With catch			200
G	3D	160-042-390	360-U26-14T		Sprung-open			200
G	3D	160-034-890	360-D26-14T85	85°	With damper (5 levels)			100
G	3D	160-034-887	360-26-14T85		Without catch			200
G	3D	160-034-884	360-C26-14T85		With catch			200

▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, 14mm overlay and a 5mm bore distance.

Installation drawing



Locus chart S≒1/4



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Opening Clearance (O.C.)

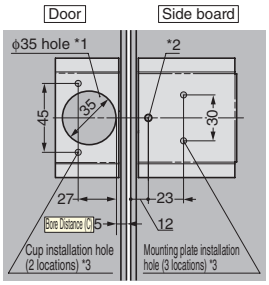
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.6
16	0.8	0.8	0.8
17	1.0	1.0	1.0
18	1.4	1.3	1.3
19	1.7	1.6	1.6
20	2.0	2.0	1.9
21*	2.5	2.4	2.3
22*	2.9	2.8	2.7
	O.C. (B)		

• The table above shows O.C. (B) for ★R1 chamfering.
* Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	12	13	14

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Refer to 1: P.181~P.182

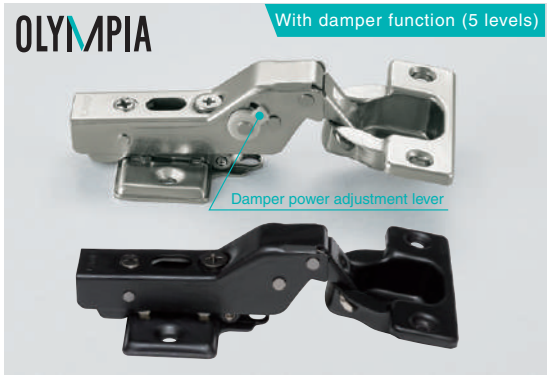
Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

105° Opening | **9mm Overlay** | **Overlay 5~9mm (When Bore Distance is 5 mm)** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 9mm overlay / 105°opening

Lapcon



[Specifications]
- Overlay: 5~9 mm (when bore distance is 5 mm.)
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

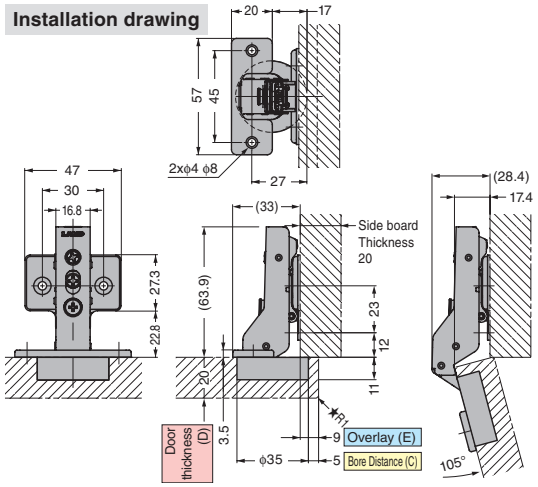
The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

Minor scratches may be visible but are not regarded as defects.

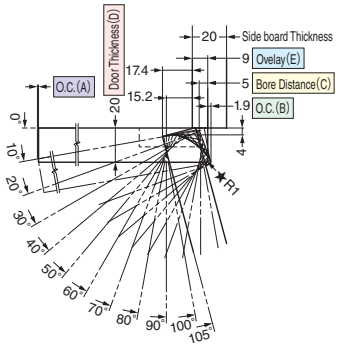
RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-026-842	360-D26-9T	105°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-026-838	360-26-9T		Without catch			200
G	3D	160-026-834	360-C26-9T		With catch			200
G	3D	160-042-391	360-U26-9T		Sprung-open			200
G	3D	160-059-817	360-D26-9T-BL		With damper (5 levels)		Black	200
G	3D	160-059-823	360-26-9T-BL		Without catch			200
G	3D	160-059-820	360-C26-9T-BL		With catch			200

▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, 9mm overlay and a 5mm bore distance.

Installation drawing



Locus chart S≒1/4



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0.6	0.6	0.6
16	0.8	0.8	0.8
17	1.0	1.0	1.0
18	1.4	1.3	1.3
19	1.7	1.6	1.6
20	2.0	2.0	1.9
21*	2.5	2.4	2.3
22*	2.9	2.8	2.7
	O.C. (B)		

- The table above shows O.C. (B) for ★R1 chamfering.
- * Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	7	8	9

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

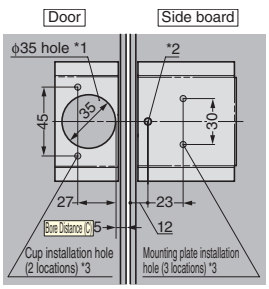
Opening Clearance (O.C.)

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

Cut out dimensions (steel doors)



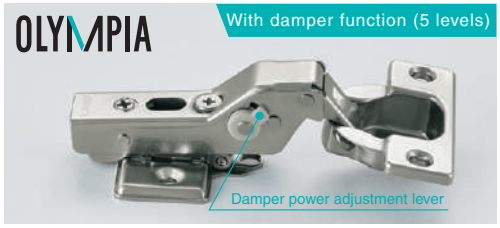
*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Refer to 1: P.181~P.182

85° Opening | **9mm Overlay** | **Overlay 5~9mm (When Bore Distance is 5 mm)** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 9mm overlay / 85°opening

Lapcon



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Overlay: 5~9 mm (when bore distance is 5 mm.)
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

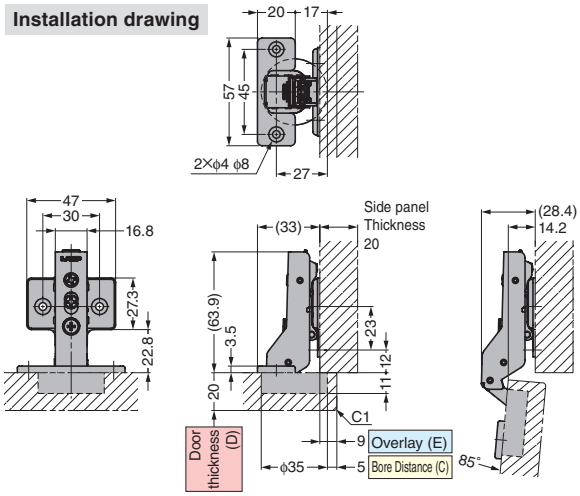
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-034-891	360-D26-9T85	85°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-034-888	360-26-9T85		Without catch			200
G	3D	160-034-885	360-C26-9T85		With catch			200

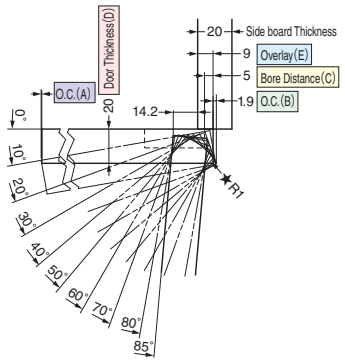
▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, 9mm overlay and a 5mm bore distance.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart S≒1/4



Opening Clearance (O.C.)

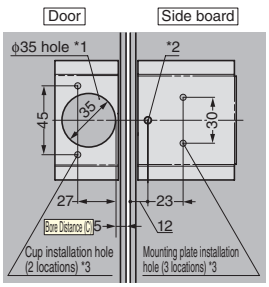
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.6
16	0.8	0.8	0.8
17	1.0	1.0	1.0
18	1.4	1.3	1.3
19	1.7	1.6	1.6
20	2.0	2.0	1.9
21*	2.5	2.4	2.3
22*	2.9	2.8	2.7
	O.C. (B)		

• The table above shows O.C. (B) for ★R1 chamfering.
* Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	7	8	9

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Refer to 1: P.181~P.182

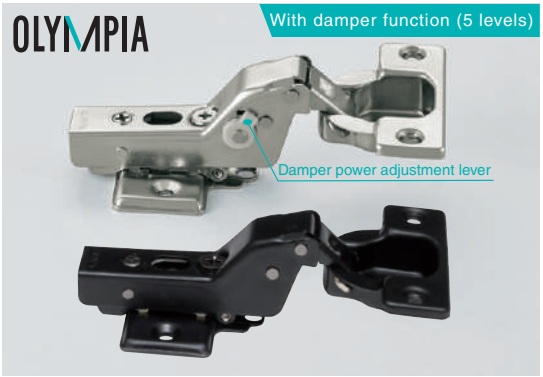
Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

93° Opening | **Inset** | **Cup Dia ϕ35 Bore Depth 11mm Recommended Door Thickness 15~20mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE 360 Inset / 93°opening

Lapcon



[Specifications]
- Cup size: ϕ35 / Bore Depth: 11 mm / Door Thickness: 15~20 mm
- 3D adjustment: Depth: +1.5, -2.5 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

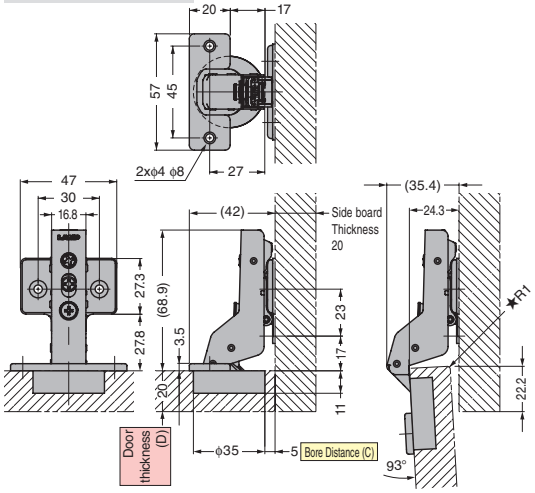
The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

Minor scratches may be visible but are not regarded as defects.

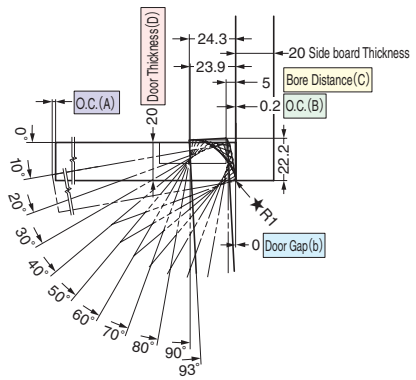
RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-026-843	360-D26-0T	93°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-026-839	360-26-0T		Without catch			200
G	3D	160-026-835	360-C26-0T		With catch			200
G	3D	160-042-392	360-U26-0T		Sprung-open			200
G	3D	160-059-818	360-D26-0T-BL		With damper (5 levels)		Black	200
G	3D	160-059-824	360-26-0T-BL		Without catch			200
G	3D	160-059-821	360-C26-0T-BL		With catch			200

▶ The installation drawing and locus chart shown are for a 20 mm thick door and side board, a 5mm bore distance and inset installation.

Installation drawing



Locus chart S≒1/4



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0	0	0
16	0	0	0
17	0	0	0
18	0.1	0	0
19	0.1	0.1	0.1
20	0.3	0.3	0.3
21*	0.6	0.5	0.4
22*	1.5	1	0.7
	O.C. (B)		

• The table above shows O.C. (B) for ★R1 chamfering.
* Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and Door Gap (b) relationship

Bore Distance (C)	3	4	5
Door Gap (b)	2	1	0

Door Gap (b) adjustment (+4mm) by turning the overlay adjustment screw. Please check required O.C. (B) at the table below.

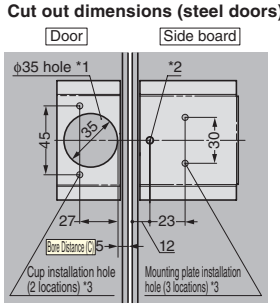
Opening Clearance (O.C.)

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.44	0.32	0.25	0.21

Cut out dimensions (steel doors)



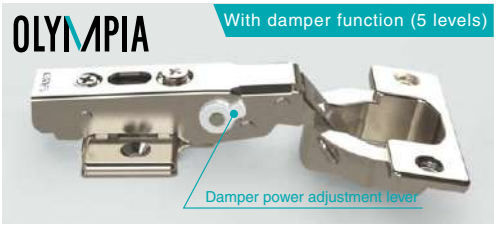
*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Refer to 1: P.181~P.182

105°, 85° Opening | **26mm Overlay** | **Overlay 22~26mm (When Bore Distance is 8 mm)** | **Cup Dia ϕ40 Bore Depth 15mm Recommended Door Thickness 18~30mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE H360 Thick Doors / 26mm overlay / 100°opening

Lapcon



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Overlay: 22~26 mm (when bore distance is 8 mm.)
- Cup size: ϕ40 / Bore Depth: 15 mm / Door Thickness: 18~30 mm
- 3D adjustment: Depth: +1.7, -2.8 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

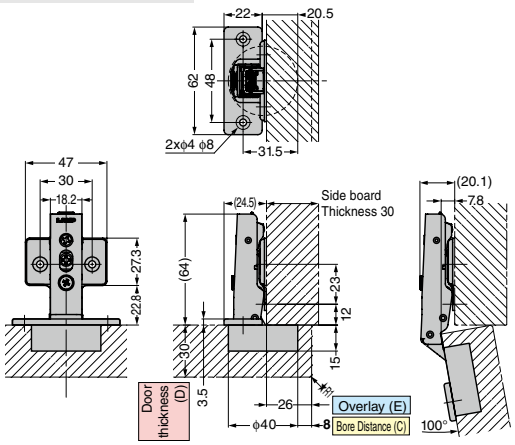
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-029-084	H360-D26-26T	100°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-029-081	H360-26-26T		Without catch			100
G	3D	160-029-078	H360-C26-26T		With catch			100

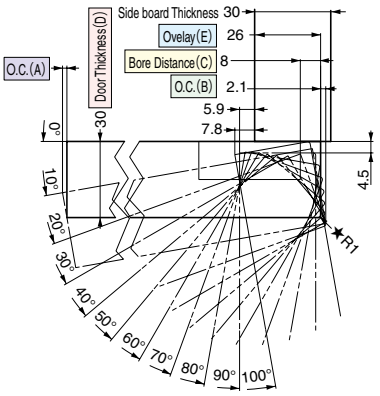
▶ The installation drawing and locus chart shown are for a 30 mm thick door and side board, 26mm overlay and a 8mm bore distance.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart



Opening Clearance (O.C.)

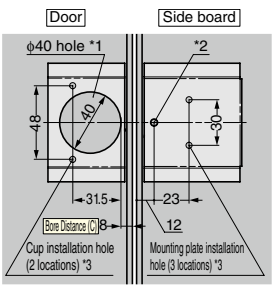
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)					
	3	4	5	6	7	8
18	0.1	0.1	0.1	0.1	0.1	0.1
20	0.3	0.3	0.3	0.3	0.3	0.3
22	0.5	0.5	0.5	0.5	0.5	0.5
24	0.8	0.8	0.8	0.8	0.8	0.8
26	1.3	1.2	1.2	1.2	1.1	1.1
28	3.6	2.6	1.6	1.6	1.6	1.5
30	6.0	5.0	4.0	3.0	2.1	2.1
32*	8.4	7.4	6.4	5.4	4.4	3.4
34*	10.8	9.8	8.8	7.8	6.8	5.8
	O.C. (B)					

• The table above shows O.C. (B) for ★R1 chamfering.
* Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	21	22	23	24	25	26

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 30mm thick door)

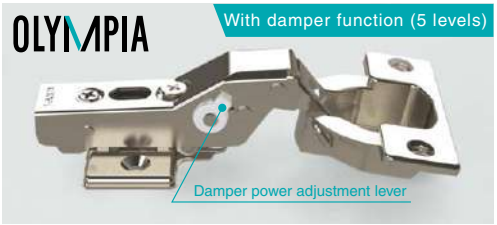
Door Width	300	400	500	600
O.C. (A)	0.35	0.25	0.19	0.16

Refer to 1: P.181~P.182

105°, 85° Opening | **16mm Overlay** | Overlay 12~16mm (When Bore Distance is 8 mm) | Cup Dia ϕ40 Bore Depth 15mm Recommended Door Thickness 18~30mm | Mounting Plate 1 OLYMPIA Series

CONCEALED HINGE H360 Thick Doors / 16mm overlay / 100°opening

Lapcon



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Overlay: 12~16 mm (when bore distance is 8 mm.)
- Cup size: ϕ40 / Bore Depth: 15 mm / Door Thickness: 18~30 mm
- 3D adjustment: Depth: +1.7, -2.8 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

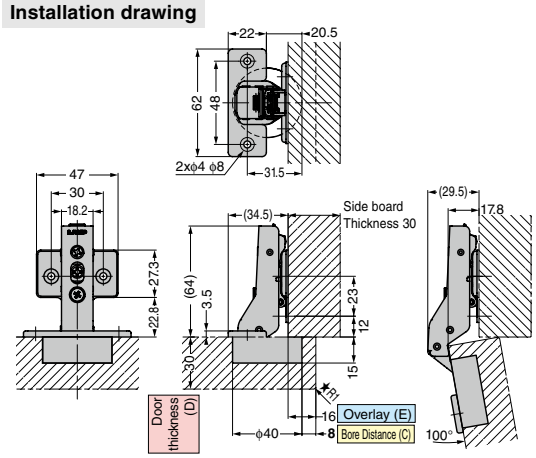
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-029-085	H360-D26-16T	100°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-029-082	H360-26-16T		Without catch			100
G	3D	160-029-079	H360-C26-16T		With catch			100

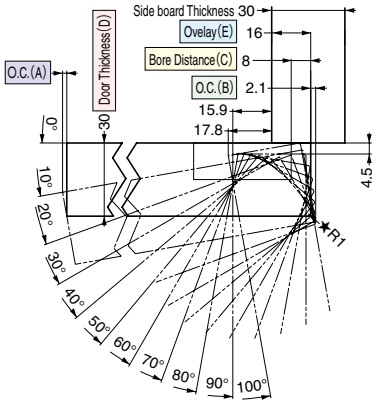
The installation drawing and locus chart shown are for a 30 mm thick door and side board, 16mm overlay and a 8mm bore distance.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart



Opening Clearance (O.C.)

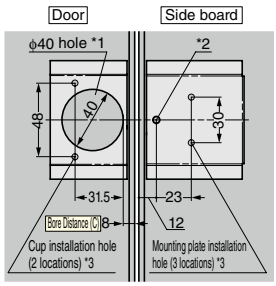
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)					
	3	4	5	6	7	8
18	0.1	0.1	0.1	0.1	0.1	0.1
20	0.3	0.3	0.3	0.3	0.3	0.3
22	0.5	0.5	0.5	0.5	0.5	0.5
24	0.8	0.8	0.8	0.8	0.8	0.8
26	1.3	1.2	1.2	1.2	1.1	1.1
28	3.6	2.6	1.6	1.6	1.6	1.5
30	6.0	5.0	4.0	3.0	2.1	2.1
32*	8.4	7.4	6.4	5.4	4.4	3.4
34*	10.8	9.8	8.8	7.8	6.8	5.8
	O.C. (B)					

- The table above shows O.C. (B) for ★R1 chamfering.
- * Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	11	12	13	14	15	16

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

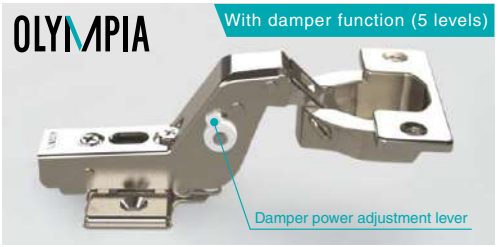
Refer to 1: P.181~P.182

Opening clearance (A) and door width relationship (for 30mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.35	0.25	0.19	0.16

93° Opening | **Inset** | **Cup Dia ϕ40 Bore Depth 15mm Recommended Door Thickness 18~30mm** | **Mounting Plate 1 OLYMPIA Series**

CONCEALED HINGE H360 Thick Doors / Inset / 93°opening



The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

[Specifications]
- Cup size: ϕ40 / Bore Depth: 15 mm / Door Thickness: 18~30 mm
- 3D adjustment: Depth: +1.7, -2.8 mm, Vertical: ±2.5 mm, Overlay: +0, -4 mm

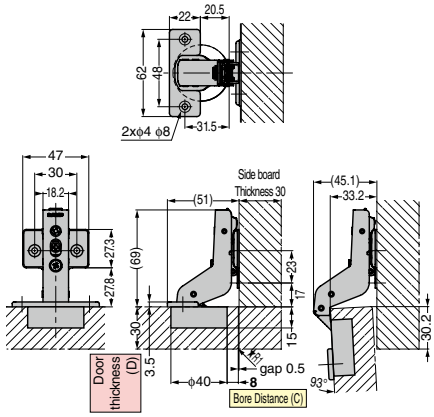
[Sold Separately]
- Mounting plates, Glass door face plate, Countersunk head tapping screw 3.5 × 15NI, etc.

[Recommended Screws]
- Countersunk head wood/tapping screw 3.5

RoHS	CAD	Item Code	Item Name	Opening Angle	Type	Material	Finish	Box (pcs)
G	3D	160-029-086	H360-D26-0T	93°	With damper (5 levels)	Steel	Nickel	100
G	3D	160-029-083	H360-26-0T		Without catch			100
G	3D	160-029-080	H360-C26-0T		With catch			100

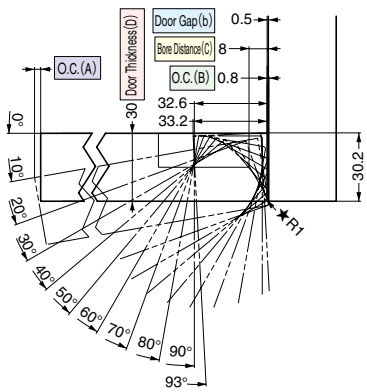
▶ The installation drawing and locus chart shown are for a 30 mm thick door and side board, a 8mm bore distance and inset installation.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart



Opening Clearance (O.C.)

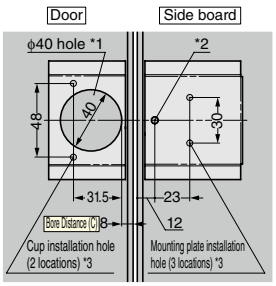
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)					
	3	4	5	6	7	8
18	0	0	0	0	0	0
20	0	0	0	0	0	0
22	0	0	0	0	0	0
24	0.1	0.1	0.1	0.1	0.1	0.1
26	0.3	0.3	0.3	0.3	0.3	0.3
28	1.7	0.9	0.5	0.5	0.5	0.5
30	3.9	2.9	4.0	3.3	2.7	2.2
32*	5.9	4.9	4.0	3.3	2.7	2.2
34*	8.1	7.1	6.1	5.2	4.6	4.0
	O.C. (B)					

- The table above shows O.C. (B) for ★R1 chamfering.
- * Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Cut out dimensions (steel doors)



*1: Please set the bottom of the cup at a depth of 11mm.
*2: Please chamfer this mounting hole. (ϕ5.1)
*3: Internal threads need to be made by welding nut or burning.

Bore distance (C) and Door Gap (b) relationship

Bore Distance (C)	3	4	5	6	7	8
Door Gap (b)	5.5	4.5	3.5	2.5	1.5	0.5

Door Gap (b) adjustment (+4mm) by turning the overlay adjustment screw. Please check required O.C. (B) at the table below.

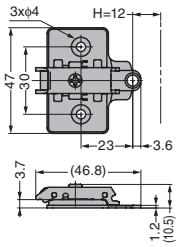
Refer to 1: P.181~P.182

Opening clearance (A) and door width relationship (for 30mm thick door)

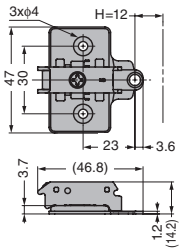
Door Width	300	400	500	600
O.C. (A)	0.78	0.55	0.43	0.35

MOUNTING PLATE 360-P4W-30T System 30

Standard



+5mm

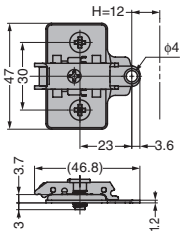


- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

RoHS	CAD	Item Code	Item Name	Type	Height Adjustment	Material	Finish	Box (pcs)
G	3D	160-026-844	360-P4W-30T	Standard	±2.5mm	Steel	Nickel	400
G	3D	160-035-077	360-P4W-30T+5	+5mm				400

MOUNTING PLATE 360-P4W-30T System 30

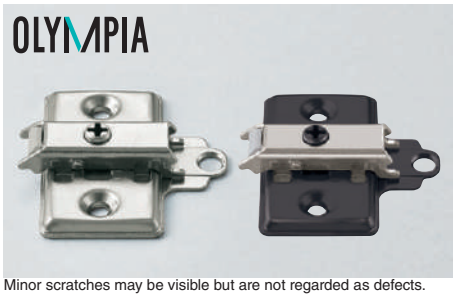
Pre-mounted screw
(holes ϕ5, min. 8.5 depth)



- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

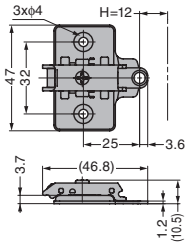
RoHS	CAD	Item Code	Item Name	Type	Height Adjustment	Material	Finish	Box (pcs)
G	3D	160-042-394	360-P4W-30T-DS	Pre-mounted screw	±2.5mm	Steel	Nickel	400

MOUNTING PLATE 360-P4W-32T System 32

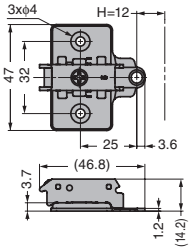


Minor scratches may be visible but are not regarded as defects.

Standard



+5mm

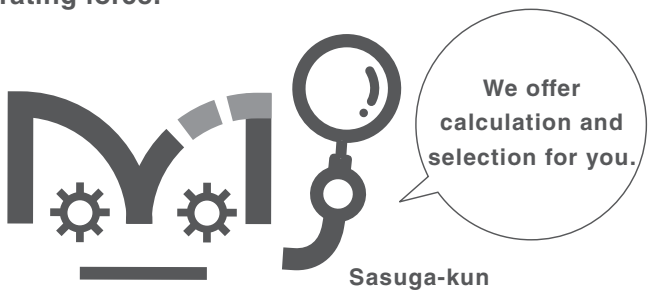


- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

RoHS	CAD	Item Code	Item Name	Type	Height Adjustment	Material	Finish	Box (pcs)
G	3D	160-026-845	360-P4W-32T	Standard	±2.5mm	Steel	Nickel	400
G	3D	160-059-825	360-P4W-32T-BL	Standard				400
—	3D	160-035-078	360-P4W-32T+5	+5mm			Black	400
—	3D	160-059-826	360-P4W-32T+5-BL	+5mm				400

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.

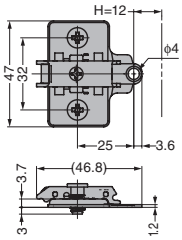


Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

MOUNTING PLATE 360-P4W-32T System 32

Pre-mounted screw
(holes ϕ5, min. 8.5 depth)

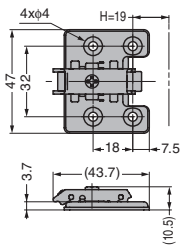


- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

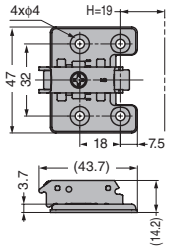
RoHS	CAD	Item Code	Item Name	Type	Height Adjustment	Material	Finish	Box (pcs)
G	3D	160-042-395	360-P4W-32T-DS	Pre-mounted screw	±2.5mm	Steel	Nickel	400

MOUNTING PLATE 360-P6WT System 32 with 4 holes

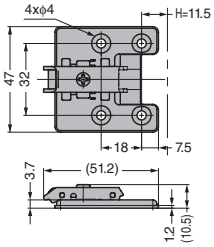
Standard



+5mm



+7.5mm

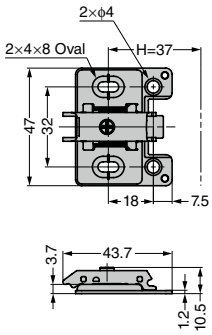


- For the standard and +5mm types:
  - Value of H for inset installation is "door thickness + 24 mm".
  - When using with the GH-360FP, value of H is "door thickness + 26 mm".
- For the +7.5mm type:
  - Value of H for inset installation is "door thickness + 16.5 mm".
  - When using with the GH-360FP, value of H is "door thickness + 18.5 mm".

RoHS	CAD	Item Code	Item Name	Type	Height Adjustment	Material	Finish	Box (pcs)
G	3D	160-026-846	360-P6WT	Standard	±2.5mm	Steel	Nickel	400
G	3D	160-035-079	360-P6WT+5	+5mm				400
G	3D	160-042-393	360-P6W-30-32T	+7.5mm				400

MOUNTING PLATE 360-P6WT-NA 8mm Depth Adjustment Type

OLYMPIA



[Specifications]
- Vertical adjustment (±3 mm), depth adjustment (±2 mm)
- Thickness: 0 mm (standard thickness)
- For inset specifications, the H dimension door thickness is +42 mm.
- When using GH-360FP 1, the door thickness is +44 mm.

[Sold Separately]
- Raised countersunk head tapping screws 3.5×15

[Optional Parts]
- Mounting Plate Mounting Jig 360-JIG 2

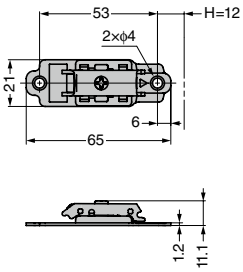
[Remarks]
- Fix the slot and then fix the round hole after adjustment.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-050-436	360-P6WT-NA	Steel	Nickel	26	400

Refer to 1: P.184, 2: P.185

MOUNTING PLATE 360-P3W-53T Straight Type

OLYMPIA



- The slim design gives a sleek look.

[Specification]
- Vertical adjustment : ± 2.5 mm
- Standard height : 0 mm
- Value of H : door thickness + 17 mm in case of inset.
- Value of H : door thickness + 19 mm in use of GH-360FP. 1

[Remarks]
- When using with two H360 hinges, door spec should be as below:
  - Door width : max. 450 mm
  - Door weight : max. 7 kg

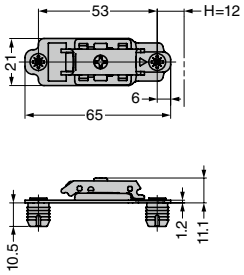
[Sold Separately]
- Raised countersunk head tapping screw 3.5 x 15

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	—	160-046-697	360-P3W-53T	Steel	Nickel Plating	20	400

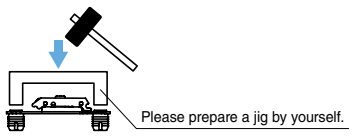
Refer to 1: P.184

MOUNTING PLATE 360-P3W-53T-D10 Straight Type / With Dowels

OLYMPIA



[Installation]



- The slim design gives a sleek look.
- Pre-attached with press-in dowels.

[Specification]
- Vertical adjustment : ± 2.5 mm
- Standard height : 0 mm
- Value of H : door thickness + 17 mm in case of inset.
- Value of H : door thickness + 19 mm in use of GH-360FP. 1
- Mounting hole : ϕ10 (depth: 11mm and more)

[Remarks]
- Press in the dowels at the same time.
- When using with two H360 hinges, door spec should be as below:
  - Door width : max. 450 mm
  - Door weight : max. 7 kg

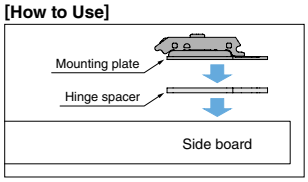
RoHS	CAD	Item Code	Item Name	Material	Finish	Dowel Material	Weight (g)	Box (pcs)
G	—	160-046-698	360-P3W-53T-D10	Steel	Nickel Plating	Polyamide (PA)	24	400

Refer to 1: P.184

HINGE SPACER 360-DP2-P4 2 mm Thick / 2 Holes / OLYMPIA Series

OLYMPIA

[How to Use]



Set the spacer between the mounting plate and side board.

- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plate]

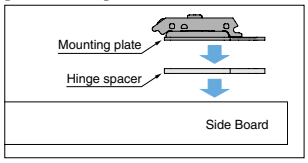
- 360-P4W-30T
- 360-P4W-30T+5
- 360-P4W-32T
- 360-P4W-32T+5

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Pack (pcs)	Box (pcs)
G	3D	160-046-075	360-DP2-P4	POM	Grey	2.6	50	500

HINGE SPACER 360-DP2-P6-NA 2 mm Thick / OLYMPIA Series

OLYMPIA

[How to Use]



Set the spacer between the mounting plate and side board.

- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plates]

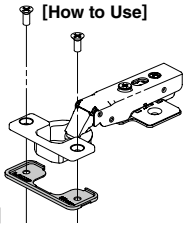
- 360-P6WT
- 360-P6WT+5
- 360-P6WT-NA

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Pack (pcs)	Box (pcs)
G	3D	160-050-437	360-DP2-P6-NA	POM	Grey	2.9	50	500

HINGE SPACER FOR SHEET METAL 360-BCS OLYMPIA Series

OLYMPIA

[How to Use]



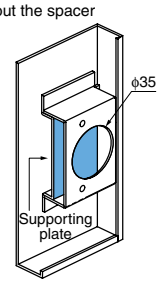
- Compatible with Olympia Series hinges (cup diameter: 35 mm) for easier installation on sheet metal doors.

[Specification]

- The thickness is 0.7 mm.

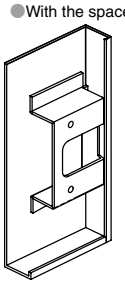
[Easier Mounting on Sheet Metal Doors]

- Without the spacer



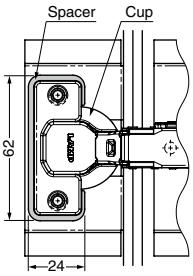
Supporting plates are required at the depth of 11 mm below the hinge cup.

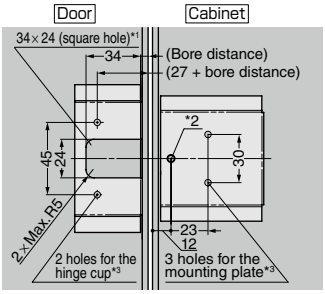
- With the spacer



No supporting plates are needed.

[Installation]



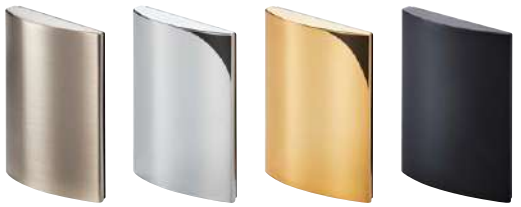


*1: No supporting plates for hinge cups are needed.
*2: Please process chamfering on the holes. (ϕ 5.1)
*3: Female threading is required including nut welding and burring process. (Recommended size: M4)

RoHS	CAD	Item Code	Item Name	Material	Box (pcs)
G	3D	160-045-368	360-BCS	POM	500

GLASS DOOR FACE PLATE GH-360FP

OLYMPIA



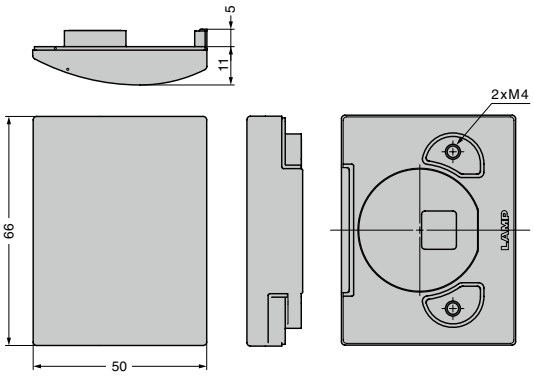
GH-360FP-SN GH-360FP-CR GH-360FP-GP GH-360FP-BL

- Glass door face plate designed specifically for the Olympia hinge. (Not suitable for the H360 hinge).
- For tempered glass doors.
- Use the screws supplied and tighten to 0.75~1.5N.m

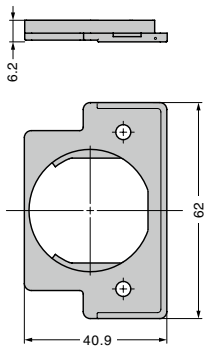
[Parts included]

- Cross Recessed Flat Head Machine Screw M4×14

RoHS	CAD	Item Code	Item Name	Finish / Colour	Material
G	3D	160-043-631	GH-360FP-CR	Chrome plating	Zinc Alloy (ZDC) Polyacetal (POM)
G	3D	160-043-632	GH-360FP-SN	Satin nickel	
G	3D	160-043-724	GH-360FP-GP	24K Gold plating	
G	3D	160-043-633	GH-360FP-BL	Black	



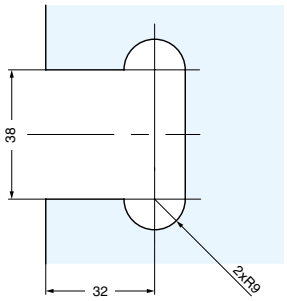
Faceplate



Socket spacer

[Cut Out Dimensions]

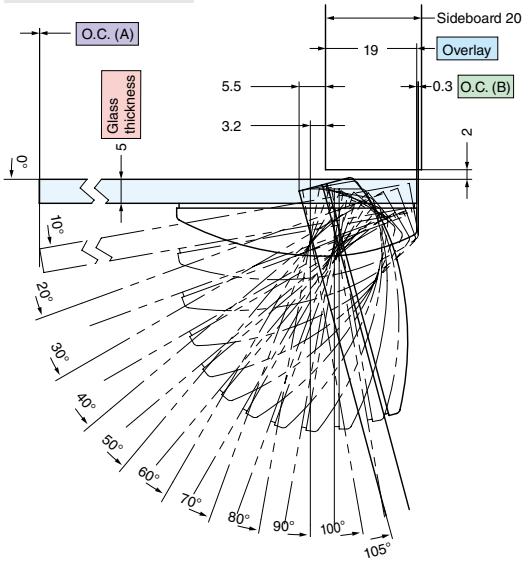
- Please use 4 ~ 6mm tempered glass.
- Use of shatterproof film is recommended.



Side board and face plate relationship

▶ For a 5mm door, 20mm sideboard and 19 overlay.

Locus chart S≒7/10 Overlay (19mm)



Opening clearance (O.C.)

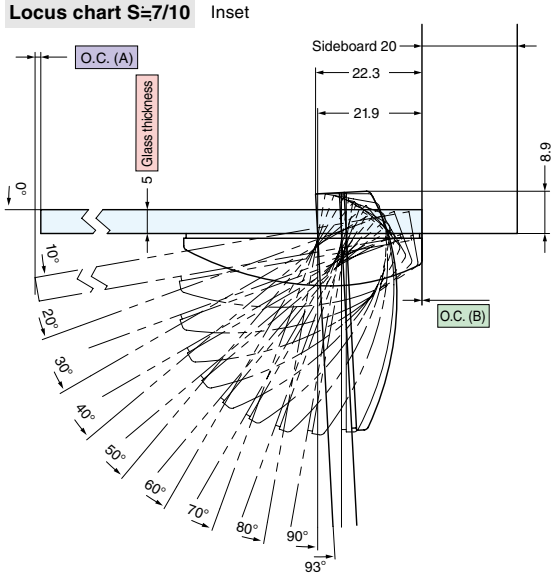
Glass thickness	4	5	6
O.C. (B)	0.2	0.3	0.5

Opening clearance (A) and door width relationship (for 5mm door)

Glass width	300	400	500	600
O.C. (A)	0.07	0.05	0.04	0.03

▶ For a 5mm door, 20mm sideboard and inset installation.

Locus chart S≒7/10 Inset



Opening clearance (O.C.)

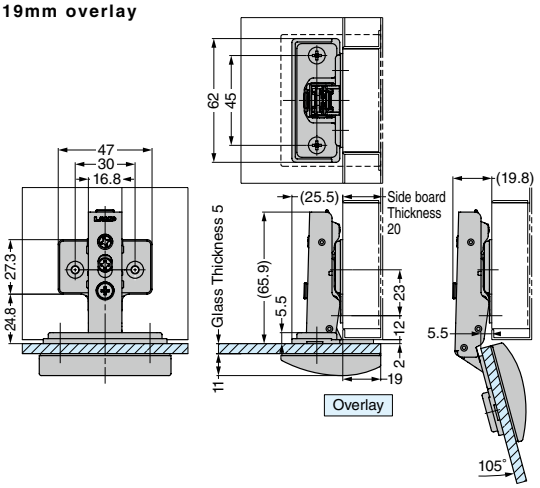
Glass thickness	4	5	6
O.C. (B)	0	0	0

Opening clearance (A) and door width relationship (for 5mm door)

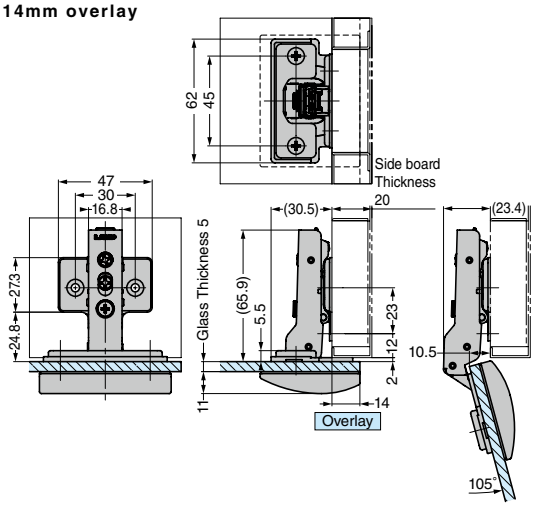
Glass width	300	400	500	600
O.C. (A)	0.34	0.25	0.19	0.16

Installation drawing

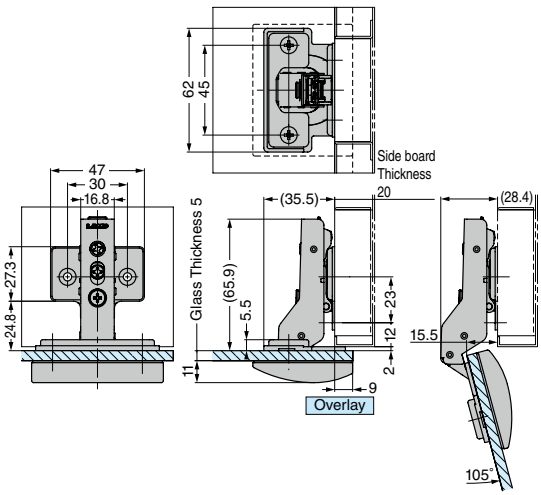
19mm overlay



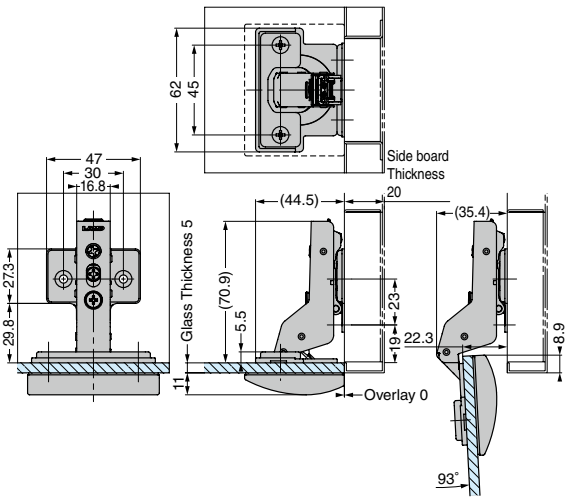
14mm overlay



9mm overlay



Inset



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

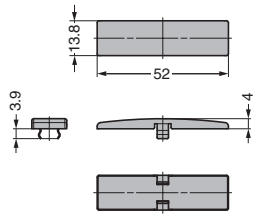
INSTALLATION JIG 360-JIG Overlay installation

- For easy installation and alignment of the Olympia hinge mounting plate.
- Cannot be used in combination with 360-P6W-30-32T and pre-mounted screw mounting plates.

RoHS	CAD	Item Code	Item Name	Box (pcs)	Carton (pcs)
G	3D	160-042-396	360-JIG	50	500

BODY COVER 360HC-19H26-NI For 19 and 26 mm Overlay

OLYMPIA



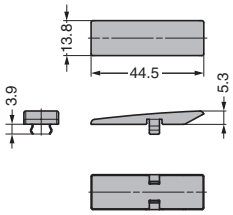
- Hides screws for a sleek look.

[Available Hinge]
- 360 (19 mm overlay type)
- H360 (26 mm overlay type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-046-883	360HC-19H26-NI	Steel	Nickel Plating	2.6	400

BODY COVER 360HC-9H16-NI For 9 and 16 mm Overlay

OLYMPIA



- Hides screws for a sleek look.

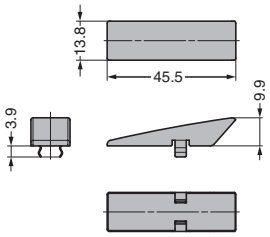
[Available Hinge]
- 360 (9 mm overlay type)
- H360 (16 mm overlay type)

[Remarks]
- Cannot be used in 14 mm overlay installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-046-884	360HC-9H16-NI	Steel	Nickel Plating	2.2	400

BODY COVER 360HC-0H0-NI For Inset

OLYMPIA



- Hides screws for a sleek look.

[Available Hinge]
- 360 (inset type)
- H360 (inset type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-046-885	360HC-0H0-NI	Steel	Nickel Plating	2.7	400

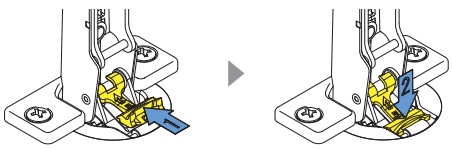
85° ANGLE LIMITER H360-85 For Thick Doors

OLYMPIA

H360-85

- Limits the opening angle from 100° to 85° of the H360 hinge. (The H360 is a thick door model of OLYMPIA hinge series.)

[How to Use]

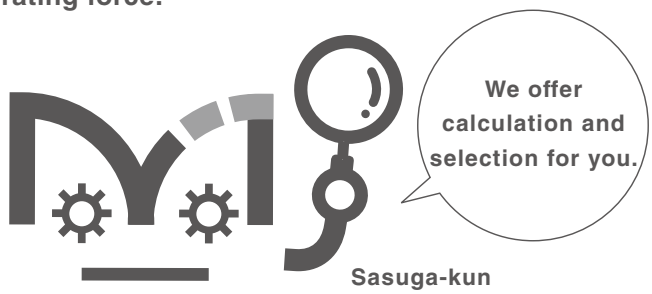


RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Box (pcs)
G	3D	160-044-151	H360-85	26mm Overlay / 16mm Overlay	PBT	Grey	1,000
G	3D	160-053-494	H360-85-0	Inset			1,000

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

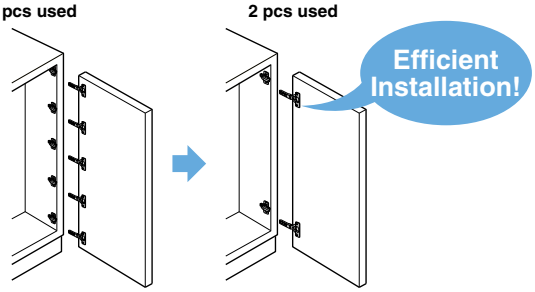
HEAVY DUTY CONCEALED HINGE J95

Max. Door Weight : 25 kg with 2 pcs, 40 kg※ with 3 pcs. ※35kg for glass doors

[Application Example] Chemical storage cabinets, etc.
Operating temperature of J95: -10˚C ~ 40˚C

[Normal Concealed Hinges] **5 pcs used**

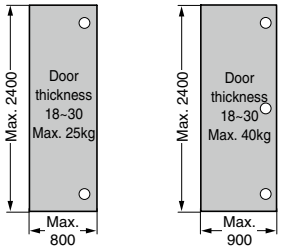
[J95] **2 pcs used**



Less usage compared with normal concealed hinges, reducing construction and installation time and providing clean appearance.

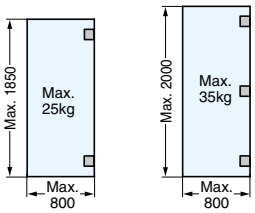
[Door Dimensions and Number of Hinges]

In case of sheet metal door

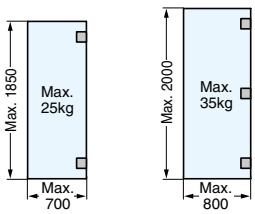


In case of glass door

Glass thickness 8mm



Glass thickness 10 mm



Install the upper and lower hinges within 200mm from the door end.Set equal installation pitch when using 3 pcs.

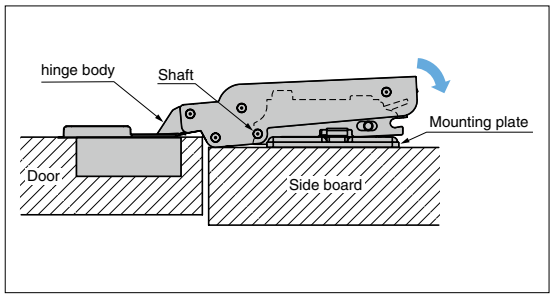
Simple Installation and Detachment by One-Touch.

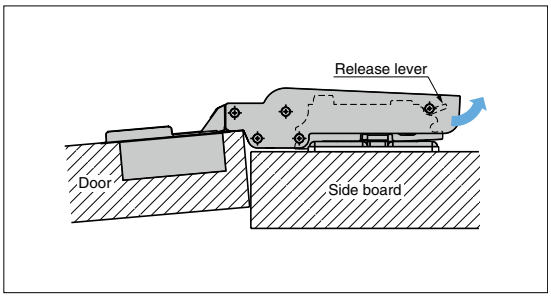
[How to Install]

Align shaft of hinge body with front end of mounting plate, and press down back end of hinge body until it snaps into place.

[How to Detach]

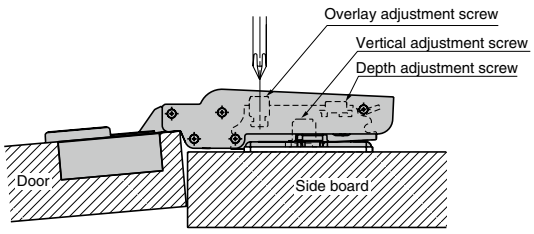
Push up release level in ↗ direction, and remove hinge body from mounting plate.





Check if hinge body is properly installed on mounting plate.

Easy and Fast Adjustment

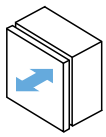
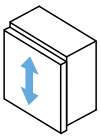


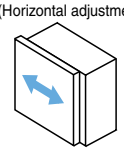
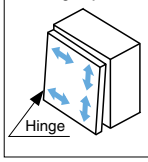
※Use a ⊕ No.2 screwdriver in the above adjustment.

With the eccentric cam mechanism, the door can be freely adjusted by only turning depth and vertical adjustment screws. Door position is easy to adjust without the need of loosening the adjustment screw, positioning and fixing.Overlay and tilting are adjustable by turning overlay adjustment screw.

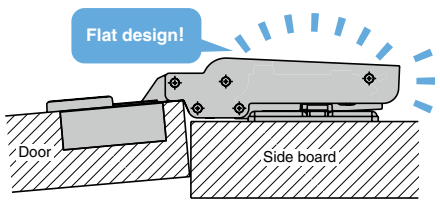
[Remarks]
Be sure to use a manual screwdriver to fine tune adjustment screws within the adjustment range. Do not use pneumatic, electric or rechargeable screwdriver. Otherwise, the adjustment range may be exceeded and damage and malfunction of adjusting mechanism may occur.

[Adjustment Directions, Amount and Method]

Depth adjustment 	+1.5 mm, –2.5 mm	Turning the depth adjustment screw counterclockwise ↺ to move the door forwards and clockwise ↻ to move the door backwards.
Vertical adjustment 	±3 mm	In case of right-hanging, turning the vertical adjustment screw counterclockwise ↺ to move the door upwards and clockwise ↻ to move the door downwards. ※In case of left-hanging, door moves in the opposite direction.

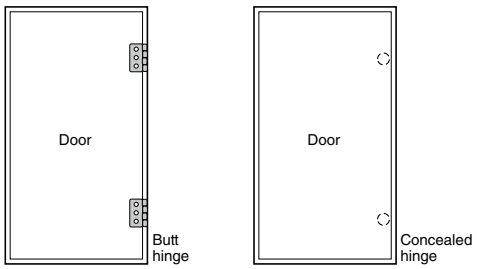
Overlay adjustment (Horizontal adjustment) 	+0 mm, –4 mm	Turning the overlay adjustment screw clockwise ↻ to decrease and counterclockwise ↺ to increase the overlay.
Tilting Adjustment 	–	Turning the overlay adjustment screw counterclockwise or clockwise to adjust.

Flat Design



Flat design with no projections such as adjustment screws on the top of body. It is safe because the release level does not protrude from the back of body.

Without Impairing Design



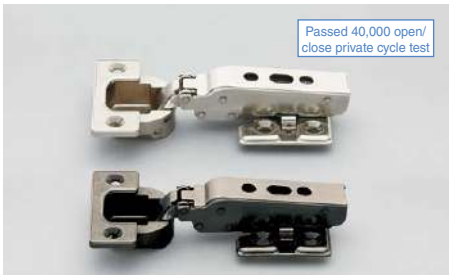
Since the hinge is not visible from outside when door is closed, it does not impair the design of cabinet.

[Remarks]
- When using concealed hinge J95 for glass and metal door, applicable door size varies.
- Door weight has priority over door size.
- Set door centre of gravity at door centre.
- Maximise the hinge installation pitch. Set equal installation pitch when using 3 pcs. Besides, the warpage of door shall be considered.
- Door dimensions and number of hinges 1 are for reference only. Please check in actual installation.
- Lubricate regularly during use.
- Watch your hands during handling before door installation.
- Do not repeatedly open and close with a single concealed hinge before installation.Otherwise, it may be damaged.
- Scattering prevention film is recommended for tempered glass.

Refer to 1 : P.188

95° Opening | **25mm Overlay** | **Overlay 21~25mm (When Bore Distance is 8 mm)** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95



Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-026-905	J95-24/25T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	134	100
G	3D	160-026-731	J95-C24/25T	With Catch			146	100
G	3D	160-034-919	J95-24/25T BN	Without Catch		Black	134	100
G	3D	160-034-916	J95-C24/25T BN	With Catch		Nickel	146	100

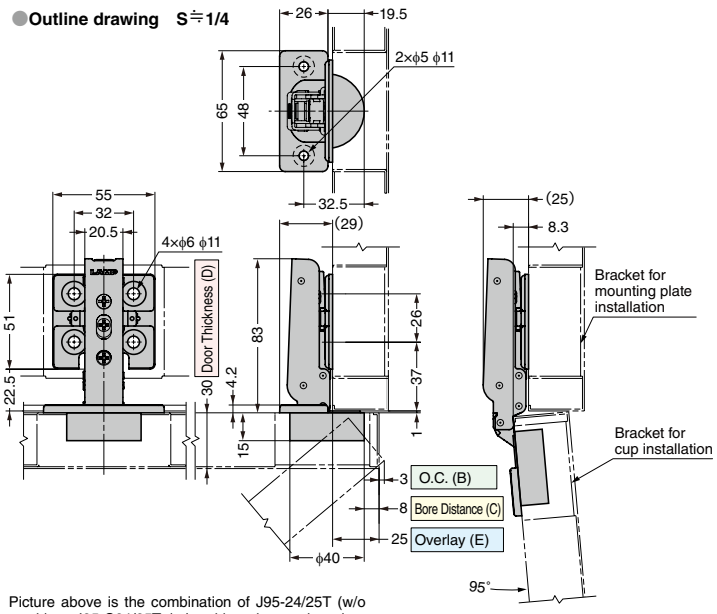
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-25GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

In case of sheet metal door

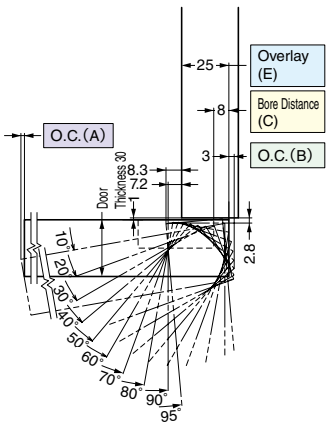
Outline drawing S≒1/4



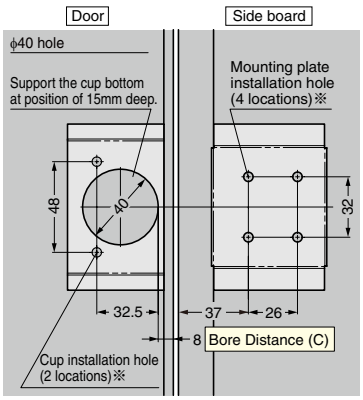
Picture above is the combination of J95-24/25T (w/o catch) or J95-C24/25T (w/catch) and mounting plate J95-P6T (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 5)



Cut Out Dimensions



※Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	20	21	22	23	24	25

Overlay adjustment (Max. -4mm) by turning the Overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0.3	0.3	0.3	0.3	0.3	0.3
20	0.5	0.5	0.5	0.5	0.5	0.5
22	0.8	0.8	0.8	0.7	0.7	0.7
24	1.1	1.1	1.1	1.1	1.1	1.0
26	1.7	1.6	1.6	1.5	1.5	1.5
28	3.2	2.8	2.5	2.2	2.1	2.0
30	5.0	4.5	4.0	3.6	3.3	3.0
32※	6.8	6.2	5.7	5.2	4.8	4.4
34※	8.6	8.0	7.5	6.9	6.5	6.0
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.5	0.3	0.3	0.2	0.2	0.2	0.2
	O.C. (A)						

[Door Dimensions and Number of Hinges] 6

Video Link

Refer to 1 4 : P.197, 2 : P.199, 3 : P.198, 5 : P.201, 6 : P.188

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door

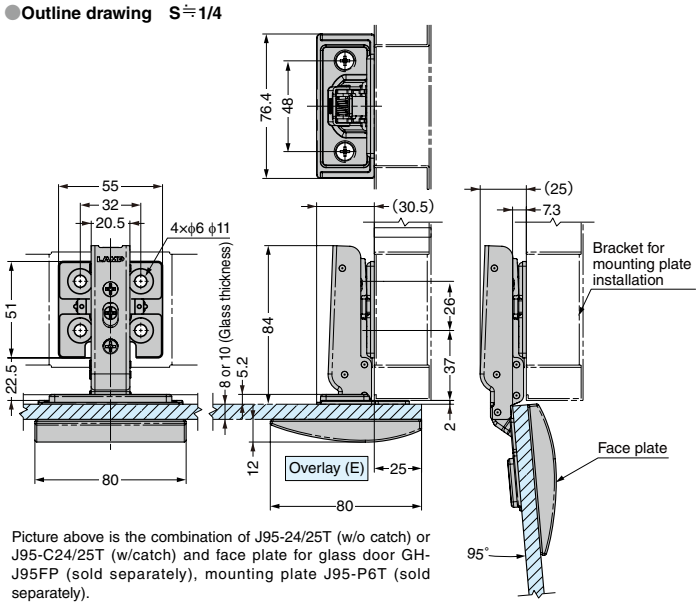
- Concealed hinge 1
- Mounting plate 2
- Face plate for glass door 3

Optional Parts

- Safety cover J95SC-25GR 4
- Cover for mounting plate 5

■In case of glass door

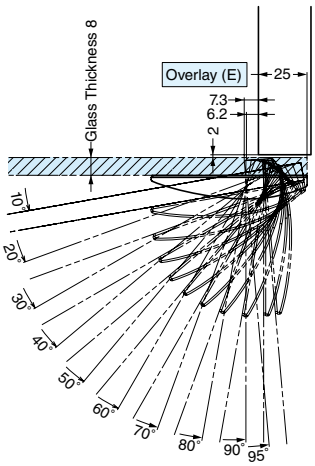
●**Outline drawing S≒1/4**



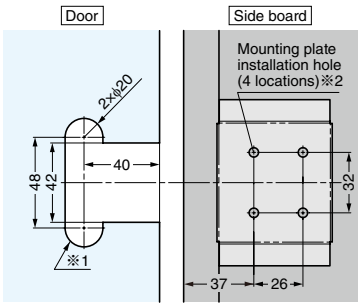
Picture above is the combination of J95-24/25T (w/o catch) or J95-C24/25T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●**Locus chart S≒1/4**

(How to Use the Locus Chart 6)



●**Cut out dimensions**



※1: Use tempered glass. Scattering prevention film is recommended.

※2: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]

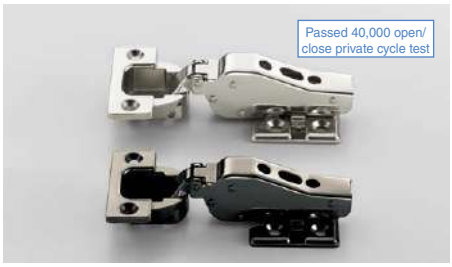
When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.190, 2 5 : P.197, 3 : P.199, 4 : P.198, 6 : P.201, 8 : P.188

95° Opening | **16mm Overlay** | **Overlay 12~16mm (When Bore Distance is 8 mm)** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95



Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-033-658	J95-24/16T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	143	50
G	3D	160-033-657	J95-C24/16T	With Catch			155	50
G	3D	160-034-920	J95-24-16T BN	Without Catch		Black	143	50
G	3D	160-034-917	J95-C24-16T BN	With Catch		Nickel	155	50

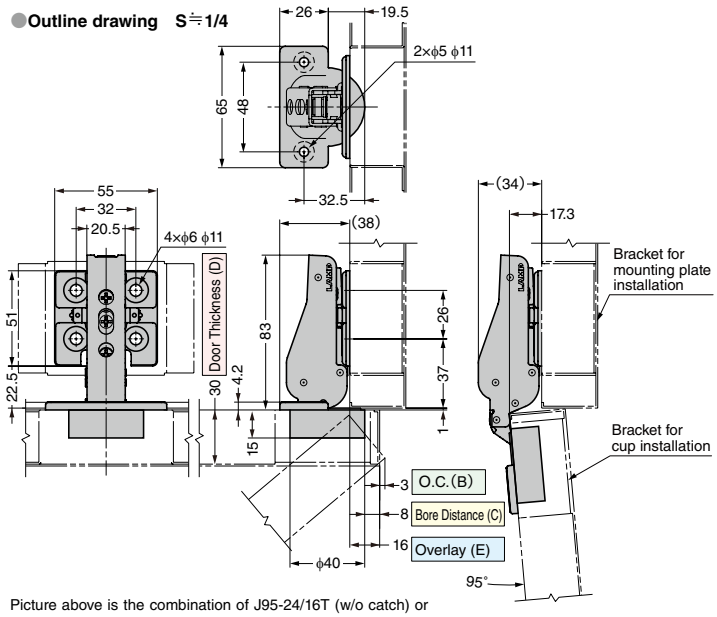
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-16GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

■In case of sheet metal door

●Outline drawing S≒1/4



Picture above is the combination of J95-24/16T (w/o catch) or J95-C24/16T (w/catch) and mounting plate J95-P6T (sold separately).

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	11	12	13	14	15	16

Overlay adjustment (Max. -4 mm) by turning the Overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0.3	0.3	0.3	0.3	0.3	0.3
20	0.5	0.5	0.5	0.5	0.5	0.5
22	0.8	0.8	0.8	0.7	0.7	0.7
24	1.1	1.1	1.1	1.1	1.1	1.0
26	1.7	1.6	1.6	1.5	1.5	1.5
28	3.2	2.8	2.5	2.2	2.1	2.0
30	5.0	4.5	4.0	3.6	3.3	3.0
32※	6.8	6.2	5.7	5.2	4.8	4.4
34※	8.6	8.0	7.5	6.9	6.5	6.0
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

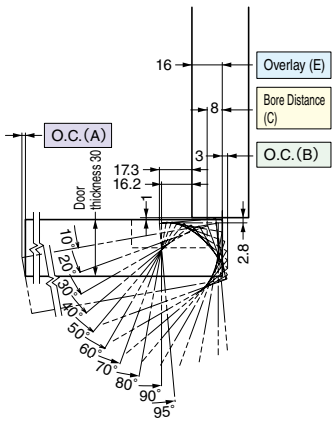
[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.5	0.3	0.3	0.2	0.2	0.2	0.2
	O.C. (A)						

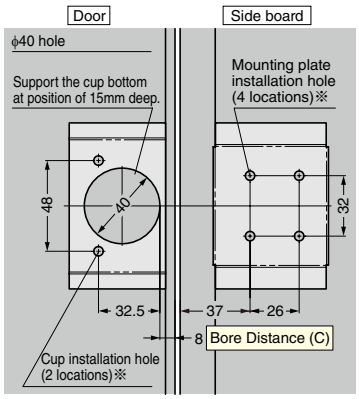
[Door Dimensions and Number of Hinges] 6

●Locus chart S≒1/4

(How to Use the Locus Chart 5)



●Cut out dimensions



※ Internal threads need to be made by welding nut or burring.

Video Link

Refer to 1 4 : P.197, 2 : P.199, 3 : P.198, 5 : P.201, 6 : P.188

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door

●Concealed hinge 1
●Mounting plate 2

●Face plate for glass door 3

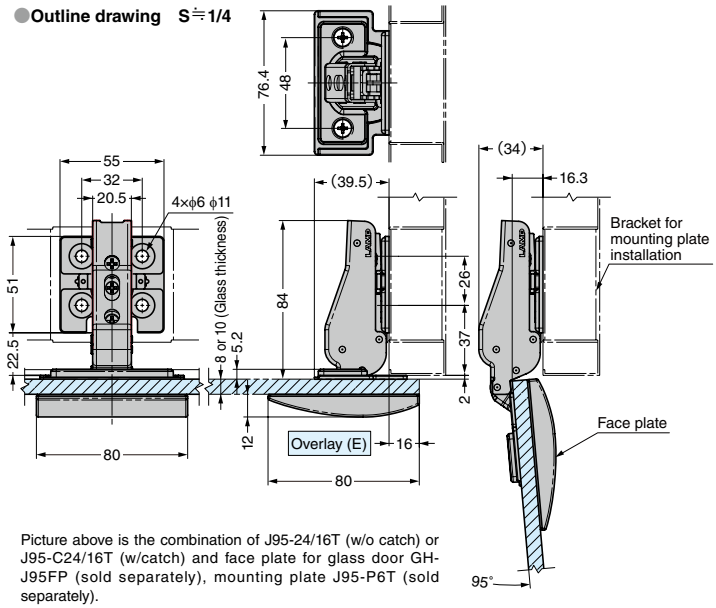
Optional Parts

●Safety cover J95SC-16GR 4

●Cover for 5 mounting plate

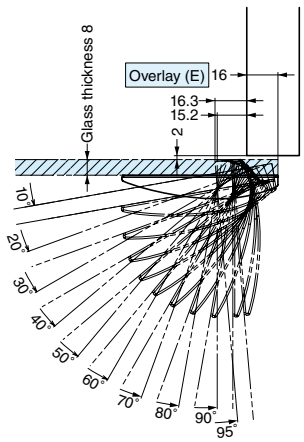
■In case of glass door

●**Outline drawing S≒1/4**

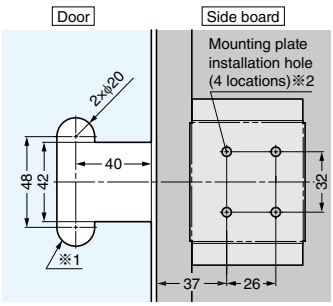


Picture above is the combination of J95-24/16T (w/o catch) or J95-C24/16T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●**Locus chart S≒1/4**
(How to Use the Locus Chart 6)



●**Cut out dimensions**



※1: Use tempered glass. Scattering prevention film is recommended.
※2: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]
When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.192, 2 5 : P.197, 3 : P.199, 4 : P.198, 6 : P.201, 8 : P.188

93° Opening | **Inset** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95

Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-033-660	J95-24/0T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	148	50
G	3D	160-033-659	J95-C24/0T	With Catch			160	50
G	3D	160-034-921	J95-24-0T BN	Without Catch		Black	148	50
G	3D	160-034-918	J95-C24-0T BN	With Catch		Nickel	160	50

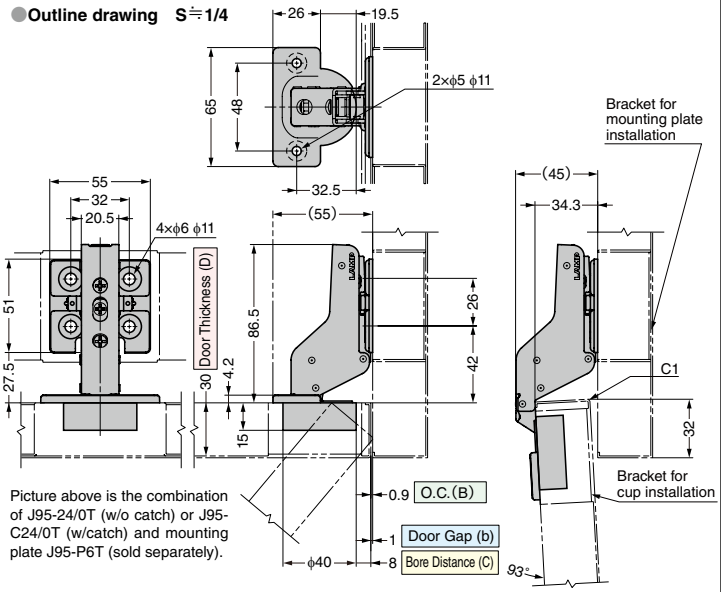
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-0GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

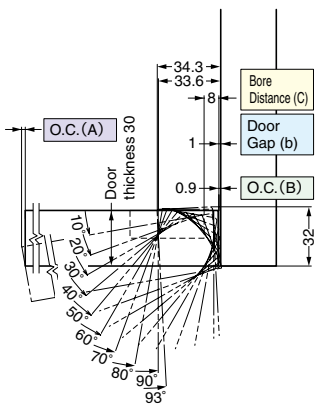
In case of sheet metal door

Outline drawing S≒1/4

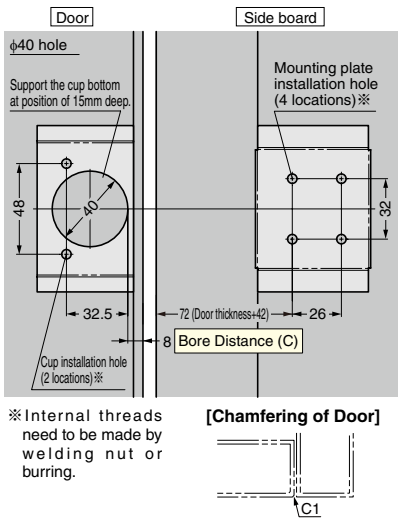


Picture above is the combination of J95-24/0T (w/o catch) or J95-C24/0T (w/catch) and mounting plate J95-P6T (sold separately).

Locus chart S≒1/4
(How to Use the Locus Chart 5)



Cut out dimensions



※Internal threads need to be made by welding nut or burring.

[Chamfering of Door]

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Door Gap (b)	6	5	4	3	2	1

Door gap can be adjusted by turning the overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C).Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0	0	0	0	0	0
20	0	0	0	0	0	0
22	0.1	0.1	0.1	0.1	0	0.1
24	0.1	0.1	0.1	0.1	0.1	0.1
26	0.3	0.3	0.3	0.3	0.3	0.3
28	1.7	1.1	0.6	0.5	0.5	0.5
30	3.5	2.9	2.3	1.8	1.0	0.9
32※	5.4	4.7	4.1	3.6	3.0	2.5
34※	7.3	6.6	6.0	5.4	4.8	4.3
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm.(O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.9	0.6	0.5	0.4	0.4	0.3	0.3
	O.C. (A)						

[Door Dimensions and Number of Hinges] 6

Video Link

Refer to 1 4 : P.197, 2 : P.199, 3 : P.198, 5 : P.201, 6 : P.188

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door

- Concealed hinge 1
- Mounting plate 2
- Face plate for glass door 3

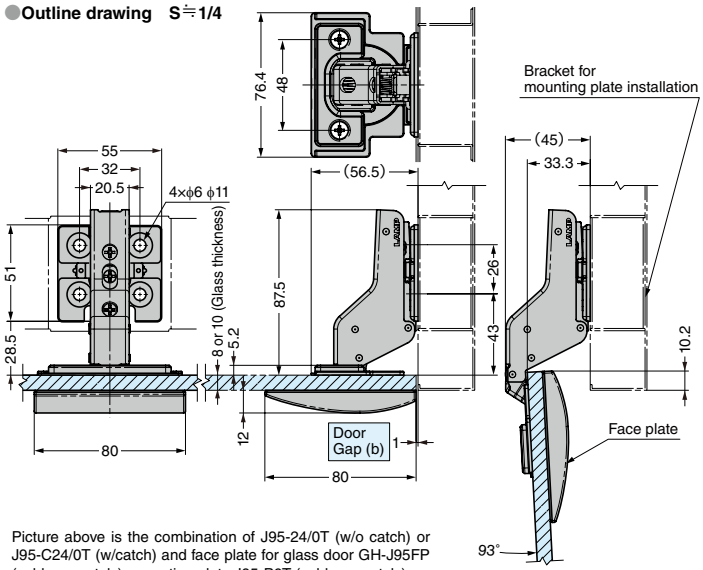
Optional Parts

- Safety cover J95SC-0GR 4

- Cover for mounting plate 5

■In case of glass door

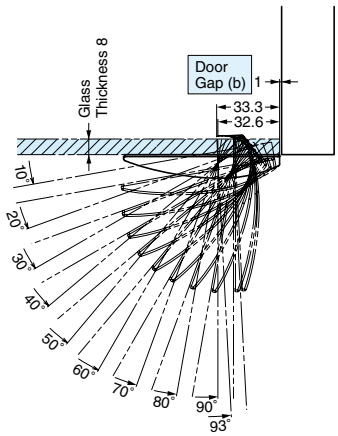
●Outline drawing S≒1/4



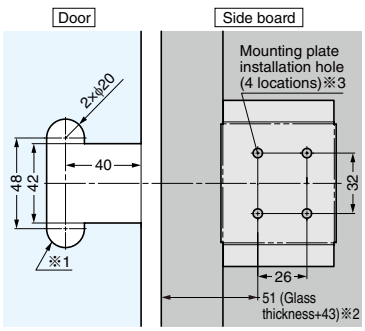
Picture above is the combination of J95-24/0T (w/o catch) or J95-C24/0T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●Locus chart S≒1/4

(How to Use the Locus Chart 6)



●Cut out dimensions



※1: Use tempered glass.Scattering prevention film is recommended.
※2: The size is 53 when using 10mm thick glass door.
※3: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]

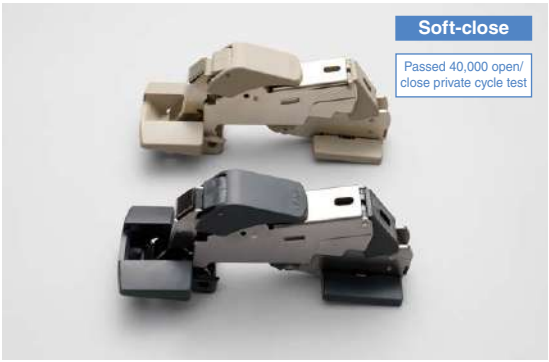
When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.194, 2 5 : P.197, 3 : P.199, 4 : P.198, 6 : P.201, 8 : P.188

160° Opening | **25mm Overlay** | **Overlay 21~25mm (When Bore Distance is 8 mm)** | **Door Thickness 18~36mm**

WIDE-ANGLE HEAVY-DUTY CONCEALED HINGE J160 Built-in Damper



- The built-in damper allows doors to close slowly providing premium door motion.
- Comes with a mounting plate and screw covers.

[Specification]

- 3-way adjustment of door position is available as below:
  - Depth : +1.5 mm / -2.5 mm
  - Vertical : ±3 mm
  - Overlay (horizontal) : +0 mm / -4 mm

[Remarks]

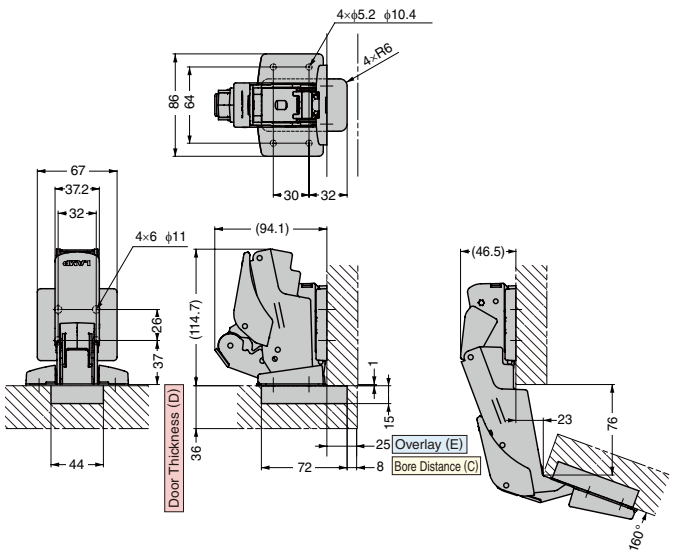
- Comes with a red holding pin which holds the hinge angle. Please do not detach it until the hinge is installed
- Please do not open and close the hinge while the holding pin is attached.

[Parts Included]

- Cross-recessed raised countersunk tapping screw 5×18

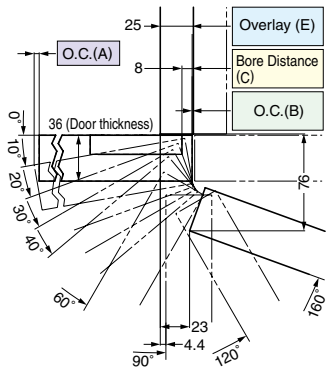
RoHS	CAD	Item Code	Item Name	Specification	Material	Finish	Weight (g)	Carton (pcs)
G	3D	160-044-973	J160-D22-25T-NI	Built-in Damper	Steel, Zinc Alloy (ZDC), Glass Filled Polyamide (PA)	Nickel	710	50
G	3D	160-044-974	J160-D22-25T-BN			Black Nickel	710	50

[Drawing]



[Locus Chart]

(How to use the locus chart 1)



[Bore Distance (C)]

Table-1

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	20	21	22	23	24	25

Overlay adjustment (Max. -4mm) by turning the overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C. (B)]

Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
34 and under	0.1 and under					
36	0.2	0.2	0.2	0.2	0.2	0.2
38*	0.5	0.5	0.5	0.5	0.6	0.6
40*	1.0	1.0	1.1	1.2	1.3	1.4
	O.C. (B)					

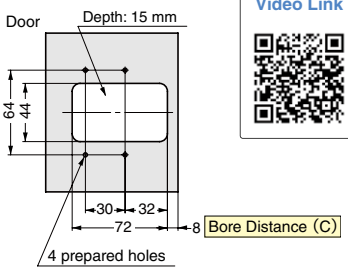
*Please refer to the locus chart if door thickness is over 36 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C. (A)]

Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
20	1.6	1.2	1.0	0.8	0.7	0.6	0.5
30	1.9	1.4	1.2	1.0	0.8	0.7	0.7
36	1.9	1.5	1.2	1.0	0.8	0.7	0.7
	O.C. (A)						

[Cut Out Dimensions]

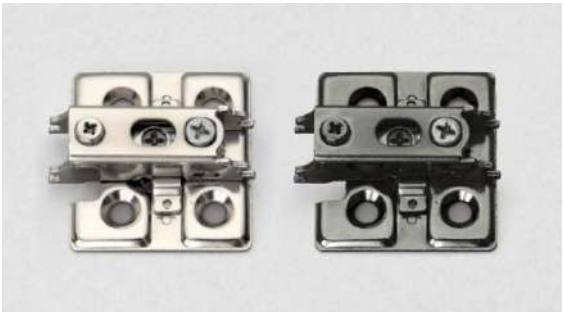


Video Link

[Door Dimensions and Number of Hinges] 2

Refer to 1 : P.201, 2 : P.188

MOUNTING PLATE J95-P6T For Heavy Duty Concealed Hinge J95



- Depth adjustment: +1.5, -2.5mm
- Vertical adjustment: ±3mm
- Overlay (horizontal) adjustment: +0, -4mm
- Value of H: Door thickness +42mm in use of INSET type.

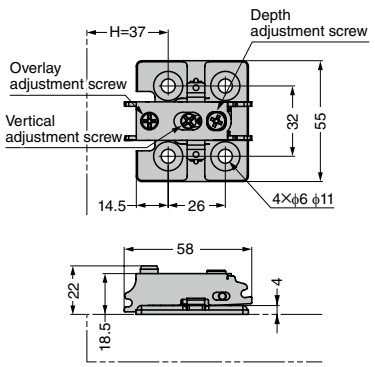
[Sold Separately]

- Cover for mounting plate J95ZC-GR 1
- Raised countersunk head tapping screw 5×18

[Recommended Screws]

- Size 5 countersunk head, or raised countersunk head tapping screw or wood screw.

[Screw] Sold Separately



[Mounting Plate]

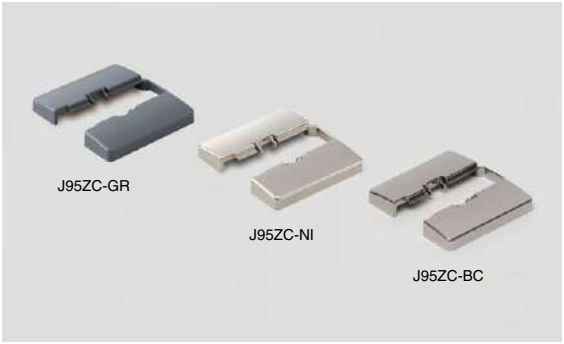
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-026-732	J95-P6T	Steel/Zinc Alloy (ZDC)	Nickel	94	100
G	3D	160-034-927	J95-P6T BN		Black Nickel	94	100

[Screw] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	–	160-032-356	TAP518NI	Steel	Nickel	–	600
G	–	160-043-496	TAP518BN		Black Nickel	–	600

Refer to 1 : P.197

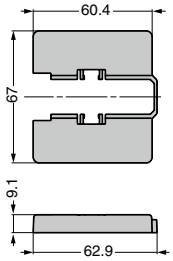
COVER FOR MOUNTING PLATE J95ZC For Heavy Duty Concealed Hinge J95 Series



- For hiding screw holes of mounting plate 1 .
- Mounting plate adjustable horizontally, vertically and in depth even after installation.

[Remarks]

- Do not bend by force. Otherwise, it may be damaged.



[With Safety Cover and Mounting Plate Cover]

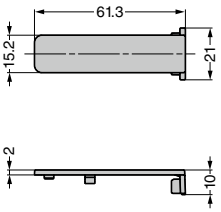
Picture above is for 25mm overlay.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-032-766	J95ZC-GR	ABS	Grey	9	500
G	–	160-034-743	J95ZC-NI		Nickel	9	500
G	3D	160-044-252	J95ZC-BC		Black Chrome	9	500

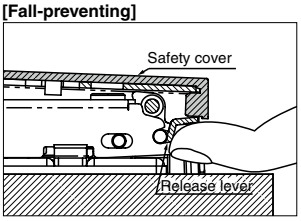
Refer to 1 : P.197

SAFETY COVER J95SC-25 For Heavy Duty Concealed Hinge J95 25mm Overlay

- Nickel plating finish is newly launched.
- For hiding screw holes.



[Fall-preventing]

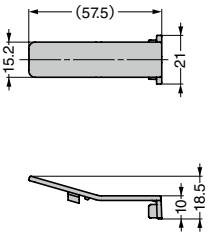


Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

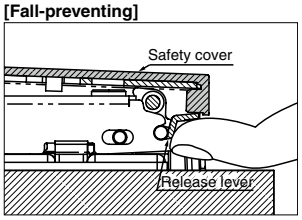
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-763	J95SC-25GR	ABS	Grey	3	500
G	3D	160-034-673	J95SC-25NI		Nickel	3	500
G	3D	160-044-249	J95SC-25BC		Black Chrome	3	500

SAFETY COVER J95SC-16 For Heavy Duty Concealed Hinge J95 16mm Overlay

- Nickel plating finish is newly launched.
- For hiding screw holes.



[Fall-preventing]

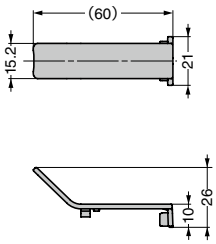


Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

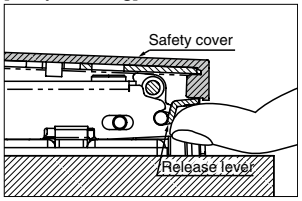
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-764	J95SC-16GR	ABS	Grey	3	500
G	3D	160-034-674	J95SC-16NI		Nickel	3	500
G	3D	160-044-250	J95SC-16BC		Black Chrome	3	500

SAFETY COVER J95SC-0 For Heavy Duty Concealed Hinge J95 Inset

- Nickel plating finish is newly launched.
- For hiding screw holes.



[Fall-preventing]



Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-765	J95SC-0GR	ABS	Grey	3	500
G	3D	160-034-675	J95SC-0NI		Nickel	3	500
G	3D	160-044-251	J95SC-0BC		Black Chrome	3	500

CUP COVER J95CC For J95 Concealed Hinges

- Special cover for J95 hinges to hide the screws.
- Comes with a double-sided tape to bond the cover and hinge.

[Remarks]

- Please make sure that the surface is clean before taping.

[No Visible Screws]

The following optional covers are used:

The J95 hinge above is the 25 mm overlay model. (Nickel colour)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)
G	3D	160-045-369	J95CC-GR	ABS	Gray	3.2	50
G	3D	160-045-370	J95CC-NI		Nickel		50
G	3D	160-045-371	J95CC-BC		Black Nickel		50

HINGE SPACER J95-DP2 2 mm Thickness / For J95 Concealed Hinges

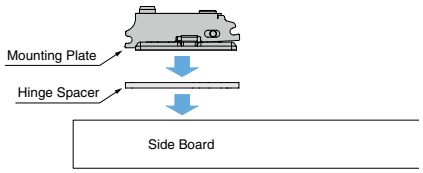
- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plate]
- J96-P9T

[Sold Seperately]
- Raised Countersunk Head Tapping Screw 5 x 25

[Recommended Screw]
- Countersunk Screw 5 x 25 / Raised Countersunk Head Tapping Screw / Wood Screw (nominal dia. 5.1)

[How to Use]



Set the spacer between the mounting plate and side board.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Pack (pcs)	Carton (pcs)
G	3D	160-048-095	J95-DP2	POM	Grey	5	100	600

[Tapping Screw 5 x 25] Sold Seperately

RoHS	CAD	Item Code	Item Name	Material	Finish
G	–	160-048-096	TAP525NI	Steel	Nickel
G	–	160-048-097	TAP525BN		Black Nickel

FACE PLATE FOR GLASS DOOR GH-J95FP For Heavy Duty Concealed Hinge J95

INSTRUCTION TEMPERED GLASS

GH-J95FP-CR

GH-J95FP-SN

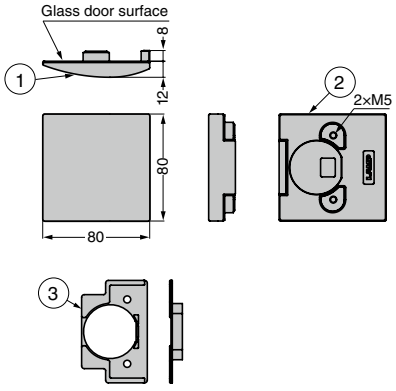
GH-J95FP-BL

[Application Example]

- Used for installing J95 1 to glass door.

[Remarks]
- Use supplied screws and tighten with 1.5 N・m or more for installation.

[Parts Included]
- Countersunk head screw M5×18



No.	Part Name	Material	Finish/Colour
①	Face Plate	Zinc Alloy (ZDC)	Chrome/Satin Nickel
②	Face Plate Spacer	POM	Black
③	Socket Spacer		

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-032-418	GH-J95FP-CR	Zinc Alloy (ZDC)	Chrome	320	1	20
G	3D	160-033-893	GH-J95FP-SN		Satin Nickel		1	20
G	3D	160-043-378	GH-J95FP-BL		Black		1	20

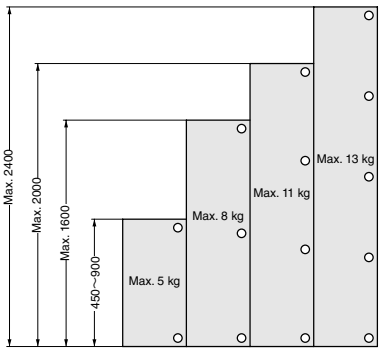
Refer to 1 : P.188~P.195

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DOOR DIMENSIONS AND NUMBER OF HINGES

[100 SERIES HINGES]

- Set door centre of gravity at door centre 1.
- Install the upper and lower hinges within 100mm from the door ends.
  Set equal installation pitch when using 3 hinges or more.
- The figure on the right is for reference only. Please check in actual installation.
- Lubricate regularly during use.
- If the conditions in the right figure, above or in the table below are not met, please contact local representatives.



Door Width	Door Thickness	Door Specific Gravity	Installation pitch
Max. 450	Max. 20	Max. 0.6	Min. 300

Refer to 1 : P.204~P.206

How to Use the Locus Chart

If you wish to use a specification other than the recommended one, please draw the specification on the locus chart. If some problems can be solved in this way, you can use various specifications. Following is an example.

For Overlay Door

●When using a door above recommended thickness (100˚ Opening)

Here, 100-46/19 SUS304B is used, and a specification of door thickness 28mm and overlay 19mm is considered. On the door part with the maximum opening angle and the opening angle of 10˚ to 30˚ where the opening clearance (O.C.) becomes maximum, draw a door with the door thickness increased by 8 mm (colour line in Fig.1). At that time, there may be the following two problems, i.e. (a) and (b).

(a) The edge of door conflicts with the edge of side board, thus door cannot reach the maximum opening angle. (A)

(b) O.C. is very large, so you should be careful when using a continuous door specification and a door close to a wall. (B)

A. As a way to solve (a), as shown in Fig. 2, if corner rounding or chamfering on the edge of the door, the door can reach the maximum opening angle. This method also serves as a solution to (b), and O.C. can be reduced (Fig.3). Besides, you may also leave a gap between door and side board (Fig.4).

B. To solve (b), take the above method or increase side board thickness to eliminate O.C. (Fig. 4), or reduce overlay.

●When using a door above recommended thickness (160˚ and 170˚ Opening)

Here, 170-34/19 is used, and a specification of door thickness 24mm and overlay 19mm is considered. As same as 100˚ opening, on the door part with the maximum opening angle and the opening angle of 50˚ where the opening clearance (O.C.) becomes maximum, draw a door with the door thickness increased by 4mm (colour line in Fig.5). The problem here is increased opening clearance and, in the continuous door specification, colliding with the next door at the maximum opening angle. The problem of opening clearance may be solved by using the same method as 100˚ opening hinge. As for the problem of colliding with the next door, it may be solved by reducing overlay, or increasing the side board thickness to greatly increase clearance between doors and limit the maximum opening angle to 130˚ or 150˚ , etc.

For Inset Door

●When using a door above recommended thickness

Again draw the actual door thickness. The problem here is also increased opening clearance. For inset door, door conflicts with side board and cannot be opened. This problem may be solved by providing a gap between door and side board (Fig.7), or corner rounding or chamfering on door edge (Fig.2) (Fig.8).

Actual dimensions for solving the problem can be tracked to some extent from the drawing.

For further details, please contact local representatives.

Fig.1

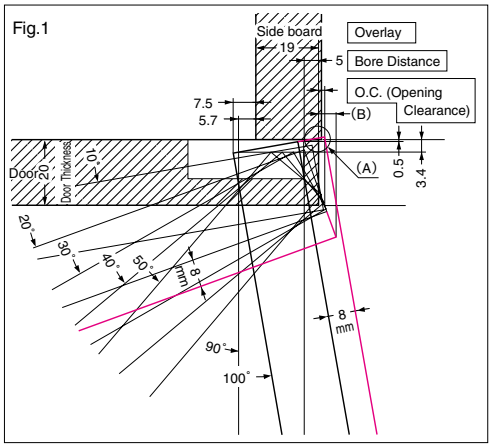


Fig.2

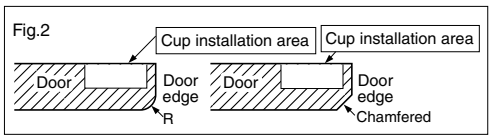


Fig.3

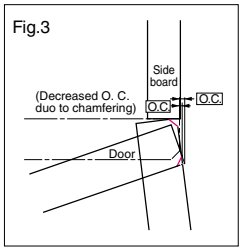


Fig.4

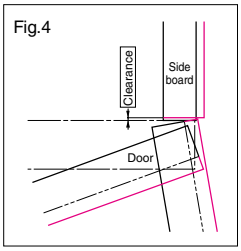


Fig.5

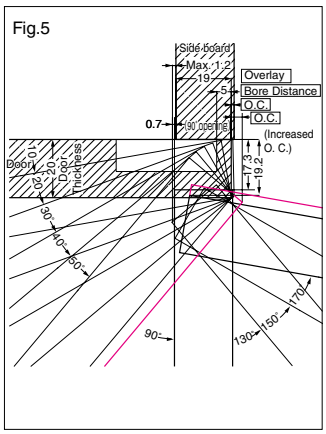


Fig.6

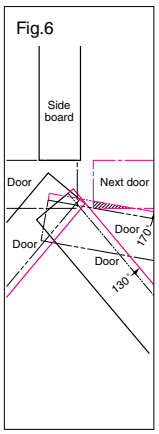


Fig.7

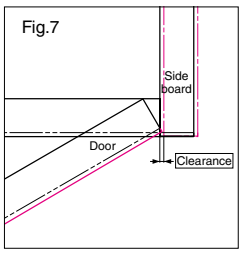
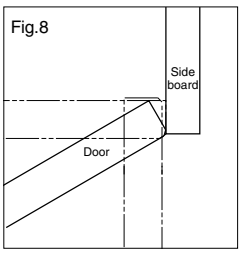


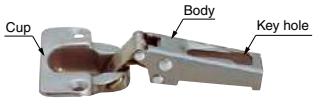
Fig.8



CONCEALED HINGE 100 SERIES

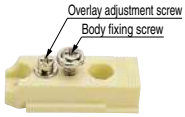
Part Names

[Concealed Hinge 1]

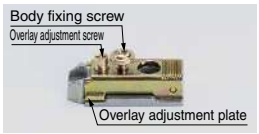


[Mounting Plate 2]

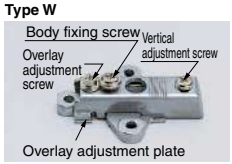
Mounting Plate



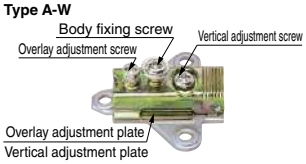
Type A



Type W



Type A-W



[Spacer 3]

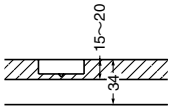
Standard type

System type

Body	Install to mounting plate.
Cup	Cut out a ϕ35 (or ϕ26, ϕ40) hole on the door, and install concealed hinge.
Key hole	When fixing to the mounting plate, insert body fixing screw in this hole and tighten.
Mounting plate	First install to the side board, then insert and tighten the body.
Body fixing screw	Used to fix the body to the mounting plate.It can also be used for door depth adjustment.
Overlay adjustment screw	Used to adjust overlay of door.
Overlay adjustment plate	(In case of type A or type A-W mounting plate) Turning overlay adjustment screw can adjust door overlay without affecting door depth and vertical adjustment.
Vertical adjustment screw	(In case of type W or type A-W mounting plate) Used for vertical adjustment of door.
Vertical adjustment plate	(In case of type W or type A-W mounting plate) Turning door vertical adjustment screw can move the door vertically.
Spacer	Used for decreasing door overlay, or increasing door gap for inset type.

Suitable for Various Door Thickness

100 Series are suitable for door thickness 15mm~34mm. Besides, performance can be maximised by using locus chart.



Full Range of Mounting Plates

Nearly 20 different mounting plates are available for 100 series to meet diversified installation requirements. Each one can be installed quickly, accurately and reliably.

Superior Corrosion Resistance

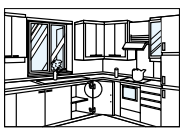
[All Stainless Steel]

The world's first stainless steel (SUS304) concealed hinge. Stainless steel features superior corrosion resistance, suitable for damp places like combined kitchen and washroom, etc. It can also be used for fields such as medical, laboratory and ship, etc.

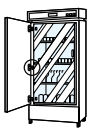
[Satin Chrome]

Plated type is highly corrosion-resistant thanks to satin chrome finish of main metal parts. And metallic silver colour makes high-tech furniture more eye-catching. (Nickel plating type also available by made to order)

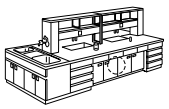
<Main Purpose of Stainless Steel Concealed Hinge>



Kitchen equipment



Medical warehouse

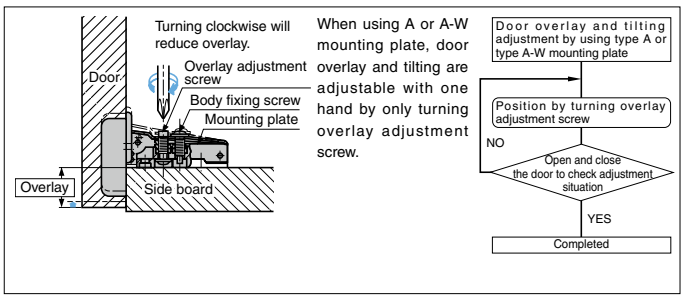


Laboratory

Marine

Easy and Fast Adjustment TYPE A, A-W MOUNTING PLATE

[100 Series Concealed Hinge Type A, A-W Mounting Plate]



Note) Be sure to use a manual screwdriver to fine tune adjustment screws within the adjustment range. Do not use a pneumatic, electric or rechargeable screwdriver, or excessive tightening torque may damage thread and cause malfunction.

Refer to 1 : P.204~P.206, 2 : P.207, P.215~P.218, 3 : P.219

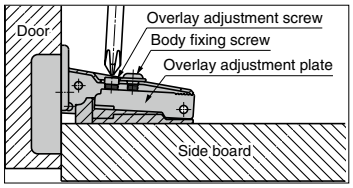
How to Adjust

Door Adjustment by Using Type A or Type A-W Mounting Plate

[Type A]

100-02A-30, 100-03A, 100-04A-30, 100-04A-32-3, 100-06A, 100-P3A, 100-P4A-30

Type A



Depth Adjustment

Loosen the body fixing screw, move the door back and forth to select appropriate position, and then tighten the screw.

Overlay Adjustment (Horizontal Adjustment)

Turning the overlay adjustment screw clockwise ↻ to decrease and counterclockwise ↺ to increase the overlay.
Operate with the body fixing screw tightened.

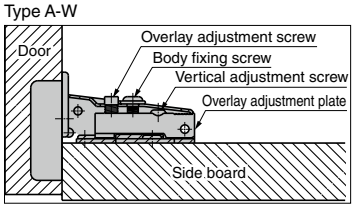
Tilting Adjustment

Turn the overlay adjustment screw. Operate with the body fixing screw tightened.

[Type A-W]

100-04A-W-30, 100-04A-W-30-2, 100-04A-W-32, 100-06AW

Type A-W



Depth Adjustment | Overlay Adjustment | Tilting Adjustment are the same as type A.

Vertical Adjustment

Loosen the vertical adjustment screw, move the door up and down to select appropriate position, and then tighten the screw.

Door Adjustment by Using Mounting Plate Other Than Type A and Type A-W

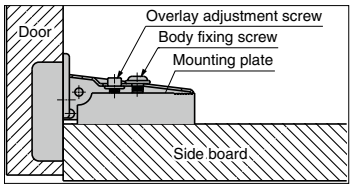
[100-01, 100-02-30, 100-03, 100-04-30, 100-06, 100-P6]

Depth Adjustment

Loosen the body fixing screw, move the door back and forth to select appropriate position, and then tighten the screw.

Overlay Adjustment (Horizontal Adjustment)

Loosen the body fixing screw first. Turn the overlay adjustment screw to determine appropriate position. Turning the overlay adjustment screw clockwise ↻ to increase and counterclockwise ↺ to decrease the overlay. Finally tighten the body fixing screw.

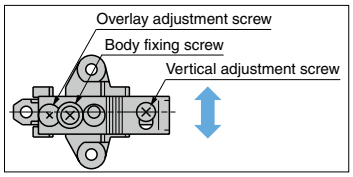


Tilting Adjustment

Loosen the body fixing screw first. Turn the overlay adjustment screw to determine appropriate position, and finally tighten the body fixing screw securely.

[Type W]

100-04W-30



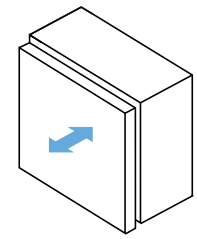
Depth Adjustment | Overlay Adjustment | Tilting Adjustment are the same as the above method.

Vertical Adjustment

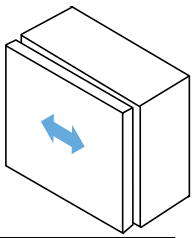
Loosen the vertical adjustment screw, move the door up and down to select appropriate position, and then tighten the screw.

[Remarks]

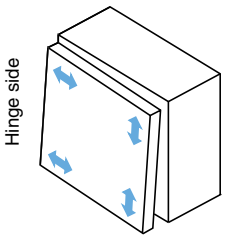
Body fixing screw may become loose due to door opening and closing.
Regularly check and tighten to prevent the door from falling off.



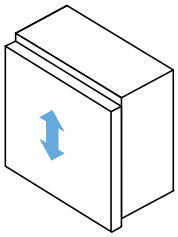
Depth Adjustment



Overlay Adjustment
(Horizontal Adjustment)



Tilting Adjustment



Vertical Adjustment

100° Opening | **19mm Overlay** | **Overlay 15~19mm** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Stainless Steel Mounting Plate 1 100 Series**

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS

Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

[Recommended Screws]

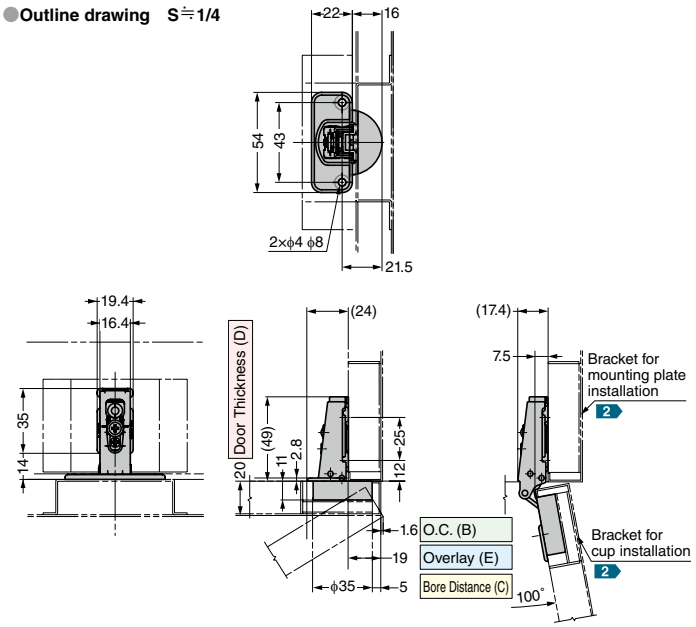
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-865	100-46/19 SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	39.1	200
G	3D	160-073-870	100-C46/19 SUS304B	With Catch			44.1	200

A mounting plate (sold separately) is required for installation. Please order separately.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

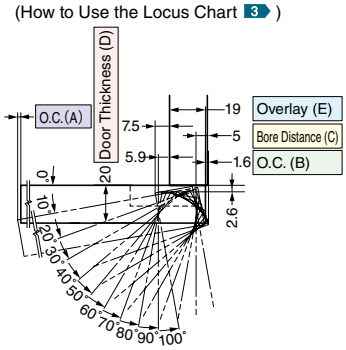
●Outline drawing S≒1/4



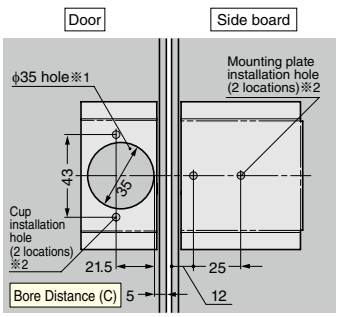
Picture above is the combination of 100-46/19 or 100-C46/19 (w/catch) and mounting plate 100-P3A (sold separately).

●Locus chart S≒1/4

(How to Use the Locus Chart 3)



●Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	17	18	19

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness	Bore Distance (C)		
(D)	3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

[O.C.(A)] Table-3

Door Thickness	O.C. (A)			
(D)	Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.207, 2 : P.221, 3 : P.201, 4 : P.200

100° Opening | **14mm Overlay** | **Overlay 10~14mm** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Stainless Steel Mounting Plate 1 100 Series**

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS

Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

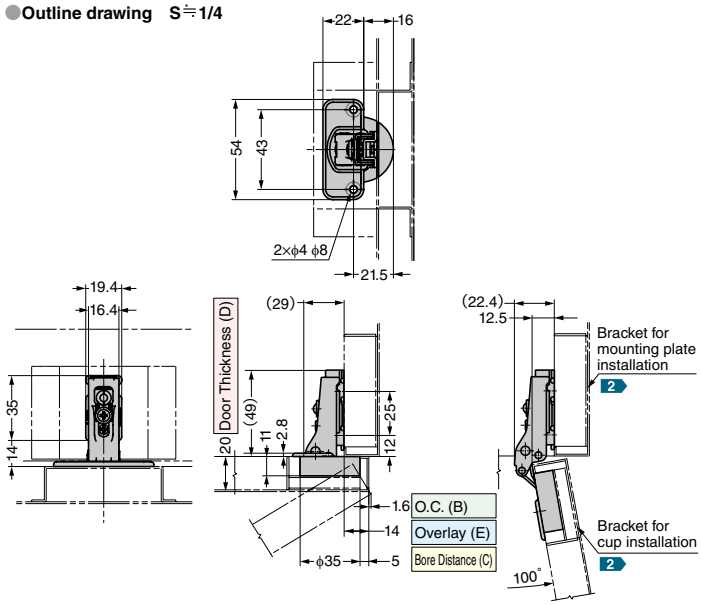
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-875	100-46/14SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	39.8	200
G	3D	160-073-880	100-C46/14SUS304B	With Catch			44	200

A mounting plate (sold separately) is required for installation. Please order separately.

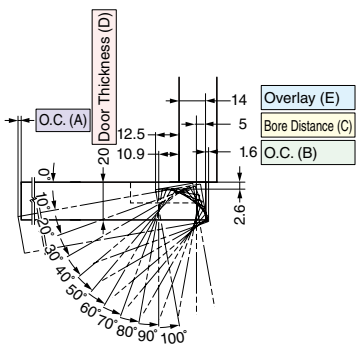
Outline drawing S≒1/4



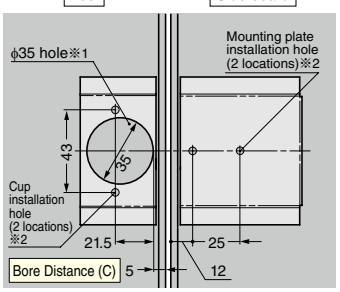
Picture above is the combination of 100-46/14 or 100-C46/14 (w/catch) and mounting plate 100-P3A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	12	13	14

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.207, 2 : P.221, 3 : P.201, 4 : P.200

100° Opening | **9mm Overlay** | Overlay 5~9mm | Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm | Stainless Steel Mounting Plate 1 100 Series

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS

Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

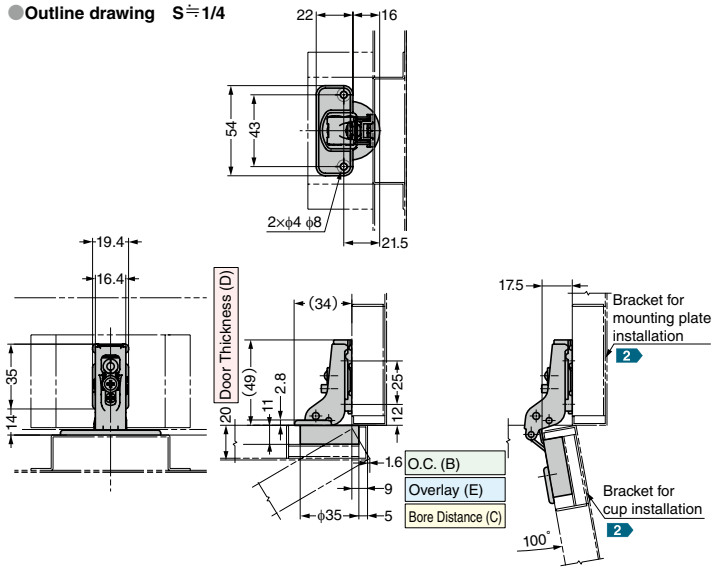
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-883	100-46/9 SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	41.3	200
G	3D	160-073-884	100-C46/9 SUS304B	With Catch			45.9	200

A mounting plate (sold separately) is required for installation. Please order separately.

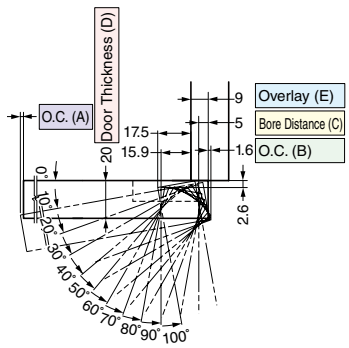
Outline drawing S≒1/4



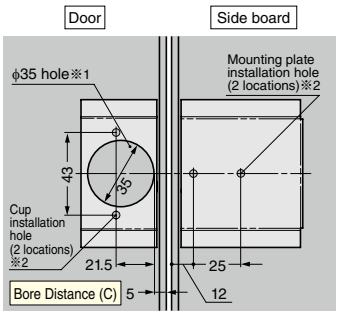
Picture above is the combination of 100-46/9 or 100-C46/9 (w/catch) and mounting plate 100-P3A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	7	8	9

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

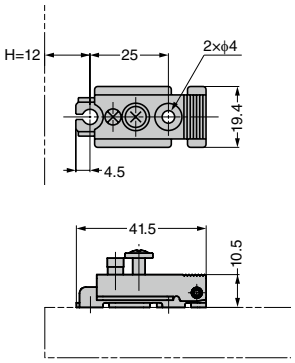
[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.207, 2 : P.221, 3 : P.201, 4 : P.200

STANDARD TYPE

STAINLESS STEEL MOUNTING PLATE 100-P3A-SUS304B

SUS



- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

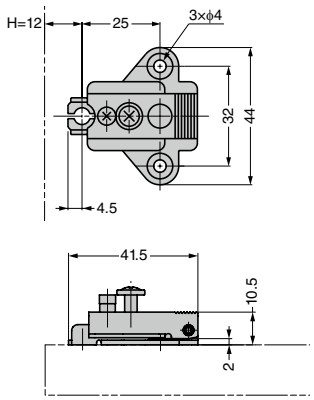
[Recommended Screws]
- M4 binding head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-155	100-P3A-SUS304B	Stainless Steel (SUS304)	Barrel Polished	21.3	400

SYSTEM 37, 32 TYPE

STAINLESS STEEL MOUNTING PLATE 100-P4A-32-SUS304B

SUS



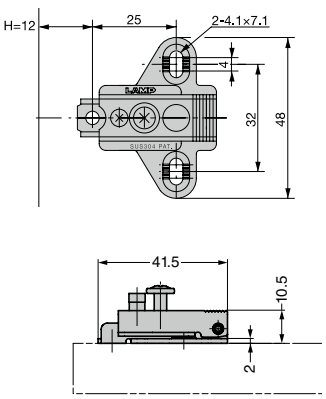
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- M4 binding head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-149	100-P4A-32-SUS304B	Stainless Steel (SUS304)	Barrel Polished	26	400

STAINLESS STEEL MOUNTING PLATE 100-P4A/32-3WAY-SUS304B

SUS



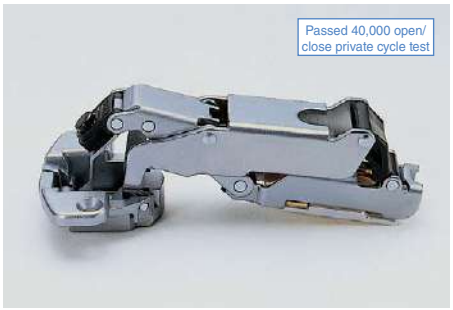
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- M4 binding head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-079-044	100-P4A/32-3WAY-SUS304B	Stainless Steel (SUS304)	Barrel Polished	40	400

170° Opening | **19mm Overlay** | **Overlay 15~20mm** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

- Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

- 100 series mounting plate 1

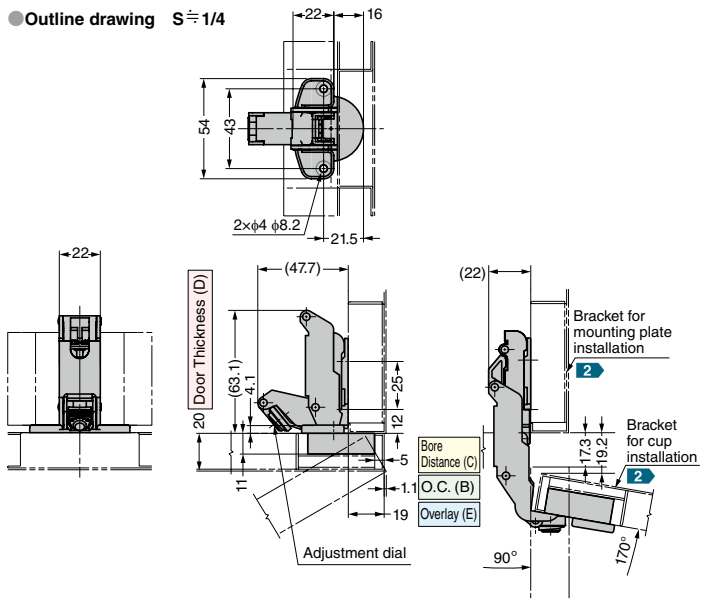
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-390	170-34/19	Without Catch	Body/Steel, Cup/	Satin	117	100
G	3D	160-073-400	170-C34/19	With Catch	Zinc Alloy (ZDC)	Chrome	125.7	100

A mounting plate (sold separately) is required for installation. Please order separately.

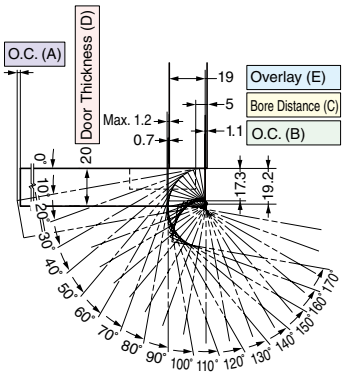
- **Outline drawing** S≒1/4



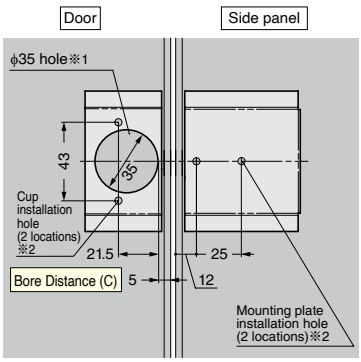
Picture above is the combination of 170-34/19 or 170-C34/19 (w/catch) and mounting plate 100-03A (sold separately).

- **Locus chart** S≒1/4

(How to Use the Locus Chart 3)



- **Cut out dimensions** For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Overlay (E)	17	18	19	20

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness	Bore Distance (C)			
(D)	3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0.1	0.1	0.1	0.1
18	0.1	0.1	0.1	0.1
19	1.1	0.8	0.3	0.1
20	2.5	1.7	1.1	0.6
21※	3.5	2.7	2.0	1.5
22※	4.5	3.7	2.9	2.3
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door).

[O.C.(A)] Table-3

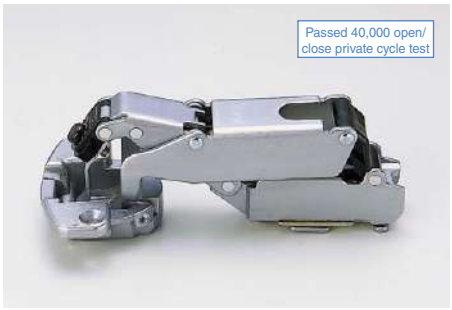
Door Thickness	O.C. (A)		
(D)	Door Width 300	Door Width 400	Door Width 500
15	0.7	0.6	0.5
20	0.7	0.6	0.5
22	0.7	0.6	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

170° Opening | **9mm Overlay** | Overlay 5~10mm | Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm | Mounting Plate 1 100 Series

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

- Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

- 100 series mounting plate 1

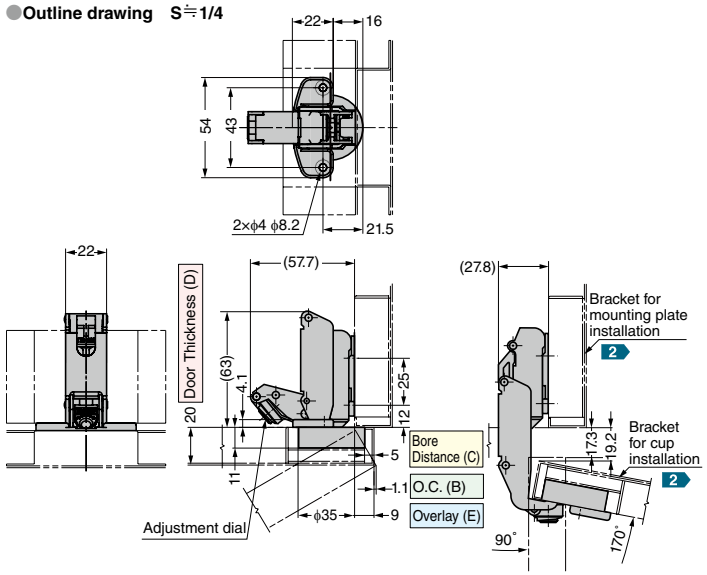
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-392	170-34/9	Without Catch	Zinc Alloy	Satin	132.8	100
G	3D	160-073-402	170-C34/9	With Catch	(ZDC)	Chrome	140.6	100

A mounting plate (sold separately) is required for installation. Please order separately.

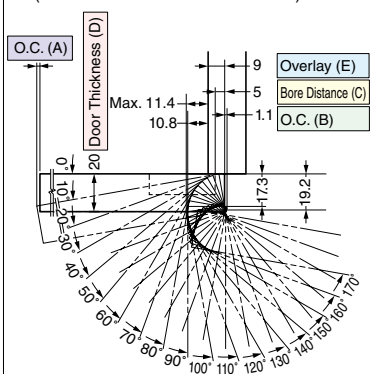
Outline drawing S≒1/4



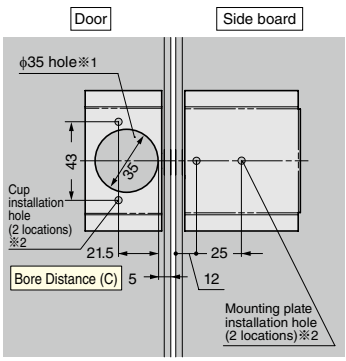
Picture above is the combination of 170-34/9 or 170-C34/9 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Overlay (E)	7	8	9	10

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0.1	0.1	0	0
19	1.0	0.6	0.2	0
20	2.3	1.7	1.1	0.6
21※	3.5	2.6	2.0	1.5
22※	4.4	3.5	2.9	2.2
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door).

[O.C.(A)] Table-3

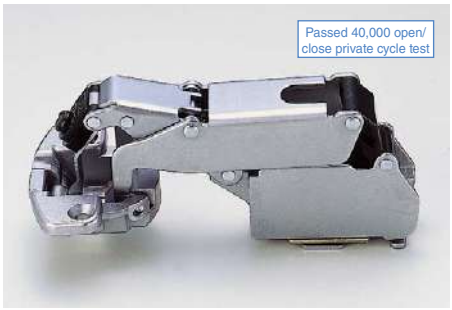
Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.7	0.5	0.5
20	0.7	0.5	0.5
22	0.7	0.5	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

170° Opening | **Inset** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

- Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

- 100 series mounting plate 1

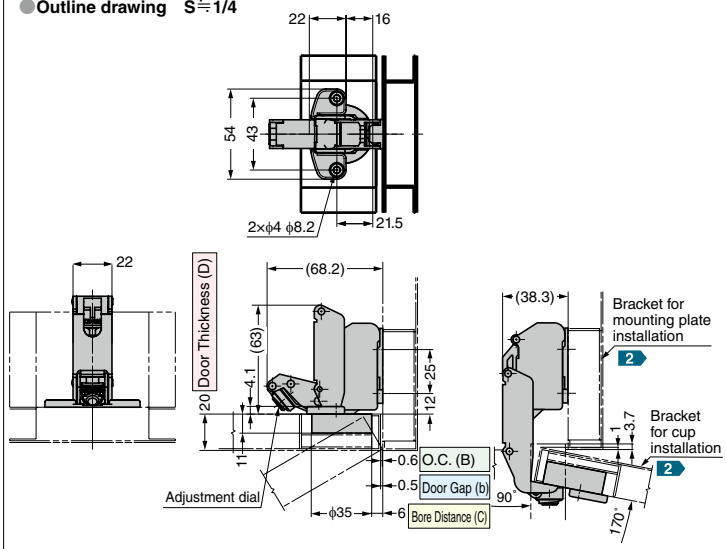
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-393	170-34/0	Without Catch	Zinc Alloy	Satin	152	100
G	3D	160-073-403	170-C34/0	With Catch	(ZDC)	Chrome	159.5	100

A mounting plate (sold separately) is required for installation. Please order separately.

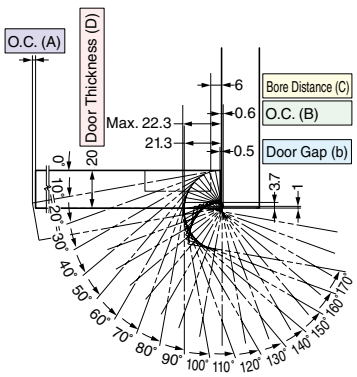
Outline drawing S≒1/4



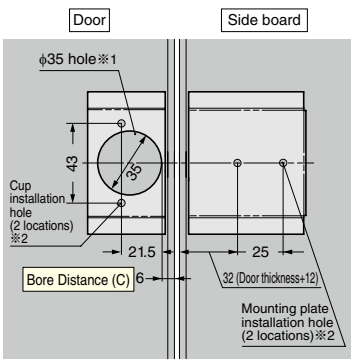
Picture above is the combination of 170-34/0 or 170-C34/0 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Door Gap (b)	3.5	2.5	1.5	0.5

For standard type shown in the table above mounting plate 0mm thickness.

Turning the overlay adjustment screw to adjust the gap.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0.1	0.1	0	0
19	1.0	0.6	0.2	0
20	2.3	1.7	1.1	0.6
21※	3.5	2.6	2.0	1.5
22※	4.4	3.5	2.9	2.2
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

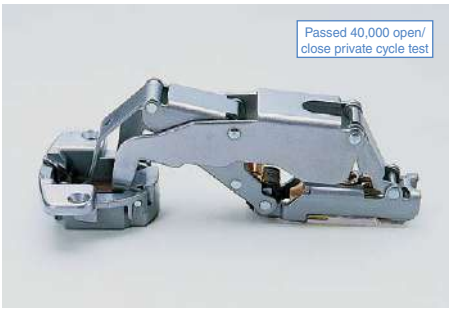
Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.7	0.5	0.5
20	0.7	0.5	0.5
22	0.7	0.5	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

160° Opening | **28mm Overlay** | Overlay 19~28mm | Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm | Mounting Plate 1 100 Series

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

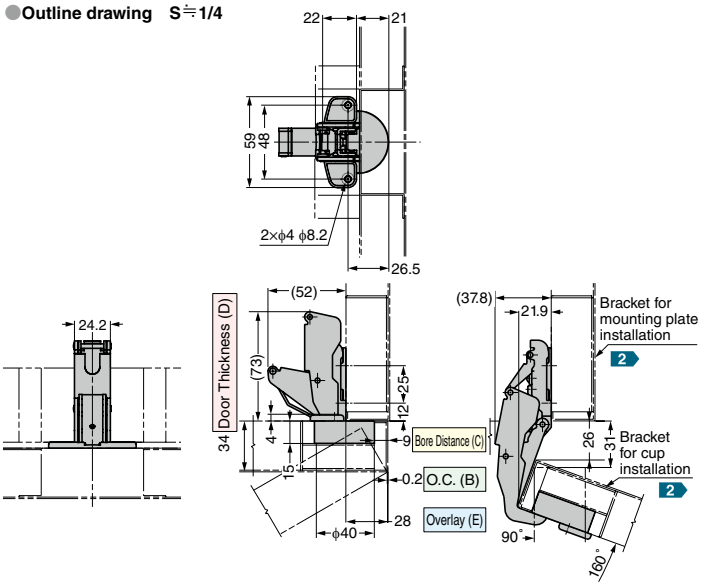
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-620	H160-34/28	Without Catch	Body/Steel, Cup/	Satin	181.4	100
G	3D	160-073-630	H160-C34/28	With Catch	Zinc Alloy (ZDC)	Chrome	194.4	100

A mounting plate (sold separately) is required for installation. Please order separately.separately.

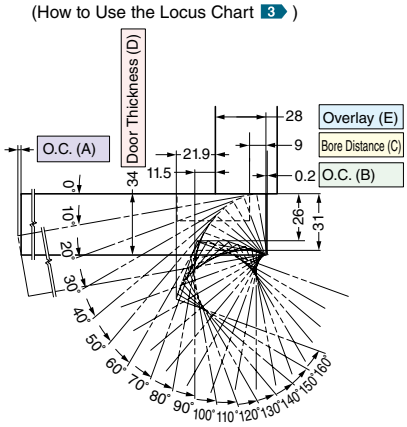
Outline drawing S≒1/4



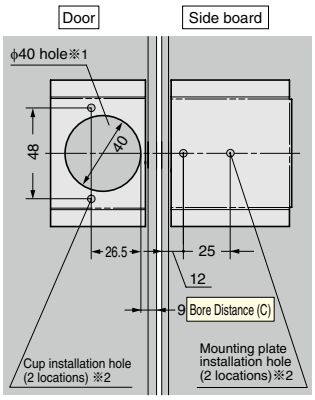
Picture above is the combination of H160-34/28 or H160-C34/28 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	22	23	24	25	26	27	28

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8	9
Max. 33	Max. 0.1						
34	0.2	0.2	0.2	0.2	0.2	0.2	0.2
35※	0.3	0.3	0.3	0.3	0.3	0.3	0.3
36※	2.0	1.6	1.5	1.4	1.0	0.7	0.5
37※	3.7	3.1	2.7	2.4	2.0	1.4	0.9
38※	5.0	4.4	3.8	3.3	2.8	2.2	1.7
39※	6.2	5.4	4.9	4.3	3.7	3.0	2.6
40※	7.2	6.4	5.7	5.3	4.6	3.9	3.4
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening.Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

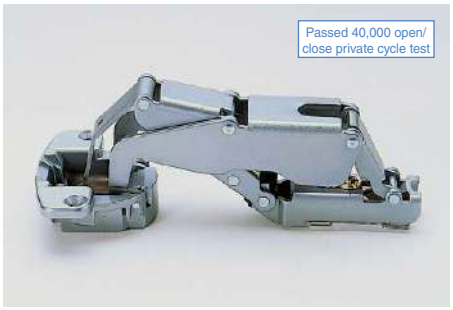
[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.6	1.1	1.0	0.9
30	2.2	1.4	1.1	1.0
34	2.2	1.5	1.1	1.0

[Door Dimensions and Number of Hinges] 4

160° Opening | **23mm Overlay** | **Overlay 14~23mm** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

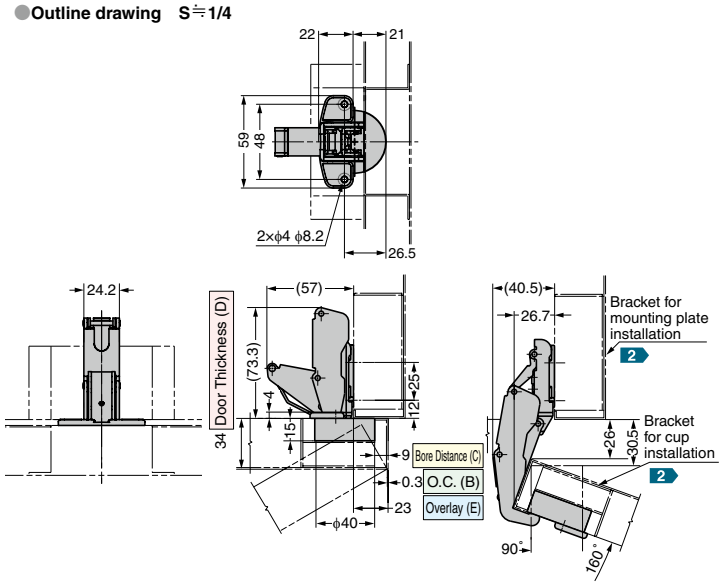
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-621	H160-34/23	Without Catch	Body/Steel, Cup/	Satin	185.4	100
G	3D	160-073-631	H160-C34/23	With Catch	Zinc Alloy (ZDC)	Chrome	197.9	100

A mounting plate (sold separately) is required for installation. Please order separately.

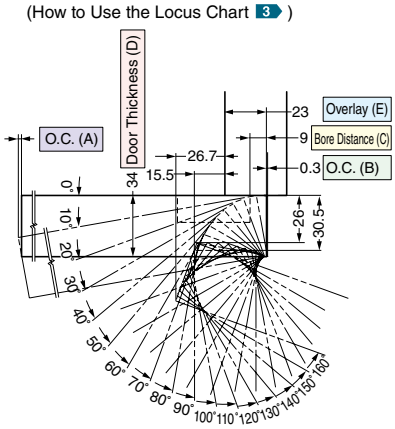
Outline drawing S≒1/4



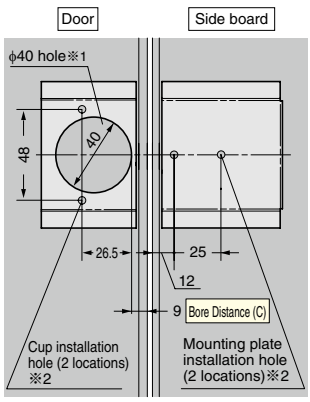
Picture above is the combination of H160-34/23 or H160-C34/23 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	17	18	19	20	21	22	23

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8	9
Max. 33	Max. 0.2						
34	0.3	0.3	0.3	0.3	0.3	0.3	0.3
35※	0.7	0.7	0.7	0.7	0.7	0.6	0.5
36※	3.2	3.0	2.7	2.3	1.6	1.3	0.9
37※	5.0	4.4	3.8	3.2	2.6	2.1	1.6
38※	6.2	5.5	4.8	4.2	3.5	2.9	2.4
39※	7.2	6.4	5.7	5.1	4.4	3.9	3.3
40※	8.3	7.3	6.6	6.0	5.4	4.7	4.2
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

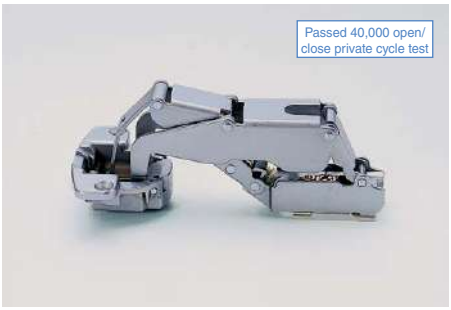
Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.8	1.3	1.0	0.8
34	1.8	1.3	1.0	0.8

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

160° Opening | **18mm Overlay** | Overlay 9~18mm | Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm | Mounting Plate 1 100 Series

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

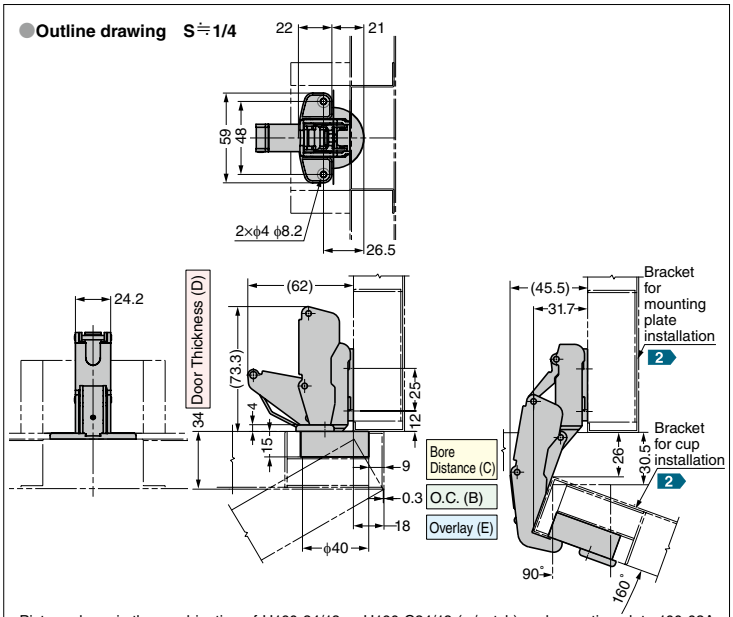
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-622	H160-34/18	Without Catch	Zinc Alloy	Satin	191	100
G	3D	160-073-632	H160-C34/18	With Catch	(ZDC)	Chrome	203.5	100

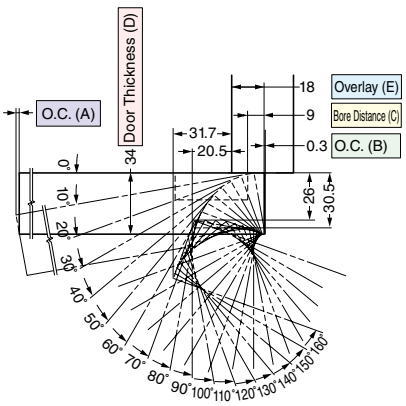
A mounting plate (sold separately) is required for installation. Please order separately.

Outline drawing S≒1/4

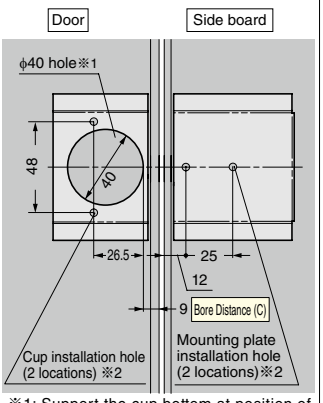


Picture above is the combination of H160-34/18 or H160-C34/18 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4
(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	12	13	14	15	16	17	18

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -6mm).

[Opening Clearance (O.C.)]
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8	9
Max. 33	Max. 0.2						
34	0.3	0.3	0.3	0.3	0.3	0.3	0.3
35※	0.7	0.7	0.7	0.7	0.7	0.6	0.5
36※	3.2	3.0	2.7	2.3	1.6	1.3	0.9
37※	5.0	4.4	3.8	3.2	2.6	2.1	1.6
38※	6.2	5.5	4.8	4.2	3.5	2.9	2.4
39※	7.2	6.4	5.7	5.1	4.4	3.9	3.3
40※	8.3	7.3	6.6	6.0	5.4	4.7	4.2
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

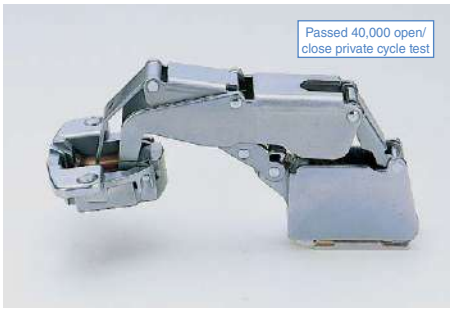
Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.8	1.3	1.0	0.8
34	1.8	1.3	1.0	0.8

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

160° Opening | **Inset** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

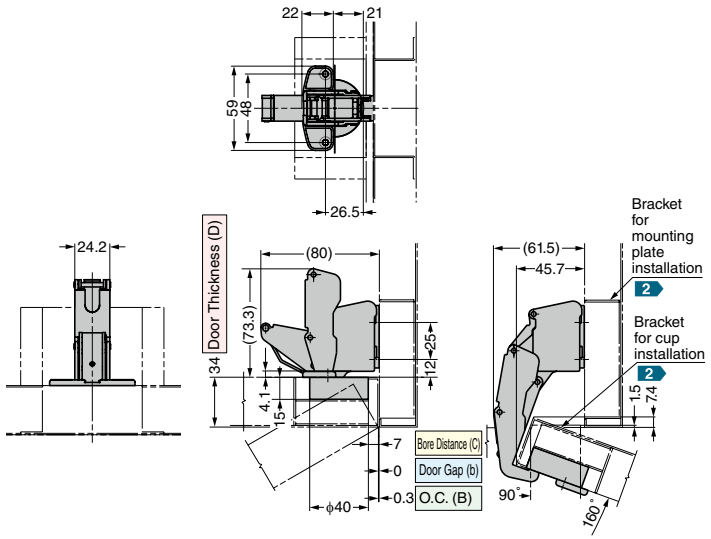
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-623	H160-34/0	Without Catch	Zinc Alloy	Satin	230.9	100
G	3D	160-073-633	H160-C34/0	With Catch	(ZDC)	Chrome	244.1	100

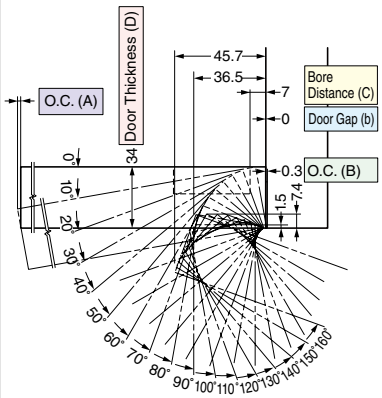
A mounting plate (sold separately) is required for installation. Please order separately.

Outline drawing S≒1/4

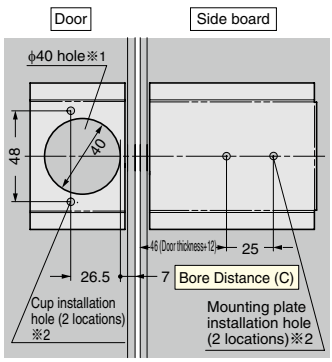


Picture above is the combination of H160-34/0 or H160-C34/0 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4
(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7
Door Gap (b)	4	3	2	1	0

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw to adjust the gap.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7
Max. 30	Max. 0.1				
31	0.1	0.1	0.1	0.1	0.1
32	0.2	0.2	0.2	0.2	0.2
33	0.2	0.2	0.2	0.2	0.2
34	0.3	0.3	0.3	0.3	0.3
35※	0.9	0.9	0.9	0.8	0.8
36※	3.4	3.1	2.8	2.2	1.6
	O.C. (B)				

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

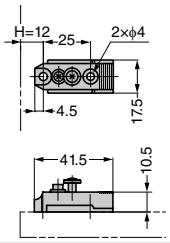
[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.7	1.3	1.0	0.8
34	1.7	1.3	1.0	0.8

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.215~P.218, 2 : P.221, 3 : P.201, 4 : P.200

MOUNTING PLATE 100-01



- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

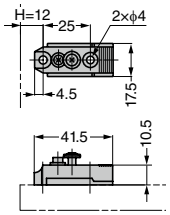
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	160-074-070	100-01	PA	Ivory	7.3	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-03



- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

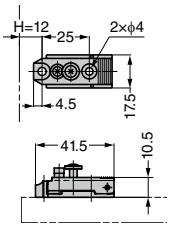
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-079	100-03	Zinc Alloy (ZDC)	Satin Chrome	22.3	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-03A



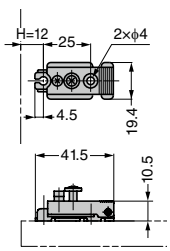
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-083	100-03A	Zinc Alloy (ZDC)/Steel	Nickel/Coloured Zinc Chromate	27.8	800

MOUNTING PLATE 100-P3A



- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

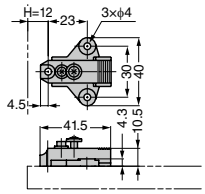
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-244	100-P3A	Steel	Satin Chrome/Coloured Zinc Chromate	21.4	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SYSTEM 30 TYPE

MOUNTING PLATE 100-02-30



- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

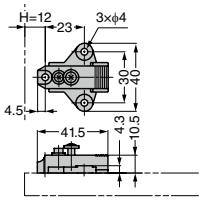
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	160-074-071	100-02-30	PA	Ivory	8.3	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-04-30



- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

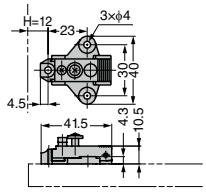
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-085	100-04-30	Zinc Alloy (ZDC)	Satin Chrome	28.3	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-02A-30



- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

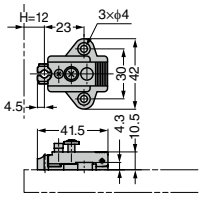
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-074-074	100-02A-30	PA/Steel	Ivory/Coloured Zinc Chromate	17	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-04A-30



- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

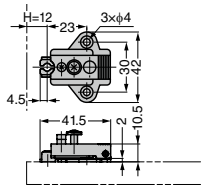
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-087	100-04A-30	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	30.7	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-P4A-30



- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

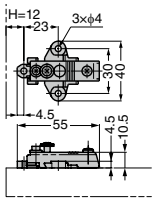
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-161	100-P4A-30	Steel	Satin Chrome/Coloured Zinc Chromate	26.6	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SYSTEM 30 TYPE

MOUNTING PLATE 100-04W-30



- Height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Remarks]

- When using a concealed hinge with wide angle opening, vertical adjustment screw is difficult to adjust.

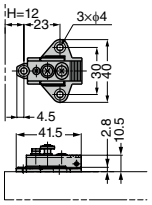
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-095	100-04W-30	Zinc Alloy (ZDC)/Steel	Satin Chrome	35.4	200	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-04A-W-30



- Height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

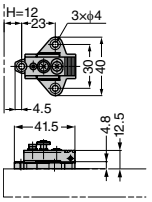
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-115	100-04A-W-30	Steel	Satin Chrome/Coloured Zinc Chromate	32.1	200	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-04A-W-30-2



- Overlay and height adjustable (±1.5).
- Height: 2mm
- Used to make overlay 2mm smaller.
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

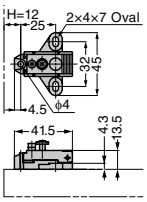
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-158	100-04A-W-30-2	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	35	200	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SYSTEM 32 TYPE

MOUNTING PLATE 100-04A-32-3



- Overlay adjustable.
- Height: 3mm
- Used to make overlay 3mm smaller.
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

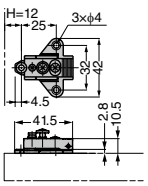
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-089	100-04A-32-3	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	37.2	400

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-04A-W-32



- Overlay and height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

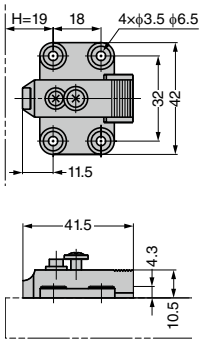
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-116	100-04A-W-32	Steel	Satin Chrome/Coloured Zinc Chromate	32.4	200	800

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-06



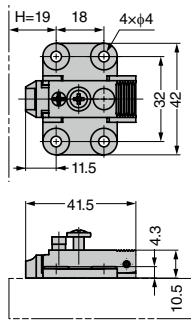
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.1 countersunk head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-110	100-06	Zinc Alloy (ZDC)	Satin Chrome	28.5	400

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-06A



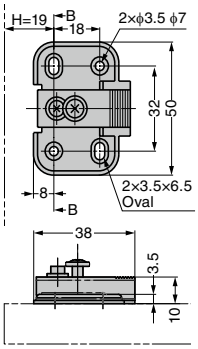
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

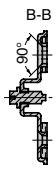
[Recommended Screws]
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-111	100-06A	Zinc Alloy (ZDC)/Steel	Satin Chrome/ Coloured Zinc Chromate	36.1	400

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-P6





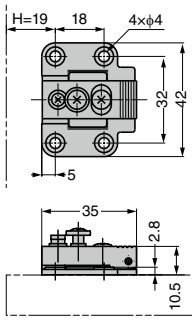
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.1 countersunk head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-160	100-P6	Steel	Satin Chrome	23	400

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MOUNTING PLATE 100-06AW



- Overlay and height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-171	100-06AW	Steel	Satin Chrome/ Coloured Zinc Chromate	36.7	400

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2 2mm Thickness

●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-01 100-03
100-03A 100-P3A
100-P3A-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-100	100-DP2	PA	Ivory	1.2	800	3200

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-30 2mm Thickness

●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-02-30 100-02A-30
100-04-30 100-04A-30
100-04W-30 100-P4A-30
100-04A-W-30 100-04A-W-30-2
100-P4A-30-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-105	100-DP2-30	PA	Ivory	1.5	800	3200

※ Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-32 2mm Thickness

●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-04A-32-3 100-04A-W-32
100-P4A-32-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-107	100-DP2-32	PA	Ivory	1.5	800	3200

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-06 2mm Thickness

●Used to make overlay 2mm smaller.

[Remarks]
●When used for 100-06AW, it may partially protrude.

Use with the following mounting plates:

100-06 100-06AW
100-06A

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-145	100-DP2-06	PA	Ivory	2.1	800	3200

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

JIG FOR MOUNTING PLATE FOR 100 SERIES For Wooden Overlay Door

Use with the following mounting plates:

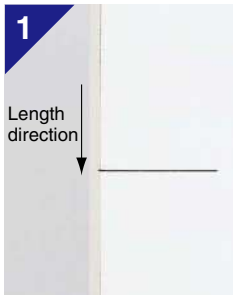
100-01	100-3
100-03A	100-02-30
100-04-30	100-02A-30
100-04A-30	100-04A-W-30
100-04A-W-30-2	100-04A-32-3
100-04A-W-32	

(Cannot be used for inset type mounting plates.)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-109	JIG	8.5	50	500

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

[How to Install]



●Draw a line at the centre of the mounting plate installation position (length direction) on side board etc.
If you want to erase the line later, drawing on the edge of side board is recommended.

●Align the V-groove of the jig with the line.

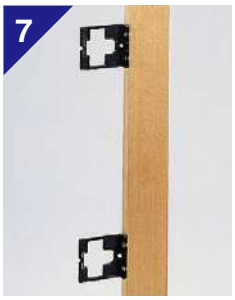
●Insert the mounting plate into the jig for correct installation position.
Optionally, insert the mounting plate into the jig and then align with the line (in reverse order of ② and ③).

●Hold the jig while fixing the mounting plate with a screw.

[Other Examples]

●Can also be used with mounting plates designed for system type.

●Mark the holes for easy installation.



●Attach the jig to a bar when installing several mounting plates at the same time.

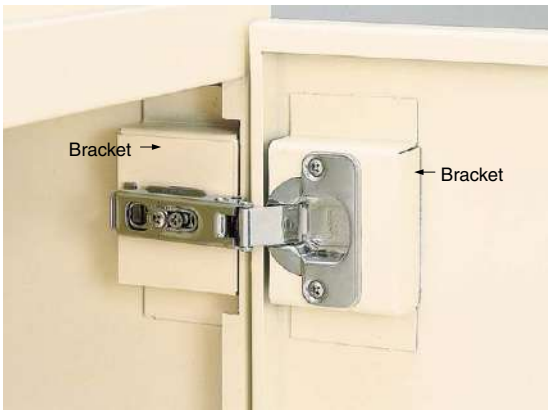
●The bar will help you decide the correct distance between the plates.

Examples of installation to sheet metal (Brackets not included)

Concealed hinges can also be used for metal cabinets.

170 (19 mm Overlay)

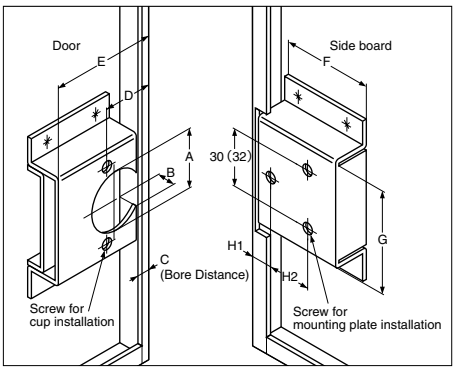
100 (19 mm Overlay)



[Bracket Installation]

Refer to this example and install brackets to the inner side of door and cabinet side board.

Customer should provide brackets.

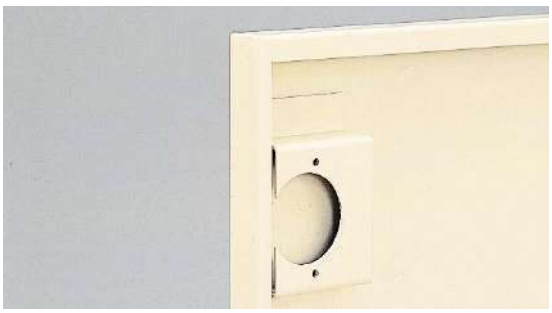


Size A: Cup diameter (ϕ26, ϕ35, or ϕ40)
Size B: Bore depth (Be sure to support cup bottom)
Size C: Bore distance
Size D: Distance from door edge to cup mounting screw
Size E: More than distance from door edge to tip of cup flange.
●For details, refer to the content page of each hinge.

Size F: More than total length of mounting plate.
Size G: More than width of mounting plate.
Size H_1, H_2: Installation position size from edge of mounting plate.
●For details, refer to the content page of the mounting plate of hinge used.

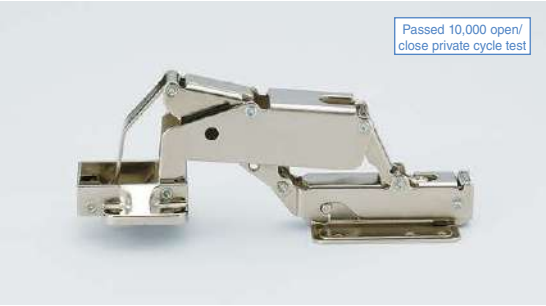
Bracket for Mounting Plate Installation

Bracket for Cup Installation



TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED HINGE (CLIP-ON) HT160THV2-G



- Sheet metal door can be quickly installed and removal.
- Spacers on the slide arms reduce arm wear and door sagging.
- Door opens without interfering with side cabinets or wall.
- For more details , please contact local representatives.

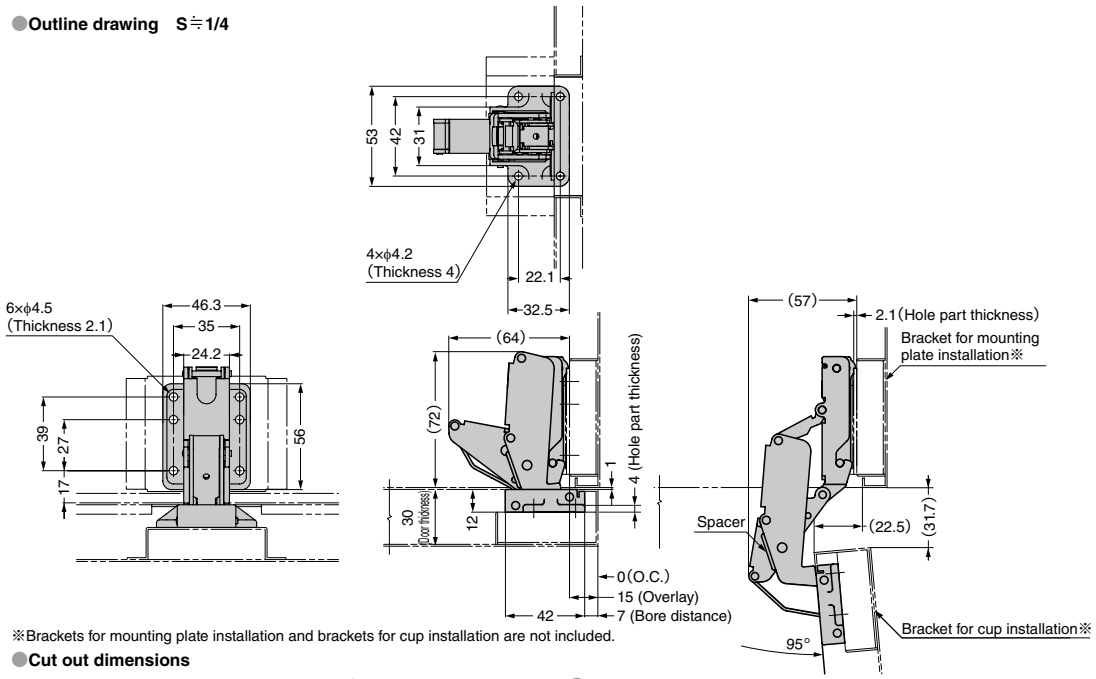
[Applications]

- Small vending machines, ticket vending machines, continuous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

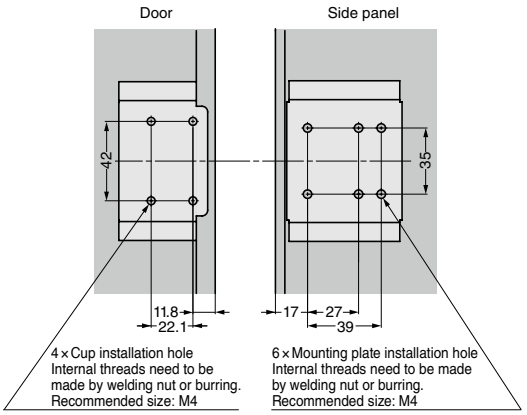
- Mounting plate HT160TZ

Outline drawing S≒1/4



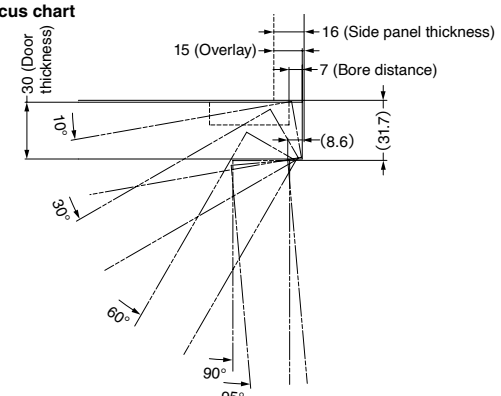
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 7 mm, Door Thickness 30 mm and 15 mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-070-327	HT160THV2-G	Body/Steel, Cup/Zinc Alloy (ZDC), Spacer/POM	Body・Cup/Nickel, Spacer/Black	204.6	100

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-391	HT160TZ	Steel	Nickel	69.1	200

※Use in combination of hinge body and mounting plate (sold separately).

CONCEALED HINGE HT160V2 With Mounting Plate

- For sheet metal doors.
- Overlay adjustment (Max. $^{+0}_{-3mm}$) by turning the overlay adjustment screw.
- Spacer on the slide arms reduces arm wear and door sagging.
- Door opens without interfering with side cabinets or wall.
- For more details, please contact local representatives.

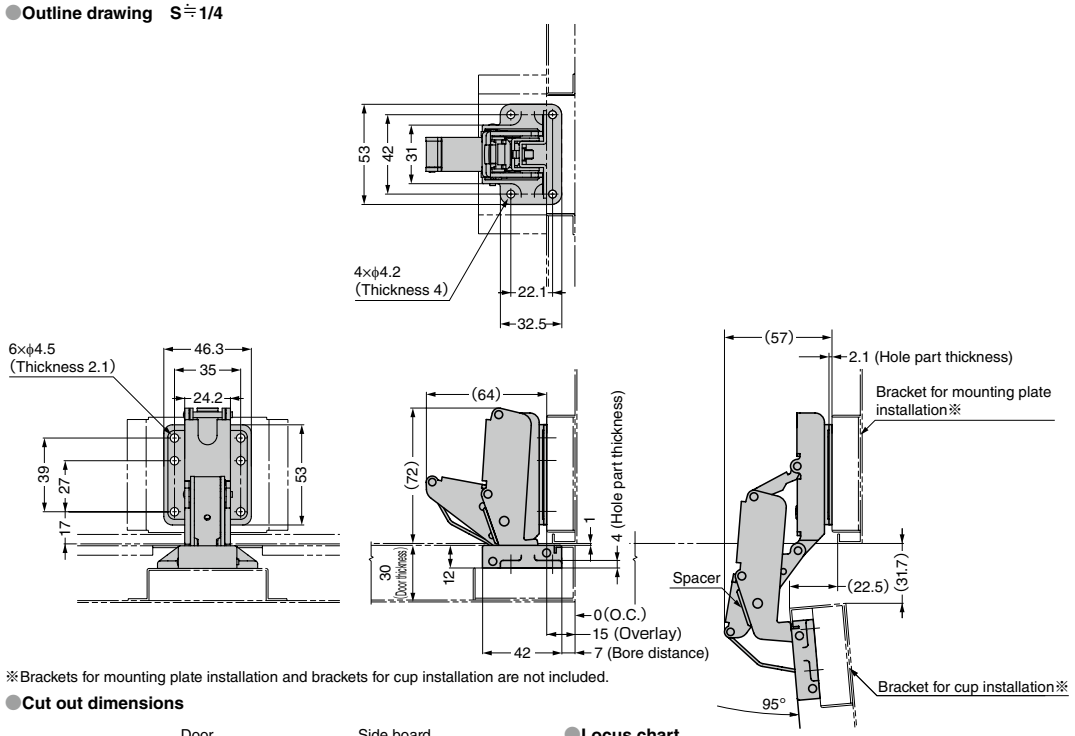
[Applications]

- Small vending machines, ticket vending machines, continuous doors, door of cabinet embedded in the wall, etc.

[Parts Included]

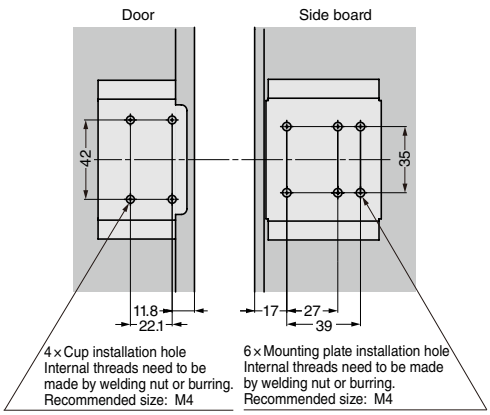
- Mounting plate

Outline drawing S≒1/4



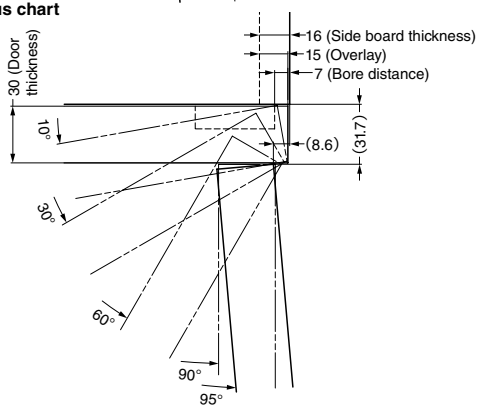
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 7 mm, Door Thickness 30 mm and 15 mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-070-393	HT160V2	Body/Steel, Cup/Zinc Alloy (ZDC), Spacer/POM	Body • Cup/Nickel, Spacer/Black	252.6	50

TORQUE CONCEALED HINGE H95TSH-F

- Has free-stop torque mechanism with 95˚ opening.
- Gives no spring-back and backlash.
  When the angle is near 0˚, the torque will be released.
- Easy installation and detachment.
- Hinge can be easily fixed onto the mounting plate by pressing down.
- Less interference with adjacent objects due to wide throw opening.
- The safety pin prevents accidental unlocking of the lock lever.

[Application]

- Vending machines, ticket machines, continuous doors, small cabinet door embedded in the walls.

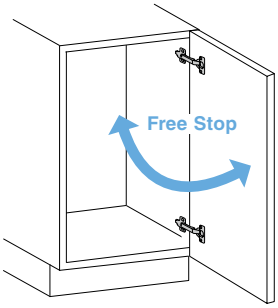
[Sold Separately]

- Mounting Plate H95TSZ

[Remarks]

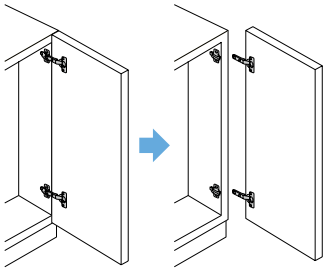
- When the angle is near 0˚, the torque will be released.

[Torque Mechanism]



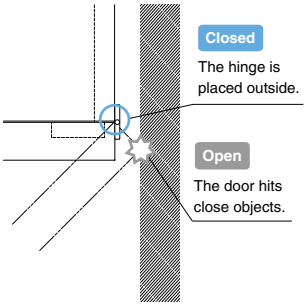
Holds in position even if the door is inclined.

[Easy Installation and Detachment]

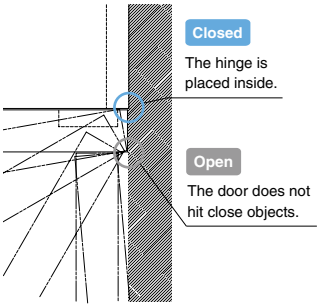


[Door Locus Comparison]

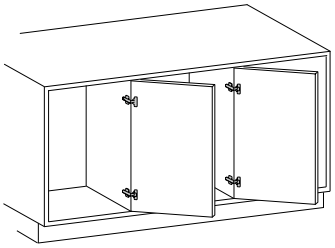
Butt Hinge



Concealed Hinge

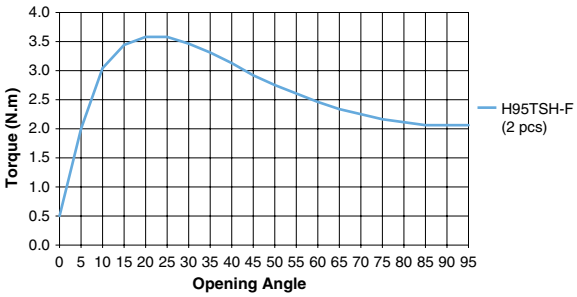


[Alternative Installations]



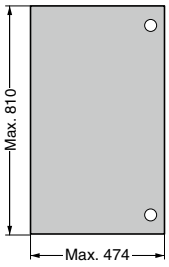
Can be used on doors lined up side by side.

[Torque Graph]



Although the torque will be released to prevent "spring-back" at a nearly closed angle, the door will not be firmly kept closed. If detent function is needed, please use with catches.

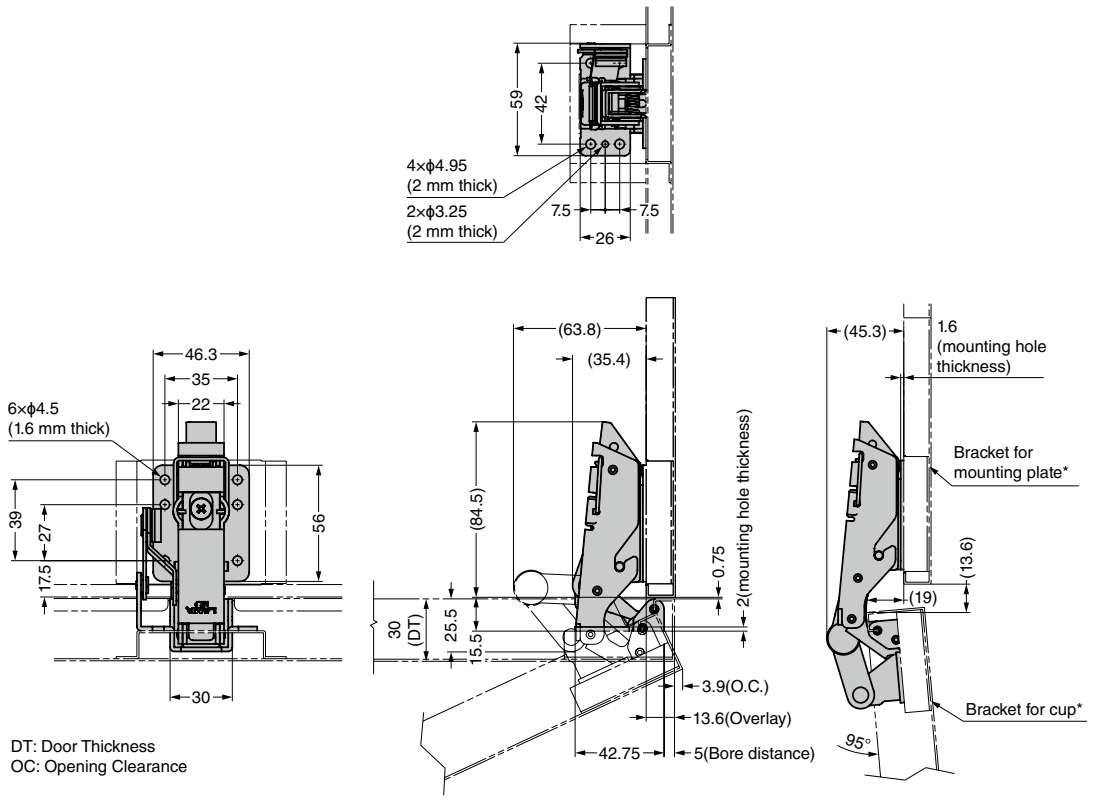
[Example Door Spec]



- Height : Max. 810 mm
- Width : Max. 474 mm
- Thickness : Max. 92 mm
- Weight : Max. 20 kg

* 2 hinges used

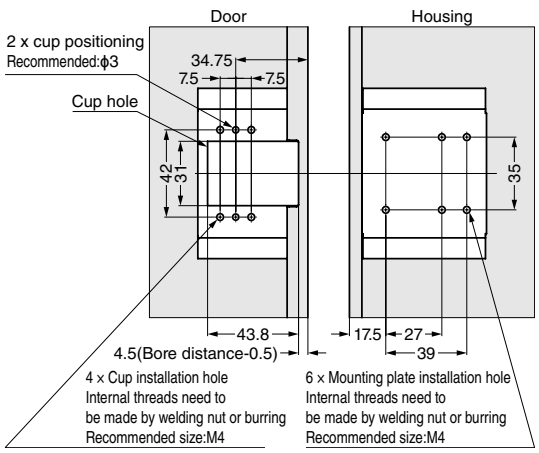
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES



DT: Door Thickness
OC: Opening Clearance

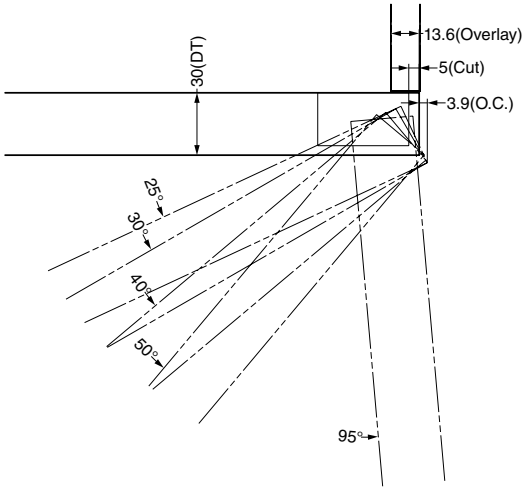
* Please prepare "Bracket for mounting plate" and "Bracket for cup" by yourself.

[Cut Out Dimensions]



The drawing shows the installation position in the conditions below:
- Bore distance : 5 mm
- Door thickness : 30 mm
- Overlay : 13.6 mm

[Locus Chart]



Reference door weight: 20 kg
(In case of door size W450 x H800, pitch 550, vertical use)

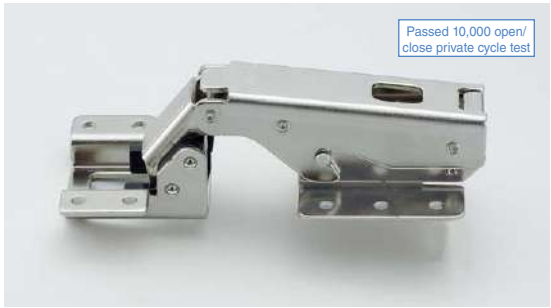
[Hinge Body]

RoHS	CAD	Item Code	Item Name	Main Material	Finish	Weight (g)	Box (pcs)
G	3D	160-046-391	H95TSH-F	Steel	Nickel	180	60

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Main Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-591	H95TSZ	Steel	Nickel	94	100

CONCEALED HINGE (CLIP-ON) H95TMH



- Compact design for space saving.
- Simple one-touch installation and detachment.
- Door opens without interfering with side cabinets or wall.
- For more details, please contact local representatives.

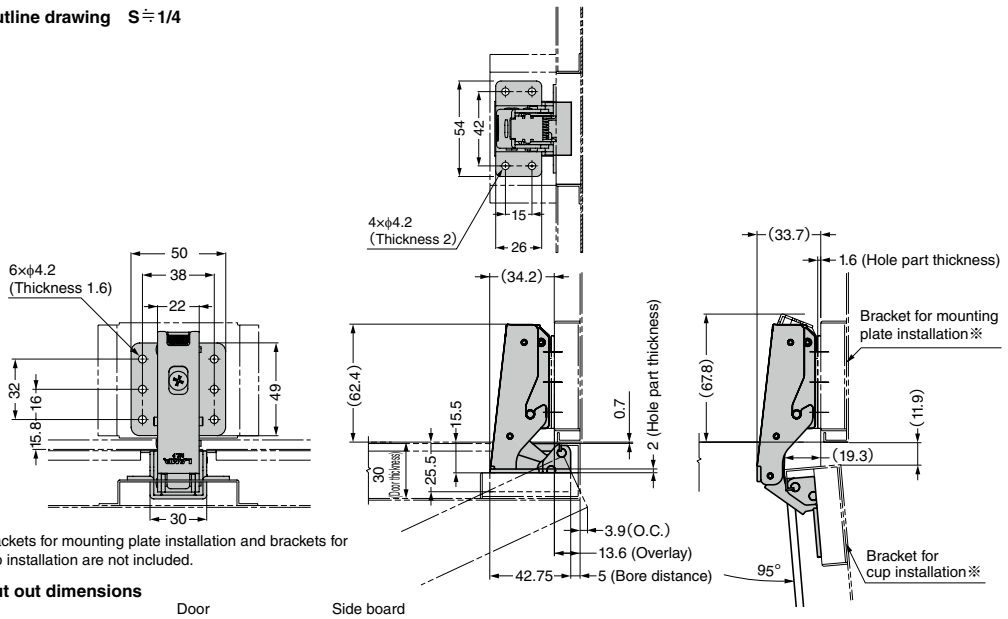
[Applications]

- Small vending machines, ticket vending machines, continuous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

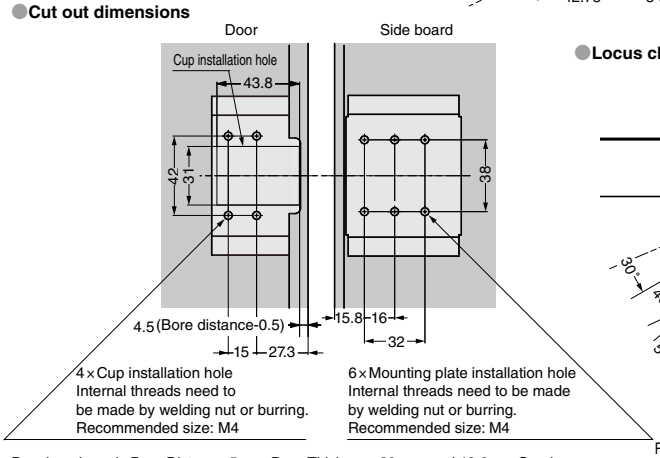
- Mounting plate H95TMZ

Outline drawing S≒1/4

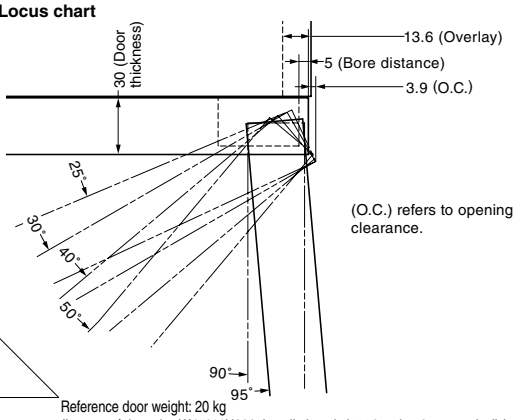


※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Locus chart



Drawing above is Bore Distance 5mm, Door Thickness 30 mm and 13.6mm Overlay.

Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

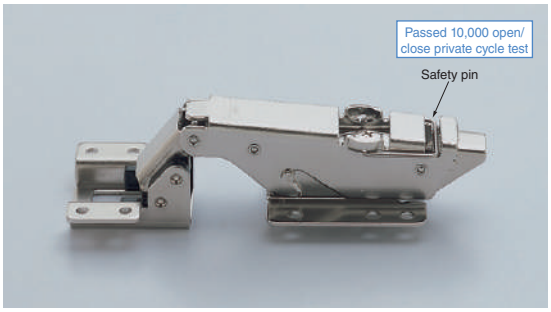
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-101	H95TMH	Steel	Nickel	138	100

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-102	H95TMZ	Steel	Nickel	80.8	100

※Use in combination of hinge body and mounting plate (sold separately).

CONCEALED HINGE (CLIP-ON) H95TSH



- Simple installation and detachment by one-touch.
- Door opens without interfering with side cabinets or wall.
- With a safety pin on the lock lever.
- For more details, please contact local representatives.

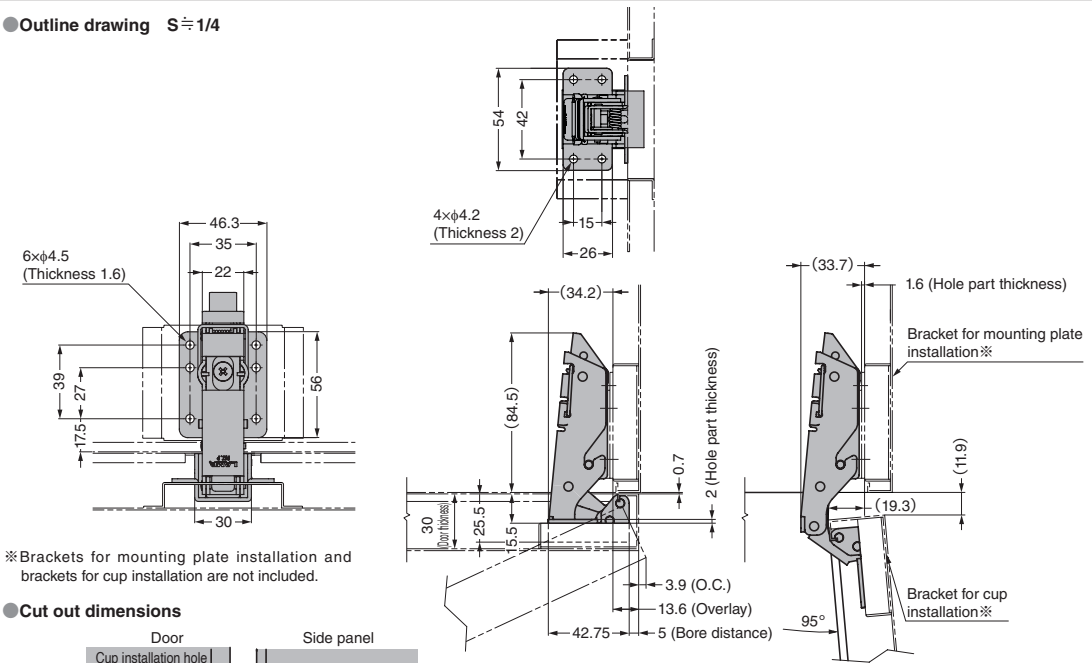
[Applications]

- Small vending machines, ticket vending machines, continuous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

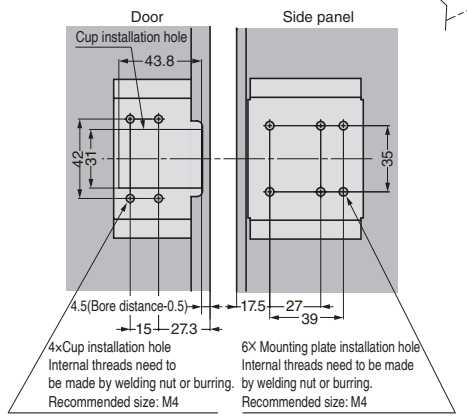
- Mounting plate H95TSZ

Outline drawing S≒1/4



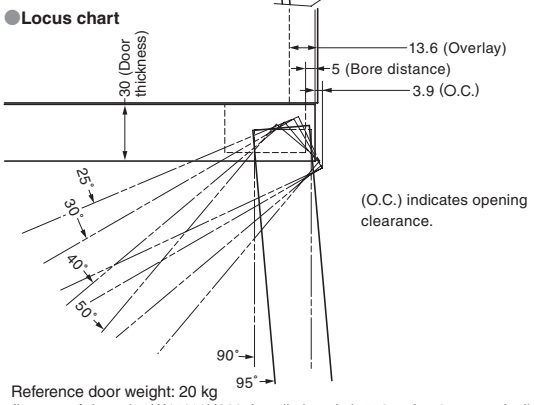
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 5mm, Door Thickness 30 mm and 13.6mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

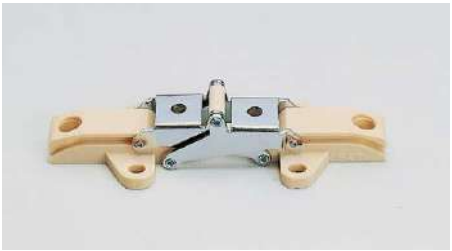
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-590	H95TSH	Steel	Nickel	150	100

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-591	H95TSZ	Steel	Nickel	94	100

※Use in combination of hinge body and mounting plate (sold separately).

CONCEALED HINGE (SURFACE MOUNT) T-90-200 For Both Overlay And Inset Doors



- Can be used for overlay and inset.

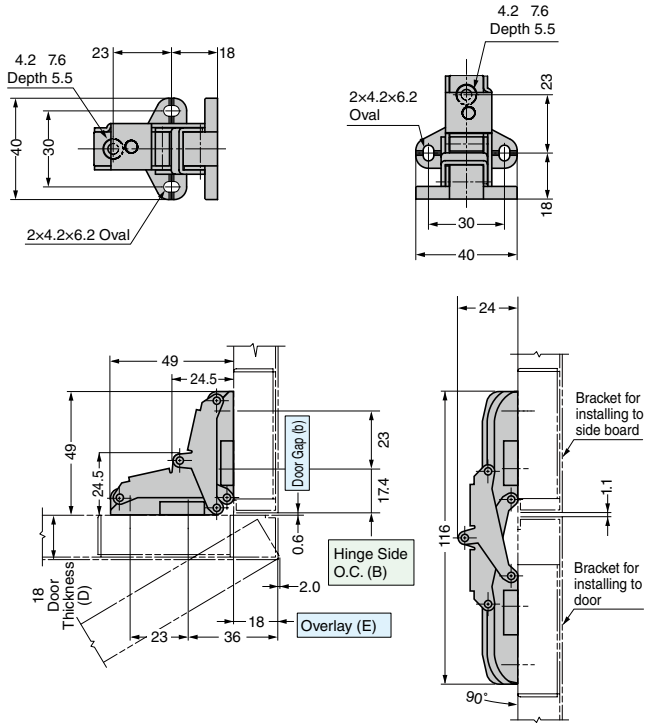
[Recommended Screws]
- Pan head screw M4
- Pan head tapping screw 4

Part Name	Material	Finish / Colour
Body	PA	Ivory
Arm	Steel (SPCC)	Chrome

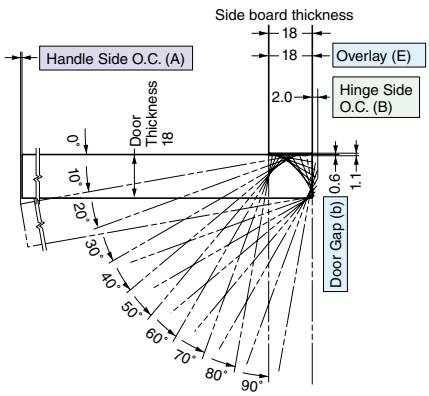
RoHS	CAD	Item Code	Item Name	Description	Overlay	Door Thickness	Opening Angle	Weight (g)	Box (pcs)
G	3D	170-090-090	T-90-200	Without Catch	15~18	15~18	90°	42	200

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

- **Outline drawing** S≒1/3



- **Locus chart** S≒1/3 (How to Use the Locus Chart 1)



Drawing above is door thickness 18mm, side board thickness 18mm and 18mm overlay.

Refer to 1 : P.201

[Opening Clearance (O.C.) and Door Gap(b)]

Handle side O.C. (A), hinge side O.C. (B) and Door Gap (b) are necessary (see the locus chart and outline drawing). Pay full attention to it in door design.

[Hinge Side O.C. (B)] Table -1

Door Thickness (D)	Hinge Side O.C. (B) Overlay (E) 15	Overlay (E) 16	Overlay (E) 17	Overlay (E) 18
15	1.1	0.5	0	0
16	2.0	1.4	0.8	0.2
17	2.9	2.3	1.7	1.1
18	3.8	3.2	2.6	2.0

※Please refer to How to Use the Locus Chart 1 if door thickness is over 18mm

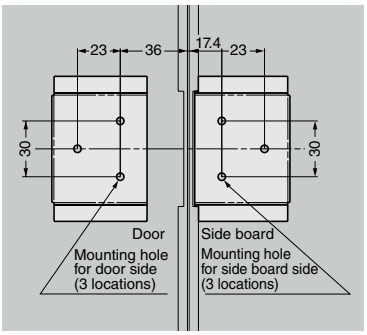
[Handle Side O.C.(A)] Table -2

Door Thickness (D)	Handle Side O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.5	0.4	0.3
16	0.5	0.4	0.4
17	0.5	0.4	0.4
18	0.5	0.4	0.4

[Overlay (E)] Table -3

Overlay (E)	Door Gap (b)
15	0.2
16	0.3
17	0.5
18	0.6

[Cut Out Dimensions] For metal door

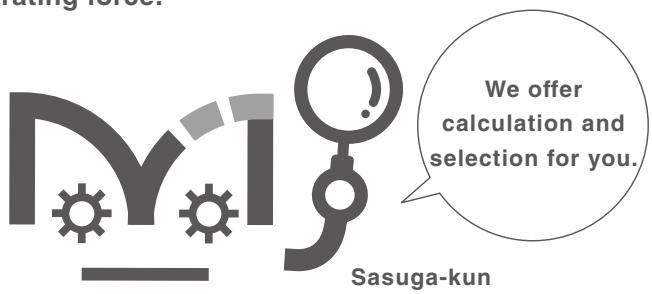


Drawing above is door thickness 18mm, side board thickness 18mm and 18mm overlay.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.

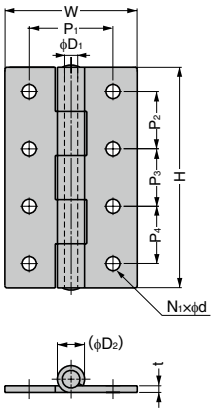


Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

BUTT HINGE LSA, LSB

SUS



●All parts made of polished stainless steel. Made to order available.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Holes	Material	Finish	H	W	P1	P2	P3	P4	t	d	D1	D2	N1	Load Capacity N / 2 pcs	Load Capacity kgf / 2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-730	LSA-40	Without screw holes	Stainless Steel (SUS304)	Mirror	40	35	–	–	–	–	1.5	–	3	6.3	–	69	7	25	100	400
G	3D	170-090-731	LSA-50				50											88	9	30	100	400
G	3D	170-090-718	LSA-65				65	50					2		4.5	8.8		157	16	66	50	200
G	3D	170-090-719	LSA-75				75											186	19	76	40	160
G	3D	170-090-734	LSA-90				90	60					3		6	12.3		333	34	190	10	80
G	3D	170-090-735	LSA-100				100											363	37	200	10	60
G	3D	170-090-724	LSB-40	With screw holes			40	35	22	26			1.5	3.2	3	6.3	4	69	7	25	100	400
G	3D	170-090-725	LSB-50				50			34				4.3				88	9	30	100	400
G	3D	170-090-716	LSB-65				65	50	30	23	23		2		4.5	8.8	6	157	16	64	50	200
G	3D	170-090-717	LSB-75				75			27	27			5.3				186	19	74	40	160
G	3D	170-090-728	LSB-90				90	60	38	35	35		3	6.4	6	12.3	8	333	34	180	10	80
G	3D	170-090-729	LSB-100				100			26	26	26						363	37	195	10	60

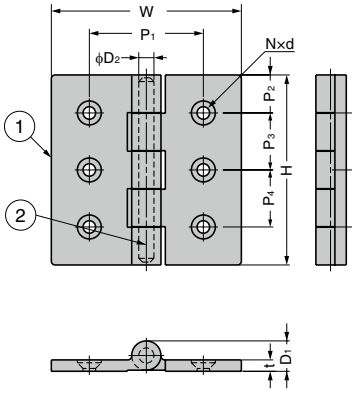
Refer to 1 : P.43

BUTT HINGE LSF

NSF SUS316

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Mirror
②	Shaft	Stainless Steel (SUS316)	–

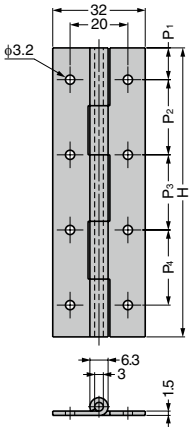
※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	H	W	P1	P2	P3	P4	t	D1	D2	Knuckles	N	d	Load Capacity N / 2 pcs	Load Capacity kgf / 2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-720	LSF-50	50	50	35	15	20	–	5	14	6	3	4	Counterbore for M4	275	28	110	20	100
G	3D	170-090-721	LSF-65	65	65	40		35							Counterbore for M5	353	36	190	20	80
G	3D	170-090-722	LSF-75	75	75	50	17.5	40		6	16	8			Counterbore for M6	500	51	305	10	50
G	3D	170-090-723	LSF-100	100	100	60	20	30	30				5	6		667	68	500	10	30

Refer to 1 : P.43

BUTT HINGE KHA

SUS



- Various sizes available.
- Steel hinge also available on order.For further details, please contact local representatives.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

Material	Finish
Stainless Steel (SUS304)	Polished

[With Mounting Holes]

RoHS	CAD	Item Code	Item Name	H	P1	P2	P3	P4	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-180	KHA-25C	25	6	13	–	–	3	49	5	13	200	800
G	3D	170-091-181	KHA-30C	30	7	16				59	6	16	200	800
G	3D	170-091-182	KHA-40C	40	8	24				69	7	21	150	600
G	3D	170-091-183	KHA-50C	50	10	30				88	9	26	100	400
G	3D	170-091-184	KHA-60C	60	8	22	22	–	5	108	11	31	100	400
G	3D	170-091-185	KHA-65C	65	8.5	24	24			118	12	34	100	400
G	3D	170-091-186	KHA-75C	75	9.5	28	28			137	14	39	50	200
G	3D	170-091-187	KHA-80C	80	10	30	30			147	15	42	50	200
G	3D	170-091-188	KHA-90C	90		35	35			167	17	47	50	200
G	3D	170-091-189	KHA-100C	100	11	26	26	26		186	19	52	50	200

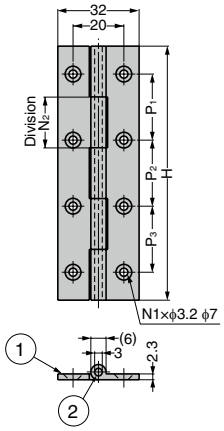
Refer to 1 : P.43

[Without Mounting Holes]

RoHS	CAD	Item Code	Item Name	H	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-170	KHA-25CN	25	3	49	5	13	200	800
G	3D	170-091-171	KHA-30CN	30		59	6	16	200	800
G	3D	200-091-172	KHA-40CN	40		69	7	21	150	600
G	3D	170-091-191	KHA-50CN	50		88	9	26	100	400
G	3D	170-091-192	KHA-60CN	60	5	108	11	31	100	400
G	3D	170-091-193	KHA-65CN	65		118	12	34	100	400
G	3D	170-091-176	*KHA-75CN	75		137	14	39	50	200
G	3D	170-091-195	KHA-80CN	80		147	15	42	50	200
G	3D	170-091-196	KHA-90CN	90		167	17	47	50	200
G	3D	170-091-179	KHA-100CN	100		186	19	52	50	200

*The order number 170-091-194 has been changed to 170-091-176 and is now available without an engraving.

BUTT HINGE KHB



- Drawing material, with small shaft diameter.
- Various sizes available.

[Applications]

- Ship, vehicle, kitchen equipment

[Remarks]

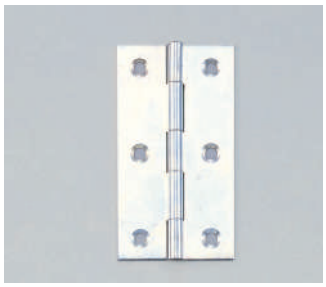
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

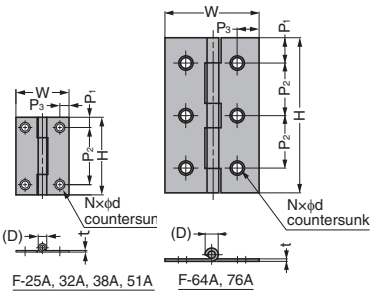
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Shaft		–

RoHS	CAD	Item Code	Item Name	H	P1	P2	P3	N1	N2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-226	KHB-25CR	25	13	–	–	4	3	49	5	17	200	800
G	3D	170-091-227	KHB-30CR	30	16					59	6	20	150	600
G	3D	170-091-228	KHB-40CR	40	24					78	8	28	100	400
G	3D	170-091-229	KHB-50CR	50	30					98	10	35	100	400
G	3D	170-091-230	KHB-60CR	60	22	22	–	6	5	118	12	41	60	240
G	3D	170-091-231	KHB-65CR	65	24	24				127	13	43	60	240
G	3D	170-091-232	KHB-75CR	75	28	28				147	15	52	60	240
G	3D	170-091-233	KHB-80CR	80	30	30				157	16	54	60	240
G	3D	170-091-234	KHB-90CR	90	35	35				177	18	63	50	200
G	3D	170-091-235	KHB-100CR	100	26	26	26	8		206	21	68	50	200

Refer to 1 : P.43

BUTT HINGE F-A





- No hole type or different finish (bronze plating, melamine enamel finish, plain) are available on order. For further details, please contact local representatives.

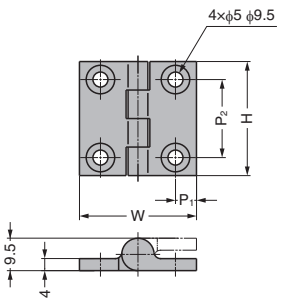
[Remarks]
- Product movement varies. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P1	P2	P3	t	D	N	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-282	F-25A	Steel (SPCC)	Clear Zinc Chromate	25	20	3.5	18	3.5	0.8	3.8	4	3.4	20	2	4.4	120	4800
G	3D	170-090-283	F-32A			32	22	4	24	4							6.1	120	4800
G	3D	170-090-284	F-38A			38	26	5	28	4.5		4.2			29	3	8.9	60	3600
G	3D	170-090-285	F-51A			51	30	6	39	5.5				3.7	39	4	13.2	60	2400
G	3D	170-090-287	F-64A			64	33	6.5	25.5	6.5	1	4.4	6	3.9	59	6	19.4	24	1200
G	3D	170-090-286	F-76A			76	41	8	30	8		5.3		4.4	69	7	32.5	24	720

Refer to 1 : P.43

BUTT HINGE 28300, 28400

SUS316



[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

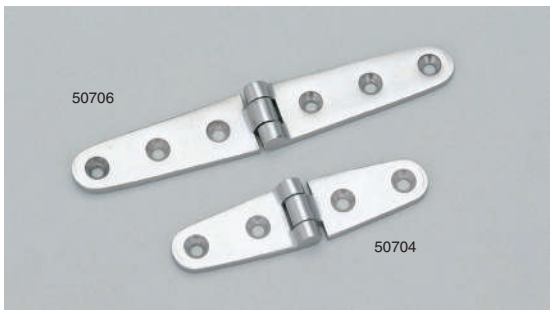
RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P1	P2	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-004	28300	Stainless Steel (SCS14)	Polished	38	39	7	26	Max.	Max.	Max.	167	17	55	20	100
G	3D	170-096-005	28400			50	50	7.5	34	450	700	21	226	23	90	20	–

Refer to 1 : P.43

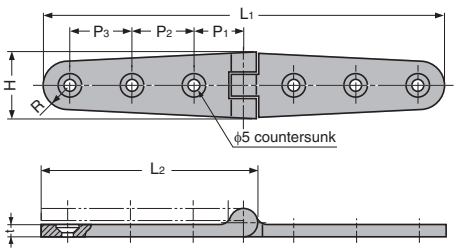
※SCS14 is equivalent to SUS316.

BUTT HINGE 50704, 50706

SUS316



[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Holes	Material	Finish	L1	L2	H	R	P1	P2	P3	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-000	50704	4	Stainless Steel (SCS14)	Polished	105	57	26.5	9	17.5	25	–	4	118	12	75	20	100
G	3D	170-096-001	50706	6			158	84			19.5		25				115	20	100

Refer to 1 : P.43

※SCS14 is equivalent to SUS316.

BUTT HINGE D-S-A

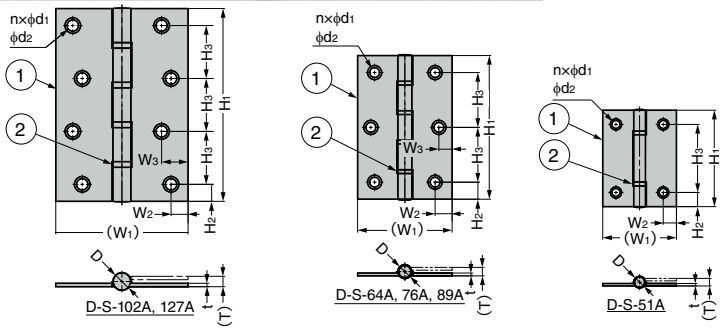
SUS

[Remarks]

- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

- Countersunk head wood screw (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Washer	PA	–

RoHS	CAD	Item Code	Item Name	H1	H2	H3	W1	W2	W3	D	t	T	d1	d2	Knuckles	Washer	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-265	D-S-51A	51	7.5	36	39	7	–	6.2	1.3	4	4.2	6	3	2	4	2.7×16	78	8	27.4	20	1000
G	3D	170-090-266	D-S-64A	64	7	25	42.5	8	6				5	7				3.1×16	98	10	36.5	20	800
G	3D	170-090-267	D-S-76A	76	9	29	50	9	7	7.4	1.5	4.5	5.2	7.5			6	3.5×22	137	14	59.5	20	480
G	3D	170-090-268	D-S-89A	89	10.5	34	56.5	10.5	7.5	9.1			5.4	8.3	5	4		3.8×25	196	20	91.6	10	280
G	3D	170-090-269	D-S-102A	102	9	28	70	9	14	9.5	1.8	5.5							226	23	132.5	10	200
G	3D	170-090-270	D-S-127A	127	11	35	82	10.5	16	11.3		6	6	9			8	4.1×25	284	29	231.5	6	120

Refer to 1 : P.43

BUTT HINGE D-S-B

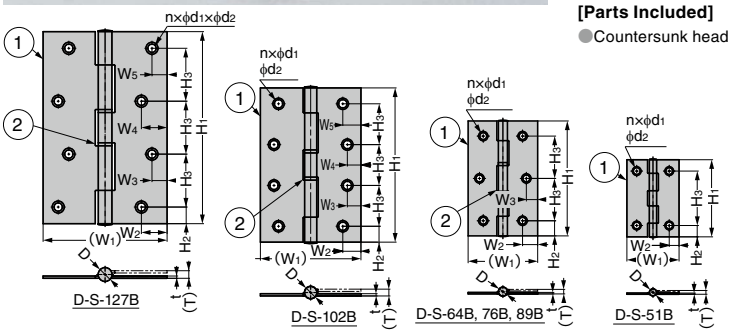
SUS

[Remarks]

- Dimensions in the following drawing are for reference. Please confirm with actual item when installing.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

- Countersunk head wood screw (SUS)



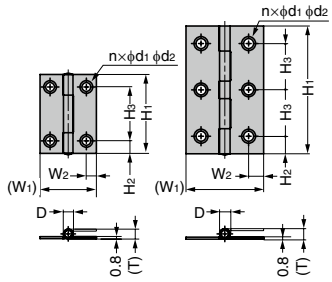
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Polished
②	Washer	PA	–

RoHS	CAD	Item Code	Item Name	H1	H2	H3	W1	W2	W3	W4	W5	D	t	T	d1	d2	Knuckles	Washer	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-271	D-S-51B	51	7.5	36	34.5	6.5	–			4.8	0.8	2.5	4.4	5.8	5	0	4	2.7×13	49	5	15.2	20	1200
G	3D	170-090-272	D-S-64B	64	8	24	40	9	5.5	–	–			3	4.2				6	2.7×16	59	6	23.8	20	1000
G	3D	170-090-273	D-S-76B	76	10	28	46	10	7.5			6	1.0		4.5	6.2		2		2.9×20	88	9	37.8	20	700
G	3D	170-090-274	D-S-89B	89	9.5	35	56	12	8			7	1.2	4		7.5				3.5×22	127	13	63.6	10	400
G	3D	170-090-275	D-S-102B	102	10.5	27	66.5		9	9	12	8.2		4.5	5.5				8		186	19	96.4	10	300
G	3D	170-090-276	D-S-127B	127	11	35	82	10	17	10	17	9.2	1.5	5		8				3.8×25	235	24	161.5	6	180

Refer to 1 : P.43

BUTT HINGE D-S-C

SUS



D-S-25C, 32C, 38C　　D-S-51C, 64C

[Remarks]

- Dimensions in the following drawing are for reference. Please confirm with actual item when installing.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

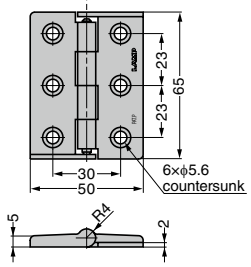
- Countersunk head wood screw (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	H3	W1	W2	D	T	d1	d2	Knuckles	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-277	D-S-25C	Stainless Steel (SUS430)	Polished	25.5	5	15.5	21	3.5	3.8	3.8	3.5	5.1	3	4	2.4×10	20	2	4.4	100	3000
G	3D	170-090-278	D-S-32C			31.5		21.5	22.5	4								29	3	5.7	100	3000
G	3D	170-090-279	D-S-38C			38	5.5	27	26	5	3.9	3.9	3.8							7.7	50	2000
G	3D	170-090-280	D-S-51C			51	7	18.5	31	6	4.2	4.2	4	5.6	5	6	2.7×13	49	5	12.9	50	1500
G	3D	170-090-281	D-S-64C			64	9	23	33	6.2							2.7×16	59	6	19.4	50	1000

Refer to 1 : P.43

BUTT HINGE HG-BF1

SUS



- Rim on edges may reduce load.
- Rim on edges may reduce warpage and increase strength.
- Rim on edges prevents shaft from falling off.

[Remarks]

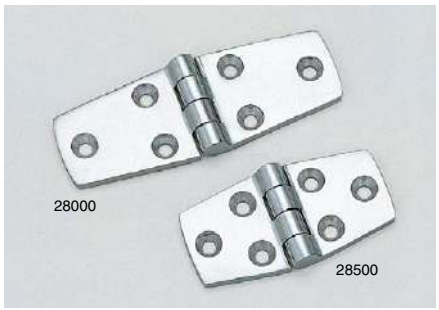
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

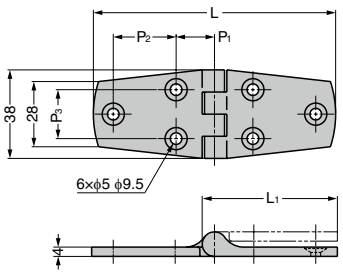
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-560	HG-BF1	Stainless Steel (SUS304)	Barrel Polished	157	16	63	20	120

Refer to 1 : P.43

BUTT HINGE 28000, 28500

SUS316





[Remarks]

- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

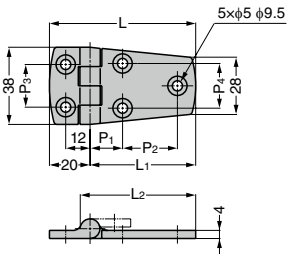
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P1	P2	P3	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-002	28500	Stainless Steel (SCS14)	Polished	74	42	13	17	20	Max. 450	Max. 700	Max. 21	167	17	85	20	100
G	3D	170-096-003	28000			104	57	16.5	27	21						115	20	100

Refer to 1 : P.43

※SCS14 is equivalent to SUS316.

BUTT HINGE 27800, 27900

SUS316



[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	P1	P2	P3	P4	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-008	27900	Stainless Steel (SCS14)	Polished	58	38	42	13.5	16.5	21	20	Max.	Max.	Max.	167	17	70	20	100
G	3D	170-096-007	27800			72	52	57	16	27	22	21	450	700	21			85	20	100

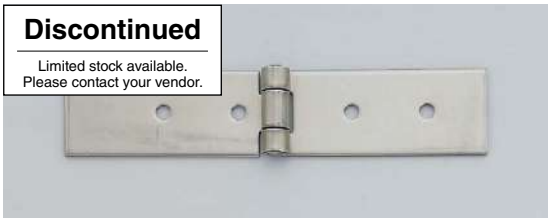
Refer to 1 : P.43

※SCS14 is equivalent to SUS316.

BUTT HINGE SYR140

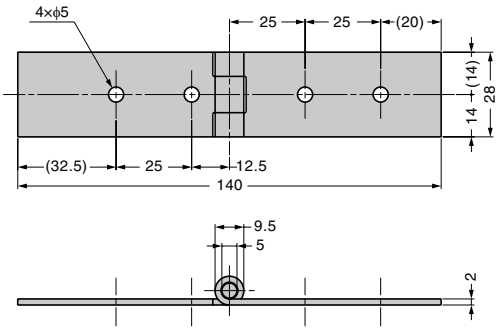
SUS

Discontinued
Limited stock available.
Please contact your vendor.



Selection Tool
Hinge Selection

[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Finish	Weight (g)	Carton (pcs)
G	3D	170-099-045	SYR140	Stainless Steel (SUS304)	69	7	Plain	74	300

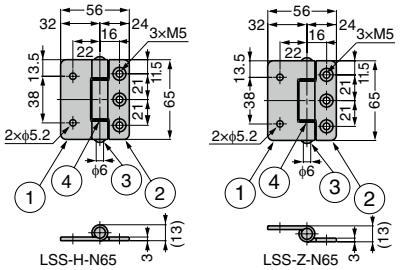
Refer to 1 : P.43

BUTT HINGE LSS

SUS

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Satin
②	Body B		
③	Shaft		–
④	Washer		

[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

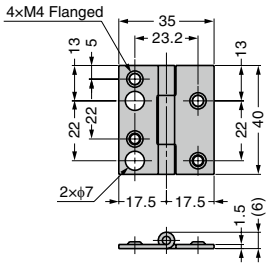


RoHS	CAD	Item Code	Item Name	Holes	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-542	LSS-H-A65	Without screw holes	245	25	125	30	120
G	3D	170-090-545	LSS-H-N65	With screw holes				30	120
G	3D	170-090-548	LSS-Z-A65	Without screw holes				30	120
G	3D	170-090-547	LSS-Z-N65	With screw holes				30	120

Refer to 1 : P.43

BUTT HINGE SBR40

SUS



- Hinge will not be in contact with screw heads while closing.
- Hinge is internal threaded.

[Remarks]

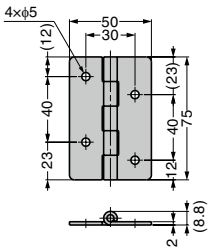
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
G	3D	170-099-088	SBR40	Stainless Steel (SUS304)	Plain	69	7	21	20

Refer to 1 : P.43

BUTT HINGE SR75

SUS



[Applications]

- Measuring instruments, precision instruments, etc.

[Remarks]

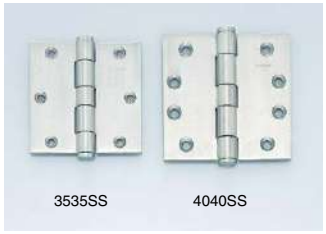
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

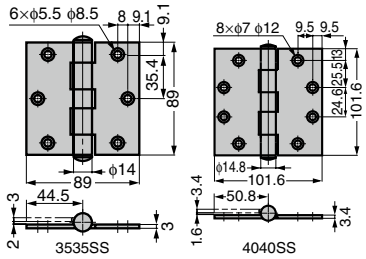
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-086	SR75	Stainless Steel (SUS304)	Plain	186	19	76	250

Refer to 1 : P.43

BUTT HINGE 3535SS, 4040SS

NSF SUS





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.
- The shaft is not removable.

[Parts Included]

- 3535SS : Countersunk head wood screw 4.5×25
- 4040SS : Countersunk head tapping screw 5.5×32

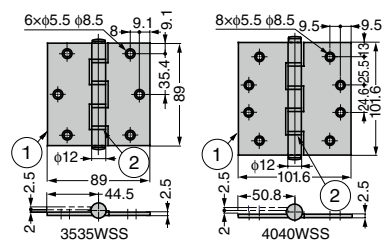
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-920-181	3535SS	Stainless Steel (SUS304)	Satin	333	34	270	2	100
G	3D	170-920-182	4040SS			431	44	400	2	100

Refer to 1 : P.43

3535SS: The carton quantity will be changed to 50 units once the current stock is depleted.4040SS:Limited inventory, contact sales associate for details.

BUTT HINGE (W/WASHER) 3535WSS, 4040WSS

SUS



- Plastic washer prevents metal-to-metal contact and metal powder scattering.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.
- The shaft is not removable.

[Parts Included]

- Countersunk head tapping screw 4×25

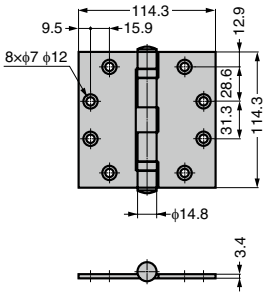
RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-834	3535WSS	245	25	195	2	100
G	3D	170-029-835	4040WSS	294	30	250	2	50

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Washer	PA	White

Refer to 1 : P.43

BUTT HINGE (W/ BALL BEARING) 4545BSS

SUS



- Ball bearing provides smooth movement.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.
- The shaft is not removable.

[Parts Included]

- Countersunk head tapping screw 5.5×32

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-920-184	4545BSS	Stainless Steel (SUS304)	Satin	481	49	420	2	50

Refer to 1 : P.43

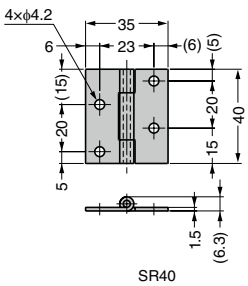
☆Limited inventory, contact sales associate for details.

BUTT HINGE SR

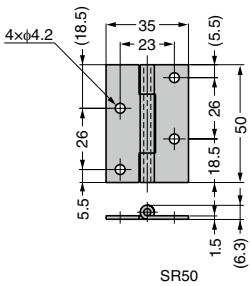
SUS

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



SR40



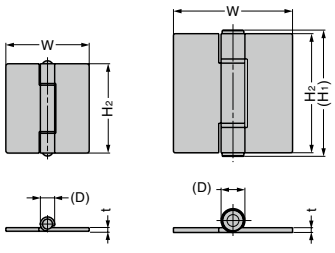
SR50

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-044	SR40	Stainless Steel (SUS304)	Plain	69	7	22	500
G	3D	170-099-042	SR50			88	9	27	500

Refer to 1 : P.43

BUTT HINGE FHS

SUS



FHS-50, FHS-60, FHS-75

FHS-100, FHS-125, FHS-150

[Applications]

- Ship, kitchen equipment

[Remarks]

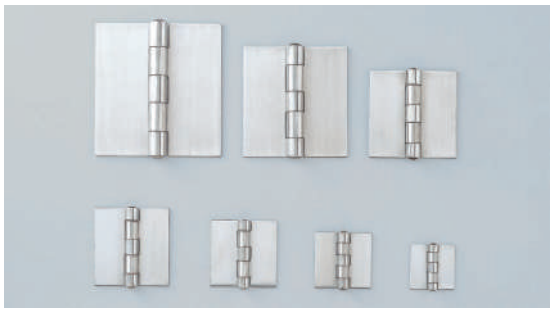
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	W	D	t	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-479	FHS-50	Stainless Steel (SUS304)	Satin	–	50	50	12	3	3	186	19	90	–	–
G	3D	170-090-478	FHS-60				60	64				226	23	130	–	–
G	3D	170-090-477	FHS-75				75	70				275	28	170	–	–
G	3D	170-090-476	FHS-100			110	100	100	20	4		490	50	520	–	40
G	3D	170-090-475	FHS-125			135	125				5	569	58	635	–	–
G	3D	170-090-474	FHS-150			160	150	120				637	65	850	–	–

Refer to 1 : P.43

BUTT HINGE LSK-1157

SUS



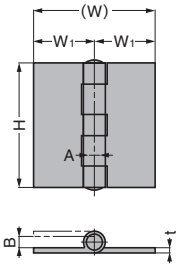
●Additional drilling is also possible. For further details, please contact local representatives.

[Applications]

●Power distribution box, control board, vehicle, ship, etc.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

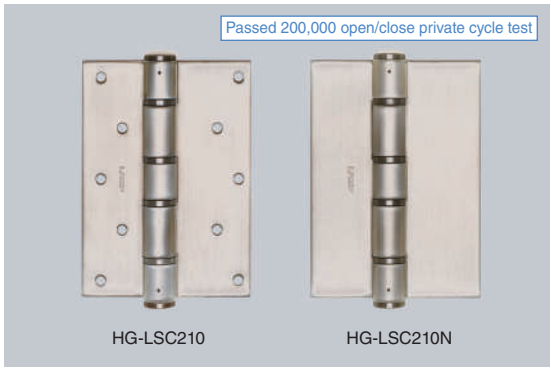


RoHS	CAD	Item Code	Item Name	Material	Finish	H	W1	W	A	B	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-445	LSK-1157-1	Stainless Steel (SUS304)	Satin	51	25	50	6	6	2.5	127	13	76	10	250
G	3D	170-090-446	LSK-1157-2			64	32	64	7	7	3	235	24	141	10	150
G	3D	170-090-447	LSK-1157-3			76	37	74				284	29	188	10	100
G	3D	170-090-448	LSK-1157-4			89	43.5	87	8	8		333	34	257	10	80
G	3D	170-090-449	LSK-1157-5			101.6	49.5	99			4	500	51	417	10	50
G	3D	170-090-450	LSK-1157-6			127	59.5	119	11	11		579	59	681	6	30
G	3D	170-090-451	LSK-1157-7			152	71.5	143	12	12		647	66	928	4	20

Refer to 1 : P.43

STAINLESS STEEL HEAVY-DUTY BUTT HINGE HG-LSC210

SUS



●6mm thick stainless steel makes the hinge very strong.

●Made with special rings (oil-impregnated bearings) for smooth movement.

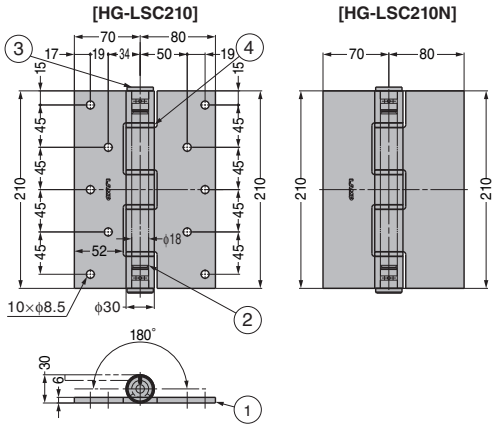
[Applications]

●Large doors, gate doors, and other heavy objects.

[Remarks]

●Be sure to read the “Cautions” 1 .

●The shaft is not removable.



Selection Tool

Hinge Selection

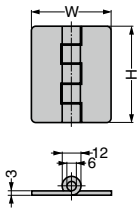
*Open/close test is under the following conditions:
-Hinge: Using three hinges vertically
-Door size: W900 × H2000
-Door weight: 250kg

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Shaft		Plain
③	Head Cap		–
④	Ring		Plain

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N / 2pcs	Load Capacity kgf / 2pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-043-696	HG-LSC210	With screw holes	1960	200	2275	1	6
G	3D	170-043-697	HG-LSC210N	Without screw holes			2300	1	6

Refer to 1 : P.43

BUTT HINGE D-CH



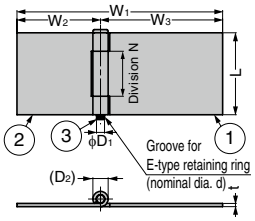
[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-395	D-CH-60	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)	60	50	3	177	18	105	–	–
G	3D	170-090-396	D-CH-90			90	60	5	275	28	180	–	–
G	3D	170-090-398	D-CH-100			100	80		294	30	245	–	–

Refer to 1 : P.43

BUTT HINGE OLYA

SUS



- Shaft detachable.

[Remarks]
- E-type retaining ring is not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		Plain

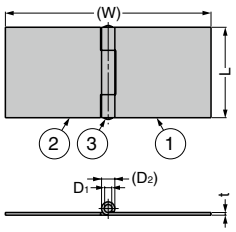
RoHS	CAD	Item Code	Item Name	L	W1	W2	W3	t	d	D1	D2	N	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-772	OLYA-128S	51	128	52	76	2	4	5	9.5	3	127	13	120	–	–
G	3D	170-099-771	OLYA-185S	65	185	30	155	3	5	6	12.5	5	245	25	330	–	–

Refer to 1 : P.43

BUTT HINGE YHS

SUS

Discontinued
Limited stock available.
Please contact your vendor.



[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		Plain

RoHS	CAD	Item Code	Item Name	L	W	t	D1	D2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-428	YHS-32	32	90	1.5	3.5	7	59	6	45	–	–
G	3D	170-099-427	YHS-38	38	82	1.2	3	5.6			35	–	–
G	3D	170-099-426	YHS-51	51	116	1.5	4	7.2	98	10	85	–	10

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

PIANO HINGE LSN

SUS

* The picture shows polished types.

- LSN 40-100-500 and LSN 40-100-1000 have built-in metal mesh resin composite bush with excellent wear resistance. Caps are welded on both ends to prevent the shaft from slipping off.
- Special dimensions and additional hole drilling, or different materials and finishes also available by made to order.

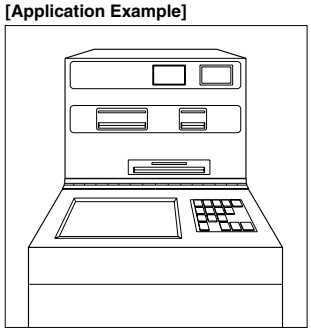
[Applications]

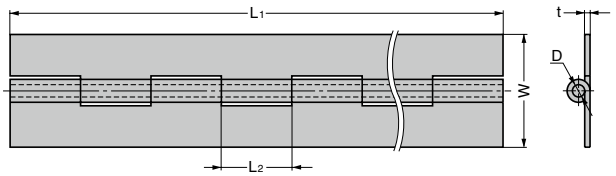
- ATM, game machine, control board, etc.

[Remarks]

- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .
- Special dimensions and additional hole drilling, or different materials and finishes also available by made to order.
- When cutting, follow the below to prevent shafts from falling off:
  - LSN8/15/20 : Cut the side which doesn't have a knurling process.
  - LSN30 : Cut the side which doesn't have a welding process.
  - LSN40 : Additional processing which prevents the shaft from falling off is required.

[Application Example]





Selection Tool

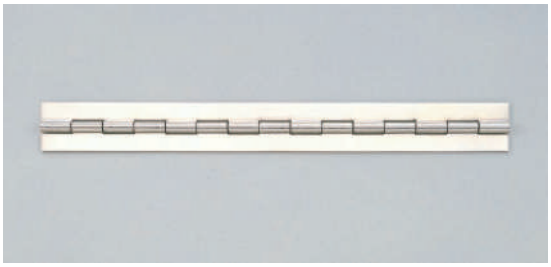
Hinge Selection

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	W	t	D	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-376	LSN8-25-300	Stainless Steel (SUS304)	Polished	300	12.5	25	0.8	2.6	137	14	690	10	50
G	3D	170-099-377	LSN8-25-600			600					275	28	134	10	50
G	3D	170-099-362	LSN8-25-1000			1000					461	47	240	10	50
G	3D	170-099-187	LSN8-25-1800			1800					716	73	400	10	50
G	3D	170-099-378	LSN8-32-300			300		32			137	14	79	10	50
G	3D	170-099-372	LSN8-32-600			600					275	28	166	10	50
G	3D	170-099-361	LSN8-32-1000			1000					461	47	265	10	50
G	3D	170-099-186	LSN8-32-1800			1800					716	73	420	10	50
G	3D	170-099-198	LSN8-38-1000			1000		38			461	47	0	10	50
G	3D	170-099-184	LSN8-38-1800			1800					716	73	500	10	50
G	3D	170-149-329	LSN15-32-300			300	20	32	1.5	3.5	255	26	165	10	50
G	3D	170-099-373	LSN15-32-350			350					304	31	192	10	50
G	3D	170-149-330	LSN15-32-450			450					392	40	247	10	50
G	3D	170-149-331	LSN15-32-600			600					520	53	337	10	50
G	3D	170-099-982	LSN15-32-750			750					598	61	410	10	50
G	3D	170-099-374	LSN15-32-850			850					628	64	461	10	50
G	3D	170-099-375	LSN15-32-900			900					667	68	491	10	50
G	3D	170-099-808	LSN15-32-1000			1000					745	76	545	10	50
G	3D	170-099-030	LSN15-38-1000					38					609	10	50
G	3D	170-099-031	LSN15-38-1800			1800					1370	140	1300	5	25
G	3D	170-090-709	LSN15-50-1000			1000		50			745	76	400	5	25
G	3D	170-099-182	LSN15-50-1800			1800					1370	140	1400	5	25
G	3D	170-099-029	LSN20-50-1000			1000	50	100	2	5	981	100	1096	5	25
G	3D	170-012-596	LSN30-100-1000		Plain				3.0	8.0	1370	140	3175	1	5
G	3D	170-012-597	LSN30-100-2000			2000					2550	260	6350	1	5
G	3D	170-012-598	※LSN40-100-500			500	90		4.0	10.0	981	100	2400	1	–
G	3D	170-012-599	※LSN40-100-1000			1000					1770	180	4600	1	–

Refer to 1 : P.43

※Built-in metal mesh resin composite bush with excellent load bearing and wear resistance.
※Appearance may be partly different from the drawing.

PIANO HINGE LH



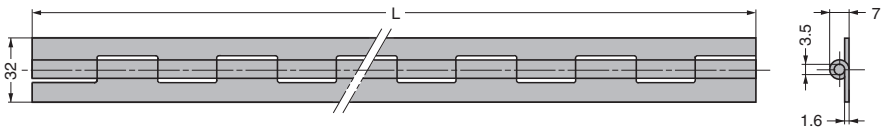
- Can be cut to any length. In case of cutting the hinge, please cut the side without knurling to prevent the shaft from coming off.
- Special dimensions and drilled products also available.

[Remarks]

- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .

Selection Tool

Hinge Selection



RoHS	CAD	Item Code	Item Name	Material	Finish	L	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	3D	170-095-505	LH-30A	Steel (SPCC)	Clear Zinc Chromate	300	216	22	175	30
G	3D	170-095-508	LH-35A			350	255	26	205	30
G	3D	170-090-507	LH-45A			450	324	33	265	30
G	3D	170-095-512	LH-60A			600	431	44	350	10
G	3D	170-095-515	LH-75A			750	539	55	437	10
G	3D	170-095-518	LH-85A			850	569	58	493	10
G	3D	170-095-521	LH-90A			900	598	61	522	10
G	3D	170-095-524	LH-100A			1000	618	63	551	10

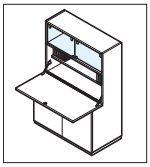
Refer to 1 : P.43

PIANO HINGE LHN

SUS

- Length from 1200 to 2100mm suitable for various application.
- Can be cut to any length.

[Application Example]

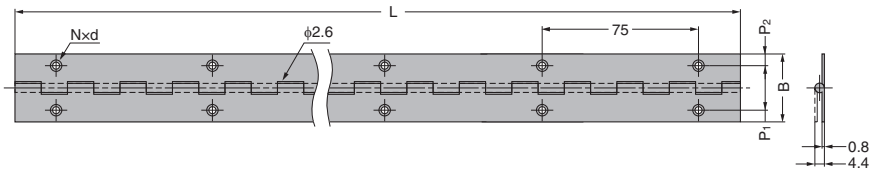


[Remarks]

- Size L is slightly shorter. Please check with actual item.
- Mounting hole pitch is actually measured on wooden item. Not suitable for sheet metal and installation with mounting hole pitch limitation.
- Take care not to damage the shaft when cutting.
- Attention should be paid to prevent the shaft from coming off.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .

Selection Tool

Hinge Selection



RoHS	CAD	Item Code	Item Name	Material	Finish	L	B	P_1	P_2	Qty of Holes N	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	3D	170-097-846	LHN-32-1200	Stainless Steel (SUS304)	Polished	1200	32	20	6	32		549	56	400	30
G	3D	170-097-847	LHN-32-1500			1500				40	ϕ4	588	60	400	30
G	3D	170-097-848	LHN-32-1872			1872				50	ϕ5.2	745	76	400	30
G	3D	170-097-849	LHN-32-2100			2100				56		834	85	600	30
G	3D	170-097-850	LHN-38-1200			1200	38	22.5	7.75	32		549	56	400	30
G	3D	170-097-843	LHN-38-1500			1500				40	ϕ4.2	588	60	400	30
G	3D	170-097-844	LHN-38-1872			1872				50	ϕ6	745	76	600	30
G	3D	170-097-845	LHN-38-2100			2100				56		834	85	650	30

Refer to 1 : P.43

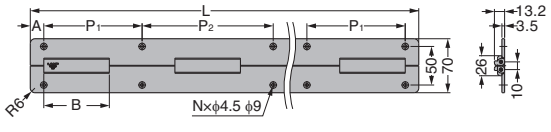
TABLETOP PIANO HINGE HG-MH

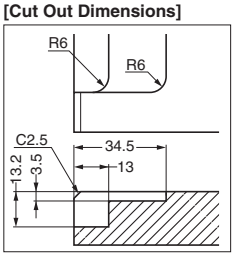
- Double pivot hinge allows 180˚ opening.
- Can be cut easily. In case of cutting the hinge, attention should be paid to prevent the shaft from coming off.
- The included screws have the same finish as the hinge.

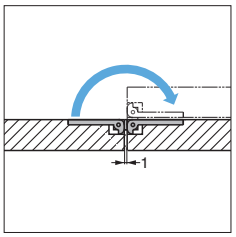
[Remarks]
- No stopper mechanism.
- Do not bear the door weight by hinge alone.

[Parts Included]
- Cross-recessed countersunk tapping screw 4x16 (stainless steel)

[Cut Out Dimensions]





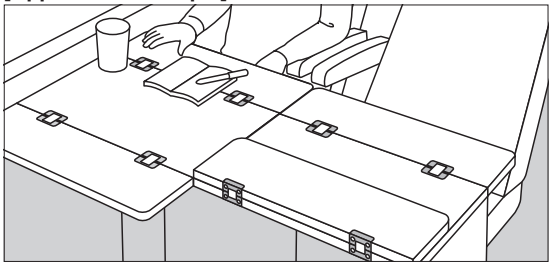


RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	P_1	P_2	B	Qty of Holes N	Weight (g)	Box (pcs)
G	3D	170-012-587	HG-MH400S	Aluminium Alloy	Anodised/Stainless Finish	400	15	111	148	74	8	452	15
G	3D	170-012-588	HG-MH400BR		Anodised/Brown							452	15
G	3D	170-012-589	HG-MH400BL		Anodised/Black							452	15
G	3D	170-012-590	HG-MH800S		Anodised/Stainless Finish	800	17.5	127.5	170	85	12	908	10
G	3D	170-012-591	HG-MH800BR		Anodised/Brown							908	10
G	3D	170-012-592	HG-MH800BL		Anodised/Black							908	10
G	3D	170-012-593	HG-MH1100S		Anodised/Stainless Finish	1100	16.5	145.5	194	97	14	1236	8
G	3D	170-012-594	HG-MH1100BR		Anodised/Brown							1236	8
G	3D	170-012-595	HG-MH1100BL		Anodised/Black							1236	8

DUAL AXIS TORQUE HINGE HG-TMH

- For more information, please see the product page 1 .

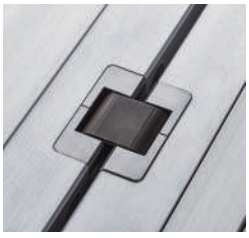
[Application Example]



Box seat table of train

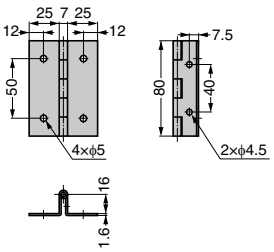
Refer to 1 : P.83

Fully opened



Mounting screws do not protrude when closed.

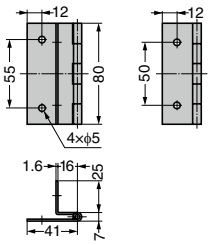
BUTT HINGE ROH-80



No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Nickel
②	Body B		
③	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-092-109	ROH-80	Steel	Nickel	85	50	200

BUTT HINGE KOH-80



[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

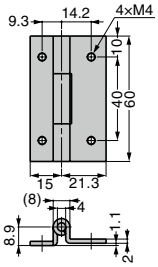
No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Nickel
②	Body B		
③	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-149-316	KOH-80	127	13	94	50	200

Refer to 1 : P.43

STEP HINGE DH60N

SUS



[Remarks]

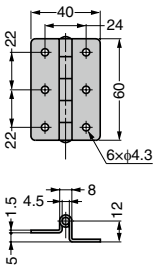
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-128	DH60N	Stainless Steel (SUS304)	Plain	147	15	51.2	150

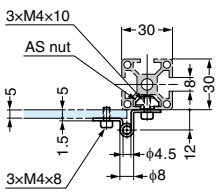
Refer to 1 : P.43

STEP HINGE DH-60C

SUS



[Dimensions]



- Door may be changed into overlay type by using 5mm thick panel.
- Stainless steel lift-off hinge with the same shape also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-159	DH-60C	Stainless Steel (SUS304)	Polished	108	11	52	80	320

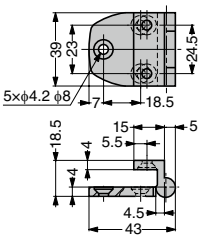
Refer to 1 : P.43

BUTT HINGE 28100

SUS316

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



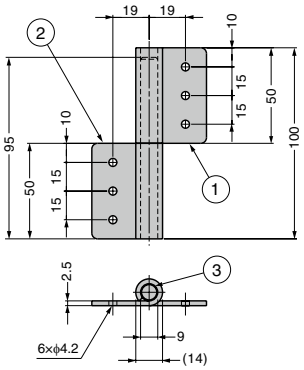
RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-006	28100	Stainless Steel (SCS14)	Polished	Max. 450	Max. 700	Max. 21	167	17	78.5	20	100

Refer to 1 : P.43

※SCS14 is equivalent to SUS316.

LIFT-OFF HINGE LSX-100

SUS



LSX-100R
(LSX-100L is symmetrical)

- Handed: Specific left and right hand mounting.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

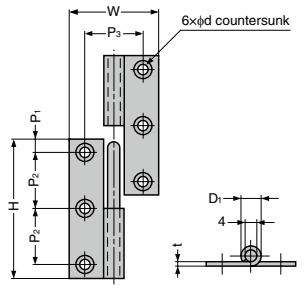
No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		–

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-343	LSX-100L	Left-handed	294	30	170	20	80
G	3D	170-090-342	LSX-100R	Right-handed				20	80

Refer to 1 : P.43

LIFT-OFF HINGE KN

SUS



Right-handed type shown.
Left-handed type is symmetrical.

- Handed: Specific left and right hand mounting.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Please be sure to chamfer the mounting surface for screws and rivets.

RoHS	CAD	Item Code	Item Name	Type	Holes	Material	Finish	H	W	P1	P2	P3	D1	t	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-742	KN-50CL	Left-handed	With screw holes	Stainless Steel (SUS304)	Polished	50	32	5	20	21	7.5	1.5	3.2	78	8	28	100	400
G	3D	170-090-743	KN-50CR	Right-handed														30	100	400
G	3D	170-090-744	KN-64CL	Left-handed				64	36	8	24	24				108	11	38	100	400
G	3D	170-090-745	KN-64CR	Right-handed														38	100	400
G	3D	170-090-746	KN-75CL	Left-handed				75	38	7.5	30		8.5	2		167	17	60	50	200
G	3D	170-090-747	KN-75CR	Right-handed														60	50	200

Refer to 1 : P.43

LIFT-OFF HINGE NH-40

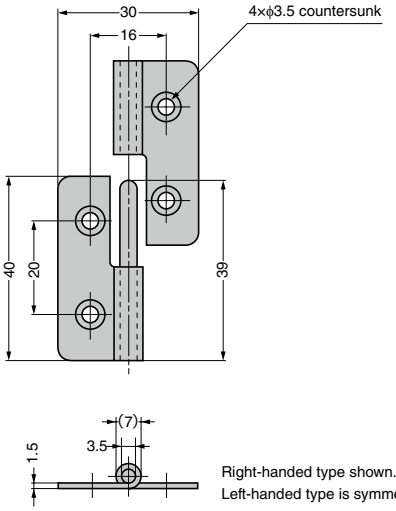
SUS

NH-40CL

- Steel hinge without mounting holes also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Please be sure to chamfer the mounting surface for screws and rivets.



Right-handed type shown.
Left-handed type is symmetrical.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-339	NH-40CL	Left-handed	Stainless Steel (SUS304)	Polished	69	7	21	150	600
G	3D	170-090-337	NH-40CR	Right-handed						150	600

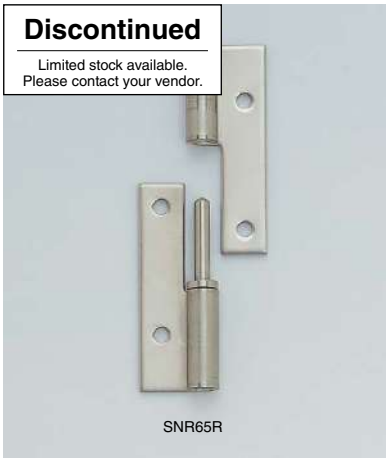
Refer to 1 : P.43

LIFT-OFF HINGE SNR65

SUS

Discontinued

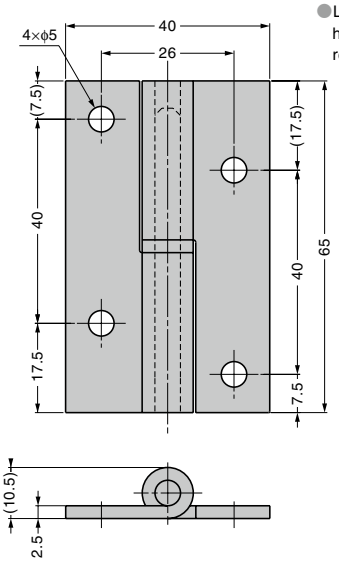
Limited stock available.
Please contact your vendor.


SNR65R

- Handed: Specific left and right hand mounting.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



Right-handed type shown. Left-handed type is symmetrical.

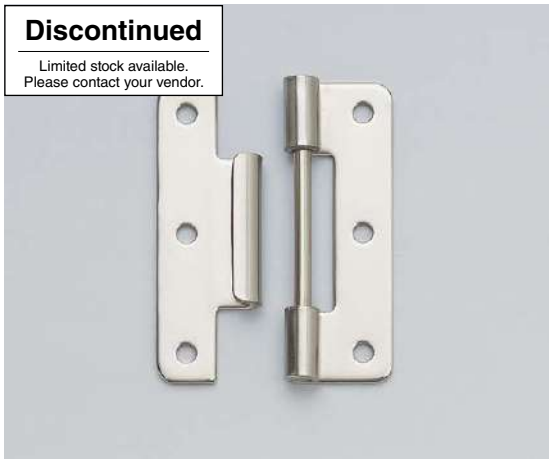
RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
G	3D	170-099-046	SNR65L	Left-handed	Stainless Steel (SUS304)	Plain	177	18	76.2	200
G	3D	170-099-043	SNR65R	Right-handed						200

Refer to 1 : P.43

LIFT-OFF HINGE BN

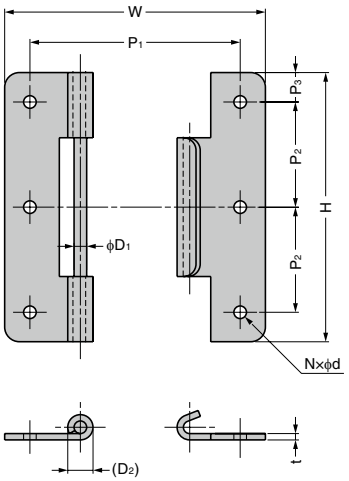
SUS

Discontinued
Limited stock available.
Please contact your vendor.



[Applications]
- Measuring instruments, laboratory equipment, trunk, etc.

[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P1	P2	P3	d	D1	D2	t	N	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-498	BN-50S	Stainless Steel (SUS304)	Polished	50	30	20	20	5	3	3	6	1.5	6	88	9	6	–	–
G	3D	170-099-497	BN-64S			64	36	24	25	7						118	12	8	–	–

Refer to 1 : P.43

LIFT-OFF HINGE SKH

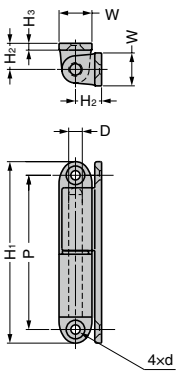
SUS

Discontinued
Limited stock available.
Please contact your vendor.

SKH-35CR

[Applications]
- Control board, various enclosures

[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	H3	W	P	D	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-129	SKH-51S	Stainless Steel (SUS304)	Barrel Polished	51	8	2.5	11	40	4	Counterbore for M3	78	8	30	–	–
G	3D	170-090-818	SKH-60S			60	9.5	3	13	48	5	Counterbore for M4	118	12	50	–	–
G	3D	170-099-328	SKH-80S			80	11.5	4.5	14.5	68	6		284	29	95	–	–

Refer to 1 : P.43

LIFT-OFF HINGE HNH

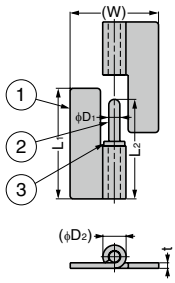
SUS

Right-handed

●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



Right-handed type.
Left-handed type is symmetrical.

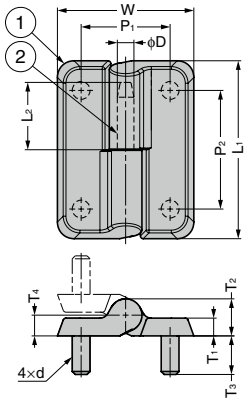
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Shaft		Plain
③	Washer		

RoHS	CAD	Item Code	Item Name	Type	Material	L_1	L_2	W	D_1	D_2	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-064	HNH-50CL	Left-handed	Stainless Steel (SUS304)	50	45	40	5	10.5	2.5	127	13	60	30	240
G	3D	170-091-065	※HNH-50CR	Right-handed											30	240
G	3D	170-091-062	HNH-65CL	Left-handed		65	60	50				177	18	89	20	160
G	3D	170-091-063	HNH-65CR	Right-handed											20	160
G	3D	170-091-060	HNH-75CL	Left-handed		75	70	70	6	12	3	245	25	165	10	80
G	3D	170-091-061	HNH-75CR	Right-handed											10	80
G	3D	170-091-058	※HNH-100CL	Left-handed		100	90	82	8	16	4	422	43	347	5	40
G	3D	170-091-059	※HNH-100CR	Right-handed											5	40

Refer to 1 : P.43

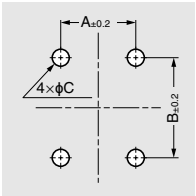
STAINLESS STEEL LIFT-OFF HINGE HG-STN With Stud Bolts

SUS



Right-handed type shown.
(R/L types are symmetrical.)

[Cut Out Dimensions]



●Easy-to-clean design:
- Smoothy polished mirror surface.
- Gently sloped sides.
- Rounded edge and corners.

●Food-grade grease is used on the shaft. (NSF H1 registered)

●Has built-in stud bolts for easy assembly.

[Application]

●Cover of food processing machines

[Remarks]

●For calculation conditions, please refer to INDEX 1

●If grease is washed off by cleaning, please apply more grease. NSF H1 and NLGI No.2 grade grease is recommended.

[Specification]

●Passed 20,000 open and close cycle tests in the conditions below:
- HG-STN-40: H800 x W600 mm / 7 kg
- HG-STN-60: H800 x W600 mm / 15 kg
- HG-STN-75: H1500 x W700 mm / 30 kg

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS13)	Mirror
②	Shaft	Stainless Steel (SUS316)	Plain

RoHS	CAD	Item Code	Item Name	Type	L_1	L_2	W	P_1	P_2	T_1	T_2	T_3	T_4	D	d	A	B	C	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs
–	3D	170-048-991	HG-STN-40R	Right-handed	40	14	36	25	25	5	9.5	11	5.5	3.6	M5	25	25	6	88	9
–	3D	170-048-992	HG-STN-40L	Left-handed																
–	3D	170-048-993	HG-STN-60R	Right-handed	60	23	46	30	40	6	12.5	13	7	5.6	M6	30	40	7	196	20
–	3D	170-048-994	HG-STN-60L	Left-handed																
–	3D	170-048-995	HG-STN-75R	Right-handed	75	28.5	66	45	45	8	16.5	18	9	7.6	M8	45	45	9	284	29
–	3D	170-048-996	HG-STN-75L	Left-handed																

Refer to 1 : P.43

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED PIVOT HINGE TS-243

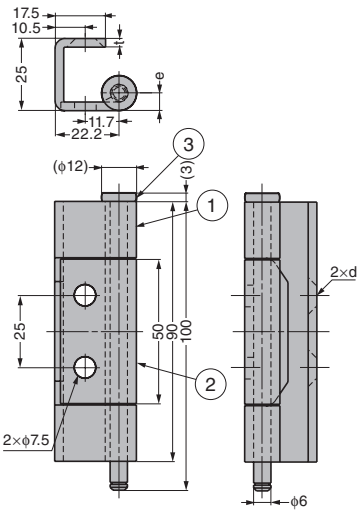
SUS

TS-243-30S

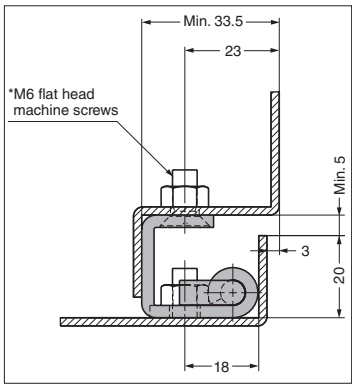
TS-243-30

- Removable pins make door mounting and removal easy.

[Remarks]
- E-type retaining rings are not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1.



[Mounting Dimensions]



*M6 machine screws are to be supplied by the customer.

No.	Part Name	TS-243-30S		TS-243-30	
		Material	Finish	Material	Finish
①	Wing A	Stainless Steel(SUS304)	Barrel Polished	Steel (SPCC)	Bright Chromate (Trivalent)
②	Wing B				
③	Pin		Plain	Stainless Steel (SUS304)	Plain

Reference door weight: 100 kg
(For door size W1000×H2300, 3 vertical pcs, 10,000 open/close times)

RoHS	CAD	Item Code	Item Name	Main Material	t	d	e	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)
G	3D	170-014-234	TS-243-30S	Stainless Steel (SUS304)	3	ϕ7.4, ϕ12.8 flat	6.1	333	34	163
G	3D	170-097-762	TS-243-30	Steel (SPCC)	3.2	ϕ6.8, ϕ12.8 flat	6.3	275	28	180

Refer to 1 : P.43

Zwei L LIFT-OFF HINGE ZL-1701

SUS316

- Oilless ring provides smooth movement.
- Superior "Zwei L Finish".
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give a jewel like finish that highlights any industrial design.

[Remarks]

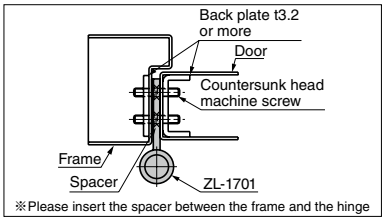
- When installing, be sure to insert the spacer as shown in the installation examples and screw it.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

ZL-1701-10
- Countersunk head wood screw 4.1×38
- Countersunk head machine screw M5×16 (head diameter ϕ8)

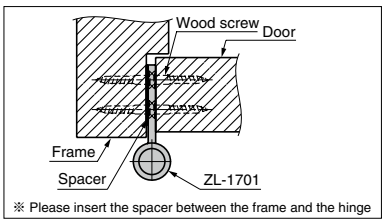
ZL-1701-12
- Countersunk head wood screw 4.8×38
- Countersunk head machine screw M5×16 (head diameter ϕ9)

[Installing to Metal Door]



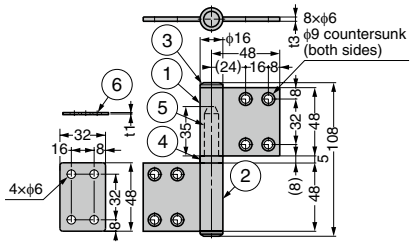
※Please insert the spacer between the frame and the hinge

[Installing to Wooden Door]

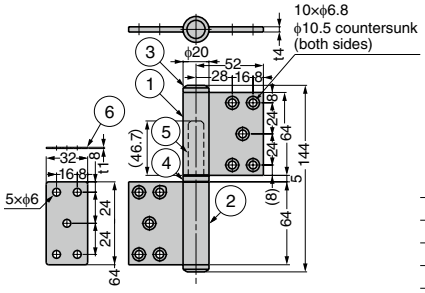


※ Please insert the spacer between the frame and the hinge

Video Link



ZL-1701-10



ZL-1701-12

No.	Part Name	Material	Finish
①	Hinge Plate (For Door)	Stainless Steel (SUS316)	Polished/Satin
②	Hinge Plate (For Frame)		
③	Finial		
④	Oilless Ring		Satin
⑤	Shaft		Plain
⑥	Spacer		

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
–	3D	170-091-691	ZL-1701-10	314	32	305	8
–	3D	170-091-690	ZL-1701-12	559	57	560	6

Refer to 1 : P.43

LIFT-OFF HINGE (WELD-ON) HG-LSH

SUS

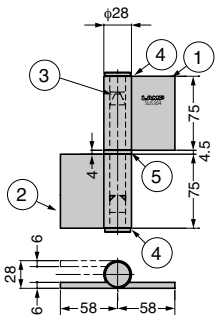
- Uses 6mm thick stainless steel for heavy duty doors.
- Special rings (oil-impregnated bearings) provides smooth movement.

[Applications]

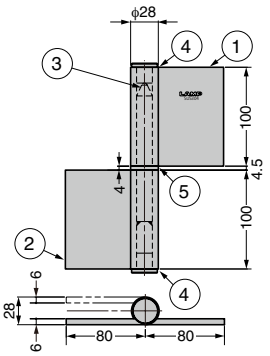
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



LSH-154R



LSH-204R

No.	Part Name	Material	Finish
①	Door Side Leaf	Stainless Steel (SUS304)	Satin
②	Frame Side Leaf		
③	Pin		Plain
④	Finial		
⑤	Ring		

※Open/close test under the following conditions:
Three hinges used vertically, door size W900×H2000
When using HG-LSH-154: Door weight 250kg
When using HG-LSH-204: Door weight 280kg

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-219	HG-LSH-154L	Left-handed	1961	200	1020	6	12
G	3D	170-034-220	HG-LSH-154R	Right-handed				6	12
G	3D	170-034-221	HG-LSH-204L	Left-handed	2177	222	1540	–	6
G	3D	170-034-222	HG-LSH-204R	Right-handed				–	6

Refer to 1 : P.43

HEAVY-DUTY STAINLESS STEEL BUTT HINGE (INSTALLATION HOLE TYPE) HG-LSW

SUS

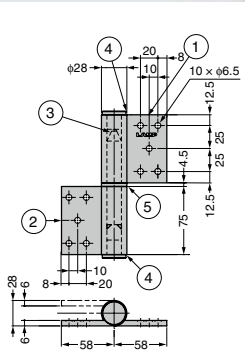
- Made from 6 mm thick stainless steel.
- Made with special rings (oil-impregnated bearings) for smooth movement.

[Application]

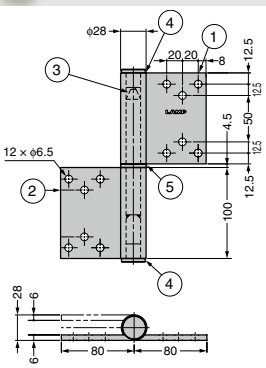
- Rotating mechanisms for large doors, gates and other heavy objects.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-LSW-154R



HG-LSW-204R

Selection Tool
Hinge Selection

No.	Part Name	Material	Finish
①	Door Side Hinge Plate	Stainless Steel (SUS304)	Satin
②	Frame Side Hinge Plate		
③	Pin		Plain
④	Head Cap		
⑤	Ring		Barrel Polished

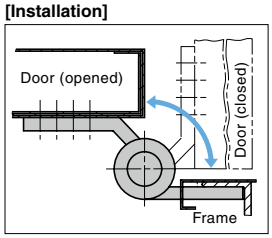
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Box (pcs)	Carton (pcs)
G	2D 3D	170-041-019	HG-LSW-154L	Left Side	1960	200	6	12
G	2D 3D	170-041-020	HG-LSW-154R	Right Side			6	12
G	2D 3D	170-041-021	HG-LSW-204L	Left Side	2180	222	–	6
G	2D 3D	170-041-022	HG-LSW-204R	Right Side			–	6

Refer to 1 : P.43

LIFT-OFF HINGE HG-KM

SUS

[Installation]



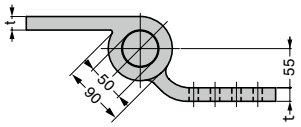
- Ultra thick hinge for ultra heavy doors.
- Thrust bearing in movable part provides smooth movement.

[Applications]

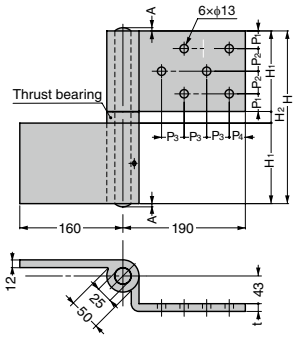
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Screws not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-KM19-275



HG-KM12-268

Selection Tool

Hinge Selection

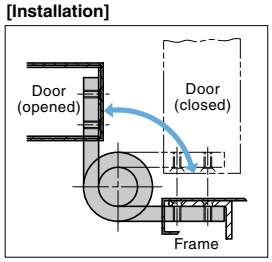
RoHS	CAD	Item Code	Item Name	Old Item Name	Type	Material	Finish	H	H_1	H_2	P_1	P_2	P_3	P_4	A	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)
G	3D	170-090-452	HG-KM12-268R	HG-KM12-268	Right-handed	Stainless Steel (SUS304)	Satin	268	125	18	27.5	35	35	25	5	12	2940	300	8.3	1
G	3D	170-044-760	HG-KM12-268L	—	Left-handed															1
G	3D	170-090-453	HG-KM19-275R	HG-KM19-275	Right-handed			275		25			30		10	19	4810	490	19.8	1
G	3D	170-044-761	HG-KM19-275L	—	Left-handed															1

Refer to 1 : P.43

LIFT-OFF HINGE HG-KH

SUS

[Installation]



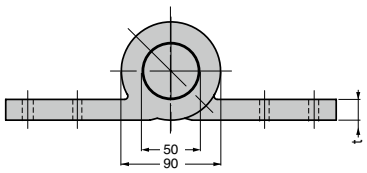
- Ultra thick hinge for ultra heavy doors.
- Thrust bearing in movable part provides smooth movement.

[Applications]

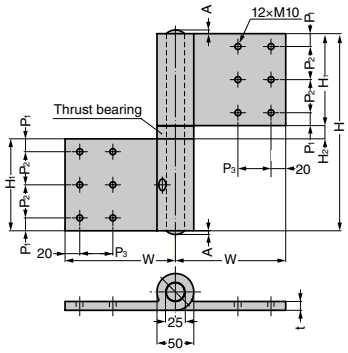
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Screws not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-KH19-275



HG-KH12-268

Selection Tool

Hinge Selection

RoHS	CAD	Item Code	Item Name	Old Item Name	Type	Material	Finish	H	H_1	H_2	W	P_1	P_2	P_3	A	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)
G	3D	170-090-454	HG-KH12-268R	HG-KH12-268	Right-handed	Stainless Steel (SUS304)	Satin	268	125	18	150	17.5	45	45	5	12	2940	300	7.4	1
G	3D	170-044-762	HG-KH12-268L	—	Left-handed															1
G	3D	170-090-455	HG-KH19-275R	HG-KH19-275	Right-handed			275		25					10	19	4810	490	17.2	1
G	3D	170-044-763	HG-KH19-275L	—	Left-handed															1

Refer to 1 : P.43

QUICK RELEASE HINGE HG-OT Quick Installation Type

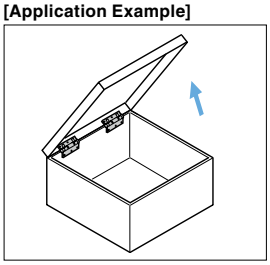
SUS

- Easy and quick to install/remove doors.
- Non-handed except for HG-OTA45, HG-OTB45.
- Can be used for upward-opening doors, top-opening lids and lateral opening doors.

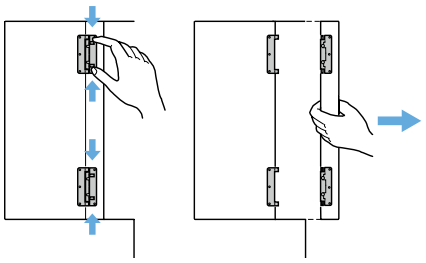
[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Application Example]

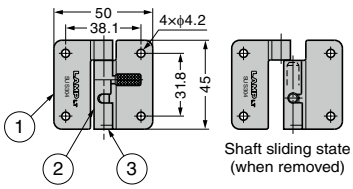


[Retracted Shaft]

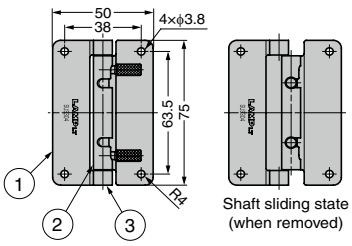


Retract the shaft and rotate it to the cabinet side.

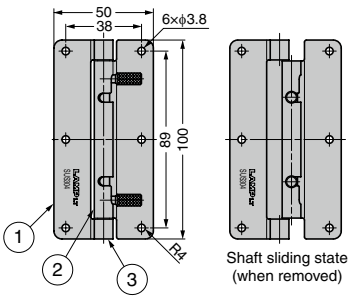
Can be installed and removed in the front direction.



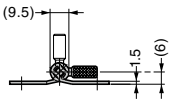
Shaft sliding state (when removed)



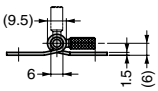
Shaft sliding state (when removed)



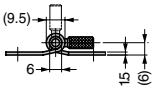
Shaft sliding state (when removed)



HG-OTA45L



HG-OTA75



HG-OTA100

No.	Part Name	Material	Finish
①	Plate	Stainless Steel (SUS304)	Satin
②	Hinge Pin	Stainless Steel (SUS303)	Plain
③	Spring	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Holes	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-944	HG-OTA45R	Right-handed	With screw holes	29	3	40	30	300
G	3D	170-090-946	☆HG-OTB45R		Without screw holes				30	300
G	3D	170-090-945	HG-OTA45L	Left-handed	With screw holes				30	300
G	3D	170-090-947	☆HG-OTB45L		Without screw holes				30	300
G	3D	170-090-942	HG-OTA75	Non-handed	With screw holes	59	6	70	40	160
G	3D	170-090-943	☆HG-OTB75		Without screw holes				40	160
G	3D	170-090-940	HG-OTA100		With screw holes	69	7	90	30	120
G	3D	170-090-941	☆HG-OTB100		Without screw holes				30	120

Refer to 1 : P.43

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

PIVOT HINGE HG-PV-30C

SUS

- Small detachable pivot hinge.
- Door is easily detached only by using the lever.

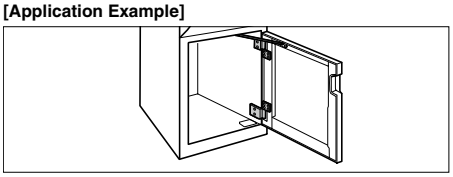
[Applications]

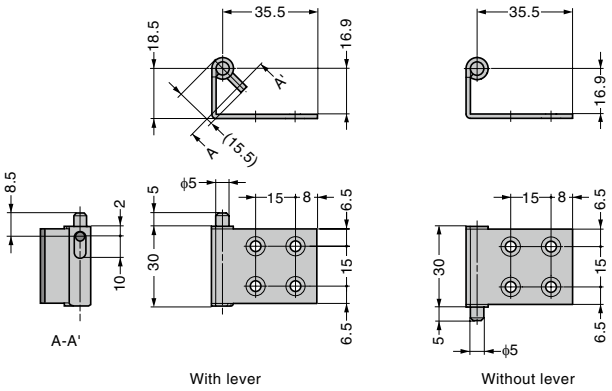
- Light doors of financial equipment, etc.

[Remarks]

- Sold in pairs (upper and lower).

[Application Example]





For right-hanging, the hinge with lever is at the upper side, while that without lever at the lower side.
For left-hanging, the hinge with lever is at the lower side, while that without lever at the upper side.

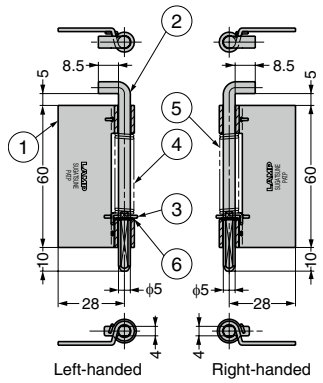
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-215	HG-PV-30C	Stainless Steel (SUS304)	Barrel Polished	54	100	200

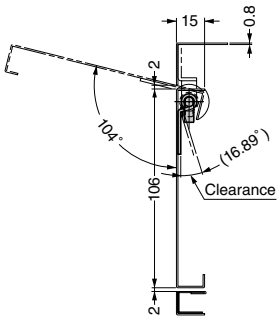
SPRING LOADED PIVOT HINGE HG-PV60AC

SUS

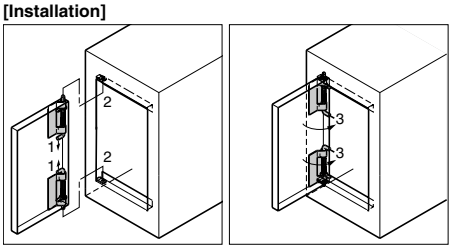
HG-PV60AC-R (Right-handed)

- Spring loaded for self closing.
- Easy door installation and removal.
- Compact self-closing mechanism saves space.





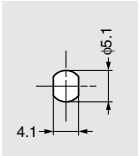
[Installation]



1. Pull up the hook of the lower hinge.
2. Insert the body into the rotation stop hole.
3. Hold the door to prevent rotation while rotating the hook, insert it to bottom along the hole.
4. Install the upper hinge in the same manner.
5. Open and close the door to check the movement.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft		–
③	Stopper		Barrel Polished
④	Spring L	Stainless Steel (SUS-304WPB)	–
⑤	Spring R		
⑥	E-type Retaining Ring (Size 3)	Stainless Steel (SUS304)	

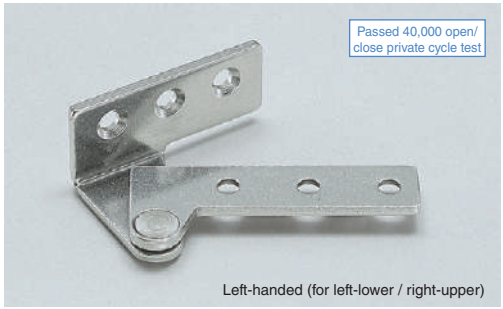
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Type	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-988	HG-PV60AC-L	Left-handed	2	38	50	200
G	3D	170-090-987	HG-PV60AC-R	Right-handed			50	200

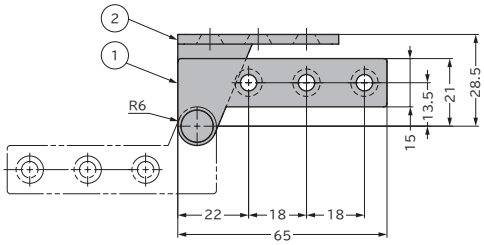
PIVOT HINGE PL-65 For Overlay Door

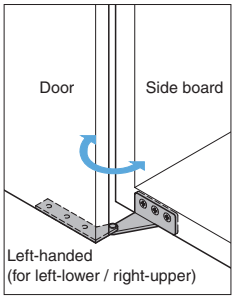
SUS

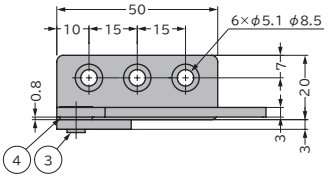


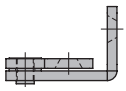
[Remarks]

●Recommended for use in pairs.









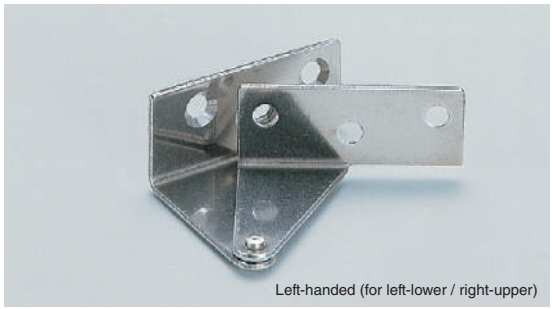
Left-handed type.

No.	Part Name	Material
①	Arm A	Stainless Steel (SUS430)
②	Arm B	
③	Hinge Pin	Stainless Steel
④	Washer	Stainless Steel (SUS304)

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door Height/2pcs	Door Thickness	Door Weight N/2pcs	Door Weight kgf/2pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-190	PL-65R	Right-handed (for right-lower / left-upper)	Max.	Min.	Max.	69	7	55	40	400
G	3D	170-099-191	PL-65L	Left-handed (for left-lower / right-upper)	600	900	20				40	400

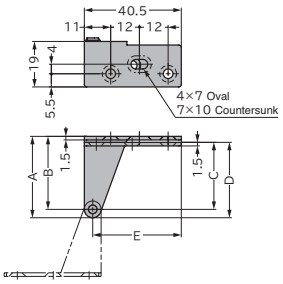
PIVOT HINGE WP1, WP3 For Overlay Door

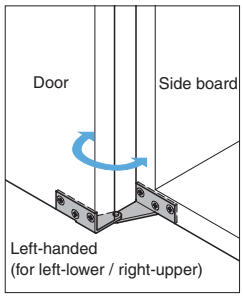
SUS



[Remarks]

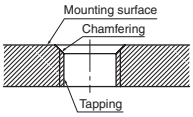
●Recommended for use in pairs.

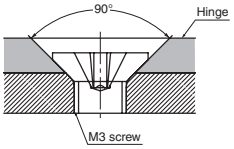




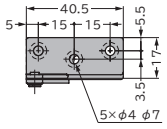
[Processing on metal sheet]

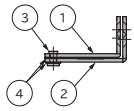
When M3 screws are used.





Please be sure to chamfer the mounting surface for screws and rivets.
In this way, screw head will not project when the body is fixed.





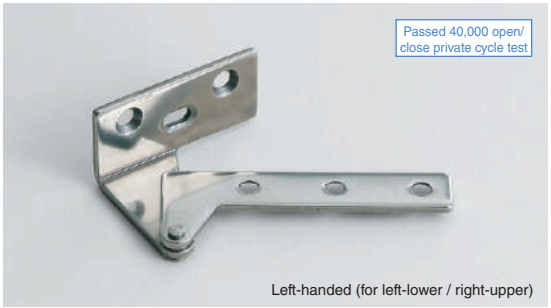
Left type shown.

No.	Part Name	Material	Finish/Colour
①	Body A	Stainless Steel (SUS430)	Bright Barrel Polished
②	Body B (slotted hole)		
③	Hinge Pin	Stainless Steel	Barrel Polished
④	Plain Washer	Stainless Steel (SUS430)	Unfinished

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	A	B	C	D	E	F	Door Width	Door Height	Door Thickness	Door Weight kg/set	Weight (g)	Box (pcs)
G	3D	170-090-257	WP1R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Barrel Polished	34	31.5	30.5	28	37	37	Max. 300	Max. 700	Max. 24	Max. 2.7	23	100
G	3D	170-090-258	WP1L	Left-handed (for left-lower / right-upper)														100
G	3D	170-090-259	WP3R	Right-handed (for right-lower / left-upper)			28	26	24.5	22	36.5	36.5			Max. 18		21	100
G	3D	170-090-260	WP3L	Left-handed (for left-lower / right-upper)														100

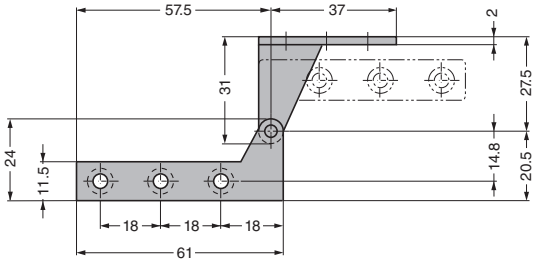
PIVOT HINGE PL-60 For Overlay Door

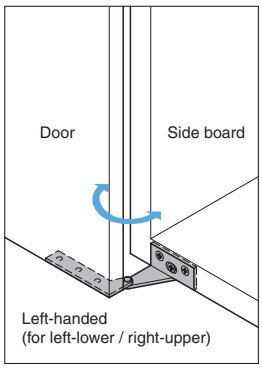
SUS

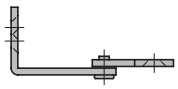


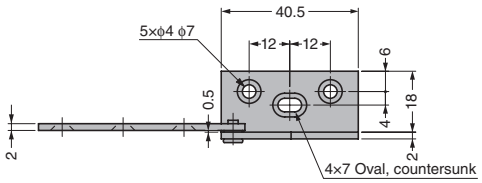
[Remarks]

●Recommended for use in pairs.





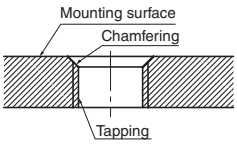


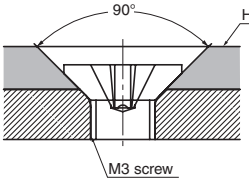


Left-handed type.

[Processing on metal sheet]

When M3 screws are used.



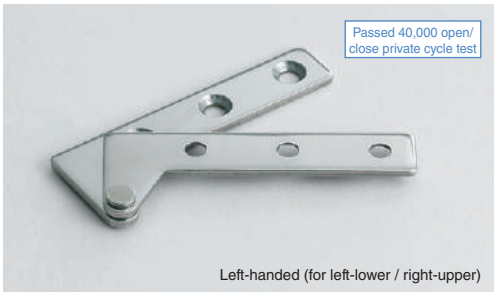


Please be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Door Height	Recommended Door Thickness	Door Weight kg/set	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-263	PL-60R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Plain	Max. 450	Max. 700	22	Max. 4	27	100	1000
G	3D	170-090-264	PL-60L	Left-handed (for left-lower / right-upper)								100	1000

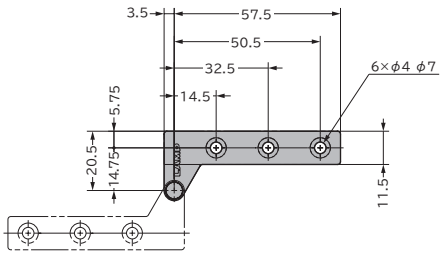
PIVOT HINGE PP-60 For Inset Door

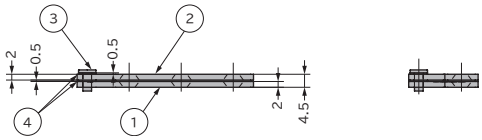
SUS



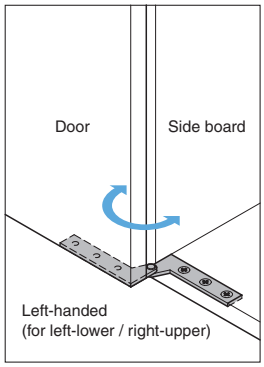
[Remarks]

●Recommended for use in pairs.





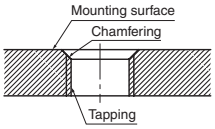
Right-handed type.

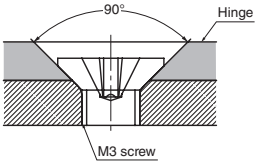


No.	Part Name	Material	Finish/Colour
①	Body A	Stainless Steel (SUS430)	Bright Barrel Polished
②	Body B		
③	Hinge Pin	Stainless Steel	—
④	Washer		

[Processing on metal sheet]

When M3 screws are used.





Please be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Door Height	Door Weight kg/set	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-261	PP-60R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Barrel Polished	Max. 450	Max. 700	Max.4	22	100	1000
G	3D	170-090-262	PP-60L	Left-handed (for left-lower / right-upper)							100	1000

HIGH DURABILITY STAINLESS STEEL SPRING HINGE HG-SHL

SUS

High durability

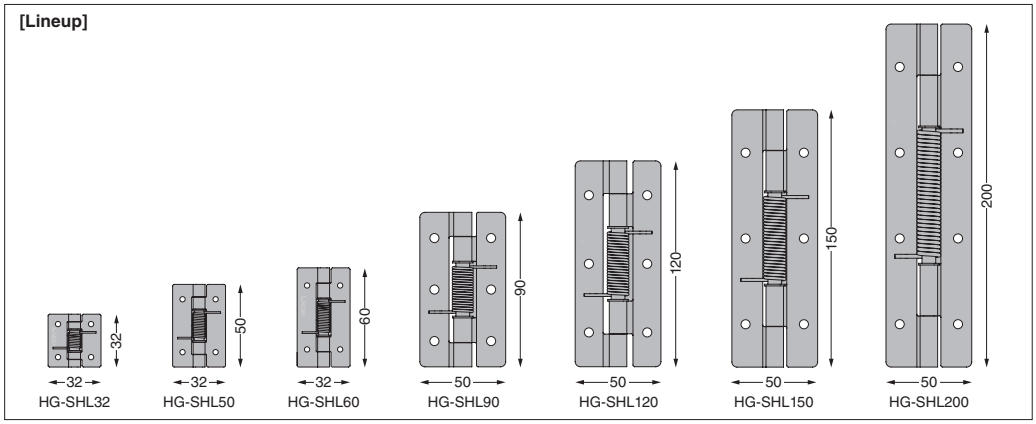
Passed 1,000,000 open/close private cycle test

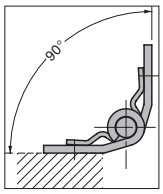
- Stainless steel structure with excellent corrosion resistance.
- Passed 1,000,000 open/close private cycle test.

[Remarks]

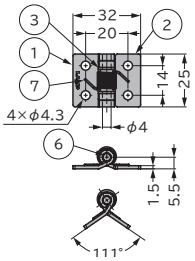
- Torque given in the table below is the value when the hinge opens 90°. (Refer to ※ in the drawing below)
- Load capacity is the value with two hinges. For calculation conditions, please refer to INDEX 1.
- Open/close tests were conducted on top-opening lids.

[Lineup]

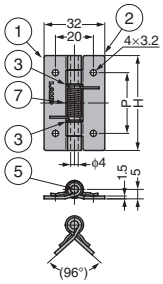




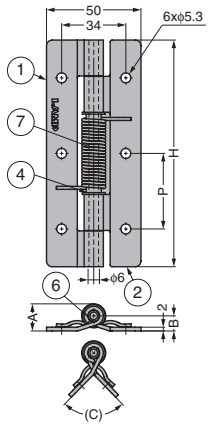
※When applying the torque given in the table below



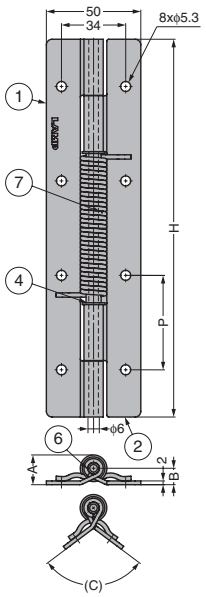
HG-SHL25



HG-SHL32
HG-SHL50
HG-SHL60



HG-SHL90
HG-SHL120
HG-SHL150



HG-SHL200

No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS304)	Barrel Polished
②	Body 2		
③	Collar	Stainless Steel (SUS303)	-
④	Collar (Large)		-
⑤	Shaft 1		-
⑥	Shaft 2	Stainless Steel (SUS304)	-
⑦	Spring		-

RoHS	CAD	Item Code	Item Name	H	P	A	B	C	Torque N·m	Torque kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)
G	3D	170-058-919	HG-SHL25	25	14	–	–	–	0.05	0.51	29	3	14
G	3D	170-024-384	HG-SHL32	32	18				0.047	0.48			20
G	3D	170-024-385	HG-SHL50	50	32				0.089	0.91	59	6	30
G	3D	170-024-386	HG-SHL60	60	40				0.14	1.43			38
G	3D	170-045-741	HG-SHL90	90	30	14	7.85	92	0.214	2.18	78	8	103
G	3D	170-045-742	HG-SHL120	120	40	14.35	8	89	0.43	4.38	186	19	137
–	3D	170-045-743	HG-SHL150	150	50	14.95	8.2	103	0.70	7.14	225	23	180
–	3D	170-045-744	HG-SHL200	200		15.75	8.7	106	0.95	9.68	284	29	248

Refer to 1: P.43

SPRING HINGE SH-C

SUS

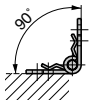
●All parts made of stainless steel.

[Remarks]

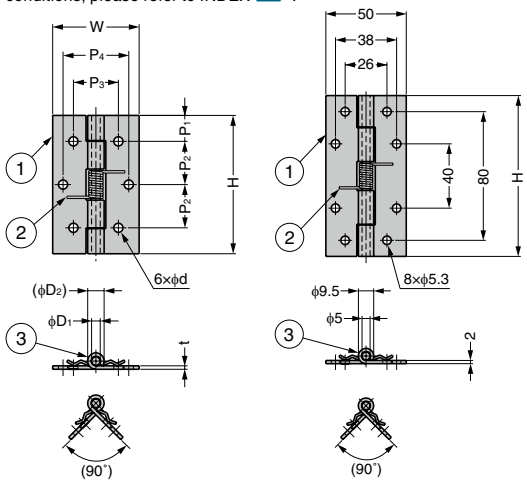
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

Selection Tool

Hinge Selection



※When applying the torque given in the table below



SH-60C, SH-80C　　SH-100C

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Spring		–
③	Shaft		

RoHS	CAD	Item Code	Item Name	H	W	t	P1	P2	P3	P4	D1	D2	d	Torque Moment cN·m	Torque Moment kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-788	SH-60C	60	40	1.5	10	20	26	26	5	8.5	4.3	27.8	2.83	88	9	44	250	–
G	3D	170-099-787	SH-80C	80	50	2	15	25		38		9.5	5.3	32.8	3.34	157	16	86	–	–
G	3D	170-099-786	SH-100C	100	Above Drawing									97.7	9.96	196	20	110	150	–

Refer to 1 : P.43

SPRING HINGE HG-BF3-2

SUS

HG-BF3-2L-SC　　HG-BF3-2R-SO

●Self-closing type (SC) and self-opening type (SO) available.

●Spring ends cannot be accessed for safety.

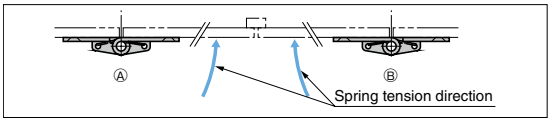
[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

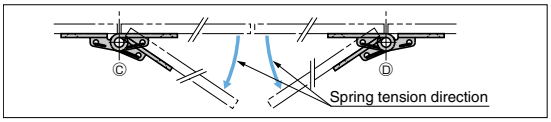
Selection Tool

Hinge Selection

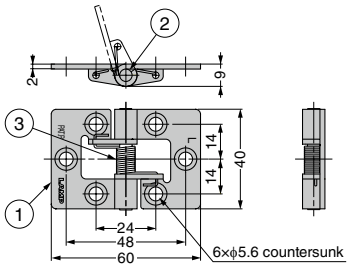
[Self-Closing Type (SC)]



[Self-Opening Type (SO)]



※Ⓐ and Ⓒ are marked with "L" , Ⓑ and Ⓓ are marked with "R" .



※Drawing above is HG-BF3-2L-SC. HG-BF3-2R-SC is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft		–
③	Spring		

RoHS	CAD	Item Code	Item Name	No.	Description	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-562	HG-BF3-2L-SC	Ⓐ	SC/Left-opening	69	7	41	20	120
G	3D	170-091-564	HG-BF3-2R-SC	Ⓑ	SC/Right-opening				20	120
G	3D	170-091-561	HG-BF3-2L-SO	Ⓒ	SO/Left-opening				20	120
G	3D	170-091-563	HG-BF3-2R-SO	Ⓓ	SO/Right-opening				20	120

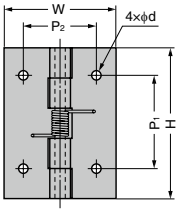
Refer to 1 : P.43

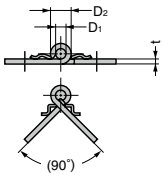
SPRING HINGE HG-SH

SUS

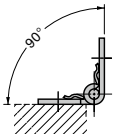
Selection Tool

Hinge Selection





Free state



※When applying the torque given in the table below

- Stainless steel construction suitable for corrosive environments.

[Remarks]

- Torque given in the table below is the value when the hinge opens 90°.(Refer to ※ in the drawing below)
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Old Item Code	Item Name	Material	Finish	H	W	P_1	P_2	D_1	D_2	d	t	Torque Moment N·m	Torque Moment kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-515	–	HG-SH-20C	Stainless Steel (SUS304)	Barrel Polished	20	14	–	–	1	2.2	–	0.5	0.097	0.99	9.8	1	1.5	800	3200
G	3D	170-098-516	170-098-520	HG-SH-25C			25	32	14	20	3	5.8	3.2	1.2	0.065	0.66	29	3	10	300	1200
G	3D	170-098-517	170-098-521	HG-SH-38C			38		26			6.5		1.5	0.147	1.5	59	6	20	200	800
G	3D	170-098-518	※170-098-522	HG-SH-51C			51	38	32	25					0.135	1.38	69	7	35	130	520

Refer to 1 : P.43

※Item code has been revised.

SPRING HINGE SA

SUS

Passed 500,000 open/close private cycle test

SA120-5314-01

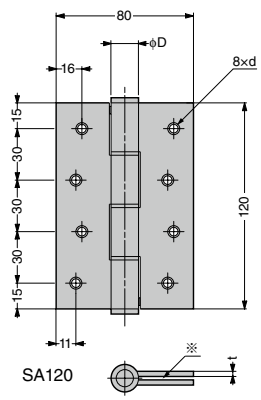
SA180-5814-05

SA180-BK-5813-09

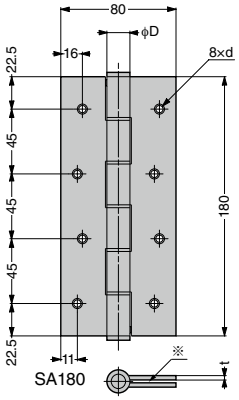
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- All parts including shaft and spring made of stainless steel (SUS304).

[Remarks]

- In case of noise, apply lubricant (grease) to washer and torsion spring.



SA120

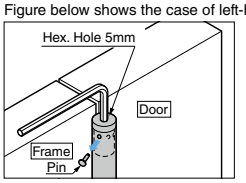


SA180

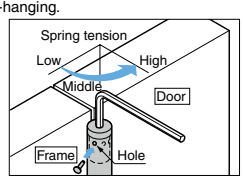
※ After the door is closed, leaves are not parallel to each other.

[How to Adjust Spring Tension]

Figure below shows the case of left-hanging.

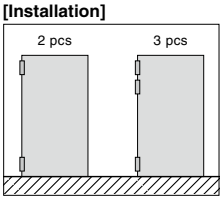


Loosen shaft with a hex key and remove the pin.



Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	With Spring	D	t	d	Door Width	Load Capacity N/2pcs	Load Capacity kgf/2pcs	Load Capacity N/3pcs	Load Capacity kgf/3pcs	Weight (g)	Box (pcs)
G	3D	170-090-810	SA120-5314-01	Aluminium Alloy	Anodised	Yes	16	4	ϕ5.3 THRU ϕ10 CSK	Max. 1000	196	20	294	30	175	2
G	3D	170-090-811	SA180-5814-01								392	40	588	60	260	2
G	3D	170-090-812	SA120-5314-05	Stainless Steel (SUS304)	Plain		17	2.5	ϕ5.5 THRU ϕ9 CSK		196	20	294	30	303	2
G	3D	170-090-813	SA180-5814-05				18	3			392	40	588	60	526	2
G	–	170-048-795	SA120-BK-5313-09	Aluminium Alloy	Black		16	4	ϕ5.3 THRU ϕ10 CSK		196	20	294	30	175	2
G	–	170-048-796	SA180-BK-5813-09								392	40	588	60	260	2
G	–	170-048-793	SA120-SM-5394-01		Anodised	No					196	20	294	30	175	2
G	–	170-048-794	SA180-SM-5894-01								392	40	588	60	260	2
G	–	170-048-797	SA120-SM-5394-05	Stainless Steel (SUS304)	Plain		17	2.5	ϕ5.5 THRU ϕ9 CSK		196	20	294	30	303	2
G	–	170-048-798	SA180-SM-5894-05				18	3			392	40	588	60	526	2

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SPRING HINGE ST150-6314-05

SUS

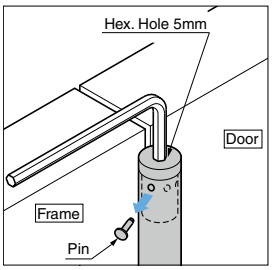
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Can reduce clearance between door and frame without door cutting.
- Aluminium hinge also available by made to order.

[Remarks]

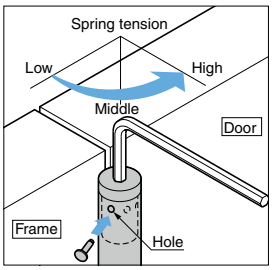
- In case of noise, apply lubricant (grease) to washer and torsion spring.

[How to Adjust Spring Tension]

Figure below shows the case of left-hanging. Right-hanging is symmetrical.

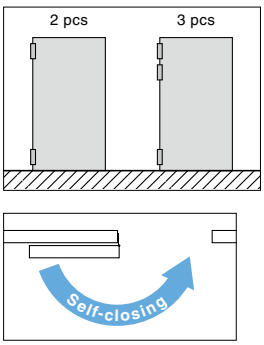


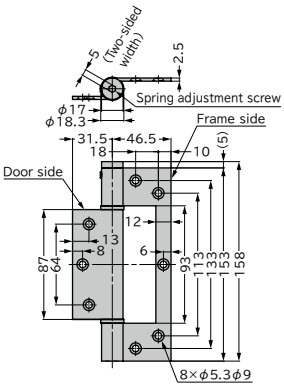
Loosen shaft with a hex key and remove the pin.



Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]





※ The value in case of door width 1000mm or less

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs※	Load Capacity kgf/2 pcs※	Load Capacity N/3 pcs※	Load Capacity kgf/3 pcs※	Weight (g)	Box (pcs)
G	3D	170-022-486	ST150-6314-05	Stainless Steel (SUS304)	Plain	392	40	588	60	336	2

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

ALUMINIUM SPRING LIFT-OFF HINGE PM120

PM120-524401L

PM120-BK-5243-09R

PM120-5224-05L

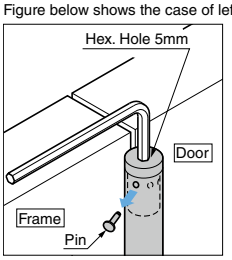
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Easy to remove the door.

[Remarks]

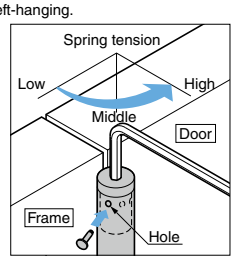
- In case of noise, apply lubricant (grease) to washer and torsion spring.

[How to Adjust Spring Tension]

Figure below shows the case of left-hanging.

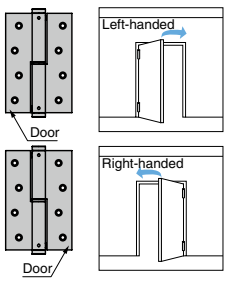


Loosen shaft with a hex key and remove the pin.

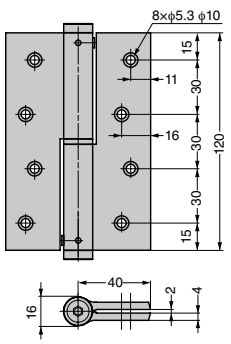


Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]



Use right-handed hinge if door is hung on the right (viewing from the side of pulling the door).



Left-handed type.

※ After the door is closed, leaves are not parallel to each other.

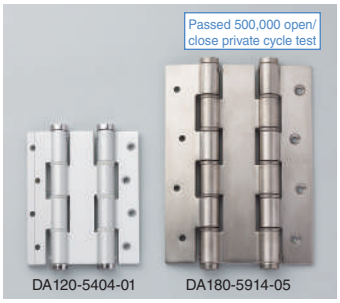
RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Load Capacity N/3 pcs	Load Capacity kgf/3 pcs	Weight (g)	Box (pcs)
G	3D	170-022-484	PM120-524401L	Left-handed	Aluminium Alloy	Anodised	Max. 1000	200	20	300	30	172	2
G	3D	170-022-485	PM120-525401R	Right-handed									2
G	–	170-048-791	PM120-BK-5243-09L	Left-handed		Black							2
G	–	170-048-792	PM120-BK-5253-09R	Right-handed									2
–	–	170-058-513	*PM120-5224-05L	Left-handed	Stainless Steel	Plain							2
–	–	170-058-514	*PM120-5254-05R	Right-handed									2

*Supplied with countersunk tapping screw.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SPRING HINGE (DOUBLE ACTION) DA

SUS

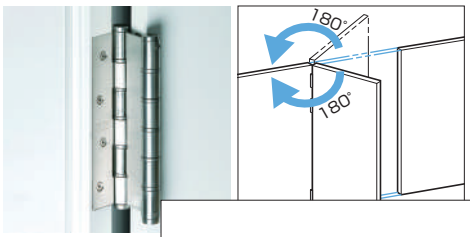


- Opens in both directions inside and outside.
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Opening angle is 180˚.
- All parts including shaft and spring made of stainless steel (SUS304).
- Anodised type is also available in black, white, gold, bronze colours. (Made to order / MOQ: 2 pcs)

[Relationship Between Door Height and Door Weight]

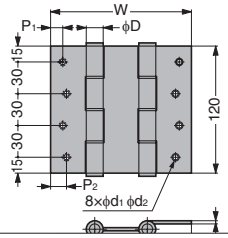
	DA120	DA180
Recommended Door Height	1800~2500 mm	
Min. Door Height	500 mm	800 mm
Door Weight	Door Height: Max. 1800mm	
	Reduce by 1.1 kg for lowering 100mm each time.	Reduce by 2.1kg for lowering 100mm each time.

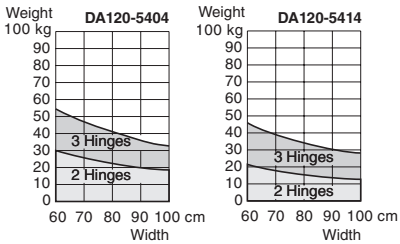
[Special Colours (made to order)]



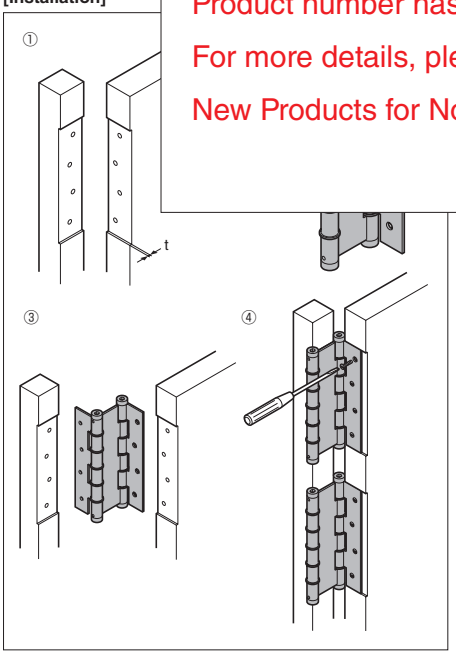
[Remarks]

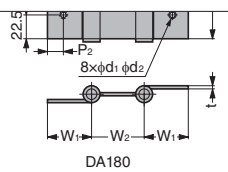
- In case of noise, apply lubricant (grease) to washer and torsion spring.

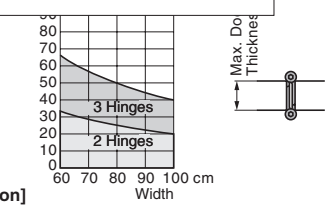




[Installation]

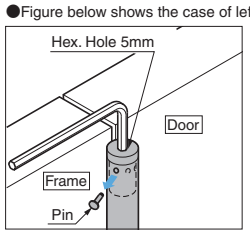




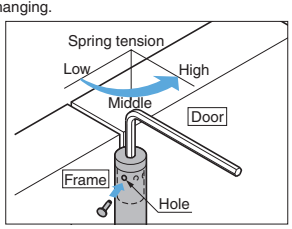


[How to Adjust Spring Tension]

- Figure below shows the case of left-hanging.



Loosen shaft with a hex key and remove the pin.



Adjust spring tension with three steps. Put the pin to the hole and fix.

Product number has been updated.

For more details, please refer to

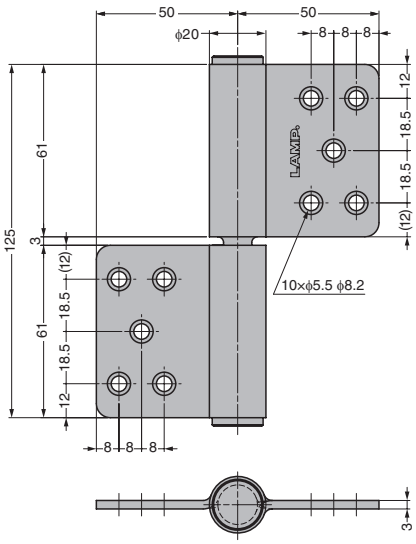
New Products for No.400 catalogue on page A032,A033.

RoHS	CAD	Item Code	Item Name	Material	Finish	W	W1	W2	P1	P2	D	t	d1	d2	Max. Door Thickness	Opening Angle	Screw	Weight (g)	Box (pcs)
G	3D	170-090-803	DA120-5404-01	Aluminium Alloy	Anodised	101	29.5	42	6.5	11.5	16	4	5.3	10	30	180˚	–	275	2
G	3D	170-090-804	DA120-5414-01			133	40	53	11	16					40			320	2
G	3D	170-090-805	DA120-5414-05	Stainless Steel (SUS304)	Plain						17	2.5	5.5	9	36		Countersunk Head Tapping Screw	555	2
G	3D	170-090-806	DA180-5904-01	Aluminium Alloy	Anodised	101	29.5	42	6.5	11.5	16	4	5.3	10	30		–	407	2
G	3D	170-090-807	DA180-5914-01			133	40	53	11	16					40			466	2
G	3D	170-090-808	DA180-5914-05	Stainless Steel (SUS304)	Plain						18	3	5.5	9	38		Countersunk Head Tapping Screw	947	2
G	3D	170-090-809	DA180-5934-01	Aluminium Alloy	Anodised	157	48.5	60	19.5	24.5	16	4	5.3	10	50			510	2

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CLEAN ROOM HINGE HG-CV-127

SUS



Drawing above is HG-CV-127R.

- Suitable for use in a clean room.
- The bearing unit (thrust bearing and needle bearing) built into the sliding section reduces metal-to-metal wear.
- Seal of rotating part prevents metal powder from scattering.
- Welded curl part provides excellent durability.

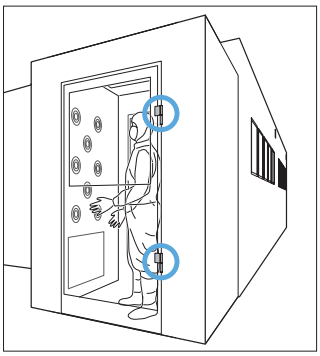
[Applications]

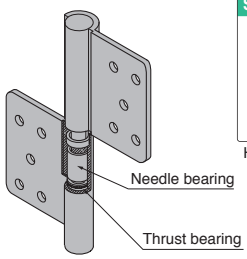
- Semiconductor manufacturing equipment, clean room, etc.

[Remarks]

- Install the shaft downwards on the door side.
- Load capacity and open/close test under the following conditions: door size H2000×W900mm, door weight 100kg, two hinges used, installation pitch 1600mm.
- The shaft may be difficult to pull out because there is very little clearance in the structure. Forcible removal may result in damage.

[Application Example]





Selection Tool

Hinge Selection

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-013-013	HG-CV-127L	Left-handed	Stainless Steel (SUS304)	Satin/ Polished	981	100	388	10	50
G	3D	170-014-422	HG-CV-127R	Right-handed						10	50

CLEAN ROOM TORQUE HINGE HG-CVT

Free stop

HG-CVT65-15

- Retains the door at any angle.
- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- Can be used horizontally or vertically.

[Applications]

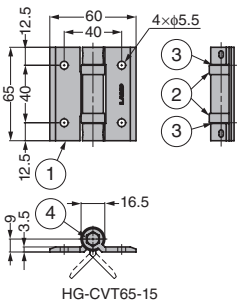
- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

[Reference door mass for vertical installation (side-opening)]

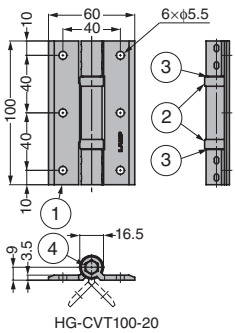
- 10 kg (door size: W 900 × H 1800 × t 25 mm, hinge installation pitch: 1140 mm. Passed 30,000 open / close private cycle test)

[Remarks]

- Be sure to read the "Cautions" 1 .
- When installing, ensure that both hinge shafts are aligned.
- Durability in vertical installation varies depending on the door specifications (moment). Please verify using the actual product.



HG-CVT65-15



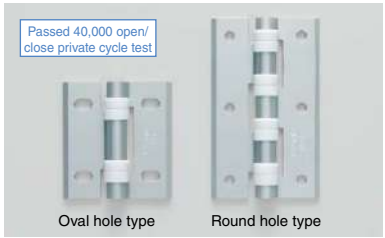
HG-CVT100-20

No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cap	POM	Natural
③	Washer	PTFE	White
④	Shaft	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)
G	3D	170-053-302	HG-CVT65-15	1.5 ±30%	15.3 ±30%	62
G	3D	170-053-303	HG-CVT100-20	2.0 ±25%	20.4 ±25%	102

Refer to 1 : P.43

CLEAN ROOM HINGE HG-CV



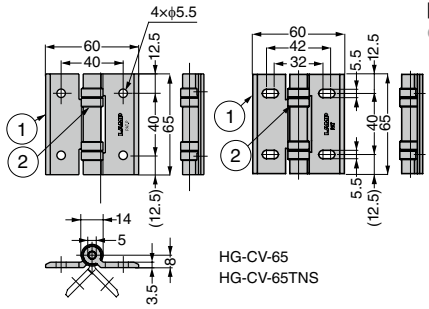
- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- When opening and closing door, plastic caps will not interfere with frame .
- Aluminium alloy material, light weight and excellent design.
- Round hole type, precision type and oval hole type available. For precision type, clearance between hinge leaves and plastic caps/shaft is small.

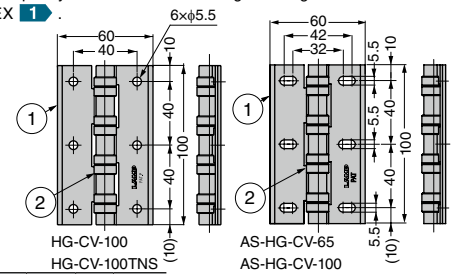
[Applications]

- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





Selection Tool

Hinge Selection

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-441	HG-CV-65	Round Hole Type	147	15	50	20	240
G	3D	170-091-442	HG-CV-100		226	23	78	20	160
G	3D	170-099-151	HG-CV-65TNS	Precision Type	147	15	50	20	240
G	3D	170-099-152	HG-CV-100TNS		226	23	78	20	160
G	3D	170-090-537	AS-HG-CV-65	Oval Hole Type	147	15	49	20	240
G	3D	170-090-540	AS-HG-CV-100		226	23	76	20	160

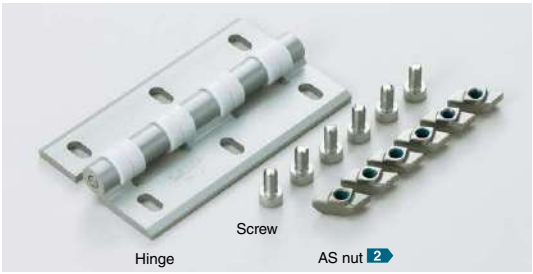
Refer to 1 : P.43

Reference door weight (HG-CV65): 8kg
Reference door weight (HG-CV100): 13kg
(In case of door size W600×800, using 2 pcs vertically)

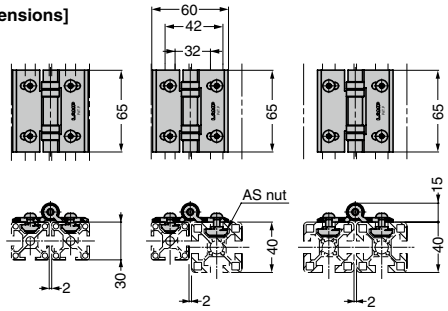
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cap	POM	White
–	Shaft	Stainless Steel (SUS303)	–

AS Parts Set For Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-527	AS-HG-CV65-30-6	Groove width 6 mm	Hinge AS-HG-CV-65: 1 pc AS nut AS-6M4: 4 pcs Hexagon socket head cap screw M4×10: 4 pcs	–
G	–	170-041-528	AS-HG-CV65-30-8	Groove width 8 mm	Hinge AS-HG-CV-65: 1pc AS nut AS-8M5: 4 pcs Hexagon socket head cap screw M5×14: 4 pcs	–
G	–	170-041-529	AS-HG-CV65-40-8			–
G	–	170-041-530	AS-HG-CV65-40-10	Groove width 10 mm	Hinge AS-HG-CV-65: 1pc AS nut AS-10M5: 4 pcs Hexagon socket head cap screw M5×14: 4 pcs	–
G	–	170-041-531	AS-HG-CV100-30-6	Groove width 6 mm	Hinge AS-HG-CV-100: 1 pc AS nut AS-6M4: 6 pcs Hexagon socket head cap screw M4×10: 6pcs	–
G	–	170-041-532	AS-HG-CV100-30-8	Groove width 8 mm	Hinge AS-HG-CV-100: 1pc AS nut AS-8M5: 6pcs Hexagon socket head cap screw M5×14: 6pcs	–
G	–	170-041-533	AS-HG-CV100-40-8			–
G	–	170-041-534	AS-HG-CV100-40-10	Groove width 10 mm	Hinge AS-HG-CV-100: 1pc AS nut AS-10M5: 6pcs Hexagon socket head cap screw M5×14: 6pcs	–

Refer to 1 : P.20, 2 : P.526

CLEAN ROOM HINGE HG-CV-65N Lift-Off Type

- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- Lift-off type, easy to detach the door.
- When opening and closing door, plastic caps will not interfere with frame .
- Aluminium alloy material, light weight and excellent design.
- Oval hole type also available.

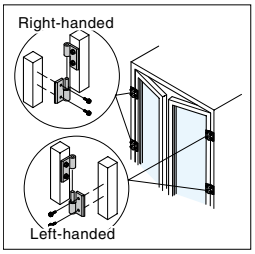
[Applications]

- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

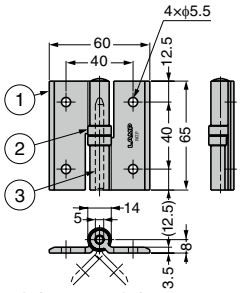
[Installation]



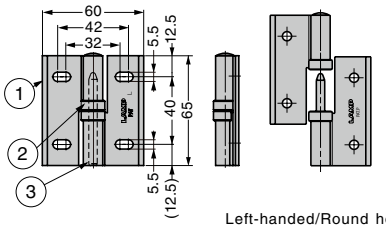
Selection Tool

Hinge Selection

Reference door weight: 8kg
(In case of door size W600×800, using 2 pcs vertically)



HG-CV-65NR, HG-CV-65NL



AS-HG-CV-65NR
AS-HG-CV-65NL

Left-handed/Round hole type shown. Right-handed type is symmetrical.

RoHS	CAD	Item Code	Item Name	Description	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-452	HG-CV-65NR	Right-handed/Round Hole	108	11	49	20	240
G	3D	170-091-451	HG-CV-65NL	Left-handed/Round Hole				20	240
G	3D	170-090-538	AS-HG-CV-65NR	Right-handed/Oval Hole			48	20	240
G	3D	170-090-539	AS-HG-CV-65NL	Left-handed/Oval Hole				20	240

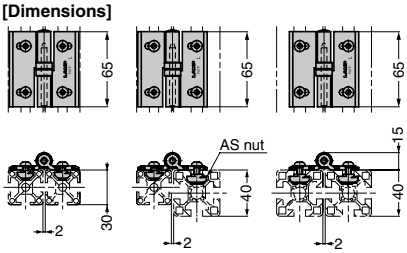
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cover	POM	White
③	Shaft	Stainless Steel (SUS303)	Plain

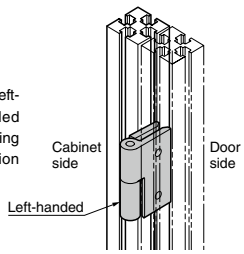
Refer to 1 : P.43

AS Parts Set For Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

[Dimensions]





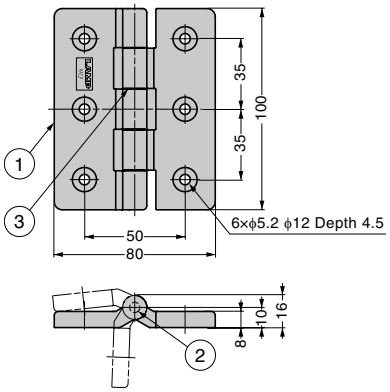
As shown on the right, left-handed and right-handed types are defined according to the Installation position of the hinge.

[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-535	AS-HG-CV65NR-30-6	Groove Width 6 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-6M4: 4pcs Hexagon Socket Head Cap Screw M4×10: 4pcs	–
G	–	170-041-539	AS-HG-CV65NL-30-6		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-6M4: 4pcs Hexagon Socket Head Cap Screw M4×10: 4pcs	–
G	–	170-041-536	AS-HG-CV65NR-30-8	Groove Width 8 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×10: 4pcs	–
G	–	170-041-540	AS-HG-CV65NL-30-8		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×10: 4pcs	–
G	–	170-041-537	AS-HG-CV65NR-40-8		Hinge AS-HG-CV-65NR: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-541	AS-HG-CV65NL-40-8		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-538	AS-HG-CV65NR-40-10	Groove Width 10 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-10M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-542	AS-HG-CV65NL-40-10		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-10M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–

Refer to 1 : P.20, 2 : P.526

BUTT HINGE HG-P100



- PVC material, with excellent chemical resistance.
- No metal powder generated because all parts (except shaft) are made of resin.
- Clear type does not affect appearance even on transparent door.
- Lead-free.

[Applications]
- Semiconductor manufacturing equipment, liquid crystal manufacturing equipment, etc.

[Remarks]
- Screw may become loose, depending on use situation. Please check appropriately.
- Use washers when fixing with screws.
- When installing to aluminium frame, over-tightening may damage mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Recommended Screws]
- M5 screw (Recommended tightening torque 2.0N・m)

Selection Tool
Hinge Selection

No.	Part Name	Material	Finish / Colour
①	Leaf	PVC	Clear
②	Shaft	Titanium Alloy	Plain
③	Washer	PEEK	–

Reference door weight: 8kg
(In case of door size W600×H800, using 2 pcs vertically)

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-836	HG-P100	98	10	74	30	240

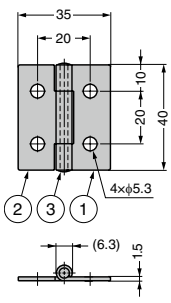
Refer to 1 : P.43

BUTT HINGE FOR ALUMINIUM FRAME AS-HG-IS

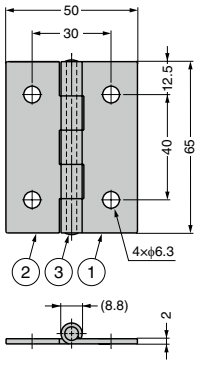
SUS

- Can be installed to aluminium frame.
- All parts made of polished stainless steel.

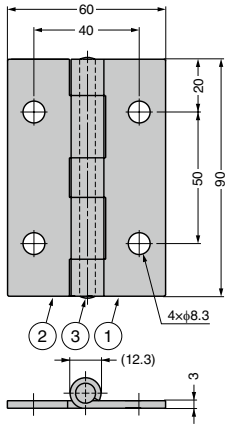
[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



AS-HG-IS40



AS-HG-IS65



AS-HG-IS90

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-116	AS-HG-IS40	69	7	21	400	–
G	3D	170-098-117	AS-HG-IS65	157	16	99	50	200
G	3D	170-098-118	AS-HG-IS90	333	34	169	10	80

Refer to 1 : P.43

No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS304)	Mirror
②	Body 2		
③	Shaft		–

LIFT-OFF HINGE FOR ALUMINIUM FRAME AS-HG-AL-N

- Aluminium alloy material, light weight and excellent design.
- Resin covering rotating part and shaft end prevents metal-to-metal friction and metal powder scattering.
- Unique shaft design for easy installation
- Shaft with rib will not fall off when door is detached.
- Suitable for aluminium frames from various manufacturers.

[Applications]

- Semiconductor manufacturing equipment, aluminium frame, household equipment, etc.

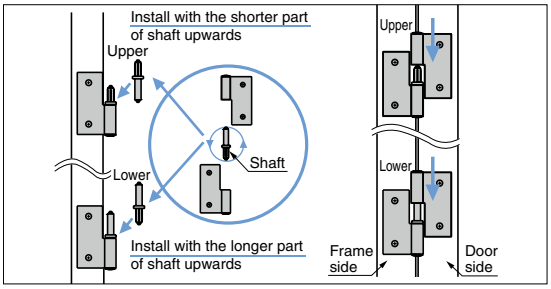
[Remarks]

- For details such as applicable aluminium frames, please contact local representatives.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

Selection Tool

Hinge Selection

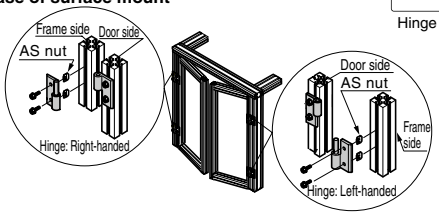
[Installation]



- Shaft
  Install upper and lower hinges with the longer and shorter part of shaft reversed.
- Door installation
  Hang the door on to the lower hinge first, and then on to the upper hinge. Different shaft length reduces installation time.

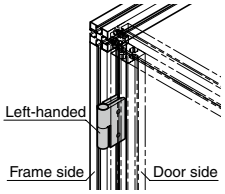
[Installation]

In case of surface mount



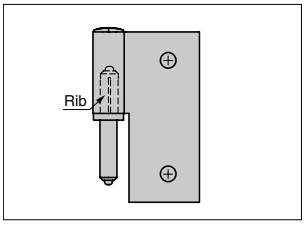
As shown above, in case of surface mount, use left-handed hinge for right-hanging while right-handed hinge for left-hanging.

In case of non-surface mount

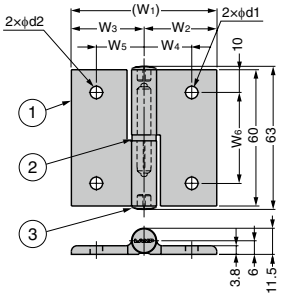


As shown on the left, in case of non-surface mount, use right-handed hinge for right-hanging while left-handed hinge for left-hanging.

[Structure of Shaft]



Unique rib design means that the shaft will remain in the door part of the upper hinge when the door is removed.
When re-installing door, remove shaft and install it into hinge at the frame side.



Right-handed/Round hole type shown. Left-handed type is symmetrical.

No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Matte Anodised Silver (Machined Surface: Plain)
②	Shaft	Stainless Steel (SUS303), POM	White
③	Cover	POM	

RoHS	CAD	Item Code	Item Name	Description	W1	W2	W3	W4	W5	W6	d1	d2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-018-210	☆AS-HG-AL-NL3020	Round Holes, Left-handed	43	18	25	11	16	40	4.5	5.5	78	8	34	20	240
G	3D	170-018-209	☆AS-HG-AL-NR3020	Round Holes, Right-handed											34	20	240
G	3D	170-018-212	☆AS-HG-AL-NL3030	Round Holes, Left-handed	50	25		16			5.5				37	20	240
G	3D	170-018-211	★AS-HG-AL-NR3030	Round Holes, Right-handed											37	20	240
G	3D	170-018-214	☆AS-HG-AL-NL3040	Round Holes, Left-handed	57			21							40	20	240
G	3D	170-018-213	☆AS-HG-AL-NR3040	Round Holes, Right-handed											40	20	240
G	3D	170-020-921	☆AS-HG-AL-NL4020	Round Holes, Left-handed	50	18	32	11			4.5				38	20	240
G	3D	170-020-920	☆AS-HG-AL-NR4020	Round Holes, Right-handed											38	20	240
G	3D	170-018-216	☆AS-HG-AL-NL4040	Round Holes, Left-handed	64	32		21			5.5				46	20	240
G	3D	170-018-215	☆AS-HG-AL-NR4040	Round Holes, Right-handed											46	20	240

Refer to 1 : P.43

★Discontinued ☆Limited inventory, contact sales associate for details.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

BUTT HINGE FOR ALUMINIUM FRAME AS-HG-AL

- Special hinges fitting perfectly with the mounting groove of aluminium frame. No additional washers are required.
- Plastic bushes provide smooth movement and prevent metal-to-metal friction.
- Aluminium alloy material, light weight and excellent design.
- Stainless steel hinge AS-HG-SUS 1 of the same type also available.

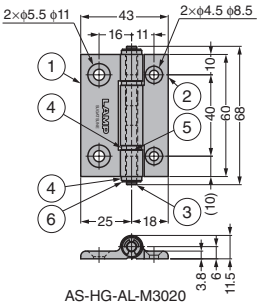
Selection Tool

Hinge Selection

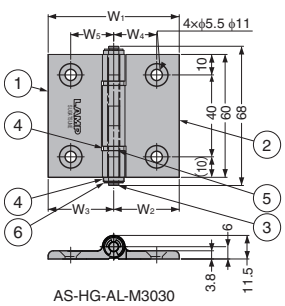
No.	Part Name	Material	Finish / Colour
①	Body A	Aluminium Alloy	Anodised Silver
②	Body B		
③	Shaft	Stainless Steel (SUS303)	Plain
④	Bush	POM	Natural
⑤	Washer	PEEK	
⑥	E-type Retaining Ring	Stainless Steel (SUS304)	–

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



AS-HG-AL-M3020
(Drawing A)



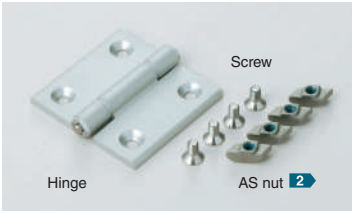
AS-HG-AL-M3030
AS-HG-AL-M3040
AS-HG-AL-M4040
(Drawing B)

RoHS	CAD	Item Code	Item Name	Drawing	W_1	W_2	W_3	W_4	W_5	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)
G	3D	170-011-679	AS-HG-AL-M3020	Drawing A	–	–	–	–	–	147	15	41
G	3D	170-011-680	AS-HG-AL-M3030	Drawing B	50	25	25	16	16			45
G	3D	170-011-681	AS-HG-AL-M3040		57	32		21				48
G	3D	170-011-682	AS-HG-AL-M4040		64		32		21			53

Refer to 1 : P.267, 2 : P.43

Parts Set for Installing to Aluminium Frame

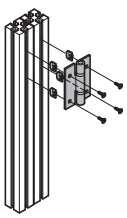
Please refer to the series introduction page 1 for details about AS series.



[AS Parts Set] Parts set of screws and AS nuts

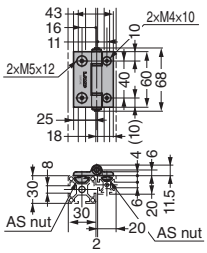
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-810	AS-HG-AL-M3020-8	Groove Width 6 mm Groove Width 8 mm	Hinge AS-HG-AL-M3020 : 1pc AS Nut AS-8M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs AS Nut AS-6M4 : 2pcs Hexagon Socket Countersunk Head Screw M4×10 : 2pcs	–
G	–	170-041-811	AS-HG-AL-M3030-8	Groove Width 8 mm	Hinge AS-HG-AL-M3030 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-812	AS-HG-AL-M3040-10	Groove Width 8 mm Groove Width 10 mm	Hinge AS-HG-AL-M3040 : 1pc AS Nut AS-10M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×16 : 2pcs AS Nut AS-8M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs	–
G	–	170-041-813	AS-HG-AL-M4040-8	Groove Width 8 mm	Hinge AS-HG-AL-M4040 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–
G	–	170-041-814	AS-HG-AL-M4040-10	Groove Width 10 mm	Hinge AS-HG-AL-M4040 : 1pc AS Nut AS-10M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–

[Installation]

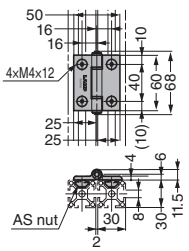


[Dimensions]

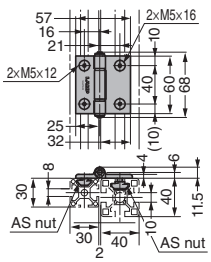
AS-HG-AL-M3020



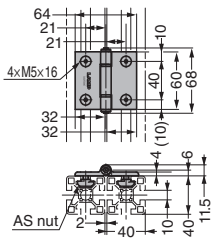
AS-HG-AL-M3030



AS-HG-AL-M3040



AS-HG-AL-M4040



Refer to 1 : P.20, 2 : P.526

BUTT HINGE FOR ALUMINIUM FRAME AS-HG-SUS

AS-HG-SUS-M3030　AS-HG-SUS-M3040

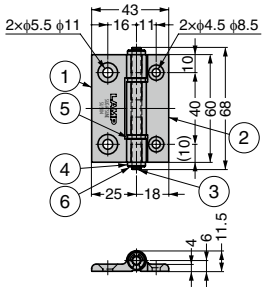
- Special hinges fitting perfectly with the mounting groove of aluminium frame. No additional washers are required.
- Plastic bushes provide smooth movement and prevent metal-to-metal friction.
- Aluminium alloy hinge AS-HG-AL 1 of the same type also available.

[Remarks]

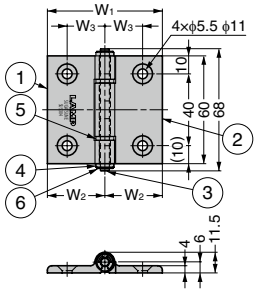
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .

Selection Tool

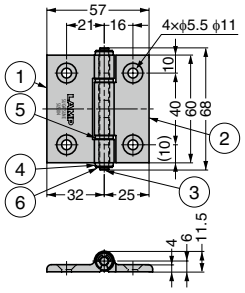
Hinge Selection



AS-HG-SUS-M3020
(Fig.A)



AS-HG-SUS-M3030
AS-HG-SUS-M4040
(Fig.B)



AS-HG-SUS-M3040
(Fig.C)

RoHS	CAD	Item Code	Item Name	Drawing	W1	W2	W3	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-011-886	AS-HG-SUS-M3020	Fig.A	–	–	–	294	30	96	10	100
G	3D	170-011-887	AS-HG-SUS-M3030	Fig.B	50	25	16			102	10	100
G	3D	170-011-888	AS-HG-SUS-M3040	Fig.C	–	–	–			112	10	100
G	3D	170-011-889	AS-HG-SUS-M4040	Fig.B	64	32	21			124	10	100

No.	Part Name	Material	Finish / Colour
①	Body A	Stainless Steel (SCS13)	Polished
②	Body B		
③	Shaft	Stainless Steel (SUS304)	Plain
④	Bush	POM	Natural
⑤	Washer	PEEK	
⑥	E-type Retaining Ring	Stainless Steel	–

Refer to 1 : P.266, 2 : P.43

Parts Set for Installing to Aluminium Frame

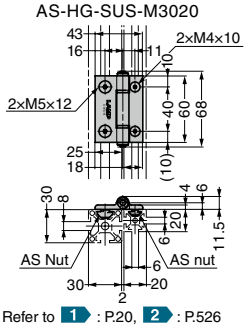
Please refer to the series introduction page 1 for details about AS series.

[AS Parts Set] Parts set of screws and AS nuts

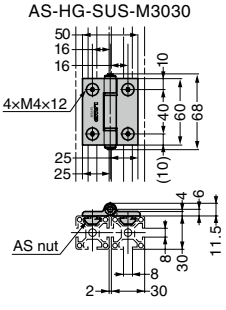
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-013-727	AS-HG-SUS-M3020-8	Groove width 6 mm Groove width 8 mm	Hinge AS-HG-SUS-M3020 : 1pc AS Nut AS-8M5 : 2pcs AS Nut AS-6M4 : 2pcs Hexagon Socket Countersunk Head Screw M4×10 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs	–
G	–	170-013-728	AS-HG-SUS-M3030-8	Groove width 8 mm	Hinge AS-HG-SUS-M3030 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-013-729	AS-HG-SUS-M3040-10	Groove width 8 mm Groove width 10 mm	Hinge AS-HG-SUS-M3040 : 1pc AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs Hexagon Socket Countersunk Head Screw M5×16 : 2pcs	–
G	–	170-013-730	AS-HG-SUS-M4040-8	Groove width 8 mm	Hinge AS-HG-SUS-M4040 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–
G	–	170-013-731	AS-HG-SUS-M4040-10	Groove width 10 mm	Hinge AS-HG-SUS-M4040 : 1pc AS Nut AS-10M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–

[Dimensions]

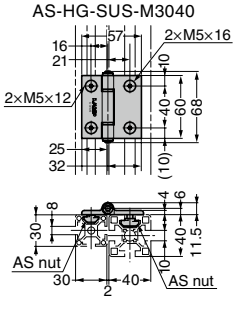
AS-HG-SUS-M3020



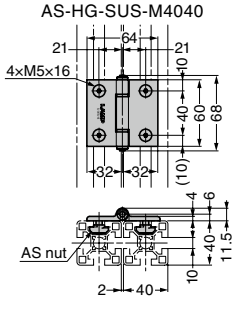
AS-HG-SUS-M3030



AS-HG-SUS-M3040



AS-HG-SUS-M4040



Refer to 1 : P.20, 2 : P.526

DROP HINGE (ADJUSTABLE TYPE) SDH-P

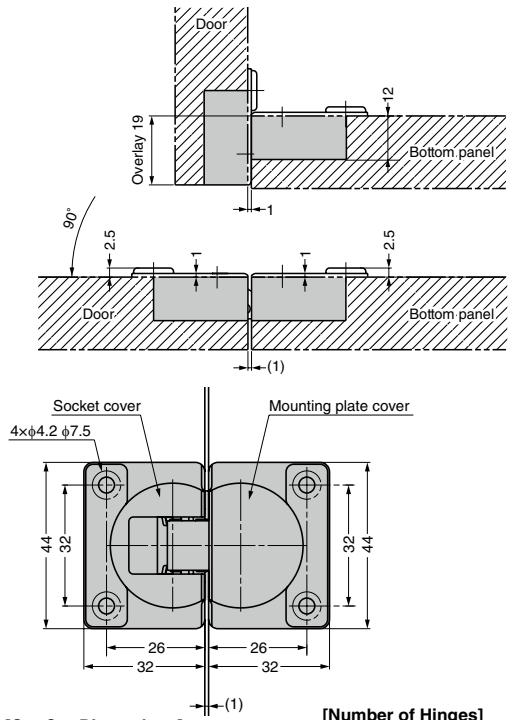
Hinges and covers are packed separately.

- 3-way adjustment.
  Overlay: 16-19mm / Horizontal: ±1mm / Door gap: 1-3mm
- For downward-opening doors.
- Can be used with soft-down stay SDS-100 1, SDS-100TV, NSDX-10(R/L) 2, NSDX-10(R/L)K-TV, CSD-10-TV.
- Bore depth:12mm

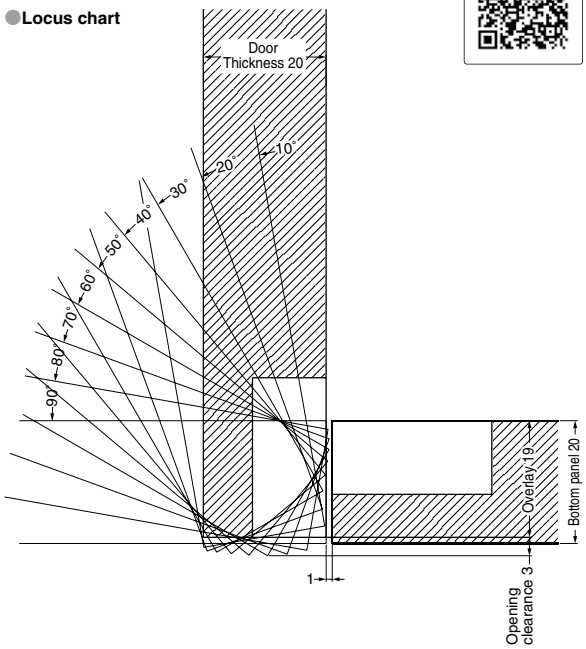
[Recommended Screws]
- Pan head tapping screw 3.5×15

Video Link

Outline drawing

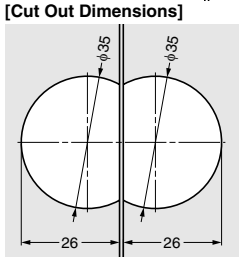


Locus chart



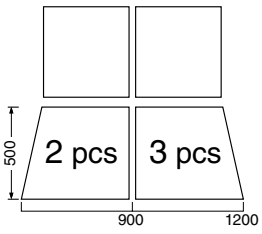
Example (door thickness : 20 mm / bottom panel: 20 mm / overlay : 19 mm)

[Cut Out Dimensions]

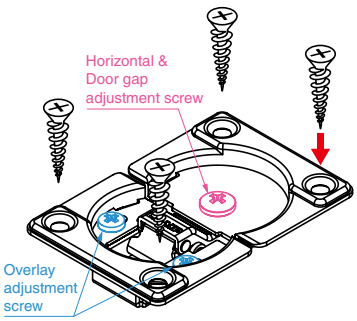


[Number of Hinges]

In case of door thickness up to 20 mm.
Material: Particle board.



[Before cover installation]



[Drop Hinge+Cover]

RoHS	CAD	Item Code	Item Name
G	3D	170-035-444	SDH-P-BL-SET
G	3D	170-037-357	SDH-P-WT-SET
G	3D	170-037-358	SDH-P-NI-SET

[Drop Hinge]

RoHS	CAD	Item Code	Item Name	Material	Finish	Overlay	Door Thickness	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-200	SDH-P	Steel	Nickel	16~19	16~20	90°	42	50	200

[Cover Set] Socket cover + mounting plate cover

RoHS	CAD	Item Code	Item Name	Styles	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	170-034-769	SDH-PC-BL	Socket Cover + Mounting Plate Cover	ABS	Black	4	100
G	3D	170-034-828	SDH-PC-WT			White	4	100
G	3D	170-034-829	SDH-PC-NI			Nickel	4	100

Refer to 1 : P.344, 2 : P.342

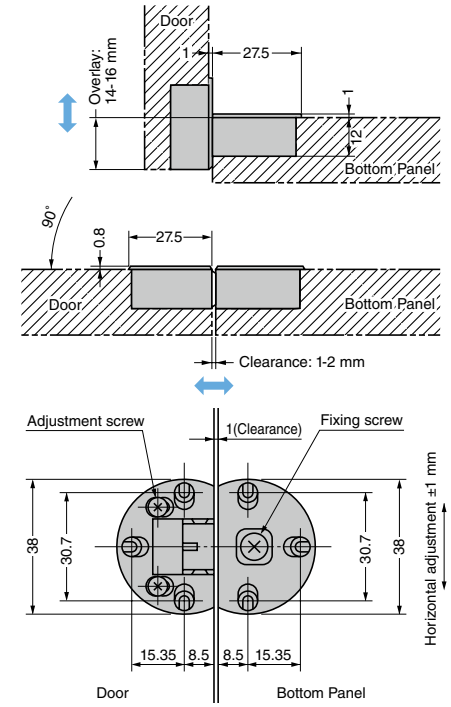
DROP HINGE (ADJUSTABLE TYPE) SDH-001

- 3-way adjustment. Overlay: 14~16mm / Door gap: +1mm / Horizontal: ±1mm
- Can be used with SOFT-DOWN STAY SDS-100 1 and NSDX-10 2 .
- Bore depth: 12mm
- Pan head tapping screw 3×13 in black (sold separately) for SDH-001BL is also available. Sold in bags (300 pcs per pack).
- Glass door type is also available.

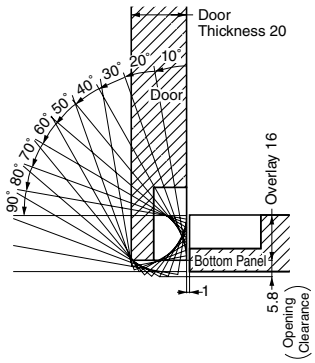
[Remarks]
- Use with a stay for downward-opening.

[Recommended Screws]
- Pan head tapping screw 3×13

Outline drawing

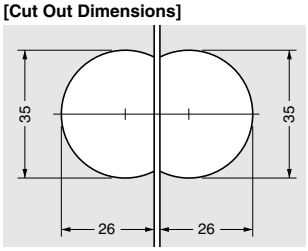


Locus chart (How to Use the Locus Chart 3)



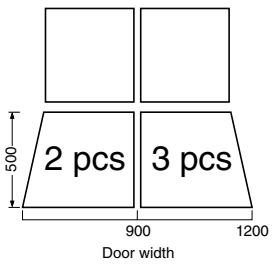
A gap equivalent to opening clearance is required for door opening and closing. Drawing above is door thickness 20 mm, bottom panel thickness 20 mm and 16 mm overlay. The value of opening clearance may change with the door thickness. Please confirm in the locus chart.

[Cut Out Dimensions]



[Number of Hinges]

In case of door thickness up to 20 mm.



[Application Example]

Combination with HEAVY DUTY SOFT-DOWN STAY HDS-10 4

[Pan Head Tapping Screw 3×13] Black

RoHS	CAD	Item Code	Item Name	1 pack	Weight (g)	Box (pcs)
G	–	170-011-885	SDH-001-S-BL	300 pcs	179	300

[Hinge]

RoHS	CAD	Item Code	Item Name	Material	Finish	Overlay	Recommended Door Thickness	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-471	SDH-001	Zinc Alloy	Nickel	14~16	16~20	90°	85	50	200
–	3D	170-010-648	SDH-001BL	(ZDC)	Black Enamel Finish				85	50	200

Refer to 1 : P.344, 2 : P.342, 3 : P.201, 4 : P.338

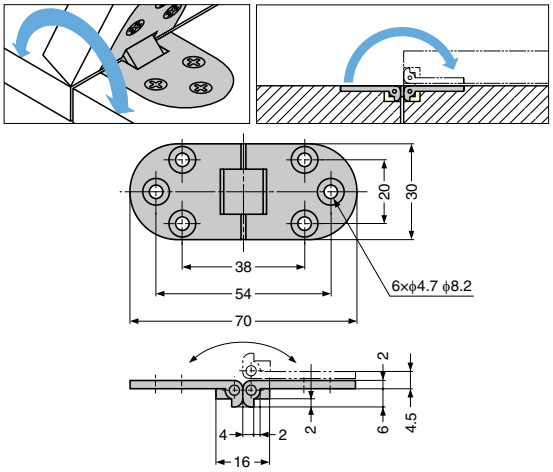
TABLETOP HINGE MH-30

●Double pivot hinge allows 180˚ opening.

[Remarks]

●Recommended door dimensions in the table below are the value when using two hinges for one door.

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-052	MH-30M	Brass	Polished	Max. 450	Max. 700	Max. 21	29	3	180˚	45	24	360
–	3D	170-090-051	MH-30WB		White Bronze Plating								24	360
–	3D	170-090-050	MH-30CR		Chrom								24	360

Refer to 1 : P.43

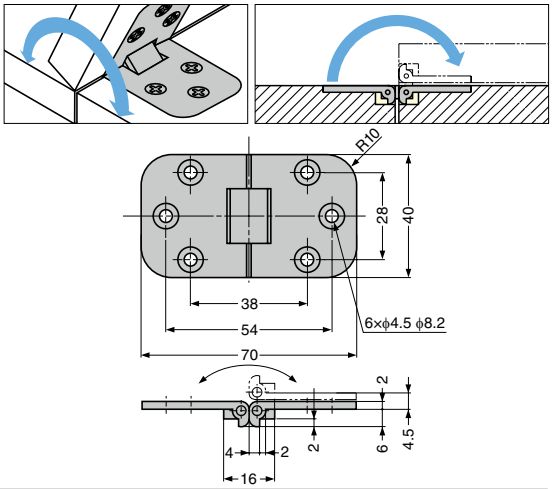
TABLETOP HINGE MH-40

●Double pivot hinge allows 180˚ opening.

[Remarks]

●Recommended door dimensions in the table below are the value when using two hinges for one door.

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

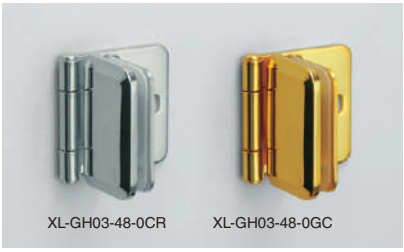


RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-057	MH-40M	Brass	Polished	Max. 450	Max. 700	Max. 21	29	3	180˚	64	16	240
–	3D	170-090-056	MH-40WB		White Bronze Plating								16	240
–	3D	170-090-055	MH-40CR		Chrom								16	240

Refer to 1 : P.43

GLASS DOOR HINGE XL-GH03-48-0 For Inset Door

TEMPERED GLASS



●Only two round holes needed on the door for one hinge.

[Applications]

●Glass or acrylic doors, various showcases, etc.

[Remarks]

●Recommended for use in pairs.

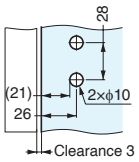
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

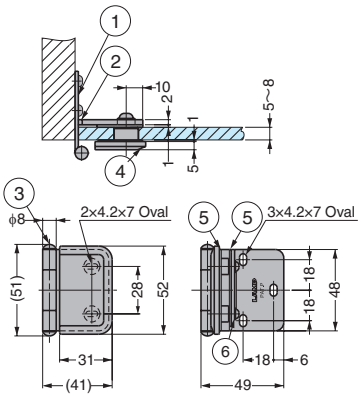
[Parts Included]

●Spacer (2 pcs)

●Truss head screw M4×12 (2 pcs)

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour	
			CR	GC
①	Hinge Plate	Stainless Steel (SUS304)	Polished	Gold, Clear
②	Arm			
③	Shaft			
④	Plate	Zinc Alloy (ZDC)	Chrome	
⑤	Spacer	Polyethylene	White	Natural
⑥	Screw	Stainless Steel (SUS304)	Plain	Plain

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-651	XL-GH03-48-0CR	Max. 650	Max. 900	5, 6, 8	118	12	132	10	100
G	3D	170-098-652	XL-GH03-48-0GC						144	10	100

Refer to 1 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE XL-GH03-48-8 For Overlay Door

TEMPERED GLASS

●Only two round holes needed on the door for one hinge.

[Applications]

●Glass or acrylic doors, various showcases, etc.

[Remarks]

●Recommended for use in pairs.

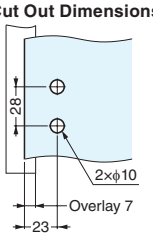
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

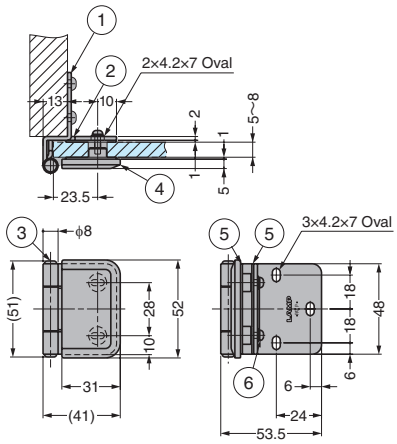
[Parts Included]

●Spacer (2 pcs)

●Truss head screw M4×12 (2 pcs)

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour	
			CR	GC
①	Hinge Plate	Stainless Steel (SUS304)	Polished	Gold, Clear
②	Arm			
③	Shaft			
④	Plate	Zinc Alloy (ZDC)	Chrome	
⑤	Spacer	Polyethylene	Natural	Natural
⑥	Screw	Stainless Steel (SUS304)	Plain	Plain

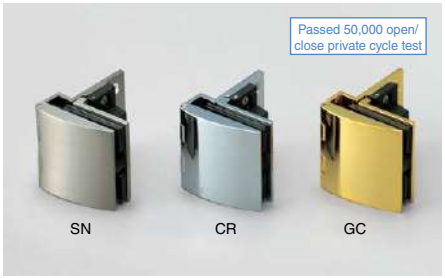
RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-649	XL-GH03-48-8CR	Max. 650	Max. 900	5, 6, 8	118	12	141	10	100
–	3D	170-098-650	XL-GH03-48-8GC						148	10	100

Refer to 1 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/ CATCH) GH-456C For Overlay Door

INSTRUCTION TEMPERED GLASS



- Suitable for showcases and covers for machine.
- Mounting position adjustable: Vertically ±1mm, Horizontally ±1.2mm.
- Inset door hinge is also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Recommended Screws]

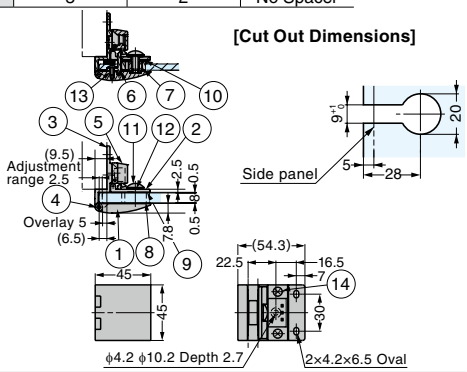
- Size 4 truss head tapping screw or size 3.8 round head wood screw

[Glass Thickness and Qty of Spacers]

Glass Thickness	5	6	8
Qty of Spacers	3	2	No Spacer

No.	Part Name	Material	Finish
①	Front Plate	Brass	SN: Satin Nickel CR: Chrome GC: Gold
②	Fixing Plate C		
③	Hinge Plate		
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Catch	–	Black
⑥	Striker	Zinc Alloy (ZDC)	–
⑦	Glass Adjustment Block	PA	Black
⑧	Pad C	PVC	–
⑨	Pad D		
⑩	Spacer	PP	
⑪	Truss Head Screw	Stainless Steel	
⑫	Spring Washer		
⑬	Truss Head Screw		
⑭	Truss Head Screw		

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-020-968	GH-456C-SN	Satin Nickel	Max. 600	Max. 1200	5, 6, 8	148	15	216	10	80
–	3D	170-020-969	GH-456C-CR	Chrome						216	10	80
–	3D	170-020-970	GH-456C-GC	Gold						216	10	80

Refer to 1 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/O CATCH) GH-456N For Overlay Door

INSTRUCTION TEMPERED GLASS

- Suitable for showcases and covers for machine.
- Mounting position adjustable: Vertically ±1mm, Horizontally ±1.2mm.
- Inset door hinge is also available.

[Remarks]

- Without catch.For type with catch, Refer to GH-456C 1 .
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .

[Recommended Screws]

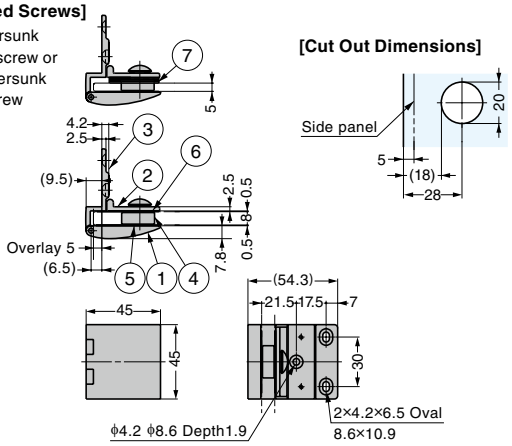
- Size 4 Countersunk head tapping screw or size 3.8 countersunk head wood screw

[Glass Thickness and Qty of Spacers]

Glass Thickness	5	6	8
Qty of Spacers	3	2	No Spacer

No.	Part Name	Material	Finish
①	Front Plate	Copper Alloy (C3604)	SN: Satin Nickel CR: Chrome GC: Gold
②	Fixing Plate B		
③	Hinge Plate		
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Glass Adjustment Block	PA	Black
⑥	Pad A	Chloroprene Rubber (CR)	
⑦	Pad B		
⑧	Spacer (Small)	PP	
⑨	Truss Head Screw	Stainless Steel	–
⑩	Spring Washer		

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-702	GH-456N-SN	Satin Nickel	Max. 600	Max. 1200	5, 6, 8	148	15	206	10	80
–	3D	170-090-703	GH-456N-CR	Chrome						206	10	80
–	3D	170-090-704	GH-456N-GC	Gold						206	10	40

Refer to 1 : P.272, 2 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR LIFT-OFF HINGE GH36-NCR For Inset Door

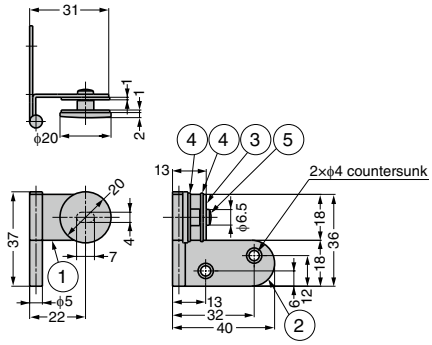
TEMPERED GLASS

Left-handed

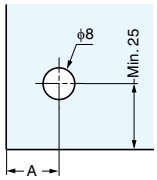
●Hinge for glass/acrylic doors.

[Remarks]

●Recommended for use in pairs.
●Use screw loosening prevention agent when mounting screws .
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

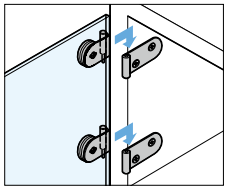


[Cut Out Dimensions]



Boring position changes with the glass thickness.

[Installation Example]



Glass Thickness	A
4	19
5	18
6	17

No.	Part Name	Material	Finish / Colour
①	Body (Male)	Steel (SPCC)	Chrome
②	Body (Female)		
③	Plate	Brass	
④	Washer	PVC	Clear
⑤	Screw	Steel (SWCH)	Nickel

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-097-957	GH36-NCRL	Left-handed	Max. 450	Max. 700	4, 5, 6	39	4	24.5	100	400

Refer to 1 : P.43

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

GLASS DOOR HINGE GH34-0 For Inset Door

TEMPERED GLASS

- Hinge for glass/acrylic doors.Square plate type GH34-0CR-K 1 also available.

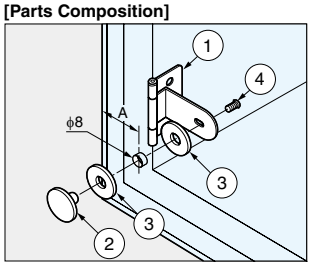
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

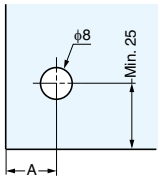
[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws .
- Note that scratch is conspicuous on black surface.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.
- Place one washer on the plate side, and the remaining washers on the opposite side.

[Parts Composition]

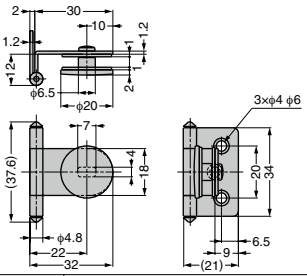


[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A	Number of washers used
4	19	4
5	18	3
6	17	2



No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome, Paint/Black, Gold,Clear
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	※Screw	Steel	Nickel, Paint/Black, Gold,Clear

※Cross-recessed binding pan head screw M3.5 x 6

RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-513	GH34-0CR	Chrome	Max. 450	Max. 700	4, 5, 6	39	4	23.5	50	500
G	3D	170-025-831	GH34-0BL	Paint/Black							50	500
–	3D	170-012-158	GH34-0G	Gold,Clear							200	–

Refer to 1 : P.274, 2 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-0CR-K For Inset Door

TEMPERED GLASS

- Hinge for glass/acrylic doors.
- Round plate type GH34-0CR 1 also available

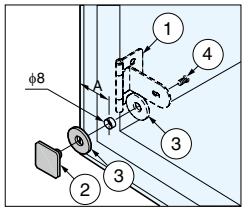
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

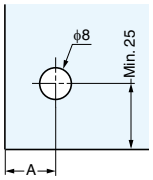
[Remarks]

- Recommended for use in pairs.
- When mounting screws, use a screw loosening prevention agent.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.
- Place one washer on the plate side, and the remaining washers on the opposite side.

[Parts Composition]

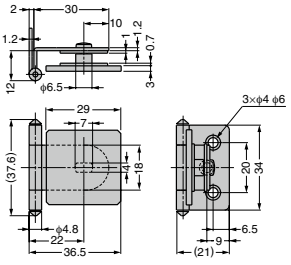


[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A	Number of washers used
4	19	4
5	18	3
6	17	2



No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	※Screw	Steel	Nickel

※Cross-recessed binding pan head screw M3.5 x 6

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-019-481	GH34-0CR-K	Max. 450	Max. 700	4, 5, 6	39	4	34	50	300

Refer to 1 : P.274, 2 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-8CR-K For Overlay Door

TEMPERED GLASS

- Hinge for glass/acrylic doors.
- Round plate type GH34-8CR 1 also available.

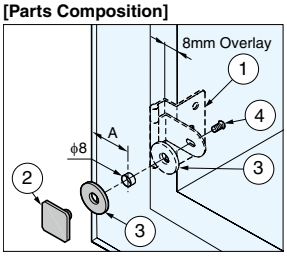
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

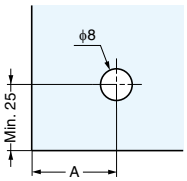
[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.
- Place one washer on the plate side, and the remaining washers on the opposite side.

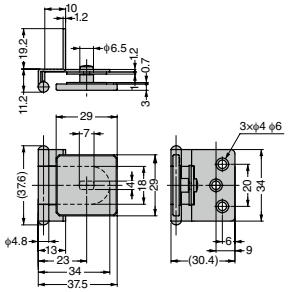
[Parts Composition]



[Cut Out Dimensions]



Boring position changes with the glass thickness.



Glass Thickness	A	Number of washers used	Overlay
4	19	4	8
5	18	3	7
6	17	2	6

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	※Screw	Steel	Nickel

※Cross-recessed binding pan head screw M3.5 x 6

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-019-482	GH34-8CR-K	Max. 450	Max. 700	4, 5, 6	39	4	37	50	300

Refer to 1 : P.280, 2 : P.43

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/ CATCH) GHC34-8CR-K For Overlay Door

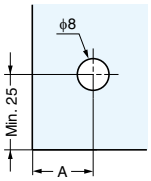
TEMPERED GLASS

- Hinge for glass/acrylic doors.
- Round plate type GHC34-8CR 1 also available.

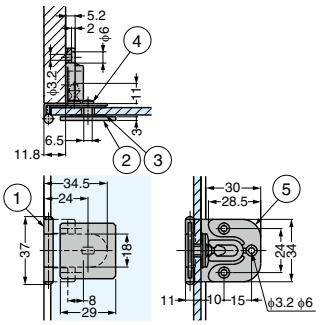
[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Place one washer on the plate side, and the remaining washers on the opposite side.

[Cut Out Dimensions]



Boring position changes with the glass thickness.



Glass Thickness	A	Number of washers used	Overlay
4	19	4	7
5	18	3	6
6	17	2	5

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel
⑤	Catch	POM	Black

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-019-480	GHC34-8CR-K	Max. 450	Max. 700	4, 5, 6	39	4	43	40	600

Refer to 1 : P.282, 2 : P.43

※ Load capacity has priority over glass size.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

GLASS DOOR HINGE GH34-0SS For Inset Door

- Hinge for glass/acrylic doors.

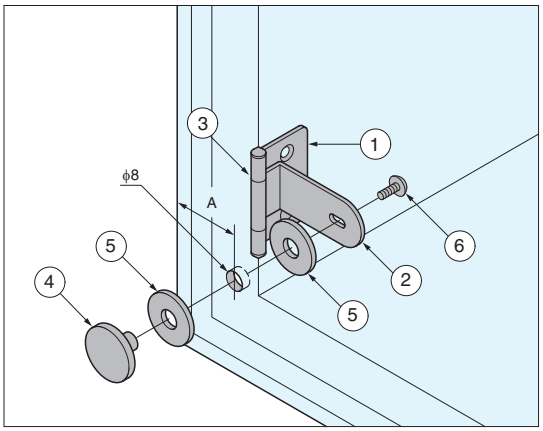
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.

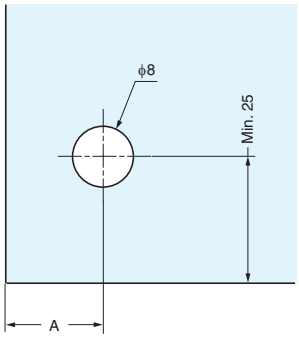
[Parts Composition]



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Plain
②	Arm		
③	Shaft	Stainless Steel	
④	Plate	Aluminium Alloy	Circular Satin Anodised Silver
⑤	Washer	PVC	Clear
⑥	※Screw	Stainless Steel	Plain

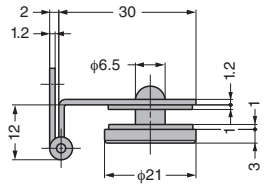
※Truss head screw M3×6

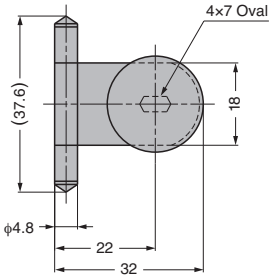
[Cut Out Dimensions]

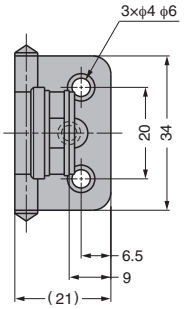


Boring position changes with the glass thickness.

Glass Thickness	A
4	19
5	18
6	17







RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-529	GH34-0SS	Max. 450	Max. 700	4, 5, 6	49	5	15	50	500

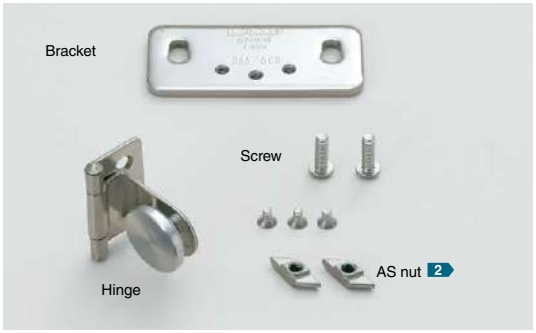
Refer to 1 : P.43

※ Load capacity has priority over glass size.

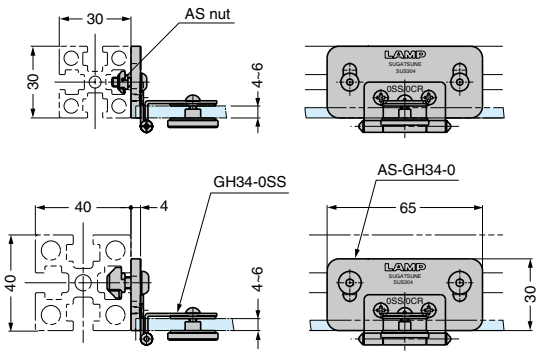
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

AS Parts Set for Installing to Aluminium Frame

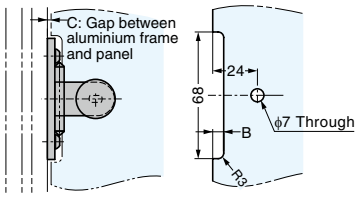
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]

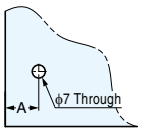


Installation (panel with notch)



Panel with notch
Cut Out Dimensions

Panel Thickness	B	C
4	5	2
5	6	2
6	7	2



Panel without notch
Cut Out Dimensions

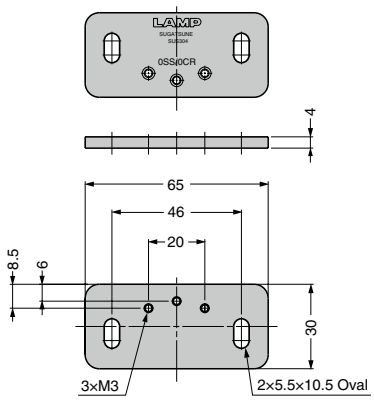
Panel Thickness	A	C
4	19	7.1
5	18	7.9
6	17	7.9

[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	170-041-604	AS-GH34-0SS-30-6	Groove Width 6 mm	Hinge GH34-0SS : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-605	AS-GH34-0SS-30-8	Groove Width 8 mm	Hinge GH34-0SS : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-606	AS-GH34-0SS-40-8		Hinge GH34-0SS : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-607	AS-GH34-0SS-40-10	Groove Width 10 mm	Hinge GH34-0SS : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : P.20, 2 : P.526

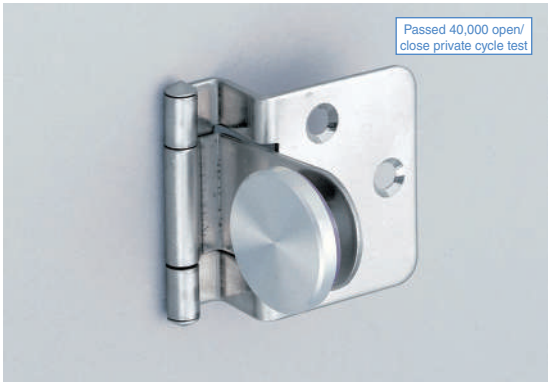
AS BRACKET FOR GH34-0SS AS-GH34-0



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-020	AS-GH34-0	Stainless Steel (SUS304)	Barrel Polished	52	50	250

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

GLASS DOOR HINGE GH34-8SS For Overlay Door



- Hinge for glass/acrylic doors.

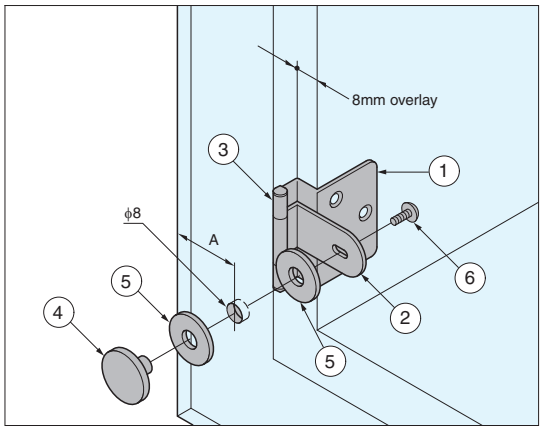
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.

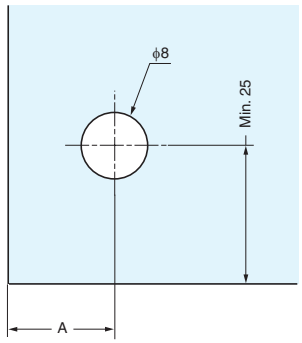
[Parts Composition]



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	Plain
②	Arm	(SUS304)	
③	Shaft	Stainless Steel	
④	Plate	Aluminium Alloy	Circular Satin Anodised Silver
⑤	Washer	PVC	Clear
⑥	※Screw	Stainless Steel	Plain

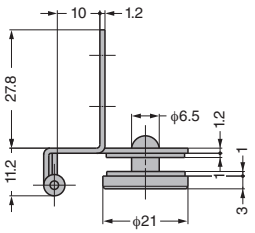
※Truss head screw M3×6

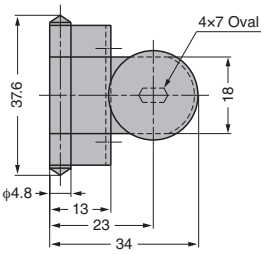
[Cut Out Dimensions]

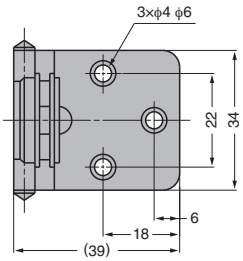


Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	8
5	18	7
6	17	6







RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-530	GH34-8SS	Max. 450	Max. 700	4, 5, 6	49	5	21	100	600

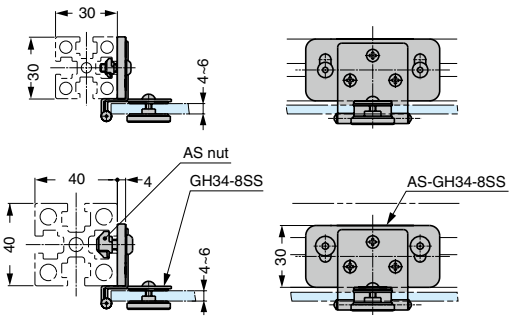
Refer to 1 : P.43

※ Load capacity has priority over glass size.

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

[Dimensions]

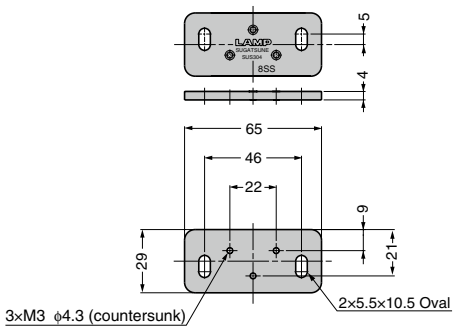


[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	170-041-584	AS-GH34-8SS-30-6	Groove Width 6 mm	Hinge GH34-8SS : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-585	AS-GH34-8SS-30-8	Groove Width 8 mm	Hinge GH34-8SS : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-586	AS-GH34-8SS-40-8		Hinge GH34-8SS : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-587	AS-GH34-8SS-40-10	Groove Width 10 mm	Hinge GH34-8SS : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : P.20, 2 : P.526

AS BRACKET FOR GH34-8SS AS-GH34-8SS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-021	AS-GH34-8SS	Stainless Steel (SUS304)	Barrel Polished	52	50	500

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

GLASS DOOR HINGE GH34-8 For Overlay Door

TEMPERED GLASS

- Hinge for glass/acrylic doors. Square plate type GH34-8CR-K 1 also available.

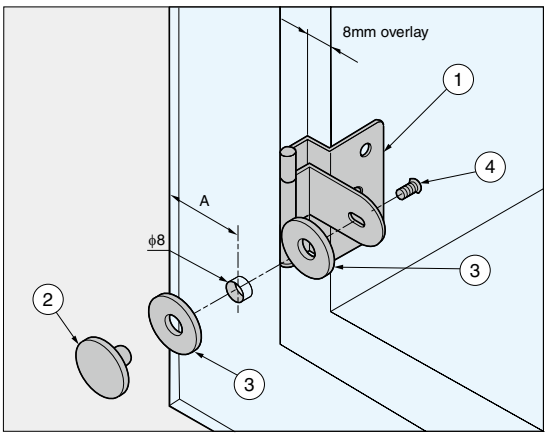
[Recommended Screw]

- Countersunk tapping screw 3 / Countersunk wood screw 3.1 / Countersunk screw pan head M3

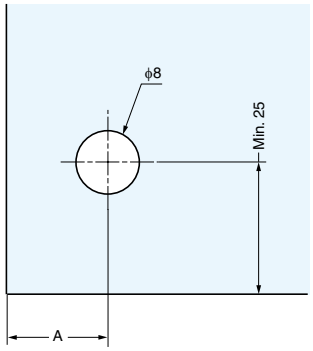
[Remarks]

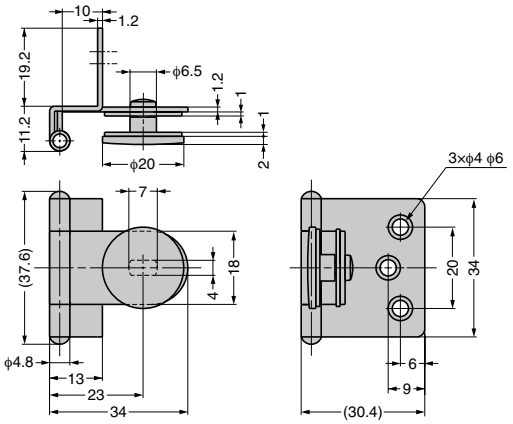
- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Note that scratch is conspicuous on black surface.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Please consider using tempered glass depending on glass size, application, and environment.
- When mounting on sheet metal, make a relief cut for screws/rivets on the mounting surface.
- Place one washer on the plate side, and the remaining washers on the opposite side.

[Parts Composition]



[Cut Out Dimensions]





Glass Thickness	A	Number of washers used	Overlay
4	19	4	8
5	18	3	7
6	17	2	6

Boring position changes with the glass thickness.

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome, Paint/Black, Gold,Clear
②	Plate	Brass	
③	Washer	PVC	Clear
④	※Screw	Steel	Nickel, Paint/Black, Gold,Clear

※Truss head screw M3.5×6

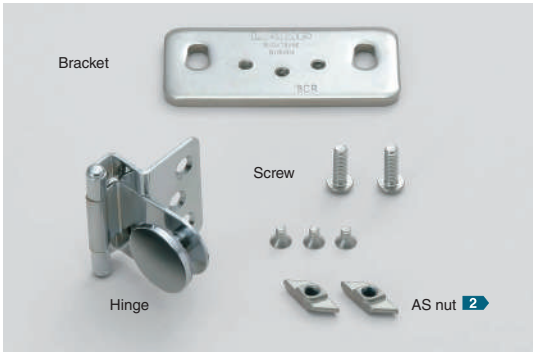
RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Door Weight kg/2pcs	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-528	GH34-8CR	Chrome	Max. 450	Max. 700	4, 5, 6	Max. 4	39	4	25	50	500
G	3D	170-025-832	GH34-8BL	Paint/Black								50	500
–	3D	170-012-159	GH34-8G	Gold,Clear								200	–

Refer to 1 : P.275, 2 : P.43

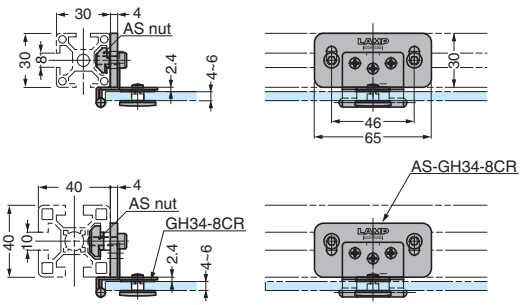
※ Load capacity has priority over glass size.

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



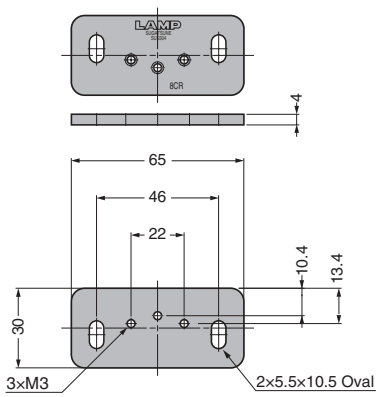
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	170-041-588	AS-GH34-8CR-30-6	Groove Width 6 mm	Hinge GH34-8CR : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-589	AS-GH34-8CR-30-8	Groove Width 8 mm	Hinge GH34-8CR : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-590	AS-GH34-8CR-40-8		Hinge GH34-8CR : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-591	AS-GH34-8CR-40-10	Groove Width 10 mm	Hinge GH34-8CR : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : P.20, 2 : P.526

AS BRACKET FOR GH34-8CR AS-GH34-8CR

Discontinued AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-022	AS-GH34-8CR	Stainless Steel (SUS304)	Barrel Polished	55	50	500

GLASS DOOR HINGE (W/ CATCH) GHC34-8 For Overlay Door

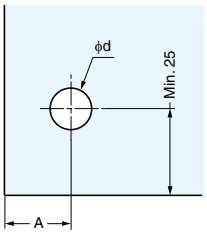
TEMPERED GLASS

- Hinge for glass/acrylic doors.
- Square plate type GH34-8CR-K 1 also available

[Remarks]

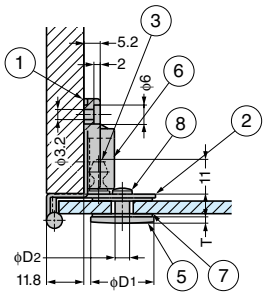
- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .
- Place one washer on the plate side, and the remaining washers on the opposite side.

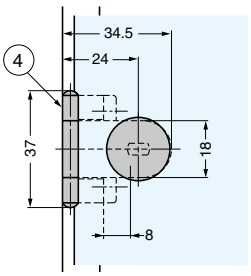
[Cut Out Dimensions]

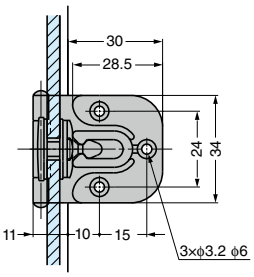


Boring position changes with the glass thickness.

Glass Thickness	A	Number of washers used	Overlay
4	19	4	7
5	18	3	6
6	17	2	5







No.	Part Name	Material			
		GHC34-8G	GHC34-8B	GHC34-8CR	GHC34-8CR-W
①	Body	Steel (SPCC)	Stainless Steel (SUS304)	Steel (SPCC)	
②	Arm				
③	Striker	Brass	Stainless Steel (SUS303)	Brass	
④	Shaft	Steel (SWCH)	Stainless Steel (SUS304)	Steel	
⑤	Plate	Copper Alloy	Aluminium Alloy	Brass	Zinc Alloy
⑥	Catch	POM			
⑦	Washer	PVC			
⑧	Binding head screw	Brass	Steel		

No.	Part Name	Finish / Colour			
		GHC34-8G	GHC34-8B	GHC34-8CR	GHC34-8CR-W
①	Body	Gold, Clear	Black Enamel Finish	Chrome	
②	Arm				
③	Striker				
④	Shaft				
⑤	Plate	Polished, Clear	Black Anodised		
⑥	Catch	Black			Natural
⑦	Washer	Clear			
⑧	Binding head screw	Brass	Nickel		

RoHS	CAD	Item Code	Item Name	D_1	D_2	d	T	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-083-524	GHC34-8G	20	6.5	8	2	Max. 450	Max. 700	4, 5, 6	39	4	36	40	600
G	3D	170-083-508	GHC34-8B	21	8	10	3				49	5	32	40	600
G	3D	170-083-523	GHC34-8CR	20	6.5	8	2				39	4	36	40	600
G	3D	170-083-516	GHC34-8CR-W											40	600

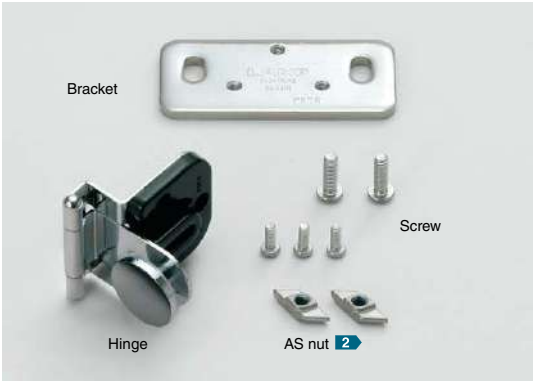
Refer to 1 : P.275, 2 : P.43

※ Load capacity has priority over glass size.

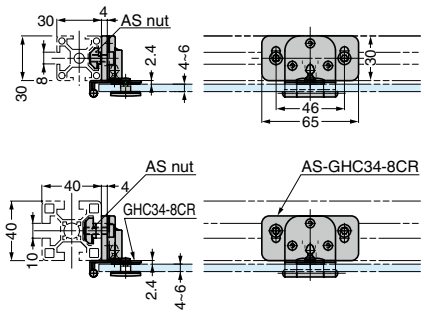
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



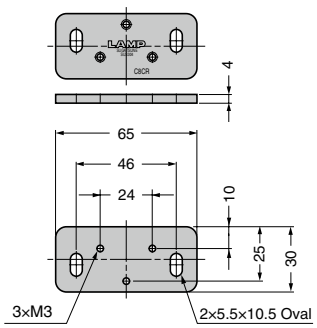
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Hinges)	Parts (Others)	Weight (g)
G	3D	170-041-600	AS-GHC34-8B-30-6	Groove Width 6 mm	GHC34-8B : 1pc	AS Nut AS-6M4 : 2pcs	–
G	3D	170-041-592	AS-GHC34-8CR-30-6		GHC34-8CR : 1pc	Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc	–
G	3D	170-041-596	AS-GHC34-8CR-W-30-6		GHC34-8CR-W : 1pc	Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-601	AS-GHC34-8B-30-8	Groove Width 8 mm	GHC34-8B : 1pc	AS Nut AS-8M4 : 2pcs	–
G	3D	170-041-593	AS-GHC34-8CR-30-8		GHC34-8CR : 1pc	Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc	–
G	3D	170-041-597	AS-GHC34-8CR-W-30-8		GHC34-8CR-W : 1pc	Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-602	AS-GHC34-8B-40-8		GHC34-8B : 1pc	AS Nut AS-8M5 : 2pcs	–
G	3D	170-041-594	AS-GHC34-8CR-40-8		GHC34-8CR : 1pc	Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc	–
G	3D	170-041-598	AS-GHC34-8CR-W-40-8		GHC34-8CR-W : 1pc	Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-603	AS-GHC34-8B-40-10	Groove Width 10 mm	GHC34-8B : 1pc	AS Nut AS-10M5 : 2pcs	–
G	3D	170-041-595	AS-GHC34-8CR-40-10		GHC34-8CR : 1pc	Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc	–
G	3D	170-041-599	AS-GHC34-8CR-W-40-10		GHC34-8CR-W : 1pc	Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : P.20, 2 : P.526

AS BRACKET FOR GHC34-8 AS-GHC34-8CR

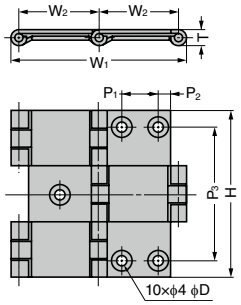
AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-023	AS-GHC34-8CR	Stainless Steel (SUS304)	Barrel Polished	54	50	500

DOUBLE ACTION HINGE HG-BH

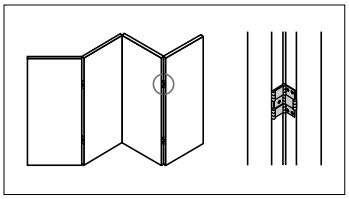
SUS



- Opens 180° in both left and right direction.

[Remarks]
- Recommended for use in pairs.

[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	H	W1	W2	T	P1	P2	P3	D	Door Width	Door Height	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-065	HG-BH60	Stainless Steel (SUS304)	Satin	60	64	29	5.5	13.5	4.8	47	6.5	Max. 450	Max. 700	Max. 2.6	65	20	260
G	3D	170-090-066	HG-BH70			70	78	35	7.5		6.8	57	7				130	10	180
G	3D	170-090-067	HG-BH80			80	94	43.2		22	6.5	66					175	10	120

CORNER FASTENER HINGE (W/ LOCK) STH-C64

SUS

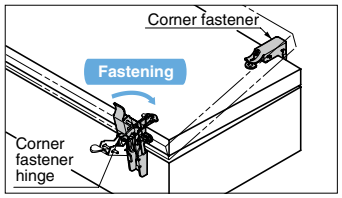
- Combination of hinge and corner fastener.
- Works with STF-C64A and STF-C64B fastener 1.
- Can be installed on cabinet corner.
- Locks when fastened to prevent accidental release.
- Sealing pin (sold separately) may be installed.

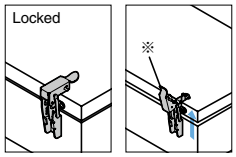
[Applications]
- Doors and covers required for dustproof and drip-proof.
- Doors and covers required for vibration proof.
- Measurement equipment, communication equipment, machine tools, etc.

Step 1.
After locked.

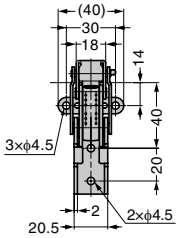
Step 2.
Pull the lever and lift the latch.

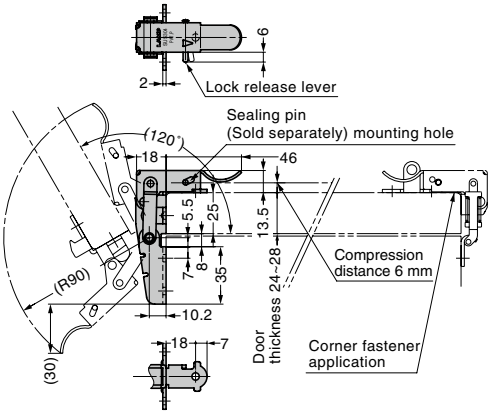
Step 3.
Release the lock of the fastener to open the lid.





Pull the lever ※ while pushing the lock release lever to lift the latch to open the lid.





RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-430	STH-C64	Stainless Steel (SUS304)	Barrel Polished	Max. 300	Max. 400	24~28	Max. 2.8	90	10	140

Refer to 1 : P.504

LAMP®

LID SUPPORTS

Stays are used for restricting the opening range of doors or lids, or holding them at a certain angle.
A typical stay has two connected arms. In recent years, various kinds of stays are developed for stopping, slowly closing or softly opening doors and lids by use of friction, resistance, spring tension and so on.

SUGATSUNE

June 2022

LIFT ASSIST STAYS
SOFT CLOSING STAYS
TORQUE STAYS
HEAVY DUTY LOCKING STAYS
FOOT STAYS
LID STAYS
OTHER STAYS
TOP-OPENING
DOWNWARD-OPENING
UPWARD-OPENING
BOTTOM-OPENING
SWING DOOR
LIFT-UP
LIFT-DOWN
UP & OVER
BI-FOLDING
OVER THE TOP

INDEX by Type

Lift Assist Stays P.294~P.311

Assists in opening and closing heavy door or lid by use of spring tension.

◂ HEAVY DUTY SPRING LOADED LID STAY S-AT (P.296)

Soft Closing Stays P.312~P.385

Slowly opens and closes door or lid with LAPCON mechanism.

Lapcon

◂ SELF-OPENING STAY HDS-20S (P.318)

Torque Stays P.386~P.391

Stops door or lid in any position.

◂ FREE-STOP STAY S-100T30 (P.390)

Heavy Duty Locking Stays P.392~P.395

Automatically locks door when fully opened.

◂ DOOR HOLDER YA-2020, YA-2020W (P.392)

Foot Stays P.396~P.398

Automatically locks door when opened and releases by simply lifting the stay with foot.

◂ FOOT STAYS YFN-300W (P.396)

Lid Stays P.399~P.415

Holds lid open fully or halfway.

◂ LID STAY LB-200A, LB-350A, LB-500A (P.401)

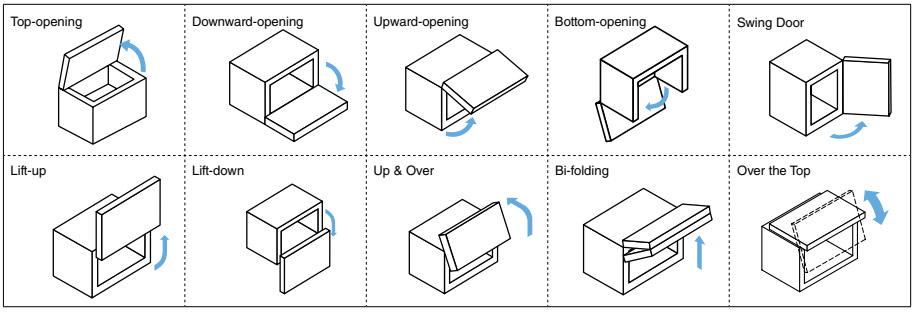
A tool for easily selecting soft-close, free stop and lift assist stays now available online!

Motion Design Tech
Selection Tool "Sasuga-kun"

Simply by inputting the movement, size, weight and centre of gravity of the door or lid to be used, the torque required can be automatically calculated and suitable stay can be selected.

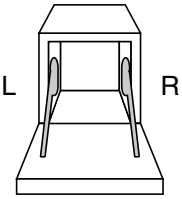
INDEX by Opening Direction

Opening Directions

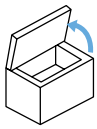


Left and Right-handed

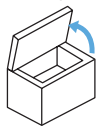
When viewing from door opening side, located on the right side is right-handed (R) and on the left side is left-handed (L).



Products by Opening Direction

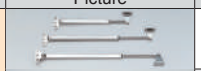
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Top-opening 	Lift Assist Stays		S-AT	Side Mount	○	6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	P.296
				Back Panel Mount		6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	
			S-ATJ	Side Mount (damper option available)	○	6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	P.298, P.300, P.302
			S-ATJD S-ATJS	Back Panel Mount (damper option available)		6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	
			S-AT02W	Side Mount	○	17.6~21.0 N·m/pc (180~214 kgf·cm/pc)	P.306
				Back Panel Mount		15.0~16.5 N·m/pc (153~168 kgf·cm/pc)	
			S-ATH-60S	Back Panel Mount	○	60 N·m/pc (611.6 kgf·cm/pc)	P.308
			S-ATH-70S			70 N·m/pc (713.6 kgf·cm/pc)	
			S-YT01	Side Mount	–	Max. 2.94 N·m/pc (Max. 30 kgf·cm/pc)	P.310
			S-YT02			Max. 3.92 N·m/pc (Max. 40 kgf·cm/pc)	
			S-YT01S	Back Panel Mount	○	Max. 2.94 N·m/pc (Max. 30 kgf·cm/pc)	
			S-YT02S			Max. 3.92 N·m/pc (Max. 40 kgf·cm/pc)	
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
	Soft Closing Stays		ARN-2	Lift-assist Soft-close Free-stop	○	4.0~8.0 N·m/pc (40.8~81.6 kgf·cm/pc)	P.316
			HDS-20S	With self-opening For Use in Pairs	–	6.9~14.7 N·m/2 pcs (70~150 kgf·cm/2 pcs)	P.318
			HDS-20	With Catch For Use in Pairs	–	13.7~41 N·m/2 pcs (140~418 kgf·cm/2 pcs)	P.320
			NSD-20	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.323
			NSDX-20 (R/L)	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.324

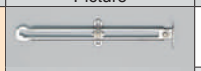
Products by Opening Direction

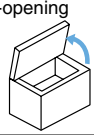
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Top-opening 	Soft Closing Stays		SDS-200 SDS-201	With Catch	○	3.43~4.9 N·m/pc (35~50 kgf·cm/pc)	P.326
			SDS-210	–			
			LAD-ST	Lift-assist Soft-close	○	8.0~16.0 N・m/pc (81.6~163.2 kgf・cm/pc)	P.328
			LAD	Lift-assist Soft-close	○	8.0~16.0 N・m/pc (81.6~163.2 kgf・cm/pc)	P.330
			LADH-35 LADH-50	Lift-assist Soft-close	○	25~50 N・m/pc (254.9~509.9 kgf・cm/pc)	P.334

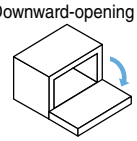
Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Torque Stays		S-TAR	Free Stop	–	0~7 N・m (0~71 kgf・cm)	P.386
		S-100T30	Free Stop	–	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)	P.390
		S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N・m/pc ($15.3^{\pm 20\%}$ kgf・cm/pc)	P.391

Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.392
		YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	–	–	P.394

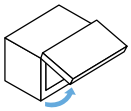
Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Lid Stays		LK-222 LK-335 LK-380	Holds When Fully Opened	○	–	P.404
		L-FS350A	Multi-angle Lock	○	294 N/pc (30 kgf/pc)	P.405
		LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc (30 kgf/pc)	P.407
		L-FS140	Multi-angle Lock	○	58.8 N/pc (6 kgf/pc)	P.412
		L-SL140	Locks When Fully Opened	○	147 N/pc (15 kgf/pc)	P.413

Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Other Stays		S-91 S-92 S-93	–	–	–	P.415
		F-300	–	○	–	P.416
		F-150 F-200 F-250	–	–	–	P.416
		F-100	–	–	–	P.416
		S-20	With Catch	–	–	P.417
		S-19	–	–	–	P.417
		S-6 S-16	–	–	–	P.418

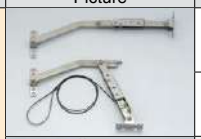
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Top-opening 	Other Stays		S-21	With Catch	–	–	P.418
			S-23	With Catch	–	–	P.419

Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Downward-opening 	Soft Closing Stays		HDS-10S	Self-close With Catch For Use in Pairs	–	5.9~17.6 N·m/2 pcs (60~180 kgf·cm/2 pcs)	P.336
			HDS-10	With Catch For Use in Pairs	–	13.7~29.4 N·m/2 pcs (140~300 kgf·cm/2 pcs)	P.338
			NSD-10	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.341
			NSDX-10 (R/L)	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.342
			SDS-100	–	○	3.43~4.9 N·m/pc (35~50 kgf·cm/pc)	P.344
			SDS-C100	With Catch			
			CSD-10-TV	–	○	1.0~4.0 N·m/pc (10.2~40.8 kgf·cm/pc)	P.346
			NSDX-10 (R/L) K-TV	With Catch	–	0.98~1.96 N·m/pc (10~20 kgf·cm/pc)	P.347
			SDS-100W(B)-TV	–	○	0.49~1.18 N·m/pc (5~12 kgf·cm/pc)	P.348
			SDS-100W(B)-TVZ			1.62~3.68 N·m/pc (16.5~37.6 kgf·cm/pc)	
			SDS-C100W(B)-TV	With Catch		0.49~1.18 N·m/pc (5~12 kgf·cm/pc)	
			SDS-C100W(B)-TVZ			1.62~3.68 N·m/pc (16.5~37.6 kgf·cm/pc)	
Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page	
Torque Stays		S-TAR	Free Stop	–	0~7 N·m (0~71kgf·cm)	P.386	
		S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N·m/pc ($15.3^{\pm 20\%}$ kgf·cm/pc)	P.391	
Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page	
Other Stays		HS	–	○	–	P.419	
		S-35	–	○	–	P.420	
		S-34	–	○	–	P.420	
		S-24 S-27 S-25	–	–	–	P.421	

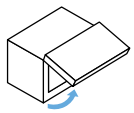
Products by Opening Direction

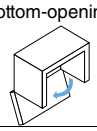
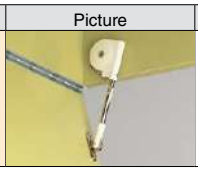
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Upward-opening 	Soft Closing Stays		ARN-3	Lift-assist Soft-close Free-stop	○	4.0~8.0 N·m/pc (40.8~81.6 kgf·cm/pc)	P.350
			SLS-ELAN	Lift-assist Free Stop Soft-down	–	4.90~9.80 N·m/pc (50~100 kgf·cm/pc)	P.352
			SLS-ELAN-TV	Lift-assist Free Stop Soft-down	–	4.60~6.17 N·m/pc (47~63 kgf·cm/pc)	P.354
			HDS-30	With Catch For Use in Pairs	–	13.7~29.4 N·m/2 pcs (140~300 kgf·cm/2 pcs)	P.356
			HDSN-30	With Catch For Use in Pairs	–	13.7~34.3 N·m/2 pcs (140~350 kgf·cm/2 pcs)	P.358
			NSD-35	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.361
			NSDX-35 (R/L)	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.362
			NSDX-35 (R/L) 2S	With Catch	–	1.96~4.9 N·m/pc (20~50 kgf·cm/pc)	P.364
			SDS-C301N	With Catch	○	3.92~6.86 N·m/pc (40~70 kgf·cm/pc)	P.365

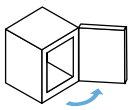
Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Torque Stays		S-TAR	Free Stop (Adjustable)	–	0~7 N·m (0~71kgf·cm)	P.386
		S-100T30	Free Stop	–	$3^{\pm 20\%}$ N·m/pc ($30.6^{\pm 20\%}$ kgf·cm/pc)	P.390
		S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N·m/pc ($15.3^{\pm 20\%}$ kgf·cm/pc)	P.391

Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.392
		YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	–	–	P.394

Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Lid Stays		LB-200A	Holds When Fully Opened	○	294 N/pc (30 kgf/pc)	P.401
		LB-350A			245 N/pc (25 kgf/pc)	
		LB-500A			196 N/pc (20 kgf/pc)	

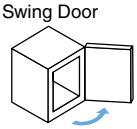
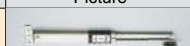
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Upward-opening 	Lid Stays		LBTS-350 LBTS-450	Holds at Multiple Angles	–	686 N/pc (70 kgf/pc)	P.402
			LB-S350	Holds When Fully Opened	○	1307 N/pc (133 kgf/pc)	P.403
			LB-S450			953 N/pc (97 kgf/pc)	
			LK-222 LK-335 LK-380	Holds When Fully Opened	○	–	P.404
			L-FS350A	Multi-angle Lock	○	294 N/pc (30 kgf/pc)	P.405
			LB-215 LB-290	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.406
			LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc (30 kgf/pc)	P.407
			L-195 L-270	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.408
			LB-CV215A	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.409
			L-200P	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.410
			L-195-JC	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.411
			L-FS140	Multi-angle Lock	○	58.8 N/pc (6 kgf/pc)	P.412
			L-SL140	Locks When Fully Opened	○	147 N/pc (15 kgf/pc)	P.413
			L-100S L-140S	Holds When Fully Opened	○	58.8 N/pc (6 kgf/pc)	P.414
			KLS	Stops When Fully Opened, Right-handed Only	–	–	P.415

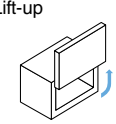
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Bottom-opening 	Soft Closing Stays		SDS-400-W	–	○	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)	P.366

Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Swing Door 	Torque Stays		S-100T30	Free Stop	–	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)	P.390
			S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N・m/pc ($15.3^{\pm 20\%}$ kgf・cm/pc)	P.391

Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.392
		YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	–	–	P.394

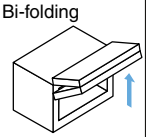
Products by Opening Direction

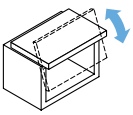
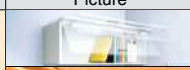
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Swing Door 	Foot Stays		YFN-300W	Two-angle Lock	○	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.396
			YFN-200	Locks When Fully Opened	○	882 N/pc (90 kgf/pc)	490 N/pc (50 kgf/pc)	P.397
			YFN-300 YFN-300-T50			1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	
			YFNS-300W	Two-angle Lock	○	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.398
			YFNS-300 YFNS-300-T50	Locks When Fully Opened	○	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.398
	Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
	Lid Stays		L-FS350A	Multi-angle Lock	○	294 N/pc(30 kgf/pc)		P.405
			LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc(30 kgf/pc)		P.407
			L-FS140	Multi-angle Lock	○	58.8 N/pc(6 kgf/pc)		P.412
	Type	Picture	Item Name	Description	Non-handed	Compression Load		Page
	Other Stay		U-3031HL	Multi-angle Lock	○	–		P.421

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Lift-up 	Soft Closing Stay		SLU-ELAN	Lift-assist Free Stop Soft-close	Max.1800	390~500	5~11 kg	P.370
			SLUN-N	Lift-assist Soft-close	600~900	390~450	2.8~5.8 kg	P.372

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Lift-down	Soft Closing Stay		SLD	Lift-assist Soft-close	600~900	360~400	3~6 kg	P.373

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Up & Over	Soft Closing Stay		EZS-ELAN	Lift-assist Free Stop Soft-close	Max.1200	500~750	5~12.5 kg	P.374

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Bi-folding 	Soft Closing Stay		HBF-ELAN	Lift-assist Free Stop Soft-close	Max.1200	320~370	2.5~6.5 kg	P.376
			HBFN	Soft-close	450~900	320~370	2.5~5.5 kg	P.378

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight	Page
Over the Top 	Soft Closing Stay		OV-1	Soft-close	700~1400	350~450	Min.20	3~5 kg	P.380
			IF-360S (L/R)	Soft-close	Max. 1200	–	15~20	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)	P.381
			IF-360W					3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)	
			IF-H360S (L/R)				18~30	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)	
			IF-H360W					3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)	

[Concept of Moment]

When selecting soft-close, free stop and lift assist stays, the criterion is the moment of the door or lid.
Moment refers to the action of the force tending to make the object rotate around a point. If the moment matches the corresponding torque of the stay, it means that the stay is applicable.

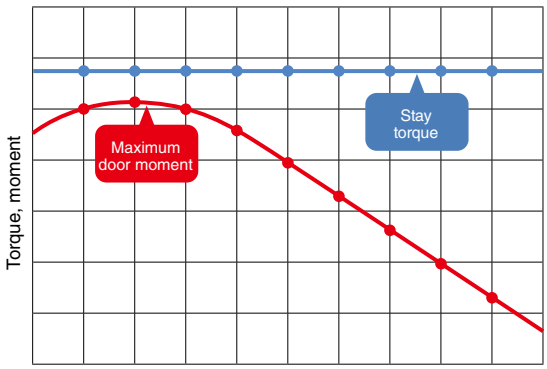
Formula for Calculating Moment

Door moment = Horizontal distance from rotation centre to centre of gravity × Door weight
Maximum door moment = Maximum horizontal distance from rotation centre to centre of gravity × Door weight

Relationship Between Applicable Stay and Door Moment

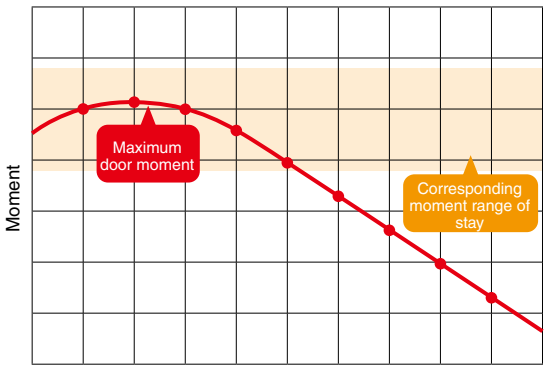
●In case of torque stay

If the stay torque is larger than the maximum door moment, then the stay is applicable.



●In case of damper stay

If the maximum door moment is within the corresponding moment range of the stay, then the stay is applicable.



※ The door moment is calculated according to horizontal distance from rotation centre to door centre of gravity. Therefore, it changes with the opening angle.
※ The door moment that is described in each product is the value for the installation in the catalogue.
※ Torque refers to the action of the force making an object rotate around the rotation axis, and moment refers to the action of the force tending to make a door or lid rotate around a point.

[Cautions]

Lift assist stays, S-ATD

- Be sure to observe the specified dimensions, levelness and perpendicularity for cabinet and door design and installation position of the product.
- When using the S-ATD type in combination, the closing speed of the door may vary depending on the individual differences of the product and the usage conditions.

Soft closing stays

- Be sure to observe the specified dimensions, levelness and perpendicularity for cabinet and door design and installation position of the product. When multiple products are used for one door, difference in installation positions may concentrate load on a certain product, affecting product life and function. Pay full attention when installing.
- Incorrect installation dimension may cause malfunction (such as not able to close the door) or damage the product or hinge.
- Install to a firm and rigid cabinet. Insufficient rigidness may affect door opening and closing.
- Do not disassemble or modify the product.
- Add up door or handle weight when calculating door moment.
- Check the movement with actual item when door moment and door weight is close to the upper or lower limit of the specified range.
- Use a screw adhesive (when required) that will not penetrate into the resin part.

LIFT ASSIST STAY S-AT SERIES

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.

[Specifications]

- Operating temperature: 0°c~40°c
- Operating humidity: 90%RH or less
- For other specification exceeding the above range, please contact local representatives.

[Remarks]

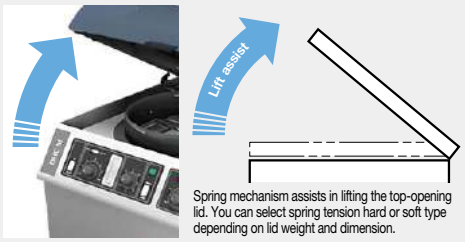
- Be sure to read the "Cautions" 1
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).

Video Link

Selection Tool

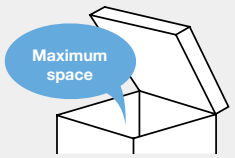
Sasuga-kun

●Easy operation with lift assist



Spring mechanism assists in lifting the top-opening lid. You can select spring tension hard or soft type depending on lid weight and dimension.

●Compact



Small body maximises space inside of the cabinet.

[S-ATH seriese]

Item name	Maximum Door Moment (N•m) (As a reference value)	Feature	Page
S-AT	4.1~6.1 / 6.1~8.8 / 8.8~11.8	Side Mount / Back Panel Mount	P.296
S-ATJ	6.1~8.8 / 8.8~11.8 — Balance Adjustable — Damper Available	Side Mount	P.298
S-ATJD	6.1~8.8 / 8.8~11.8 — Balance Adjustable — Damper Available	Back Panel Mount	P.300
S-ATJS	6.1~8.8 / 8.8~11.8 — Balance Adjustable	Back Panel Mount	P.302
S-AT02W	17.6~21.0	Side Mount / Back Panel Mount	P.306
S-ATH	54.0~60.0 / 63.0~70.0	Back Panel Mount	P.308

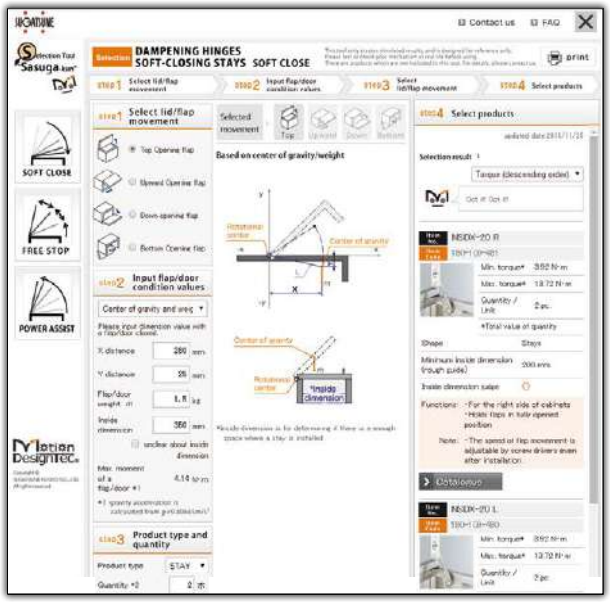
Torque

Refer to 1 : P.293

A tool for easily selecting soft-close, free stop and lift assist stays now available online!

Motion Design Tech
Selection Tool "Sasuga-kun"

Simply by inputting the movement, size, weight and centre of gravity of the door or lid to be used, the torque required can be automatically calculated and suitable stay can be selected.

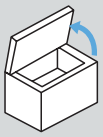


LIFT ASSIST STAY S-AT Side Mount, Back Panel Mount

L=R INSTRUCTION

S-AT01, S-AT02 (Side mount type)

S-AT01S, S-AT02S (Back panel mount type)

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	S-AT01	Side mount	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)
	S-AT01S	Back panel mount		6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02S			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle (about 10˚ ~80˚).
- Compact design maximises the space inside.
- Side mount and back panel mount are available. Both are non-handed.
- Can select spring tension hard or soft type depending on lid weight and dimension.
- S-AT02W 1 with doubled maximum door moment also available.

[Specifications]
- Operating temperature: 0℃~40℃
- Operating humidity: 90%RH or less
- For other specification exceeding the above range, please contact local representatives.

[Remarks]
- Be sure to read the “Cautions” 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- We recommend to test the assembly before final use.

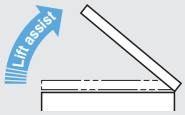
[Recommended Screw]
- Cross-recessed truss head screw M4

Video Link

Selection Tool

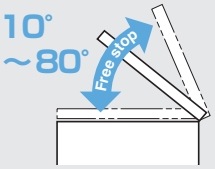
Sasuga-kun

●Easy operation with lift assist



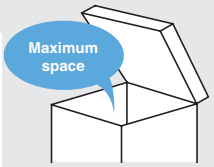
Spring mechanism assists in lifting the top-opening lid. You can select spring tension hard or soft type depending on lid weight and dimension.

●Free stop



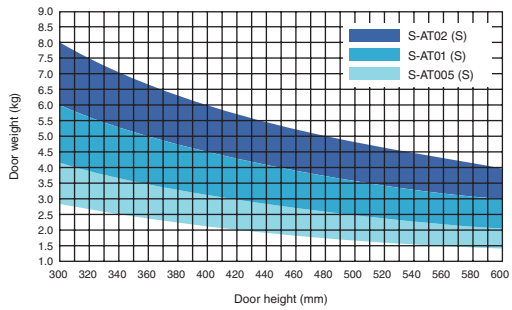
Easily holds the opening angle of top-opening lid at about 10˚ ~80˚ .

●Compact



Small body maximises space inside of the cabinet.

[Selection Graph]



Selection graph and door moment formula are obtained when door centre of gravity is at the height centre and installation is done according to dimensions in drawings.

[Applicable Range]

●Choose from 2 types according to the maximum door moment.
Maximum Door Moment (N·m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

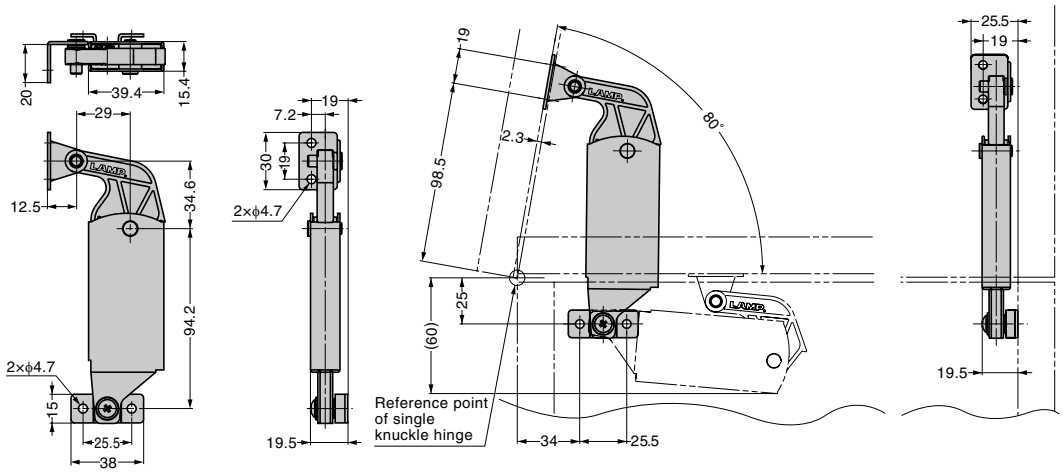
Maximum Door Moment N・m	Item Name	Qty
6.1~8.8	S-AT01 (S)	1pc
8.8~11.8	S-AT02 (S)	

●With 2 stays, the maximum door moment will be doubled.

Refer to 1 : P.306~P.307, 2 : P.293

LIFT ASSIST STAY S-AT01, S-AT02 Side Mount

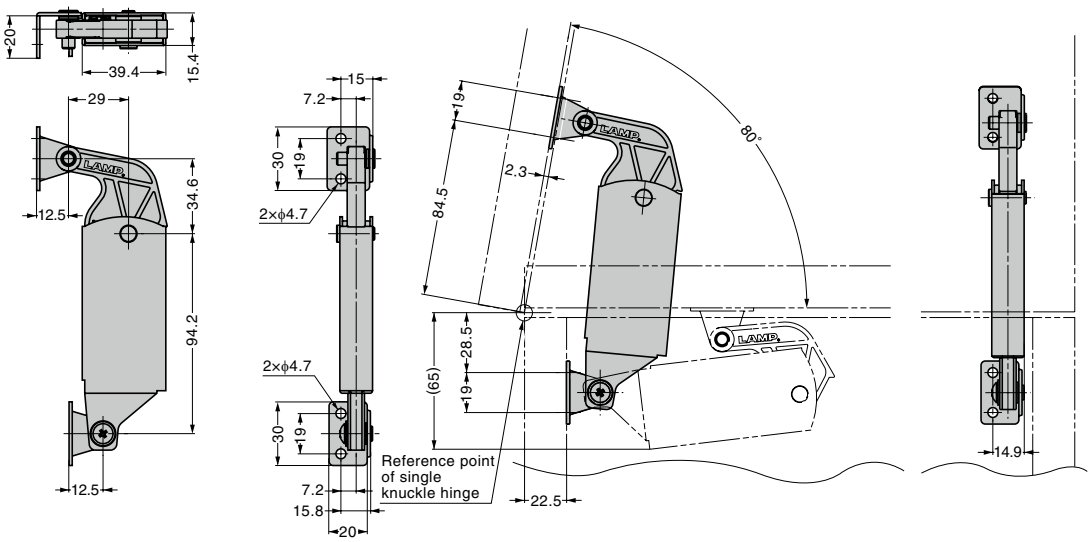
L=R INSTRUCTION



RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-544	S-AT01	Stainless Steel (SUS430)/ POM	Plain	6.1~8.8	62~90	195	10	50
G	3D	180-017-545	S-AT02			8.8~11.8	90~120	195	10	50
G	3D	180-043-522	S-AT005			4.1~6.1	42~62	195	10	50

LIFT ASSIST STAY S-AT01S, S-AT02S Back Panel Mount

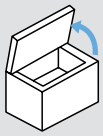
L=R INSTRUCTION



RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-546	S-AT01S	Stainless Steel (SUS430)/ POM	Plain	6.1~8.8	62~90	195	10	50
G	3D	180-017-547	S-AT02S			8.8~11.8	90~120	195	10	50
G	3D	180-043-523	S-AT005S			4.1~6.1	42~62	195	10	50

BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJ Side Mount

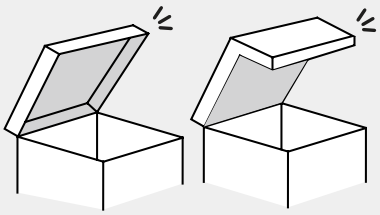
L=R INSTRUCTION

Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Side mount (damper option available)	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

*The max. door moment depends on the following factors:
- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Balance Adjustment]



This feature allows adjustment to the location of center of gravity.

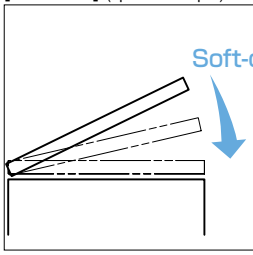
[Lift-assist]

Spring mechanism assists in lifting the top-opening lid. You can select hard or soft spring tension type depending on lid weight and dimension.

[Compact]

Small body maximises space inside the cabinet.

[Soft-close] (optional damper)



The S-ATD (optional damper) 1 provides soft-closing effect ensuring safety

[Specifications]

- Operating temperature : 0℃~40℃
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

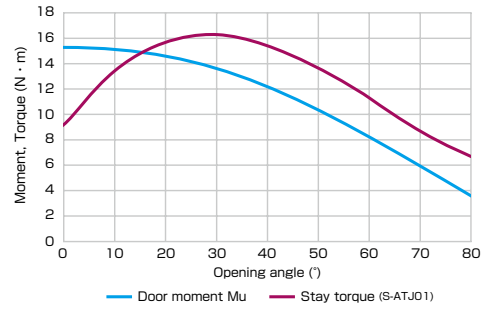
[Remarks]

- Be sure to read the "Cautions" 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M5)

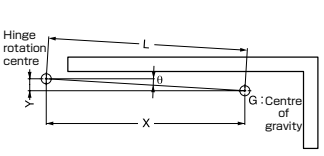
[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.
The stay torque should be above the door moment from the middle of the opening.
・Door moment Mu > Stay torque : Force is applied in the closing direction of door.
・Door moment Mu < Stay torque : Force is applied in the opening direction of door.
・Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg
*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculatiog Door Moment]

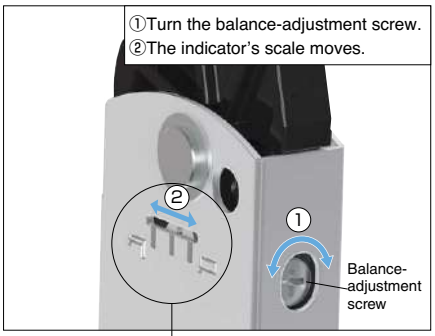
Calculation formula: Mu = m × L × cosθ

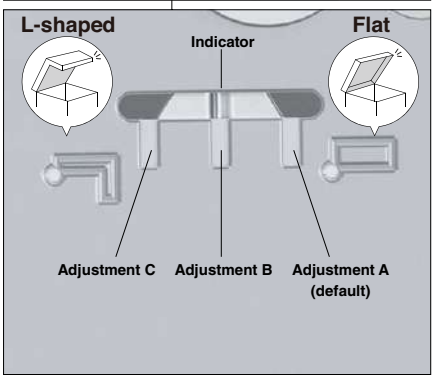


X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

Refer to 1 : P.304, 2 : P.293

[Balance Adjustment]

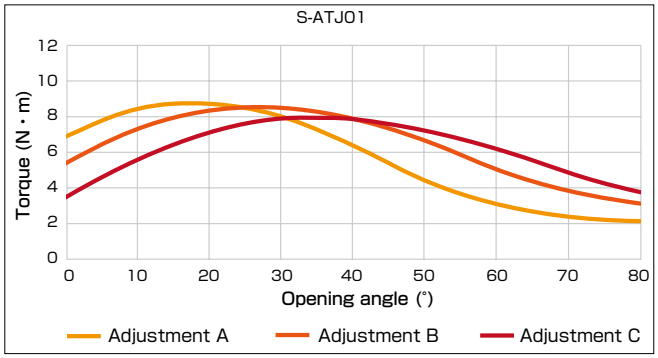


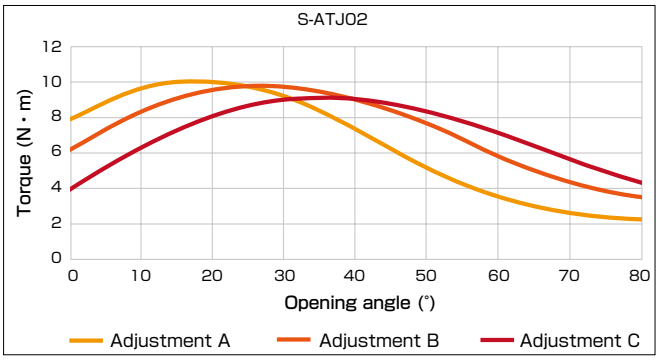


The indicator shows how much balance-adjustment is applied.
Balance-adjustment should depend on the location of the center of gravity.
When used in:
- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.
*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted

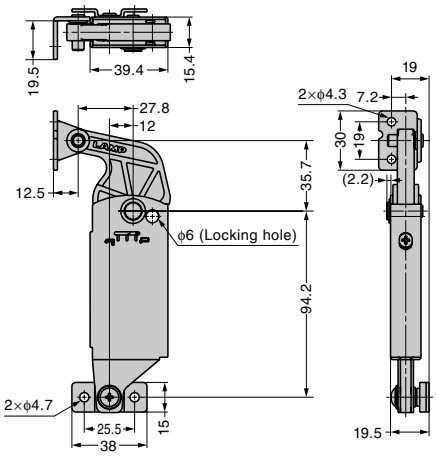




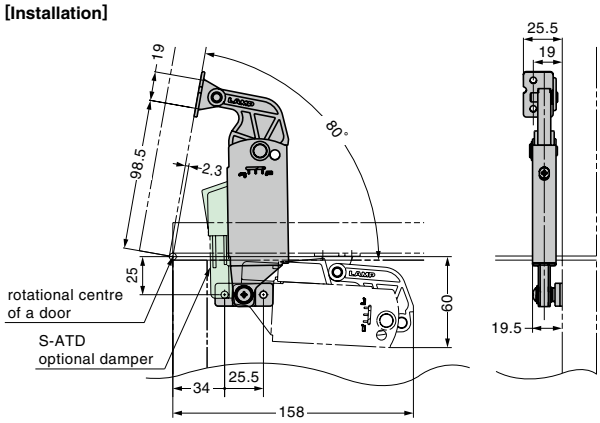
Video Link

Selection Tool

Sasuga-kun



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-043-515	S-ATJ01	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	200	10	50
G	3D	180-043-518	S-ATJ02			8.8~11.8	90~120		10	50

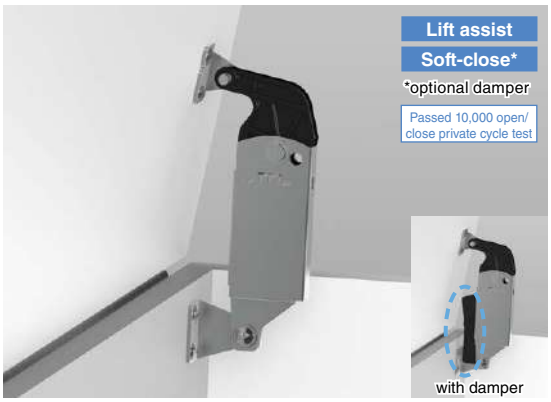
*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

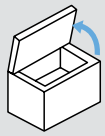
[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Damper Case Colour	Damper Resistance	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-054-093	S-ATD-20	Grey	Weak	15	50	–
G	3D	180-043-521	S-ATD-30	Black	Strong		50	–

BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJD Back Panel Mount

L=R INSTRUCTION

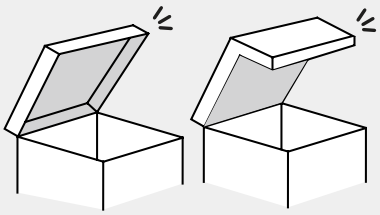


Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

*The max. door moment depends on the following factors:
- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Balance Adjustment]



This feature allows adjustment to the location of center of gravity.

[Specifications]
- Operating temperature : 0℃~40℃
- Operating humidity : 90%RH or less

[Remarks]
- Be sure to read the "Cautions" 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]
- Truss head screw M4

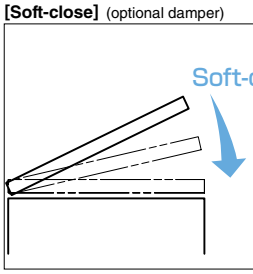
[Lift-assist]

Spring mechanism assists in lifting the top-opening lid. You can select hard or soft spring tension type depending on lid weight and dimension.

[Compact]

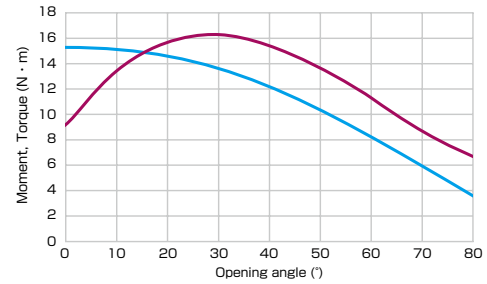
Small body maximises space inside the cabinet.

[Soft-close] (optional damper)



The S-ATD (optional damper) 1 provides soft-closing effect ensuring safety

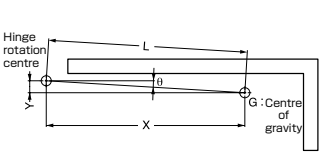
[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.
The stay torque should be above the door moment from the middle of the opening.
・Door moment Mu > Stay torque : Force is applied in the closing direction of door.
・Door moment Mu < Stay torque : Force is applied in the opening direction of door.
・Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg
*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculatiog Door Moment]

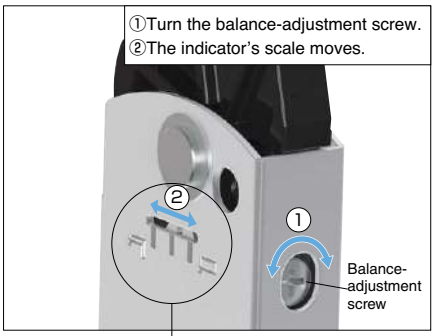
Calculation formula: Mu = m × L × cosθ

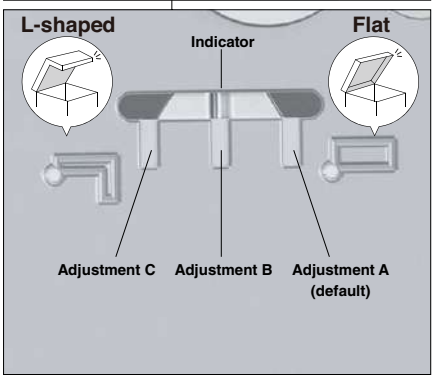


X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

Refer to 1 : P.304, 2 : P.293

[Balance Adjustment]

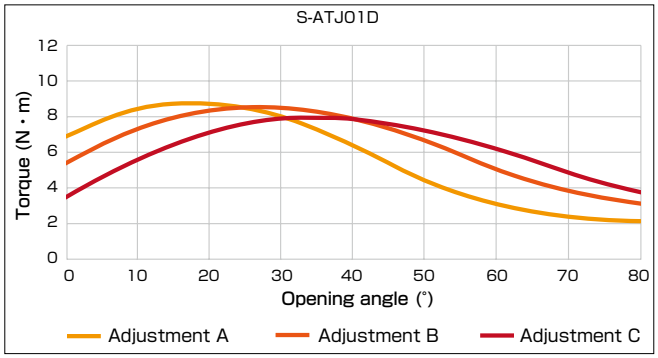


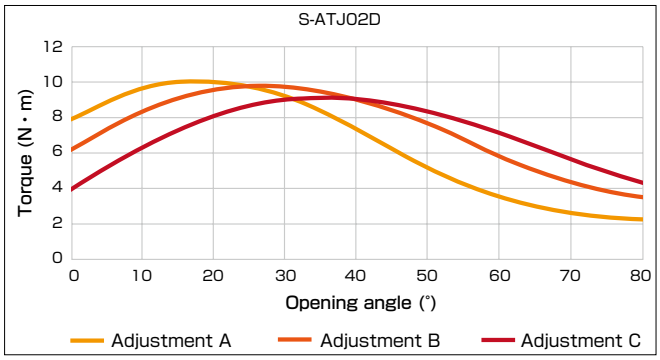


The indicator shows how much balance-adjustment is applied.
Balance-adjustment should depend on the location of the center of gravity.
When used in:
- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.
*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted

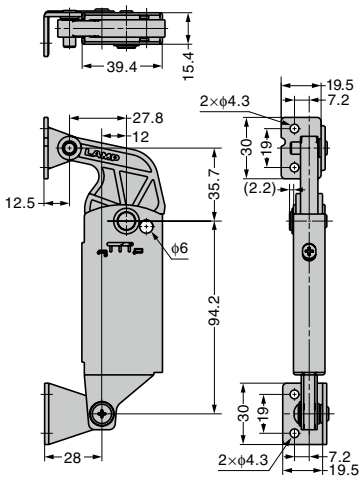




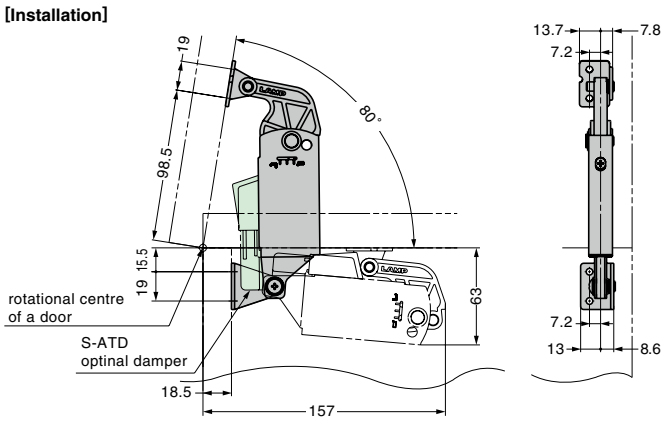
Video Link

Selection Tool

Sasuga-kun



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-043-516	S-ATJ01D	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	210	10	50
G	3D	180-043-519	S-ATJ02D			8.8~11.8	90~120		10	50

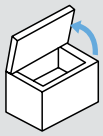
*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Damper Case Colour	Damper Resistance	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-054-093	S-ATD-20	Grey	Weak	15	50	–
G	3D	180-043-521	S-ATD-30	Black	Strong		50	–

BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJS Back Panel Mount

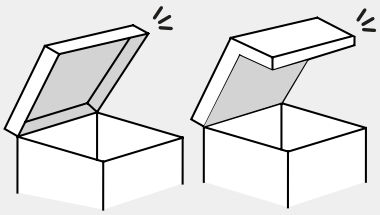
L=R INSTRUCTION

Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

*The max. door moment depends on the following factors:
- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.

[Balance Adjustment]



This feature allows adjustment to the location of center of gravity.

[Specifications]
- Operating temperature : 0℃~40℃
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

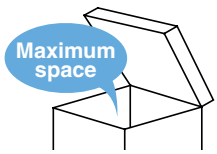
[Remarks]
- Be sure to read the "Cautions" 1.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]
- Truss head screw M4

[Lift-assist]

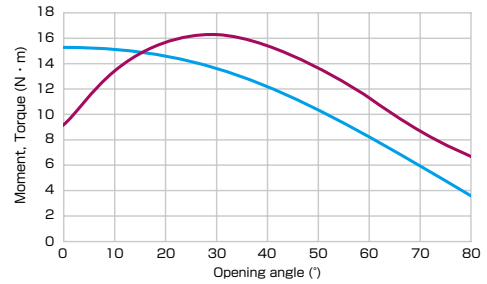
Spring mechanism assists in lifting the top-opening lid. You can select hard or soft spring tension type depending on lid weight and dimension.

[Compact]



Small body maximises space inside the cabinet.

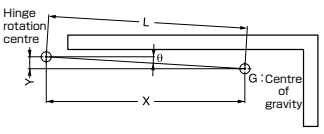
[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.
The stay torque should be above the door moment from the middle of the opening.
・Door moment Mu > Stay torque : Force is applied in the closing direction of door.
・Door moment Mu < Stay torque : Force is applied in the opening direction of door.
・Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg
*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculatiog Door Moment]

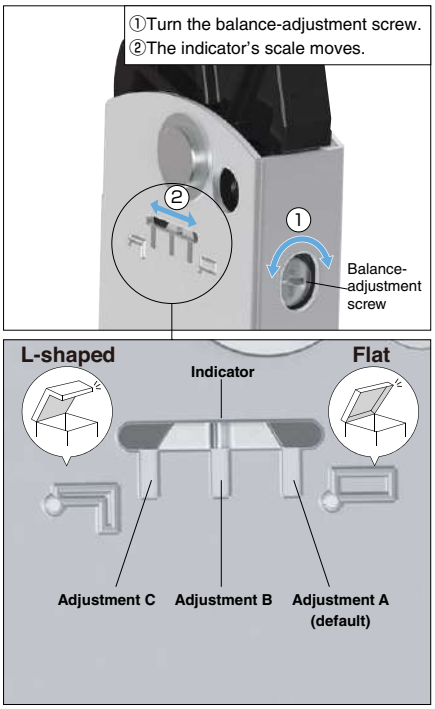
Calculation formula: $Mu = m \times L \times \cos\theta$



X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

Refer to 1 : P.293

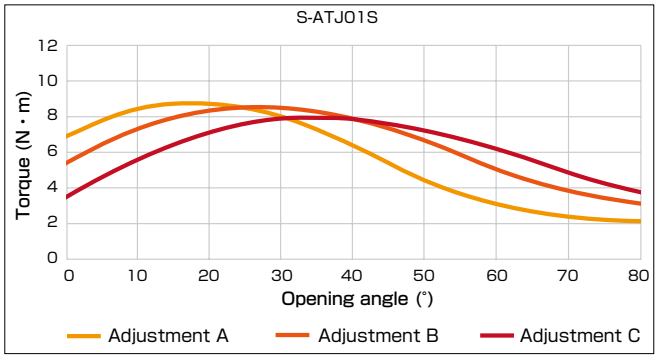
[Balance Adjustment]

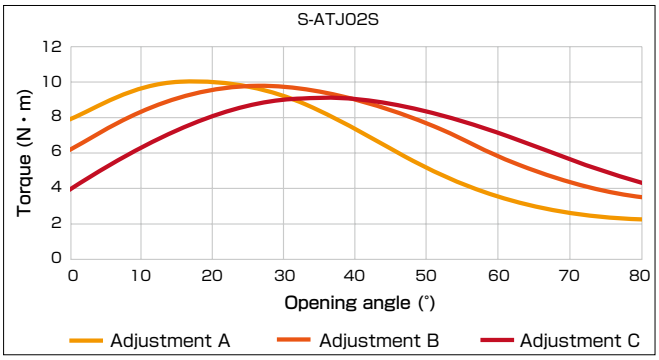


The indicator shows how much balance-adjustment is applied.
Balance-adjustment should depend on the location of the center of gravity.
When used in:
- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.
*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted

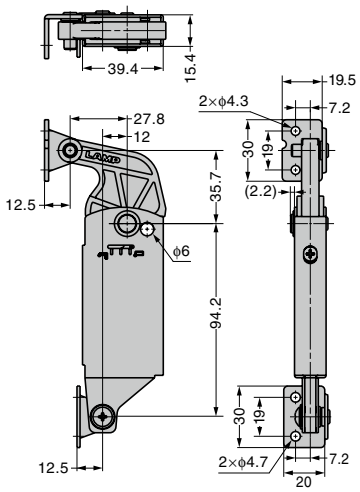




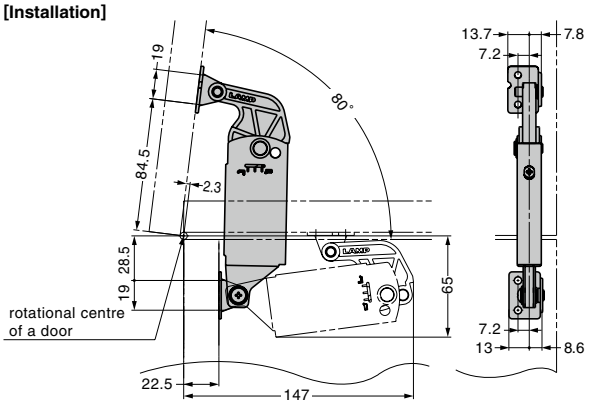
Video Link

Selection Tool

Sasuga-kun



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-043-517	S-ATJ01S	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	200	10	50
G	3D	180-043-520	S-ATJ02S			8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

DAMPER UNIT S-ATD For S-ATJ and S-ATJD

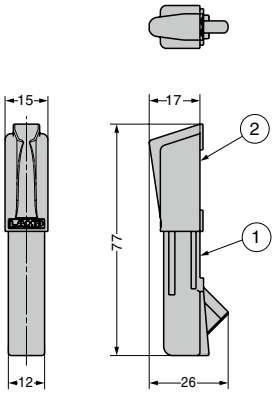
S-ATD-20 S-ATD-30

- Specially designed for use with the S-ATJ 1 and S-ATJD 2.
  Adds soft-closing feature to the stays.
- A Weak Type Damper S-ATD-20 is now available.
- Easy to attach to the S-ATJ and S-ATJD stays by simply inserting it. The thickness is designed to fit the stays allowing for maximum space inside cabinets.

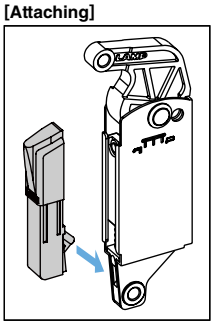
[Remarks]

- Be sure to read the "Cautions" 3.
- Only for use with the S-ATJ and S-ATJD. Can not be used with other items in the S-AT series.
- Other installation points than those in this catalogue may not be available. For details, please check with the product search engine called "Sasuga-kun" .

[When attached to the S-ATJD]



[Attaching]



Selection Tool

Sasuga-kun

No.	Part Name	Material
①	Damper Case	POM
②	Slider	PBT

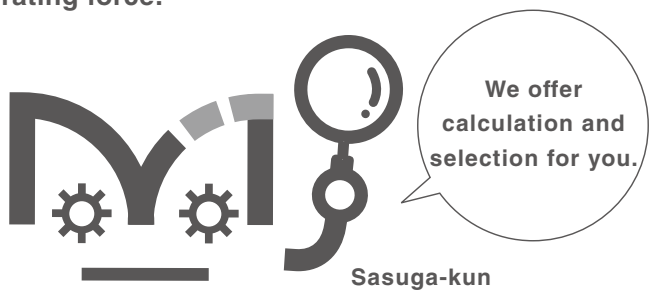
RoHS	CAD	Item Code	Item Name	Damper Case Colour	Damper Resistance	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-054-093	S-ATD-20	Grey	Weak	15	50	–
G	3D	180-043-521	S-ATD-30	Black	Strong		50	–

Refer to 1 : P.298, 2 : P.300, 3 : P.293

LIFT ASSIST STAYS
SOFT CLOSING STAYS
TORQUE STAYS
HEAVY DUTY LOCKING STAYS
FOOT STAYS
LID STAYS
OTHER STAYS
TOP-OPENING
DOWNWARD-OPENING
UPWARD-OPENING
BOTTOM-OPENING
SWING DOOR
LIFT-UP
LIFT-DOWN
UP & OVER
BI-FOLDING
OVER THE TOP

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun | Search

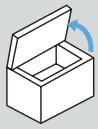
https://cont.sugatsune.co.jp/motion/en/

LIFT ASSIST STAY S-AT02W Side Mount, Back Panel Mount

L=R INSTRUCTION

Side mount type

Back panel mount type

Opening Direction	Description	Non-handed	Maximum Door Moment
 Top-opening	Side Mount	Yes	17.6~21.0 N・m/pc (180~214 kgf・cm/pc)
	Back Panel Mount		15.0~16.5 N・m/pc (153~168 kgf・cm/pc)

- Doubled torque (※) compared with conventional S-AT 1 . (※ For side mount)
- Spring mechanism assists in lifting heavy top-opening lid.
- Easily holds the lid at any angle (about 10˚ ~80˚).
- Compact design maximises space inside of the cabinet.
- Non-handed for both side and back panel mount. Use side panel bracket for side mount.

[Specifications]
- Operating temperature: 0℃~40℃
- Operating humidity: 90%RH or less
  ※ For other specification exceeding the above range, please contact local representatives.

[Remarks]
- Be sure to read the "Cautions" 2 .
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Because of high spring tension product, abnormal noise, deformation or damage may occur depending on cabinet and hinge used. Check if the cabinet has sufficient strength and rigidity before use.
- Continuous opening and closing is not allowed.
- Spring tension may vary over time.
- Do not use with concealed hinges (multiaxial hinges).
- We recommend to test assembly before final use.

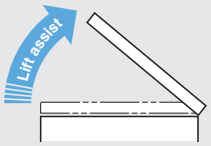
Video Link

Selection Tool
Sasuga-kun

[Parts Included]
- Side panel bracket (For side mount)
- Truss head screw M5×6 (Used for fixing the body and bracket in case of side mount)

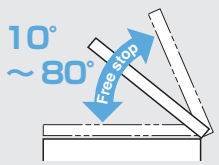
[Recommended Screw]
- Truss head screw M5

●Easy operation with lift assist



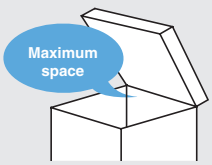
Built-in spring mechanism assists in lifting heavy top-opening lid.

●Free stop



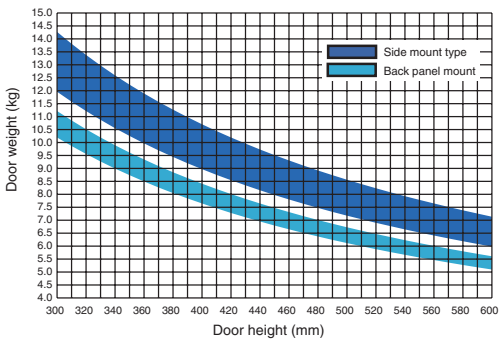
Easily holds the opening angle of top-opening lid at about 10˚~80˚.

●Compact



Small body maximises space inside of the cabinet.

[Selection Graph]



Door size ranges and door moment formula are obtained when door centre of gravity is at the door centre and installation is done according to dimensions in drawings on the next page.

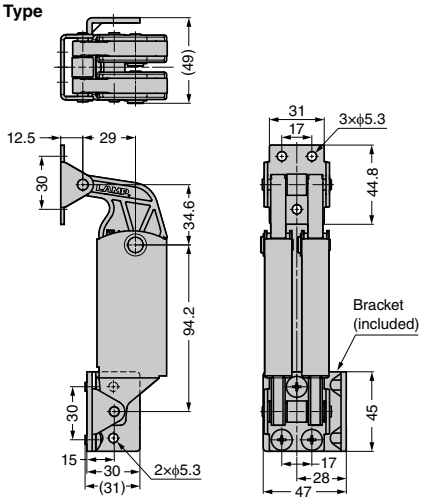
[Maximum Door Moment]
- Choose from 2 types of installation according to the maximum door moment.
  Maximum Door Moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum Door Moment N・m	Installation	Qty
17.6~21.0	Side Mount	1 pc
15.0~16.5	Back Panel Mount	

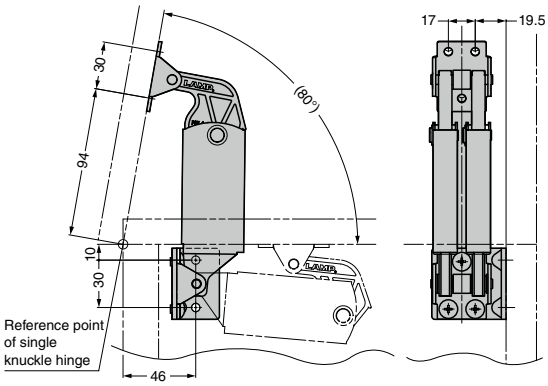
- With 2 stays, the maximum door moment will be doubled.

Refer to 1 : P.296, 2 : P.293

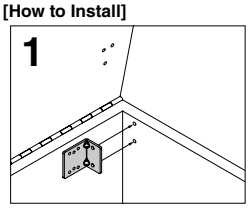
■Side Mount Type



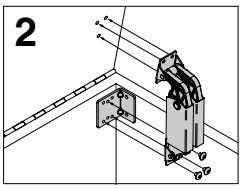
[Installation]



[How to Install]



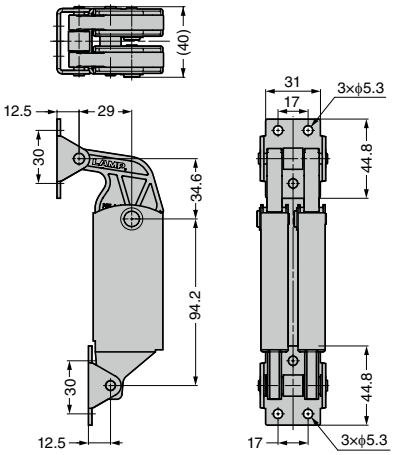
Install side board bracket (non-handed) to cabinet with mounting screws (※).
※Not included.



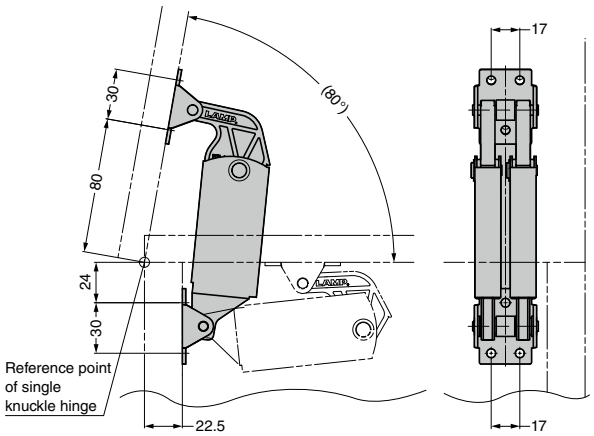
Fix stay body to side board bracket with supplied screws, and then install the body to top-opening lid with mounting screws (※).

For inset type or other non-specified installation types, please contact local representative.

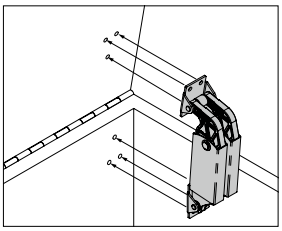
■Back Panel Mount Type



[Installation]



[How to Install]



Install the body to cabinet with mounting screws (※). Do not use the supplied side board bracket and truss head screws.
※Not included.

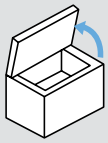
For inset type or other non-specified installation types, please contact local representative.

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Type	Side Mount Maximum Door Moment N·m/pc	Side Mount Maximum Door Moment kgf·cm/pc	Back Panel Mount Maximum Door Moment N·m/pc	Back Panel Mount Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	180-025-461	S-AT02W	Stainless Steel (SUS430)/POM	Plain/ Black	Side Mount Back Panel Mount	17.6~21.0	180~214	15.0~16.5	153~168	490	10

※Can be set at 90 degree opening by changing the installation position. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

LIFT ASSIST STAY S-ATH

L=R SUS

Opening Direction	Item Name	Non-handed	Maximum Door Moment
 Top-opening	S-ATH-60S	Yes	60 N・m/pc (611.6 kgf・cm/pc)
	S-ATH-70S		70 N・m/pc (713.6 kgf・cm/pc)

- Applicable to heavier top-opening lids.
- Spring mechanism assists in lifting heavy top-opening lid.
- Can choose from two types depending on the shape of top-opening lid.
- Torque adjustable (+0%, -10%) by turning the adjustment bolt.

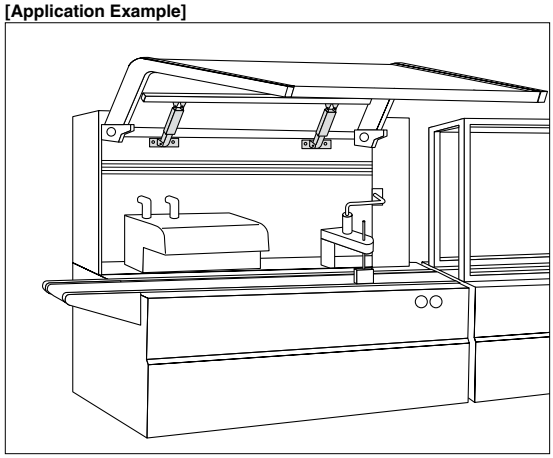
[Specifications]
- Operating temperature: 0℃~40℃
- Operating humidity: 90%RH or less

[Remarks]
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Because of high spring tension product, abnormal noise, deformation or damage may occur depending on cabinet and hinge used. Check if the cabinet and hinge have sufficient strength and rigidity before use.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Proper testing is necessary.
- Spring tension may vary over time.

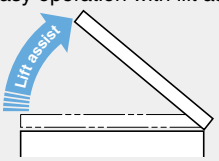
Selection Tool

Sasuga-kun
Simulation at other installation positions than those in the catalogue may also be done.

[Application Example]



- Easy operation with lift assist.



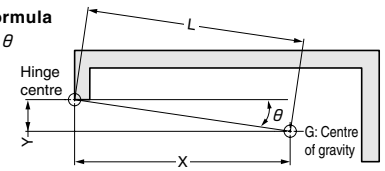
Easy to lift heavy top-opening lid with spring tension (lift assist function). Can choose from two types depending on the shape of top-opening lid.

[How to Select] Refer to the following 1~3 for model selection.

1. Calculating the maximum door moment

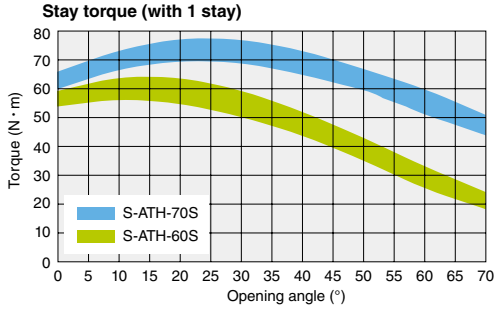
Calculation formula

$Mu = W \times L \times \cos\theta$



X	Horizontal distance from rotation centre to door centre of gravity
Y	Vertical distance from rotation centre to door centre of gravity
L	Distance from rotation centre to door centre of gravity
θ	Angle from horizontal line at hinge centre to door centre of gravity
W	Door weight
G	Door centre of gravity

2. Confirming stay torque



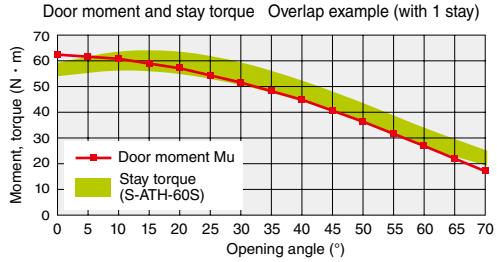
3. Selecting model

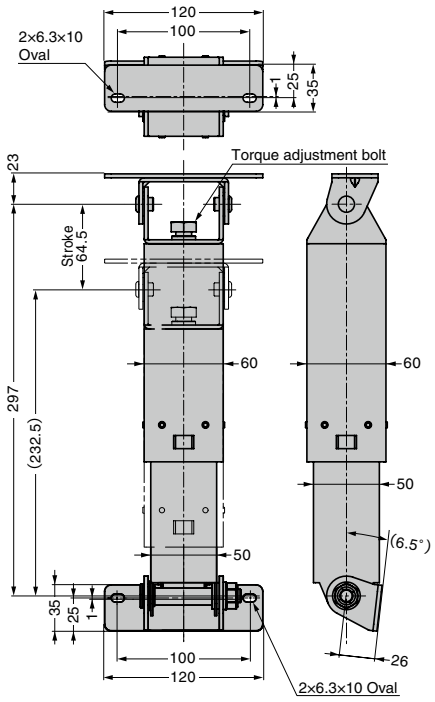
As shown in the graph on the right, if the door moment and stay torque overlap, the stay is considered to be consistent with the specifications.

Door moment Mu > Stay torque・・・Force is applied in the closing direction of door.
Door moment Mu < Stay torque・・・Force is applied in the opening direction of door.

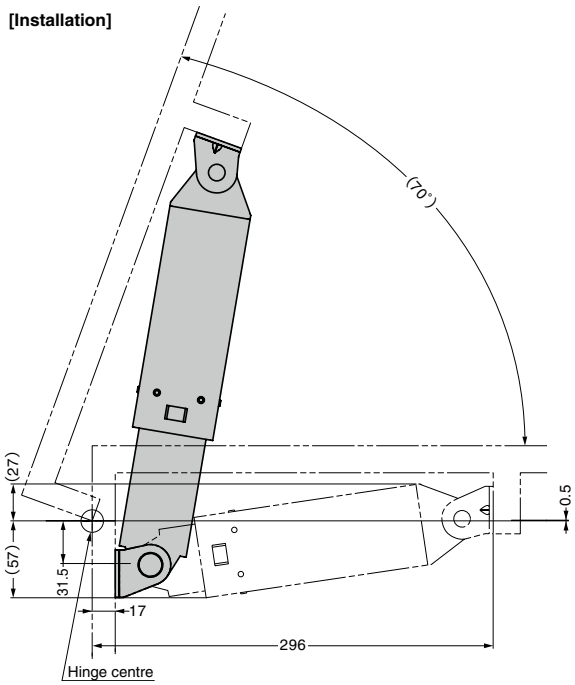
Conditions in the above example: X = 42cm, Y = 3cm, L = 42.1cm, W = 15kg
Stay in application example: S-ATH-60S (1 pc use)

Door moment and stay torque Overlap example (with 1 stay)



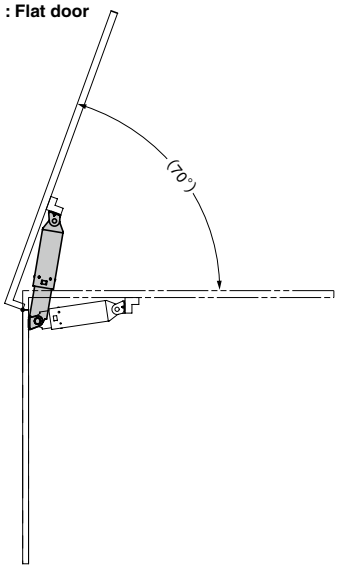


[Installation]

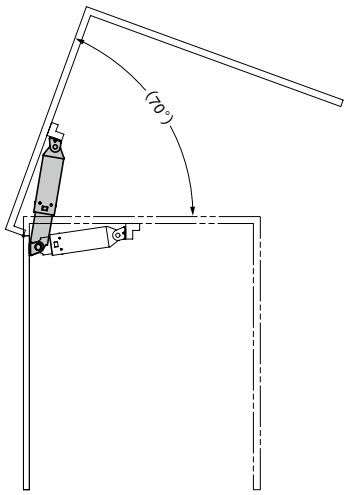


[Applicable Door Shape]

S-ATH-60S : Flat door



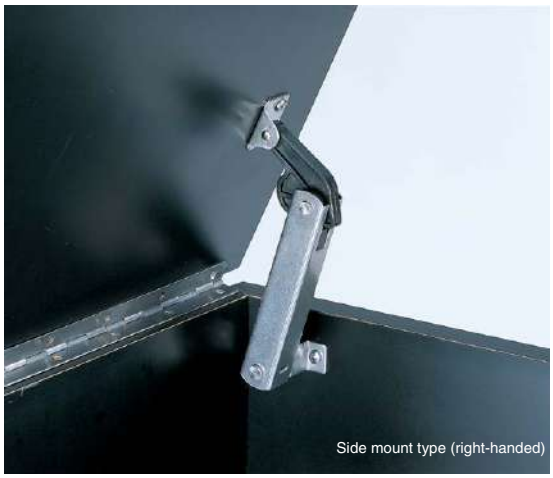
S-ATH-70S : L-shaped door



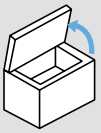
RoHS	CAD	Item Code	Item Name	Applicable Door Shape	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	180-033-866	S-ATH-60S	Flat Door	Stainless Steel (SUS304)	Satin	60	611.6	2500	1
G	3D	180-033-867	S-ATH-70S	L-shaped door			70	713.6		1

LIFT ASSIST STAY S-YT Side Mount, Back Panel Mount

SUS

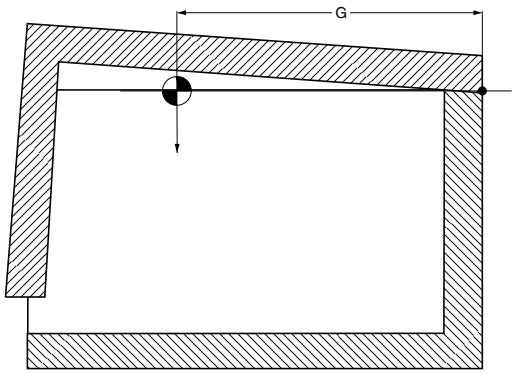

Side mount type (right-handed)

Back panel mount type Side mount type

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	S-YT01	Side Mount	–	Max. 2.94 N・m/pc (Max. 30 kgf・cm/pc)
	S-YT02			Max. 3.92 N・m/pc (Max. 40 kgf・cm/pc)
	S-YT01S	Back Panel Mount	Yes	Max. 2.94 N・m/pc (Max. 30 kgf・cm/pc)
	S-YT02S			Max. 3.92 N・m/pc (Max. 40 kgf・cm/pc)

- Lid can be opened with a small force and held in fully opened position.
- Can choose from 2 types of spring tension depending on lid weight.
- Two installation types (side mount and back panel mount) are available, while side mount is divided into left side installation and right side installation.
- Body and spring are made of stainless steel (SUS304), suitable for corrosive environments.
- Plastic parts and metal parts can be easily separated.

[Remarks]
- Be sure to read the “Cautions” 1.
- Do not open the lid above the opening angle.
- Spring tension may vary over time.
- Do not use with concealed hinges (multiaxial hinges).



[Calculation of Maximum Door Moment]

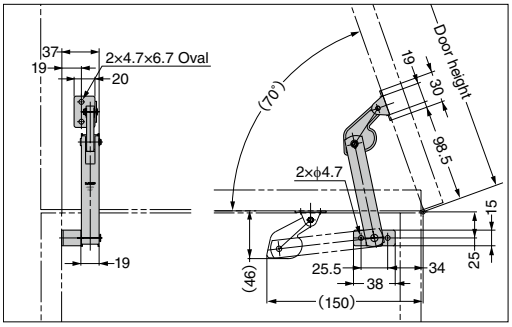
Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity G (m)

[Remarks]
- Since door moment varies depending on installation position, opening angle and centre-of-gravity position, the calculation result is only for reference in selection.
- Be sure to conduct verification before use.

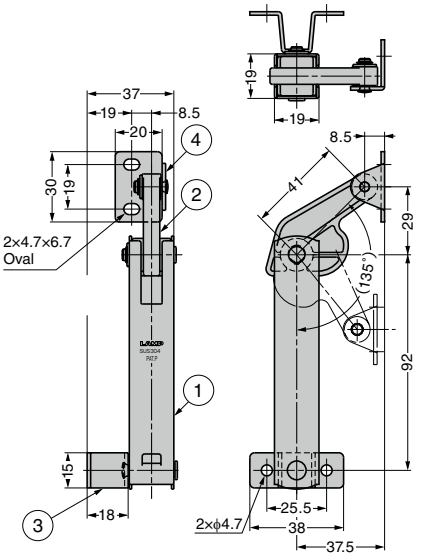
Refer to 1 : P.293

LIFT ASSIST STAY S-YT Side Mount

SUS

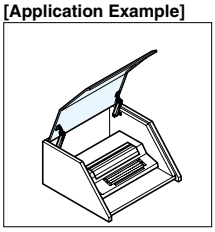


Installation for 70° opening (Left-handed)
Opening up to about 80° by changing installation position.



Left-handed type shown.

[Application Example]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	POM	Black
③	Case Bracket (For Side Board)	Stainless Steel (SUS304)	Barrel Polished
④	Arm Bracket		

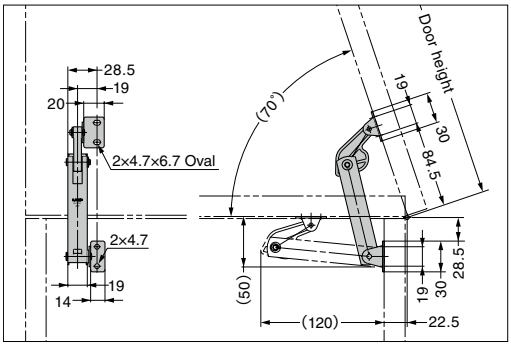
RoHS	CAD	Item Code	Item Name	Type	Spring Tension	Maximum Door Moment N · m/pc	Maximum Door Moment kgf · cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-083	S-YT01R	Right-handed	Soft	Max. 2.94	Max. 30	130	10	100
G	3D	180-100-084	S-YT01L	Left-handed				123	10	100
G	3D	180-100-085	S-YT02R	Right-handed	Hard	Max. 3.92	Max. 40	130	10	100
G	3D	180-100-086	S-YT02L	Left-handed				130	10	100

Refer to 1 : P.310

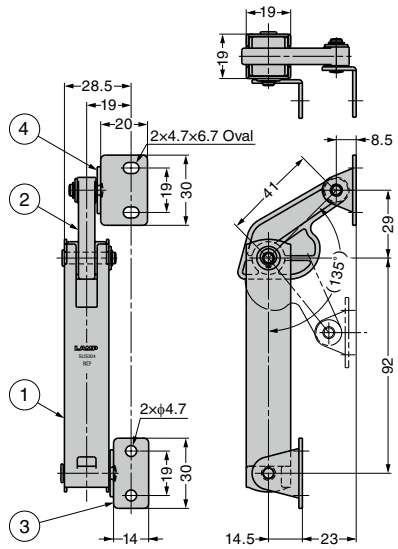
Refer to the calculation of maximum door moment 1.

LIFT ASSIST STAY S-YT Back Panel Mount

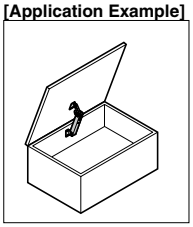
L=R SUS



Installation for 70° opening
Opening up to about 80° by changing installation position.



[Application Example]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	POM	Black
③	Case Bracket (For Side Board)	Stainless Steel (SUS304)	Barrel Polished
④	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Spring Tension	Maximum Door Moment N · m/pc	Maximum Door Moment kgf · cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-081	S-YT01S	Soft	Max. 2.94	Max. 30	120	10	100
G	3D	180-100-082	S-YT02S	Hard	Max. 3.92	Max. 40	128	10	100

Refer to 1 : P.310

Refer to the calculation of maximum door moment 1.

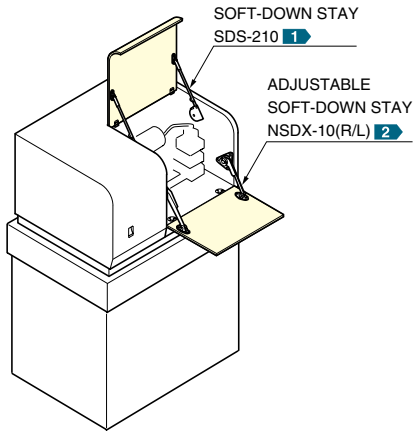
Lapcon Series

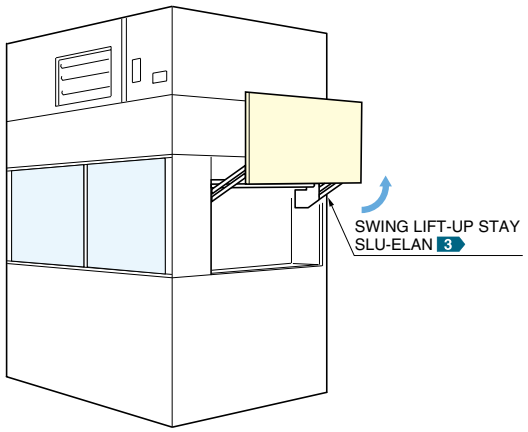
Safe and smooth with Lapcon!

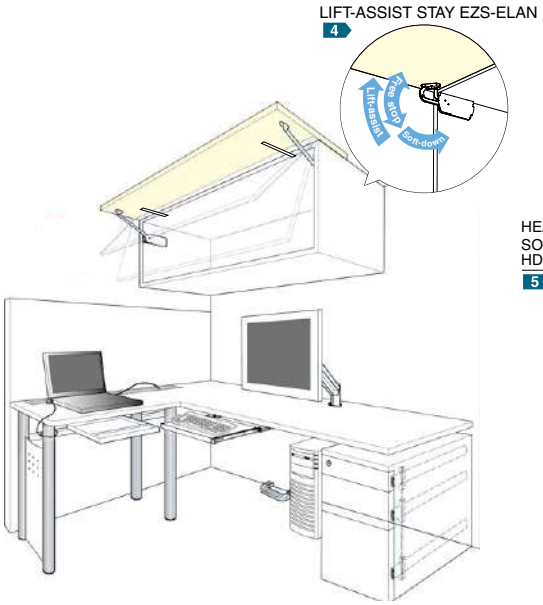
LAPCON refers to Sugatsune's patented damper mechanism which controls motion softly and smoothly. This damper mechanism with superior operability and safety has gained a high reputation from our customers, applicable to a wide variety of products such as stays, lift coat hangers, door closers, and storage beds, etc. These products are widely applied in Japan and overseas.

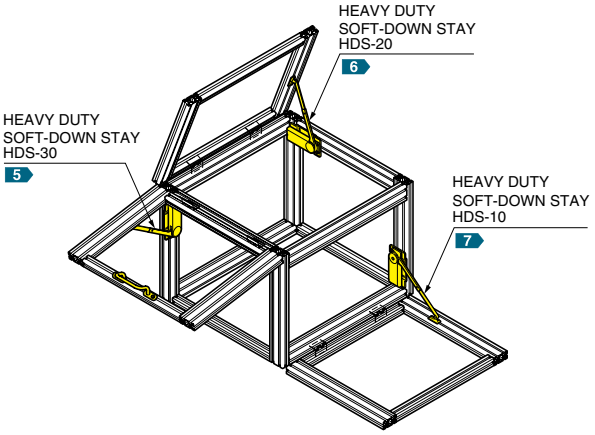
Motion DesignTec®

[Application Example]





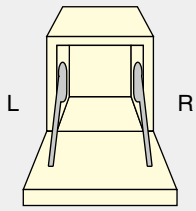




Refer to 1 : P.326, 2 : P.342 , 3 : P.370, 4 : P.374, 5 : P.356, 6 : P.320, 7 : P.338

Soft-Down Stay Selection by lid/flap movement

When viewing from door opening side, located on the right side is right-handed (R) and on the left side is left-handed (L).



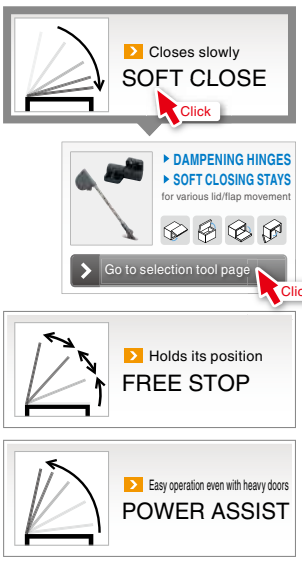
Lid/Flap Movement/Purpose	Hinge Type	Stay Type	Opening Angle
Top-opening	• Single knuckle hinge • Concealed hinge	HDS - 20S	75°
		HDS - 20	70°
		NSDX-20(R/L)	70°, 105°
	• Single knuckle hinge • Concealed hinge	SDS - 200, SDS - 201	70°
		SDS - 210	105°
		LAD - ST	95°
		LAD	–
Upward-opening	• Single knuckle hinge • Concealed hinge	SLS - ELAN, SLS - ELAN-TV	80°, 90°
		HDS - 30	80°
		HDSN - 30	80°, 90°
		NSDX - 35(R/L)	80°, 90°, 100°
		NSDX - 35(R/L)2S	80°/60°, 90°/65°, 100°/70°
		SDS - C301N	90°
Downward-opening	• Single knuckle hinge • Drop hinge • Concealed hinge	HDS - 10S	90°
		HDS - 10	
		NSDX - 10(R/L), NSDX - 10(R/L)K-TV	
		SDS - 100, SDS - C100	
		CSD - 10 - TV	
		SDS - 100TV, SDS - C100TV	
Bottom-opening	• Single knuckle hinge	SDS - 400 - W	70°

[Introduction of Selection Tool]

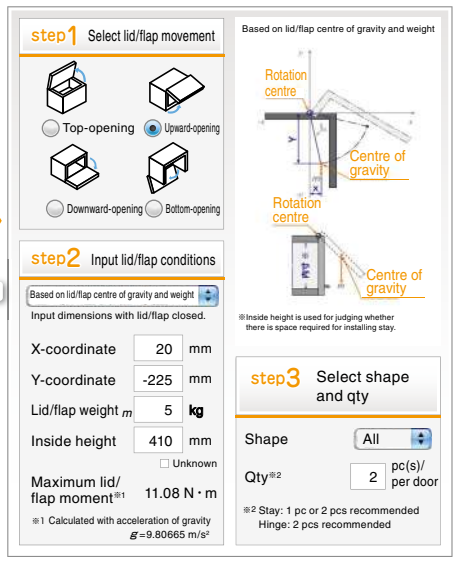
A tool for easily selecting Lapcon stays now available online!

Motion Design Tech
Selection Tool "Sasuga-kun"

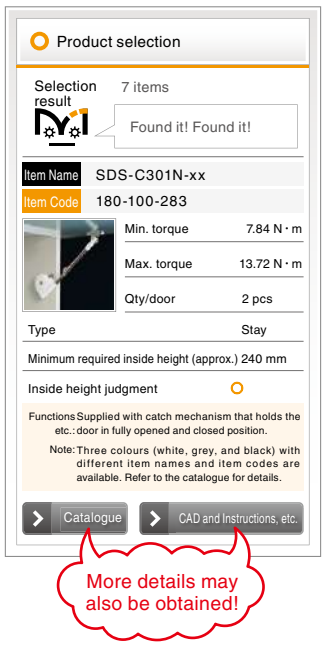
1 Select kind of movement



2 Input conditions



3 Choose a product !



No Registration Required Free

Let's try to use "Sasuga-kun" right now!

From PC

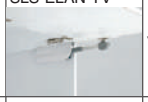
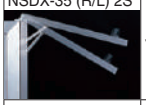
Enter by clicking the Sugatsune homepage.

Selection Tool "Sasuga-kun"

From tablet

Scan the 2D barcode on the right.

LAPCON STAY SERIES

Opening Direction	Description	Item Name	Qty 1 pc	Qty 2 pcs	Non-handed	Catch	Maximum Door Moment	Page
Upward-opening	Lift-assist Free Stop Soft-down	SLS-ELAN	Yes	Yes	–	–	4.9~9.8 N・m (50~100 kgf・cm)	P.352
		SLS-ELAN-TV 	Yes	Yes	–	–	4.6~6.17 N・m (47~63 kgf・cm)	P.354
	Soft-down	HDS-30	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.356
		HDSN-30	–	Yes	–	Yes	13.7~34.3 N・m (140~350 kgf・cm) ※	P.358
		NSD-35	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.361
		NSDX-35 (R/L)	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.362
		NSDX-35 (R/L) 2S 	Yes	Yes	–	Yes (Two Angles)	1.96~4.9 N・m (20~50 kgf・cm)	P.364
		SDS-C301N	Yes	Yes	Yes	Yes	3.92~6.86 N・m (40~70 kgf・cm)	P.365
	Self & Soft-opening	HDS-20S	–	Yes	–	Yes	6.9~14.7 N・m (70~150 kgf・cm) ※	P.318
Top-opening	Soft-down	HDS-20	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.320
		NSD-20	Yes	Yes	–	Yes	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)	P.323
		NSDX-20 (R/L)	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.324
		SDS-200 SDS-201	Yes	Yes	Yes	Yes	3.43~4.9 N・m (35~50 kgf・cm)	P.326
		SDS-210				–		

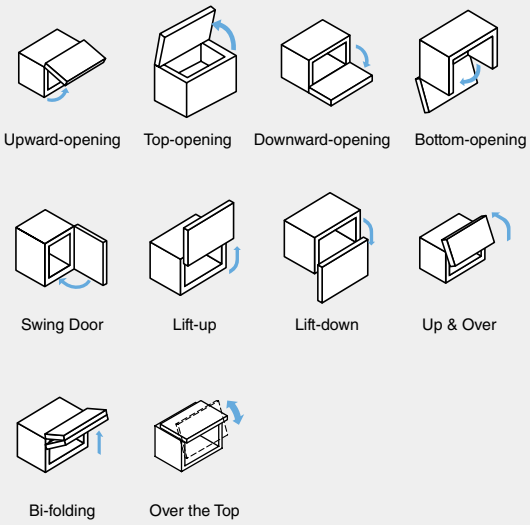
Opening Direction	Description	Item Name	Qty 1 pc	Qty 2 pcs	Non-handed	Catch	Maximum Door Moment	Page
Top-opening	Lift-assist Soft-close	LAD-ST	Yes	Yes	Yes	–	8.0~16.0 N・m (81.6~163.2 kgf・cm)	P.328
		LAD	Yes	Yes	Yes	–	8.0~16.0 N・m (81.6~163.2 kgf・cm)	P.330
		LADH	Yes	Yes	Yes	–	25~50 N・m/pc (255~510 kgf・cm/pc)	P.334
Downward-opening	Self & Soft-close	HDS-10S	–	Yes	–	Yes	5.9~17.6 N・m (60~180 kgf・cm) ※	P.336
	Soft-down	HDS-10	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.338
		NSD-10	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.341
		NSDX-10 (R/L)	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.342
		SDS-100	Yes	Yes	Yes	–	3.43~4.9 N・m (35~50 kgf・cm)	P.344
		SDS-C100				Yes		
		CSD-10-TV	Yes	Yes	Yes	–	1.0~4.0 N・m (10.2~40.8 kgf・cm)	P.346
		NSDX-10 (R/L) K-TV	Yes	Yes	–	Yes	0.98~1.96 N・m (10~20 kgf・cm)	P.347
		SDS-100-TV	Yes	Yes	Yes	–	0.49~1.18 N・m (5~12 kgf・cm)	P.348
		SDS-C100-TV				Yes	1.62~3.68 N・m (16.5~37.6 kgf・cm)	
Bottom-opening	Soft-down	SDS-400-W	Yes	Yes	Yes	–	3.43~4.9 N・m (35~50 kgf・cm)	P.366

※ is the value when using 2 pcs.

Opening Direction	Description	Item Name	Door Width	Door Height	Door Weight	Page
Lift-up	Lift-assist Free Stop Soft-close	SLU-ELAN	Max. 1800	390~500	5~11 kg	P.370
	Lift-assist Soft-close	SLUN-N	600~900	390~450	2.8~5.8 kg	P.372
Lift-down	Lift-assist Soft-close	SLD	600~900	360~400	3~6 kg	P.373
Up & Over	Lift-assist Free Stop Soft-close	EZS-ELAN	Max. 1200	500~750	5~12.5 kg	P.374
Bi-folding	Lift-assist Free Stop Soft-close	HBF-ELAN	Max. 1200	320~370	2.5~6.5 kg	P.376
	Soft-close	HBFN	450~900	320~370	2.5~5.5 kg	P.378
Over the Top	Soft-close	OV-1	700 ~1400	350~450	3~5 kg	P.380
		IF	Max. 1200	—	—	P.381

[Notes]

●Opening Direction



●Description

Lift-assist

Door can be opened with a slight force.

Free stop

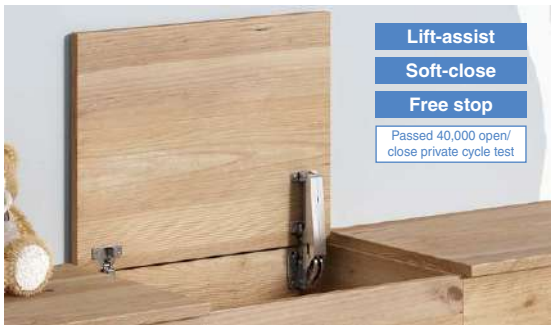
Door can be stopped in any position.

Soft-down, Soft-close

Door closes slowly.

AILERON STAY FOR OLYMPIA ARN-2 Top-opening Model

L=R INSTRUCTION



Opening	Description	Non-handed	Type	Maximum Door Moment
Top-opening	Lift-assist Soft-close Free-stop	Yes	M	4.0–6.0 N·m/pc (40.8–61.2 kgf·cm/pc)
			H	6.0–8.0 N·m/pc (61.2–81.6 kgf·cm/pc)

- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19 / H360-D26-26T).
- The lift-assist function allows for light opening of doors.
- The force of lift-assist is adjustable.
- The soft-close function makes doors close gently (0°–30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- The free-stop function enables doors to hold in position.
- Closing speed of doors is adjustable.

[Door Movements]

Lift-assist
Allows for light opening of doors

Soft-close
OLYMPIA's damper makes doors close slowly. (0° - 30°)

Free-stop
Enables doors to hold in position.

[Specifications]
- Operating temperature: 0℃ – 40℃

[Parts Included]
- Door-side mounting plate
- Countersunk head tapping screw 3.5 × 1.5 (for attaching the mounting plate to AILERON)
- Binding head tapping screw 3.5 × 1.5 (for attaching the door-side mounting plate, mounting plate for AILERON, and AILERON)

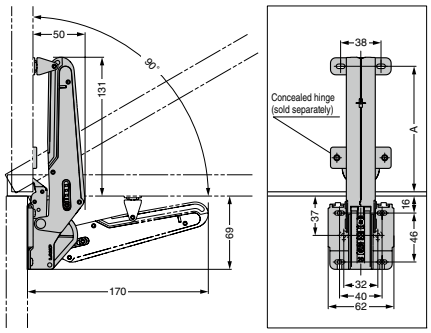
[Optional Parts]
- Hinge spacer 360-BCS
- Aileron spacer ARN-DP

[Sold Separately]
- Mounting plate for AILERON
- OLYMPIA concealed hinge
- Mounting plate for OLYMPIA

Video Link

Video Link

[Installation]



Hinge Used	A
360-D26-19T	118
H360-D26-26T	116

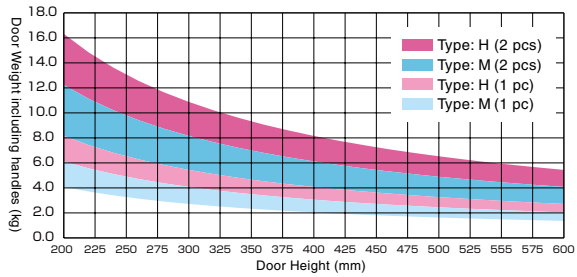
Please see pages of Olympia hinges for installation dimensions.

[Application Example]

Selection Tool

Sasuga-kun

[Selection Graph] (upward and top-opening models)



Maximum Door Moment	Type	Number of AILERON
4.0–6.0	M	1 pc
6.0–8.0	H	
8.0–12.0	M	2 pcs
12.0–16.0	H	

As a guide for model selection, please refer to the graph on the left .
For use with doors outside of the scope of this graph, use the calculation below.
(The door weight includes attached decorations such as handles.)
- The selection should be based on Max. door moment. (Two types are available.)
- Maximum Door Moment (N·m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

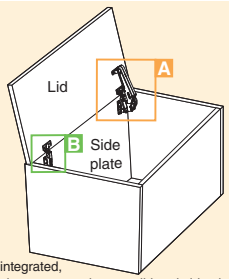
[Aileron Stay] Sold singly

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Type	Max. Door Moment N·m/pc	Max. Door Moment kgf·cm/pc	Box (pc)	Carton (pc)
G	3D	180-043-945	ARN-2-M-GR	Steel (SPCC) / POM	Nickel plating / Grey	M	4.0 ~ 6.0	40.8 ~ 61.2	1	20
G	3D	180-043-946	ARN-2-H-GR			H	6.0 ~ 8.0	61.2 ~ 81.6	1	20
G	3D	180-049-501	ARN-2-M-BL		Nickel plating / Black	M	4.0 ~ 6.0	40.8 ~ 61.2	1	20
G	3D	180-049-502	ARN-2-H-BL			H	6.0 ~ 8.0	61.2 ~ 81.6	1	20

[Standard Set] Including parts sold separately

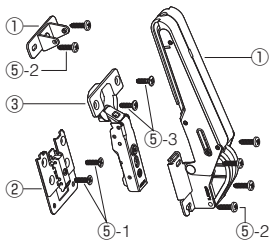
RoHS	CAD	Item Code	Item Name	Finish / Colour	Door Width	Max. Door Moment N·m	Max. Door Moment kgf·cm	Set Contents	Box (pc)	Carton (pc)
G	–	180-045-661	ARN-2-M-GR-S	Nickel plating / Grey	450~ 900	4.0 ~ 6.0	40.8~ 61.2	Aileron stay, Mounting plate for Aileron stay, Olympia hinge, Mounting plate for Olympia hinge, Screws	1	10
G	–	180-045-662	ARN-2-H-GR-S			6.0 ~ 8.0	61.2~ 81.6		1	10
G	–	180-049-505	ARN-2-M-BL-S	Nickel plating / Black		4.0 ~ 6.0	40.8~ 61.2		1	10
G	–	180-049-506	ARN-2-H-BL-S			6.0 ~ 8.0	61.2~ 81.6		1	10

Components for one lid

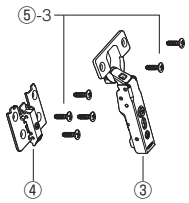


The hinges are integrated, so the parts can be aggregated on one lid and side plate surface.

A With AILERON



B No AILERON



Required parts for one lid (A + B)

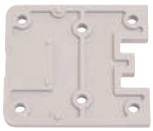
The required quantity depends on lid width and maximum moment.

			Item Code	Item Name	Lid width [mm] 450~900 / Lid max. moment [N·m] 4.0 to 6.0	6.0 to 8.0	8.0 to 12.0	12.0 to 16.0	900~1600 / 4.0 to 6.0	6.0 to 8.0	8.0 to 12.0	12.0 to 16.0	1600~2000 / 4.0 to 6.0	6.0 to 8.0	8.0 to 12.0	12.0 to 16.0
AILERON	① Body	Grey / Black / Including: - Binding tapping screws x6 - Countersunk head tapping screw x2	180-043-945 or 180-049-501	ARN-2-M-GR or ARN-2-M-BL	Standard Set 1	-	2	-	1	-	2	-	1	-	2	-
			180-043-946 or 180-049-502	ARN-2-H-GR or ARN-2-H-BL	-	1	-	2	-	1	-	2	-	1	-	2
	② Washer		180-043-949	ARN-SZ	1		2		1		2		1		2	
OLYMPIA CONCEALED HINGE	③ Body		160-026-840 or 160-029-084	360-D26-19T or H360-D26-26T (damper built-in)	2 *3		3		2		3		2		3	
			160-026-836 or 160-029-081	360-26-19T or H360-26-26T (no catch)	-		-		1		-		2		-	
			160-026-832 or 160-029-078	360-C26-19T or H360-C26-26T (with catch)	-		-		-				-		1	
	④ Washer		160-026-846 *1	360-P6WT (System 32/4 holes)	1		1		2		1		3		2	
	⑤ Screw		160-070-030	TAP3515NI	8 *2		10*2		14 *2		10*2		20*2		16 *2	

*1 For ④ Washer, 360-P4W-32T (Item Code: 160-026-845) and 360-P4W-30T (Item Code: 160-026-844) can also be used.
*2 Quantity when using ④ Washer 360-P6WT. When using 360-P4W-32T or 360-P4W-30T, the required quantity is reduced by one for each washer.
*3 The 360-D26-19T is included in the standard set.

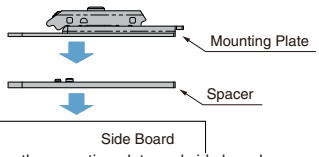
AILERON SPACER ARN-DP 2 and 5 mm Thick

ARN-DP2 (2 mm)


ARN-DP5 (5 mm)

- Specially designed for use with the AILERON stay 1 .
- The ARN-DP2 decreases overlay of outset doors by 2 mm.
- The ARN-DP5 decreases overlay of outset doors by 5 mm.
- The ARN-DP2 can be doubled for 4 mm thickness.

[How to Use]



Set the spacer between the mounting plate and side board.

[Available Mounting Plate]
- ARN-SZ 2

[Remarks]
- The included screws are for fixing the spacer (ARN-DP5) and mounting plate (ARN-SZ).
- Please use the optional screws if two ARN-DP2 are used.

[Parts Included]
- Cross-recessed binding head tapping screw 3.5×20 (Only the ARN-DP5 comes with these screws.)

[Spacer]

RoHS	CAD	Item Code	Item Name	Colour	Type	Material	Box (pcs)	Carton (pcs)
G	3D	180-046-667	ARN-DP2	Grey	+ 2 mm	POM	80	640
G	3D	180-047-915	ARN-DP5		+ 5 mm (screw included)		80	640

[Optional screw when using two ARN-DP2]

RoHS	CAD	Item Code	Item Name
G	—	180-046-669	TAP3520NI

Sold in sets of 4 screws.

Refer to 1 : P.316, P.350, 2 : P.317, P.351

SELF-OPENING STAY HDS-20S For Use in Pairs

Lapcon INSTRUCTION

Right side installation shown.

Opening Direction	Description	Non-handed	Model	Maximum door moment
Top-opening	With Self-opening For Use in Pairs	–	H	6.9~10.8 N·m/2 pcs (70~110 kgf·cm/2 pcs)
			S	10.9~14.7 N·m/2 pcs (111~150 kgf·cm/2 pcs)

- Ideal for top-opening lids.
- Opens automatically after a small impulse.
- Holds the door at closed position.
- For door hinge, piano/butt hinge or concealed hinge is suitable.

[Specifications]
- Operating temperature: 0℃ ~40℃

[Remarks]
- Be sure to read the "Cautions" 1.
- Handed: Specific left and right-handed.
- Used in pairs.
- Do not push the door up over the max. opening angle. And do not roughly open and close the door.

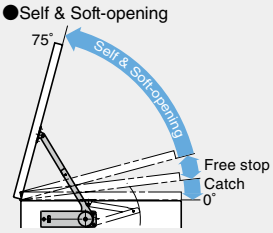
[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

Video Link Video Link

[Applicable Range]
- Choose from 2 types according to door moment.
  Maximum door moment (N·m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

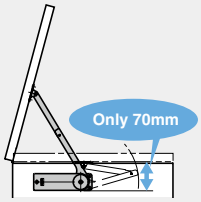
Maximum door moment N·m	Model	Qty
6.9~10.8	H	2pcs
10.9~14.7	S	2pcs

●Self & Soft-opening

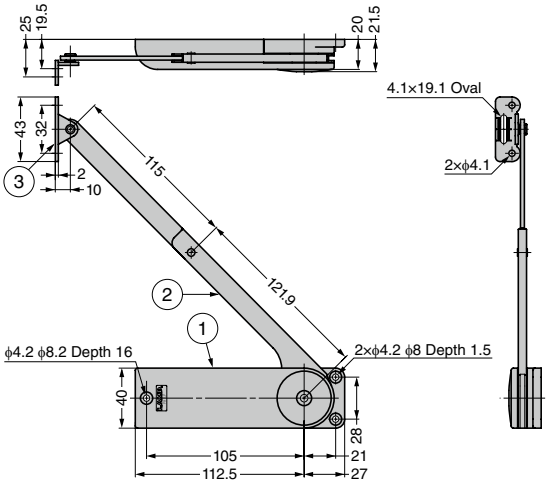


Opens automatically after a small impulse.

●Space-saving



Only 70mm mounting height maximises inside space.



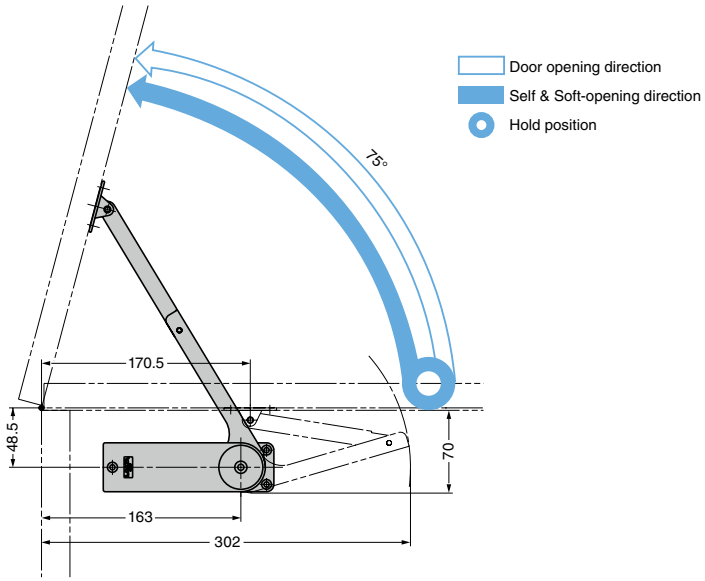
Right-handed type shown.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

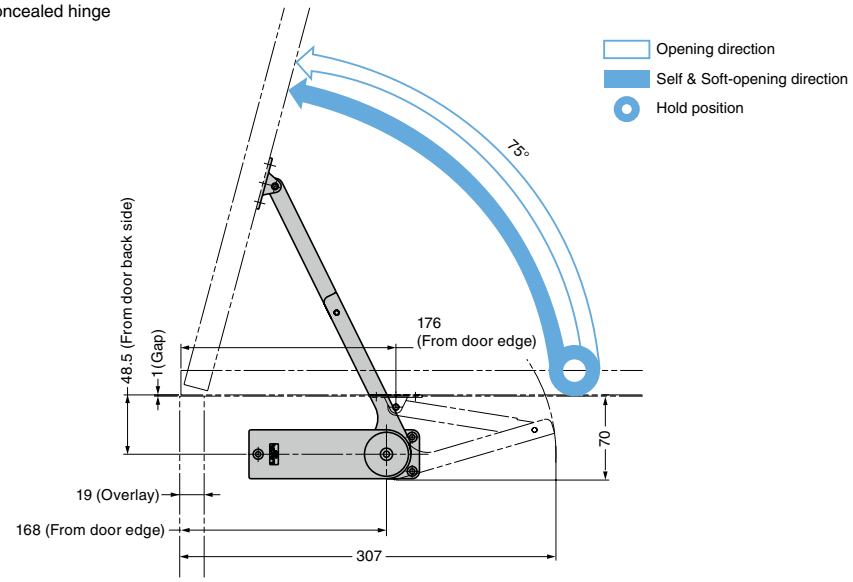
Refer to 1 : P.293

[Installation] Top-opening 75˚ and right side installation. Left side installation is symmetrical.

With piano/butt hinge



With concealed hinge

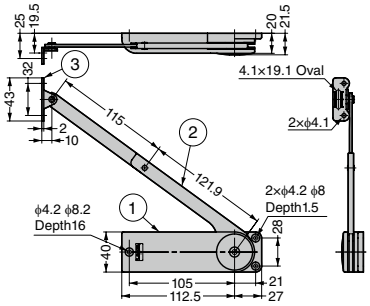


RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G	3D	180-029-751	HDS-20S-HL-BL	Left-handed	Steel / ABS	Nickel plating / Black	H	6.9~10.8	70~110	298	40
G	3D	180-029-752	HDS-20S-HR-BL	Right-handed						298	40
G	3D	180-029-753	HDS-20S-HL-WT	Left-handed		Nickel plating / White				298	40
G	3D	180-029-754	HDS-20S-HR-WT	Right-handed						298	40
G	3D	180-029-755	HDS-20S-SL-BL	Left-handed		Nickel plating / Black	S	10.9~14.7	111~150	311	40
G	3D	180-029-756	HDS-20S-SR-BL	Right-handed						311	40
G	3D	180-029-757	HDS-20S-SL-WT	Left-handed		Nickel plating / White				311	40
G	3D	180-029-758	HDS-20S-SR-WT	Right-handed						311	40

HEAVY DUTY SOFT-DOWN STAY HDS-20 For Use in Pairs

Opening	Description	Non-handed	Model	Max. door moment
Top-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)
			XH	39~41 N·m/2 pcs (397~418 kgf·cm/2 pcs)

- For top-opening doors.
- Designed to hold the door in fully opened position.
- For door hinge, piano/butt hinge or concealed hinge is suitable.
- AS parts set 1 for installing to aluminium frame also available.



No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- Used in pairs.
- Do not push the door up more than opening angle 7°. And do not roughly open and close the door.

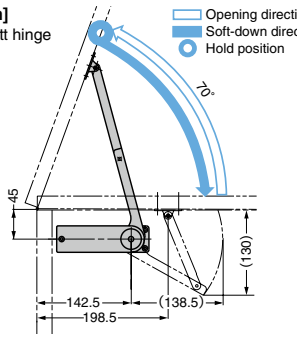
[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

[Applicable Range]
- Max. door moment (N·m) = Door weight (kg)×9.80665× Distance from rotation centre to door centre of gravity (m)

Maximum door moment N·m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	
39~41	XH	

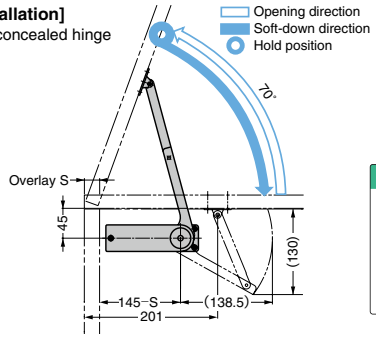
Video Link

[Installation]
with piano/butt hinge



*Top-opening 70°and right side installation. Left side installation is symmetrical.

[Installation]
with concealed hinge



Selection Tool
Sasuga-kun

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-237	HDS-20KL-BL	Left-handed	ABS/Steel	Nickel/Black	K	13.7~19.5	140~199	284	40	40
G	3D	180-109-236	HDS-20KR-BL	Right-handed						282	40	40
G	3D	180-109-243	HDS-20KL-WT	Left-handed		Nickel/White				310	40	40
G	3D	180-109-242	HDS-20KR-WT	Right-handed						283	40	40
G	3D	180-109-239	HDS-20ML-BL	Left-handed		Nickel/Black	M	19.6~24.4	200~249	288	40	40
G	3D	180-109-238	HDS-20MR-BL	Right-handed						289	40	40
G	3D	180-109-245	HDS-20ML-WT	Left-handed		Nickel/White				288	40	40
G	3D	180-109-244	HDS-20MR-WT	Right-handed						288	40	40
G	3D	180-109-241	HDS-20HL-BL	Left-handed		Nickel/Black	H	24.5~29.4	250~300	297	40	40
G	3D	180-109-240	HDS-20HR-BL	Right-handed						297	40	40
G	3D	180-109-247	HDS-20HL-WT	Left-handed		Nickel/White				299	40	40
G	3D	180-109-246	HDS-20HR-WT	Right-handed						299	40	40
G	3D	180-043-093	HDS-20XHL-BL	Left-handed		Nickel/Black	XH	39~41	397~418	–	40	40
G	3D	180-043-094	HDS-20XHR-BL	Right-handed						–	40	40
G	3D	180-043-095	HDS-20XHL-WT	Left-handed		Nickel/White				–	40	40
G	3D	180-043-096	HDS-20XHR-WT	Right-handed						–	40	40

Refer to 1 : P.321, 2 : P.293

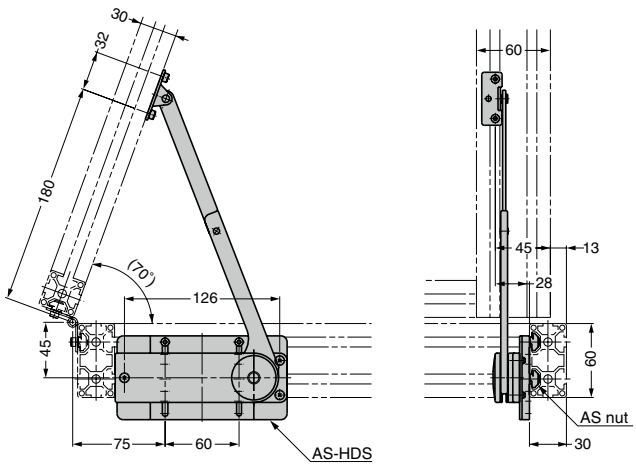
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

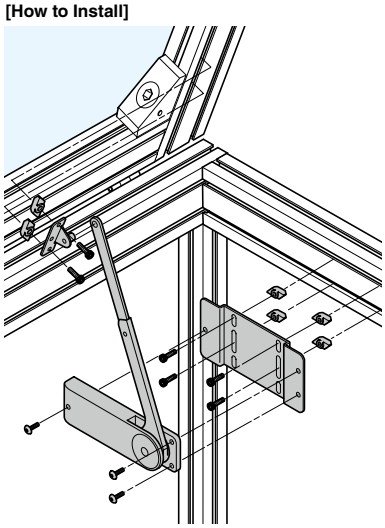
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-637	AS-HDS-20KR-BL-30-6	Groove Width 6 mm	HDS-20KR-BL : 1 pc	AS Nut AS-6M4 : 6pcs Pan Head Screw M4×8 : 3pcs Bracket AS-HDS : 1pc Hexagon Socket Head Cap Screw M4×10 : 6pcs	–
G	3D	180-013-638	AS-HDS-20KL-BL-30-6		HDS-20KL-BL : 1 pc		–
G	3D	180-013-639	AS-HDS-20KR-WT-30-6		HDS-20KR-WT : 1 pc		–
G	3D	180-013-640	AS-HDS-20KL-WT-30-6		HDS-20KL-WT : 1 pc		–
G	3D	180-013-641	AS-HDS-20MR-BL-30-6		HDS-20MR-BL : 1 pc		–
G	3D	180-013-642	AS-HDS-20ML-BL-30-6		HDS-20ML-BL : 1 pc		–
G	3D	180-013-643	AS-HDS-20MR-WT-30-6		HDS-20MR-WT : 1 pc		–
G	3D	180-013-644	AS-HDS-20ML-WT-30-6		HDS-20ML-WT : 1 pc		–
G	3D	180-013-645	AS-HDS-20HR-BL-30-6		HDS-20HR-BL : 1 pc		–
G	3D	180-013-646	AS-HDS-20HL-BL-30-6		HDS-20HL-BL : 1 pc		–
G	3D	180-013-647	AS-HDS-20HR-WT-30-6		HDS-20HR-WT : 1 pc		–
G	3D	180-013-648	AS-HDS-20HL-WT-30-6		HDS-20HL-WT : 1 pc		–
G	3D	180-013-649	AS-HDS-20KR-BL-30-8	Groove Width 8 mm	HDS-20KR-BL : 1 pc	AS Nut AS-8M4 : 6pcs Pan Head Screw M4×8 : 3pcs Bracket AS-HDS : 1pc Hexagon Socket Head Cap Screw M4×10 : 6pcs	–
G	3D	180-013-650	AS-HDS-20KL-BL-30-8		HDS-20KL-BL : 1 pc		–
G	3D	180-013-651	AS-HDS-20KR-WT-30-8		HDS-20KR-WT : 1 pc		–
G	3D	180-013-652	AS-HDS-20KL-WT-30-8		HDS-20KL-WT : 1 pc		–
G	3D	180-013-653	AS-HDS-20MR-BL-30-8		HDS-20MR-BL : 1 pc		–
G	3D	180-013-654	AS-HDS-20ML-BL-30-8		HDS-20ML-BL : 1 pc		–
G	3D	180-013-655	AS-HDS-20MR-WT-30-8		HDS-20MR-WT : 1 pc		–
G	3D	180-013-656	AS-HDS-20ML-WT-30-8		HDS-20ML-WT : 1 pc		–
G	3D	180-013-657	AS-HDS-20HR-BL-30-8		HDS-20HR-BL : 1 pc		–
G	3D	180-013-658	AS-HDS-20HL-BL-30-8		HDS-20HL-BL : 1 pc		–
G	3D	180-013-659	AS-HDS-20HR-WT-30-8		HDS-20HR-WT : 1 pc		–
G	3D	180-013-660	AS-HDS-20HL-WT-30-8		HDS-20HL-WT : 1 pc		–

[Dimensions]

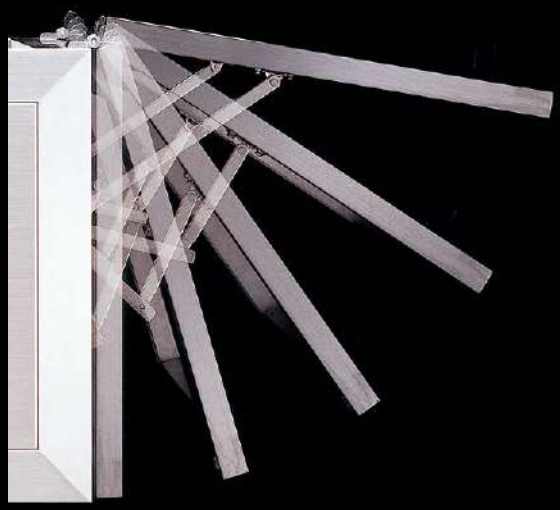


[How to Install]



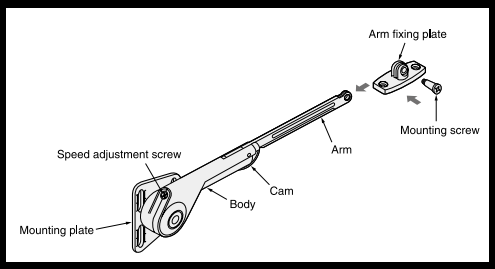
Refer to 1 : P.20

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

[Remarks]
Designed to operate at room temperature 0°~40°C.



APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

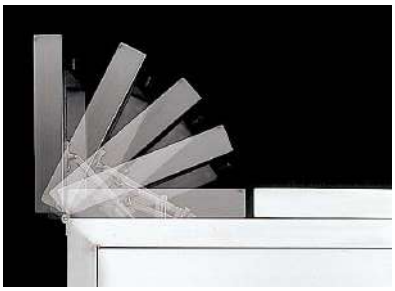
ADJUSTABLE SOFT-DOWN STAY NSD-20

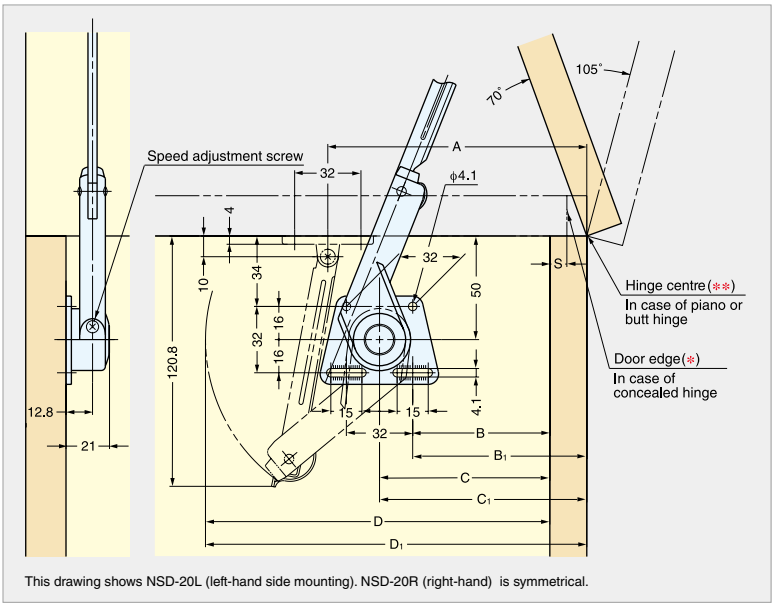
Lapcon INSTRUCTION

- For Top-opening flap door with piano, butt or concealed hinges.
- Opening angle adjustable from 70˚ to 105˚
- Designed to hold door in fully opened position.

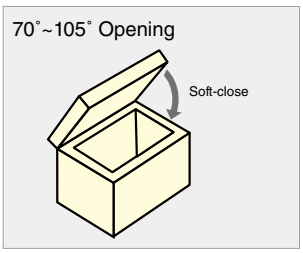
Torque Calculation :
Torque = Door Height x 1/2 x Door Weight.
Per Piece : 20~70 kg·cm.

Material	Finish
Zinc Alloy, Steel	Nickel





This drawing shows NSD-20L (left-hand side mounting). NSD-20R (right-hand) is symmetrical.



Opening Angle	Hinge Type	A	B	C	D	B_1	C_1	D_1
70˚	Concealed Hinge	126	85-S	101-S	185-S	-	-	-
	Piano / Butt Hinge	125	-	-	-	84	100	184
105˚	Concealed Hinge	103	62-S	78-S	162-S	-	-	-
	Piano / Butt Hinge	97	-	-	-	56	72	156

Note: "S" dimension is the overlay distance for concealed hinge(s).

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-104-103	NSD-20R	210	20	80
–	3D	180-104-102	NSD-20L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-20 (R/L)

Lapcon AS INSTRUCTION

Opening Direction	Description	Non-handed	Maximum Door Moment
Top-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

- For top-opening doors.
- Designed to hold the door in fully opened position.
- Opening angle 70° or 105° .
- Closing speed adjustable with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and conditions.
- Do not push the door up over the max. opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]

- Mounting plate 3
- SDS face plate and spacer for glass door (please order when using mounting plate NSDX-GZ 3.)

Video Link

Selection Tool

Sasuga-kun

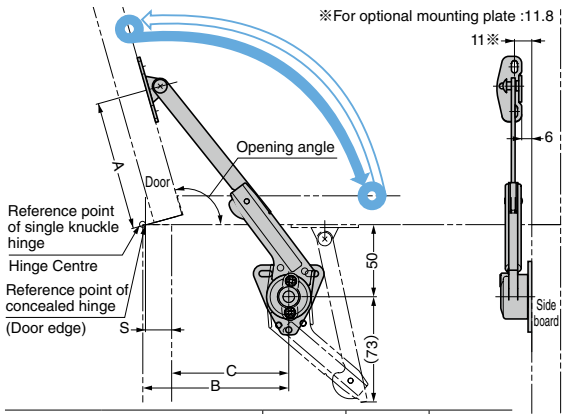
[Maximum Door Moment]

- With 1 stay
  Maximum door moment =1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×
  Distance from rotation centre to door centre of gravity (m)

[Installation] Right side installation for top-opening 105° . Left side installation is symmetrical.

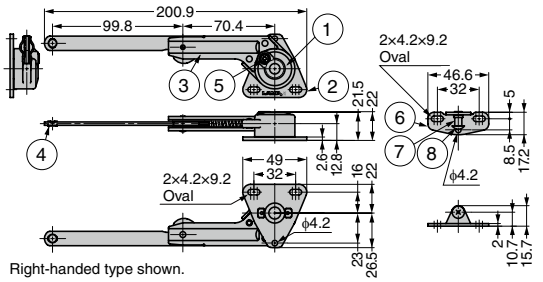
Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.

Opening direction Soft-down direction Hold position



Hinge Type		A	B	C
70° Opening	Concealed Hinge	126	–	101–S
	Single Knuckle Hinge	125	100	–
105° Opening	Concealed Hinge	103	–	78–S
	Single Knuckle Hinge	97	72	–

Installation dimensions vary depending on hinge type and opening angle.



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

- S is overlay at hinge side. For concealed hinge, use our recommended hinge 360-26-19T.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-481	NSDX-20R	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-480	NSDX-20L	Left-handed						20	80

[Mounting Plate] Sold separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip on Mounting Plate for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 3
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.325, 2 : P.293, 3 : P.369

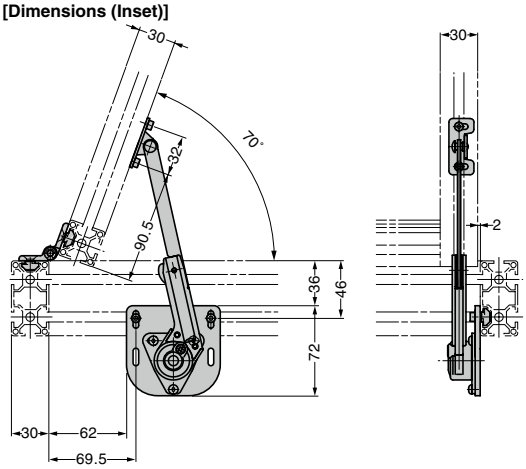
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

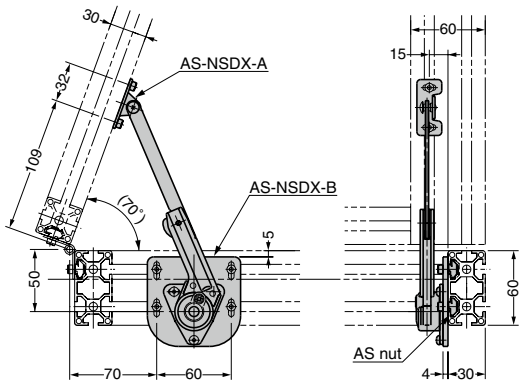
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-643	AS-NSDX-20RK-30-6	Groove Width 6 mm	NSDX-20RK : 1pc AS Nut AS-6M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-645	AS-NSDX-20LK-30-6		NSDX-20LK : 1 pc AS Nut AS-6M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-644	AS-NSDX-20RK-30-8	Groove Width 8 mm	NSDX-20RK : 1pc AS Nut AS-8M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-646	AS-NSDX-20LK-30-8		NSDX-20LK : 1pc AS Nut AS-8M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–

[Dimensions (Inset)]



[Dimensions (Overlay)]



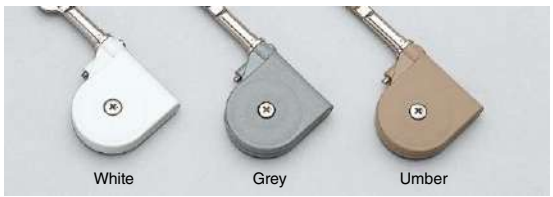
Refer to 1 : P.20

SOFT-DOWN STAY SDS-200, SDS-201, SDS-210

Lapcon L=R INSTRUCTION

Right side installation shown. (SDS-200-W)

Right side installation shown. (SDS-210-G)



Mounting plate SDS-A for SDS-210

Mounting plate SDS-B for SDS-200 and SDS-201

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Top-opening	SDS-200	With Catch	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)
	SDS-201			
	SDS-210	–		

- For top-opening doors.
- Non-handed: Can be installed either on left or right side.
- Designed to hold the door in fully opened position.
- Three types are available, depending on opening angle and type of hinge (sold separately).
  SDS-200: Opening angle 70˚ ※, piano/butt hinge
  SDS-201: Opening angle 70˚ ※, concealed hinge
  SDS-210 (wide angle opening): Opening angle 105˚ ※, piano/butt hinge or concealed hinge
  ※Fully opened angle of door at the installation position in the installation drawing next page.
- For opening angle or hinge type other than specified, please contact local representatives.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not push the door up over the max. opening angle. Also do not forcibly press the door down when closing.

[Parts Included]
- Mounting plate
- Countersunk head tapping screw 3.5×14

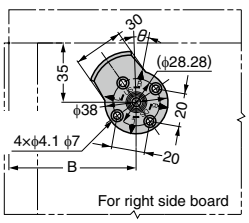
[Sold Separately]
- Concealed hinge OLYMPIA 360-26-19T, 360-26-0T

Video Link

Selection Tool
Sasuga-kun

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]
SDS-200, SDS-201

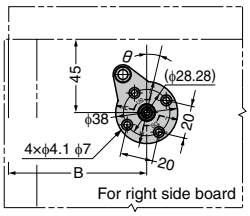


[Full Overlay]

Item Name	Hinge Type	Opening Angle	B	θ
SDS-200	Single Knuckle Hinge	70˚	75	(0˚)
SDS-201	Concealed Hinge 360-26/19T		74	
SDS-210	Single Knuckle Hinge	105˚	81	(5˚)
	Concealed Hinge 360-26/19T		87	(12˚)

For right side board, install with the "→" mark of R at US side upwards.
For left side board, install with the "→" mark of L at US side upwards.

SDS-210

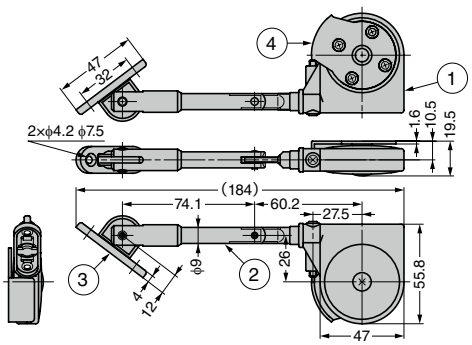


[Inset (Door Thickness 20mm)]

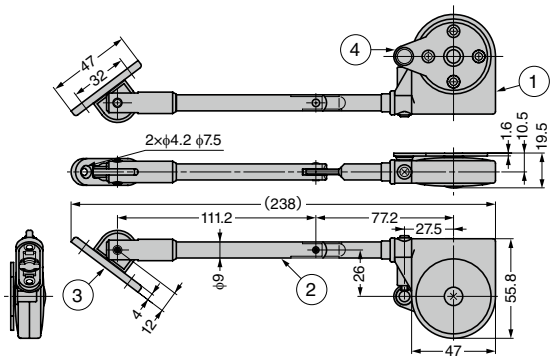
Item Name	Hinge Type	Opening Angle	B	θ
SDS-200	Single Knuckle Hinge	70˚	63.5	(10˚)
SDS-201	Concealed Hinge 360-26/0T		79	(0˚)
SDS-210	Single Knuckle Hinge	105˚	70	(15˚)

For right side board, install with the "→" mark of R at US side upwards.
For left side board, install with the "→" mark of L at US side upwards.

Refer to 1 : P.293



SDS-200, SDS-201



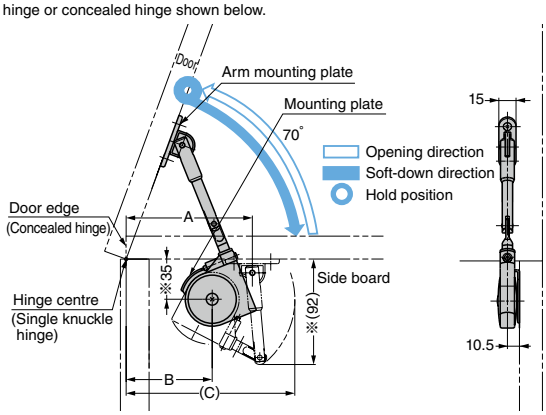
SDS-210

No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Umber
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting Plate		

[Installation SDS-200 and SDS-201]

Right side installation for top-opening 70˚ . Left side installation is symmetrical.

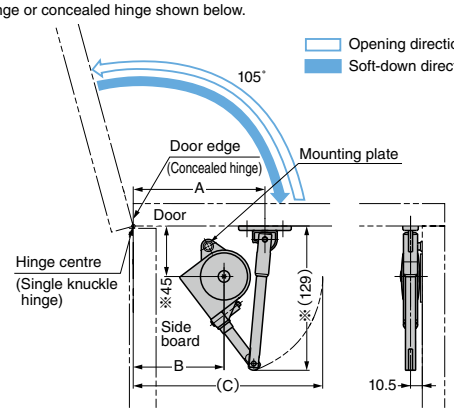
Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



[Installation SDS-210]

Right side installation for top-opening 105˚ . Left side installation is symmetrical.

Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



- Installation dimensions vary depending on hinge type. Reference point of installation dimension (A, B, C) : hinge centre for piano/butt hinge, while door edge for concealed hinge.
- Reference point of ※ marked dimensions is the back side of door.

[Full Overlay]

Item Name	Hinge Type	Opening Angle	A	B	C
SDS-200	Single knuckle hinge	70˚	110	75	147
SDS-201	Concealed Hinge 360-26/19T		109	74	146
SDS-210	Single knuckle hinge	105˚	117.5	81	169
	Concealed Hinge 360-26/19T		123.5	87	175

[Inset (Door Thickness 20mm)]

Item Name	Hinge Type	Opening Angle	A	B	C
SDS-200	Single knuckle hinge	70˚	98.5	63.5	135
SDS-201	Concealed Hinge 360-26/0T		114	79	151
SDS-210	Single knuckle hinge	105˚	108.3	70	157.3

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment (N·m/pc)	Maximum Door Moment (kgf·cm/pc)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-268	SDS-200-W	ABS/Steel	Nickel/Grey	3.43~4.9	35~50	153	20	100
G	3D	180-100-269	SDS-200-G		Nickel/Umber				20	100
G	3D	180-100-270	SDS-200-U		Nickel/White				20	100
G	3D	180-100-271	SDS-201-W		Nickel/Grey				20	100
G	3D	180-100-272	SDS-201-G		Nickel/Umber				20	100
G	3D	180-100-273	SDS-201-U		Nickel/White				20	100
G	3D	180-100-274	SDS-210-W		Nickel/Grey			159	20	100
G	3D	180-100-275	SDS-210-G		Nickel/Umber				20	100
G	3D	180-100-276	SDS-210-U		Nickel/White				20	100

[SDS Face Plate and Spacer for Glass Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.369

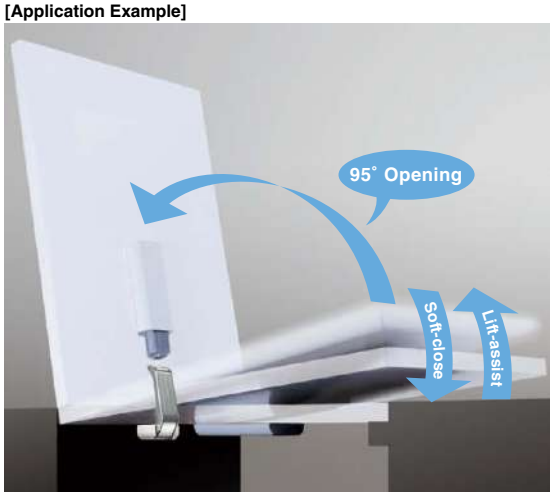
LIFT-ASSIST DAMPER LAD-ST With Stopper

Lapcon L=R INSTRUCTION

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Top-opening	LAD-ST-L	Lift-assist Soft-close	Yes	8.0~10.5 N・m/pc (81.6~107.1 kgf・cm/pc)
	LAD-ST-M			10.5~13.5 N・m/pc (107.1~137.7 kgf・cm/pc)
	LAD-ST-H			13.5~16.0 N・m/pc (137.7~163.2 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Lift-assist mechanism with light opening.
- Stops flap at 95˚ opening with stopper.
- Suitable for door thickness 15~40mm.
- Can be post-installed to existing counters without processing.
- Installation position can be easily determined with the supplied template.

[Application Example]



[Specifications]

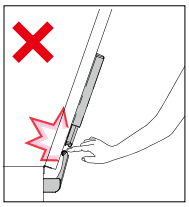
- Operating temperature: 0℃~40℃

Selection Tool

Sasuga-kun

[Remarks]

- Simply holds rather than fixes flap in opened position.
- Make sure to have sufficient hinge strength and installation strength at door hanging side.
- Do not use concealed hinge.
- Closed flap cannot be held with only this product. Please install a catch at the front end of flap.
- Do not forcibly open and close flap more than necessary.
- Ensure that the distance from mounting surface of damper unit and stopper to flap surface is 15~40mm (see drawing).
- Be careful not to pinch fingers between arm unit and damper unit.
- Do not use with spacer LAD-DP 1 (for thick door) and bracket for back mount LAD-BKT 2 (for horizontal installation).



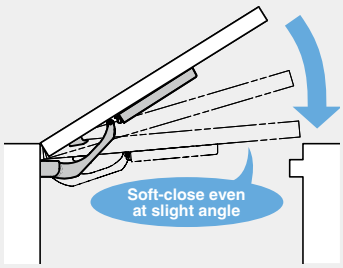
[Parts Included]

- Binding head tapping screw 4×16
- Template for positioning

[Recommended Hinge]

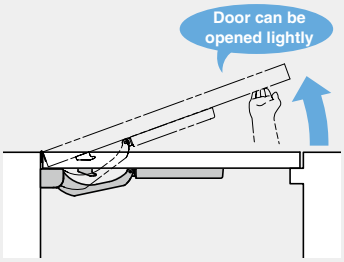
- Concealed hinge R 3

Soft-close



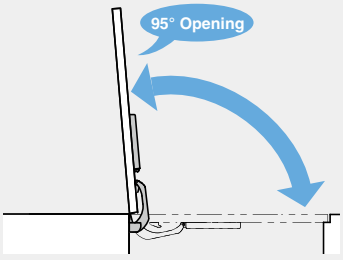
Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

Lift-assist



Lift-assist mechanism with light opening.

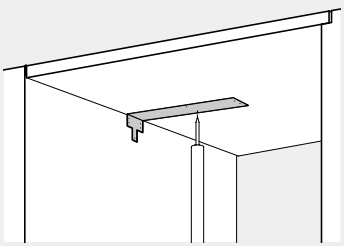
With opening stopper



Stops flap at 95˚ opening.

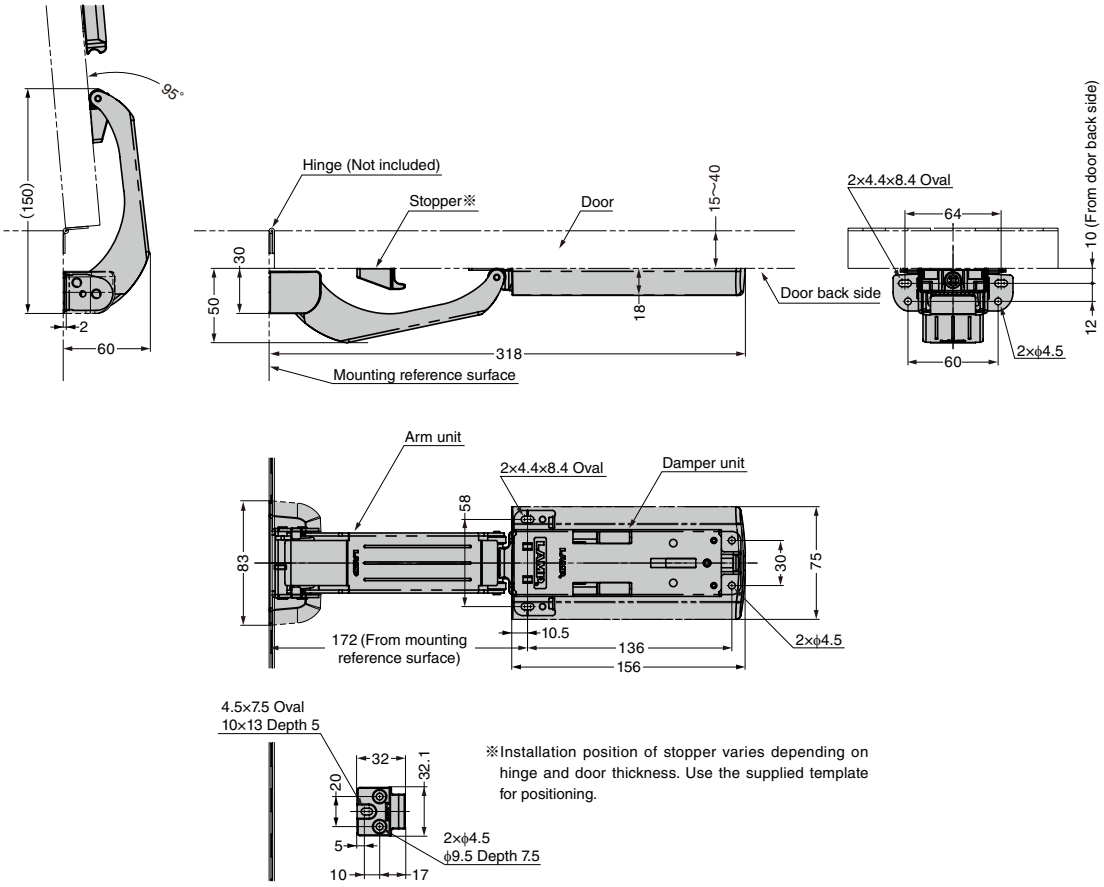
Depending on the top panel shape or handle position, the panel may close under its own weight.

Easy post-installation



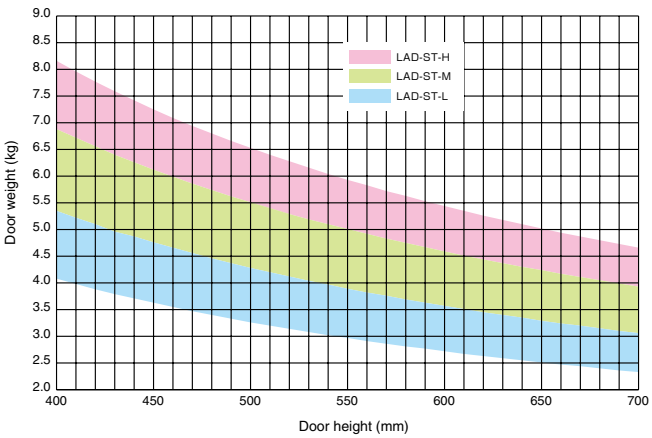
Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.

Refer to 1 2 : P.331, 3 : P.150



※Installation position of stopper varies depending on hinge and door thickness. Use the supplied template for positioning.

[Door Size Ranges] 1pc use only



Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.
Door weight includes attached decorations.

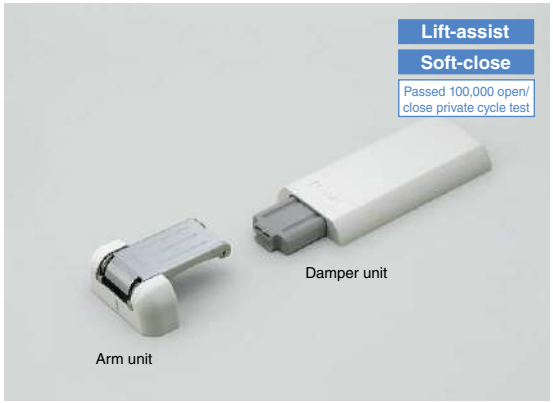
Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Recommended Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-033-213	LAD-ST-L	ABS/POM/Steel/ Zinc Alloy (ZDC)	Zinc Chromate/ Nickel Chrome/ Nickel	8.0~10.5	81.6~107.1	15~40	750	1	10
G	3D	170-033-214	LAD-ST-M			10.5~13.5	107.1~137.7			1	10
G	3D	170-033-215	LAD-ST-H			13.5~16.0	137.7~163.2			1	10

LIFT ASSIST STAYS
SOFT CLOSING STAYS
TORQUE STAYS
HEAVY DUTY LOCKING STAYS
FOOT STAYS
LID STAYS
OTHER STAYS
TOP-OPENING
DOWNWARD-OPENING
UPWARD-OPENING
BOTTOM-OPENING
SWING DOOR
LIFT-UP
LIFT-DOWN
UP & OVER
BI-FOLDING
OVER THE TOP

LIFT-ASSIST DAMPER LAD

Lapcon L=R INSTRUCTION



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Top-opening	LAD-L	Lift-assist Soft-close	Yes	8.0~10.5 N・m/pc (81.6~107.1 kgf・cm/pc)
	LAD-M			10.5~13.5 N・m/pc (107.1~137.7 kgf・cm/pc)
	LAD-H			13.5~16.0 N・m/pc (137.7~163.2 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Lift-assist mechanism with light opening.
- Can be installed to existing counters without additional processing.
- Installation position can be easily determined with the supplied template.
- Slim arm unit does not disturb the doorway. Projection is only 35mm when opened.
- 2 pairs use possible. Torque becomes double. 3 pairs or more not allowed.

[Application Example]

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Use with single knuckle hinges or concealed hinges (sold separately) .
- Do not use with slide hinges. Otherwise, hinges may deform and flap may not close.
- No functions to hold flap in opened position and stop in opening direction. Install a safety device separately.
- Please prepare separate holder to support the flap in closed position. (see below※).
- Do not forcibly open and close flap more than necessary.
- Since load is applied to flap, side board and hinge, ensure that the frame structure has sufficient strength.
- Be careful not to pinch fingers between arm unit and damper unit.

Video Link

Selection Tool
Sasuga-kun

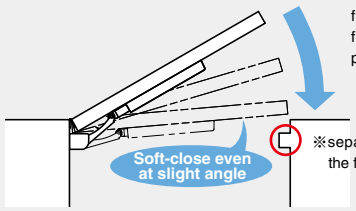
[Parts Included]

- Binding head tapping screw 4×16
- Template for positioning

[Recommended Hinge]

- Concealed hinge R 2

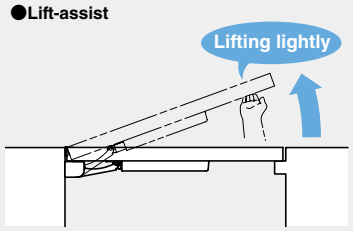
●Soft-Close



Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

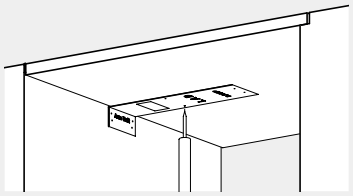
※separate holder to support the flap required.

●Lift-assist

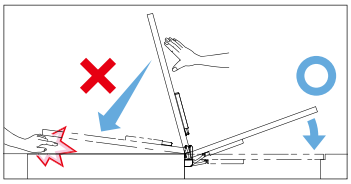


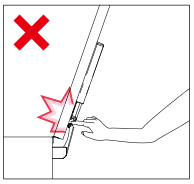
Top board can be lifted lightly.

●Easy post-installation



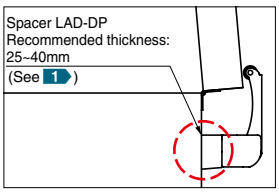
Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.

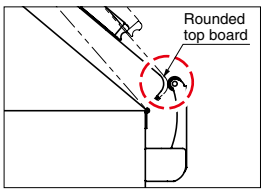




[For Door Thickness More Than 25 mm]

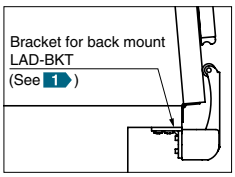
When door thickness exceeds 25mm, you may be able to use this product by using with spacer (sold separately) 1 or rounding the flap (figure below).



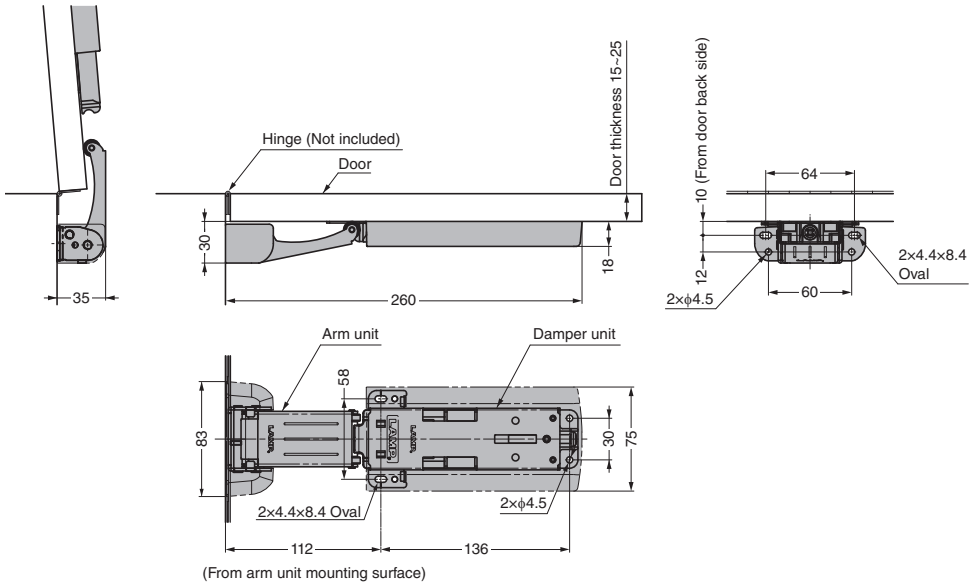


[For Installing on Horizontal Surface]

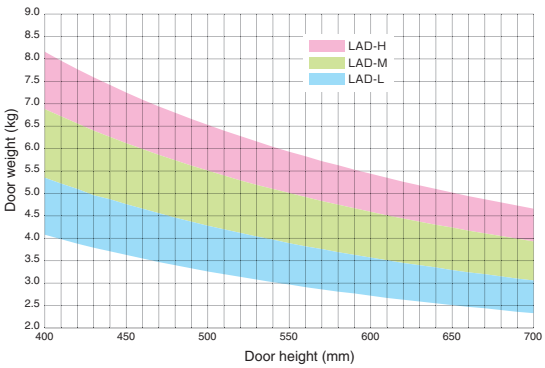
When installing on a horizontal surface, please use bracket for back mount (sold separately) 1 .



Refer to 1 : P.331, 2 : P.150



[Door Size Ranges] 1pc use (※2pcs use possible. Torque moment doubles)



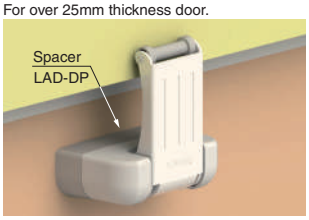
Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.

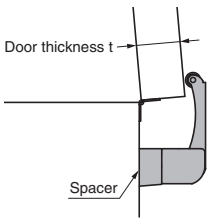
Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

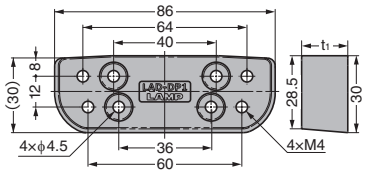
RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-804	LAD-L	ABS/POM/Steel	Zinc Chromate/ Nickel Chrome	8.0~10.5	81.6~107.1	15~25	545	1	20
G	3D	170-025-805	LAD-M			10.5~13.5	107.1~137.7		568	1	20
G	3D	170-025-806	LAD-H			13.5~16.0	137.7~163.2		571	1	20

SPACER LAD-DP

For over 25mm thickness door.

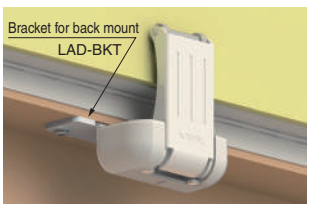




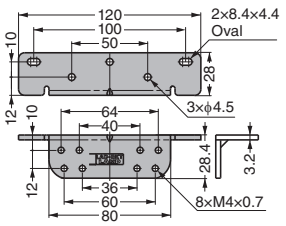


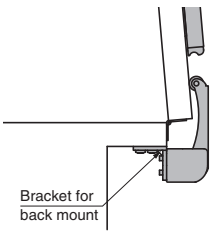
RoHS	CAD	Item Code	Item Name	t1	Door Thickness (t)	Material	Colour	Weight (g)	Box (pcs)
G	3D	170-028-234	LAD-DP1	18	25~35	POM	Grey	58	50
G	3D	170-028-235	LAD-DP2	25	30~40			67	50

BRACKET FOR BACK MOUNT LAD-BKT



●Allows the LAD to be mounted on a horizontal surface. Can be used together with the LAD-DP.





RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-028-236	LAD-BKT	Steel (SPCC)	Nickel	129	20	100

MOUNTING PLATE FOR LAD LAD-SPT

INSTRUCTION

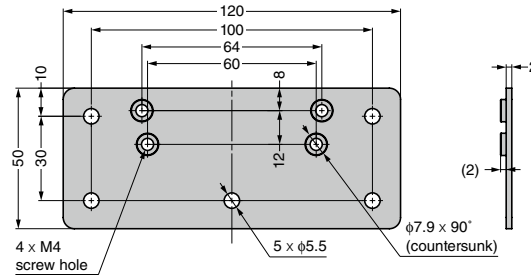
●A plate to reinforce the surface where the LAD Lift-Assist Damper or LAD-ST Arm Unit is mounted.

[Remarks]
- ●Use the single-side type when the lateral plate thickness is 20 mm or greater, and the double-sided type if the thickness is 15 - 19 mm.
- ●Two plates are required when using the double-sided type.
- ●Cannot be used with the LAD-DP Spacer for thick plates or the LAD-BKT Bracket for Back Mount.

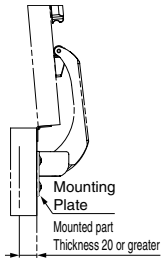
[Parts Included]
- ●Size M4 x 8 binding screws

[Recommended Screw]
- ●Single-side type: Size 5 x 20 or larger cross-recessed truss tapping screws
- ●Double-sided type: Size M5 cross-recessed truss screws and flat washers, spring washers and nuts for M5 screws

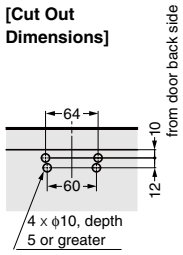
[Application Example]



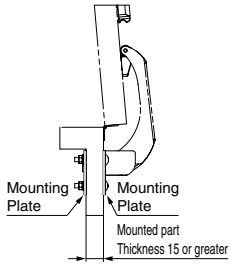
[Single-side Type]



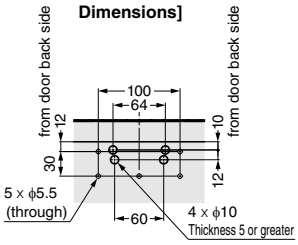
[Cut Out Dimensions]



[Double-sided Type]



[Cut Out Dimensions]



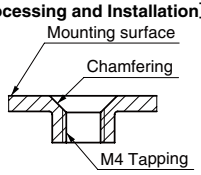
RoHS	CAD	Item Code	Item Name	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-754	LAD-SPT	Stainless Steel	130	10	50

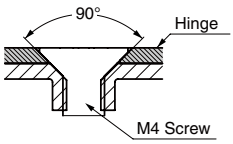
STAINLESS STEEL PIANO HINGE LSN-C

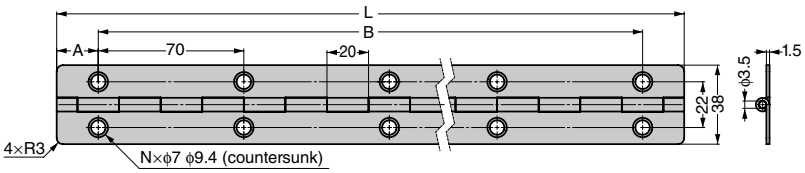
SUS

[Remarks]
- ●The load capacity is the value when using one hinge. For calculation conditions, please refer to the "Concept of Load-bearing" 1.
- ●Please note this product is designed for use on wood. Hole positioning on wood should be done by aligning the actual hinge. This product is not suitable for sheet metal or installations with hole pitch limitations.
- ●When installing to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side. In this way, the screw head will not protrude when the hinge is fixed.

[Processing and Installation]







Selection Tool

Hinge Selection

RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	B	Number of Holes (N)	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-045-408	LSN15-38-450C	Stainless Steel (SUS304)	Polished	450	15	420	14	392	40	270	10	40
G	3D	170-045-409	LSN15-38-600C			600	20	560	18	519	53	360	10	40

Refer to 1 : P.43

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

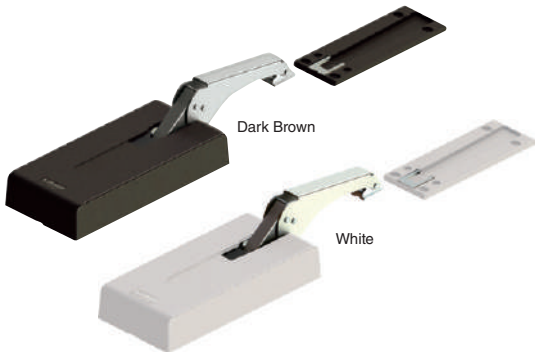
- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

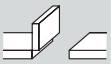
SUGATSUNE **Search**

LIFT-ASSIST DAMPER (FOR HEAVY DUTY) LADH

Lapcon INSTRUCTION

Lift-assist
Soft-close
Passed 100,000 open/close private cycle test



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
	LADH-35	Lift-assist	Yes	25~35 N・m/pc (255~357 kgf・cm/pc)
	LADH-50	Soft-close		35~50 N・m/pc (357~510 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Lift-assist mechanism with light opening.
- Stops flap at 95° opening with stopper.
- Installation position can be easily determined with the supplied template.
- Can be post-installed to existing counters without processing.
- Can be used in pair. Max. moment of the lid will be twice as 1pc use.

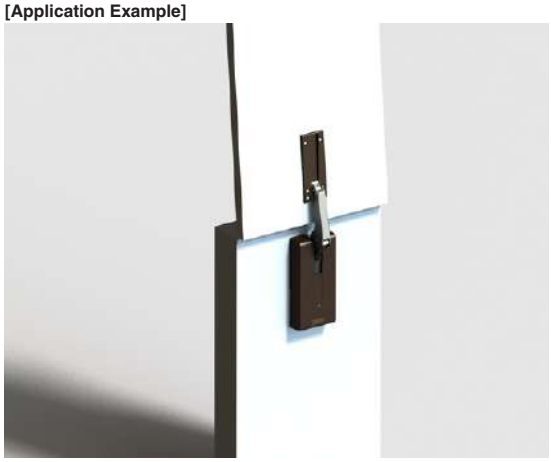
[Remarks]
- Do not use more than 2 pcs per flap.
- Simply holds rather than fixes flap in opened position.
- Make sure to have sufficient hinge strength and installation strength at damper mounting surface and door hanging side.
- Do not use concealed hinge.
- Closed flap cannot be held with only this product. Please install a catch at the front end of flap.

[Remarks When Using 2 pcs]
- Use the same items.
- Make sure the two stoppers contact the lid at the same time when it fully opens.
- Make sure the load is evenly distributed to the two items.
- Make sure the damper adjustment of the two items is the same.

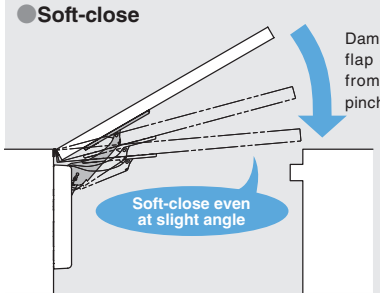
[Parts Included]
- Binding head tapping screw 5.1×25
- Paper template

Video Link | Video Link | Selection Tool
Sasuga-kun

[Application Example]

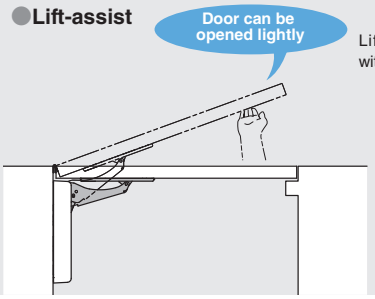


Soft-close



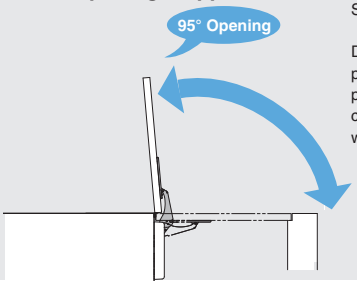
Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

Lift-assist



Lift-assist mechanism with light opening.

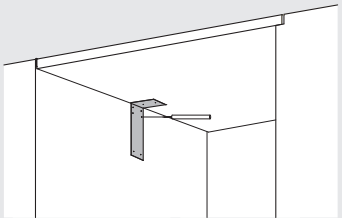
With opening stopper



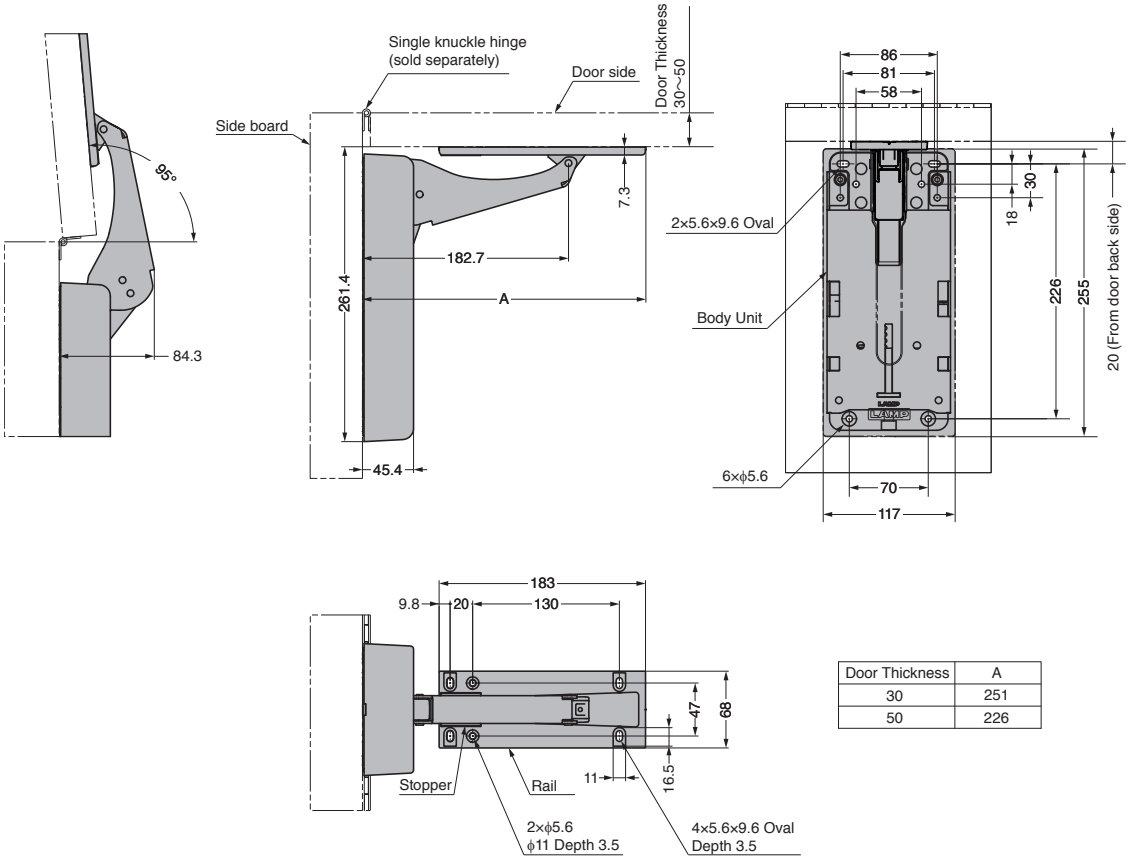
Stops flap at 95° opening.

Depending on the top panel shape or handle position, the panel may close under its own weight.

Easy post-installation

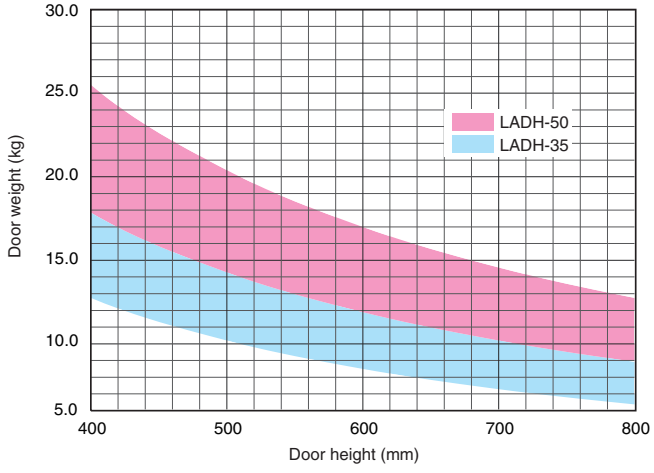


Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.



Door Thickness	A
30	251
50	226

[Door Size Ranges]



Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.
Door weight includes attached decorations.

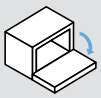
Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

When using 2 pcs per flap, the available specs will be twice.

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Recommended Thickness	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	170-034-868	LADH-35	Steel (SPCC)/ Polyacetal (POM)/ABS	Nickel Plating/Nickel Chrome/Dark Brown	25~35	254.9~356.9	30~50	2	1	4
G	3D	170-034-869	LADH-50			35~50	356.9~509.9			1	4
G	3D	170-052-559	LADH-35WT			25~35	254.9~356.9			1	4
G	3D	170-052-560	LADH-50WT			35~50	356.9~509.9			1	4

SELF-CLOSE STAY HDS-10S For Use in Pairs

Lapcon INSTRUCTION

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Downward-opening	Self-close With Catch For Use in Pairs	–	K	5.9~9.3 N·m/2 pcs (60~95 kgf·cm/2 pcs)
			M	9.3~12.7 N·m/2 pcs (95~130 kgf·cm/2 pcs)
			H	10.8~15.7 N·m/2 pcs (110~160 kgf·cm/2 pcs)
			S	13.7~17.6 N·m/2 pcs (140~180 kgf·cm/2 pcs)

- For downward opening flaps.
- Self-closes after a small impulse.
- Holds door in fully closed or fully opened position.
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 is suitable.

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 1.
- Used in pairs.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not roughly open and close the door.

[Parts Included]

- Mounting plate
- Binding head tapping screw 3.5×15

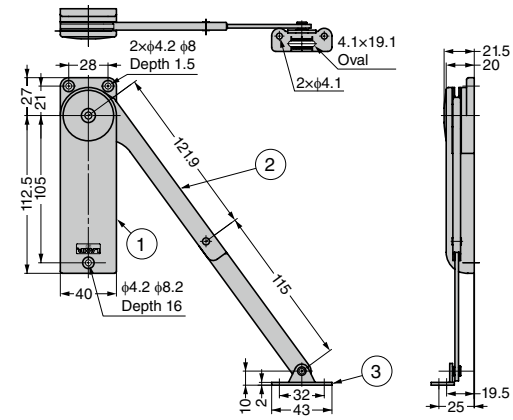
Video Link

Video Link

[Applicable Range]

- Choose from 4 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

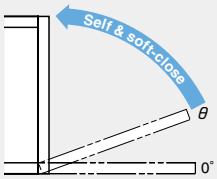
Maximum door moment N・m	Model	Qty
5.9~ 9.3	K	2 pcs
9.3~12.7	M	
10.8~15.7	H	
13.7~17.6	S	



Right-handed type shown.

●Self & Soft-close

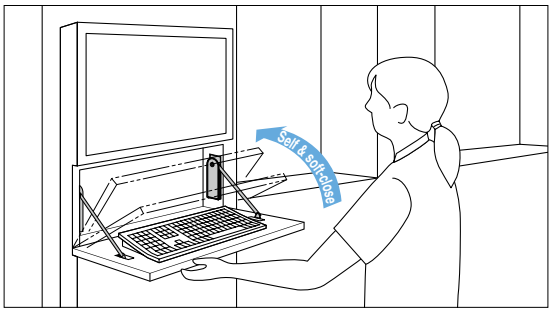
Self-closes after a small impulse.



Model	Self & Soft-close Starting Angle θ
K	5°~35°
M	5°~20°
H	
S	5°~15°

No.	Part Name	Material	Finish
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

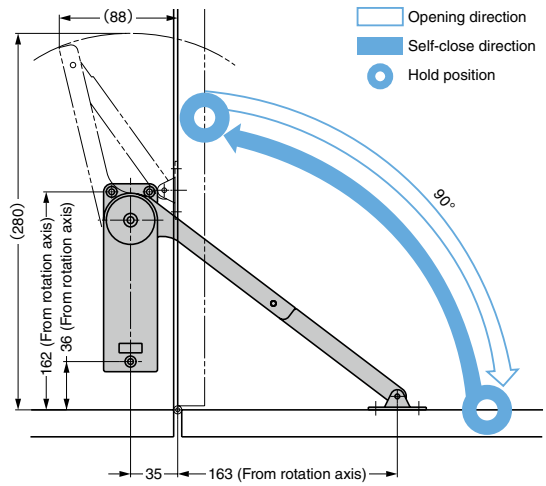
[Application Example]



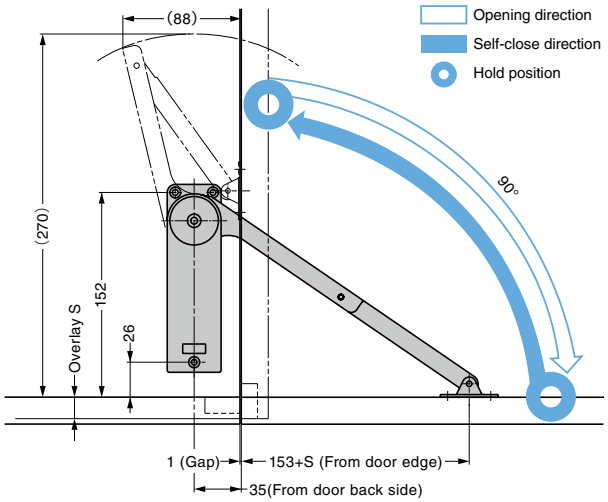
Refer to 1 : P.293, 2 : P.269

[Installation] Right side installation for downward-opening 90˚. Left side installation is symmetrical.

With single knuckle hinge



With drop hinge

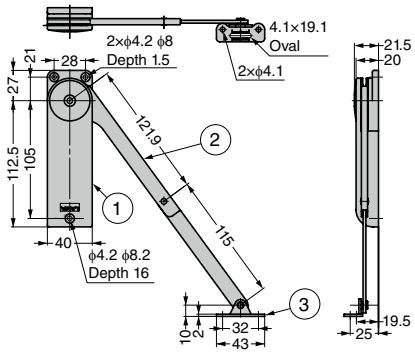


RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G	3D	180-025-872	HDS-10S-KL-BL	Left-handed	ABS/Steel	Nickel/Black	K	5.9~9.3	60~95	292	40
G	3D	180-026-723	HDS-10S-KL-WT			Nickel/White				292	40
G	3D	180-025-873	HDS-10S-KR-BL	Right-handed		Nickel/Black				292	40
G	3D	180-026-724	HDS-10S-KR-WT			Nickel/White				292	40
G	3D	180-025-874	HDS-10S-ML-BL	Left-handed		Nickel/Black	M	9.3~12.7	95~130	301	40
G	3D	180-026-725	HDS-10S-ML-WT			Nickel/White				301	40
G	3D	180-025-875	HDS-10S-MR-BL	Right-handed		Nickel/Black				301	40
G	3D	180-026-726	HDS-10S-MR-WT			Nickel/White				301	40
G	3D	180-025-876	HDS-10S-HL-BL	Left-handed		Nickel/Black	H	10.8~15.7	110~160	309	40
G	3D	180-026-727	HDS-10S-HL-WT			Nickel/White				309	40
G	3D	180-025-877	HDS-10S-HR-BL	Right-handed		Nickel/Black				309	40
G	3D	180-026-728	HDS-10S-HR-WT			Nickel/White				309	40
G	3D	180-025-902	HDS-10S-SL-BL	Left-handed		Nickel/Black	S	13.7~17.6	140~180	312	40
G	3D	180-026-729	HDS-10S-SL-WT			Nickel/White				312	40
G	3D	180-025-903	HDS-10S-SR-BL	Right-handed		Nickel/Black				312	40
G	3D	180-026-730	HDS-10S-SR-WT			Nickel/White				312	40

HEAVY DUTY SOFT-DOWN STAY HDS-10 For Use in Pairs

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
Downward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)

- For downward-opening doors.
- Designed to hold the door in fully closed position.
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 1 is suitable.
- AS parts set 2 for installing to aluminium frame also available.



No.	Part Name	Material	Finish
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 3.
- Handed: Specific left and right-handed.
- Used in pairs.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not roughly open and close the door.

[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

[Applicable Range]
- Choose from 3 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	

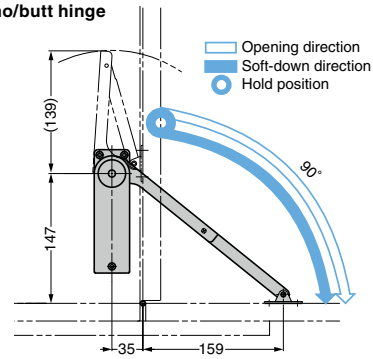
Video Link

Selection Tool

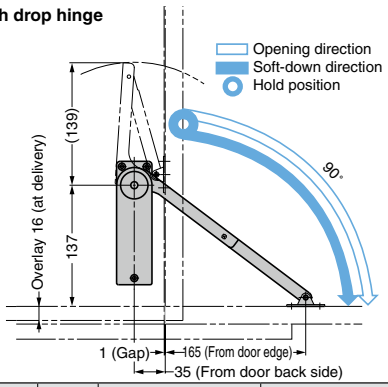
Sasuga-kun

[Installation] Right side installation for downward-opening 90˚. Left side installation is symmetrical.

With piano/butt hinge



With drop hinge

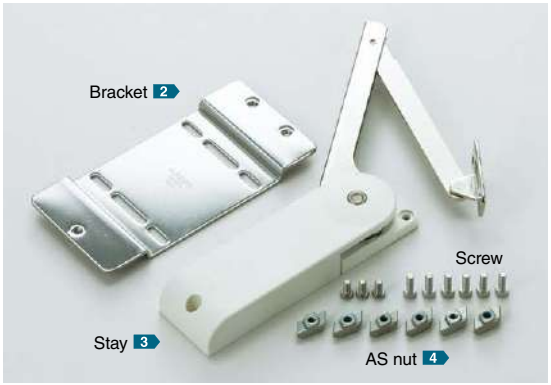


RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G	3D	180-104-067	HDS-10KL-BL	Left-handed	ABS/Steel	Nickel/Black	K	13.7~19.5	140~199	292	40
G	3D	180-104-066	HDS-10KR-BL	Right-handed						292	40
G	3D	180-104-073	HDS-10KL-WT	Left-handed		Nickel/White				292	40
G	3D	180-104-072	HDS-10KR-WT	Right-handed						292	40
G	3D	180-104-069	HDS-10ML-BL	Left-handed		Nickel/Black	M	19.6~24.4	200~249	302	40
G	3D	180-104-068	HDS-10MR-BL	Right-handed						302	40
G	3D	180-104-075	HDS-10ML-WT	Left-handed		Nickel/White				302	40
G	3D	180-104-074	HDS-10MR-WT	Right-handed						302	40
G	3D	180-104-071	HDS-10HL-BL	Left-handed		Nickel/Black	H	24.5~29.4	250~300	308	40
G	3D	180-104-070	HDS-10HR-BL	Right-handed						308	40
G	3D	180-104-077	HDS-10HL-WT	Left-handed		Nickel/White				308	40
G	3D	180-104-076	HDS-10HR-WT	Right-handed						308	40

Refer to 1 : P.269, 2 : P.339, 3 : P.293

AS Parts Set for Installing to Aluminium Frame

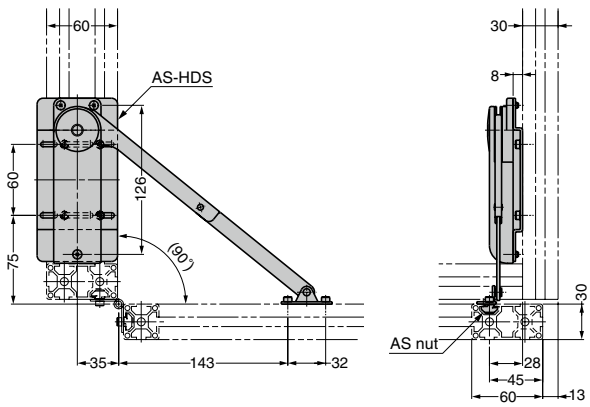
Please refer to the series introduction page 1 for details about AS series.



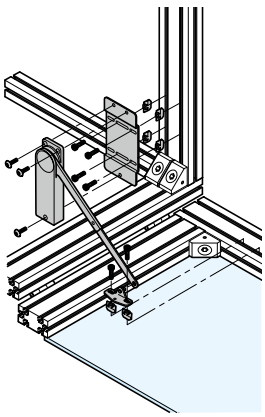
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-685	AS-HDS-10KR-BL-30-6	Groove Width 6 mm	HDS-10KR-BL : 1 pc		–
G	3D	180-013-686	AS-HDS-10KL-BL-30-6		HDS-10KL-BL : 1 pc		–
G	3D	180-013-687	AS-HDS-10KR-WT-30-6		HDS-10KR-WT : 1 pc		–
G	3D	180-013-688	AS-HDS-10KL-WT-30-6		HDS-10KL-WT : 1 pc		–
G	3D	180-013-689	AS-HDS-10MR-BL-30-6		HDS-10MR-BL : 1 pc	AS Nut AS-6M4 : 6 pcs	–
G	3D	180-013-690	AS-HDS-10ML-BL-30-6		HDS-10ML-BL : 1 pc	Pan Head Screw M4×8 : 3 pcs	–
G	3D	180-013-691	AS-HDS-10MR-WT-30-6		HDS-10MR-WT : 1 pc	Bracket AS-HDS : 1 pc	–
G	3D	180-013-692	AS-HDS-10ML-WT-30-6		HDS-10ML-WT : 1 pc	Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-693	AS-HDS-10HR-BL-30-6		HDS-10HR-BL : 1 pc		–
G	3D	180-013-694	AS-HDS-10HL-BL-30-6		HDS-10HL-BL : 1 pc		–
G	3D	180-013-695	AS-HDS-10HR-WT-30-6		HDS-10HR-WT : 1 pc		–
G	3D	180-013-696	AS-HDS-10HL-WT-30-6		HDS-10HL-WT : 1 pc		–
G	3D	180-013-697	AS-HDS-10KR-BL-30-8	Groove Width 8 mm	HDS-10KR-BL : 1 pc		–
G	3D	180-013-698	AS-HDS-10KL-BL-30-8		HDS-10KL-BL : 1 pc		–
G	3D	180-013-699	AS-HDS-10KR-WT-30-8		HDS-10KR-WT : 1 pc		–
G	3D	180-013-700	AS-HDS-10KL-WT-30-8		HDS-10KL-WT : 1 pc		–
G	3D	180-013-701	AS-HDS-10MR-BL-30-8		HDS-10MR-BL : 1 pc	AS Nut AS-8M4 : 6 pcs	–
G	3D	180-013-702	AS-HDS-10ML-BL-30-8		HDS-10ML-BL : 1 pc	Pan Head Screw M4×8 : 3 pcs	–
G	3D	180-013-703	AS-HDS-10MR-WT-30-8		HDS-10MR-WT : 1 pc	Bracket AS-HDS : 1 pc	–
G	3D	180-013-704	AS-HDS-10ML-WT-30-8		HDS-10ML-WT : 1 pc	Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-705	AS-HDS-10HR-BL-30-8		HDS-10HR-BL : 1 pc		–
G	3D	180-013-706	AS-HDS-10HL-BL-30-8		HDS-10HL-BL : 1 pc		–
G	3D	180-013-707	AS-HDS-10HR-WT-30-8		HDS-10HR-WT : 1 pc		–
G	3D	180-013-708	AS-HDS-10HL-WT-30-8		HDS-10HL-WT : 1 pc		–

[Dimensions]

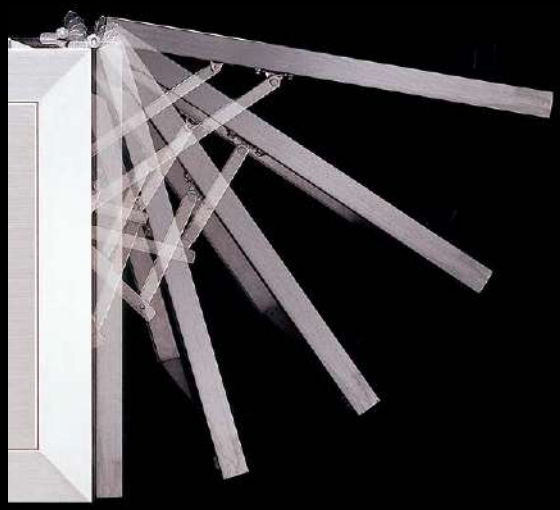


[How to Install]



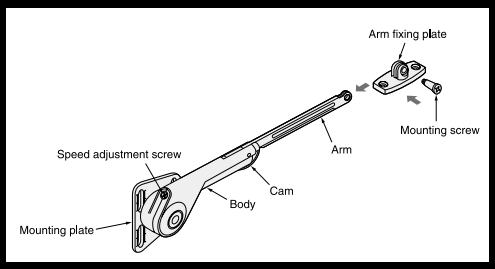
Refer to 1 : P.20, 2 : P.367, 3 : P.338, 4 : P.526

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

[Remarks]
Designed to operate at room temperature 0°~40°C.



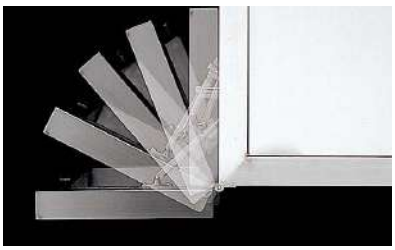
APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

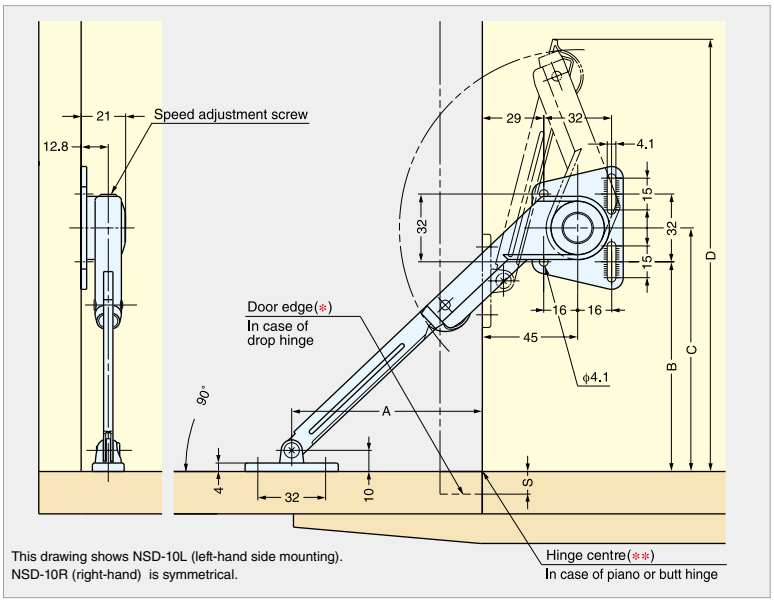
ADJUSTABLE SOFT-DOWN STAY NSD-10

Lapcon INSTRUCTION

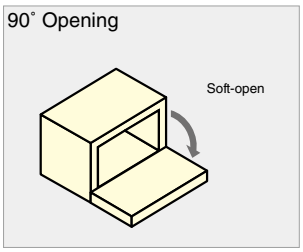
- For downward-opening flap door with piano, butt or drop Hinges.
- NSD-10 is designed to hold door in closed position.
- Torque Calculation :
  Torque = Door Height x 1/2 x Door Weight.
  Per Piece : 20~70 kg·cm.
  Per Pair : 40~140 kg·cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel





This drawing shows NSD-10L (left-hand side mounting).
NSD-10R (right-hand) is symmetrical.



The distance for A, B, C is measured from "door edge (*)" and "top surface of bottom board" when drop hinges are used, and from "hinge centre (**)" and "top surface of bottom board" when piano or butt hinges are used.

Hinge Type	A	B	C	D
Drop Hinge	97	106-S	122-S	211-S
Piano / Butt Hinge	90	99	115	204

Note: "S" dimension is the overlay distance for drop hinge(s).

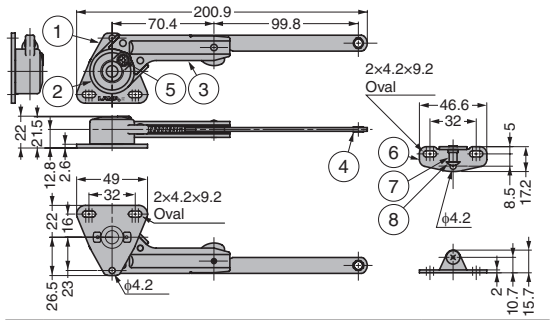
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-109-376	NSD-10R	210	20	80
–	3D	180-109-381	NSD-10L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-10 (R/L)

Lapcon AS INSTRUCTION

Opening Direction	Description	Non-handed	Maximum Door Moment
Downward-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

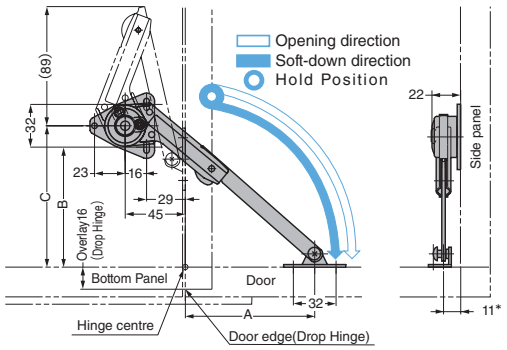
- For downward-opening doors.
- Designed to hold the door in fully closed position.
- Door opening speed can be adjusted with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss head screw (M4×5)		

[Installation] Right side installation for downward-opening 90˚. Left side installation is symmetrical.

Comes down slowly and softly in opening direction.
Installation with piano/butt hinge or drop hinge shown below.



*11.8 for NSDX-CZ, NSDX-AZ and NSDX-GZ

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door opening speed varies depending on product and conditions.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Sold Separately]
- Mounting plate 3
- SDS face plate and spacer for glass door 4

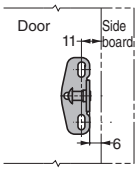
Video Link

Selection Tool
Sasuga-kun

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]

D-view (refer to "Installation")



Hinge Type	A	B	C
Drop Hinge (SDH-001)	97※2	91	107
Drop Hinge (SDH-P)	98※3	88	104
Piano/Butt Hinge	90	99	115

Installation dimensions vary depending on hinge type.

- ※1: 11.8 for optional mounting plate.
- ※2: In case of overlay 16 mm (factory preset). For drop hinge, use our 3-way adjustable type SDH-001 5.
- ※3: In case of overlay 19mm (factory preset). Use SDH-P 6.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for drop hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-008	NSDX-10R	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-009	NSDX-10L	Left-handed						20	80

[Mounting Plate] Sold Separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip on Mounting Plate for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 4
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.343, 2 : P.293, 3 4 : P.369, 5 : P.269, 6 : P.268

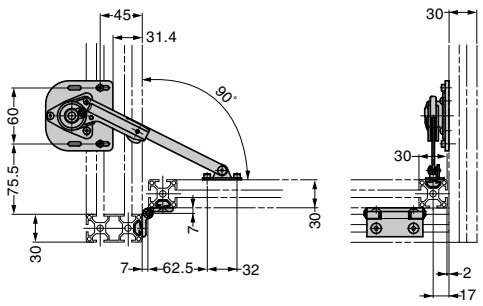
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

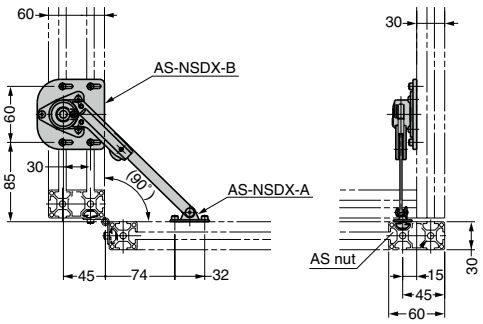
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-639	AS-NSDX-10RK-30-6	Groove Width 6 mm	NSDX-10RK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-641	AS-NSDX-10LK-30-6		NSDX-10LK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-640	AS-NSDX-10RK-30-8	Groove Width 8 mm	NSDX-10RK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-642	AS-NSDX-10LK-30-8		NSDX-10LK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–

[Dimensions (Inset)]



[Dimensions (Overlay)]



Refer to 1 : P.20, 2 : P.342, 3 : P.368, 4 : P.526

SOFT-DOWN STAY SDS-100, SDS-C100

Lapcon L=R INSTRUCTION

Right side installation shown. (SDS-C100-G)

Mounting Plate SDS-A

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Downward-opening	SDS-100	–	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)
	SDS-C100	With Catch		

- For downward-opening doors.
- Non-handed: Can be installed either on left or right side.
- SDS-C100 (with catch) is designed to hold the door in fully closed position. Catch is necessary when using SDS-100 (without catch).
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 1 is suitable.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

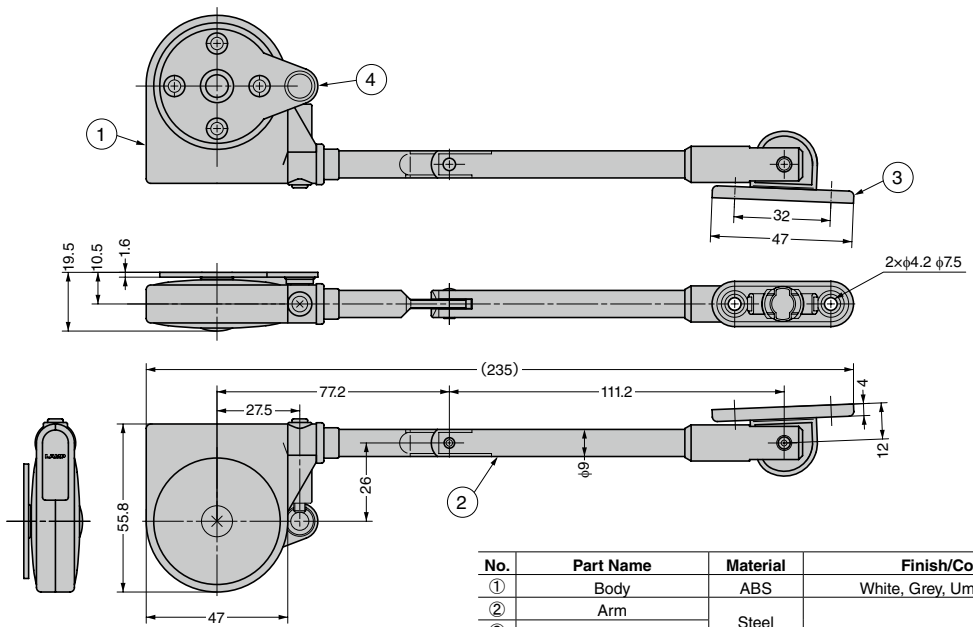
[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 3

Video Link

Selection Tool
Sasuga-kun

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

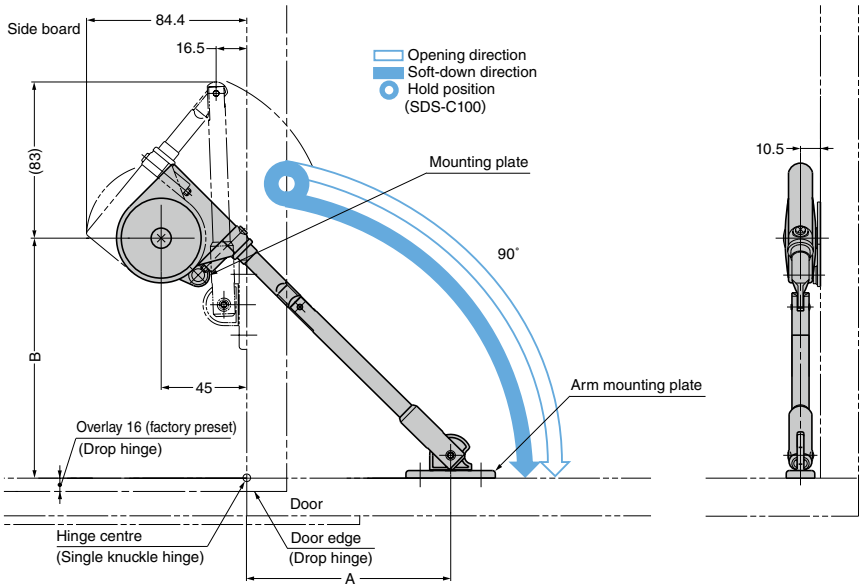


No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Umber, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting Plate		

Refer to 1 : P.269, 2 : P.293, 3 : P.369

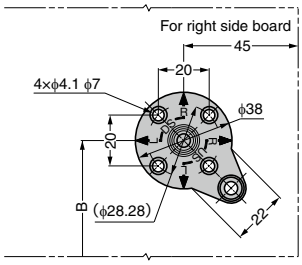
[Installation] Right side installation for downward-opening 90˚. Left side installation is symmetrical.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



Installation dimensions vary depending on hinge type. Reference point of installation dimension: hinge centre for piano/butt hinge or two-piece piano hinge, while door edge for drop hinge 1.

[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

Hinge Type	Arm Mounting Plate Position	Mounting Plate Position
	A	B
Single Knuckle Hinge	100	135
Drop Hinge (SDH-001)	107※1	126
Drop Hinge (SDH-P)	108.5※2	124.5

※1 In case of overlay 16mm (factory preset)
※2 In case of overlay 19mm (factory preset)

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-261	SDS-100W	Without Catch	ABS/Steel	Nickel/ White	3.43~4.9	35~50	167	20	100
G	3D	180-014-892	SDS-C100-W	With Catch						20	100
G	3D	180-100-262	SDS-100G	Without Catch		Nickel/ Grey				20	100
G	3D	180-100-266	SDS-C100-G	With Catch						20	100
G	3D	180-100-263	SDS-100U	Without Catch		Nickel/ Umber				20	100
G	3D	180-100-267	SDS-C100-U	With Catch						20	100
G	3D	180-027-278	SDS-100-B	Without Catch		Nickel/ Black				20	100
G	3D	180-014-891	SDS-C100-B	With Catch						20	100

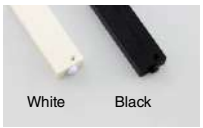
[SDS Face Plate and Spacer for Glass Door] Sold Separately 2

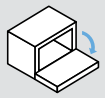
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.268, P.269, 2 : P.369

COMPACT SOFT-DOWN STAY CSD-10-TV

Lapcon L=R INSTRUCTION



Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Downward-opening	–	Yes	L	1.0 ~2.0 N・m/pc (10.2~20.4 kgf・cm/pc)
			M	2.0~3.0 N・m/pc (20.4~30.6 kgf・cm/pc)
			H	3.0~4.0 N・m/pc (30.6~40.8 kgf・cm/pc)

- For downward-opening doors.
- Easy-installed just by aligning the main body to the inside cabinet corner and then fixing with screws.
- Mounting plate can be positioned easily with a template.
- Non-handed.
- Installed on the bottom board of cabinet for maximum space inside the cabinet.
- Cover for mounting plate may be of the same colour as the main body.

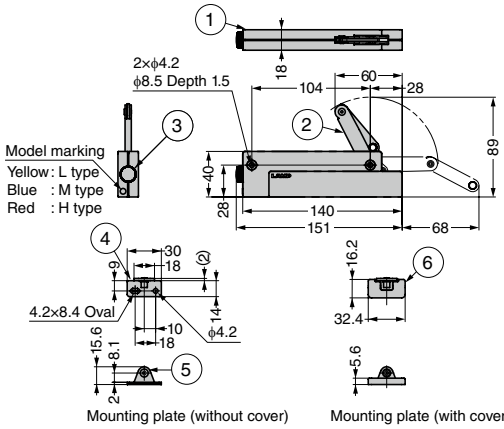
[Applicable Range]

- Choose from 3 types according to maximum door moment.

Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
1.0 ~ 2.0	L	1 pc
2.0 ~ 3.0	M	
3.0 ~ 4.0	H	

- With 2 stays, the maximum door moment will be doubled.

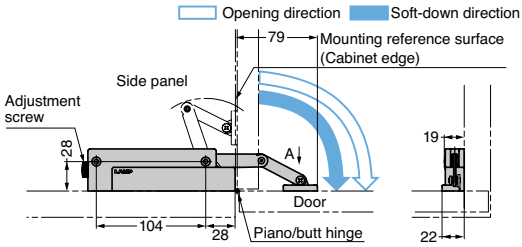


Mounting plate (without cover) Mounting plate (with cover)

No.	Part Name	Material	Finish/Colour
①	Body	PC/ABS	White, Black
②	Arm	Steel (SPCC)	Nickel
③	Adjustment Screw	Steel + Resin	White, Black
④	Mounting Plate	Steel (SPCC)	Nickel
⑤	Shaft	Stainless Steel	Plain
⑥	Cover	ABS	White, Black

[Installation] Right side installation for downward-opening 90˚. Left side installation is symmetrical.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- CSD-10-TV does not have catch feature. Please install a catch separately.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not use concealed hinge.

Selection Tool

Sasuga-kun

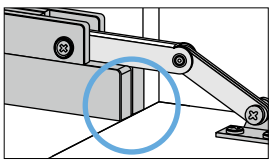
[Parts Included]

- Mounting plate
- Cover for mounting plate
- Binding head screw M4×4 (for connecting main body and mounting plate)
- Binding head tapping screw 3.5×30 (for main body)
- Binding head tapping screw 3.5×15 (for mounting plate)

[Sold Separately]

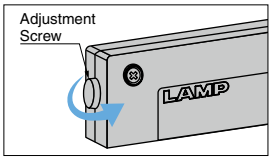
- Butt hinge
- Drop hinge SDH-P, SDH-001
- Drop hinge for glass door SDH-G
- Face plate for glass door SDH-FP, SDS-50G
- Mounting plate for glass door NSDX-GZ

[Easy to Position]



- Installation position is determined simply by pressing the main body against bottom and aligning to cabinet edge.

[Speed adjustment]



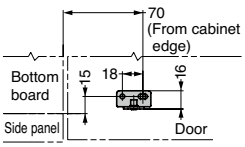
- Opening speed may be slightly changed.

[Installation Position of Mounting Plate (Included)]

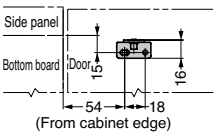
A-view (refer to "Installation")

Can easily position with the supplied template.

For left side panel



For right side panel



RoHS	CAD	Item Code	Item Name	Colour	Model	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-033-207	CSD-10-TV-L-WT	White	L	1.0~2.0	10.2~20.4	130	10	100
G	3D	180-033-208	CSD-10-TV-L-BL	Black					10	100
G	3D	180-033-209	CSD-10-TV-M-WT	White	M	2.0~3.0	20.4~30.6		10	100
G	3D	180-033-210	CSD-10-TV-M-BL	Black					10	100
G	3D	180-033-211	CSD-10-TV-H-WT	White	H	3.0~4.0	30.6~40.8		10	100
G	3D	180-033-212	CSD-10-TV-H-BL	Black					10	100

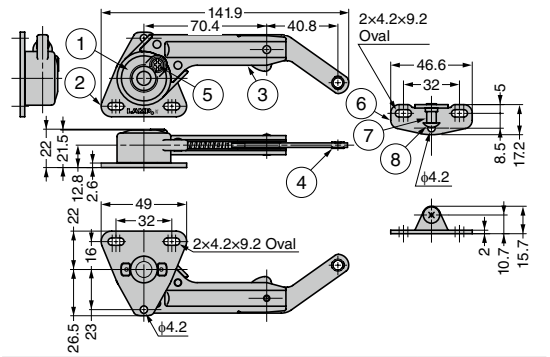
SHORT ARM SOFT-DOWN STAY NSDX-10 (R/L) K-TV

Lapcon INSTRUCTION

Right side installation shown. (NSDX-10RK-TV)

Opening Direction	Description	Non-handed	Maximum Door Moment
Downward-opening	With Catch	–	0.98~1.96 N・m/pc (10~20 kgf・cm/pc)

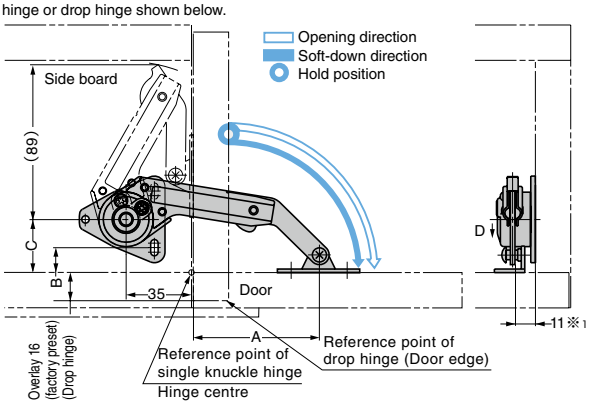
- For downward-opening doors.
- Designed to hold the door in fully closed position.
- Opening speed can be adjusted with adjustment screw.



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

[Installation] Right side installation for downward-opening 90°. Left side installation is symmetrical.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 1.
- Handed: Specific left and right-handed.
- Door opening speed varies depending on product and conditions.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Parts Included]

- Mounting plate NSDX-SZ
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting plate 2
- SDS face plate and spacer for glass door 2

Video Link

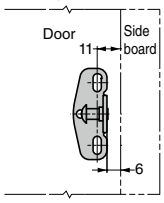
Video Link

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = 0.98 N~1.96 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]

D-view (refer to "Installation")



Selection Tool

Sasuga-kun

Hinge Type	A	B	C
Drop Hinge (SDH-001)	74※2	14	30
Drop Hinge (SDH-P)	75※3	12	28
Piano/Butt Hinge	71	27	43

Installation dimensions vary depending on hinge type.

- ※1 : 11.8 for optional mounting plate.
- ※2 : In case of overlay 16 mm (factory preset).
  For drop hinge, use our 3-way adjustable type SDH-001 3.
- ※3: In case of overlay 19mm (factory preset). Use SDH-P 4.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for drop hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-016-425	NSDX-10RK-TV	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	0.98~1.96	10~20	143	20	80
G	3D	180-016-424	NSDX-10LK-TV	Left-handed						20	80

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 2
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.293, 2 : P.369, 3 : P.269, 4 : P.268

SHORT ARM SOFT-DOWN STAY SDS-100-TV, SDS-C100-TV

Lapcon L=R INSTRUCTION

Right side installation shown.

White Black

Mounting plate SDS-A

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Downward-opening	SDS-100W(B)-TV	–	Yes	0.49~1.18 N・m/pc (5~12 kgf・cm/pc)
	SDS-100W(B)-TVZ			1.62~3.68 N・m/pc (16.5~37.6 kgf・cm/pc)
	SDS-C100W(B)-TV	With Catch		0.49~1.18 N・m/pc (5~12 kgf・cm/pc)
	SDS-C100W(B)-TVZ			1.62~3.68 N・m/pc (16.5~37.6 kgf・cm/pc)

- For downward-opening doors.
- Non-handed: Can be installed either on left or right side.
- SDS-C100-TV (with catch) is designed to hold the door in fully closed position. Catch is necessary when using SDS-100-TV (without catch).
- 3-way adjustable drop hinge SDH-001 1 is suitable.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

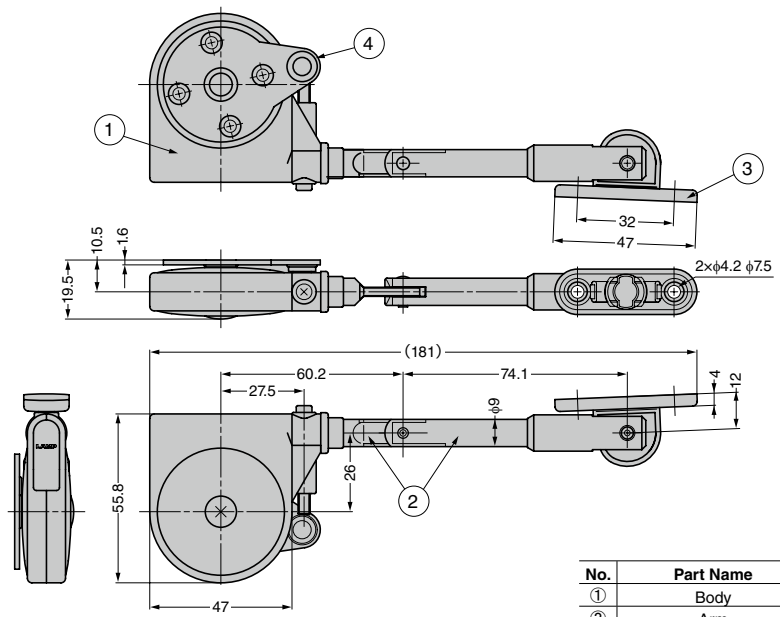
[Sold Separately]
- SDS face plate and spacer for glass door 3

[Applicable Range]
- Choose from 2 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Item Name Suffix	Qty
0.49~1.18	TV	1 pc
1.62~3.68	TVZ	

- With 2 stays, the maximum door moment will be doubled.

Video Link Video Link Selection Tool
Sasuga-kun

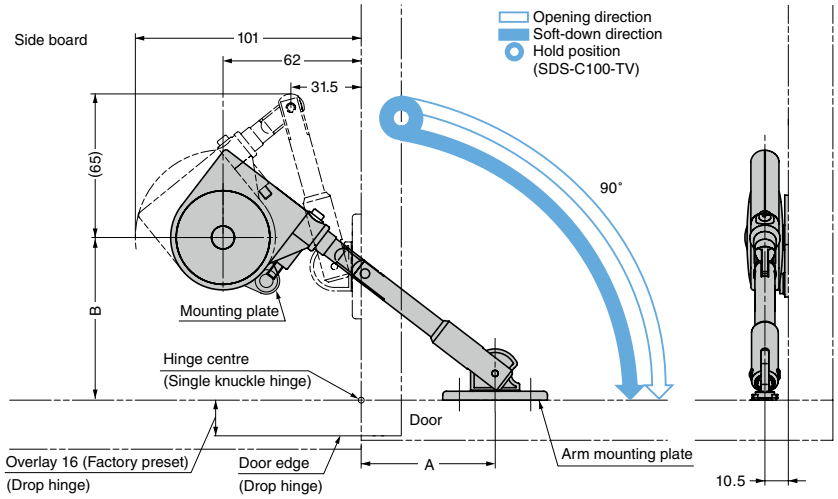


No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

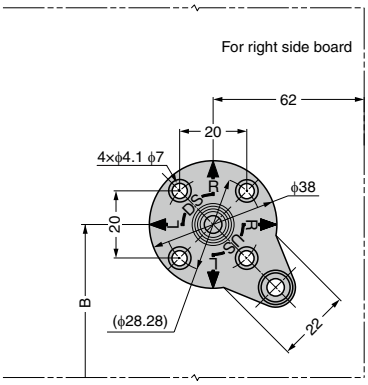
Refer to 1 : P.269, 2 : P.293, 3 : P.369

[Installation] Right side installation for downward-opening 90˚.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

Hinge Type	A	B
Single Knuckle Hinge	60	73
Drop Hinge (SDH-001)	65※1	62
Drop Hinge (SDH-P)	66※2	60

●※1 In case of overlay 16 mm (factory preset).
●※2 In case of overlay 19mm (factory preset).
※Install according to the dimensions in the above figure and table after making door overlay, clearance and horizontal adjustment.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-258	SDS-100W-TV	Without Catch	White	0.49~1.18	5~12	144	20	100
G	3D	180-100-259	SDS-100B-TV		Black			144	20	100
G	3D	180-100-006	SDS-C100W-TV	With Catch	White			154	20	100
G	3D	180-109-263	SDS-C100B-TV		Black			152	20	100
G	3D	180-014-181	SDS-100W-TVZ	Without Catch	White	1.62~3.68	16.5~37.6	147	20	100
G	3D	180-014-182	SDS-100B-TVZ		Black			147	20	100
G	3D	180-014-183	SDS-C100W-TVZ	With Catch	White			154	20	100
G	3D	180-014-184	SDS-C100B-TVZ		Black			158	20	100

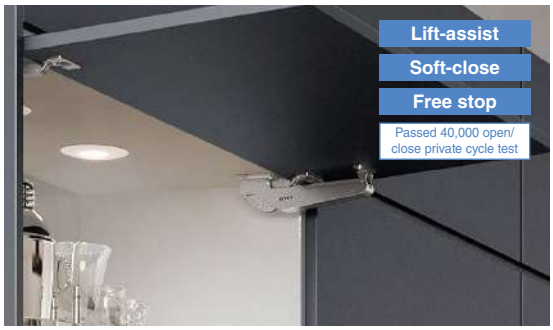
[SDS Face Plate and Spacer for Glass Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.369

AILERON STAY FOR OLYMPIA ARN-3 Upward Opening Model

L=R INSTRUCTION

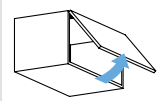


Opening	Description	Non-handed	Type	Maximum Door Moment
Upward	Lift-assist Soft-close Free-stop	Yes	M	4.0–6.0 N·m/pc (40.8–61.2 kgf·cm/pc)
			H	6.0–8.0 N·m/pc (61.2–81.6 kgf·cm/pc)

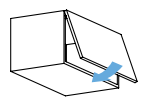
- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19 / H360-D26-26T).
- The lift-assist function allows for light opening of doors.
- The force of lift-assist is adjustable.
- The soft-close function makes doors close gently (0°–30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- The free-stop function enables doors to hold in position.
- Closing speed of doors is adjustable.

[Door Movements]

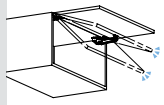
Lift-assist
Allows for light opening of doors


Light opening

Soft-close
OLYMPIA's damper makes doors close slowly. (0° - 30°)


Gently closing

Free-stop
Enables doors to hold in position.


Holds in position

[Specifications]
- Operating temperature: 0℃ – 40℃

[Parts Included]
- Door-side mounting plate
- Countersunk head tapping screw 3.5 × 1.5 (for attaching the mounting plate to AILERON)
- Binding head tapping screw 3.5 × 1.5 (for attaching the door-side mounting plate, mounting plate for AILERON, and AILERON)

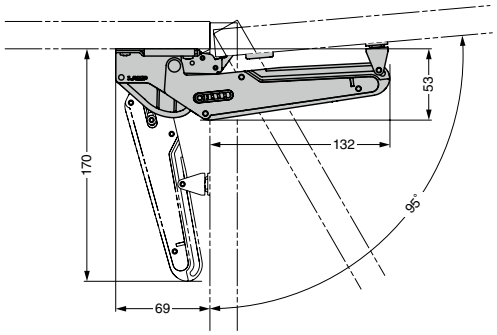
[Optional Parts]
- Hinge spacer 360-BCS
- Aileron spacer ARN-DP

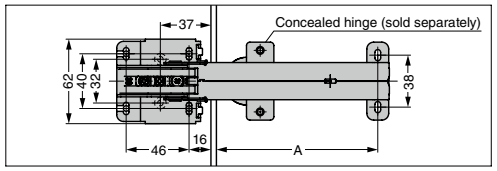
[Sold Separately]
- Mounting plate for AILERON
- OLYMPIA concealed hinge
- Mounting plate for OLYMPIA

Video Link

Video Link

[Installation]





Please see pages of Olympia hinges for installation dimensions.

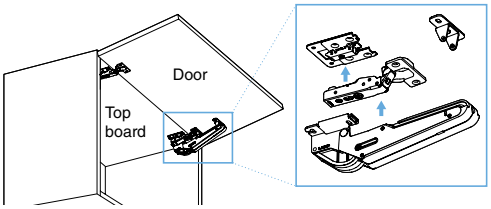
Hinge Used	A
360-D26-19T	118
H360-D26-26T	116

[Application Example]

Selection Tool

Sasuga-kun

[Combined unit attaches to the top of the cabinet]



Simple installation only requires AILERON to be placed on OLYMPIA with a mounting plate designed for AILERON

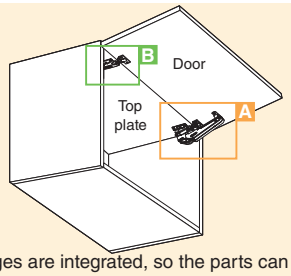
[Aileron Stay] Sold singly

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Type	Max. Door Moment N·m/pc	Max. Door Moment kgf·cm/pc	Box (pc)	Carton (pc)
G	3D	180-043-947	ARN-3-M-GR	Steel (SPCC) / POM	Nickel plating / Grey	M	4.0 ~ 6.0	40.8 ~ 61.2	1	20
G	3D	180-043-948	ARN-3-H-GR			H	6.0 ~ 8.0	61.2 ~ 81.6	1	20
G	3D	180-049-503	ARN-3-M-BL		Nickel plating / Black	M	4.0 ~ 6.0	40.8 ~ 61.2	1	20
G	3D	180-049-504	ARN-3-H-BL			H	6.0 ~ 8.0	61.2 ~ 81.6	1	20

[Standard Set] Including parts sold separately

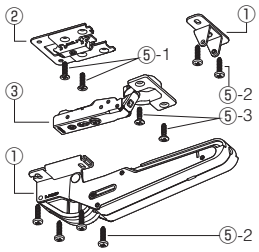
RoHS	CAD	Item Code	Item Name	Finish / Colour	Door Width	Max. Door Moment N·m	Max. Door Moment kgf·cm	Set Contents	Box (pc)	Carton (pc)
G	–	180-045-659	ARN-3-M-GR-S	Nickel plating / Grey	450~ 900	4.0 ~ 6.0	40.8~ 61.2	Aileron stay, Mounting plate for Aileron stay, Olympia hinge, Mounting plate for Olympia hinge, Screws	1	10
G	–	180-045-660	ARN-3-H-GR-S			6.0 ~ 8.0	61.2~ 81.6		1	10
G	–	180-049-507	ARN-3-M-BL-S	Nickel plating / Black		4.0 ~ 6.0	40.8~ 61.2		1	10
G	–	180-049-508	ARN-3-H-BL-S			6.0 ~ 8.0	61.2~ 81.6		1	10

Components for one door

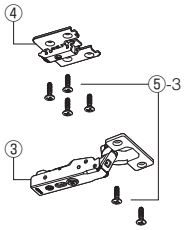


The hinges are integrated, so the parts can be aggregated on one door and top plate.

A With AILERON



B No AILERON



Required parts for one door (A + B)

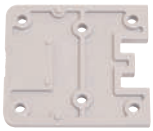
The required quantity depends on door width and maximum moment.

			Item Code	Item Name	Door width [mm] 450~900 / Door max. moment [N·m] 4.0 t 6.0	6.0 t 8.0	8.0 t 12.0	12.0 t 16.0	900~1600 / 4.0 t 6.0	6.0 t 8.0	8.0 t 12.0	12.0 t 16.0	1600~2000 / 4.0 t 6.0	6.0 t 8.0	8.0 t 12.0	12.0 t 16.0
AILERON	① Body	Grey / Black / Including: - Binding tapping screws x6 - Countersunk head tapping screw x2	180-043-947 or 180-049-503	ARN-3-M-GR or ARN-3-M-BL	Standard Set 1	-	2	-	1	-	2	-	1	-	2	-
			180-043-948 or 180-049-504	ARN-3-H-GR or ARN-3-H-BL	-	1	-	2	-	1	-	2	-	1	-	2
	② Washer		180-043-949	ARN-SZ	1		2		1		2		1		2	
OLYMPIA CONCEALED HINGE	③ Body		160-026-840 or 160-029-084	360-D26-19T or H360-D26-26T (damper built-in)	2 *3		3		2		3		2		3	
			160-026-836 or 160-029-081	360-26-19T or H360-26-26T (no catch)	-		-		1		-		2		-	
			160-026-832 or 160-029-078	360-C26-19T or H360-C26-26T (with catch)	-		-		-				-		1	
	④ Washer		160-026-846 *1	360-P6WT (System 32/4 holes)	1		1		2		1		3		2	
	⑤ Screw		160-070-030	TAP3515NI	8 *2		10 *2		14 *2		10 *2		20 *2		16 *2	

*1 For ④ Washer, 360-P4W-32T (Item Code: 160-026-845) and 360-P4W-30T (Item Code: 160-026-844) can also be used.
*2 Quantity when using ④ Washer 360-P6WT. When using 360-P4W-32T or 360-P4W-30T, the required quantity is reduced by one for each washer.
*3 The 360-D26-19T is included in the standard set.

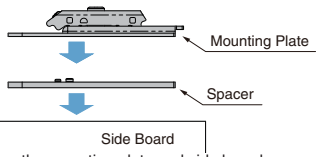
AILERON SPACER ARN-DP 2 and 5 mm Thick

ARN-DP2 (2 mm)


ARN-DP5 (5 mm)

- Specially designed for use with the AILERON stay 1 .
- The ARN-DP2 decreases overlay of outset doors by 2 mm.
- The ARN-DP5 decreases overlay of outset doors by 5 mm.
- The ARN-DP2 can be doubled for 4 mm thickness.

[How to Use]



Set the spacer between the mounting plate and side board.

[Available Mounting Plate]
- ARN-SZ 2

[Remarks]
- The included screws are for fixing the spacer (ARN-DP5) and mounting plate (ARN-SZ).
- Please use the optional screws if two ARN-DP2 are used.

[Parts Included]
- Cross-recessed binding head tapping screw 3.5×20 (Only the ARN-DP5 comes with these screws.)

[Spacer]

RoHS	CAD	Item Code	Item Name	Colour	Type	Material	Box (pcs)	Carton (pcs)
G	3D	180-046-667	ARN-DP2	Grey	+ 2 mm	POM	80	640
G	3D	180-047-915	ARN-DP5		+ 5 mm (screw included)		80	640

[Optional screw when using two ARN-DP2]

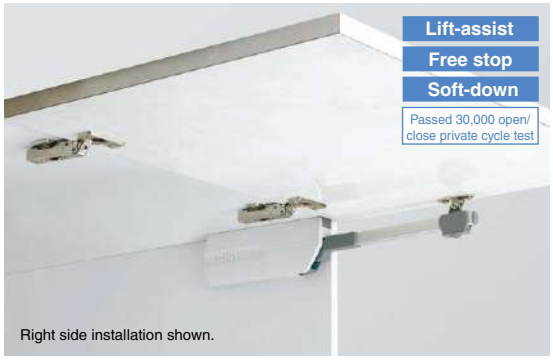
RoHS	CAD	Item Code	Item Name
G	–	180-046-669	TAP3520NI

Sold in sets of 4 screws.

Refer to 1 : P.316, P.350, 2 : P.317, P.351

EASY LIFT-UP STAY SLS-ELAN®

Lapcon INSTRUCTION



Right side installation shown.

Compact body saves space, not even affecting the shelf mounting.

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
Upward-opening	Lift-assist Free stop Soft-down	–	M	4.90~7.35 N·m/pc (50~75 kgf·cm/pc)
			H	7.35~9.80 N·m/pc (75~100 kgf·cm/pc)

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig.1).
  - ・Door can be stopped in any position in the range of about 30˚ to fully opened position (see Fig.2).
  - ・Door closes slowly in the range of about 0˚ to 30˚ (see Fig. 3)
- Easy installation from the front for both left and right.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the “Cautions” 1.
- Handed: Specific left and right-handed.
- Never push down the arm of stay before door installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

[Parts Included]
- Countersunk head tapping screw 3.5×35
- Binding head tapping screw 3.5×15
- Truss head screw M4×5 (for mounting plate)

[Sold Separately]
- Mounting plate SLS-ELAN-AZ 2
- Slider (for maintenance)

Video Link

Selection Tool
Sasuga-kun

[3 Functions in 1 Stay]

Lift-assist
Door can be opened with a slight force.

Fig.1

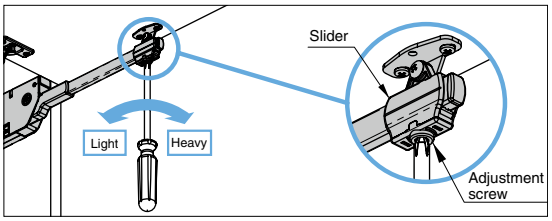
Free stop
Door can be stopped in any position in the range of about 30 ˚ to fully opened position.

Fig.2

Soft-close
Door closes slowly in the range of about 0˚ to 30˚ even if you release your hands from the door.

Fig.3

[Adjustment of Lift-assisting Force]

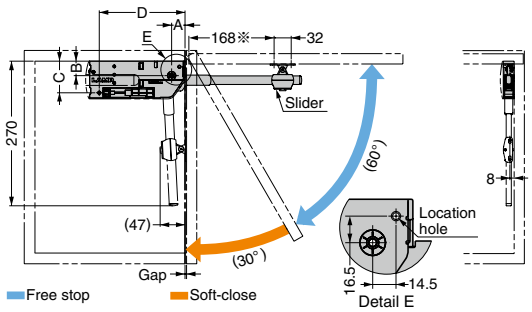


- If the door opens and closes improperly, turn the adjustment screw at the bottom of the slider to adjust door movement.

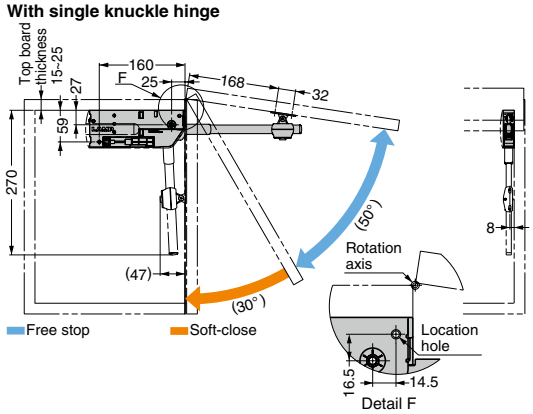
Refer to 1 : P.293, 2 : P.355

[Installation] Right side installation for upward-opening 90˚.
Left side installation is symmetrical.

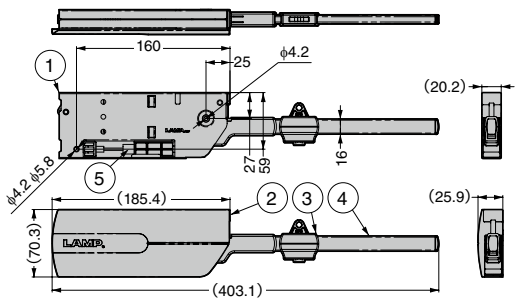
With concealed hinge

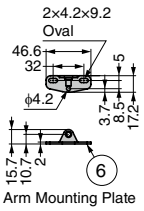


With single knuckle hinge



- If axis position of single knuckle hinge different from the figure above, please contact local representatives.
- Top board thickness is 15~25mm. For other thicknesses, please contact local representatives.





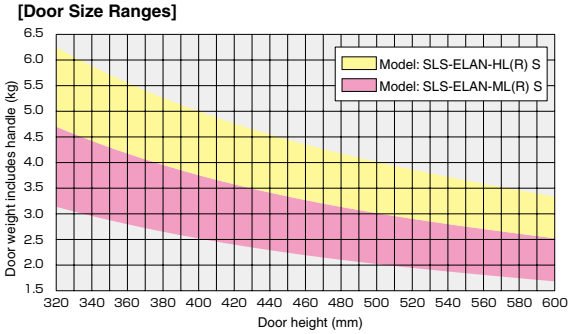
No.	Part Name	Material	Finish/Colour
①	Body	Steel (SECC)	–
②	Body Cover R	ABS	Light Grey
③	Slider	POM	Dark Grey
④	Tip Arm	Aluminium Alloy	Anodised
⑤	Damper	–	–
⑥	Arm Mounting Plate	Steel (SPCC)	Nickel

Hinge Type	Bore Distance	A	B	C	D
360-(C)26/19T (19 mm Overlay)	5	25	27	59	160
H360-(C)26/19T (26 mm Overlay)	7				
360-(C)26/9T (9 mm Overlay)	5		37	69	
H360-(C)26/16T (16 mm Overlay)	7				
360-(C)26/0T (Inset)	5	Door Thickness + 27	47	79	A+135
H360-(C)26/0T (Inset)	7		53	85	

Table above is the combination with mounting plate 360-P4W-30T or 360-P4W-32T.

If the clearance between cabinet and door is 4mm or more, install the mounting plate according to a dimension obtained by subtracting the clearance from ※ marked dimension (Installation position of the body unit is unchanged).
(Example) When the gap between cabinet and door is 5mm: 168 - 5 (Gap) =163
If the connection between the body and cabinet is weak due to cabinet material etc., tighten a screw additionally in the location hole shown left. (Additional screws are sold separately)

[Door Size Ranges]



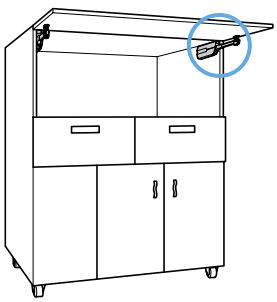
Refer to the above graph as a guide for model selection.
For a door with size not given here, calculate as follows.
Door weight includes handle.

●Choose from 2 types according to maximum door moment.
Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
4.90~7.35	M	1 pc
7.35~9.80	H	

●With 2 stays, the maximum door moment will be doubled.
※Confirm the movement with actual item.

[Application Example]



[Installation]

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	180-015-491	SLS-ELAN-MRS	Right-handed	Aluminium Alloy/ABS	Anodised/ Light Grey	M	4.90~7.35	50~75	600	20
G	3D	180-015-490	SLS-ELAN-MLS	Left-handed							20
G	3D	180-015-493	SLS-ELAN-HRS	Right-handed			H	7.35~9.80	75~100		20
G	3D	180-015-492	SLS-ELAN-HLS	Left-handed							20

[Mounting Plate for Aluminium Frame Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Part Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-647	SLS-ELAN-AZ	Body	11	320	1280
G	3D	180-018-555	SLS-ELAN-AZS	Screw Set	4	–	800

Refer to 1 : P.355

LAPCON STAY SLS-ELAN-TV

Lapcon INSTRUCTION

Right side installation shown.

Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	Lift-assist Free stop Soft-down	–	4.60~6.17 N·m/pc (47~63 kgf·cm/pc)

- Short-arm type of easy lift-up stay SLS-ELAN 1.
- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  Door can be opened with a slight force. (see Fig. 1)
  Door can be stopped in any position in the range of about 30˚ to fully opened position. (see Fig. 2)
  Door closes slowly in the range of about 0˚ to 30˚. (see Fig. 3)
- Easy installation from the front for both left and right.

Compact body saves space, not even affecting the shelf mounting.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Never push down the arm of stay before door installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

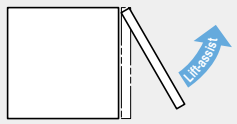
Selection Tool
Sasuga-kun

[Parts Included]
- Countersunk head tapping screw 3.5×35
- Binding head tapping screw 3.5×15
- Truss head screw M4×5 (for mounting plate)

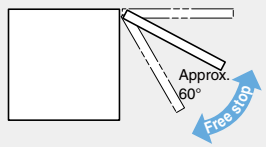
[Sold Separately]
- Mounting plate SLS-ELAN-AZ 3
- Slider (for maintenance)

[3 Functions in 1 Stay]

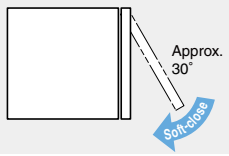
Lift-assist
Door can be opened with a slight force.

Fig.1


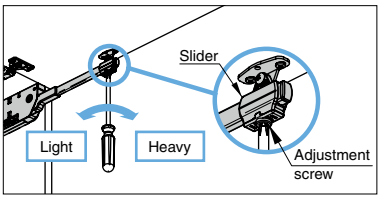
Free stop
Door can be stopped in any position in the range of about 30˚ to fully opened position.

Fig.2


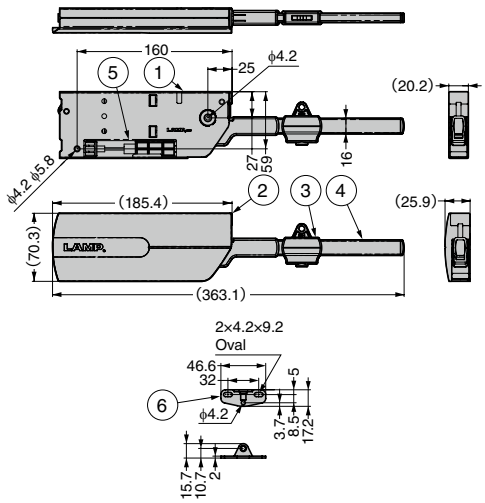
Soft-close
Door closes slowly in the range of about 0˚ to 30˚ even if you release your hands from the door.

Fig.3


[Adjustment of Lift-assisting Force]



- If the door opens and closes improperly, turn the adjustment screw at the bottom of the slider to adjust door movement.

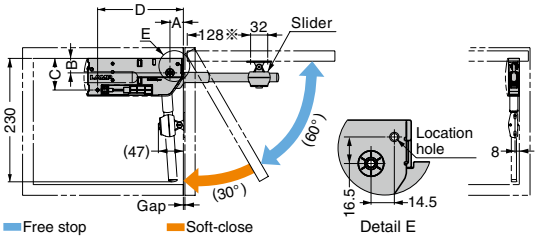


No.	Part Name	Material	Finish/Colour
①	Body	Steel (SECC)	–
②	Body Cover	ABS	Light Grey
③	Adjustment Slider	POM	Dark Grey
④	Tip Arm	Aluminium Alloy	Anodised
⑤	Damper	–	–
⑥	Mounting Plate	Steel (SPCC)	Nickel

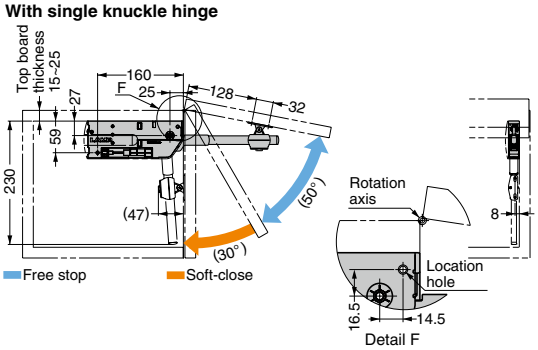
Refer to 1 : P.352, 2 : P.293, 3 : P.355

[Installation] Right side installation for upward-opening. Left side installation is symmetrical.

With concealed hinge



With single knuckle hinge



- If axis position of single knuckle hinge different from the figure above, please contact local representatives.
- Top board thickness is 15 ~ 25mm.For other thicknesses, please contact local representatives.

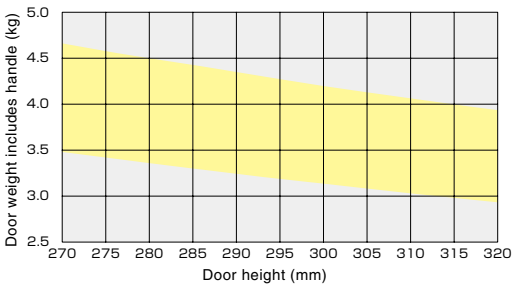
Hinge Type	Bore Distance	A	B	C	D
360-(C)26/19T (19 mm Overlay)	5	25	27	59	160
H360-(C)26/26T (26 mm Overlay)	7				
360-(C)26/9T (9 mm Overlay)	5		37	69	
H360-(C)26/16T (16 mm Overlay)	7				
360-(C)26/0T (Inset)	5	Door Thickness + 27	47	79	A+135
H360-(C)26/0T (Inset)	7		53	85	

Table above is the combination with mounting plate 360-P4W-30T or 360-P4W-32T.

If the clearance between cabinet and door is 4mm or more, install the mounting plate according to a dimension obtained by subtracting the clearance from ※ marked dimension (Installation position of the body unit is unchanged.)
(Example) When the gap between cabinet and door is 5 mm: 128 - 5 (Gap) =123

If the connection between the body and cabinet is weak due to cabinet material etc., tighten a screw additionally in the location hole shown left. (Additional screws are sold separately)

[Door Size Ranges]



Refer to the above graph as a guide for model selection.
For a door with size not given here, calculate as follows.
Door weight includes handle.

- With 1 stay
  Maximum door moment = 4.6~6.17 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

※Confirm the movement with actual item.

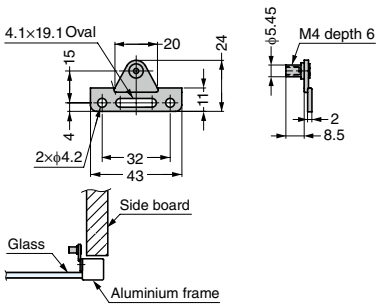
[Application Example]

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-018-057	SLS-ELAN-HR-TV-S	Right-handed	Aluminium	Anodised/	4.6~6.17	47~63	590	20	20
G	3D	180-018-056	SLS-ELAN-HL-TV-S	Left-handed	Alloy/ABS	Light Grey				20	20

MOUNTING PLATE FOR ALUMINIUM FRAME DOOR SLS-ELAN-AZ

Refer to 1 : P.352, 2 : P.354



- Used for installing SLS-ELAN 1, SLS-ELAN-TV 2 to aluminium frame.

[Sold Separately]

- Screw set
  Binding head tapping screw 3.5×12 (2 pcs)
  Truss head screw M4×5 (1 pc)

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-647	SLS-ELAN-AZ	Steel	Nickel	9.5	320	1280

[Screw Set] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	–	180-018-555	SLS-ELAN-AZS	Steel	Nickel	50	–	800

HEAVY DUTY SOFT-DOWN STAY HDS-30 For Use in Pairs

Right side installation shown.

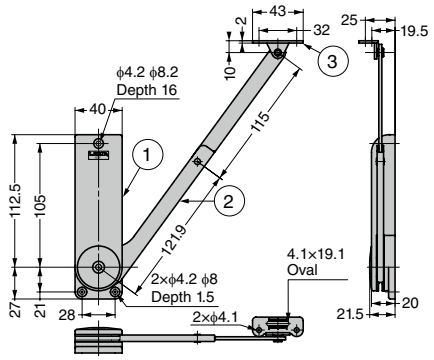
Opening Direction	Description	Non-handed	Model	Maximum Door Moment
Upward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)

- For upward-opening doors.
- Designed to hold the door in fully opened and closed positions.
- For door hinge, piano/butt hinge or concealed hinge is suitable.
- AS parts set 1 for installing to aluminium frame also available.

[Applicable Range]

- Choose from 3 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 2.
- Used in pairs.
- Do not push the door further over 80°. And do not roughly open and close the door.

[Parts Included]

- Mounting plate
- Binding head tapping screw 3.5×15

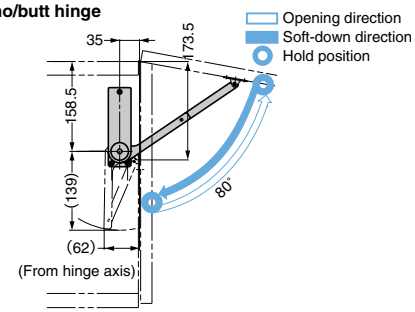
Video Link

Selection Tool
Sasuga-kun

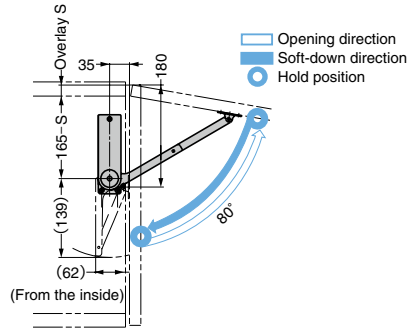
No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

[Installation] Right side installation for upward-opening 80°. Left side installation is symmetrical.

With piano/butt hinge



With concealed hinge



RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-104-078	HDS-30KR-BL	Right-handed	ABS/Steel	Nickel/Black	K	13.7~19.5	140~199	276	40	–
G	3D	180-104-079	HDS-30KL-BL	Left-handed						276	40	–
G	3D	180-109-270	HDS-30KR-WT	Right-handed		Nickel/White				276	40	–
G	3D	180-109-271	HDS-30KL-WT	Left-handed						276	40	–
G	3D	180-104-080	HDS-30MR-BL	Right-handed		Nickel/Black	M	19.6~24.4	200~249	294	40	–
G	3D	180-104-081	HDS-30ML-BL	Left-handed						294	40	–
G	3D	180-109-272	HDS-30MR-WT	Right-handed		Nickel/White				294	40	–
G	3D	180-109-273	HDS-30ML-WT	Left-handed						294	40	–
G	3D	180-104-082	HDS-30HR-BL	Right-handed		Nickel/Black	H	24.5~29.4	250~300	300	40	–
G	3D	180-104-083	HDS-30HL-BL	Left-handed						300	40	–
G	3D	180-109-274	HDS-30HR-WT	Right-handed		Nickel/White				300	40	–
G	3D	180-109-275	HDS-30HL-WT	Left-handed						300	40	–

Refer to 1 : P.357, 2 : P.293

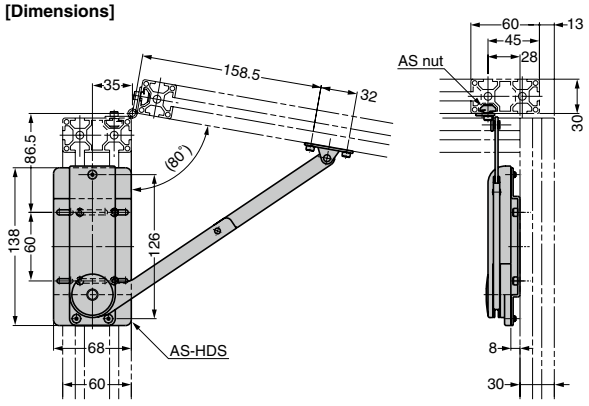
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

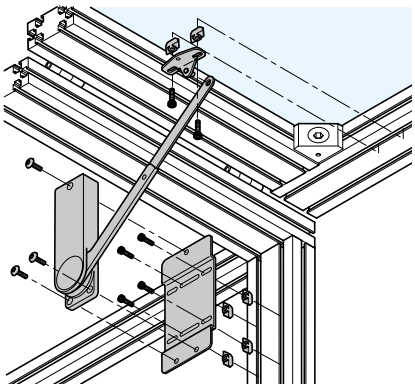
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-661	AS-HDS-30KR-BL-30-6	Groove Width 6 mm	HDS-30KR-BL : 1 pc	AS Nut AS-6M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-662	AS-HDS-30KL-BL-30-6		HDS-30KL-BL : 1 pc		–
G	3D	180-013-663	AS-HDS-30KR-WT-30-6		HDS-30KR-WT : 1 pc		–
G	3D	180-013-664	AS-HDS-30KL-WT-30-6		HDS-30KL-WT : 1 pc		–
G	3D	180-013-665	AS-HDS-30MR-BL-30-6		HDS-30MR-BL : 1 pc		–
G	3D	180-013-666	AS-HDS-30ML-BL-30-6		HDS-30ML-BL : 1 pc		–
G	3D	180-013-667	AS-HDS-30MR-WT-30-6		HDS-30MR-WT : 1 pc		–
G	3D	180-013-668	AS-HDS-30ML-WT-30-6		HDS-30ML-WT : 1 pc		–
G	3D	180-013-669	AS-HDS-30HR-BL-30-6		HDS-30HR-BL : 1 pc		–
G	3D	180-013-670	AS-HDS-30HL-BL-30-6		HDS-30HL-BL : 1 pc		–
G	3D	180-013-671	AS-HDS-30HR-WT-30-6		HDS-30HR-WT : 1 pc		–
G	3D	180-013-672	AS-HDS-30HL-WT-30-6		HDS-30HL-WT : 1 pc		–
G	3D	180-013-673	AS-HDS-30KR-BL-30-8	Groove Width 8 mm	HDS-30KR-BL : 1 pc	AS Nut AS-8M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-674	AS-HDS-30KL-BL-30-8		HDS-30KL-BL : 1 pc		–
G	3D	180-013-675	AS-HDS-30KR-WT-30-8		HDS-30KR-WT : 1 pc		–
G	3D	180-013-676	AS-HDS-30KL-WT-30-8		HDS-30KL-WT : 1 pc		–
G	3D	180-013-677	AS-HDS-30MR-BL-30-8		HDS-30MR-BL : 1 pc		–
G	3D	180-013-678	AS-HDS-30ML-BL-30-8		HDS-30ML-BL : 1 pc		–
G	3D	180-013-679	AS-HDS-30MR-WT-30-8		HDS-30MR-WT : 1 pc		–
G	3D	180-013-680	AS-HDS-30ML-WT-30-8		HDS-30ML-WT : 1 pc		–
G	3D	180-013-681	AS-HDS-30HR-BL-30-8		HDS-30HR-BL : 1 pc		–
G	3D	180-013-682	AS-HDS-30HL-BL-30-8		HDS-30HL-BL : 1 pc		–
G	3D	180-013-683	AS-HDS-30HR-WT-30-8		HDS-30HR-WT : 1 pc		–
G	3D	180-013-684	AS-HDS-30HL-WT-30-8		HDS-30HL-WT : 1 pc		–

[Dimensions]



[How to Install]

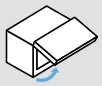


Refer to 1 : P.20

HEAVY DUTY SOFT-DOWN STAY HDSN-30 For Use in Pairs

Lapcon INSTRUCTION

Right side installation shown.

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Upward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N・m/2 pcs (140~199 kgf・cm/2 pcs)
			M	19.6~24.4 N・m/2 pcs (200~249 kgf・cm/2 pcs)
			H	24.5~29.3 N・m/2 pcs (250~299 kgf・cm/2 pcs)
			S	29.4~34.3 N・m/2 pcs (300~350 kgf・cm/2 pcs)

- For upward-opening doors.
- Designed to hold the door in closed and opened position and close the door softly.
- Secures enough space for shelf board.
- Can be easily and quickly installed on mounting plate.
- Maximum moment of HDSN is 34.3N・m (for opening angle 80˚ only), while conventional HDS is only 29.4N・m.
- Mounting plate (sold separately) suitable for 20mm aluminium frame available.

[Applicable Range]

- Choose from 4 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m		Model	Qty
Opening angle 90˚	Opening angle 80˚		
13.7~17.5	13.7~19.5	K	2 pcs
17.6~21.5	19.6~24.4	M	
21.6~25.4	24.5~29.3	H	
25.5~29.4	29.4~34.3	S	

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the “Cautions” 1.
- Handed: Specific left and right-handed.
- Hinges not included. Customer should provide concealed hinges (without catch) or single knuckle hinges.
- 1 mounting plate (sold separately) is necessary for 1 stay body.
- Used in pairs.

[Parts Included]

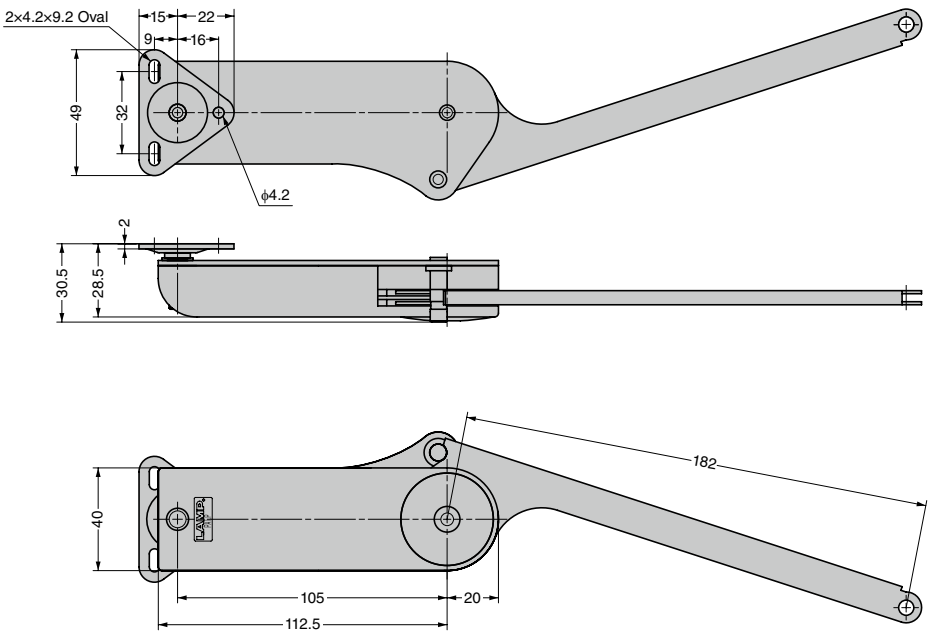
- Mounting plate
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting Plate HDSN-SZ, HDSN-AZ 2

Selection Tool

Sasuga-kun



Refer to 1 : P.293, 2 : P.359

[Installation] 45mm or more aluminium frame door or wooden door (HDSN-SZ) and opening angle 90˚

- ( ) Dimensions for 80˚ opening. Figures 1, 2 and 3 are in case of using mounting plate (HDSN-AZ) for 20mm aluminium frame.
- Dimensions for door with gasket shown. Without gasket, shift stay installation position towards back panel side by gasket thickness D.

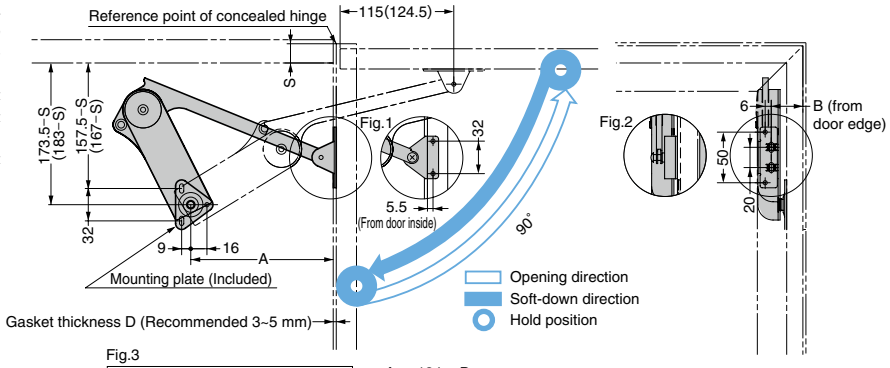
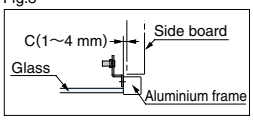


Fig.3



A = 134 − D

B = $15+T_0-\left(\frac{W_0-W_1}{2}\right)$

C = Distance from the side board inside to the aluminium frame

T_0 = Cabinet side board thickness

W_0 = Cabinet overall width

W_1 = Door width

S = Overlay

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Model	Maximum Door Moment/2 pcs				Weight (g)	Box (pcs)	Carton (pcs)
								Opening angle 90˚/ (N·m)	Opening angle 90˚/ (kgf·cm)	Opening angle 80˚/ (N·m)	Opening angle 80˚/ (kgf·cm)			
G	3D	180-109-601	HDSN-30KL	Left-handed	ABS/ Steel	Nickel/ Light Grey	K	13.7~17.5	140~179	13.7~19.5	140~199	366	40	–
G	3D	180-109-602	HDSN-30KR	Right-handed								283	40	–
G	3D	180-109-603	HDSN-30ML	Left-handed			M	17.6~21.5	180~219	19.6~24.4	200~249	415	40	–
G	3D	180-109-604	HDSN-30MR	Right-handed								415	40	–
G	3D	180-109-605	HDSN-30HL	Left-handed			H	21.6~25.4	220~259	24.5~29.3	250~299	415	40	–
G	3D	180-109-606	HDSN-30HR	Right-handed								415	40	–
G	3D	180-109-607	HDSN-30SL	Left-handed			S	25.5~29.4	260~300	29.4~34.3	300~350	415	40	–
G	3D	180-109-608	HDSN-30SR	Right-handed								393	40	–

ARM MOUNTING PLATE FOR HDSN HDSN-SZ, HDSN-AZ

HDSN-SZ

HDSN-AZ

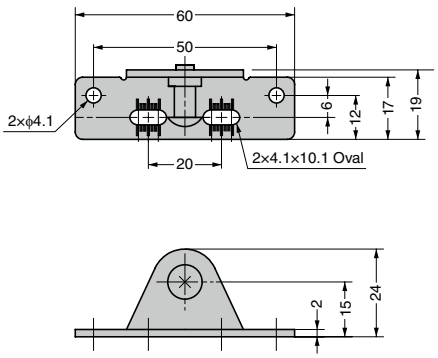
- For aluminium frame door.
- Two types are available.

[Parts Included]

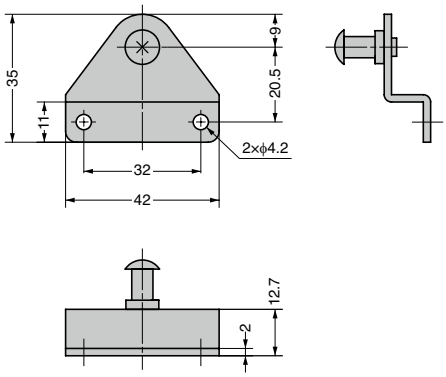
- Binding head tapping screw 3.5×15 (for HDSN-SZ)

[Recommended Screw]

- M4 Screw (HDSN-AZ)



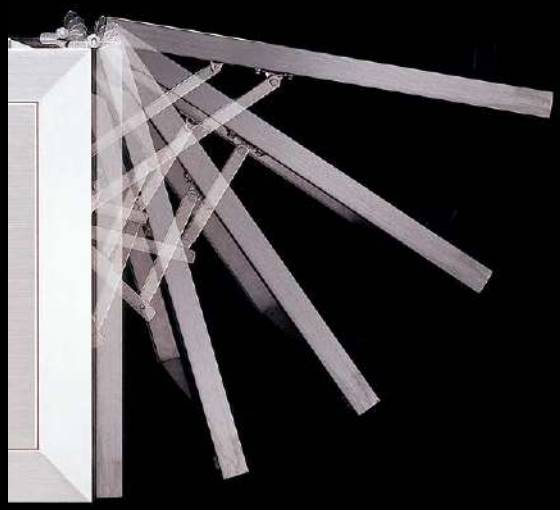
HDSN-SZ



HDSN-AZ

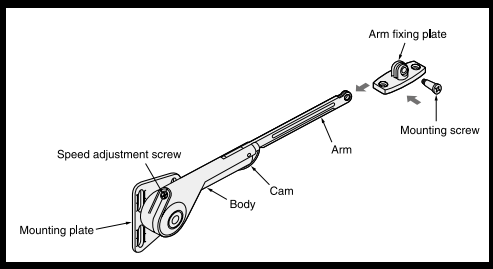
RoHS	CAD	Item Code	Item Name	Application	Included Screw	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-609	HDSN-SZ	For 45 mm or more Aluminium Frame Door / Wooden Door	Yes	Steel	Nickel	24	120	–
G	3D	180-109-610	HDSN-AZ	For 20 mm Aluminium Frame Door	No			25	120	–

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

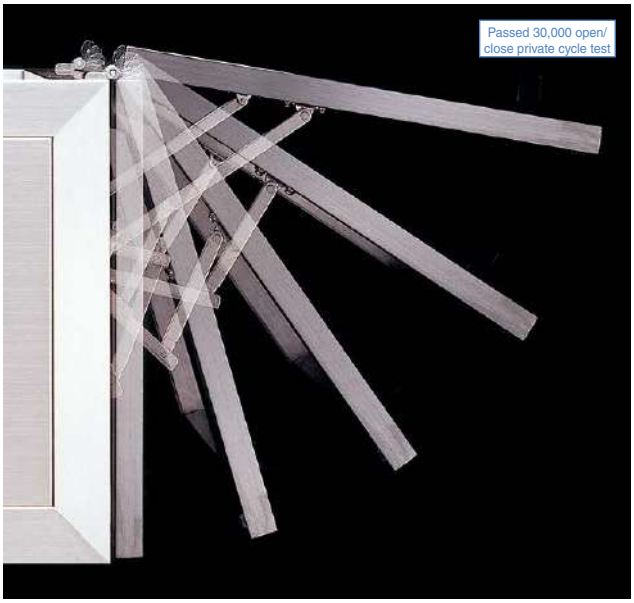
[Remarks]
Designed to operate at room temperature 0°~40°C.



APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

ADJUSTABLE SOFT-DOWN STAY NSD-35

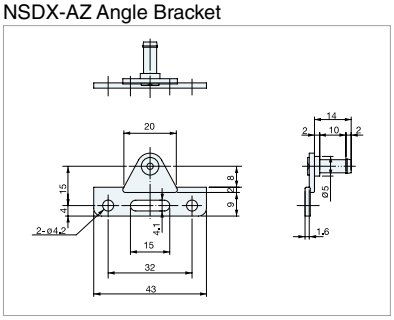
Lapcon INSTRUCTION



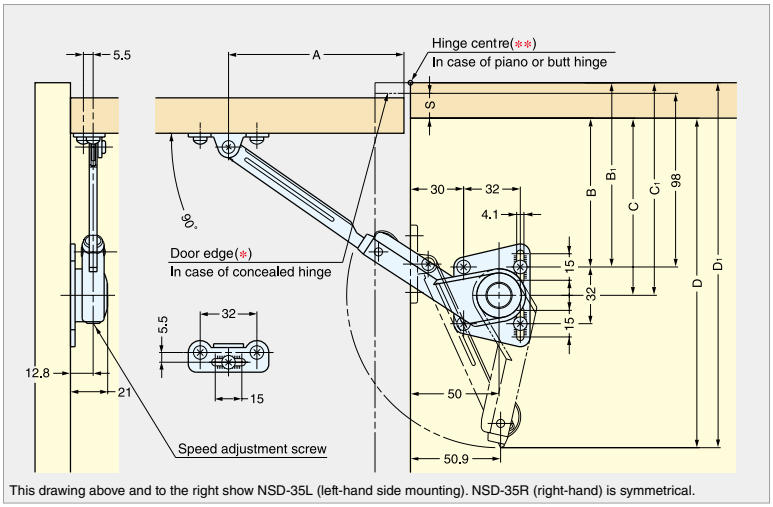
- For Upward-opening flap door with piano, butt or concealed hinges.
- Opening angle adjustable from 80˚ to 100˚ .
- Designed to hold door in fully opened position.
- Two stop version (holds door at 65˚ and 90˚) is also available.
- Torque Calculation :
  Torque = Door Height x 1/2 x Door Weight.
  Per Piece : 20~70 kg·cm.
  Per Pair : 40~140 kg·cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel

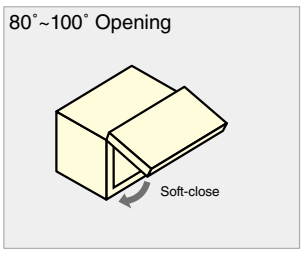
NSDX-AZ Angle Bracket



NSDX-AZ (angle bracket) for aluminium frame application available upon request.



This drawing above and to the right show NSD-35L (left-hand side mounting). NSD-35R (right-hand) is symmetrical.



Opening Angle	80˚		90˚		100˚	
Position of Plates	Down		Middle		Up	
	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket
For Hinge Centre (Up) ↑ ↓ (Down)						

Hinge Type	A	B	C	D	B1	C1	D1
Concealed Hinge	99	98-S	114-S	200-S	-	-	-
Piano / Butt Hinge	93	-	-	-	92	108	194

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-109-280	NSD-35R	210	20	80
–	3D	180-109-279	NSD-35L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-35 (R/L)

Lapcon AS INSTRUCTION

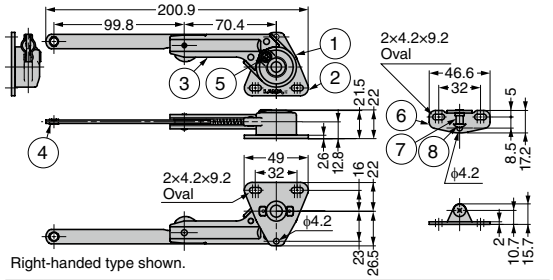
Right side installation shown.

Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

- For upward-opening doors.
- Designed to hold the door in fully opened and closed position.
- Opening angle 80˚, 90˚ or 100˚.
- Closing speed adjustable with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = 1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

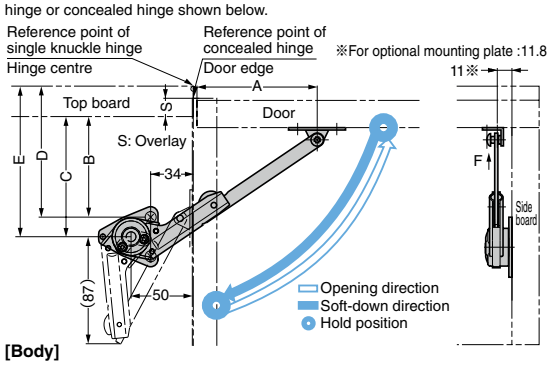


Right-handed type shown.

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

[Installation] Right side installation for upward-opening 90˚.
Left side installation is symmetrical.

Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and use conditions.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]

- Mounting plate 3
- SDS face plate and spacer for glass door 4 (Please order when using 5 mounting plate NSDX-GZ.)

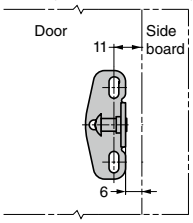
Video Link

Selection Tool

Sasuga-kun

[Installation for Mounting Plate]

F-view (refer to "Installation")



Hinge Type		A	B	C	D	E
80˚ Opening	Concealed Hinge	106	105–S	121–S	–	–
	Single Knuckle Hinge	100	–	–	99	115
90˚ Opening	Concealed Hinge	98	97–S	113–S	–	–
	Single Knuckle Hinge	91.5	–	–	90.5	106.5
100˚ Opening	Concealed Hinge	92.5	91.5–S	107.5–S	–	–
	Single Knuckle Hinge	85	–	–	84	100

Installation dimensions vary depending on hinge type and opening angle.

- S is overlay at hinge side.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-028	NSDX-35R	Right-handed	Zinc Alloy (ZDC)/Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-029	NSDX-35L	Left-handed						20	80

[Mounting Plate] Sold Separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm Aluminium Frame	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 4
(Please use with mounting plate NSDX-GZ 5.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.363, 2 : P.293, 3 4 5 : P.369

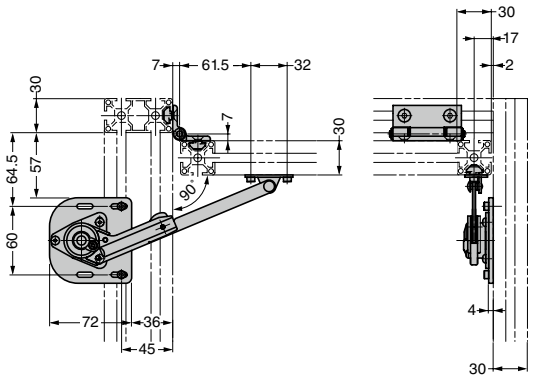
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

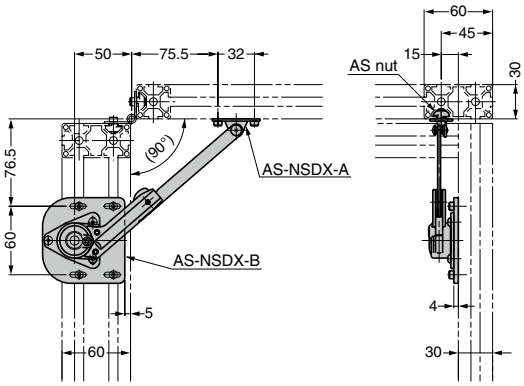
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-647	AS-NSDX-35RK-30-6	Groove Width 6 mm	NSDX-35RK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-649	AS-NSDX-35LK-30-6		NSDX-35LK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-648	AS-NSDX-35RK-30-8	Groove Width 8 mm	NSDX-35RK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-650	AS-NSDX-35LK-30-8		NSDX-35LK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–

[Dimensions (Inset)]



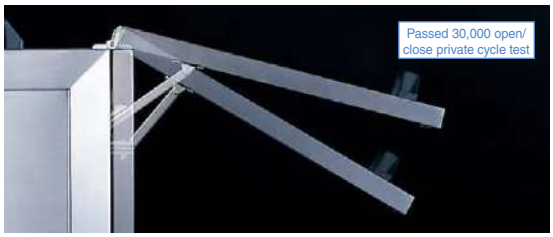
[Dimensions (Overlay)]



Refer to 1 : P.20

SOFT-DOWN STAY NSDX-35(R/L) 2S

Lapcon INSTRUCTION

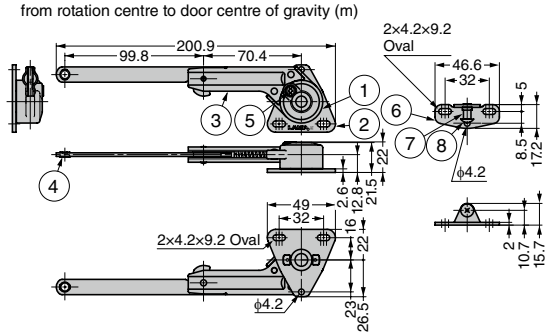


Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	With Catch	–	1.96~4.9 N・m/pc (20~50 kgf・cm/pc)

- For upward-opening doors.
- Holds the opened door at two angles.
- Designed to hold the door in fully closed position.
- Opening angle 80˚, 90˚ or 100˚.
- Closing speed adjustable with adjustment screw.

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = 1.96~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 1.
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and use conditions.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]

- Mounting plate 2
- SDS face plate and spacer for glass door 3

Video Link

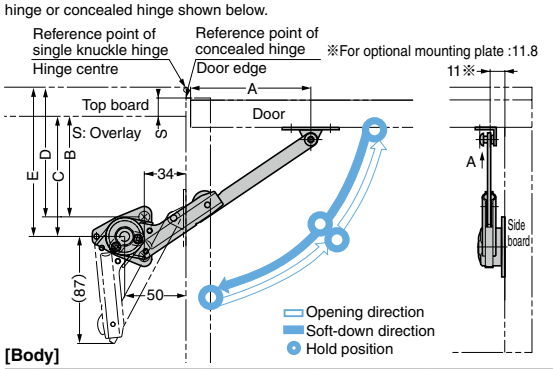
Selection Tool

Sasuga-kun

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

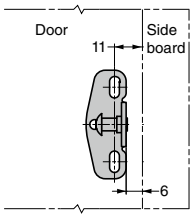
[Installation] Right side installation for upward-opening 90˚.
Left side installation is symmetrical.

Comes down slowly and softly in closing direction.Installation with piano/butt hinge or concealed hinge shown below.



[Installation for Mounting Plate]

A-view (refer to "Installation")



Hinge Type		A	B	C	D	E
80˚60˚ Opening	Concealed Hinge	106	105–S	121–S	–	–
	Single Knuckle Hinge	100	–	–	99	115
90˚65˚ Opening	Concealed Hinge	98	97–S	113–S	–	–
	Single Knuckle Hinge	91.5	–	–	90.5	106.5
100˚70˚ Opening	Concealed Hinge	92.5	91.5–S	107.5–S	–	–
	Single Knuckle Hinge	85	–	–	84	100

Installation dimensions vary depending on hinge type and opening angle.

- S is overlay at hinge side.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-026	NSDX-35R2S	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~4.9	20~50	170	20	80
G	3D	180-109-027	NSDX-35L2S	Left-handed						20	80

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 3
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.293, 2 3 : P.369

SOFT-DOWN STAY SDS-C301N

Lapcon L=R INSTRUCTION

Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	With Catch	Yes	3.92~6.86 N・m/pc (40~70 kgf・cm/pc)

- For upward-opening doors.
- Non-handed: Can be installed either on left or right side.
- Designed to hold the door in fully opened and closed position.
- Use butt hinge or concealed hinge for door hinge. (In case of wooden door or metal door)

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

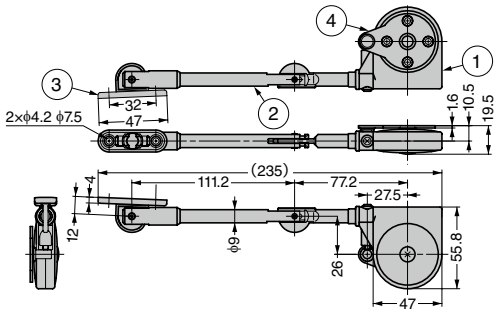
[Sold Separately]
- Concealed hinge OLYMPIA 360-26-19T

Video Link

Selection Tool

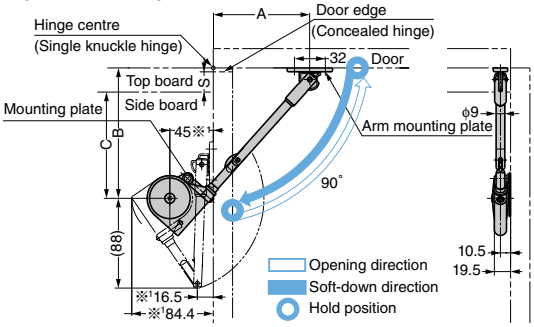
Sasuga-kun

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.92~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)
- Custom-made products (small door moment type) also available.

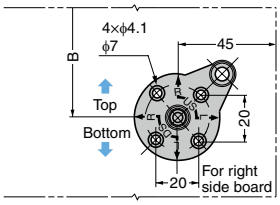


[Installation] Right side installation for upward-opening 90˚. Left side installation is symmetrical.

Comes down slowly and softly in closing direction.Installation with piano/butt hinge or concealed hinge shown below.



[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at US side directly upwards.
For left side board, install with the "→" mark of L at US side directly upwards.

Overlay	Hinge Type	A	B	C
Full Overlay	Single Knuckle Hinge	100	135	–
Full Overlay	Concealed Hinge 360-26-19T	108	–	143–S
Inset	Single Knuckle Hinge	97※2	132※2	–

※2 In case the door thickness is 20 mm.

- S is overlay at hinge side.
- Installation dimensions vary depending on hinge type. Reference point of installation dimensions (A, B, C): hinge centre for piano/butt hinge, while door edge for concealed hinge.
- ※1 Reference point of ※1 marked dimensions is the back side of door.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-012-151	SDS-C301NW	ABS/Steel	Nickel/White	3.92~6.86	40~70	165	20	100
G	3D	180-100-284	SDS-C301NG		Nickel/Grey				20	100
G	3D	180-100-285	SDS-C301NBL		Nickel/Black				20	100

[SDS Face Plate and Spacer for Glass Door] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.293, 2 : P.369

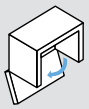
SOFT-DOWN STAY SDS-400-W

Lapcon L=R INSTRUCTION

Right side installation shown. (SDS-400-W)

White

Mounting plate SDS-B

Opening Direction	Description	Non-handed	Maximum Door Moment
 Bottom-opening	–	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)

- For bottom-opening doors.
- Suitable for glove box, etc.
- Non-handed: Can be installed either on left or right side.
- Piano/butt hinge is suitable.
- When using hinges other than specified, please contact local representatives.

[Specifications]
- Operating temperature: 0℃~40℃

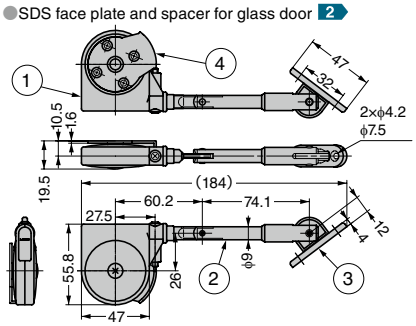
[Remarks]
- Be sure to read the "Cautions" 1.
- Customer should provide a catch to hold the door in fully closed position.
- Do not push the door down more than opening angle 70°. Also do not forcibly push the door up when closing.

[Parts Included]
- Mounting plate SDS-B
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 2

Video Link

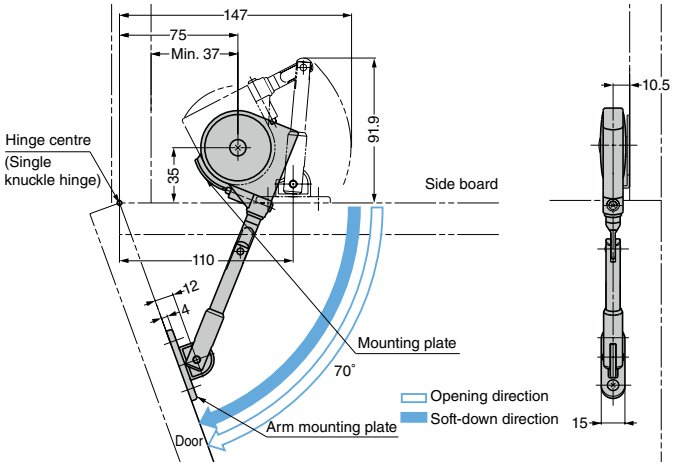
Selection Tool
Sasuga-kun



[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

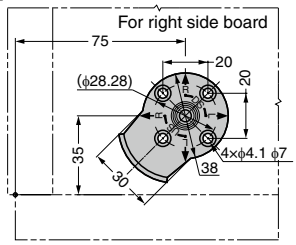
[Installation] Right side installation for bottom-opening 70°. Left side installation is symmetrical.

Comes down slowly and softly in opening direction.Installation with piano/butt hinge shown below.



No.	Part Name	Material	Finish/Colour
①	Body	ABS	White
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

[Installation for Mounting Plate]



(SDS-400 is marked with DS.)
For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-286	SDS-400-W	ABS/Steel	Nickel/White	3.43~4.9	35~50	146	20	100

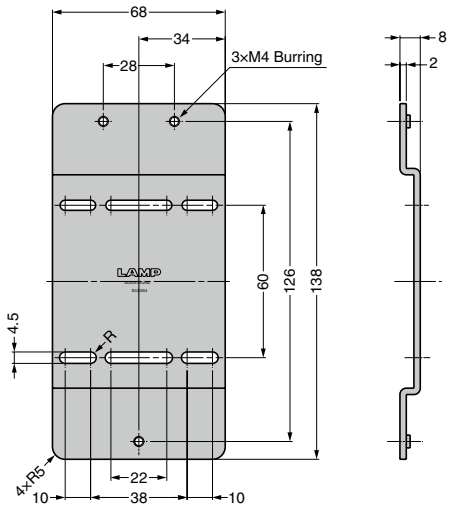
[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish		50	200

Refer to 1 : P.293, 2 : P.369

AS BRACKET FOR HDS AS-HDS

●Used for installing soft-down stay HDS to aluminium frame.

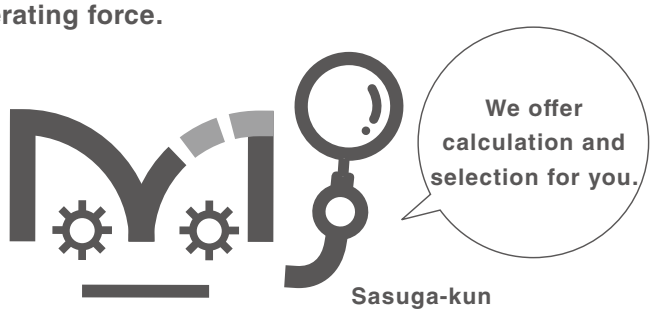


[Installation]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-235	AS-HDS	Stainless Steel (SUS304)	Barrel Polished	198	10	100

Product **Selection Tool Sasuga-kun**

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun | Search

https://cont.sugatsune.co.jp/motion/en/

NSDX BRACKET FOR STAY AS-NSDX

AS SUS

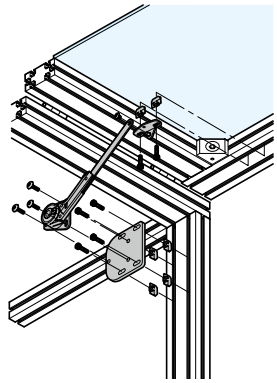
Application Example

- Used for installing soft-down stay NSDX to aluminium frame.
- Use AS nuts 1 for installation.

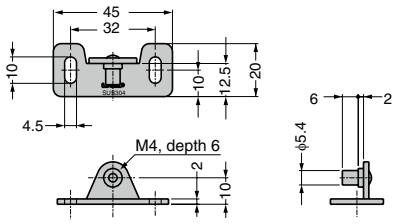
[Parts Included]

- AS-NSDX-A: Truss head screw M4×5 (SUS)
  AS-NSDX-B: None

[How to Install]

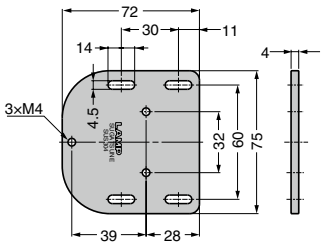


AS-NSDX-A



AS-NSDX-A

AS-NSDX-B



AS-NSDX-B

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-234	AS-NSDX-A	For Arm	Stainless Steel (SUS304)	Barrel Polished	15	100	1000
G	3D	180-100-233	AS-NSDX-B	For Body			151	20	200

Refer to 1 : P.526

MOUNTING PLATE FOR NSDX NSDX-SZ, NSDX-CZ, NSDX-AZ, NSDX-GZ

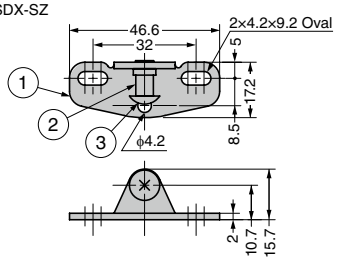
- For quick installation of NSDX stay.
- Three types are available.

NSDX-CZ

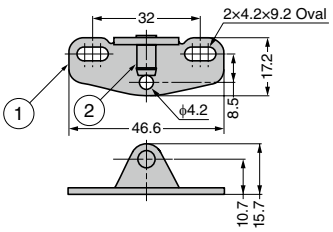
NSDX-AZ

NSDX-GZ

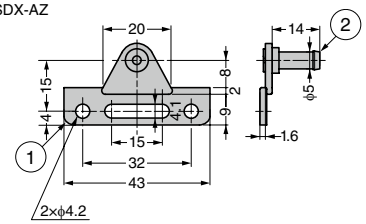
NSDX-SZ



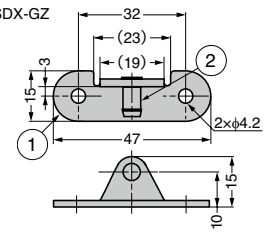
NSDX-CZ



NSDX-AZ



NSDX-GZ

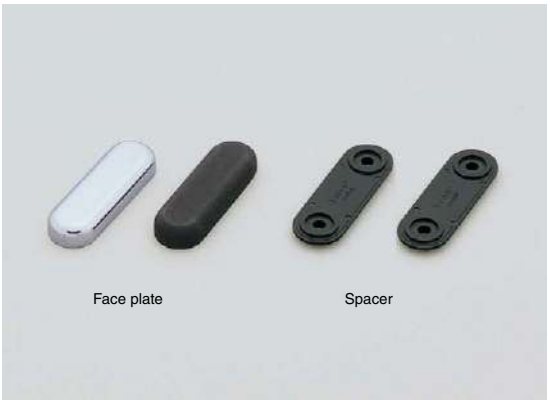


No.	Part Name	Material	Finish
①	Mounting Plate	Steel (SPCC)	Nickel
②	Shaft	Steel (SWCH)	
③	Truss Head Screw (M4×5)		

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
GT	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
GT	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame	11	160	640
GT	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

SDS FACE PLATE AND SPACER FOR GLASS DOOR SDS-50G

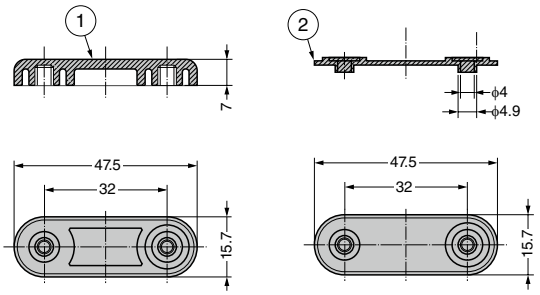
TEMPERED GLASS



- Glass door face plate for SDS and NSDX.

[Parts Included]

- Countersunk head screw M4×14 (2 pcs)



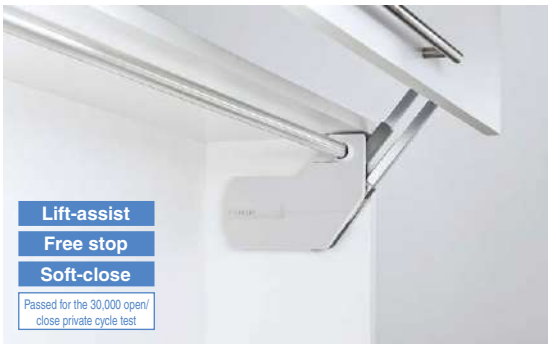
Face plate Spacer

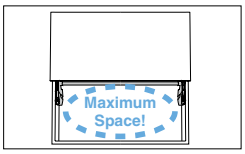
No.	Part Name	Material	Finish	Carton
①	Face Plate	Zinc Alloy (ZDC)	Chrome (CR), Black (BL)	1 pc
②	Spacer	ABS	Black	2 pcs

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	180-100-260	SDS-50G-CR	25	50	200
GT	3D	180-928-046	SDS-50G-BL		50	200

SWING LIFT-UP STAY SLU-ELAN

Lapcon INSTRUCTION



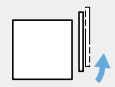


[3 Functions in 1 Stay]

●Lift-assist

Can open the door with a slight force.

Fig. 1

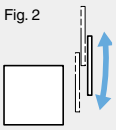


●Free stop

Door can be stopped in any position.

※The operating range varies slightly depending on the door size and weight.

Fig. 2



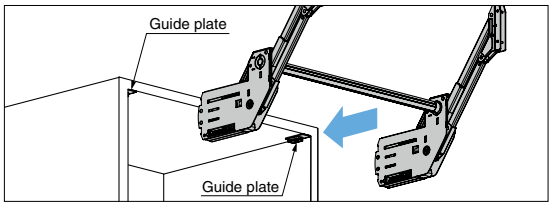
●Soft-close

Door closes slowly even if you release your hands from the door.

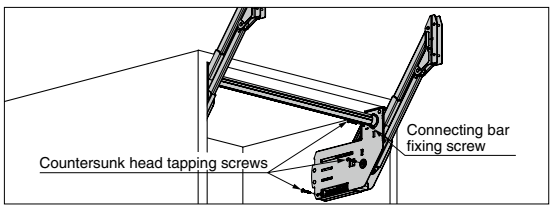
※The operating range varies slightly depending on the door size and weight.

Fig. 3

[Easy Installation] Fig.4 ※1 connecting bar (sold separately) is necessary for 1 set of stay.

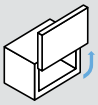


Install on left and right sides of top board bottom after aligning the guide plate with internal surface and edge of cabinet. Installation position is determined by inserting the main body with the main body and connecting bar temporarily assembled.



Fix the main body to cabinet with countersunk head tapping screws (included). Tighten connecting bar fixing screws (left and right sides).

Refer to 1 : P.293, 2 : P.371

Opening Direction	Description	Item Name	Door Width	Door Height	Door Weight※
 Lift-Up	Lift-assist Free stop Soft-close	SLU-ELAN-S4	Max. 1800	390~500	5~6.5 kg
		SLU-ELAN-L4			6.5~8 kg
		SLU-ELAN-M4			8~9.5 kg
		SLU-ELAN-H4			9.5~11 kg

※ Door weight includes handle.

- ●Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig. 1).
  - ・Door can be stopped in any position (see Fig. 2).
  - ・Door closes slowly even if you release your hands from the door (see Fig. 3).
- ●Door can be opened and closed smoothly regardless of handle position.
- ●Installed on the bottom of cabinet top board for maximum space inside the cabinet, not even affecting the shelf mounting.
- ●Installation position of the main body can be easily determined (see Fig.4).
- ●Mounting plate can be quickly attached to the main body (see Fig.5).

[Specifications]

●Operating temperature: 0℃~40℃

[Remarks]

- ●Be sure to read the "Cautions" 1.
- ●1 connecting bar (sold separately) is necessary for 1 set of stay.
- ●Use in pairs.
- ●Never push down the arm of single stay before installation.
- ●Do not open the door further in fully opened position. And do not roughly.

[Parts Included]

- ●Mounting plate (2 pcs)
- ●Guide plate (2 pcs)
- ●Countersunk head tapping screw 3.5×38 (6 pcs) for main body
- ●Binding head tapping screw 3.5×15 (6 pcs) for mounting plate

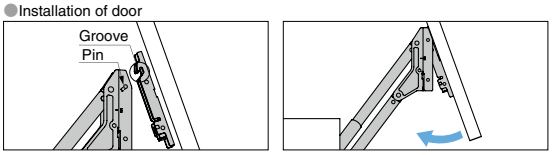
[Sold Separately]

- ●Connecting bar ELB 2

Video Link

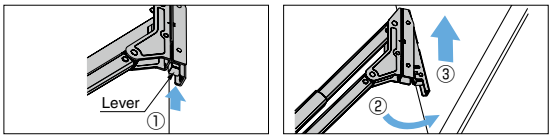
[Installation and Removal of Door] Fig. 5

●Installation of door

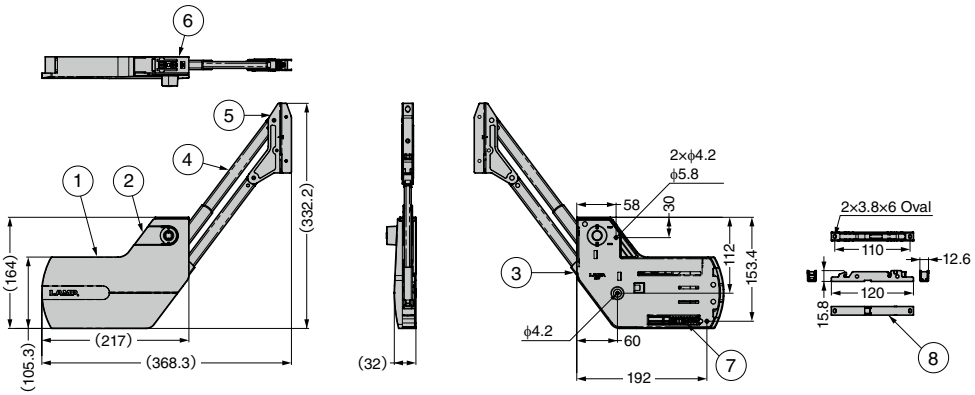


Hang the groove at the tip of mounting plate on the pin of main body, and then push the door along the arrow with a click feeling.

●Removal of door

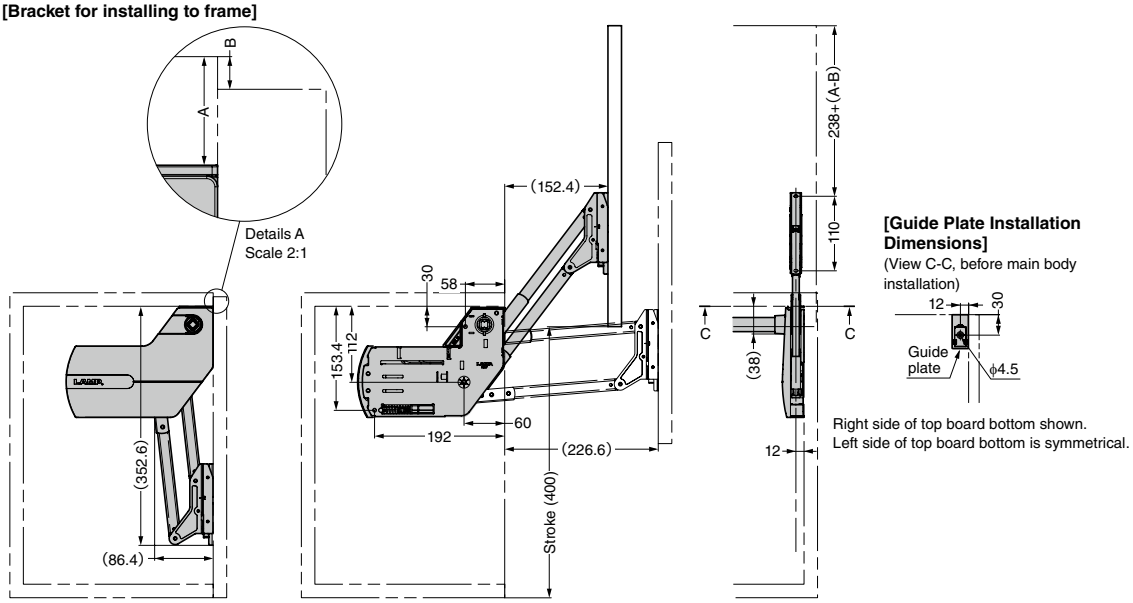


Lift the door along ② arrow while pushing the lever along ① arrow, and then move the door along ③ arrow to detach.



No.	Part Name	Material	Finish/Colour
①	Body Cover	ABS	Light Grey
②	Side Cover		
③	Main Body	Steel (SECC)	–
④	Arm	Aluminium Alloy	Anodised
⑤	Mounting Plate Body	Steel (SPCC)	Nickel
⑥	Guide Plate	POM	Dark Grey
⑦	Damper	–	–
⑧	Mounting Plate	Steel (SPCC)	Nickel

[Bracket for installing to frame]



For vertical continuous doors, the gap from upper door should be 3mm or more (for door thickness 16~22mm).

[Body] 1 set

This product is sold as 1 set. The order quantity is "1", which includes one piece for the left side and one for the right side.

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height※1	Door Weight kg※2	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-022-312	SLU-ELAN-S4	Steel/ ABS	Nickel/ Light Grey	Max. 1800	390~500	5~6.5	2491	5	–
G	3D	180-022-313	SLU-ELAN-L4					6.5~8	2542	5	–
G	3D	180-022-314	SLU-ELAN-M4					8~9.5	2581	5	–
G	3D	180-022-315	SLU-ELAN-H4					9.5~11	2631	5	–

※1 Cabinet inside height is Min. 360 mm. ※2 Door weight includes handle.

[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Cabinet Inside Width※3	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-022-319	ELB-480	Aluminium Alloy	Anodised	556~566	181	10	–
G	3D	180-022-320	ELB-780			856~866	294	10	–
G	3D	180-022-321	ELB-1080			1156~1166	407	10	–
G	3D	180-022-322	ELB-1380			1456~1466	520	10	–
G	3D	180-026-323	ELB-1680			1756~1766	633	10	–

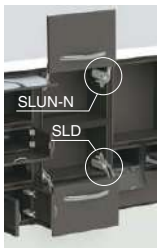
※3 For other cabinet inside widths, the bar can be cut on site (connecting bar length = cabinet inside width - 80mm).

SWING LIFT-UP STAY SLUN-N

Lapcon INSTRUCTION

Opening Direction	Item Name	Description	Door Width	Door Height	Door Weight
Lift-up	SLUN-3N	Lift-assist Soft-close	600 ~900	390 ~450	2.8~3.8 kg
	SLUN-4N				3.8~4.8 kg
	SLUN-5N				4.8~5.8 kg

- Patented Lapcon mechanism helps open and close the door smoothly.
- Spring mechanism assists opening the door lightly when it is opened outwards by 50~70mm.
- Damper provides smooth and soft closing.
- Installed on the bottom of cabinet top board for maximum space inside the cabinet.



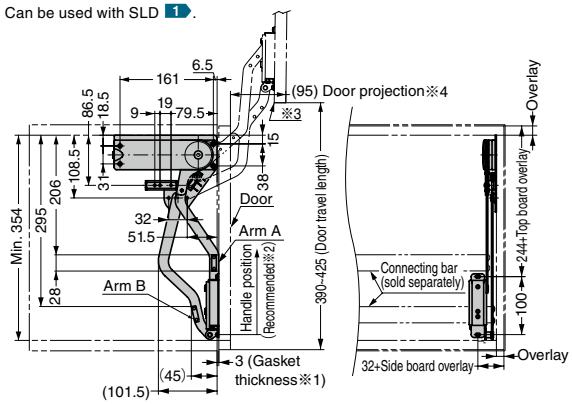
[Parts Included]
- Binding head tapping screw 3.5×15 (for main body)
- Countersunk head tapping screw 3.5 × 20 (for damper)
- Truss head tapping screw 4.5 ×12 (for connecting bar)

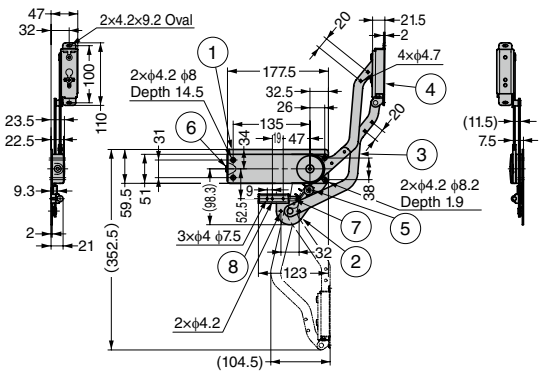
[Sold Separately]
- Connecting bar SLUB (below)

[Specifications]
- Operating temperature: 5℃~35℃

[Remarks]
- Be sure to read the "Cautions" 2.
- 1 connecting bar (sold separately) is necessary for 1 set of stay. Install 2 pcs to ensure lateral strength.
- For glass door, the frame width needs 75mm or more.
- Be sure to install a handle (sold separately) in the middle of door width. For easy door opening, install the handle above the bottom edge of door side mounting plate (see ※2 in the figure below).
- Used in pairs.

Can be used with SLD 1.





[Installation]

※1: Dimension with gasket attached on door. Without gasket, shift stay installation position towards back panel side by 3mm.
※2: Install handle above the bottom edge of door side mounting plate as shown above.
※3: If door height is 425mm or more, lower part of door will cover cabinet top board when door is fully opened.
※4: Maximum door projection is 267mm.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	Grey
②	Mounting Plate	Steel (SPCC)	Chrome
③	Arm		
④	Mounting Plate		
⑤	Stopper	EPDM	Black
⑥	Adjustment Screw	Steel (SWCH)	Tin Cobalt Plating
⑦	Damper Core	POM	–
⑧	Damper Holder	PA	

[Body] 1 set

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height	Door Weight kg	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-020-832	SLUN-3N	ABS/ Steel	Chrome/Grey	600~900	390~450	2.8~3.8	1972	5	–
G	3D	180-020-833	SLUN-4N					3.8~4.8	1967	5	–
G	3D	180-020-834	SLUN-5N					4.8~5.8	2012	5	–

[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Mounting Position	Length of Connecting Bar for Cabinet Overall Width 600	Length of Connecting Bar for Cabinet Overall Width 900	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-120-287	SLUB-535	Aluminium Alloy	Anodised	Arm A	535	–	191	10	–
G	3D	180-104-088	SLUB-551			Arm B※	551		196	10	–
G	3D	180-120-288	SLUB-835			Arm A	–	835	308	10	–
G	3D	180-100-131	SLUB-851			Arm B※		851	312	10	–

※ If the centre part of door is glass etc., install the connecting bar on arm B to make it inconspicuous.

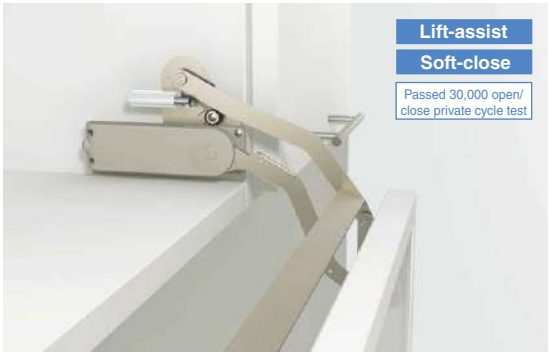
Refer to 1 : P.373, 2 : P.293

- 2 types of connecting bars are available for cabinet overall width 600mm and 900mm.
- Dimensions in the left table are for standard products with side board thickness of cabinet 15mm. If the side board thickness is over 15mm, the connecting bar should be cut according to the below formula.

Arm A: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 35
Arm B: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 19

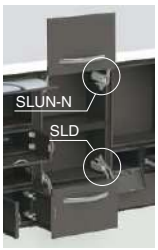
SWING DOWN STAY SLD

Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Door Width	Door Height	Door Weight
Lift-down	SLD-3	Lift-assist Soft-close	600 ~900	360 ~400	3~4 kg
	SLD-4				4~5 kg
	SLD-5				5~6 kg

- Patented Lapcon mechanism helps open and close the door smoothly.
- Unique swing down mechanism holds the door in fully opened position.
- Damper provides smooth and soft closing.
- Installed on the top of cabinet bottom board for maximum space inside the cabinet.



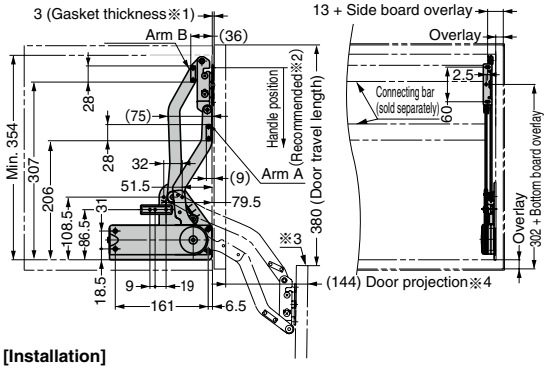
[Parts Included]
- Binding head tapping screw 3.5×15 (for main body)
- Countersunk head tapping screw 3.5 × 20 (for damper)
- Truss head tapping screw 4.5 ×12 (for connecting bar)

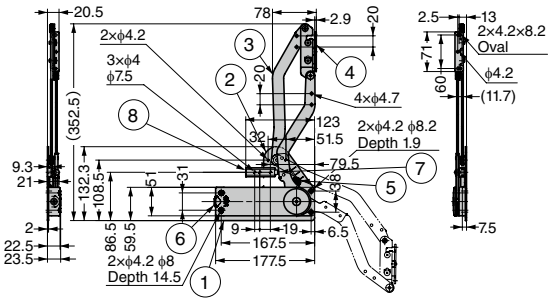
[Sold Separately]
- Connecting bar SLUB (below)

Can be used with SLUN-N 1 .

[Specifications]
- Operating temperature: 5℃~35℃

[Remarks]
- Be sure to read the "Cautions" 2 .
- 1 connecting bar (sold separately) is necessary for 1 set of stay.Install 2 pcs to ensure lateral strength.
- For glass door, the frame width needs 45mm or more.
- Be sure to install a handle (sold separately) in the middle of door width. For easy door opening, install the handle below the top edge of door mounting Plate (see ※2 in the figure below).
- Used in pairs.





[Installation]

※1: Dimension with gasket attached on door. Without gasket, shift stay installation position towards back panel side by 3mm.
※2: Install handle below the top edge of door side mounting Plate as shown above.
※3: If door height is 380mm or more, upper part of door will cover cabinet bottom board when door is fully opened.
※4: Maximum door projection is 242mm.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	Grey
②	Mounting Plate	Steel (SPCC)	Chrome
③	Arm		
④	Mounting Plate		
⑤	Stopper	POM	Black
⑥	Adjustment Screw	Steel (SWCH)	Tin Cobalt Plating
⑦	Damper Core	POM	–
⑧	Damper Holder	PA	

[Body] 1 set

This product is sold as 1 set. The order quantity is "1", which includes one piece for the left side and one for the right side.

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height	Door Weight kg	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-020-848	SLD-3	ABS/Steel	Chrome/Grey	600~900	360~400	3~4	1900	5	–
G	3D	180-020-849	SLD-4					4~5	1900	5	–
G	3D	180-020-850	SLD-5					5~6	1980	5	–

[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Mounting Position	Length of Connecting Bar for Cabinet Overall Width 600	Length of Connecting Bar for Cabinet Overall Width 900	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-120-287	SLUB-535	Aluminium Alloy	Anodised	Arm A	535	–	191	10	–
G	3D	180-104-088	SLUB-551			Arm B※	551		196	10	–
G	3D	180-120-288	SLUB-835			Arm A	–	835	308	10	–
G	3D	180-100-131	SLUB-851			Arm B※		851	312	10	–

※If the centre part of door is glass etc., install the connecting bar on arm B to make it inconspicuous.

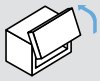
Refer to 1 : P.372, 2 : P.293

- 2 types of connecting bars are available for cabinet overall width 600mm and 900mm.
- Dimensions in the left table are for standard products with side board thickness of cabinet 15mm. If the side board thickness is over 15mm, the connecting bar should be cut according to the below formula.

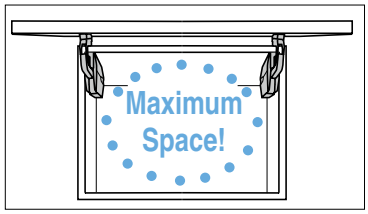
Arm A: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 35
Arm B: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 19

LIFT-ASSIST STAY EZS-ELAN®

Lapcon INSTRUCTION

Opening Direction	Description	Door Width	Door Height	Door Weight※
 Up & Over	Lift-assist Free stop Soft-close	Max. 1200	500~750	5~12.5 kg

※ Door weight includes handle.



Slim design maximises space inside of the cabinet.

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - Door can be opened with a slight force (see Fig. 1).
  - Door can be stopped in any position in the range of about 30˚ to 70˚ (see Fig.2).
  - Door closes slowly in the range of about 0˚ to 20˚ (see Fig.3).
- Installed on the bottom of cabinet top board for maximum space inside the cabinet.
- No hinges and connecting bar required for installation.
- Installation position of the main body is determined simply by aligning to the bottom surface of top board and cabinet edge (see Fig.4).
- Mounting plate can be quickly attached to the main body (see Fig.5).
- Torque adjustment according to the door weight is unnecessary.

[3 Functions in 1 Stay]

●Lift-assist

Door can be opened with a slight force.

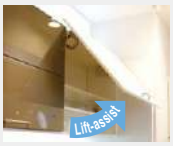
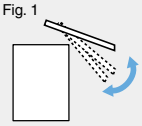


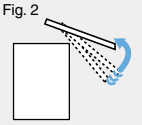
Fig. 1



●Free stop

Door can be stopped in any position in the range of about 30˚ to 70˚ .

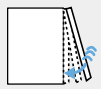
Fig. 2



●Soft-close

Door closes slowly in the range of about 0˚ to 20˚ even if you release your hands from the door.

Fig. 3



[Specifications]

- Operating temperature: 0℃~40℃

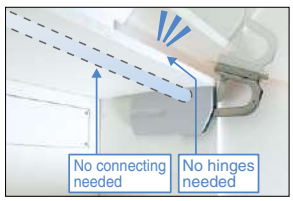
[Remarks]

- Be sure to read the "Cautions" 1.
- Used in pairs.
- Never push down the arm of single stay before installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

[Parts Included]

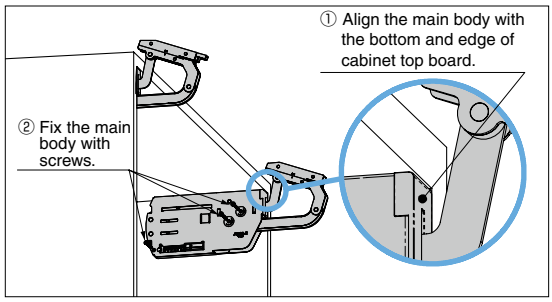
- Mounting plate
- Countersunk head tapping screw 3.5×38 (for main body)
- Binding head tapping screw 3.5×15 (for mounting plate)

Video Link



No need to install connecting bar and hinge separately, maximising space inside of the cabinet.

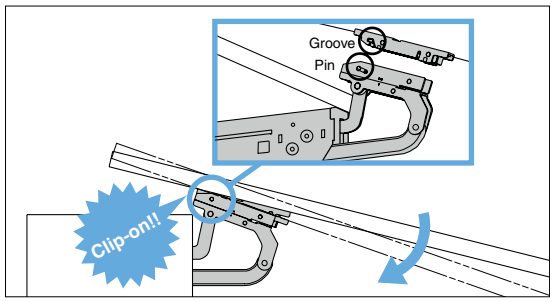
[Easy Installation] Fig.4



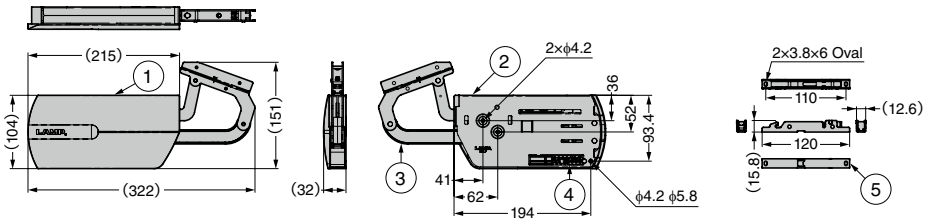
Installation position is determined simply by pressing the main body against the bottom surface of top board and aligning the surface indicated by ① with cabinet edge.

Refer to 1 : P.293

[Quick Door Installation] Fig.5

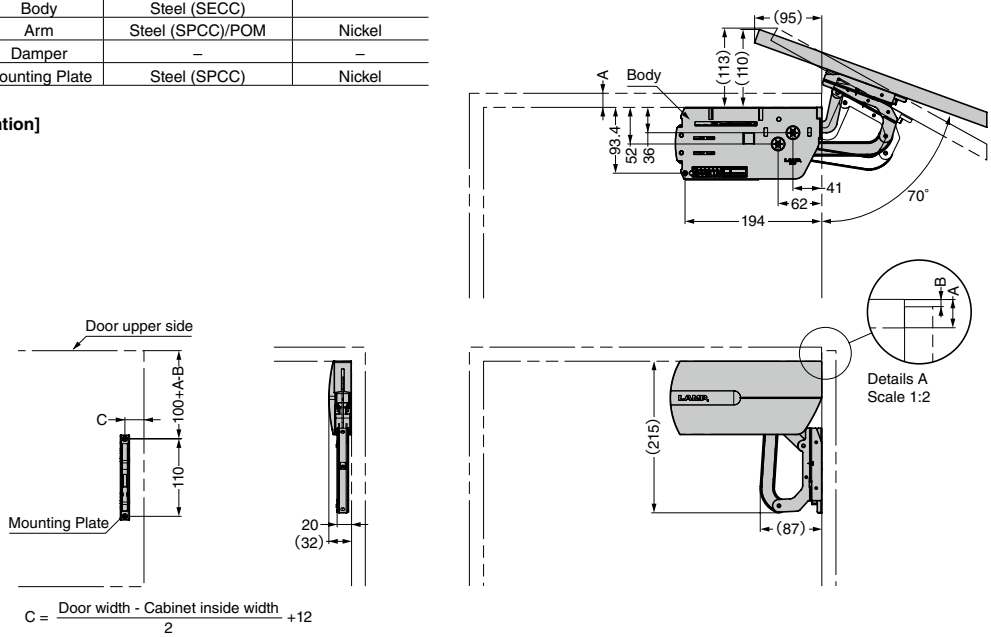


To install the door, simply hook the pin of main unit to the groove of mounting plate and lower the door until it clicks in place.



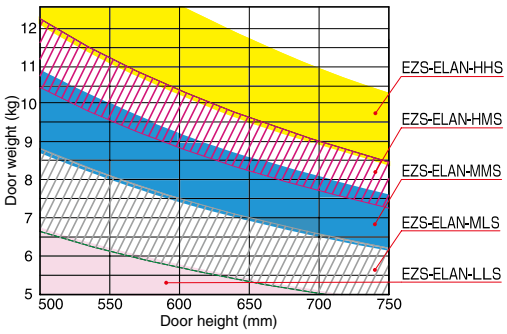
No.	Part Name	Material	Finish
①	Body Cover	ABS	–
②	Body	Steel (SECC)	
③	Arm	Steel (SPCC)/POM	Nickel
④	Damper	–	–
⑤	Mounting Plate	Steel (SPCC)	Nickel

[Installation]



$$C = \frac{\text{Door width - Cabinet inside width}}{2} + 12$$

[Door Size Range]



Refer to the left graph or the following as a guide for model selection.

1. Calculation of lifting power

Lifting power = Door height [mm]×(Door weight [kg] - 1)

Door size

Door width: Max. 1200mm
Door height: 500~750 mm
Door weight: 5~12.5 kg

※ Confirm the movement with actual item if lifting power is at the upper or lower limit of each model.
※ Door weight includes handle.

2. Applicable models

Liftting Power	Model
1900~2860	EZS-ELAN-LLS
2820~3900	EZS-ELAN-MLS
3850~4950	EZS-ELAN-MMS
4700~5600	EZS-ELAN-HMS
5550~6930	EZS-ELAN-HHS

[Body] 1 set

This product is sold as 1 set. The order quantity is "1", which includes one piece for the left side and one for the right side.

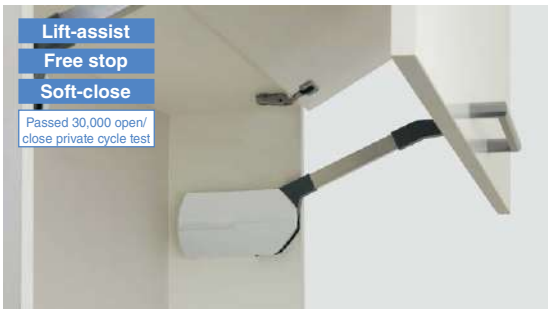
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-018-903	EZS-ELAN-LLS	Steel/ABS	Nickel/Light Grey	2245	1	5
G	3D	180-018-904	EZS-ELAN-MLS			2316	1	5
G	3D	180-018-905	EZS-ELAN-MMS			2387	1	5
G	3D	180-018-906	EZS-ELAN-HMS			2431	1	5
G	3D	180-018-907	EZS-ELAN-HHS			2475	1	5

[Cover] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-018-983	EZS-ELAN-COVER	ABS	Light Grey	160	1	5

BI-FOLD LIFT-ASSIST STAY HBF-ELAN

Lapcon INSTRUCTION



Opening Direction	Description	Door Width	Door Height	Door Weight
Bi-folding	Lift-assist Free stop Soft-close	Max. 1200	320~370	2.5~6.5 kg

Values above are for 1 bi-fold door.

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig. 1).
  - ・Door can be stopped in any position in the range of about 50˚ to fully opened position (see Fig.2).
  - ・Door closes slowly in the range of about 0˚ to 40˚ even if you release your hands from the door (see Fig.3).
- Opening angle can be easily adjusted according to hinge used (see Fig.4).
- Quick installation due to innovative vertical adjustment function of mounting plate (see Fig.5~7).
- Easy installation by using supplied template.

[3 Functions in 1 Stay]

Lift-assist
Door can be opened with a slight force.

Fig. 1

Free stop
Door can be stopped in any position in the range of about 50˚ to fully opened position.

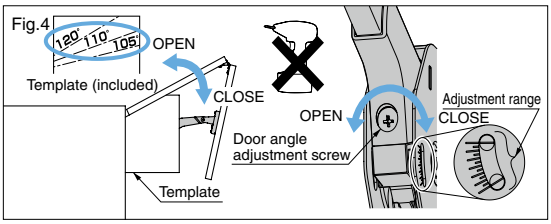
Fig. 2

Soft-close
Door closes slowly in the range of about 0˚ to 40˚ even if you release your hands from the door.

Fig. 3

[Multiple Adjustments]

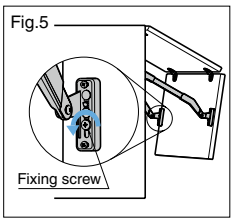
Fig.4



Place the template folded at the opening angle position of hinge against the hinge side of cabinet, and then turn the door angle adjustment screw to match the opening angle with the template.

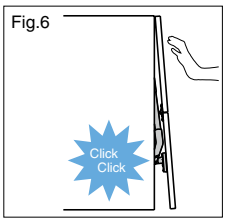
[Vertical Adjustment of Mounting Plate]Quick installation possible

Fig.5



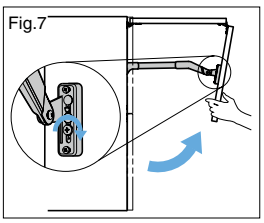
Loosen the fixing screws of the left and right mounting plates.

Fig.6



Press the upper door until the door is closed, then the mounting plates is adjusted to the appropriate position with a click sound.

Fig.7



Grasp the lower part of the lower door, slowly open the door, and then tighten the fixing screws of the left and right mounting plates.

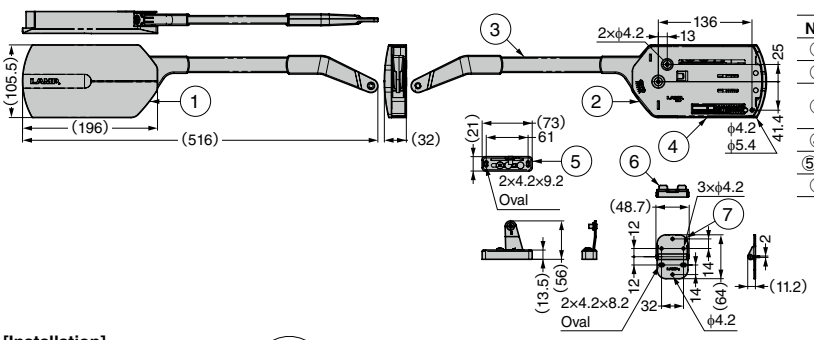
Refer to 1 : P.293

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the “Cautions” 1.
- Never push down the arm of single stay before installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.
- Hinges not included. Customer should provide concealed hinges (without catch) or single knuckle hinges.
- Specified range of movement and door weight slightly vary depending on the type of hinge used (concealed hinge or piano/butt hinge).Confirm with actual item before use.
- Two centre hinges connecting the upper door and the lower door are included.
- For easy door opening, recommended to install the handle above the centre of the lower door mounting plate.
- Use in pairs.

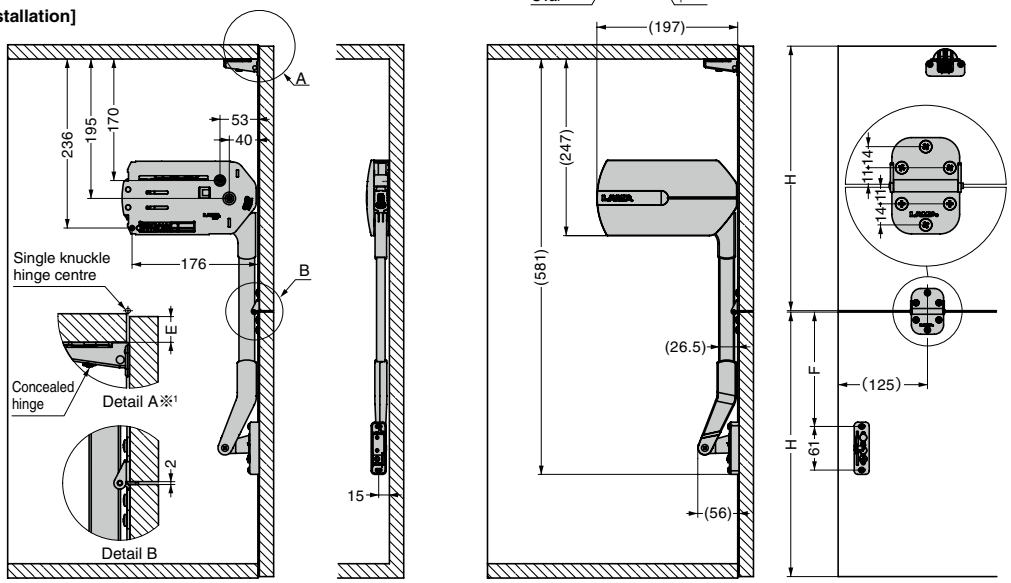
Video Link

[Parts Included]
- Mounting plate
- Centre hinge
- Paper template
- Countersunk head tapping screw 3.5×38 (for main body)
- Binding head tapping screw 3.5×15 (for centre hinge)
- Binding head tapping screw 3.5×27 (for mounting plate)
- Truss head screw M4×5 (for mounting plate)



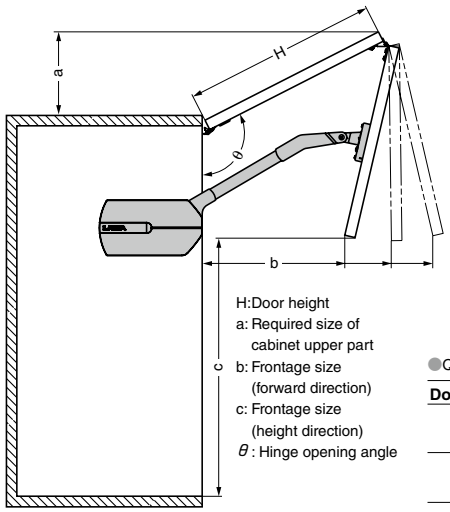
No.	Part Name	Material	Finish/Colour
①	Body Cover	ABS	–
②	Body	Steel (SECC)	
③	Arm	Aluminium Alloy/ABS	Anodised
④	Damper	–	–
⑤⑥	Mounting Plate	Steel (SPCE)	Nickel
⑦	Centre Hinge	Steel (SPCC)	

[Installation]



※1 Concealed hinge or piano/butt hinge not included.

F = 512 + E (Overlay) - H (Door height)



H:Door height
a: Required size of cabinet upper part
b: Frontage size (forward direction)
c: Frontage size (height direction)
θ: Hinge opening angle

[With concealed hinge]

●Hinge opening angle and door position

Opening Angle θ	Door Height H	a	b	c
105°	320	58	364	341
	350	65	348	373
	370	69	314	399
110°	320	85	364	369
	350	93	344	402
	370	99	303	431
120°	320	134	359	424
	350	148	330	459
	370	157	270	492

●Qty of Concealed Hinges

Door Weight kg	Door Width	Qty
2.5~5.5	~900	2 pcs
	900~1200	
5.6~6.5	~900	3 pcs
	900~1200	

[With single knuckle hinge]

●Hinge opening angle and door position

Opening Angle θ	Door Height H	a	b	c
120°	320	167	351	452
	350	181	313	490
110°	370	131	289	461

※When using single knuckle hinge, use the template (included) and adjust so that the opening angle θ of the hinge becomes 120 ° or less (see Fig. 4).

[Body]1 set Values below are for 1 door (bi-fold door). 2 doors are necessary for 1 cabinet.

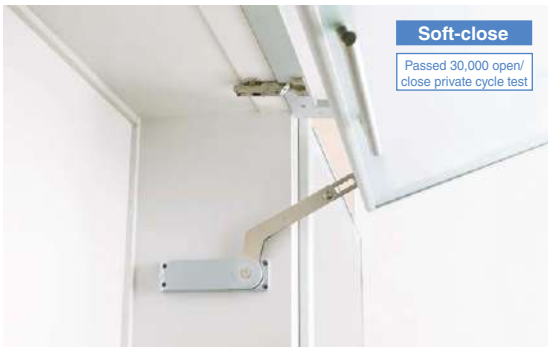
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height※2	Door Weight kg※3	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-024-608	HBF-ELAN-LL	Aluminium Alloy/ ABS	Anodised/ Light Grey	Max. 1200	320~370	2.5~3.3	2245	1	5
G	3D	180-024-609	HBF-ELAN-ML					3.3~4.1	2316	1	5
G	3D	180-024-610	HBF-ELAN-MM					4.1~4.9	2387	1	5
G	3D	180-024-611	HBF-ELAN-HM					4.9~5.7	2431	1	5
G	3D	180-024-612	HBF-ELAN-HH					5.7~6.5	2475	1	5

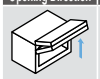
For supplied centre hinge (2 pcs), use 2 pcs regardless of door width.

※2 Cabinet inside height is Min. 600mm. ※3 Door weight includes handle.

HORIZONTAL BI-FOLDING UNIT HBFN

Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight
 Bi-folding	HBFN-(2~4)M	Soft-close	450~900	320~370	17~20	2.5 ~ 5.5 kg

- Patented Lapcon mechanism controls door closing softly and smoothly.
- Designed to hold the door in closed and opened position.
- Mounting plates (sold separately) suitable for 20mm and 45mm aluminium frames are available.

[Specifications]

- Operating temperature: 5℃~35℃

[Remarks]

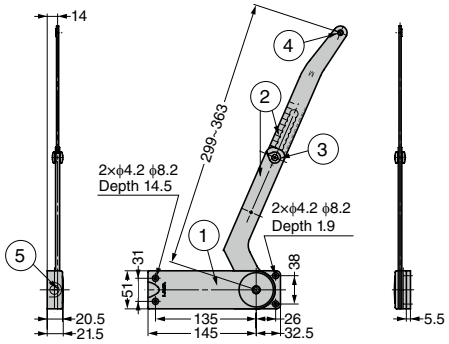
- Be sure to read the "Cautions" 1.
- 1 set of stays needs 1 set of mounting plates (sold separately).
- Hinges used for installing door to cabinet are not included. Customer should provide concealed hinges (overlay type, opening angle 105°).
- Two offset hinges used for connecting upper door and lower door are included.Order additionally if door width exceeds 600mm.
- For easy door opening, recommended to install the handle above the centre of the lower door mounting plate.

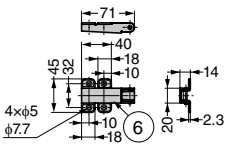
[Parts Included]

- Center hinge HBFN-CH (2 pcs)
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting plate HBFN-SZ, HBFN-AZ-S 2





No.	Part Name	Material	Finish/Colour
①	Body	ABS	–
②	Arm	Steel (SPCC)	Nickel
③	Adjustment Dial	Zinc Alloy (ZDC)	
④	Sleeve	POM	Natural
⑤	Adjustment screw	Steel (SWCH)	Tin Cobalt Plating
⑥	Center hinge	Steel (SPCC)	Nickel

[Center Hinge] 2 pcs supplied with the main body. Order additionally for door width more than 600mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	180-099-941	HBFN-CH	Steel	Nickel	64	40	160

[Body] 1 set ※ Values below are only for 1 door. 2 doors are necessary for 1 cabinet.

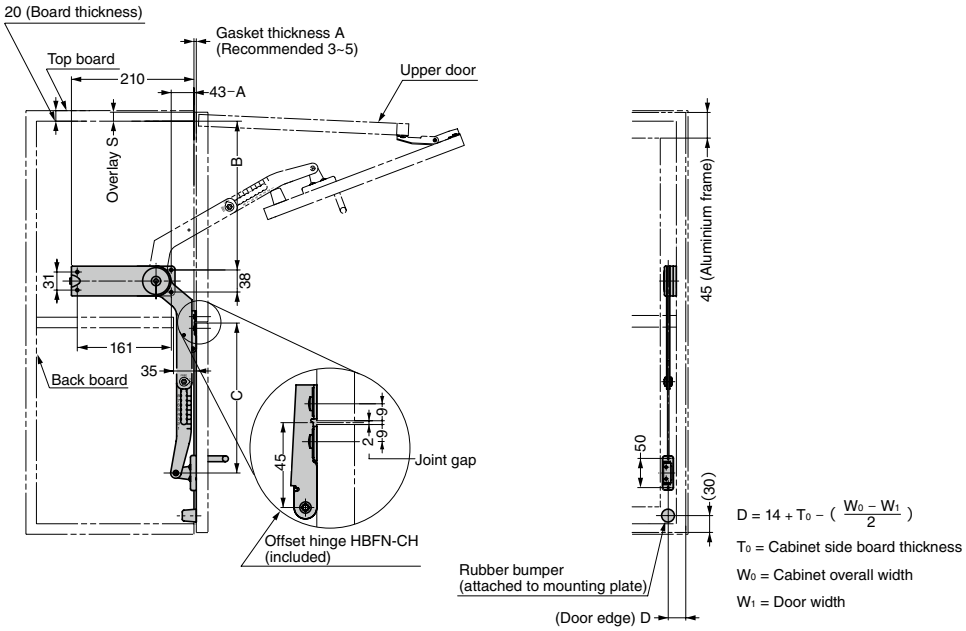
RoHS	CAD	Item Code	Item Name	Arm Size	Door Width	Door Height	Door Thickness	Door Weight kg	θ	L	t	Weight (g)	Box (sets)	Carton (sets)
G	CAD	180-109-615	HBFN-2M	M	450~900	320~370	17~20	2.5~3.5	171°	299~363	14	1500	10	–
G	CAD	180-109-616	HBFN-3M					3.5~4.5				1500	10	–
G	CAD	180-109-617	HBFN-4M					4.5~5.5				1600	10	–

Refer to 1 : P.293, 2 : P.379

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

[Installation]

※Dimensions for door with gasket shown. Without gasket, shift main body installation position towards back panel side by gasket thickness A.



[Installation Dimensions]

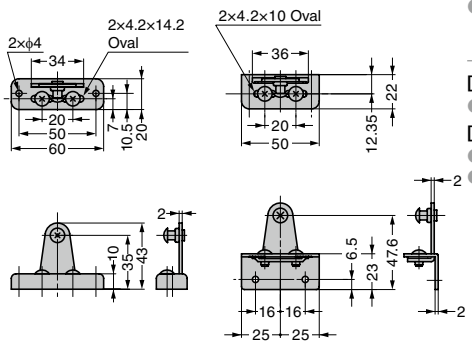
Door Height	Upper Opening Angle 90°			Upper Opening Angle 105°		
	Arm Adjustment Position	B	C	Arm Adjustment Position	B	C
320	1	247–S	241	4	226–S	244
330	2	252–S	244	5	234–S	250
340	3	258–S	248	6	243–S	257
350	4	263–S	251	7	251–S	263
360	5	269–S	255	8	259–S	269
370	6	274–S	258	9	267–S	275

ARM MOUNTING PLATE FOR HBFN HBFN-SZ, HBFN-AZ-S

INSTRUCTION

HBFN-SZ

HBFN-AZ-S (made to order)



HBFN-SZ

HBFN-AZ-S (made to order)

- For wooden doors and aluminium frame doors. Only for HBFN.

[Remarks]

- Sold in sets.

[Parts Included]

- Truss head screw M4×6
- Countersunk head tapping screw 3.5×25

RoHS	CAD	Item Code	Item Name	Application	Material	Finish	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-109-618	HBFN-SZ	For 45 mm or more Aluminium Frame Door / Wooden Door	Steel/ Rubber	Nickel	44	50	–
–	3D	–	☆HBFN-AZ-S	For 20mm Aluminium Frame Door			52	–	–

☆Made to order.

OVER THE TOP FLIPPER DOOR MECHANISM (W/ SOFT CLOSING) OV-1

Lapcon INSTRUCTION

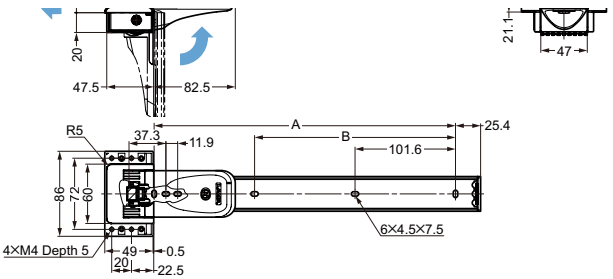
Opening Direction	Description	Door Width	Door Height	Door Thickness	Door Weight
Over the Top	Soft-close	700~1400	350~450	Min. 20	3~5 kg

- Patented Lapcon technology provides a smooth and quiet motion.
- Prevents from slamming shut.
- Adjustable closing speed.

[Remarks]
- 2 pcs of OV1-MBP-BL-TRN-N2 (Main body) and 2 pcs of OV-SLP RN (Rail) are necessary for 1 cabinet.

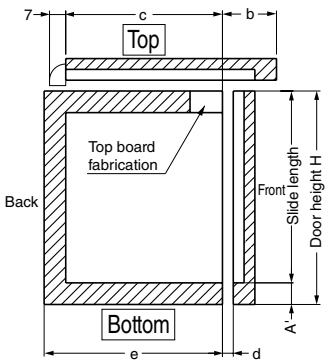
[Parts Included]
- Installation plate (4 pcs)
- Countersunk head screw M4×26 for wooden door (8 pcs)
- Binding head screw M4×8 for metal door (8 pcs)
- Binding head tapping screw 4×10 for rail installation (12 pcs)

Video Link

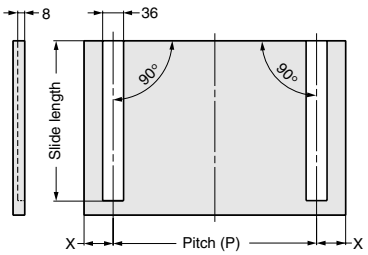


[Cut Out Dimensions]

Cabinet dimensions

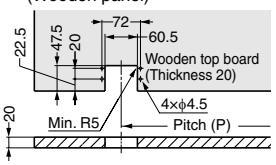


Door fabrication

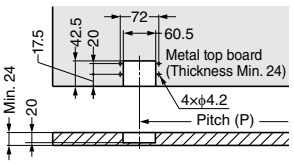


Top board fabrication

(Wooden panel)



(Sheet metal)



	b	c	d	e
Wooden Top Board	A'+82.8	H-b	3,1	Min. c+7
Metal Top Board	A'+87.8		8.1	

	X
Inset Application	80
Overlay Application	Side Board Thickness+80

[Main Body] 2 pcs are necessary for 1 cabinet.

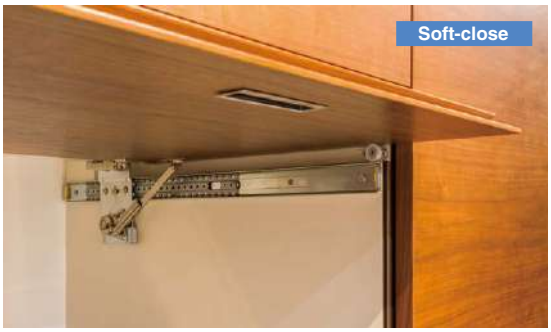
RoHS	CAD	Item Code	Item Name	Material	Colour	Door Width	Door Height	Door Thickness	Door Weight kg	Torque Moment N·m	Torque Moment kgf·cm	Weight (g)	Carton (pcs)
–	CAD	180-109-206	OV1-MBP-BL-TRN-N2	Steel & Plastic	Black	700~1400	350~450	Min. 20	3~5	5.9~9.8	60~100	282	40

[Rail] 2 pcs are necessary for 1 cabinet.

RoHS	CAD	Item Code	Item Name	Material	Finish	Slide Length	Travel Length	A	B	Weight (g)	Carton (pcs)
–	–	190-119-672	OV-13 SLP RN	Steel	Clear Zinc Chromate	330.2	222.4	279.4	177.8	270	20
–	–	190-119-673	OV-14 SLP RN			355.6	247.8	304.8	203.2	287	20
–	–	190-119-674	OV-15 SLP RN			381	273.2	330.2	228.6	310	20
–	–	190-119-675	OV-16 SLP RN			406.4	298.6	355.6	254	322	20

INSET RECEDING DOOR MECHANISM (W/ SOFT CLOSING) IF

Lapcon INSTRUCTION



This product is designed for inset doors. The example shown has been customised from the standard specification.

Opening Direction	Item Name	Description	Door Width	Door Thickness	Maximum Door Moment
Over the Top	IF-360S (L/R)	Soft-close	Max. 1200	15~20	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)
	IF-360W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)
	IF-H1360S (L/R)			18~30	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)
	IF-H360W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
- Prevents from slamming shut.
- Stores the door horizontally on the underside of cabinet top board.

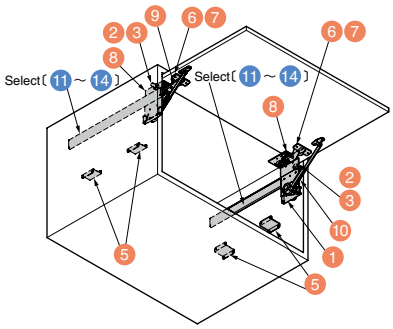
[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Ensure that the door centre of gravity is at the centre of door.
- When closing door, fully pull the door out first. Otherwise, it may cause a malfunction.

※The circled numbers shown below are part numbers. Please check with the parts list 1.



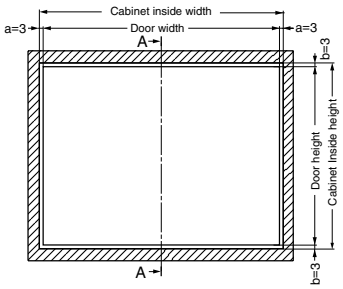
Video Link

Video Link

- 5 shown above is guard plate for preventing storage articles from contacting brackets and others.
- 7 is included in parts set d e f 1. 6 concealed hinge in d e f is not used.

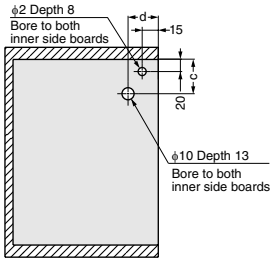
[Cut Out Dimensions]

Cabinet front

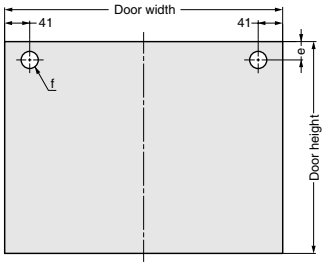


a: Clearance in the width direction (3 mm)
b: Clearance in the height direction (3 mm)

Cabinet cutaway view (A-A)



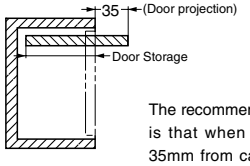
Door cut out dimensions



Item Name	c	d	e	f
IF-360SL	37.5	9.5+Door Thickness	22.5	ϕ35 Depth 11
IF-360SR				
IF-360W				
IF-H360SL	43.6		26	ϕ40 Depth 15
IF-H360SR				
IF-H360W				

[Door Storage and Recommended Door Height]

Rail \ Item Name	Door Storage		Recommended Door Height	
	IF-360SL IF-360SR IF-360W	IF-H360SL IF-H360SR IF-H360W	IF-360SL IF-360SR IF-360W	IF-H360SL IF-H360SR IF-H360W
AL-78-14	263.7+Door Thickness	260.9+Door Thickness	298.7+Door Thickness	295.9+Door Thickness
AL-78-16	314.5+Door Thickness	311.7+Door Thickness	349.5+Door Thickness	346.7+Door Thickness
AL-78-19	390.7+Door Thickness	387.9+Door Thickness	425.7+Door Thickness	422.9+Door Thickness
AL-78-24	517.7+Door Thickness	514.9+Door Thickness	552.7+Door Thickness	549.9+Door Thickness



The recommended door height is that when door protrudes 35mm from cabinet with door stored as shown on the left.

Refer to 1 : P.382

When ordering IF ●Necessary Parts ..... Parts Set + Rails

Parts Set

Necessary parts. (See page 1 for details about dimensions and description of each part in the parts set)

Refer to "[Cut Out Dimensions]" and "[Door Storage and Recommended Door Height]" in the page 2 and order the necessary parts set.

Item Code	Item Name	Parts Included									
		1 Bracket	2 Roller	3 Insert	4 Slider	5 Guard Plate	6 Hinge 360-C26-19T	7 Hinge H360-C26-26T	8 Mounting Plate	9 Soft-down Stay (Left-handed)	10 Soft-down Stay (Right-handed)
a – 3D 180-046-067	IF-360SL	2 pcs	2 pcs	2 pcs	2 pcs	4 pcs	2 pcs	–	2 pcs	1 pc	–
b – 3D 180-046-068	IF-360SR									–	1 pc
c – 3D 180-046-069	IF-360W									1 pc	1 pc
d – 3D 180-046-070	*IF-H360SL	2 pcs	2 pcs	2 pcs	2 pcs	4 pcs	2 pcs	2 pcs	2 pcs	1 pc	–
e – 3D 180-046-071	*IF-H360SR									–	1 pc
f – 3D 180-046-072	*IF-H360W									1 pc	1 pc

*Please use 7 concealed hinge H360-C26-26T (φ40) only. (Do not use 6 concealed hinge 360-C26-19T (φ35)).

[Remarks]

The hinge 6 and 7 model included in the parts set is now the OLYMPIA 360 hinge.
The parts sets have been changed as follows:

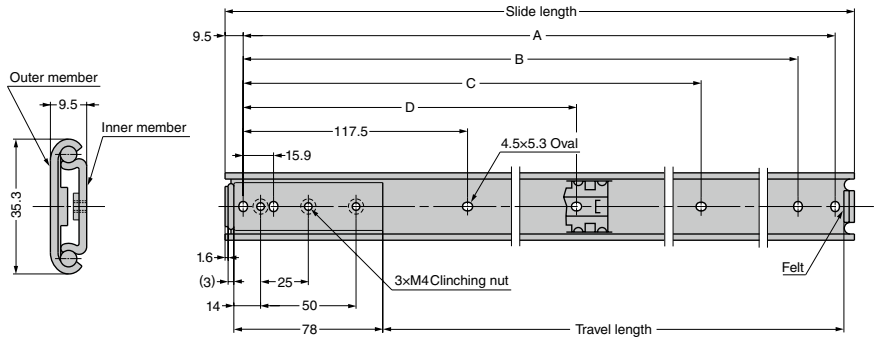
- IF-102 → IF-360
- IF-H102 → IF-H360

Rails

Necessary Parts.

2 pcs are necessary for 1 cabinet. Please refer to the figure below and order the necessary rails.

No.	Slide Length	RoHS	CAD	Item Code	Parts Name	Description
11	Slide Length 355.6 mm	G	3D	190-113-945 AL-78-14	Rail	●Material Steel ●Finish Clear Zinc Chromate
12	Slide Length 406.4 mm	G	3D	190-113-942 AL-78-16		
13	Slide Length 482.6 mm	G	3D	190-113-943 AL-78-19		
14	Slide Length 609.6 mm	G	3D	190-113-944 AL-78-24		

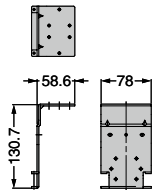
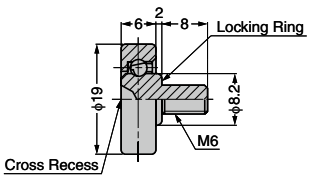
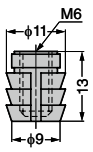
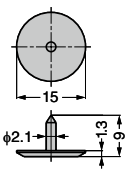
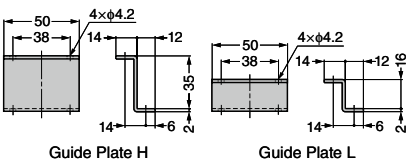
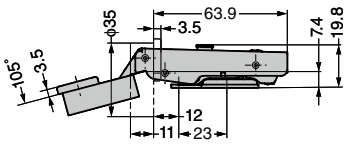
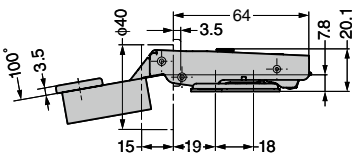


Item Name	Slide Length	Travel Length	A	B	C	D	Weight (g)
AL-78-14	355.6	267.6	336.6	320.7	219.1	–	274
AL-78-16	406.4	318.4	387.4	371.5	269.9		280
AL-78-19	482.6	394.6	463.6	447.7	346.1	231.8	350
AL-78-24	609.6	521.6	590.6	574.7	473.1	295.3	420

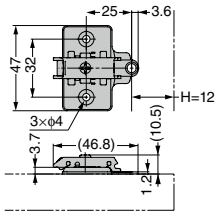
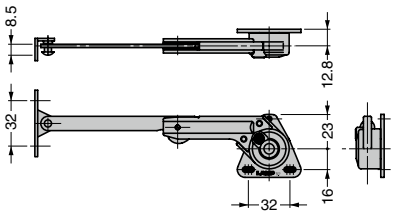
Refer to 1 : P.383, 2 : P.381

IF Parts Included

All parts except rails for item codes in 1 are in a set.

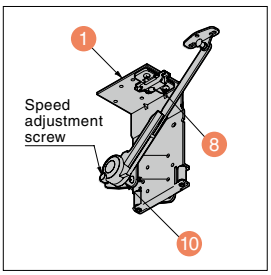
No.	Qty a	Qty b	Qty c	Qty d	Qty e	Qty f	Parts Name	Dimensions	Description
1	2 pcs			2 pcs			Bracket (For IF)		●Material Steel ●Finish Clear Zinc Chromate
2	2 pcs			2 pcs			Roller		G 3D Item Code : 210-140-587 Item Name : DR-19-B2 ●Material POM ●Colour Natural
3	2 pcs			2 pcs			Insert		G 3D Item Code : 120-041-310 Item Name : SC-107-13 ●Material PA ●Colour White
4	2 pcs			2 pcs			Slider		G 3D Item Code : 210-030-122 Item Name : F-15 ●Material POM ●Colour Natural
5	4 pcs a / b / d / e : Plate H/L (2 pcs each) c / f : Plate H (4 pcs)						Guide Plate		●Material Stainless Steel (SUS430) ●Finish Satin
6	2 pcs			2 pcs			Concealed Hinge (Body)		G 3D Item Code : 160-026-832 Item Name : 360-C26-19T ●Material Steel ●Finish Nickel
7	–			2 pcs			Concealed Hinge (Body) For Thick Door		G 3D Item Code : 160-029-078 Item Name : H360-C26-26T ●Material Steel ●Finish Nickel

Refer to 1 : P.382

No.	Qty a	b	c	d	e	f	Parts Name	Dimensions	Description
8	2 pcs			2 pcs			Mounting Plate		Item Code : 160-026-845 Item Name : 360-P4W-32T ●Material Steel ●Finish Nickel
9	1 pc	–	1 pc	1 pc	–	1 pc	Soft-down Stay		(9) Left-handed Item Code : 180-100-071 Item Name : NSDX-35LK (10) Right-handed Item Code : 180-100-072 Item Name : NSDX-35RK ●Material Steel ●Finish Nickel
10	–	1 pc	1 pc	–	1 pc	1 pc			

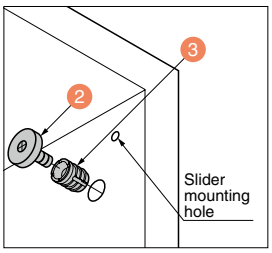
[Installation]

※The circled numbers are part numbers. Refer to the parts included 1 .



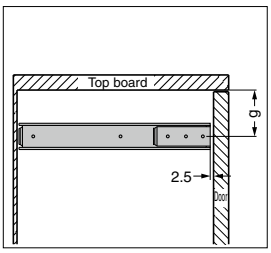
●Bracket assembling

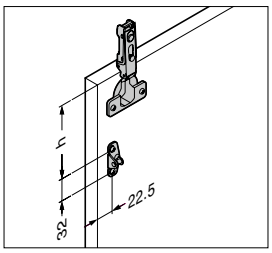
As shown left, use supplied mounting screws M4×8 and M3.5×6 to install the main body of soft-down stay NSDX-35(L/R) and mounting plate 8 (360-P4W-32T) to bracket 1, respectively.



●Parts installation to cabinet

Drive F type slider 4 (F-15) and insert 3 (SC-107-13) into mounting holes on the inner surface of cabinet side panel, respectively. Next, screw bearing roller 2 (DR-19-B2) into the insert.





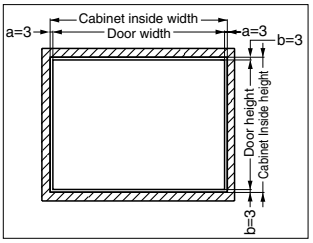
Item Name	g	h
IF-360SL	66.5	84
IF-360SR		
IF-360W		
IF-H360SL	71.5	82
IF-H360SR		
IF-H360W		

●Rail installation

Install rail at the position shown left. (Dimensions is the distance of the first hole)

●Parts installation to door

Install concealed hinge with the supplied screws (raised countersunk head tapping screws 3.5×16).Next, install the door side mounting plate of soft-down stay NSDX-35(L/R) at the position shown left with the supplied screws.

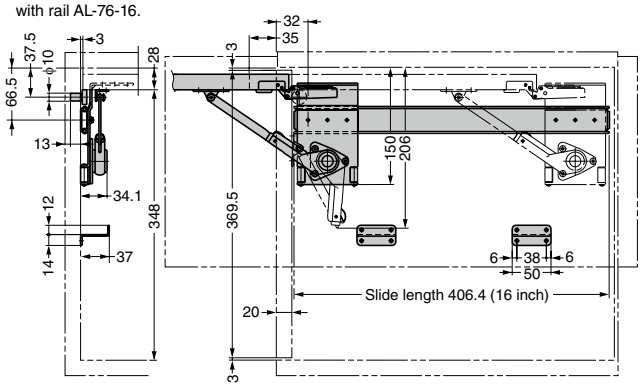


●How to adjust

1. When the door is installed to cabinet, if vertical dimensions of clearance (a) in opening direction and clearance (b) in height direction are different, make adjustment with the mounting plate adjustment screw of concealed hinge.
2. Door slowly closes under the action of soft-down stay. Adjust door closing speed with the speed adjustment screw of soft-down stay.

[Installation]

●Drawing below is an example of door thickness 20mm and using IF-360S in combination with rail AL-76-16.



Refer to 1 : P.383~P.384

DISK DAMPER UDD DIGEST

Lapcon INSTRUCTION

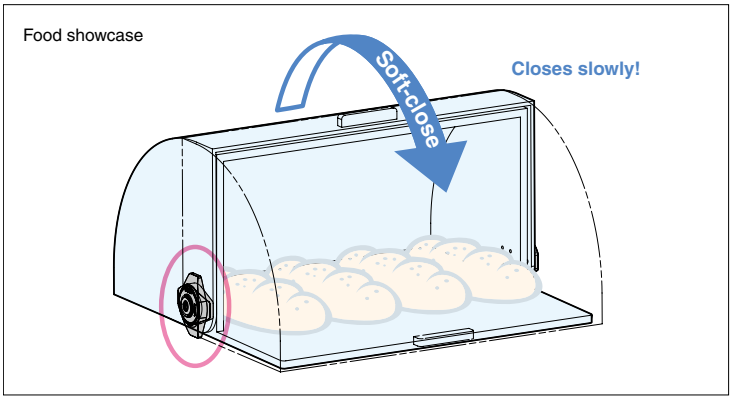
- Mounted at the rotation shaft of cover, etc.
- Simple design does not affect cabinet appearance.
- Ideal for food showcase, etc.
- Refer to 1 for details.

Video Link

Selection Tool

Sasuga-kun

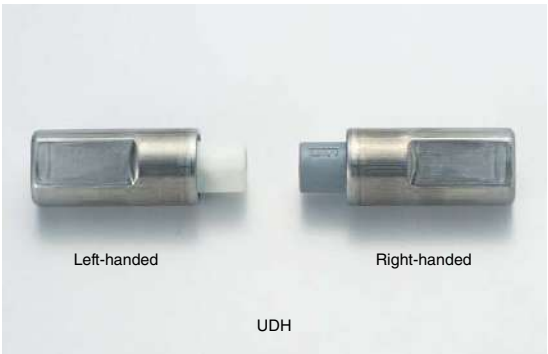
[Application Example]



Refer to 1 : P.119

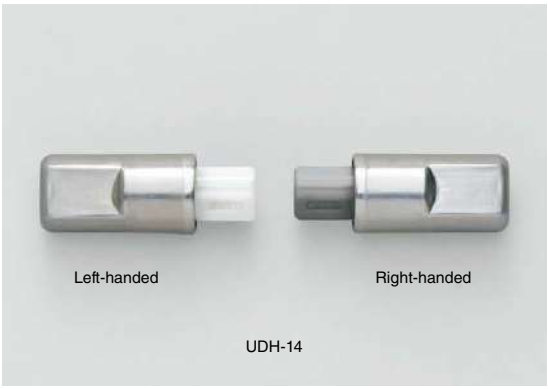
DAMPER HINGE UDH DIGEST

Lapcon

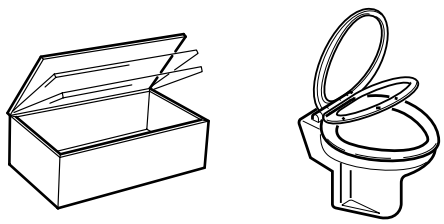


- Patented technology allows compact design.
- Can be detached as a single unit.
- Keeps lids / doors from slamming shut.
- Applicable to places with safety and motion quality requirements, also can effectively prevent noise and impact.
- Refer to 1 for details.

Video Link



[Application Example]



Refer to 1 : P.115~P.117

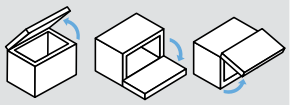
FREE-STOP STAY (ONE WAY) S-TAR

INSTRUCTION HEX KEY

Right side installation for top-opening shown.

Picture above shows right side installation for downward-opening.

Picture above shows right side installation for upward-opening.

Opening Direction	Description	Torque
 Top-opening Downward-opening Upward-opening	Free stop	0~7 N・m (0~71 kgf・cm)

- Torque stay for upward-opening, downward-opening and top-opening.
- Free stop in any position when lifting up the door.
- Friction in one direction only, provides smooth opening.
- Optional mounting plates available. (Mounting plate, mounting plate for aluminium frame, and mounting plate for glass door)
- Torque adjustable with a hex key (included).

[Remarks]

- Be sure to read the "Cautions" 1.
- Refer to the graph 2 for applicable doors.
- Handed: Specific left and right-handed.
- Use S-TAR-2030 for upward-opening/top-opening and S-TAR-10 for downward-opening.
- For downward-opening, when placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- When using 2 pcs, adjust free stop mechanisms evenly. Over loosening may cause free stop function failure.
- Without soft-close function.
- Install a catch (sold separately) to keep the door closed.
- Operating temperature : 0℃~40℃
- The torque may vary depending on the temperature of the operating environment. Torque adjustment should be done at room temperature.
- If there is a reduction in the torque, please readjust it.

[Parts Included]

- Countersunk head tapping screw 4×20
- Binding head tapping screw 3.5×15
- Hex key 4
- Mounting plate

[Sold Separately]

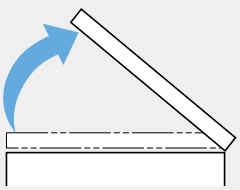
- Mounting plate 3
- Face plate and spacer 4 for SDS glass door

Selection Tool

Sasuga-kun

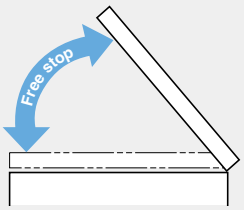
●One way torque

Door can be opened lightly by reducing unnecessary torque.



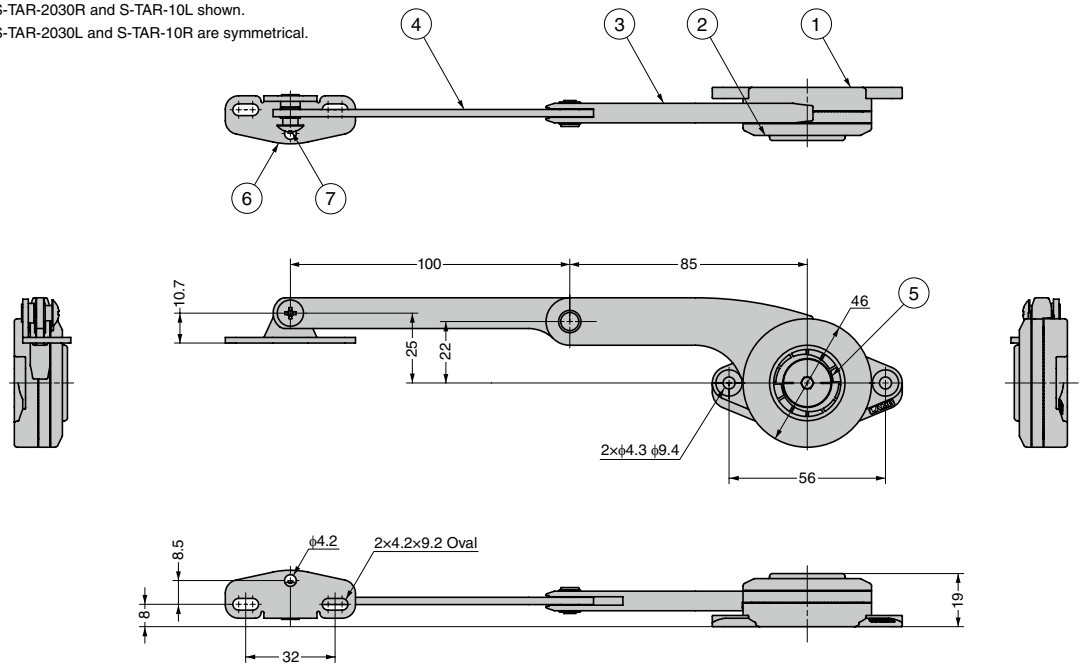
●Free stop

Door can be stopped in any position.



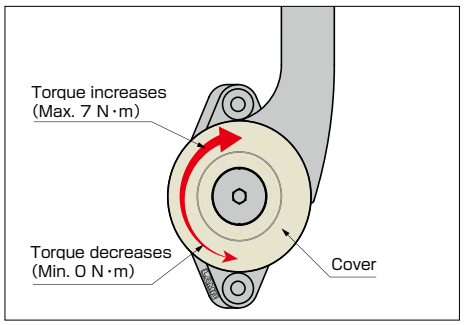
Refer to 1 : P.293, 2 : P.388~P.389, 3 4 : P.369

S-TAR-2030R and S-TAR-10L shown.
S-TAR-2030L and S-TAR-10R are symmetrical.



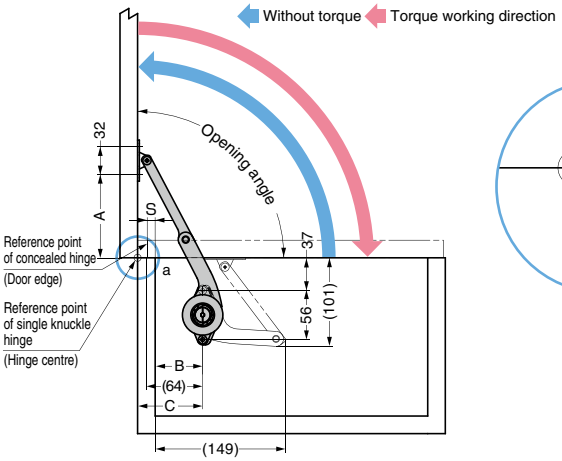
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Cover		
③	Root Arm		
④	Tip Arm	Steel (SPCC)	
⑤	Torque Adjustment Screw	Steel	
⑥	Mounting Plate	Steel (SPCC)	
⑦	Truss Head Screw	Steel	

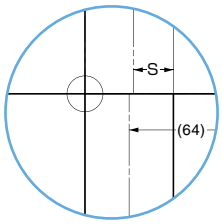
[How to Adjust Torque]



Adjustable with the supplied hex key.
When adjusting the torque, press and hold the cover (yellow area).

[Installation (Top-opening)] For right side board

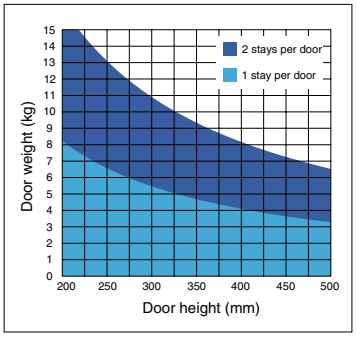




Detail a

S = Overlay by concealed hinge

[Door Size Ranges (Top-opening)]



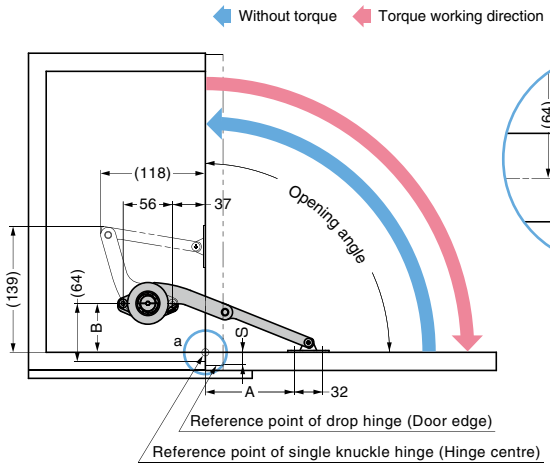
Hinge	Opening Angle	A	B	C
Concealed Hinge	70°	114	73-S	—
Concealed Hinge	90°	98		
Single Knuckle Hinge	70°	115	—	77
Single Knuckle Hinge	90°	93		

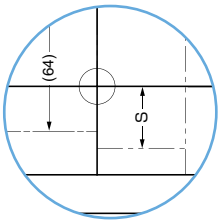
[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 8.1 N・m
- With 2 stays, the maximum door moment will be doubled.

Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation (Downward-opening)] For right side board

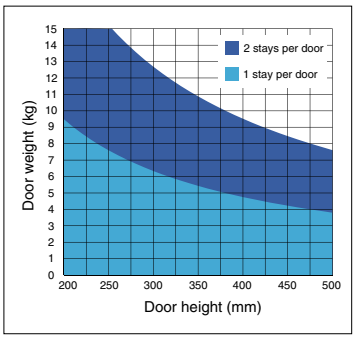




Detail a

S = Overlay by drop hinge

[Door Size Ranges (Downward-opening)]



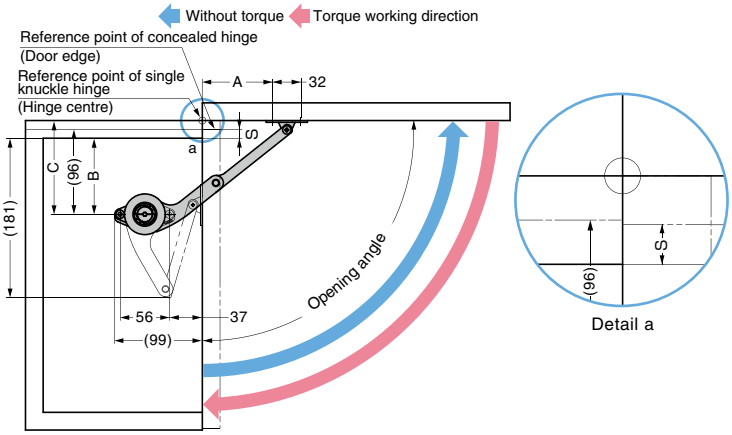
Hinge	Opening angle	A	B
Drop Hinge	90°	99	70-S
Single Knuckle Hinge		100	51

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 9.3 N・m
- With 2 stays, the maximum door moment will be doubled.

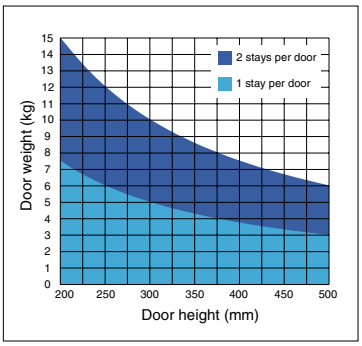
Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation (Upward-opening)] For right side board



S = Overlay by concealed hinge

[Door Size Ranges (Upward-opening)]



Hinge	Opening Angle	A	B	C
Concealed Hinge	80°	98	105-S	–
Concealed Hinge	90°	88		
Concealed Hinge	100°	80		
Single Knuckle Hinge	80°	90	–	109
Single Knuckle Hinge	90°	77		
Single Knuckle Hinge	100°	66		

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 7.4 N・m
- With 2 stays, the maximum door moment will be doubled.

Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Body]

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Type	Opening Direction	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-028-991	S-TAR-2030R	0~7	0~71	Right-handed	Upward-opening, Top-opening	234	20	40
G	3D	180-028-990	S-TAR-2030L			Left-handed			20	40
G	3D	180-028-993	S-TAR-10R			Right-handed	Downward-opening		20	40
G	3D	180-028-992	S-TAR-10L			Left-handed			20	40

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame Door	11	160	640
G	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 1 (Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	26	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish	25	50	200

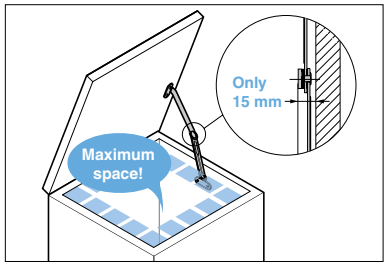
Refer to 1 2 : P.369

FREE-STOP STAY S-100T30

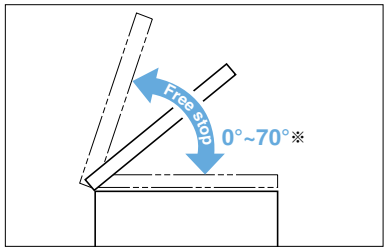
SUS

Picture above shows top-opening installation of S-100T30R (right-handed).

Picture above shows swing door installation of S-100T30R (right-handed).



Distance from the mounting surface to the disk surface of stay is only 15mm, maximising space inside of the cabinet.



※Opening angle changes depending on installation position. (70˚ is for installation as per Fig.1)

Opening Direction	Torque
Top-opening, Downward-opening, Upward-opening, Swing Door	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)

- Disk structure that generates torque by the friction of metal plates is thin and space-saving, maximising space inside of the cabinet.

[Specifications]

- Operating temperature: 0℃~40℃

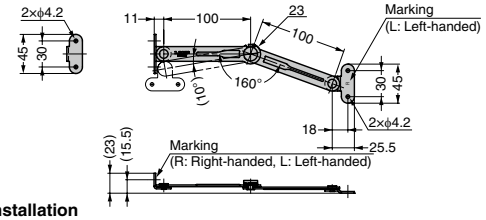
[Remarks]

- Do not operate continuously (repeatedly in a short time).
- Do not contact with water, oil and lubricant, etc.

[Example Chart for the Below Installation]

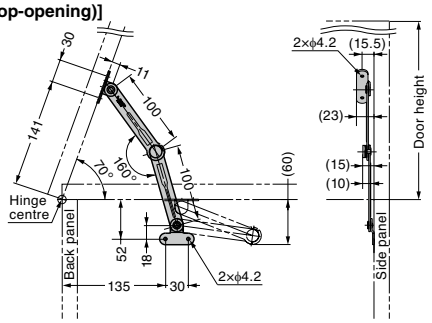
- Relations between door height and door weight for free stop are listed in the table below.
- The following table shows the values for installation as per Fig.1 and Fig. 2.For reference only.

Door height (door width for swing door)	Door Weight kg/pc	Door Weight kg/pair
200	Max. 3.9	Max. 7.8
250	Max. 3.1	Max. 6.2
300	Max. 2.6	Max. 5.2
350	Max. 2.2	Max. 4.4
400	Max. 1.9	Max. 3.8
450	Max. 1.7	Max. 3.4
500	Max. 1.5	Max. 3.0



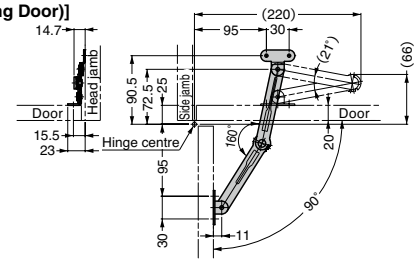
[Right Side Installation (For Top-opening)]

Fig.1



[Right Side Installation (For Swing Door)]

Fig.2



Video Link

Selection Tool

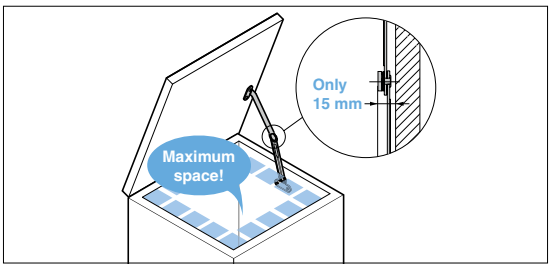
Sasuga-kun

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-011-966	S-100T30R	Right-handed	Stainless Steel	Barrel	$3^{\pm 20\%}$	$30.6^{\pm 20\%}$	100	30	120
G	3D	180-011-967	S-100T30L	Left-handed	(SUS430)	Polished				30	120

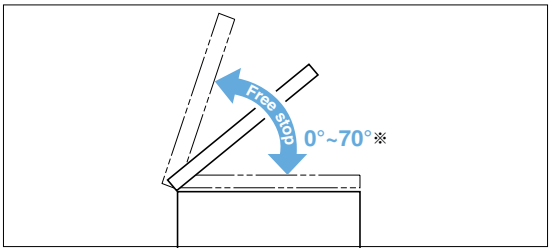
FREE-STOP STAY S-52T15

SUS

Picture above shows top-opening installation of S-52T15R (right-handed).



Distance from the mounting surface to the disk surface of stay is only 15mm, maximising space inside of the cabinet.



※Opening angle changes depending on installation position.
(70˚ is for installation as per Right)

Opening Direction	Torque
Top-opening, Downward-opening, Upward-opening, Swing Door	1.5±20% N・m/pc (15.3±20% kgf・cm/pc)

- Disk structure that generates torque by the friction of metal plates is thin and space-saving, maximising space inside of the cabinet.

[Specifications]

- Operating temperature: 0℃~40℃

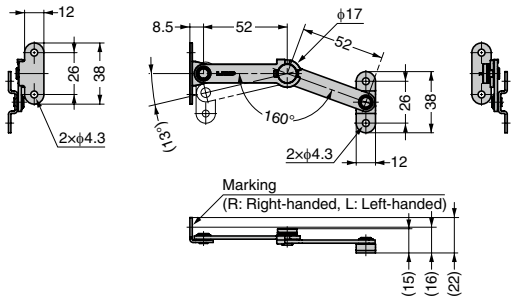
[Remarks]

- Do not operate continuously (repeatedly in a short time).
- Do not contact with water, oil and lubricant, etc.

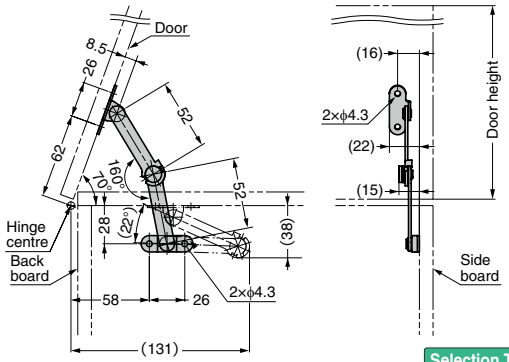
[Example Chart for the Below Installation]

- Relations between door height and door weight for free stop are listed in the table below.
- The following table shows the values for installation below. For reference only.

Door Height	Door Weight kg/pc	Door Weight kg/pair
200	Max. 1.8	Max. 3.6
250	Max. 1.4	Max. 2.8
300	Max. 1.2	Max. 2.4
350	Max. 1.0	Max. 2.0
400	Max. 0.9	Max. 1.8



[Right Side Installation (For Top-opening)]



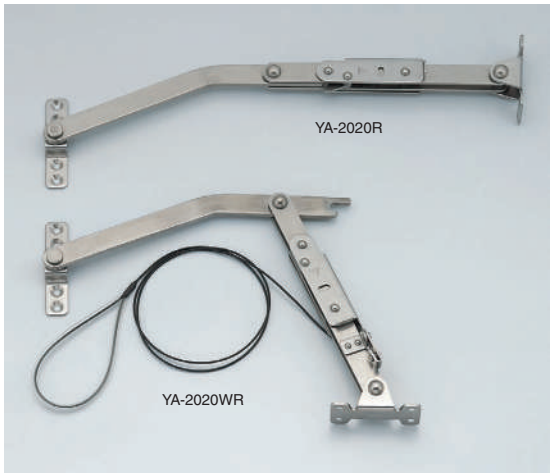
Selection Tool

Sasuga-kun

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-023-579	S-52T15R	Right-handed	Stainless Steel	Barrel	1.5±20%	15.3±20%	40	25	200
G	3D	180-023-580	S-52T15L	Left-handed	(SUS430)	Polished				25	200

DOOR HOLDER YA-2020, YA-2020W

TEST METHOD 15 TEST METHOD 16 SUS



Opening Direction	Item Name	Description	Lock Release Part	Tension Force	Compression Load
Top-opening Upward-opening	YA-2020 (R/L)	Locks When Fully Opened	Grip	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)
Swing Door	YA-2020W (R/L)	Keeps Unlocked	Wire		

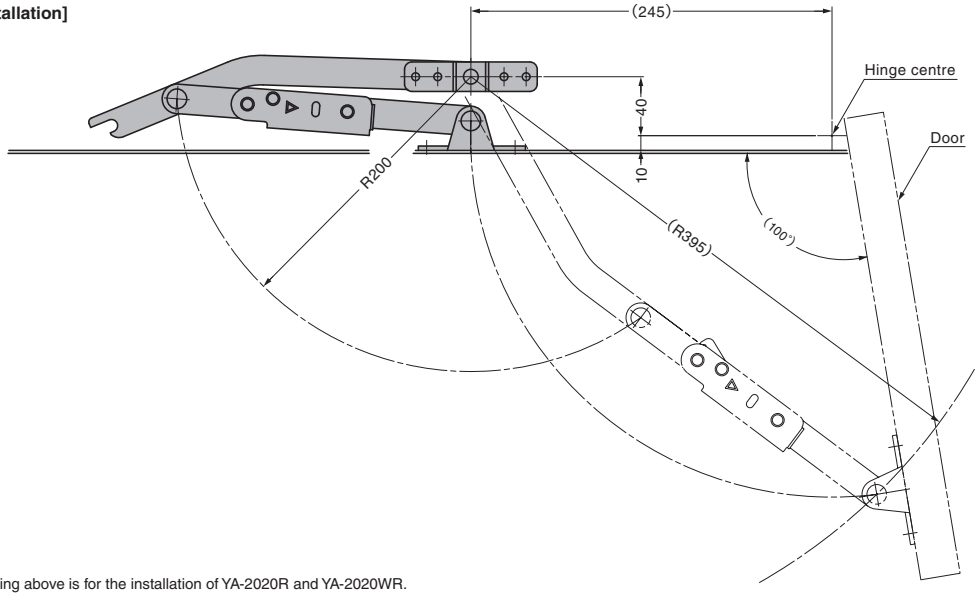
- Automatically locks door when fully opened.
- Slide the grip (see part ③ in the figure below) to release the lock. Slide the grip to the end to remain unlocked.
- Safe and reliable operation without closing the door while releasing the lock.
- Indicator turns red when unlocked.
- YA-2020W (R/L) (with lock release wire) available for tall application.
- Either 1 piece use and 2 pieces use is available.

[Remarks]

- Release the lock while supporting the door.
- Opening angle and installation position change depending on the position of hinge centre.
  Determine the installation position based on the hinges used and cabinet shape.

[Application Example]

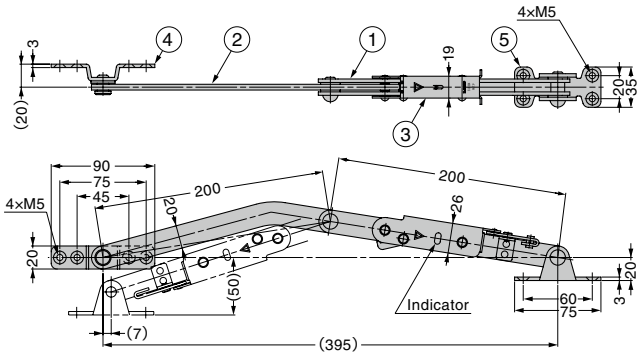
[Installation]



Drawing above is for the installation of YA-2020R and YA-2020WR.
This drawing shows the right-handed type seen from above. Left-handed type is symmetrical.

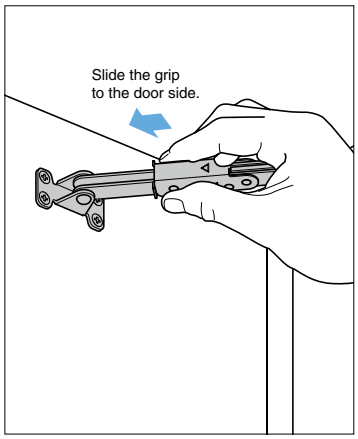
DOOR HOLDER YA-2020 Without Wire

TEST METHOD 15 TEST METHOD 16 SUS



Right-handed type shown. Left-handed type is symmetrical.

[Lock Release with Grip]

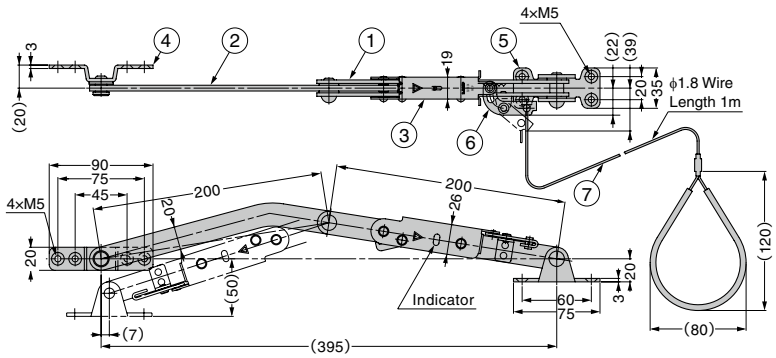


No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		

RoHS	CAD	Item Code	Item Name	Type	Tension Force N	Tension Force kgf	Compression Load N	Compression Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-200	YA-2020R	Right-handed	1470	150	588	60	630	4	16
G	3D	180-100-201	YA-2020L	Left-handed						4	16

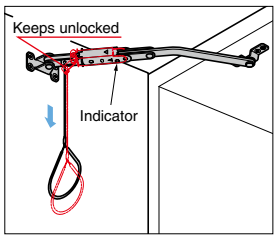
DOOR HOLDER YA-2020W With Wire

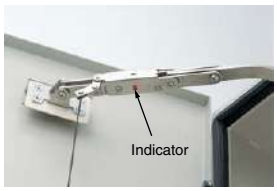
TEST METHOD 15 TEST METHOD 16 SUS



Right-handed type shown. Left-handed type is symmetrical.

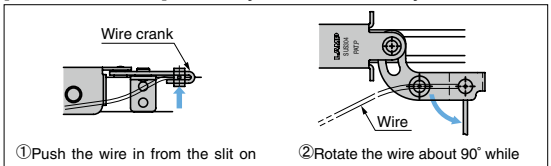
[Lock Release with Wire]





No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		
⑥	Wire Crank		
⑦	Wire	Stainless Steel (SUS304), PA	–

[How to Install Wire] ※ Already installed in the stay.



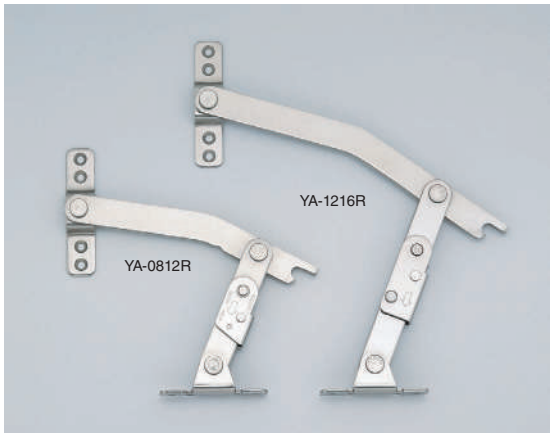
①Push the wire in from the slit on the back side of wire crank.

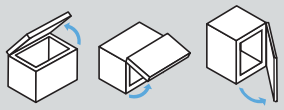
②Rotate the wire about 90˚ while the slit is pushed in..

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-202	YA-2020WR	Right-handed	1470	150	588	60	650	4	16
G	3D	180-100-203	YA-2020WL	Left-handed						4	16

DOOR HOLDER YA-0812, YA-1216

INSTRUCTION SUS



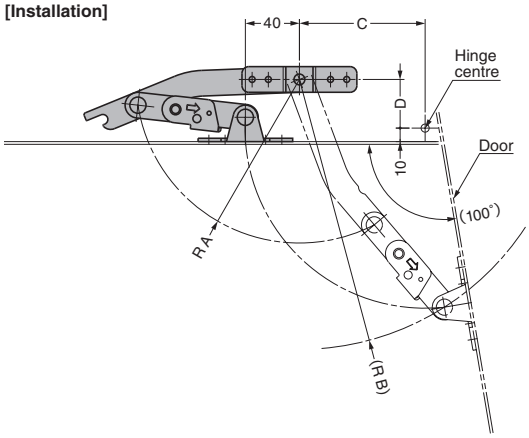
Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Top-opening Upward-opening Swing Door	Locks When Fully Opened / Keeps Unlocked	Grip	–	–

- Automatically locks door when fully opened.
- Slide the grip (see part ③ in the figure below) to release the lock. Slide the grip to the end to remain unlocked.
- Safe and reliable operation without closing the door while releasing the lock.
- Either 1 piece use and 2 pieces use is available.

[Remarks]

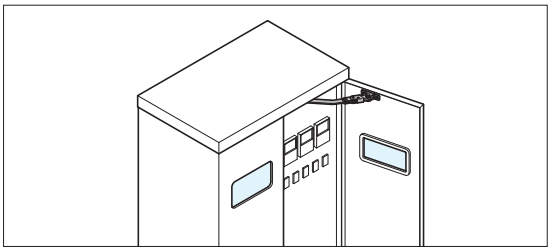
- Release the lock while supporting the door.
- Opening angle and installation position change depending on the position of hinge centre.
  Determine the installation position based on the hinges used and cabinet shape.

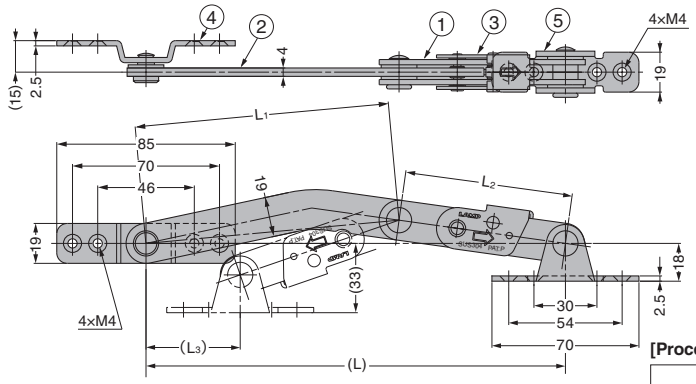
[Installation]



Drawing above is for the installation of YA-0812R and YA-1216R.
This drawing shows the right-handed type seen from above. Left-handed type is symmetrical.

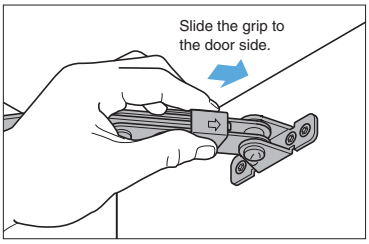
[Application Example] Right-handed



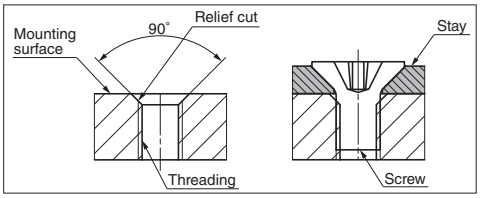


Right-handed type shown. Left-handed type is symmetrical.

[Lock Release]



[Processing Example]

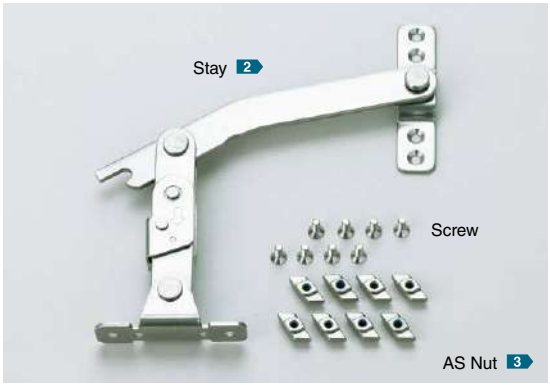


No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		

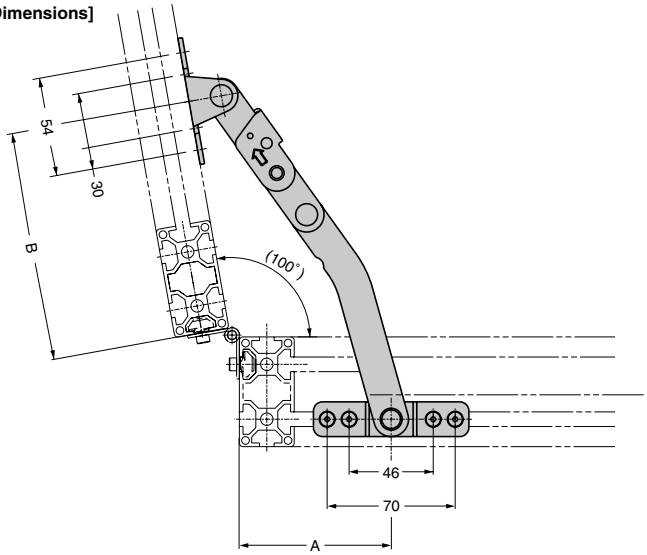
RoHS	CAD	Item Code	Item Name	Type	L	L_1	L_2	L_3	A	B	C	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-205	YA-0812L	Left-handed	200	121	80	45	121	200	93	36	275	5	30
G	3D	180-100-204	YA-0812R	Right-handed										5	30
G	3D	180-100-199	YA-1216L	Left-handed	280	161	120	44	161	280	145	40	340	5	30
G	3D	180-100-198	YA-1216R	Right-handed										5	30

AS Parts Set for Installing to Aluminium Frame

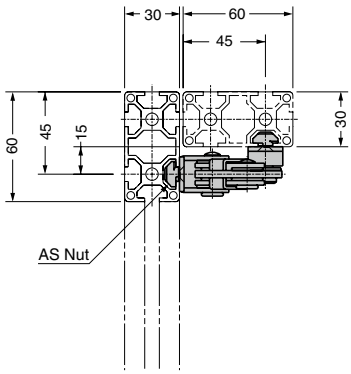
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



Side view in closed state



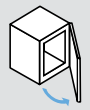
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	180-041-617	AS-YA-0812L-30-6	Groove Width 6 mm	YA-0812L (Left-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-618	AS-YA-0812R-30-6		YA-0812R (Right-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-619	AS-YA-0812L-30-8	Groove Width 8 mm	YA-0812L (Left-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-620	AS-YA-0812R-30-8		YA-0812R (Right-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-621	AS-YA-1216L-30-6	Groove Width 6 mm	YA-1216L (Left-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-622	AS-YA-1216R-30-6		YA-1216R (Right-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-623	AS-YA-1216L-30-8	Groove Width 8 mm	YA-1216L (Left-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-624	AS-YA-1216R-30-8		YA-1216R (Right-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–

Refer to 1 : P.20, 2 : P.394, 3 : P.526

FOOT STAY YFN-300W Two-angle Lock

L=R

Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Swing Door	Two-angle Lock	Body (Lifting with Foot)	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

- Locks the door at two angles: 85˚ and 110˚ (fully opened).
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount.
  (Vertical use not allowed)
- Improved version of the foot stay YF-300W

(The product size and dimensions for installation have not changed.)

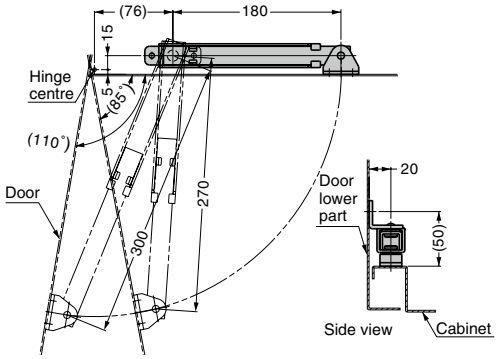
[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

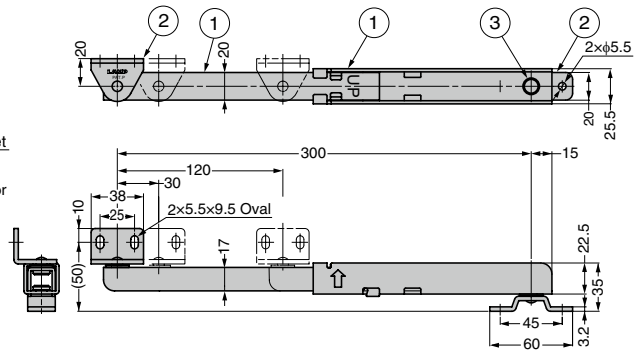
[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Open or close the door slowly. Quick opening operation may not lock the door.
- Opening angle and installation position change depending on the position of hinge.

[Installation]



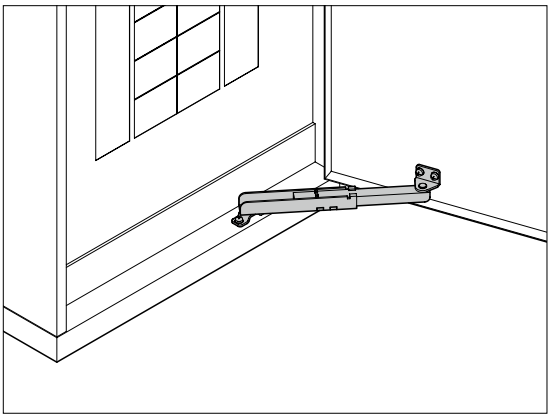
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.



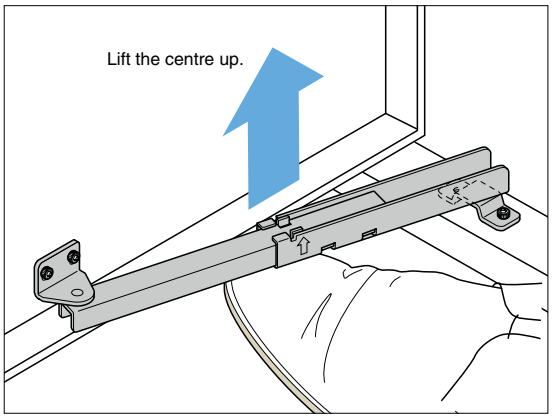
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Bracket		
③	Shaft	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-852	YFN-300W	1470	150	588	60	435	5	30

[Application Example]



[Lock Release]



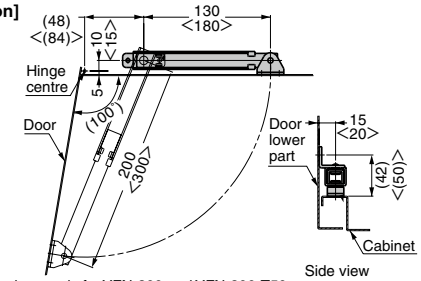
FOOT STAY YFN

L=R

Opening Direction	Item Name	Description	Lock Release Part	Tension Force	Compression Load
Swing Door	YFN-200	Locks When Fully Opened	Body (Lifting with Foot)	882 N/pc (90 kgf/pc)	490 N/pc (50 kgf/pc)
	YFN-300 YFN-300-T50			1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

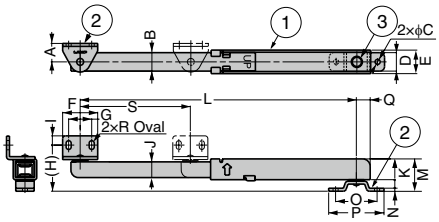
- Automatically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.
- Improved version of the foot stay YF-200, YF-300, YF-300-T50. (The product size and dimensions for installation have not changed.)

[Installation]



※Dimensions in < > is for YFN-300 and YFN-300-T50.

- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.



[Applications]

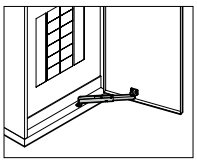
- Switch board, communication equipment, control panel, various display boards, etc.

[Remarks]

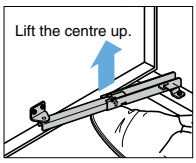
- Release the lock while supporting the door.
- Do not step on the stay.
- Opening angle and installation position change depending on the position of hinge.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Bracket		
③	Shaft	Stainless Steel (SUS304)	–

[Application Example]



[Lock Release]



Item Name	L	S	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R
YFN-200	200	70	15	15.9	5.5	17	20	33	20	42	8	15.7	20	30	2.3	35	50	10	5.5×8
YFN-300	300	120	20	20	5.5	20	25.5	38	25	50	10	17	22.5	35	3.2	45	60	15	5.5×9.5
YFN-300-T50					9											50	72		

RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-882	YFN-200	882	90	490	50	198	10	100
G	3D	180-036-854	YFN-300	1470	150	588	60	438	5	30
G	3D	180-036-853	YFN-300-T50					476	5	30

※The item names and item codes have changed. (Old item names : YF-200, YF-300, YF-300-T50)

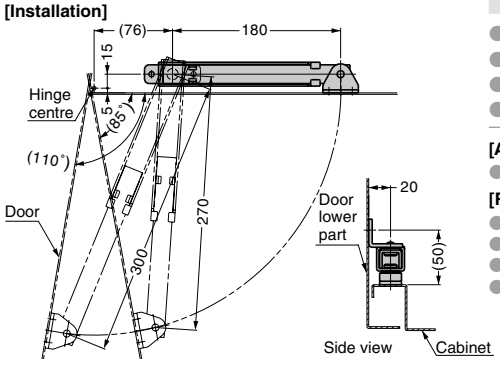
FOOT STAY YFNS-300W Two-angle Lock

L=R SUS

Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
Swing Door	Two-angle Lock	Body (Lifting with Foot)	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

- Locks the door at two angles: 85° and 110° (fully opened).
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)

[Installation]



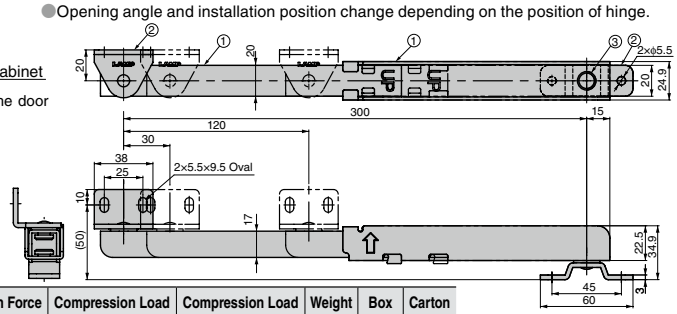
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.

[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Open or close the door slowly. Quick opening operation may not lock the door.
- Opening angle and installation position change depending on the position of hinge.



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel
②	Bracket		Polished
③	Shaft		–

RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-923	YFNS-300W	1470	150	588	60	386	5	30

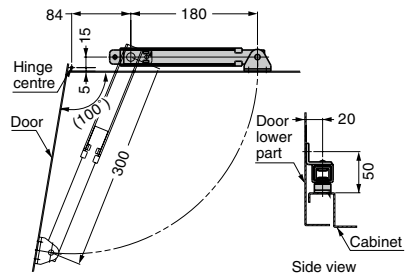
FOOT STAY YFNS-300, YFNS-300-T50

L=R SUS

Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
Swing Door	Locks When Fully Opened	Body (Lifting with Foot)	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

- Automatically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Installation]



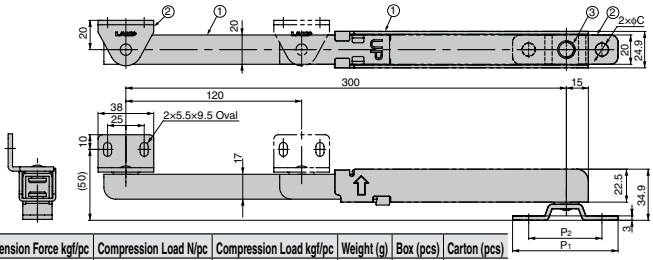
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.

[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

[Remarks]

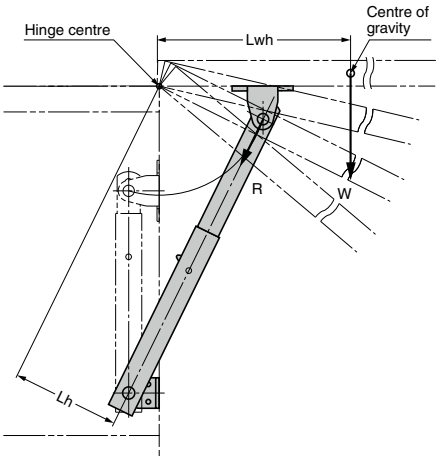
- Release the lock while supporting the door.
- Do not step on the stay.
- Opening angle and installation position change depending on the position of hinge.



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel
②	Bracket		Polished
③	Shaft		–

RoHS	CAD	Item Code	Item Name	P1	P2	C	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-922	YFNS-300	60	45	5.5	1470	150	588	60	389	5	30
G	3D	180-036-924	YFNS-300-T50	72	60	9					396	5	30

LID STAY L SERIES



[How to Select]

1. Calculate door moment Mt.

Mt (mN・m) = W (kg) × 9.80665 × Lwh (mm)

W(kg) : Door weight

Lwh (mm) : Horizontal distance to door centre of gravity

2. Calculate load R applied in the axial direction of stay.

$$R\ (N) = \frac{Mt\ (mN \cdot m)}{Lh\ (mm) \times n}$$

Lh (mm) : Distance from rotation centre of door to fixed point of stay

n : Number of stays used (n=1 or 2)

3. Compare load R applied in the axial direction of stay with compressive load P of stay.

Possible to use if P>R.

Product Name	Picture	Item Name	Opening Direction: Top-opening	Opening Direction: Upward-opening	Opening Direction: Swing Door	Qty: 1 Unit Per Door	Qty: 2 Units Per Door	Non-handed	Hold & Lock	Lock Release	Compression Load	Page
Lid Stay LB-200A LB-350A LB-500A		LB-200A	No ※1	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	294 N/pc (30 kgf/pc)	P.401
		LB-350A									245 N/pc (25 kgf/pc)	
		LB-500A									196 N/pc (20 kgf/pc)	
Heavy Duty Multi-angle Lid Stay LBTS-350 LBTS-450		LBTS-350	No ※1	Yes	No	Yes	No	No	Holds at Multiple Angles	Releases When Fully Opened	686 N/pc (70 kgf/pc)	P.402
		LBTS-450										
Heavy Duty Lid Stay LB-S350 LB-S450		LB-S350	No ※1	Yes	No	Yes	It depends ※2	Yes	Holds When Fully Opened	Releases When Fully Opened	1307 N/pc (133 kgf/pc)	P.403
		LB-S450									953 N/pc (97 kgf/pc)	
Lid Stay LK-222 LK-335 LK-380		LK-222	Yes	Yes	No	No	Yes	Yes	Holds When Fully Opened	–	Spring Tension/pc Extended: 31 N (3.2 kgf) Compressed: 68 N (7.0 kgf)	P.404
		LK-335									Spring Tension/pc Extended: 37 N (3.8 kgf) Compressed: 83 N (8.5 kgf)	
		LK-380									Spring Tension/pc Extended: 35 N (3.6 kgf) Compressed: 83 N (8.5 kgf)	
Multi-angle Lid Stay (W/ Lock) L-FS350A		L-FS350A	Yes	Yes	Yes	Yes	Yes	Yes	Multi-angle Lock	Slide to Release	294 N/pc (30 kgf/pc)	P.405

※1 Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

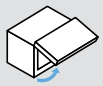
※2 (It depends) More Consultation Needed.

Product Name	Picture	Item Name	Opening Direction			Qty		Non-handed	Hold & Lock	Lock Release	Compression Load	Page
			Top-opening	Upward-opening	Swing Door	1 Pc Per Door	2 Pcs Per Door					
Lid Stay LB-215 LB-290		LB-215 LB-290	No※	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.406
Lid Stay (W/ Lock) LSP-195B LSP-270B		LSP-195B LSP-270B	Yes	Yes	Yes	Yes	No	Yes	Locks When Fully Opened	Releases with Knob	294 N//pc (30 kgf//pc)	P.407
Lid Stay L-195 L-270	L-195A-TI (Titanium Alloy) L-270B (Stainless Steel)	L-195 L-270	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.408
Clean Room Lid Stay LB-CV215A		LB-CV215A	No※	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.409
Low Profile Lid Stay L-200P		L-200P	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.410
Lid Stay L-195-JC		L-195-JC	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.411
Mini Lid Stay (W/ Lock) L-FS140		L-FS140	Yes	Yes	Yes	Yes	Yes	Yes	Multi-angle Lock	Slide Release	58.8 N//pc (6 kgf//pc)	P.412
Mini Lid Stay (W/ Lock) L-SL140		L-SL140	Yes	Yes	No	Yes	No	Yes	Locks When Fully Opened	Safety Lock Release	147 N//pc (15 kgf//pc)	P.413
Mini Lid Stay L-100S L-140S		L-100S L-140S	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	58.8 N//pc (6 kgf//pc)	P.414

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

LID STAY LB-200A, LB-350A, LB-500A

TEST METHOD 16 | AS | L=R | SUS

Opening Direction	Item Name	Description	Non-handed	Qty	Compression Load
 Upward-opening※	LB-200A	Holds When Fully Opened	Yes	1 Pc Per Door 2 Pcs Per Door	294 N/pc (30 kgf/pc)
	LB-350A				245 N/pc (25 kgf/pc)
	LB-500A				196 N/pc (20 kgf/pc)

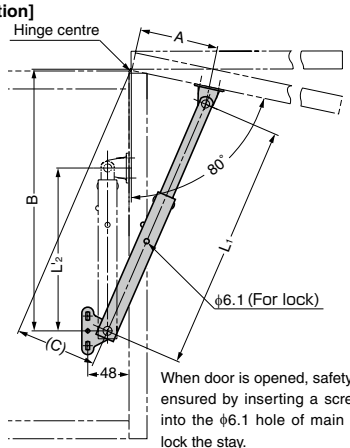
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Locks the stay by passing a screwdriver or pin through the lock hole.

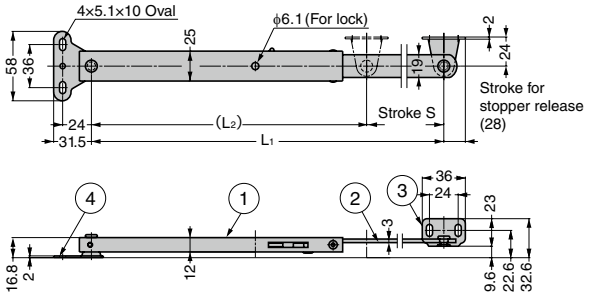
[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)
- Release stopper while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

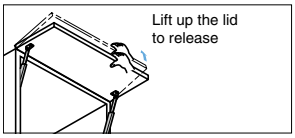
[Installation]



When door is opened, safety can be ensured by inserting a screwdriver into the ϕ6.1 hole of main body to lock the stay.



[Stopper Release]



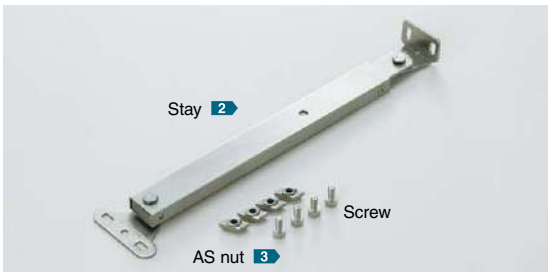
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		
④	Case Bracket		

RoHS	CAD	Item Code	Item Name	L1	L2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-014-929	LB-200A	200	155	45	56	219	59.7	294	30	230	10	40
G	3D	180-100-122	LB-350A	350	230	120	128	364	129.9	245	25	314	10	40
G	3D	180-014-928	LB-500A	500	305	195	195	510	194.5	196	20	394	10	20

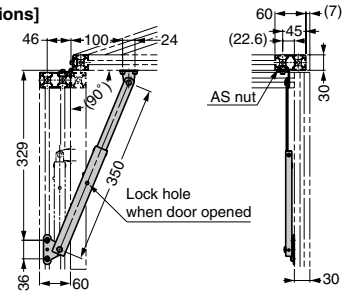
Refer to 1 : P.399

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



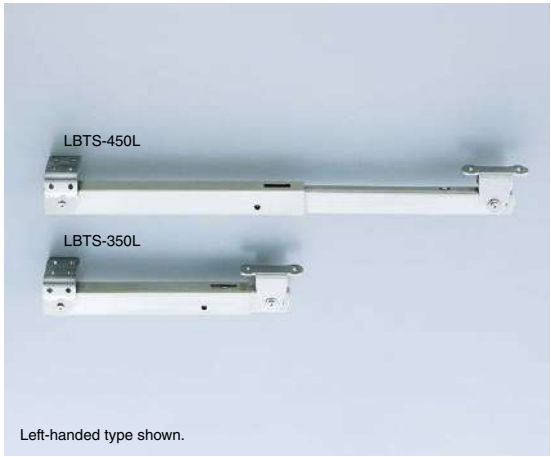
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	180-041-627	AS-LB-350A-30-6	Groove Width 6 mm	LB-350A : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	–
G	–	180-041-628	AS-LB-350A-30-8	Groove Width 8 mm	LB-350A : 1 pc AS Nut AS-8M5 : 4 pcs Hexagon Socket Head Cap Screw M5×10 : 4 pcs	–

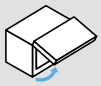
Refer to 1 : P.20, 2 : P.401, 3 : P.526

HEAVY DUTY MULTI-ANGLE LID STAY LBTS-350, LBTS-450

TEST METHOD 16 SUS



Left-handed type shown.

Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds at Multiple Angles	–	1 Pc Per Door	686 N/pc (70 kgf/pc)

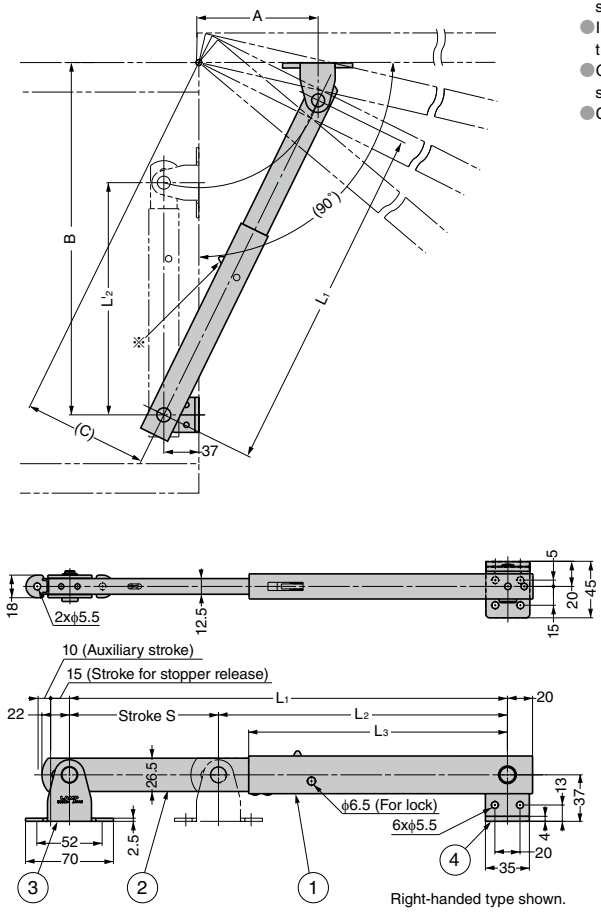
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Ratchet stay holds the lid at multiple angles.
  Holding angles: LBTS-350…4 angles, LBTS-450…6 angles
- Lift up the lid in fully opened position to release stopper.
  When closing from the middle stop position, fully open the door first.
- Locks the stay in fully opened position by passing a pin through the lock hole.

[Remarks]

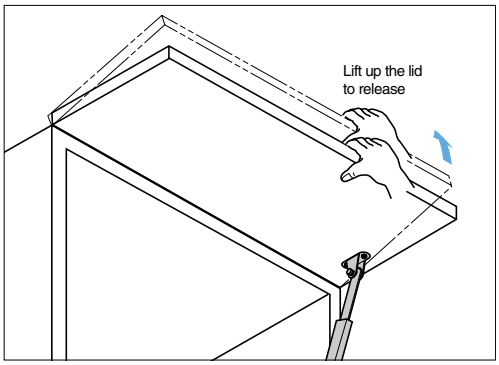
- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L2 of the installation example is within the range of 234 to 242 mm (for LBTS-350) or 284 to 292 mm (for LBTS-450). (Or the hinge and stay may be damaged, or the stopper may not operate with the stay extended.)
- Install with the side (※ in the figure) where stay rotor is exposed from the main body facing upward. Or the rotor may not operate properly.
- Generally use 1 pc. If using 2 pcs, left and right operation may not be synchronised.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation]

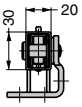


Right-handed type shown.

[Stopper Release]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		Barrel Polished
④	Bracket		

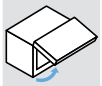


RoHS	CAD	Item Code	Item Name	Description	L1	L2	L3	S	A	B	C	Stop Positions	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-404	LBTS-350R	Right-handed	350	230	206	120	115	352	119.6	4	686	70	715	5	20
G	3D	180-109-403	LBTS-350L	Left-handed												5	20
G	3D	180-109-406	LBTS-450R	Right-handed	450	280	256	170	155	442	155.5	6			820	5	20
G	3D	180-109-405	LBTS-450L	Left-handed												5	20

Refer to 1 : P.399

HEAVY DUTY LID STAY LB-S350, LB-S450

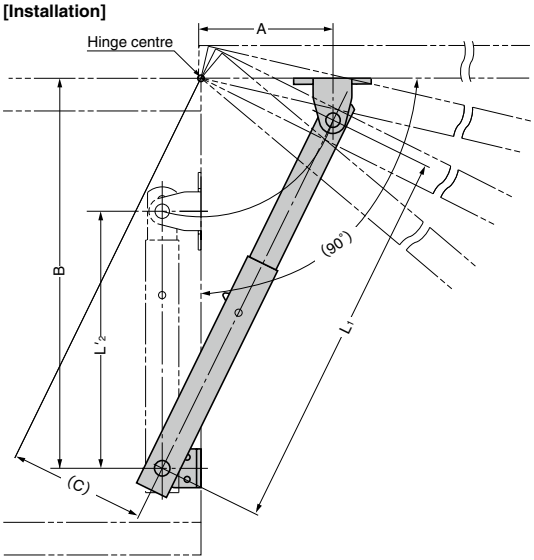
TEST METHOD 16 L=R SUS

Opening Direction	Item Name	Description	Non-handed	Qty	Compression Load
 Upward-opening※	LB-S350	Holds When Fully Opened	Yes	1 Pc Per Door (More Consultation Needed for 2 Pcs per Door)	1307 N/pc (133 kgf/pc)
	LB-S450				953 N/pc (97 kgf/pc)

※ Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Dimension A can be within 300mm~550mm by made to order. For further details, please contact local representatives.
- Locks the stay in fully opened position by passing a pin through the lock hole.

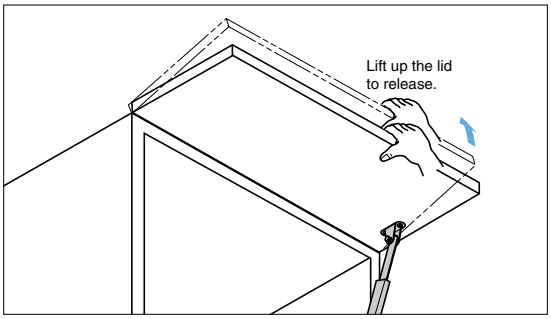
[Installation]

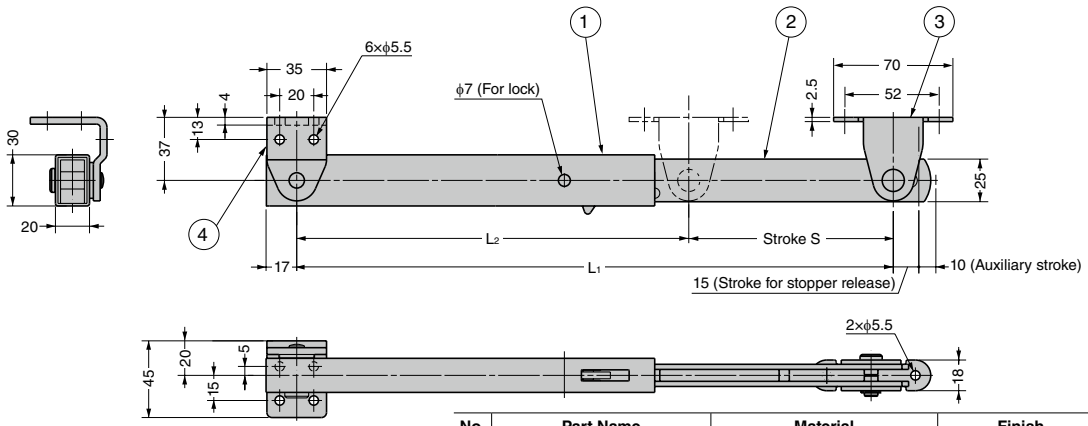


[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is above 235mm (for LB-S350) or above 285mm (for LB-S450). (Or the hinge and stay may be damaged, or the stopper may not operate with the stay extended.)
- Can be used singly or in pairs, depending on door width and door weight.For further details, please contact local representatives.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

[Stopper Release]





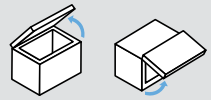
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		Barrel Polished
④	Bracket		

RoHS	CAD	Item Code	Item Name	L1	L2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-168	LB-S350	350	230	120	115	352	119.6	1307	133	745	5	20
G	3D	180-100-169	LB-S450	450	280	170	155	442	155.5	953	97	865	5	20

Refer to 1 : P.399

LID STAY LK-222, LK-335, LK-380

NSF L=R SUS

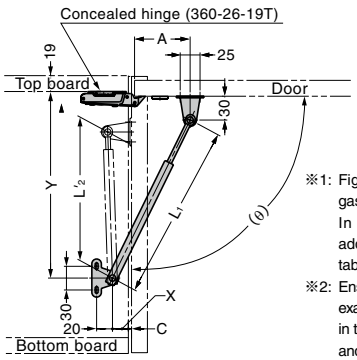
Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening	Holds When Fully Opened	Yes	2 Pcs Per Door	–

●Spring mechanism assists lifting the door and holds in opened position and additional catch not required both for in opened position and closed position.

[Remarks]

●Never open more than the angle where the stay has completely extended. Otherwise, it may be damaged. Install a stopper to restrict the opening of the door. Use two units per door. (1 unit per door not allowed)

[Installation LK-222 and LK-335]



※1: Figure left shows when using gasket (gasket thickness C=4). In case of no gasket (C=0), add 4mm to dimension X in the table below.

※2: Ensure that L'2 of the installation example is larger than L 2 shown in the figure below. (Or the hinge and stay may be damaged.)

Item Name	Opening Angle θ	L1	A	X	Y	Door Weight kg
LK-222	90°	222	70	20	235	Max. 2.5
	85°		75		240	Max. 2.7
	75°		85		251	Max. 3.0
LK-335	90°	335	104		344	Max. 3.1
	85°		112		351	Max. 3.3
	75°		127		368	Max. 3.8

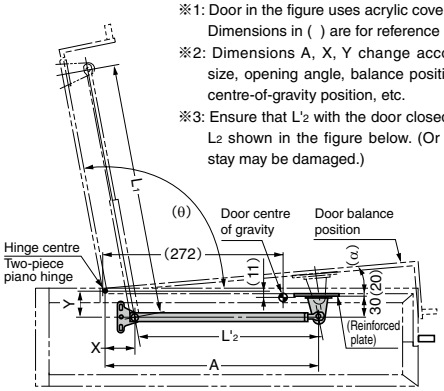
LK222: In case door height 350mm
LK335: In case door height 500mm

[Installation LK-335 and LK-380]

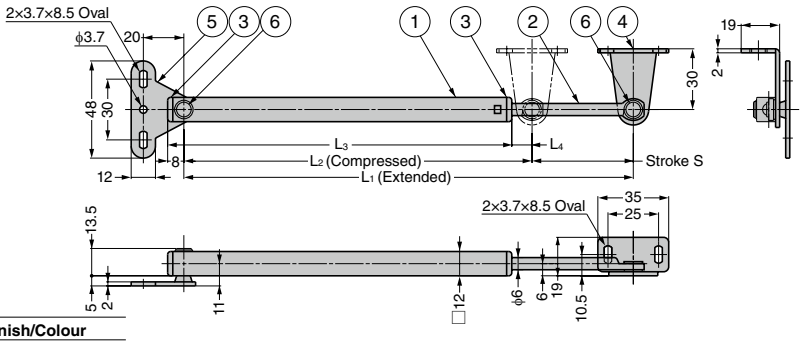
※1: Door in the figure uses acrylic cover (5mm thick). Dimensions in ( ) are for reference only.

※2: Dimensions A, X, Y change according to door size, opening angle, balance position setting and centre-of-gravity position, etc.

※3: Ensure that L'2 with the door closed is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)



Item Name	Opening Angle θ	Door Balance Angle α	L1	A	X	Y	Door Weight kg
LK-335	90°	0.5°	335	295	45	38	2.5
		14°					3.0
	85°	12°				44	3.3
LK-380	110°	8°	380	330	40	36	2.5
	90°	3.5°		335	55	44	3.0
		4°		320	41	59	4.0
	80°	7.5°		335	56	60	4.3

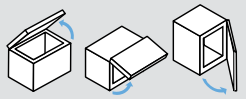


No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Stay		Polished
③	Cover	PA	Black
④	Arm Bracket	Stainless Steel (SUS304)	Satin
⑤	Case Bracket		
⑥	Shaft		–
–	Spring	Piano Wire	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	L1	L2	L3	L4	S	Spring Tension/pc				Weight (g)	Box (pcs)	Carton (pcs)
									Extended N	Extended kgf	Compressed N	Compressed kgf			
G	3D	180-100-045	LK-222	222	172	170	10	50	31	3.2	68	7.0	145	25	150
G	3D	180-100-046	LK-335	335	250	238	20	85	37	3.8	83	8.5	185	25	150
G	3D	180-100-047	LK-380	380	280	269	19	100	35	3.6			205	25	150

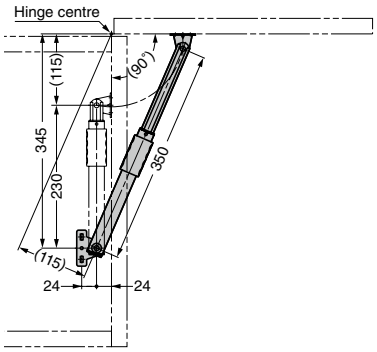
MULTI-ANGLE LID STAY (W/ LOCK) L-FS350A Slide release

AS L=R SUS

Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening Swing Door	Multi-angle Lock	Yes	1 Pc Per Door 2 Pcs Per Door	294 N/pc (30 kgf/pc)

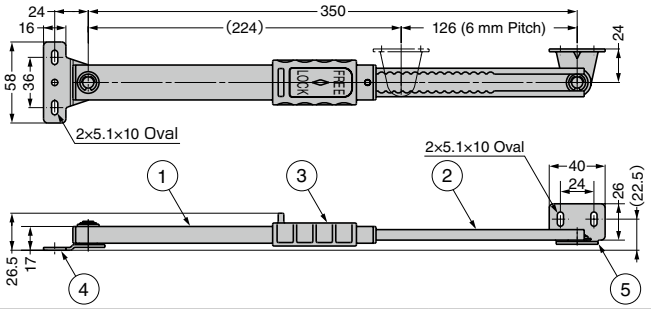
- Locks the lid at multiple angles with the lock lever. Slide the lock lever in any position to lock the extension direction and compression direction.
- Installation pitch is identical to LB-350A 1.
- Plastic parts and metal parts can be separated.

[Installation]

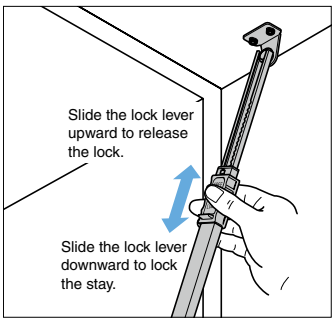


[Remarks]

- When using this product as a stopper, please use on doors only.
- Allow room for stroke when installing.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- Release the lock while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 2.



[Lock and Release]



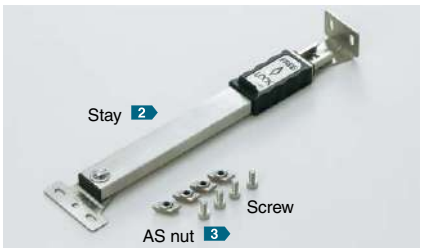
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Lock Lever	POM	Dark Grey
④	Case Bracket	Stainless Steel (SUS304)	Satin
⑤	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-617	L-FS350A	294	30	326	5	50

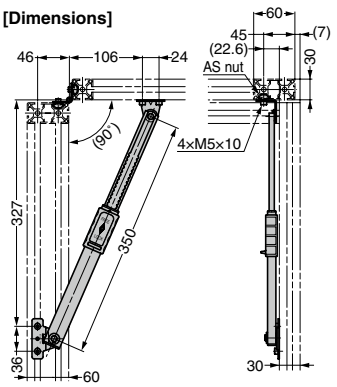
Refer to 1 : P.401, 2 : P.399

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



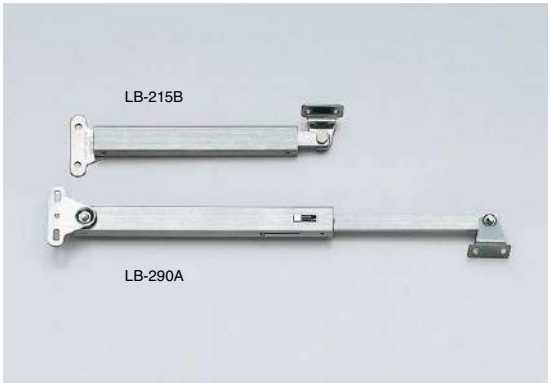
[AS Parts Set] Parts set of screws and AS nuts

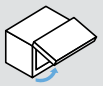
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-633	AS-L-FS350A-30-6	Groove Width 6 mm	L-FS350A : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	–
G	3D	180-041-634	AS-L-FS350A-30-8	Groove Width 8 mm	L-FS350A : 1 pc AS Nut AS-8M5 : 4 pcs Hexagon Socket Head Cap Screw M5×10 : 4 pcs	–

Refer to 1 : P.20, 2 : P.405, 3 : P.526

LID STAY LB-215, LB-290

TEST METHOD 16 | L=R | SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Pc Per Door 2 Pcs Per Door	147 N/pc (15 kgf/pc)

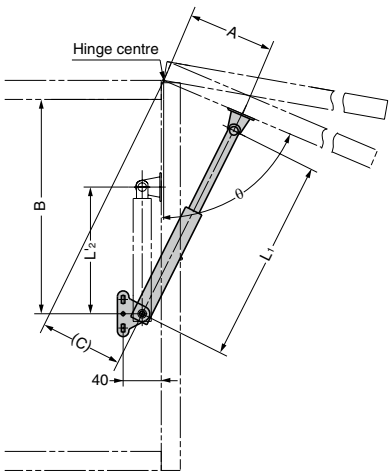
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

●Holds the lid in fully opened position. Slightly lift up the lid to release stopper.

[Specifications]

●Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)
●Release stopper while supporting the door.
●Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation]



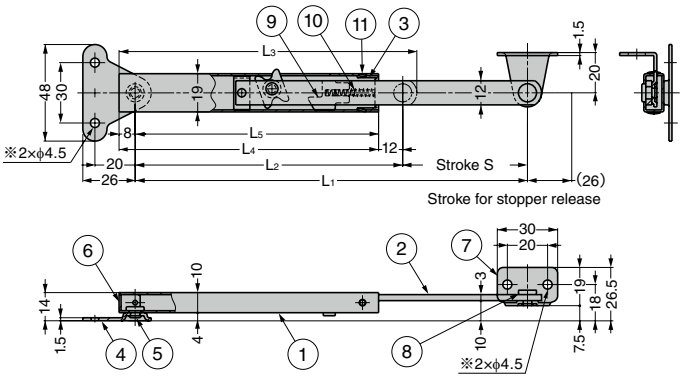
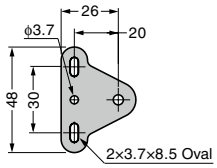
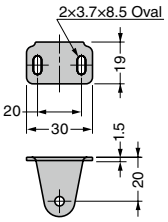


Figure above shows LB-215B or LB-290B.

Type A Case bracket

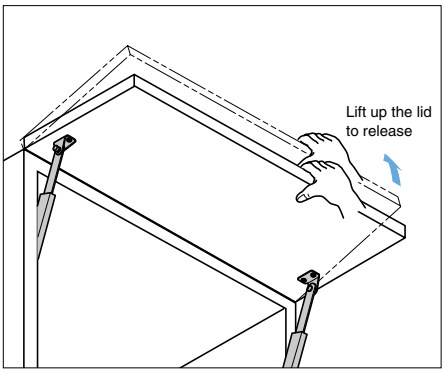


Type A Arm bracket



※Mounting hole shape of LB-215A and LB-290A shown above.

[Stopper Release]



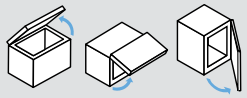
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		–
③	End Cap		Satin
④	Case Bracket		
⑤	Bottom Shaft	Stainless Steel	–
⑥	Bottom Cap	Stainless Steel (SUS304)	Satin
⑦	Arm Bracket		
⑧	Top Shaft	Stainless Steel	–
⑨	Slide Parts	Zinc Alloy (ZDC)	
⑩	Spring	Stainless Steel (SUS304)	
⑪	Blind Rivet	Stainless Steel	

RoHS	CAD	Item Code	Item Name	Installation hole	L1	L2	L3	L4	L5	S	A	B	C	θ	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-100-110	LB-215A	Long hole	215	153	168	149	141	62	90	225	91.8	67°	260~350	147	15	140	10	100
–	3D	180-100-112	LB-215B	Round hole														140	10	100
–	3D	180-100-120	LB-290A	Long hole	290	190	205	186	178	100	105	280	102.9	80°	340~500			166	10	100
–	3D	180-100-121	LB-290B	Round hole														166	10	100

Refer to 1 : P.400

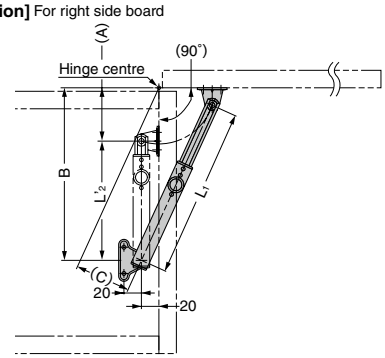
LID STAY (W/ LOCK) LSP-195B, LSP-270B

TEST METHOD 16 | AS | L=R | SUS

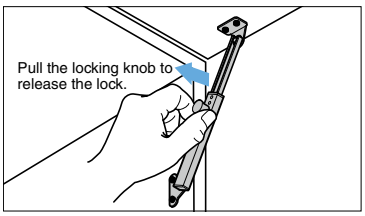
Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening Swing Door	Locks When Fully Opened	Yes	1 Pc Per Door	294 N/pc (30 kgf/pc)

- Can be locked automatically at the door position fully opened.Pull the locking knob to release the lock.
- Installation pitch is identical to L-195B and L-270B 1.
- Plastic parts and metal parts can be separated.

[Installation] For right side board

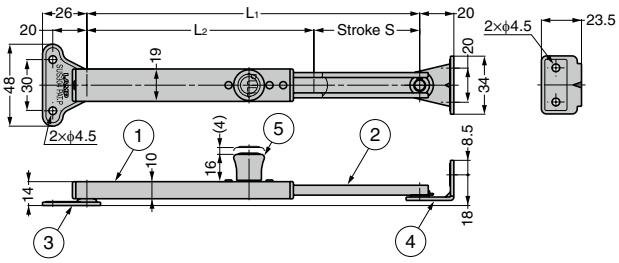


[Lock Release]



[Remarks]

- Do not use this product as a stopper other than for a door.
- Allow room for stroke depending on installation location and purpose.
- Use 1 pc for 1 door.
- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2. (Or the hinge and stay may be damaged.)
- Release the lock while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 2.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Case Bracket		
④	Arm Bracket		
⑤	Locking Knob	POM	Dark Grey

RoHS	CAD	Item Code	Item Name	L1	L2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-358	LSP-195B	195	133	62	61	197	63.8	294	30	127	6	60
G	3D	180-100-357	LSP-270B	270	170	100	92	265	91.9			147	6	60

Refer to 1 : P.408, 2 : P.399

AS Parts Set for Installing to Aluminium Frame

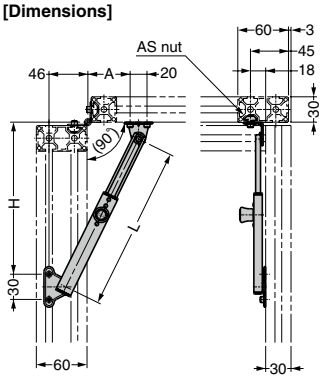
Please refer to the series introduction page 1 for details about AS series.

[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	A	Weight (g)
G	–	180-041-629	AS-LSP-195B-30-6	Groove Width 6 mm	LSP-195B : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	50	–
G	–	180-041-630	AS-LSP-195B-30-8	Groove Width 8 mm	LSP-195B : 1 pc AS Nut AS-8M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs		–
G	–	180-041-631	AS-LSP-270B-30-6	Groove Width 6 mm	LSP-270B : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	80	–
G	–	180-041-632	AS-LSP-270B-30-8	Groove Width 8 mm	LSP-270B : 1 pc AS Nut AS-8M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs		–

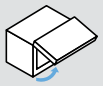
Refer to 1 : P.20, 2 : P.407, 3 : P.526

[Dimensions]



LID STAY L-195, L-270

TEST METHOD 16 | L=R | TITANIUM | SUS

Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Pc Per Door	147 N/pc (15 kgf/pc)

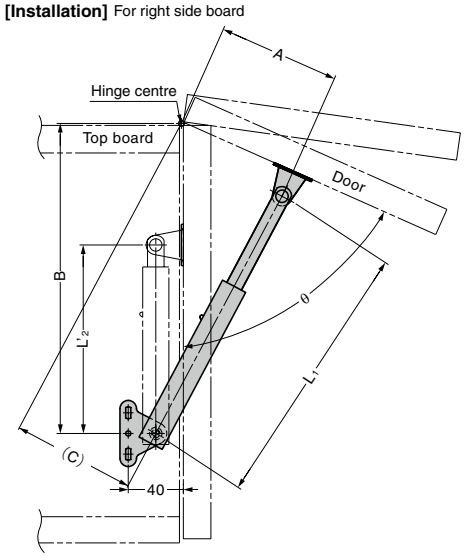
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.

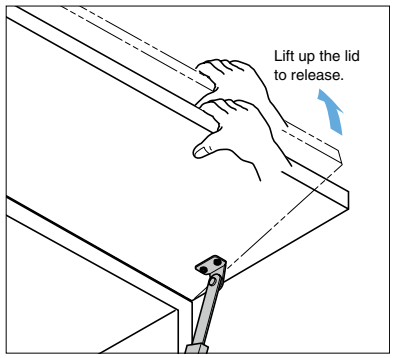
[Remarks]

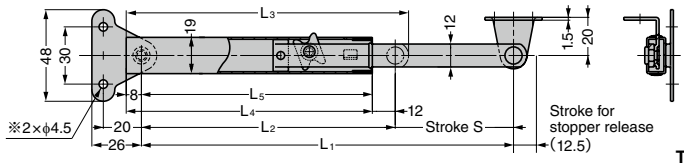
- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)
- Use 1 pc for 1 door. If using 2 pcs, left and right operation may not be synchronised.
- Do not use this product as a stopper other than for a door.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation] For right side board



[Stopper Release]





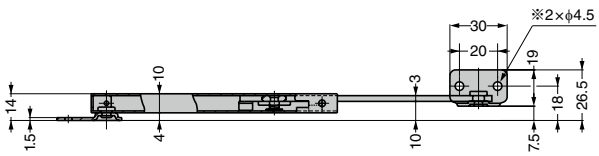
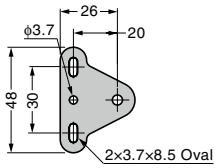
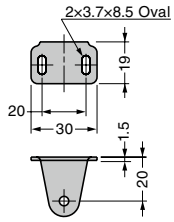


Figure above shows L-195B or L-270B.

Type A Case bracket



Type A Arm bracket

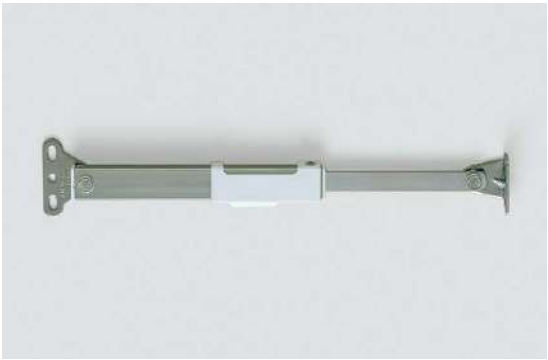


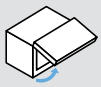
RoHS	CAD	Item Code	Item Name	Installation hole	Material	Finish	L1	L2	L3	L4	L5	S	A	B	C	θ	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-114	L-195A	Long hole	Stainless Steel (SUS304)	Satin	195	133	148	129	121	62	90	225	86.2	66°	250~350	147	15	120	10	100
G	3D	180-100-115	L-195B	Round hole																124	10	100
–	3D	180-100-118	L-195A-TI	Long hole	Titanium	Satin														71	10	100
G	3D	180-100-116	L-270A	Long hole	Stainless Steel (SUS304)	Satin	270	170	185	166	158	100	105	275	105.8	82°	320~500			150	10	100
G	3D	180-100-117	L-270B	Round hole																183	10	100
–	3D	180-100-119	L-270A-TI	Long hole	Titanium	Satin														87	10	100

Refer to 1 : P.399

CLEAN ROOM LID STAY LB-CV215A

L=R SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Pc Per Door 2 Pcs Per Door	147 N/pc (15 kgf/pc)

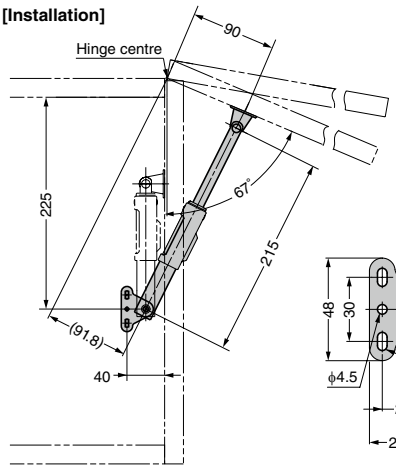
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

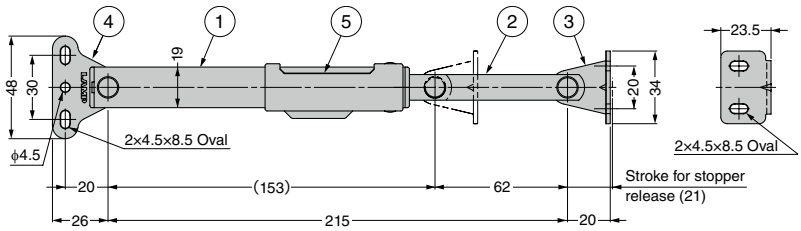
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Using plastic parts and plastic cover at the sliding part prevent metal powder scattering due to metal-to-metal wear.

[Remarks]

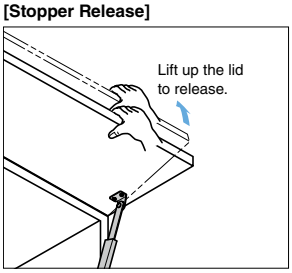
- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Can be used singly or in pairs.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- Calculate suitable door size with reference to LID STAY SERIES 1.

[Installation]





[Stopper Release]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Arm		
③	Arm Bracket		
④	Case Bracket		
⑤	Cover	ABS	White

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-197	LB-CV215A	147	15	149	10	–

Refer to 1 : P.399

CLEAN ROOM MAGNETIC CATCH · CLEAN ROOM HINGE DIGEST

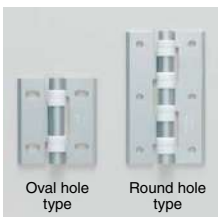
- The magnet is covered with resin, preventing metal powder scattering and rusting.

MC-JM45 1

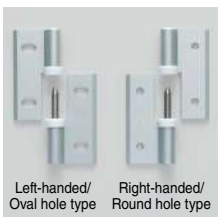
MC-JMS45WT 2

MC-JM63G 3

- Plastic cap at rotating part prevents metal powder scattering due to metal-to-metal wear.



HG-CV 4

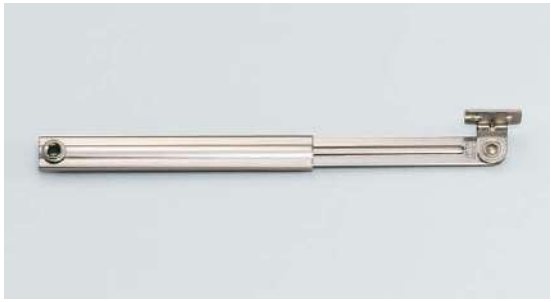


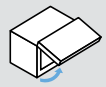
HG-CV-65N 5

Refer to 1 : P.448, 2 : P.451, 3 : P.452, 4 : P.262, 5 : P.263

LOW PROFILE LID STAY L-200P

TEST METHOD 16 | L=R | SUS



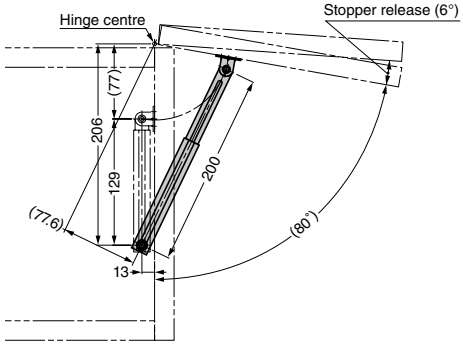
Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Pc Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

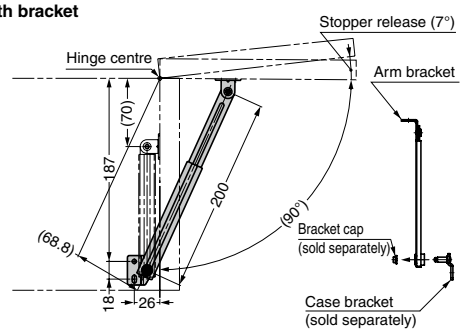
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Can be installed in a small space due to compact design.
- Used for opening and closing of device or door.

[Installation]

Without bracket



With bracket

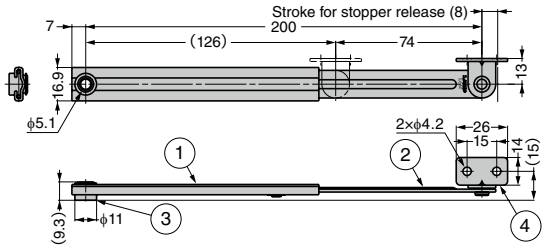


[Remarks]

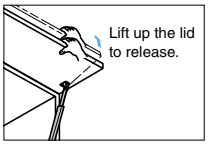
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-200P-BT (sold separately) 1.
- Calculate suitable door size with reference to LID STAY List 2.

[Sold Separately]

- Mounting bracket L-200P-BT 1



[Stopper Release]

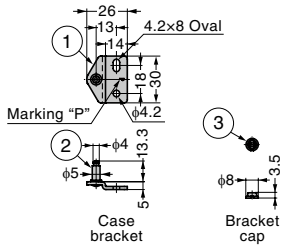


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Case Bracket	Stainless Steel (SUS304)	–
④	Arm Bracket (Plate)	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-104	L-200P	147	15	68	30	300

Refer to 1 : P.410, 2 : P.399

BRACKET L-200P-BT For L-200P



- Bracket for L-200P 1.
- One-touch installation with the bracket cap.
- Refer to L-200P 1 for installation details.

[Remarks]

- For L-200P only.
- Do not apply excessive force in the direction of removing the cap.

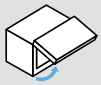
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-028-721	L-200P-BT	14	30	300

Refer to 1 : P.410

No.	Part Name	Material	Finish/Colour
①	Case Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Shaft of Case Bracket	Stainless Steel (SUS303)	Plain
③	Bracket Cap	POM	Black

LID STAY L-195-JC

TEST METHOD 16 | L=R | INSTRUCTION | SUS

Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Pc Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

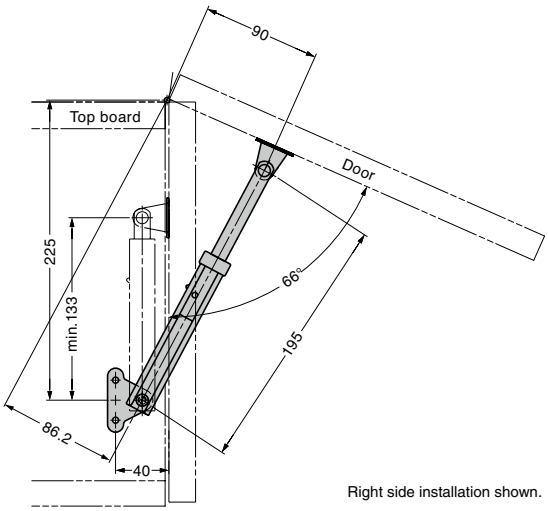
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Simplified version of the same size as L-195 type 1 with excellent cost performance.

[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that the dimension to be at least 133mm.Or the hinge and lid stay may be damaged.
- Use 1 pc for 1 door.If using 2 pcs, left and right operation may not be synchronised.
- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Calculate suitable door size with reference to LID STAY SERIES 2.

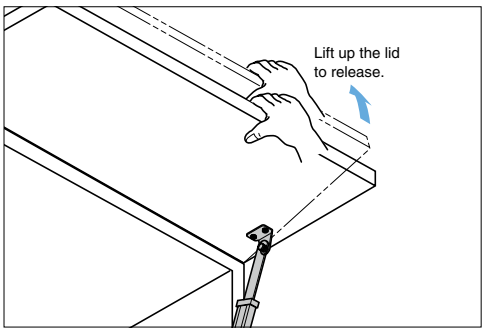
[Installation]

With single knuckle hinge



Right side installation shown.

[Stopper Release]



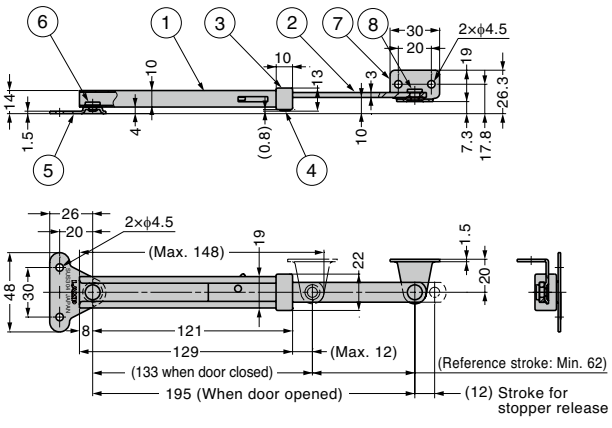
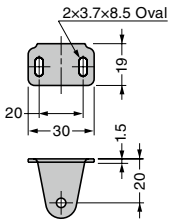
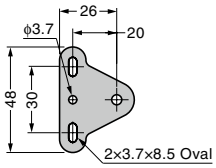


Figure above shows L-195-JC-B.

Type A Arm bracket



Type A Case bracket



※Mounting hole shape of L-195-JC-A shown above.

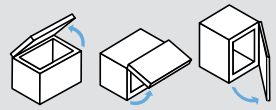
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	Stainless Steel	–
③	Cover	POM	Plain
④	Blind Rivet	Aluminium Alloy	–
⑤	Case Bracket	Stainless Steel (SUS304)	Barrel Polished
⑥	Shaft	Stainless Steel	Plain
⑦	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
⑧	Top Shaft	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	Installation hole	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-977	L-195-JC-A	Long hole	250~350	147	15	100	10	100
G	3D	180-017-976	L-195-JC-B	Round hole					10	100

Refer to 1 : P.408, 2 : P.399

MINI LID STAY (W/ LOCK) L-FS140 Slide release

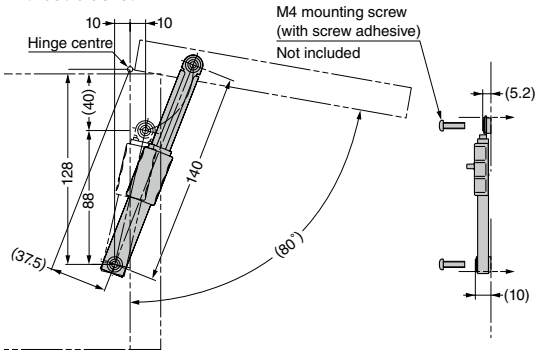
TEST METHOD 16 | L=R | SUS

Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening Swing Door	Multi-angle Lock	Yes	1 Pc Per Door 2 Pcs Per Door	58.8 N/pc (6 kgf/pc)

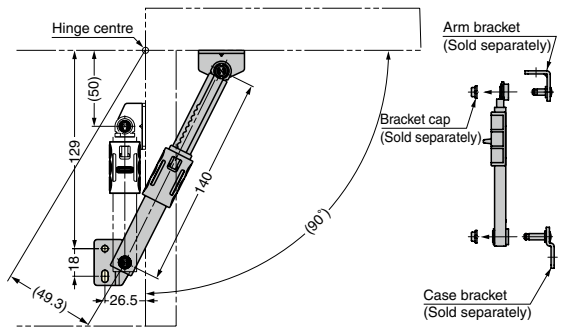
- Locks the lid at multiple angles.
  Sliding the lock lever in any position simultaneously locks the extension direction and compression direction.
- Installation pitch is identical to L-140S 1.
- Plastic parts and metal parts can be separated.

[Installation]

Without bracket



With bracket

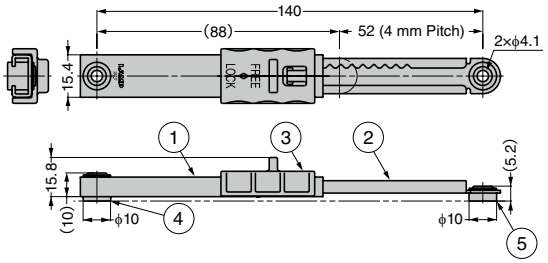


[Remarks]

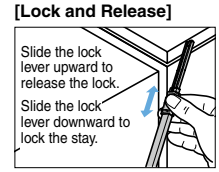
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-FS140-BT (sold separately) 2.
- Calculate suitable door size with reference to LID STAY SERIES 3.

[Sold Separately]

- Mounting bracket L-FS140-BT 2



[Lock and Release]

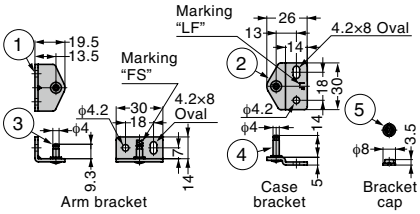


No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Lock Lever	POM	Dark Grey
④	Case Bracket	Stainless Steel (SUS304)	–
⑤	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-108	L-FS140	58.8	6	50	20	200

Refer to 1 : P.414, 2 :P.412, 3 : P.399

BRACKET L-FS140-BT For L-FS140



- Bracket for L-FS140 1.
- One-touch installation with the bracket cap.
- Refer to the stay page 1 for installation details.

[Remarks]

- For L-FS140 only.
- Do not apply excessive force in the direction of removing the cap.

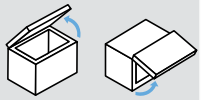
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-028-720	L-FS140-BT	27	40	400

Refer to 1 : P.412

No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Shaft of Arm Bracket	Stainless Steel (SUS303)	Plain
④	Shaft of Case Bracket		
⑤	Bracket Cap	POM	Black

MINI LID STAY (W/ LOCK) L-SL140 Safety Lock Release

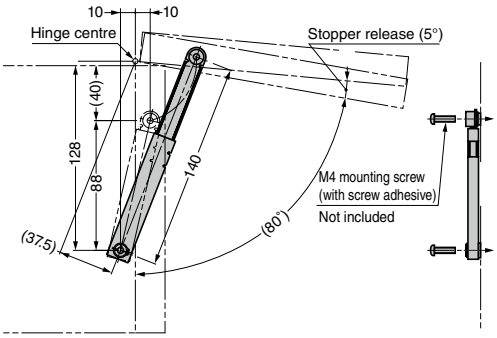
L=R SUS

Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening	Locks When Fully Opened	Yes	1 Pc Per Door	147 N/pc (15 kgf/pc)

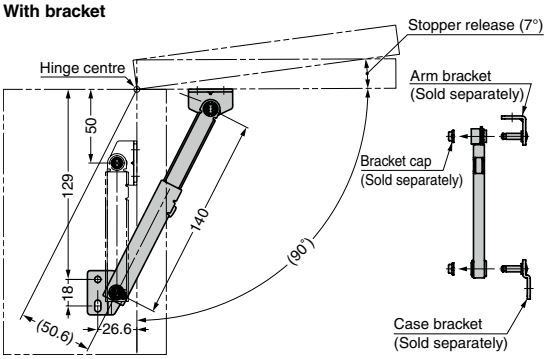
- Can be locked automatically at the door position fully opened. Releases by pushing the release button with the door opened and arm extended. (Safety lock release)
- Installation pitch is identical to L-140S 1.
- Can be installed in a small space due to compact design.
- Used for opening and closing of small device or door.

[Installation]

Without bracket



With bracket

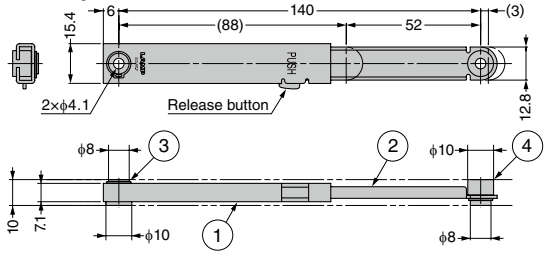


[Remarks]

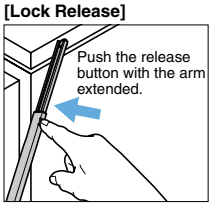
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-SL140-BT (sold separately) 2.
- Calculate suitable door size with reference to LID STAY SERIES 3.

[Sold Separately]

- Mounting bracket L-SL140-BT 2



[Lock Release]

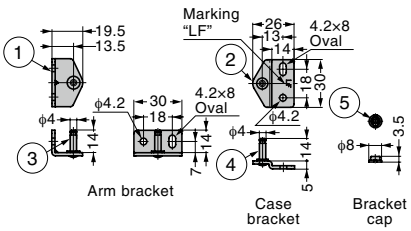


No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Case Bracket		–
④	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-354	L-SL140	147	15	51	30	300

Refer to 1 : P.414, 2 : P.413, 3 : P.399

BRACKET L-SL140-BT For L-SL140



- Bracket for L-SL140 1.
- One-touch installation with the bracket cap.
- Refer to L-SL140 1 for installation details.

[Remarks]

- For L-SL140 only.
- Do not apply excessive force in the direction of removing the cap.

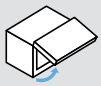
No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Shaft of Arm Bracket	Stainless Steel (SUS303)	Plain
④	Shaft of Case Bracket		
⑤	Bracket Cap	POM	Black

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-028-719	L-SL140-BT	27	30	300

Refer to 1 : P.413

MINI LID STAY L-100S, L-140S

TEST METHOD 16 | L=R | SUS

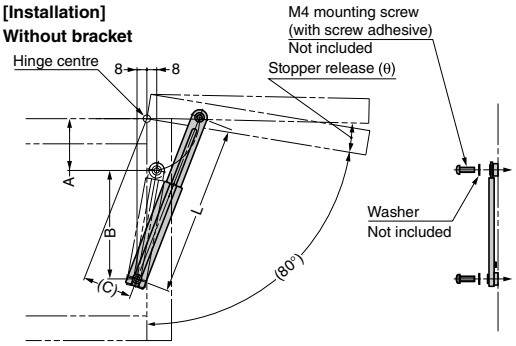
Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening	Holds When Fully Opened	Yes	1 Pc Per Door	58.8 N/pc (6 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

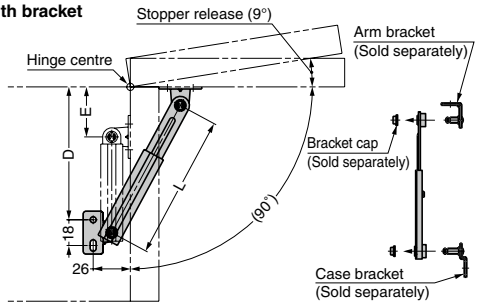
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Can be installed in a small space due to compact design.
- Used for opening and closing of small device or door.

[Installation]

Without bracket



With bracket



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Washer	PA	–
③	Bracket	Stainless Steel (SUS304)	
④	Roter		Barrel Polished

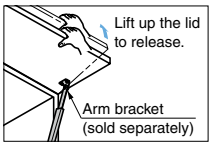
[Remarks]

- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-S-BT (sold separately) 1.
- Calculate suitable door size with reference to LID STAY SERIES 2.

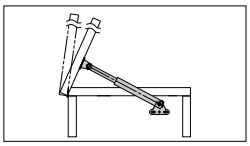
[Sold Separately]

- Mounting bracket L-S-BT 1

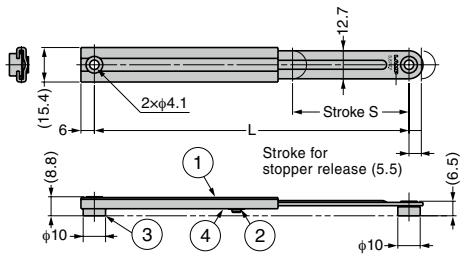
[Stopper Release]



[Use on Top-opening Lids]



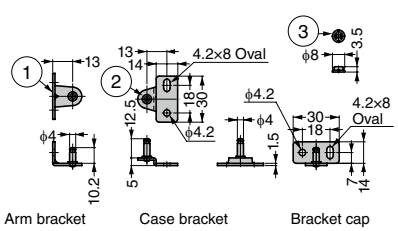
Maximum angle of top-opening lids must be less than 90 degrees.



RoHS	CAD	Item Code	Item Name	L	S	A	B	C	D	E	θ	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-118	L-100S	100	32	24	67	22.5	93	35	15°	58.8	6	31	30	300
G	3D	180-100-105	L-140S	140	52	42	88	39.7	131	48	9°			38	30	300

Refer to 1 : P.414, 2 : P.399

BRACKET L-S-BT For L-100S, L-140S



- Bracket for installing L-100S, L-140S 1 to wooden door.
- Can be easily fixed by fitting the cap.

[Remarks]

- For L-100S, L-140S only.
- Do not apply excessive force in the direction of removing the stay.

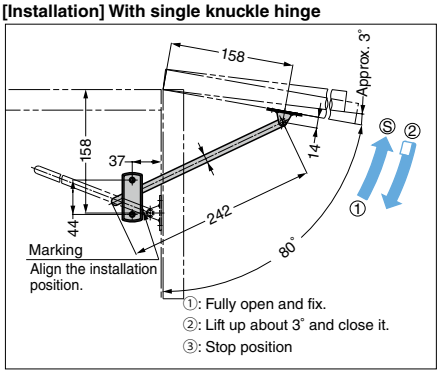
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-100-620	L-S-BT	17	40	400

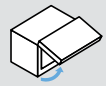
Refer to 1 : P.414

No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Bracket Cap	POM	White

LID STAY KLS

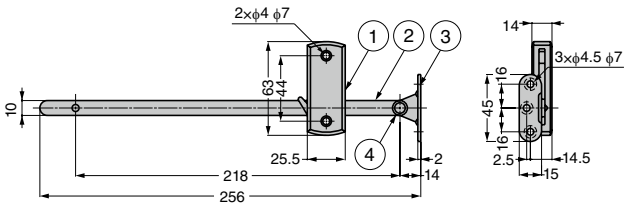
[Installation] With single knuckle hinge



Opening Direction	Description
 Upward-opening	Stops When Fully Opened, Right-handed Only

- Holds the door in fully opened position. Lift up the door to release the stopper.
- Easy installation with a marking on the body for indicating installation position.

[Remarks]
- Right side installation only.
- Max. door height is 300mm.
- Height more than 300mm or applying force to the front end may cause deformation and damage.



No.	Part Name	Material	Finish/Colour
①	Body	PA	White
②	Arm	Steel (SS)	Nickel
③	Bracket	Steel (SPCC)	
④	Spring	Steel	–

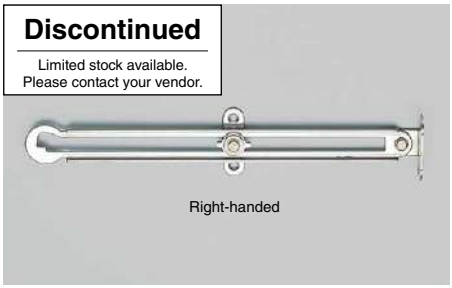
RoHS	CAD	Item Code	Item Name	Door Weight kg/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-052	KLS	Max. 8	85	20	200

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

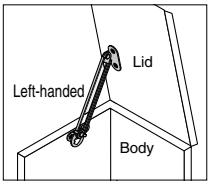
LID STAY S-91, S-92, S-93

SUS

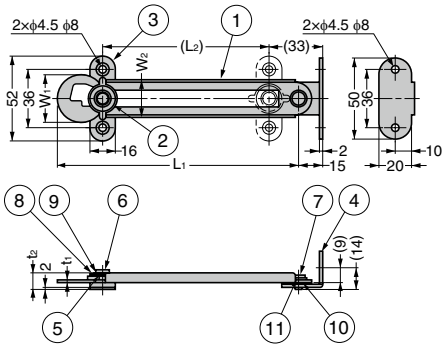
Discontinued
Limited stock available.
Please contact your vendor.



[Installation]



Opening Direction	Description
Top-opening	–



Right-handed type shown.

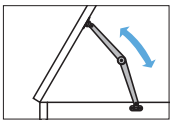
No.	Part Name	Material	Finish
①	Rail Arm	Stainless Steel (SUS304)	Barrel Polished
②	Rotary		
③	Base Plate		
④	Bracket		
⑤	Spring	Stainless Steel (SUS301)	–
⑥	Shaft A	Stainless Steel (SUS303)	
⑦	Shaft B		
⑧	Washer	Stainless Steel (SUS304)	
⑨	N Washer	PA	
⑩	N Washer		
⑪	N Washer		

RoHS	CAD	Item Code	Item Name	Type	L_1	L_2	W_1	W_2	t_1	t_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-055	S-91R	Right-handed	277	231	30	24	2	11	120	100	–
G	3D	180-103-001	S-91L	Left-handed								100	–
G	3D	180-100-056	S-92R	Right-handed	198	153	28	23	1.5	10.5	85	30	180
G	3D	180-103-002	S-92L	Left-handed								30	180
G	3D	180-100-057	S-93R	Right-handed	150	105					75	60	240
G	3D	180-100-070	S-93L	Left-handed								60	240

LID STAY F-300

L=R SUS

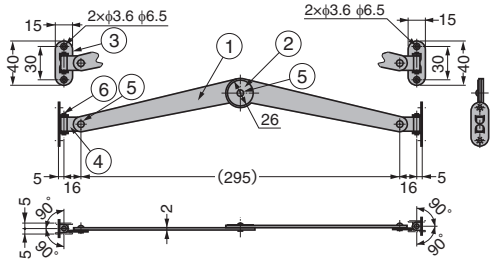
[Installation]



Opening Direction	Description
Top-opening	Non-handed

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



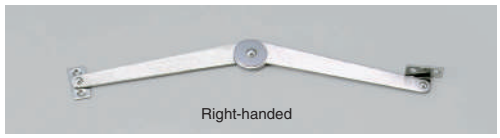
No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel
⑥	Rivet	Brass	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	180-100-064	F-300	113	10

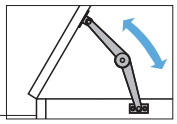
Limited stock available. Please contact with your vender.

LID STAY F-150, F-200, F-250

SUS


Right-handed

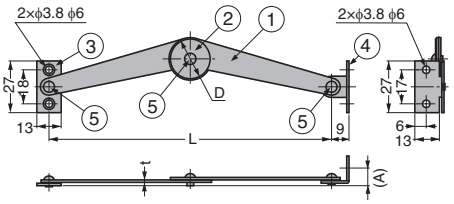
[Installation]



Opening Direction	Description
Top-opening	–

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel

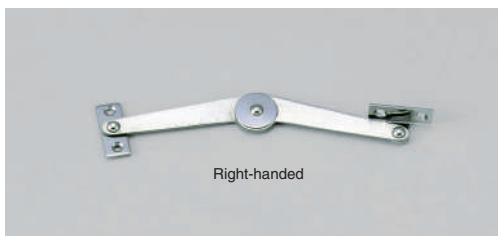
RoHS	CAD	Item Code	Item Name	Type	L	D	A	t	Weight (g)	Box (pcs)
G	3D	180-100-061	F-150R	Right-handed	150	22	9	1.2	30	40
G	3D	180-100-067	F-150L	Left-handed						40
G	3D	180-100-062	F-200R	Right-handed	198	22.5			37	30
G	3D	180-100-068	F-200L	Left-handed						30
G	3D	180-100-063	F-250R	Right-handed	250	25.5		1.5	65	30
G	3D	180-100-069	F-250L	Left-handed						30

Limited stock available. Please contact with your vender.

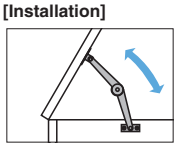
Right-handed type shown.

LID STAY F-100

SUS


Right-handed

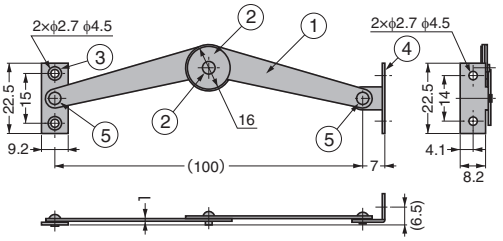
[Installation]



Opening Direction	Description
Top-opening	–

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)
G	3D	180-100-060	F-100R	Right-handed	13	50
G	3D	180-100-066	F-100L	Left-handed		50

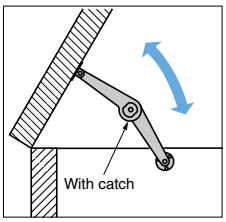
Limited stock available. Please contact with your vender.

Right-handed type shown.

LID STAY S-20 With Catch

S-20L (left-handed)

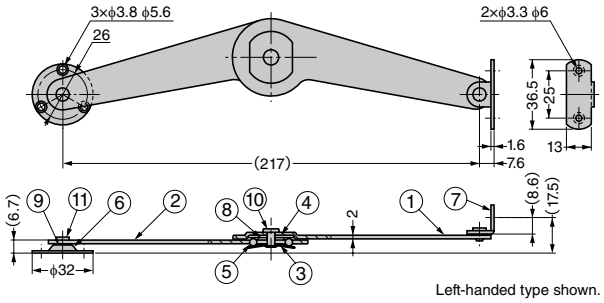
[Installation] Right-handed



Opening Direction	Description
Top-opening	With Catch

[Remarks]
- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

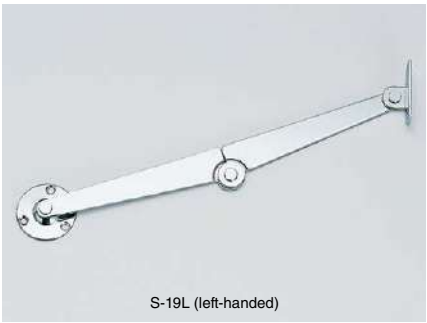
No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Steel (SK)	
④	Spring B		–
⑤	Ball	Steel (SWRCH)	
⑥	Bracket	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Nickel
⑨	Washer	PA	–
⑩	Centre Shaft	Steel (SWRM)	Chrome
⑪	Shaft	Brass	Tin Cobalt Plating



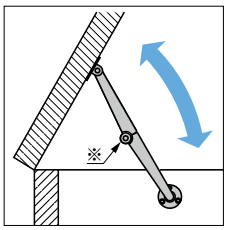
Left-handed type shown.

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	180-100-138	S-20R	Right-handed	410	41.8	122	40	160
GT	3D	180-100-139	S-20L	Left-handed				40	160

LID STAY S-19


S-19L (left-handed)

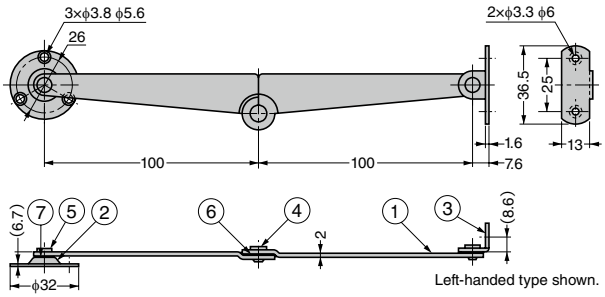
[Installation] Right-handed



Opening Direction	Description
Top-opening	–

[Remarks]
- When closing the door, operate while pulling the centre rivet (※ in left figure) toward you.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Bracket		
③	Bracket		
④	Centre Shaft	Brass	Tin Cobalt Plating
⑤	Shaft		
⑥	Washer A	PA	Natural
⑦	Washer B		



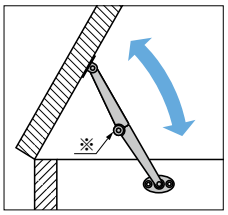
Left-handed type shown.

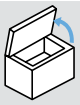
RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	180-100-136	S-19R	Right-handed	425	43.4	66	50	300
GT	3D	180-100-137	S-19L	Left-handed				50	300

LID STAY S-6, S-16

S-6L (left-handed)

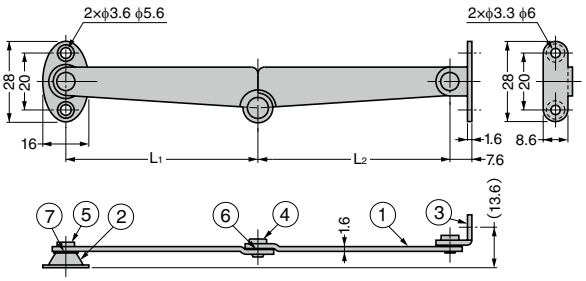
[Installation] Right-handed



Opening Direction	Description
 Top-opening	–

[Remarks]

- When closing the door, operate while pulling the centre rivet (※ in left figure) toward you.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Left-handed type shown.

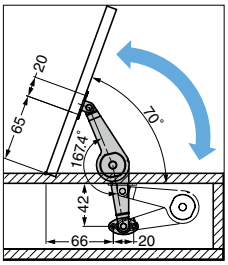
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Mounting Plate		
③	Bracket		
④	Centre Shaft	Brass	Tin Cobalt Plating
⑤	Shaft		
⑥	Washer A	PA	Natural
⑦	Washer B		

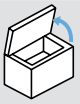
RoHS	CAD	Item Code	Item Name	Type	L_1	L_2	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-132	S-6R	Right-handed	53	53	318	32.4	20	100	1000
G	3D	180-100-133	S-6L	Left-handed						100	1000
G	3D	180-100-134	S-16R	Right-handed	67	67	336	34.3	31	60	600
G	3D	180-100-135	S-16L	Left-handed						60	600

LID STAY S-21 With catch

S-21L (left-handed)

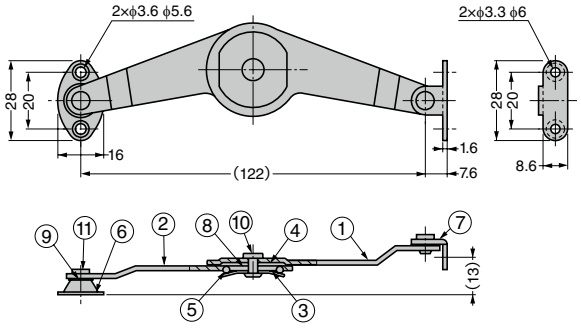
[Installation] Right-handed



Opening Direction	Description
 Top-opening	With catch

[Remarks]

- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Left-handed type shown.

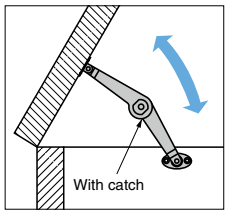
No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Steel (SK)	–
④	Spring B		
⑤	Balls	Steel (SWRCH)	
⑥	Mounting Plate	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Coloured Zinc Chromate (Trivalent)
⑨	Washer	PA	Natural
⑩	Centre Shaft	Brass	Tin Cobalt Plating
⑪	Shaft		

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-140	S-21R	Right-handed	309	31.5	49	50	500
G	3D	180-100-141	S-21L	Left-handed				50	500

LID STAY S-23 With catch

S-23L (left-handed)

[Installation] Right-handed

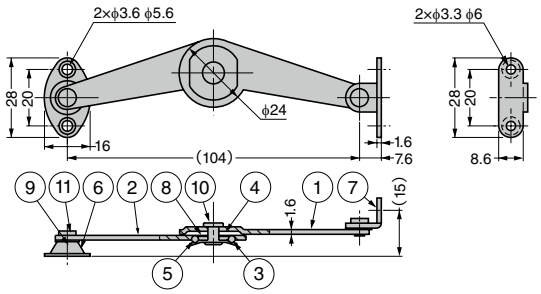


Opening Direction	Description
Top-opening	With catch

[Remarks]

- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Stainless Steel (SUS301)	–
④	Spring B		
⑤	Balls	Steel (SWRCH)	
⑥	Mounting Plate	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Coloured Zinc Chromate (Trivalent)
⑨	Washer	PA	Natural
⑩	Centre Shaft	Brass	Tin Cobalt Plating
⑪	Shaft		



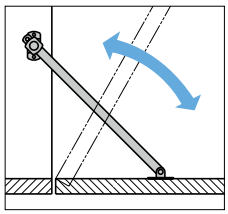
Left-handed type shown.

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-142	S-23R	Right-handed	298	30.4	33	50	500
G	3D	180-100-143	S-23L	Left-handed				50	500

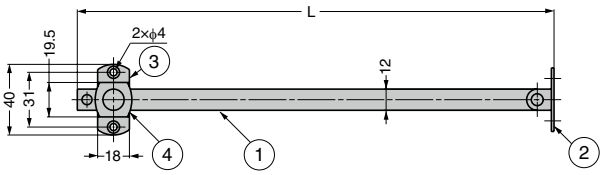
LID STAY HS

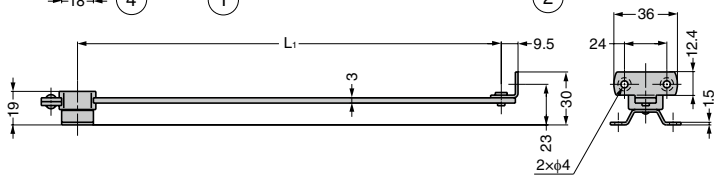
NSF L=R SUS

[Installation]



Opening Direction	Description
Downward-opening	Non-handed





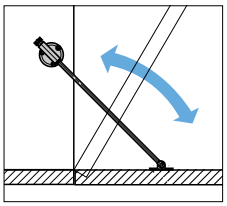
No.	Part Name	Material	Finish/Colour
①	Arm	Stainless Steel (SUS304)	Satin
②	Bracket		
③	Mounting Plate		
④	Body	PA	White

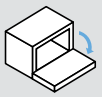
RoHS	CAD	Item Code	Item Name	L	L1	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-020	HS-180	210	180	80	20	220
G	3D	180-100-021	HS-210	240	210	90	20	220
G	3D	180-100-022	HS-240	270	240	100	20	220

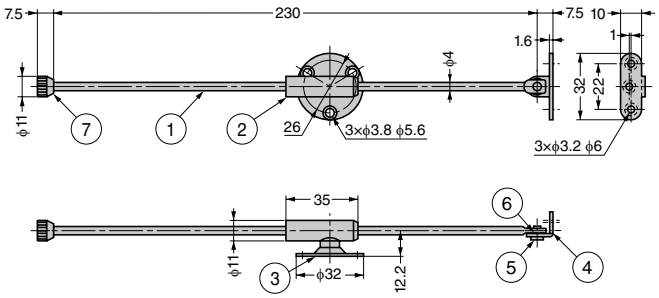
LID STAY S-35

L=R

[Installation]



Opening Direction	Description
 Downward-opening	Non-handed



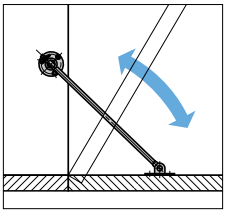
No.	Part Name	Material	Finish/Colour
①	Arm	Steel (SWRM)	Chrome
②	Arm Guide	PA	Brown
③	Bracket	Steel (SPCC)	Chrome
④	Bracket		
⑤	Shaft	Brass	Tin Cobalt Plating
⑥	N Washer	PA	Natural
⑦	Nut	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-151	S-35	44	60	300

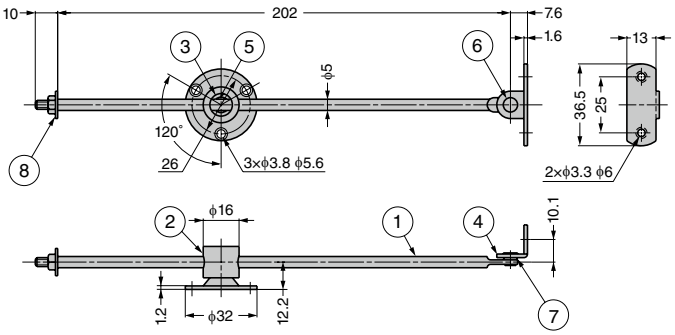
LID STAY S-34

L=R

[Installation]



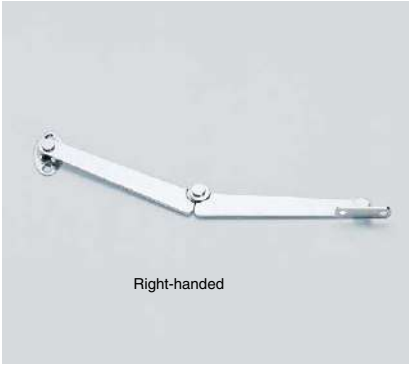
Opening Direction	Description
Downward-opening	Non-handed



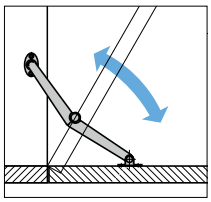
No.	Part Name	Material	Finish/Colour
①	Arm	Steel (SWRM)	Chrome
②	Arm Guide	PA	Natural
③	Bracket	Steel (SPCC)	Chrome
④	Bracket		
⑤	Shaft A	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
⑥	Shaft B	Brass	Tin Cobalt Plating
⑦	Washer	PA	Natural
⑧	Flanged Hexagon Nut	Steel (SWCH)	Nickel

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-150	S-34	52	60	300

LID STAY S-24, S-27, S-25


Right-handed

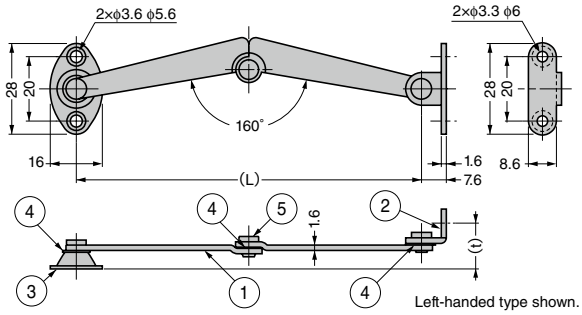
[Installation] Right-handed



Opening Direction	Description
Downward-opening	–

[Remarks]

- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



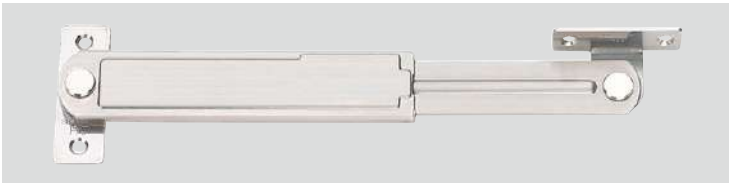
Left-handed type shown.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Bracket		
③	Washer		
④	Washer	PA	Natural
⑤	Shaft	Brass	Tin Cobalt Plating

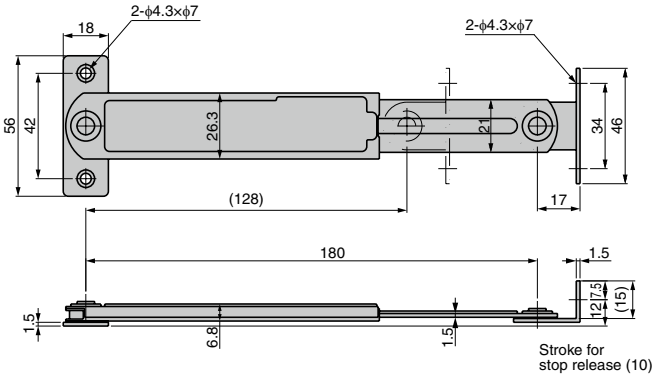
RoHS	CAD	Item Code	Item Name	Type	L	t	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-144	S-24R	Right-handed	105.5	13.6	326	33.3	21	100	1000
G	3D	180-100-145	S-24L	Left-handed						100	1000
G	3D	180-100-148	S-27R	Right-handed	133		325	33.2	31	60	600
G	3D	180-100-149	S-27L	Left-handed		13.4				60	600
G	3D	180-100-146	S-25R	Right-handed	163	13.6	287	29.3	35	60	600
G	3D	180-100-147	S-25L	Left-handed		13.4				60	600

MULTI-ANGLE LID STAY U-3031HL

L=R SUS



- Ratchet stay holds flap lid at multiple angles.
- Non-handed.
- Thin and compact design.
- Completely open the door to release lock.
- Completely close the door to re-engage the lock.



Stroke for stop release (10)

Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	Stop Positions	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
–	–	180-109-200	U-3031HL	15	7	127	10	100

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Refer to Back Cover

・Download installation instructions

SUGATSUNE Search

LAMP®

CATCHES, LATCHES & FASTENERS

Catches and latches are a kind of hardware used for holding doors in closed position.

[Latches]
"Latch" means hasp or clasp, which mainly refers to a mechanism that requires operation “releasing the hasp caught on the counter plate”. By using various “releasing” mechanisms such as lever or pusher, easy operation can be realised.

[Catches]
Unlike latch, catch uses other mechanisms than “hasp” for holding, and it mainly refers to a mechanism which "can be released by pulling". Among others, a wide variety of magnetic catches is a core advantage of Sugatsune. We offer various catches with different size, magnetic force and heat resistance.

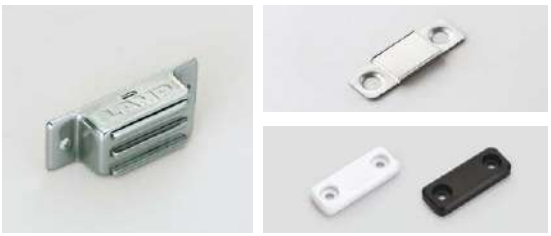
SUGATSUNE

June 2022

MAGNETIC CATCHES
KNUCKLE CATCHES & TENSION CATCHES
TOUCH LATCHES
LEVER LATCHES
SLIDE / BARREL BOLTS
DRAW LATCHES
PUSH LOCK FASTENERS & KNOB FASTENERS
ALUMINIUM FRAME CORNER CONNECTORS
DOOR DAMPERS

■INDEX by Type

Magnetic Catches P.432~



Used for keeping doors closed, our wide range of magnets include strong force type with neodymium earth, heat resistance type, types compliant to food sanitation law, and types specially designed for clean rooms.

Knuckle Catches & Tension Catches P.465~

Used for keeping the door closed with ball and roller.
Can be used in places sensitive to magnetic force with no magnet used.

Touch Latches P.473~

Door can be opened/closed by single touch, without the need of handle or knob.

Lever Latches P.487~

Door can only be opened by operating latch, so it will not open easily even in case of earthquake or other movement.

Slide / Barrel Bolts P.488~

Locked and unlocked positions can be held simply by operating the knob.

Draw Latches P.499~

By operating the lever, door can be pulled in and held together with the cabinet.

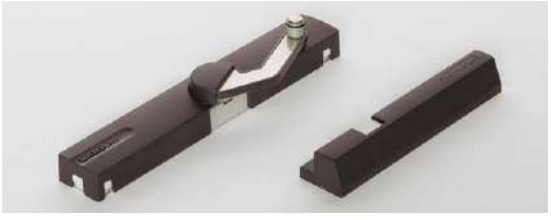
Push Lock Fasteners & Knob Fasteners P.513~

Panel can be attached / detached by simple operation such as pushing and rotating.

Aluminium Frame Corner Connectors P.524~

Aluminium frames can be easily joined together.

Door Dampers P.528~



Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.

MAGNETIC CATCHES
KNUCKLE CATCHES & TENSION CATCHES
TOUCH LATCHES
LEVER LATCHES
SLIDE / BARREL BOLTS
DRAW LATCHES
PUSH LOCK FASTENERS & KNOB FASTENERS
ALUMINUM FRAME CORNER CONNECTORS
DOOR DAMPERS

■INDEX by Specification

Magnetic Catches

For magnetic catches, refer to P.430~.

Knuckle Catches & Tension Catches

P.466~

Picture	Product Name	Material	Push-in Force N (kgf)	Pulling Force N (kgf)
	Knuckle Catch NAC P.466	POM	58N (5.9kgf)	69N (7.0kgf)
	Knuckle Catch JC-T50 P.466	POM	19N (1.9kgf)	20N (2.0kgf)
	Rotary Catch (Mortise Type) RCU P.467	POM	27N (2.8kgf)	32N (3.3kgf)
	Rotary Catch RC6900, RC6901 P.467	POM	11N (1.1kgf) 24N (2.4kgf) 19N (1.9kgf)	16N (1.6kgf) 29N (3.0kgf) 25N (2.6kgf)
	Knuckle Catch JC-24, JC-26 P.468	POM	28N (2.9kgf) 25N (2.6kgf) 17N (1.7kgf)	23N (2.3kgf) 21N (2.1kgf) 13N (1.3kgf)
	Knuckle Catch (Mortise Type) JCU P.468	POM	18N (1.8kgf)	17N (1.7kgf)
	Knuckle Catch (Mortise Type) JCU-F P.469	POM	25N (2.6kgf)	26N (2.7kgf)
	Adjustable Knuckle Catch ESO-6732 P.469	PA	127.4~254.8N (13~26kgf)	78.4~196N (8~20kgf)
	Roller Catch S-1080 (STBRC) P.470	SUS	9.8N (1.0kgf)	26.5N (2.7kgf)
	Tension Catch BCTS P.470	SUS316	20N (2 kgf) 23N (2.3kgf) 56N (5.7kgf)	13N (1.3kgf) 18N (1.8kgf) 38N (3.9kgf)

Picture	Product Name	Material	Push-in Force N (kgf)	Pulling Force N (kgf)
	Tension Catch BCU P.471	Zinc Alloy (ZDC)	35.3N (3.6kgf) 40.2N (4.1kgf)	23.5N (2.4kgf) 38.2N (3.9kgf)
	Tension Catch BCT P.471	Zinc Alloy (ZDC)	43.1N (4.4kgf) 40.2N (4.1kgf) 45.1N (4.6kgf)	29.4N (3.0kgf) 32.3N (3.3kgf) 34.3N (3.5kgf)
	Roller Catch (Mortise Type) R500R P.472	Steel (SPCC)	25N (2.6kgf)	64N (6.5kgf)
	Roller Catch R265, R325 P.472	SUS	12.7N (1.3kgf) 9.8N (1kgf)	23.5N (2.4kgf) 30.4N (3.1kgf)
	Roller Catch C882 P.472	PE	–	–

Touch Latches

P.473~

Picture	Product Name	Material	Retaining Force N (kgf)
	Non-magnetic Touch Latch MLC-100DS-WT P.473	Reinforced Nylon / PBT	90N (9.2kgf)
	Non-magnetic Touch Latch MLC-100 P.474	Reinforced Nylon / Reinforced PBT	90N (9.2kgf)
	Non-magnetic Touch Latch MLC-HT130BL P.474	Reinforced PA / Reinforced PBT	117.6N (12kgf)
	Non-magnetic Touch Latch MC-37F P.475	ABS	78N (8kgf)
	Non-magnetic Touch Latch MC-20 P.475	PP	40N (4kgf)
	Non-magnetic Touch Latch PR-21P P.476	ABS	–
	Non-magnetic Touch Latch PR-20P P.476	ABS	–
	Non-magnetic Touch Latch MC-28 P.477	ABS	29N (3kgf)
	Non-magnetic Touch Latch ESN-195/BLK P.477	PBT	34N (3.5kgf)
	Non-magnetic Mini Touch Latch PR4PK-B P.478	POM	12N (1.2kgf)
	Non-magnetic Mini Touch Latch NS2 P.478	PC	–
	Non-magnetic Touch Latch PR3PK P.479	ABS	–

Picture	Product Name	Material	Retaining Force N (kgf)
	Metal Magnetic Touch Latch ML-ZN80 P.480	Zinc Alloy (ZDC)	29.4N (3kgf)
	Magnetic Touch Latch ML-120 P.480	ABS	23.5N (2.4kgf)
	Magnetic Touch Latch ML-80 P.481	ABS	15.7N (1.6kgf)
	Magnetic Touch Latch ML-30S P.481	ABS	11.8N (1.2kgf)
	Magnetic Touch Latch ML-30W P.482	ABS	11.8N (1.2kgf)
	Magnetic Touch Latch MC-25 P.482	PP	4.9N (0.5kgf)
	Magnetic Touch Latch MC-S60 P.483	ABS / POM	10.8N (1.1kgf)
	Magnetic Touch Latch (Mortise Type) MC-U60 P.483	ABS/POM	10.8N (1.1kgf)
	Push Knob Latch TLP-S P.484	Brass/PA	196N (20kgf)
	Push Knob Latch DPL-RO P.485	Zinc Alloy (ZDC) / ABS	98N (10kgf)
	Push Knob Latch DPL-OV P.485	Zinc Alloy (ZDC) / ABS	98N (10kgf)
	Push Knob Latch DPL-SQ P.486	Zinc Alloy (ZDC) / ABS	98N (10kgf)

Lever Latches

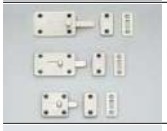
P.487~

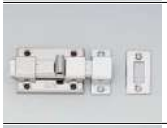
Picture	Product Name	Material	Retaining Force N (kgf)
	Stainless Steel Lever Latch LL-66S P.487	SUS316	196N (20kgf)
	Lever Latch LL-66 P.487	PA/ABS	196N (20kgf)

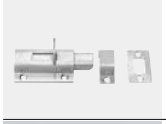
Picture	Product Name	Material	Retaining Force N (kgf)
	Sliding Door Latch HC-30R P.488	SUS	–
	Lever Bolt HR35 P.489	SUS	–

Slide / Barrel Bolts

P.488~

Picture	Product Name	Material
	Bar Latch SSL P.488	SUS
	Bar Latch BLT P.489	SUS
	Bar Latch BLL P.490	SUS
	Bar Latch BLL2 P.491	SUS
	Stainless Steel Hasp HP P.492	SUS
	Slide Bolt FL4 P.493	SUS
	Slide Bolt FL2 P.493	SUS

Picture	Product Name	Material
	Slide Bolt KR75 P.494	SUS
	Slide Bolt KR65 P.494	SUS
	Spring Loaded Barrel Bolt BSS2, BSS3 P.495	SUS
	Spring Loaded Barrel Bolt BSS P.495	SUS
	Spring Loaded Barrel Bolt BLS P.496	SUS
	Spring Loaded Barrel Bolt BL-S P.496	SUS
	Gate Latch SSG P.497	SUS

Picture	Product Name	Material
	Push Barrel Bolt PRS-40 P.497	SUS
	Slide Bolt B-KR P.498	Brass
	Slide Bolt KR-50 P.498	SUS
	Flush Slam Latch P10-55H P.498	Brass

Draw Latches

P.499~

Functions

- Adjustment…Clamping margin adjustable after installation.
- With safety lock…With safety lock for preventing accidental release.
- With hole for padlock or sealing tool…Can be used with padlock (P.873) or sealing tool.
- With cam lock…With cam lock for preventing mischief.

Picture	Product Name	Load Capacity	Functions				Clean Room	Corner Mount	Page
			Adjustment	With Safety Lock	Padlock Sealing Tool	With Cam Lock			
	Draw Latch (Clean Room) STF-CV150	3300N (330kgf)	●				●		P.499
	Draw Latch 93416	1500N (153kgf)	●		●				P.503

Picture	Product Name	Load Capacity	Functions				Clean Room	Corner Mount	Page
			Adjustment	With Safety Lock	Padlock Sealing Tool	With Cam Lock			
	Draw Latch 93415	1000N (102kgf)	●		●				P.503
	Draw Latch (W/ Handle) THF-100	980N (100kgf)	●	●	●				P.500
	Stainless Steel Draw Latch (W/ Safety Lock) STF100	784N (80kgf)		●					P.501
	Stainless Steel Draw Latch (W/ Safety Lock) STF82L	784N (80kgf)		●					P.502
	Stainless Steel Draw Latch (Spring Loaded) STF80	784N (80kgf)							P.502
	Draw Latch THF-75	730N (75kgf)	●	●	●				P.501
	Stainless Steel Draw Latch PN-51	686N (70kgf)							P.511
	Stainless Steel Compression Latch STF-CP140	600N (61kgf)	●	●	●				P.506
	Stainless Steel Draw Latch (Spring Loaded) SCC-60	600N (61kgf)							P.507
	Stainless Steel Draw Latch SCC-TF30	500N (51kgf)	●						P.499
	Draw Latch P34	400N (41kgf)			●				P.508
	Corner Fastener (W/ Lock) STF-C64A/STF-C64B	330N (34kgf)		●	●			●	P.504
	Draw Latch (Spring Loaded) SCCA-60	330N (34kgf)							P.508
	Draw Latch P91	300N (31kgf)							P.508
	Stainless Steel Draw Latch STF40	300N (30.6kgf)							P.503
	Stainless Steel Draw Latch (Spring Loaded) SCC-40	250N (25kgf)							P.507
	Stainless Steel Draw Latch (Spring Loaded) SCC-30	200N (20kgf)							P.507
	Draw Latch (Spring Loaded) SCCA-40	200N (20kgf)							P.508
	Stainless Steel Draw Latch (Spring Loaded) SCC-25	100N (10kgf)							P.507
	Corner Fastener STF-A56AH/STF-A56AC	–						●	P.505
	Corner Fastener PS34A	–			●			●	P.505
	Draw Latch PS, P	–			●				P.509
	Draw Latch P11	–			●				P.509
	Stainless Steel Draw Latch P100SUS	–							P.509
	Draw Latch P	–							P.510
	Stainless Steel Draw Latch PS35	–							P.510
	Draw Latch P1040	–							P.511
	Draw Latch P102H	–							P.512

Push Lock Fastener & Knob Fastener

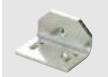
P.514~

Picture	Product Name	Panel Thickness
	Push Lock Fastener 251F, 151F Large/Flush Type P.514	–
	Stainless Steel Push Lock Fastener 152FT Mini/Flush Type P.515	–
	Push Lock Fastener 252F, 152F Mini/Flush Type P.516	–
	Push Lock Fastener 255F, 155F Mini/Button Type P.518	–
	Push Lock Fastener 149FN Push-Turn Type For Horizontal Use Only P.520	–
	Knob Fastener BRT Fall-preventing Screw P.521	–

Picture	Product Name	Panel Thickness
	Knob Fastener BRT-NC P.521	–
	Knob Fastener DBN Snap-in Installation P.522	Max. 5
	Knob Fastener BRF P.522	–
	Knob Fastener RTS-W (New Model of the UN) P.523	–
	Knob Fastener RTS-B (New Model of the UN) P.523	–

Aluminium Frame Corner Connectors

P.524~

Picture	Product Name	Aluminium Frame Groove Width
	Corner Connector PJ One-touch Connector Post-installation Type P.524	For 6 mm 8 mm 10 mm
	Panel Fixing Middle Bracket AS-PTB P.525	–

Picture	Product Name	Aluminium Frame Groove Width
	Stainless Steel AS Nut Post-installation Type P.526	For 6 mm 8 mm 10 mm

Door Dampers

P.528~

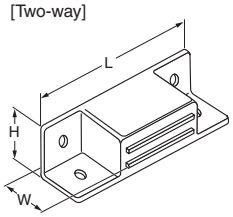
Picture	Product Name	Door Width	Door Weight
	Damper Catch DC P.528	Max. 450 Max. 600	Max. 4kg Max. 7kg
	Damper Catch DC-200 P.530	450~900	7~40kg
	Door Damper LDD-V P.532	Max. 900	15~40kg

Picture	Product Name	Door Width	Door Weight
	Door Damper LDD-S P.536	Max. 900	15~40kg
	Door Damper LDD-V100 P.538	Max. 900	40~100kg

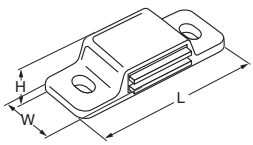
■INDEX by Specification

Magnetic Catches (Magnetic Force · Size · Mounting direction · Description)

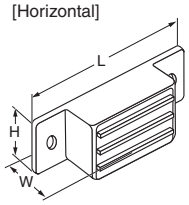
[Two-way]



[Vertical]



[Horizontal]



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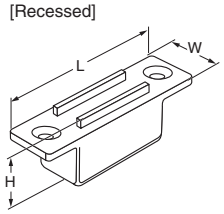
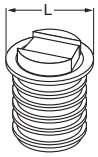


[Rounded]



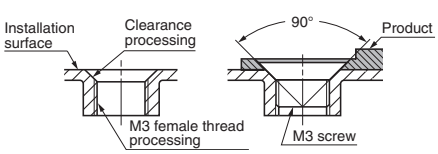
Item Name	Magnetic Force N	Size			Mounting direction	Description	Material	Page
		L	W	H				
MCH-105	147	105	21.5	21.4	Two-way	–	Zinc Alloy (ZDC)	P.457
MC0083HP-140	140	50	14.1	17	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS304)	P.432
MC0083-N	137	50	14.1	17	Horizontal	–	Stainless Steel (SUS304)	P.432
MCH-80	137	80	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.457
MCH-61	107	61	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.457
MC0083D	98	80	13	17	Horizontal	–	Brass	P.432
MC12S	88.2	75.5	24	13	Vertical	–	Aluminium Alloy	P.436
MC-159-8	78.4	41	3	16.5	Horizontal	Ultra Thin	Steel	P.444
MC-110NF	78.4	45	10	11	Two-way	–	PC	P.457
MC-YN005-N	73.5	39	7	11	Horizontal	–	Stainless Steel (SUS430)	P.433
MC0083HP-70	70	50	14.1	17	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS304)	P.432
MC-FS-4SW	69	45	6.7	10.7	Recessed	Snap-in Installation	POM	P.458
MC0083	68.6	50	13	17	Horizontal	–	Brass	P.432
SB11A-AA-1	68.6	86.5	26.5	15.3	Vertical	–	Aluminium Alloy	P.434
MCH-50	68	50	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.457
MC-FS17W	58.8	64	10	14	Recessed	Snap-in Installation	ABS	P.460
MC-SPL	54.9	106	20.5	16	Vertical	Anti rust	PBT	P.436
MC200-1	53.9	48	22.5	12	Vertical	–	PE	P.437
MC0051	53.9	46	12	14.8	Recessed	–	ABS	P.461
MC0099GP	51	45	14.5	11.5	Two-way	–	PC	P.456
MC-YN005HP-50	50	39	7	11	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS430)	P.434
MC12	49	75.5	24	13	Vertical	–	Aluminium Alloy	P.436
MC009S	49	45	15	12	Vertical	–	PE	P.437
MC-111	49	64	7.5	24.5	Horizontal	–	ABS	P.439
MC-159-SUS	49	41	2.8	16.5	Horizontal	Ultra Thin, Anti rust	Stainless Steel (SUS430)	P.444
MC-JM63G-50	49	63	19	14	Two-way	Clean room, Anti rust	POM	P.452
MC-SPM	47	86	17	13	Vertical	Anti rust	PBT	P.436
MC-YC-06	44.1	34	13.5	8	Two-way	–	Zinc Alloy (ZDC)	P.436
MC-FP5S	44.1	40	10	13.5	Recessed	Snap-in Installation	ABS	P.459
MC-FS10	44.1	64	10	14	Recessed	Snap-in Installation	ABS	P.460
SB11B-AA-1	39.2	56.5	26.5	15.3	Vertical	–	Aluminium Alloy	P.434
MS6	39.2	36.5	22	19	Vertical	–	Plastic	P.440
MC-159-4-STD	39.2	35	2.2	16.5	Horizontal	Ultra Thin, Back Mount	Stainless Steel (SUS430)	P.445
MC-MS50	39.2	50	6.6	17	Horizontal	Clean room, Anti rust	Silicone Rubber (Q)	P.446
MC-MSH50BU	39.2	50	6.6	17	Horizontal	Hygienic, Anti rust	Silicone Rubber (Q)	P.447
MC-159	39	41	2.6	16.5	Horizontal	Ultra Thin	Steel (SPCC)	P.443
MC0099S	37.2	45	14.5	11.5	Two-way	–	ABS	P.456
HT-MSG72-ER	35	72	26.9	51.7	Vertical	With Emergency Open Function	Stainless Steel (SCS13)	P.462
MC200	34.3	48	22.5	12	Vertical	–	PE	P.437
MC0097-1	34.3	41	18.5	10	Vertical	–	PE	P.437
MC-FS-2SW	34	26.5	6.7	9.7	Recessed	Snap-in Installation	ABS	P.458
MC-421-30	30	42	2.4	10.2	Horizontal	Ultra Thin	Steel (SPCC)	P.442
MC-YN005	29.4	39	7	11	Horizontal	–	Stainless Steel (SUS430)	P.433
MC-YS001	29.4	34	13.5	6	Vertical	–	PBT	P.435
MC84	29.4	46	25	14.2	Vertical	–	ABS	P.437
MC-112	29.4	53	6.7	23.5	Horizontal	–	ABS	P.439
MC-JM45	29.4	45	5.6	17	Horizontal	Clean room, Anti rust	PP	P.448
MC-JM50	29.4	50	21	13	Vertical	Clean room, Anti rust	POM	P.450
MC-JMS45WT	29.4	45	27	19	Vertical	Clean room, Anti rust	Stainless Steel (SUS304)	P.451
MC-JM63G-30	29.4	63	19	14	Two-way	Clean room, Anti rust	POM	P.452

Item Name	Magnetic Force N	Size			Mounting direction	Description	Material	Page
		L	W	H				
SMC-103	29.4	45	17	11.2	Two-way	Built-in reed switch	PC	P.454
MC-JM74SW-30	29.4	74	30	14	Two-way	Clean room, Anti rust, Built-in reed switch	POM	P.456
MC-SS30	29.4	29	17	24	Recessed	Snap-in Installation	ABS	P.460
MC-YSW02	29	41	14.6	14.6	Vertical	Snap-in Installation	POM	P.435
MCH-40	29	40	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.457
MC-KL	27.4	60	18	16	Vertical	–	PBT	P.438
MC-YN016HP-27	27	35	2.8	12	Horizontal	Heat Resistance, Ultra Thin, Anti rust	Stainless Steel (SUS430)	P.441
MC-YN001, MC-YN001P	26.5	35	2.2	12	Horizontal	Ultra Thin	Steel (SPCC)	P.442
MC-JMF54	25	54	10	16.5	Recessed	Clean room, Anti rust, Snap-in Installation	PP	P.451
MC-FS-4W	25	45	6.7	9.7	Recessed	Snap-in Installation	ABS	P.458
MC009	24.5	45	15	12	Vertical	–	PE	P.437
MC0750	24.5	42	6.7	18	Horizontal	–	Steel (SPCC)	P.439
MC-125	24.5	26.5	30.1	16.5	Vertical	–	ABS	P.440
MC-IS4	24.5	14	–	–	Rounded	–	PA	P.461
MC-IS4F	24.5	14	–	–	Rounded	–	PA	P.461
MC-421SUS-24	24	42	2.7	10	Horizontal	Ultra Thin, High Corrosion Resistance	Stainless Steel (SUS430)	P.442
MC-EL	23.5	60	18	16	Vertical	–	PE	P.438
MC-KM-S	23.5	50.5	17	12	Vertical	–	PBT	P.438
MS4	23.5	33	22	16.5	Vertical	–	Plastic	P.440
MC-YN015S	22.5	35	2.2	12	Horizontal	Ultra Thin, Anti rust	Stainless Steel (Equivalent)	P.441
MC-FP5	21.6	40	10	13.5	Recessed	Snap-in Installation	ABS	P.459
MC-FS34G	21.6	26	9.8	12.5	Recessed	Snap-in Installation	PA	P.459
MC-YN005HP-20	20	39	7	11	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS430)	P.434
MC-SM10	20	39	11.5	11	Vertical	–	Aluminium Alloy	P.438
MC-EM-S	19.6	49.5	16	14	Vertical	–	PE	P.438
MC-159-2-STD	19.6	35	2.2	16.5	Horizontal	Ultra Thin, Back Mount	Stainless Steel (SUS430)	P.445
MC-MS45	19.6	45	6.6	17	Horizontal	Clean room, Anti rust	Silicone Rubber (Q)	P.446
MC-MSH45BU	19.6	45	6.6	17	Horizontal	–	Silicone Rubber (Q)	P.447
MC-YN003	16.6	36	4.5	9	Horizontal	–	Steel (SPCC)	P.439
MC-YN016HP-15	15	35	2.8	12	Horizontal	Heat Resistance, Ultra Thin, Anti rust	Stainless Steel (SUS430)	P.441
MC-FS-2W	15	26.5	6.7	9.7	Recessed	Snap-in Installation	ABS	P.458
MC0097	14.7	41	18.5	10	Vertical	–	PE	P.437
MC-S88	14.7	46	21	15	Vertical	–	Aluminium Alloy	P.438
MC-158	14.7	41	2.6	16.5	Horizontal	Ultra Thin	Steel (SPCC)	P.443
MC-JM38	14.7	38	3.2	16.5	Horizontal	Ultra Thin, Clean room	Polypropylene	P.447
MC-JM63G-15	14.7	63	19	14	Two-way	Clean room, Anti rust	POM	P.452
MC-FS3	12.7	24.2	9.6	12.3	Recessed	Snap-in Installation	ABS	P.458
MC-FS34W, MC-FS34B	12.7	26	9.8	12.5	Recessed	Snap-in Installation	PA	P.459
MC-YS002	12	34	13.5	6	Vertical	–	PBT	P.435
MC-421-11	11	42	2.4	10.2	Horizontal	Ultra Thin	Steel (SPCC)	P.442
MC0099	10.8	45	14.5	11.5	Two-way	–	ABS	P.456
NB01	10.78	9.5	–	–	Rounded	–	PA	P.461
MC-113	9.8	43	6.5	17	Horizontal	–	ABS	P.439
SMC-101B	9.8	45	17	11.2	Two-way	Built-in reed switch	PC	P.454
MC-IS2	9.8	10	–	–	Rounded	–	PA	P.461
MC-421SUS-9	9	42	2.7	10	Horizontal	Ultra Thin, High Corrosion Resistance	Stainless Steel (SUS430)	P.442
MC-S78	7.8	38	18	11	Vertical	–	Aluminium Alloy	P.439
CM-2B	3.9	13	5	7.9	Recessed	Snap-in Installation	PA	P.460

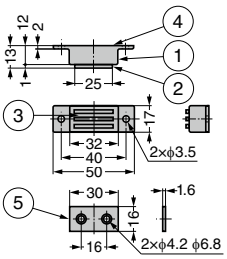
[Cautions]

- There are variations in the magnetic force of the product. Please confirm with the actual product.
- Please refer to the drawing of clearance processing for screw holes shown in the right in case the products or the counter plates have to be installed with countersunk screws.

Reference of the drawing (In case of M3 screws)



MAGNETIC CATCH MC0083



[Remarks]
- Be sure to read the "Cautions" 1

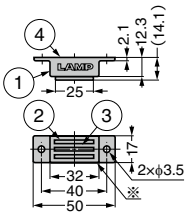
[Parts Included]
- Counter plate

No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Yoke	Steel (SPCC)	
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	Anodised
⑤	Counter plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-068	MC0083	68.6	7.0	32	40	400

Refer to 1 : P.431

MAGNETIC CATCH MC0083-N Strong Force Type



※part is marked with item name

- Strong magnetic force.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃

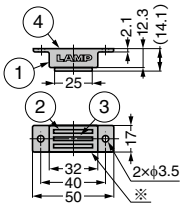
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Yoke	Steel	Nickel
③	Magnet	Neodymium	
④	Cover	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-026-513	MC0083-N	137	14	41	40	400

Refer to 1 : P.431

MAGNETIC CATCH MC0083HP

NSF SUS



※part is marked with item name

- Suitable for high temperature environments up to 250℃. Small with strong magnetic force.
- Anti rust: made of stainless steel.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.

[Sold Separately]
- Counter plate (SUS) AS-68 2

[Counter Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	17	100	1000

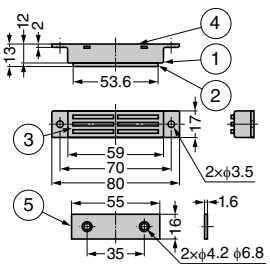
[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-012-729	MC0083HP-70	70	7.1	40	40	400
G	3D	140-012-613	MC0083HP-140	140	14.3		40	400

Refer to 1 : P.431, 2 : P.464

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel
②	Yoke	Stainless Steel (SUS430)	Polished
③	Magnet	Samarium Cobalt	Plain
④	Cover	Stainless Steel (SUS304)	

MAGNETIC CATCH MC0083D



[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate

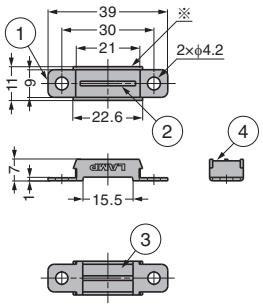
No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Yoke	Steel (SPCC)	
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	Anodised
⑤	Counter plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-067	MC0083D	98	10	63	20	200

Refer to 1 : P.431

MAGNETIC CATCH MC-YN005 Centre Yoke Type

NSF AS SUS



- Thin magnetic catch ideal for tight spaces.
  Heat resistance type MC-YN005HP 1 of the same shape also available.
- Small body with strong magnetic force.
- MC-YN005 (ferrite magnet type) made of stainless steel with excellent rust prevention.
- AS parts set (below) for installing to aluminium frame also available.
- Neodymium magnet type MC-YN005N is newly launched.
  ※part is marked with item name for identification.

[Applications]
- Food equipment, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2.

[Body]

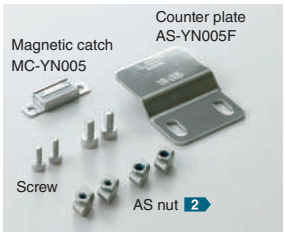
RoHS	CAD	Item Code	Item Name	Magnet	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-558	MC-YN005	Ferrite	29.4	3	9	200	1000
G	3D	140-026-512	MC-YN005-N	Neodymium	73.5	7.5	10	200	1000

Refer to 1 : P.434, 2 : P.431

No.	Part Name	Material		Finish	
		MC-YN005	MC-YN005-N	MC-YN005	MC-YN005-N
①	Yoke	Stainless Steel (SUS430)	Stainless Steel (SUS430)	Plain	Barrel Polished
②	Yoke				Barrel Polished
③	Magnet	Ferrite	Neodymium		Nickel
④	Cover	Stainless Steel (SUS304)	Stainless Steel (SUS304)		Plain

AS Parts Set for Installing to Aluminium Frame

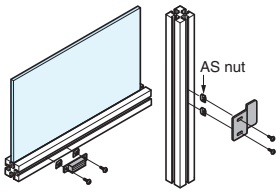
Please refer to the series introduction page 1 for details about AS series.



[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	140-041-501	AS-MC-YN005-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-6M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-502	AS-MC-YN005-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-8M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-503	AS-MC-YN005-40-8	40×40 Groove Width 8 mm		–
G	–	140-041-504	AS-MC-YN005-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-10M4 : 4 pcs M4×12 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-505	AS-MC-YN005-40-8-30-6	Door: 30×30 Groove Width 6 mm Frame: 40×40 Groove Width 8 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005D : 1 pc AS Nut AS-6M4 : 2 pcs AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-506	AS-MC-YN005-40-10-30-8	Door: 30×30 Groove Width 8 mm Frame: 40×40 Groove Width 10 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005D : 1 pc AS Nut AS-8M4 : 2 pcs AS Nut AS-10M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs	–

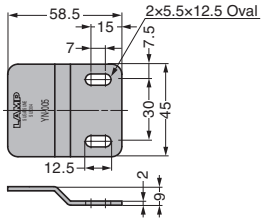
[Installation] **[Counter Plate Installation]**



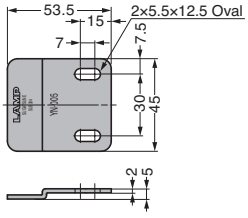
Refer to 1 : P.20, 2 : P.526

STAINLESS STEEL COUNTER PLATE AS-YN005

SUS



Counter Plate AS-YN005F
(Flat type)

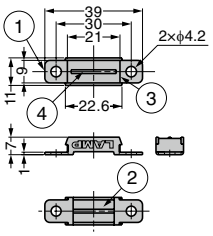


Counter Plate AS-YN005D
(Stepped type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-090-696	AS-YN005D	Stainless Steel (SUS430)	Barrel Polished	–	50	300
G	3D	140-090-697	AS-YN005F			38	50	300

MAGNETIC CATCH MC-YN005HP Centre Yoke Type

No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Samarium Cobalt	Plain
③	Cover	Stainless Steel (SUS304)	
④	Yoke	Stainless Steel (SUS430)	Barrel Polished



- Suitable for high temperature environments up to 250℃ . Non-heat resistance type MC-YN005 1 of the same shape also available.
- Anti rust: made of stainless steel.
- Thin magnetic catch ideal for tight spaces.
- Small body with strong magnetic force.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2 .

[Sold Separately]
- Counter plate (SUS) MC-JM49 3

[Body]

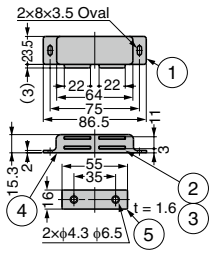
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-012-617	MC-YN005HP-20	20	2	11	200	1000
G	3D	140-012-625	MC-YN005HP-50	50	5.1		200	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	10	100	1000

Refer to 1 : P.433, 2 : P.431, 3 : P.464

MAGNETIC CATCH SB11A-AA-1 With Spring



- Built-in spring in the yoke reduces impact.

[Remarks]
- Be sure to read the "Cautions" 1 .

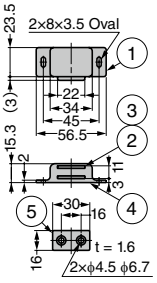
[Parts Included]
- Counter Plate

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Gold Anodised
②	Yoke	Steel (SPCC)	Nickel
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	
⑤	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-160	SB11A-AA-1	68.6	7	72	20	200

Refer to 1 : P.431

MAGNETIC CATCH SB11B-AA-1 With Spring



- Built-in spring in the yoke reduces impact.

[Remarks]
- Be sure to read the "Cautions" 1 .

[Parts Included]
- Counter plate

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Gold Anodised
②	Yoke	Steel (SPCC)	Nickel
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	
⑤	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-161	SB11B-AA-1	39.2	4	36.7	40	400

Refer to 1 : P.431

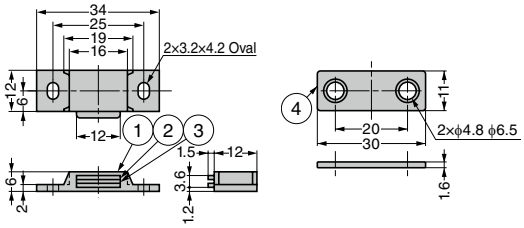
MAGNETIC CATCH MC-YS

- Thin magnetic catch of 6mm high ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet: MC-YS001, MC-YS001P.
- Weaker magnetic force (ferrite magnet): MC-YS002, MC-YS002P.
- Zinc alloy MC-YC-06 1 with strong magnetic force also available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Max. temperature for neodymium magnet: 80℃

[Parts Included]
For MC-YS001P, MC-YS002P only
- Counter Plate
- Countersunk head wood screw 2.9×13, pan head wood screw 3.1×13

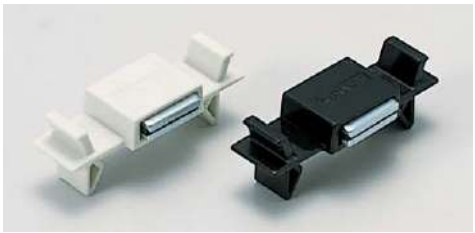
No.	Part Name	Material		Finish / Colour	
		MC-YS001 MC-YS001P	MC-YS002 MC-YS002P	MC-YS001 MC-YS001P	MC-YS002 MC-YS002P
①	Body	PBT		White	
②	Yoke	Steel (SPCC)		Coloured Zinc Chromate (Trivalent)	Clear Zinc Chromate (Trivalent)
③	Magnet	Neodymium	Ferrite	Nickel	–
④	Counter Plate	Steel		Coloured Zinc Chromate (Trivalent)	



RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-298	MC-YS001	Magnetic Catch Only	29.4	3	6	100	1000
G	3D	140-050-296	MC-YS001P	Magnetic Catch・Counter Plate & Screws				100	1000
G	3D	140-050-297	MC-YS002	Magnetic Catch Only	12	1.2	5	100	1000
G	3D	140-050-295	MC-YS002P	Magnetic Catch・Counter Plate & Screws				100	500

Refer to 1 : P.436, 2 : P.431

MAGNETIC CATCH MC-YSW SNAP-IN TYPE



- Snap-in magnetic catch for sheet metal applications.
- Thin magnetic catch of 6mm high ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet: MC-YSW02.

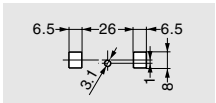
[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature for neodymium magnet: 80℃
- For 1mm and 2mm door, please use spacer YS-P05 (not need for 1.6mm and 2.6mm door).

[Sold Separately]
- Spacer YS-P05

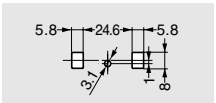
No.	Part Name	Material	Finish / Colour
		MC-YSW02	MC-YSW02
①	Body	POM	White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Neodymium	Nickel

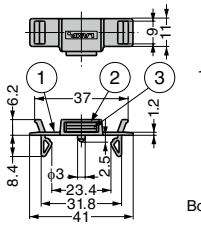
[Cut Out Dimensions]

For 1mm door (Need YS-P05)
For 1.6mm door (No need YS-P05)

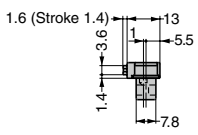


For 2mm door (Need YS-P05)
For 2.6mm door (No need YS-P05)

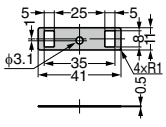




Body



Spacer YS-P05



Spacer

[Body]

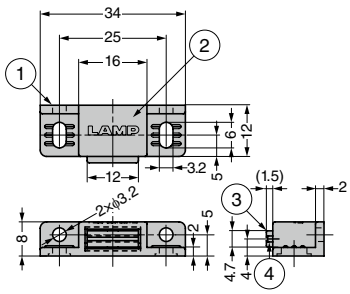
RoHS	CAD	Item Code	Item Name	Colour	Magnet	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-002	MC-YSW02W	White	Neodymium	29	3	5.5	100	1000
G	3D	140-050-029	MC-YSW02B	Black					100	1000

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-003	YS-P05	PP	Natural	0.16	1000	10000

Refer to 1 : P.431

MAGNETIC CATCH MC-YC-06



- Strong die-cast body.
- Small body with strong magnetic force by using neodymium magnet.
- Can be installed vertically or horizontally.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80˚C

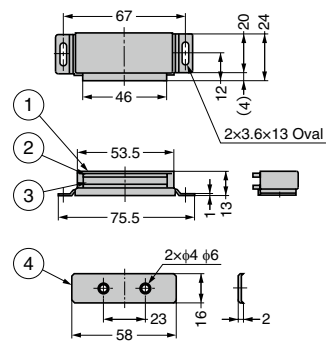
[Recommended Screws]
- M3 Pan head screw
  MC-YS 2 with PBT body also available.

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Case Bracket	Stainless Steel (SUS304)	–
③	Yoke	Steel	Clear Zinc Chromate (Trivalent)
④	Magnet	Neodymium	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-432	MC-YC-06	44.1	4.5	12	100	1000

Refer to 1 : P.431, 2 : P.435

MAGNETIC CATCH MC12



[Remarks]
- Be sure to read the "Cautions" 1.

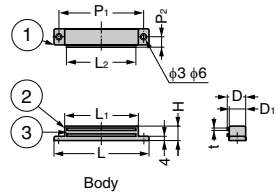
[Parts Included]
- Counter Plate

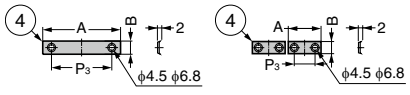
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	MC12: Gold Anodised
			MC12S: Paint/Metallic Brown
②	Yoke	Steel (SPCC)	MC12: Clear Zinc Chromate (Trivalent)
			MC12S: Chrome
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	MC12: Clear Zinc Chromate (Trivalent)
			MC12S: Chrome

RoHS	CAD	Item Code	Item Name	Finish	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-093	MC12	Gold Anodised	49	5	72.9	20	200
G	3D	140-050-094	MC12S	Paint/Metallic Brown	88.2	9		20	200

Refer to 1 : P.431

MAGNETIC CATCH MC-SP





- Sponge inside reduces noise when the door closed.

[Remarks]
- Be sure to read the "Cautions" 1.

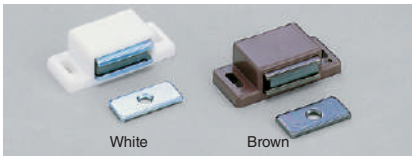
[Parts Included]
- Counter plate
- Sponge cushion
- Countersunk head wood screw 2.7×1.6 (SUS)

No.	Part Name	Material	Colour
①	Body	PBT	White
②	Yoke	Stainless Steel (SUS430)	Plain
③	Magnet	Ferrite	
④	Counter Plate	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	D1	H	P1	P2	t	A	B	P3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pc)	Box (pcs)	Carton (pcs)
G	3D	140-050-070	MC-SPM-S	86	68.4	63	17	15	13	77	9.5	1.5	70	12	57	47	4.8	57	4	12	360
G	3D	140-050-071	MC-SPM-W										30	11	20			53.5	6	12	360
G	3D	140-050-072	MC-SPL-S	106	85.6	80	20.5	18	16	94	11.5	2	79	14	65	54.9	5.6	100	4	6	180
G	3D	140-050-073	MC-SPL-W										38		25				6	6	180

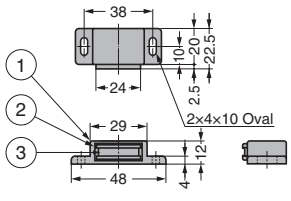
Refer to 1 : P.431

MAGNETIC CATCH MC200



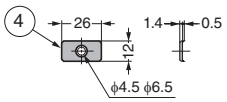
No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Brown
②	Yoke	Steel (SPCC)	Bright chromate treatment (trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Bright chromate treatment (trivalent)

※The finishes will be "Clear Zinc Chromate (Trivalent)" when the current stock is run out.



[Remarks]
- Be sure to read the "Cautions" 1

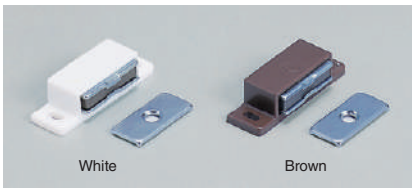
[Parts Included]
- Counter plate



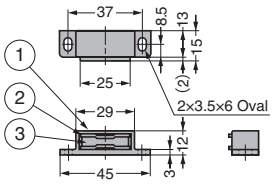
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-058-030	MC200W	White	34.3	3.5	20	100	1000
G'	3D	140-058-031	MC200BR	Brown				100	1000
G'	3D	140-058-032	MC200W-1	White	53.9	5.5		100	1000
G'	3D	140-058-033	MC200BR-1	Brown				100	1000

Refer to 1 : P.431

MAGNETIC CATCH MC009

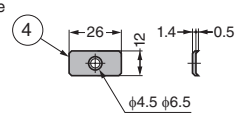


No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Brown
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate



[Remarks]
- Be sure to read the "Cautions" 1

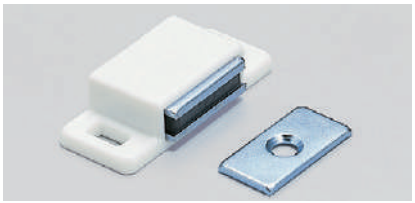
[Parts Included]
- Counter plate



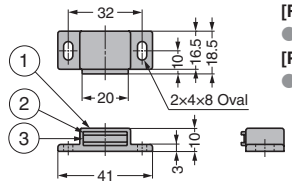
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-040-008	MC009W	White	24.5	2.5	17	100	1000
G'	3D	140-058-010	MC009BR	Brown				100	1000
G'	3D	140-040-009	MC009SW	White	49	5		100	1000
–	3D	140-058-012	MC009SBR	Brown				100	1000

Refer to 1 : P.431

MAGNETIC CATCH MC0097

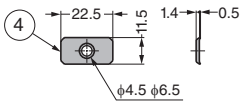


No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Black
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)



[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate

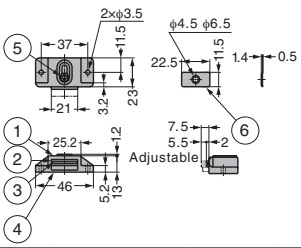


RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-050-331	MC0097W	White	14.7	1.5	12	100	1000
G'	3D	140-050-332	MC0097B	Black				100	1000
G'	3D	140-050-329	MC0097W-1	White	34.3	3.5		100	1000
G'	3D	140-050-330	MC0097B-1	Black				100	1000

Refer to 1 : P.431

MAGNETIC CATCH MC84

No.	Part Name	Material	Finish / Colour		
			BR	BG	BL
①	Body	ABS	Brown	Beige	Black
②	Yoke	Steel (SPCC)	Coloured Chromate		
③	Magnet	Ferrite	–		
④	Back Cover	ABS	Brown	White	Black
⑤	Screw	Steel (SS)	Nickel Plated		
⑥	Counter Plate	Steel (SPCC)	Bright Chromate (trivalent)		



- Yoke position adjustable 5.5mm back and forward.

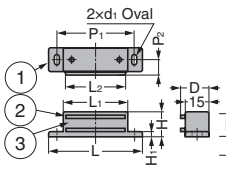
[Remarks]
- Be sure to read the "Cautions" 1.

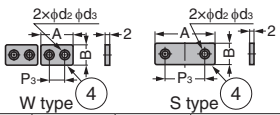
[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.7×13

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-058-046	MC84BR	Brown	29.4	3	18	100	1000
G'	3D	140-058-047	MC84BG	Beige				100	1000
G'	3D	140-059-083	MC84BK	Black				100	1000

Refer to 1 : P.431

MAGNETIC CATCH MC-K





No.	Part Name	Material	Finish / Colour
①	Body	PBT	White
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Chrome

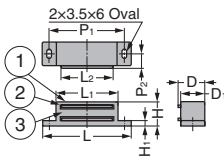
●Sponge inside reduces noise when the door closed.

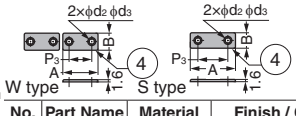
[Remarks]
●Be sure to read the "Cautions" 1.
[Parts Included]
●Counter plate
●Sponge cushion
●Pan head wood screw 3.1×13
●Countersunk head wood screw 2.9×13

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	H	H1	P1	P2	d1	A	B	P3	d2	d3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pcs)	Box (pcs)	Carton (pcs)
G	3D	140-050-290	MC-KM-S	50.5	33	30	17	12	3	42	10	3.2×6.2	30	11.5	20	4.2	6.7	23.5	2.4	26	4	12	720
G	3D	140-050-291	MC-KL-S	60	42	38	18	16	3.2	50	10.5	3.2×6	38	14	25	4.3	6.4	27.4	2.8	45		12	360
G	3D	140-050-292	MC-KL-W										20	13	10						6	12	360

Refer to 1 : P.431

MAGNETIC CATCH MC-E





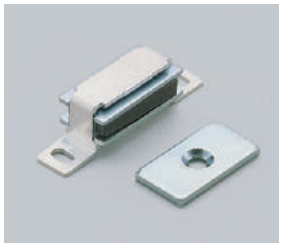
No.	Part Name	Material	Finish / Colour
①	Body	PE	White
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)

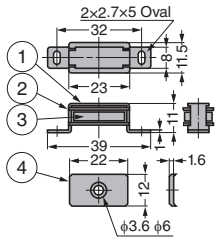
[Remarks]
●Be sure to read the "Cautions" 1.
[Parts Included]
●Counter plate
●Pan head wood screw 3.1×13
●Countersunk head wood screw 2.9×13

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	D1	H	H1	P1	P2	A	B	P3	d2	d3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pcs)	Box (pcs)	Carton (pcs)
G	3D	140-050-058	MC-EM-S	50	34.2	28	16	15	13	3.8	41.5	9	30	11	20	4.8	6.5	19.6	2	26	4	24	240
G	3D	140-050-059	MC-EL-S	60	41.4	34.6	17.5	16	15.6	3.5	50	9.5	38	14	25	4.3	6.4	23.5	2.4	38		24	360
G	3D	140-050-060	MC-EL-W										20	13	10	4.4					6	24	360

Refer to 1 : P.431

MAGNETIC CATCH MC-SM10





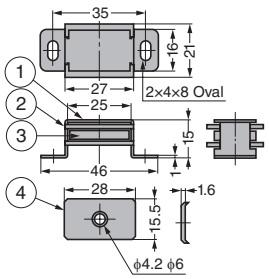
[Remarks]
●Be sure to read the "Cautions" 1.
[Parts Included]
●Counter plate
●Round head wood screw 2.7×13 (2 pcs)
●Countersunk head wood screw 2.4×13 (1 pc)

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Anodised
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-202	MC-SM10	20	2	12	100	1600

Refer to 1 : P.431

MAGNETIC CATCH MC-S88



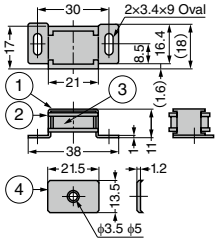
[Remarks]
●Be sure to read the "Cautions" 1
[Parts Included]
●Counter plate
●Round head wood screw 3.1×13 (2 pcs)
●Countersunk head wood screw 2.9×13 (1 pc)

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Plain
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-032	MC-S88	14.7	1.5	28.5	24	720

Refer to 1 : P.431

MAGNETIC CATCH MC-S78



[Remarks]
- Be sure to read the "Cautions" 1

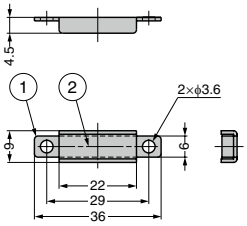
[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 2.4×13 (1 pc)

No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Brown Enamel Finish
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-030	MC-S78	7.8	0.8	17	36	720

Refer to 1 : P.431

MAGNETIC CATCH MC-YN003



- Thin magnetic catch of 4.5mm thick ideal for tight spaces.

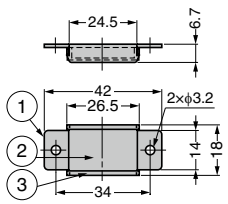
[Remarks]
- Be sure to read the "Cautions" 1.
- Please install so that the counter plate contacts the yoke on both sides. Direct contact with magnet may cause magnet breaking.

No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-540	MC-YN003	16.6	1.7	5	500	2500

Refer to 1 : P.431

MAGNETIC CATCH MC0750



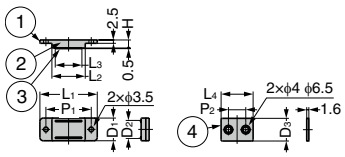
[Remarks]
- Be sure to read the "Cautions" 1.

No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Ferrite	–
③	Cover	Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-057-000	MC0750	24.5	2.5	19	150	750

Refer to 1 : P.431

MAGNETIC CATCH MC-111, MC-112, MC-113



- Surface mount type thin magnetic catch ideal for tight spaces.

[Remarks]
- Be sure to read the "Cautions" 1.

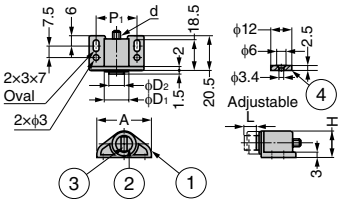
[Parts Included]
- Counter plate

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Ivory
②	Magnet	Ferrite	–
③	Yoke	Steel	Clear Zinc Chromate
④	Counter Plate	(SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	L1	L2	L3	L4	D1	D2	D3	P1	P2	H	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	–	140-059-463	MC-111B	Black	64	46	42	45	24.5	21	24	55	30	7	49	5	48	50	500
G	3D	140-059-464	MC-111IV	Ivory														50	500
–	3D	140-059-465	MC-112B	Black	53	35	31	34	23.5	20	23	44	20	6.2	29.4	3	32	50	500
G	3D	140-059-466	MC-112IV	Ivory														50	500
G	3D	140-059-467	MC-113B	Black	43	25	20	24	17	13.5	17	34	13	6	9.8	1	14	100	1000
G	3D	140-059-468	MC-113IV	Ivory														100	1000

Refer to 1 : P.431

MAGNETIC CATCH MS



- Yoke position adjustable back and forward.

[Remarks]
- Be sure to read the "Cautions" 1.
- Screws not included.
- Magnet yoke without surface finish may rust.

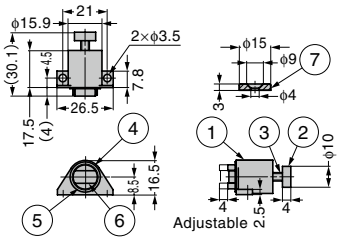
[Parts Included]
- Counter plate W4 2

No.	Part Name	Material	Finish / Colour
①	Body	Plastic	White, Brown
②	Yoke	Steel	Plain
③	Magnet	Ferrite	–
④	Counter Plate W4	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	A	P1	D1	D2	d	H	L	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-506	MS4WP	White	33	25.5	14	9	M4	16.5	5	23.5	2.4	11.7	–	1000
–	3D	140-050-507	MS4BRP	Brown											–	1000
–	3D	140-050-508	MS6WP	White	36.5	28	17	11	M5	19	3	39.2	4	17.7	–	1000
–	3D	140-050-509	MS6BRP	Brown											–	1000

Refer to 1 : P.431, 2 : P.464

MAGNETIC CATCH MC-125



- Yoke position adjustable 4mm back and forward.
- Yoke position adjustable back and forward by turning the knob on the back side of the body.

[Remarks]
- Be sure to read the "Cautions" 1.
- Screws not included.

[Parts Included]
- Counter plate W12 2

No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Knob	Brass	Nickel
③	Bolt	ABS	White, Black
④	Tube	Brass	Nickel
⑤	Yoke	Steel (SS)	Clear Zinc Chromate
⑥	Magnet	Ferrite	–
⑦	Counter Plate W12	Steel (SUM)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-954	MC-125WTP	White	24.5	2.5	14.5	20	1000
G	3D	140-021-955	MC-125BLP	Black				20	1000

Refer to 1 : P.431, 2 : P.464

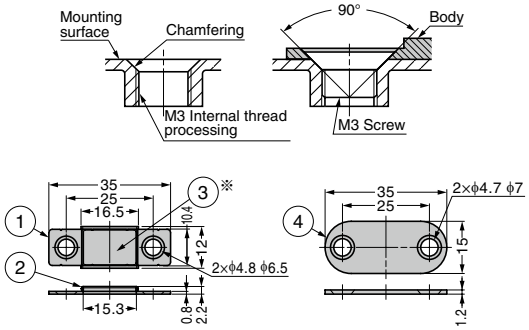
MAGNETIC CATCH MC-YN015S, MC-YN015SP

SUS

MC-YN015S (Magnetic catch)　MC-YN015SP (Magnetic catch, counter plate and screws)

- Ultra thin magnetic catch of 2.2mm thick ideal for tight space.
- Stainless steel type of the same size as conventional MC-YN001 1.
- Anti rust: made of stainless steel and acrylic resin coated magnet.
- Small body with strong magnetic force by using neodymium magnet.
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.

[Cut Out Dimensions and Installation Example] For M3 screw



※Magnet is stored under the cover.

[Remarks]

- Be sure to read the "Cautions" 2.
- Rust may occur when using in direct water exposure or high temperature and high humidity environment.
- Max. temperature: 80℃
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the cover. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets.In this way, screw head will not project when the body is fixed (refer to "Cut Out Dimensions and Installation Example").

[Parts Included]

For MC-YN015SP only
- Counter plate
- Countersunk head tapping screw 3×14 (SUS)

[Recommended Screws]

- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

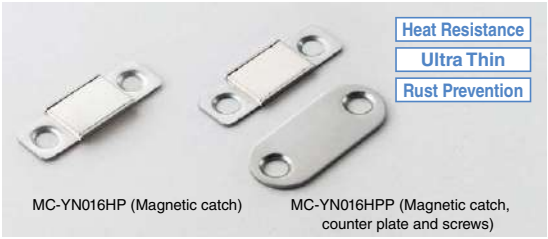
No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (Equivalent)	Barrel Polished
②	Cover	Stainless Steel (SUS304)	Plain
③	Magnet	Neodymium	Plastic Coating
④	Counter Plate	Stainless Steel (Equivalent)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-672	MC-YN015S	Magnetic Catch Only	22.5	2.3	3.6	100	2000
G	3D	140-020-673	MC-YN015SP	Magnetic catch・Counter Plate & Screws			7.3	100	2000

Refer to 1 : P.442, 2 : P.431

MAGNETIC CATCH MC-YN016HP

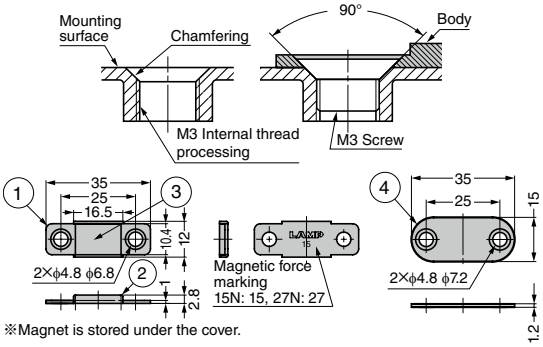
SUS



MC-YN016HP (Magnetic catch)　MC-YN016HPP (Magnetic catch, counter plate and screws)

- Suitable for high temperature environments up to 250℃ .
- Anti rust: made of stainless steel.
- Ultra thin magnetic catch of 2.8mm thick ideal for tight spaces.
- Small body with strong magnetic force (samarium cobalt magnet).
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.
- Non-heat resistance type MC-YN015S 1 of the same shape also available.

[Cut Out Dimensions and Installation Example] For M3 screw



※Magnet is stored under the cover.

[Remarks]

- Be sure to read the "Cautions" 2.
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the cover. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed (refer to "Cut Out Dimensions and Installation Example").

[Parts Included]

For MC-YN016HPP only
- Counter plate
- Countersunk head tapping screw 3×14 (SUS)

[Recommended Screws]

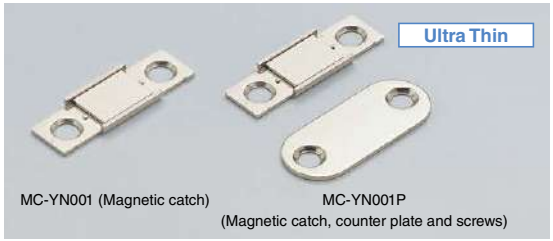
- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (SUS430)	Barrel Polished
②	Cover	Stainless Steel (SUS304)	Plain
③	Magnet	Samarium Cobalt	
④	Counter Plate	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-220	MC-YN016HP-15	Magnetic Catch Only	15	1.5	4	100	2000
G	3D	140-033-221	MC-YN016HPP-15	Magnetic Catch・Counter Plate & Screws			10.4	100	2000
G	3D	140-033-222	MC-YN016HP-27	Magnetic Catch Only	27	2.8	5	100	2000
G	3D	140-033-223	MC-YN016HPP-27	Magnetic Catch・Counter Plate & Screws			11.4	100	2000

Refer to 1 : P.441, 2 : P.431

MAGNETIC CATCH MC-YN001, MC-YN001P



MC-YN001 (Magnetic catch)　　MC-YN001P (Magnetic catch, counter plate and screws)

- Ultra thin magnetic catch of 2.2mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.

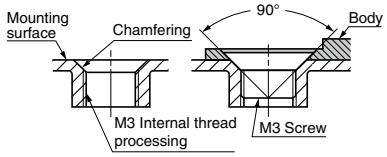
[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the magnet. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed (refer to "Cut Out Dimensions and Installation Example").

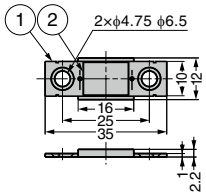
[Parts Included]

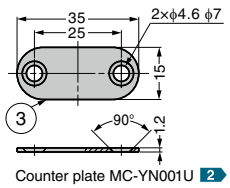
For MC-YN001P only
- Counter plate MC-YN001U 2
- Countersunk head tapping screw 3×14

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

[Cut Out Dimensions and Installation Example] For M3 screw







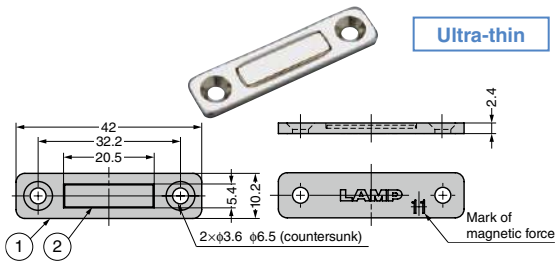
Counter plate MC-YN001U 2

No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Neodymium	
③	Counter Plate	Steel (SPCC)	

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (sets)	Carton (sets)
G	3D	140-050-257	MC-YN001	Magnetic Catch Only	26.5	2.7	4.0	100	1000
G	3D	140-050-000	MC-YN001P	Magnetic Catch・Counter Plate & Screws			7.5	100	1000

Refer to 1 : P.431, 2 : P.465

ULTRA-THIN MAGNETIC CATCH MC-421



- Super-slim and compact design: 2.4 mm thick and 10.2 mm wide.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80
- The counter plate should be in contact with the body. Direct contact may damage the magnet.

[Sold Separately]
- Counter plate (made of SUS) MC- JM42(New Products for no.400 CatalogueP.C2).

[Recommended Screw]
- Countersunk head wood screw M3

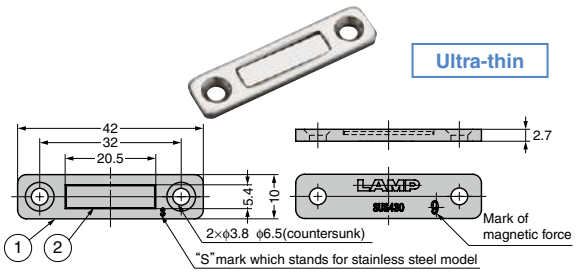
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-045-390	MC-421-11	11	1.1	6.4	250	1500
G	3D	140-045-391	MC-421-30	30	3.1	6.6	250	1500

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Nickel
②	Magnet	Neodymium	

Refer to 1 : P.431

ULTRA-THIN MAGNETIC CATCH MC-421SUS Stainless Steel

SUS



- Made of stainless steel for high corrosion resistance.
- Super-slim and compact design: 2.7 mm thick and 10 mm wide.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80
- The counter plate should be in contact with the body. Direct contact may damage the magnet.

[Sold Separately]
- Counter plate (made of SUS) MC- JM42(New Products for no.400 CatalogueP.C2).

[Recommended Screw]
- Countersunk head wood screw M3

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-045-392	MC-421SUS-9	9	0.9	6.9	250	1500
G	3D	140-045-393	MC-421SUS-24	24	2.4	7.1	250	1500

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Neodymium	Nickel

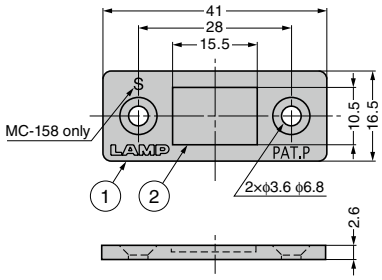
Refer to 1 : P.431

MAGNETIC CATCH MC-158, MC-159

- Ultra thin magnetic catch of 2.6mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Similar items (extra strong magnetic force): MC-159-8 1, MC-159-SUS 2.
- AS parts set (below) for installing to aluminium frame also available.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80˚C
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.
- Only MC-158 is marked with "S" to differentiate it from MC-159 (see the drawing below)

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



*Without the mark "PAT.P" from the next production lot.

No.	Part Name	Material	Finish (MC-158, MC-159)	Finish (MC-159-BL)
①	Body	Steel (SPCC)	Nickel	Copper Plating (Black)
②	Magnet	Neodymium		Black Chromate (Trivalent)

[Counter Plate] Sold Separately

RoHS	CAD	Item Code	Item Name
G	3D	140-059-555	MC-YN001U
G	3D	140-038-025	MC-YN001U-BL

[Magnetic Catch]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-014	MC-158	14.7	1.5	12	200	1000
G	3D	140-058-061	MC-159	39	4		200	1000
G	3D	140-038-023	MC-159-BL				200	1000

Refer to 1 2 : P.444, 3 : P.431

AS Parts Set for Installing to Aluminium Frame

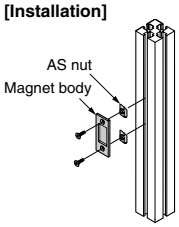
Please refer to the series introduction page 1 for details about AS series.

[AS Parts Set] Parts set of counter plate, screws and AS nuts used for installing to aluminium frame

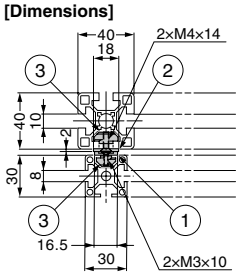
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	140-041-498	AS-MC-159-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-159 : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M3 : 2 pcs AS Nut AS-6M4 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	36
G	–	140-041-499	AS-MC-159-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-159 : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M3 : 2 pcs AS Nut AS-8M4 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	44
G	–	140-041-500	AS-MC-159-40-8	40×40 Groove Width 8 mm		48

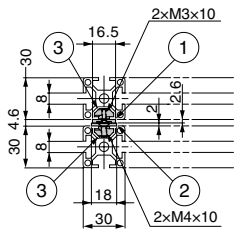
※Item names correspond to MC-159.

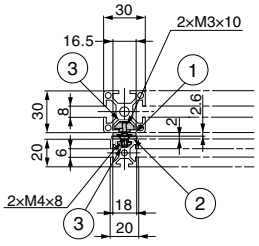
[Installation]



[Dimensions]







No.	Product Name
①	Magnetic Catch MC-159
②	Counter Plate AS-68
③	AS Nut

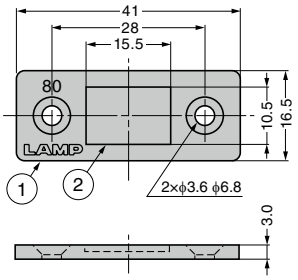
Refer to 1 : P.20, 2 : P.464, 3 : P.526

MAGNETIC CATCH MC-159-8 Strong Force Type

- Ultra thin magnetic catch of 3mm thick ideal for tight spaces.
- Small body with extra strong magnetic force by using neodymium magnet.
- Similar items (different magnetic force): MC-158, MC-159 1, MC-159-SUS 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80˚C
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



No.	Part Name	Material	Finish
①	Body	Steel	Nickel
②	Magnet	Neodymium	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-026-510	MC-159-8	78.4	8	14	200	1000

Refer to 1 : P.443, 2 : P.444, 3 : P.431

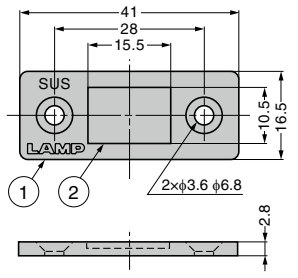
MAGNETIC CATCH MC-159-SUS

SUS

- Anti rust: made of stainless steel and acrylic resin coated magnet.
- Ultra thin magnetic catch of 2.8mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Similar items (different magnetic force): MC-158, MC-159 1, MC-159-8 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80˚C
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



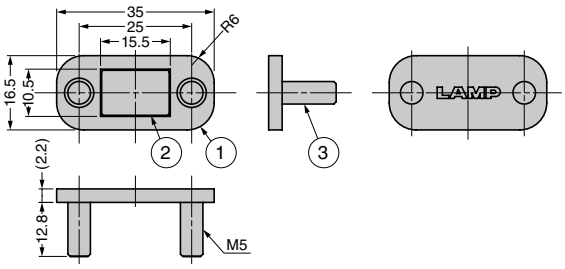
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Neodymium	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-026-511	MC-159-SUS	49	5	13	200	1000

Refer to 1 : P.443, 2 : P.444, 3 : P.431

STAINLESS STEEL MAGNETIC CATCH MC-159-STD Ultra-thin / Back-mount

SUS



- The bolts are designed to be fixed with nuts from the back side. As there are no screw heads, it is easy to keep the flat surface clean.
- Neodymium magnet is used for strong force.
- 2.2 mm ultra-thin design.
- Counter plate of back-mount type is also available.

[Remarks]

- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃
- The counter plate to be used with should be in contact with the catch body. If an object makes direct surface contact with the magnet, it may break and no longer work properly.

[Parts Included]

- Hexagon nut M5 stainless steeel (SUS304)

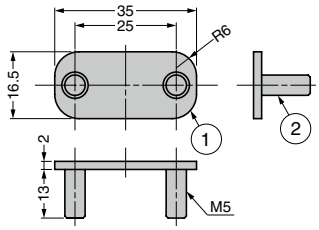
RoHS	CAD	Item Code	Item Name	Magnetic Force		Weight (g)
				N	kgf	
G	3D	140-045-567	MC-159-2-STD	19.6	2	14
G	3D	140-045-568	MC-159-4-STD	39.2	4	

Refer to 1 : P.431

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Neodymium	Nickel
③	Stud Bolt	Stainless Steel (SUS303)	–

STAINLESS STEEL COUNTER PLATE MC-159U-STD Back-mount

SUS



- The bolts are designed to be fixed with nuts from the back side. As there are no screw heads, it is easy to keep the flat surface clean.

[Parts Included]

- Hexagon nut M5 stainless steel (SUS304)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-045-569	MC-159U-STD	13.2	50	1,000

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Stud Bolt	Stainless Steel (SUS303)	–

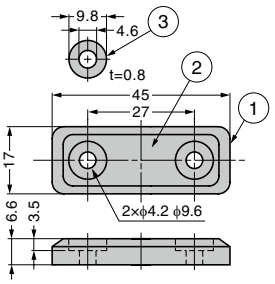
SEALED MAGNETIC CATCH MC-MS45

- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.
- Similar item (larger size and stronger magnetic force): MC-MS50 1.

[Remarks]
- Be sure to read the "Cautions" 2.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80˚C
- Do not scrape strongly, as damaged magnetic surface may tear. Please use flat counter plate without irregularities.

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68 4, MC-JM49 5

[Recommended Screws]
- Truss head screw M4



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-799	MC-MS45LGR	Light Grey	19.6	2	12	100	1000
G	3D	140-033-800	MC-MS45DGR	Dark Grey				100	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	7	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Light Grey, Dark Grey
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

Refer to 1 : P.446, 2 : P.431, 3 : P.463, 4 5 : P.464

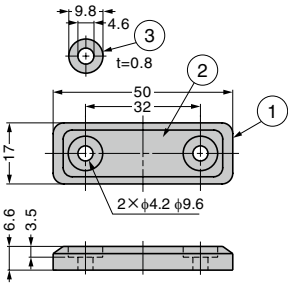
SEALED MAGNETIC CATCH MC-MS50

- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.
- Similar item (smaller size and weaker magnetic force): MC-MS45 1

[Remarks]
- Be sure to read the "Cautions" 2.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80˚C
- Do not scrape strongly, as damaged magnetic surface may tear. Please use flat counter plate without irregularities.
- Recommended tightening torque is 39N・cm (4kgf・cm).

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68 4, MC-JM49 5

[Recommended Screws]
- Truss screw M4



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-024-468	MC-MS50LGR	Light Grey	39.2	4	15	100	1000
G	3D	140-024-469	MC-MS50DGR	Dark Grey				100	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Light Grey, Dark Grey
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

Refer to 1 : P.446, 2 : P.431, 3 : P.463, 4 5 : P.464

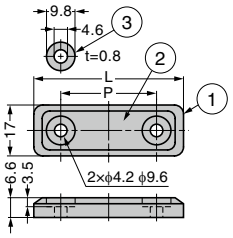
SEALED MAGNETIC CATCH MC-MSH Food Sanitation Act Compliant Material

- Body material is compliant with the Food Sanitation Act (standard test for rubber implement (except baby bottles), containers and packaging).
- Blue body is easy to find even if it is mixed in food and other parts can also be detected with a metal detector.
- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80℃
- Do not scrape strongly, as damaged magnetic surface may tear.Please use flat counter plate without irregularities.

[Sold Separately]
- Counter plate AS-68 2, MC-JM49 3

[Recommended Screws]
- Truss screw M4



[Body]

RoHS	CAD	Item Code	Item Name	L	P	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-801	MC-MSH45BU	45	27	19.6	2	12	100	1000
G	3D	140-033-802	MC-MSH50BU	50	32	39.2	4	15	100	1000

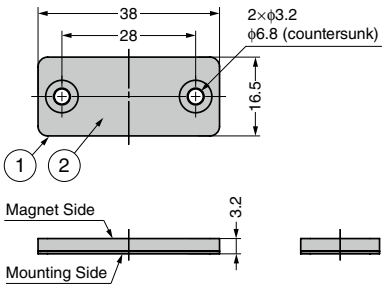
[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

Refer to 1 : P.431, 2 3 : P.464

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Blue
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

SEALED MAGNETIC CATCH MC-JM38 Ultra-thin



- Covered with resin to prevent from rusting.
- Made of neodymium for strong magnetic force.
- The thickness is only 3.2 mm.
- Ideal for clean room, wet condition. It is recommended to use with the MC-JMP45 sealed counter plate. 1

[Application]
- Washing machine, kitchen equipment.

[Sold Separately]
- MC-JMP45 sealed counter plate

[Recommended Screw]
- Countersunk screw M3

[Remarks]
- Max. temperature: 80℃
- Recommended tightening torque: Max. 31.5 N·cm (3.2 kgf·cm)

No.	Part Name	Material	Finish/Colour
①	Body	Polypropylene	White, Black
②	Magnet	Neodymium	Nickel

[Counter Plate] Sold Separately

RoHS	CAD	Item Code	Item Name
G	3D	140-050-122	MC-JMP45WT
G	3D	140-029-241	MC-JMP45BL

[Magnetic Catch]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-608	MC-JM38WT	White	14.7	1.5	5	200	1,000
G	3D	140-050-609	MC-JM38BL	Black				200	1,000

Refer to 1 : P.463

SEALED MAGNETIC CATCH MC-JM45

- The body covered with resin prevents rusting.
- Small body with strong magnetic force by using neodymium magnet.
- Thin magnetic catch of 5.6mm thick ideal for tight spaces.
- Ideal for kitchen or bath equipment by using with the counter plate MC-JMP45 (sold separately).
- AS parts set 1 for installing to aluminium frame also available.

[Applications]
- Washing machine, kitchen equipment, etc.

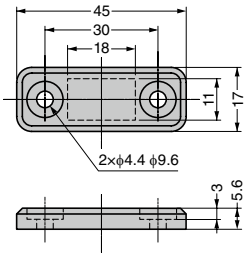
[Remarks]
- Be sure to read the "Cautions" 2.
- Max. temperature: 80˚C
- The material, shape of this product are identical to sealed magnetic catch MC-JMP45. The back of MC-JMP45 is partially blue to differentiate from this product.

[Sold Separately]
- Counter plate MC-JMP45 3, Counter plate AS-68, MC-JM49 4

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-154	MC-JM45WT	29.4	3	8.5	100	1000
G	3D	140-029-240	MC-JM45BL				100	1000



[Counter Plate] Sold Seperately

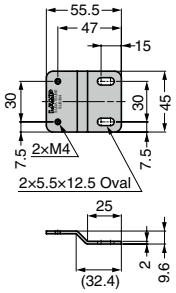
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

Part Name	Material	Colour
Body	PP	White, Black
Magnet	Neodymium	–

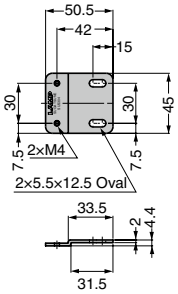
Refer to 1 : P.449, 2 : P.431, 3 : P.463, 4 : P.464

BRACKET AS-JM-45

SUS



AS-JM-45F (Flat type)



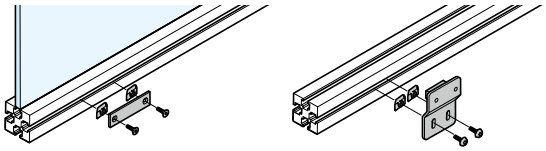
AS-JM-45D (Stepped type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-136	AS-JM-45F	Stainless Steel (SUS304)	Barrel Polished	39	50	500
G	3D	140-050-137	AS-JM-45D			32	50	500

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

[Installation]

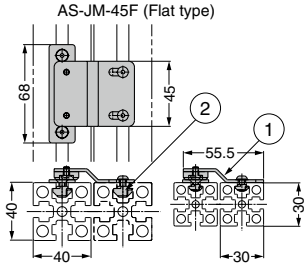


[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	3D	140-041-509	AS-MC-JM45WTF-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	73
G	3D	140-041-510	AS-MC-JM45WTF-40-8	40×40 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Countersunk Head Screw : 2 pcs	86
G	3D	140-041-511	AS-MC-JM45WTF-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	85
G	3D	140-041-512	AS-MC-JM45WTF-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs AS Nut AS-10M5 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M5×12 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Countersunk Head Screw : 2 pcs	97
G	3D	140-041-513	AS-MC-JM45WTD-40-8-30-6	Door: 30×30 Groove Width 6 mm Frame: 40×40 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45D : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M4 : 2 pcs AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	75
G	3D	140-041-514	AS-MC-JM45WTD-40-10-30-8	Door: 30×30 Groove Width 8 mm Frame: 40×40 Groove Width 10 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45D : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs AS Nut AS-10M5 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M5×12 Hexagon Socket Button Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	87

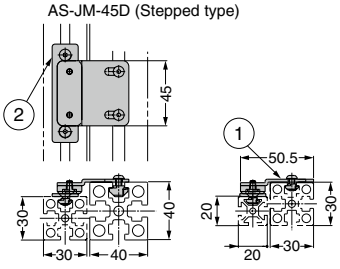
[Dimensions]

AS-JM-45F (Flat type)



No.	Product Name
①	Bracket AS-JM-45F
②	AS Nut

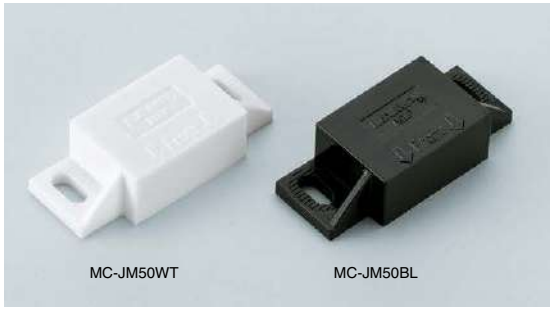
AS-JM-45D (Stepped type)



No.	Product Name
①	Bracket AS-JM-45D
②	Counter Plate AS-68

Refer to 1 : P.20, 2 : P.464, 3 : P.526

SEALED MAGNETIC CATCH MC-JM50 For Clean Room



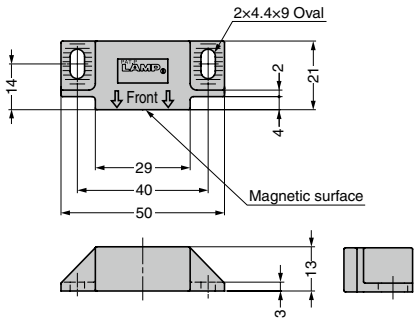
- Resin coated body prevents rusting.
- Ideal for clean rooms by using with the counter plate MC-JM49 (sold separately).
- AS parts set (below) for installing to aluminium frame also available.

[Applications]
- Washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use in contact with steam, hot water and water. Do not leave strongly acidic or basic detergents to avoid deteriorating.
- Max. temperature: 80°C

[Sold Separately]
- Counter plate MC-JM49 2

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)



Part Name	Material	Colour
Body	POM	White, Black
Magnet	Neodymium	–

[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-156	MC-JM50WT	White	29.4	3	21	24	480
G	3D	140-050-155	MC-JM50BL	Black				24	480

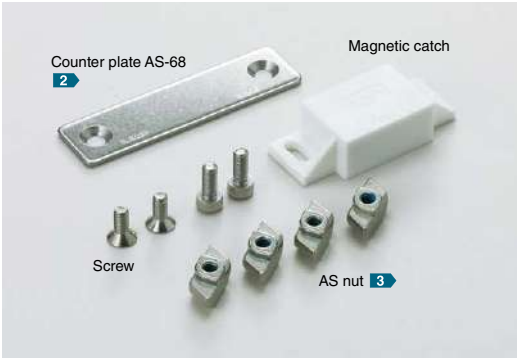
Refer to 1 : P.431, 2 : P.464

[Counter Plate] Sold Seperately

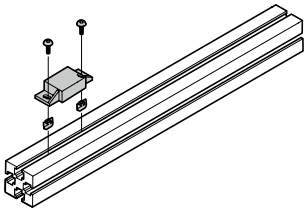
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	10	100	1000

AS Parts Set for Installing to Aluminium Frame

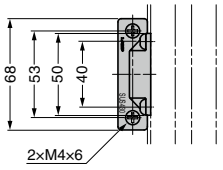
Please refer to the series introduction page 1 for details about AS series.

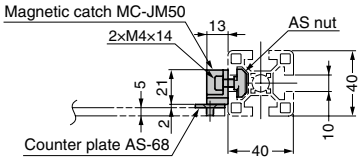


[Installation]



[Dimensions]





[AS Parts Set] Parts set of screws, AS nuts and counter plate used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-507	AS-MC-JM50WT-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-JM50 : 1 pc AS Nut AS-10M4 : 2 pcs	54
G	–	140-041-508	AS-MC-JM50BL-40-10		M4×14 Hexagon Socket Head Cap Screw : 2 pcs Counter Plate AS-68 : 1 pc	54

Refer to 1 : P.20, 2 : P.464, 3 : P.526

SEALED MAGNETIC CATCH MC-JMS45WT With Swing Function

Cover removed

- Resin coated body prevents rusting.
- Magnetic surface can pivot for better contact with counter plate.
- Suitable for kitchen equipment using with MC-JMP45 (sold separately).

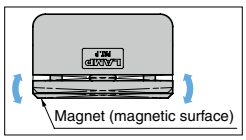
[Applications]
- Washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80°C

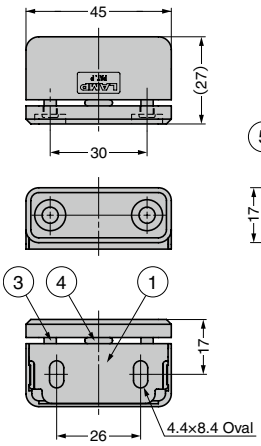
[Sold Separately]
- Counter plate MC-JMP45 2
- Counter plate AS-68 3, MC-JM49 4

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)

[Movement of Magnet]



Magnet face can pivot.



No.	Part Name	Material	Finish / Colour
①	Body (Thickness t = 1.5)	Stainless Steel (SUS304)	Barrel Polished
②	Cover	PP	White
③	Shaft	Stainless Steel (SUS303)	Plain
④	O-ring	Rubber (FKM)	Black
⑤	Magnet (MC-JM45WT 5)	PP/Neodymium	White

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-024-597	MC-JMS45WT	29.4	3	26	24	240

Refer to 1 : P.431, 2 : P.463, 3 4 : P.464, 5 : P.448

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

MAGNETIC CATCH MC-JMF54 Snap-in Installation

MC-JMF54BL

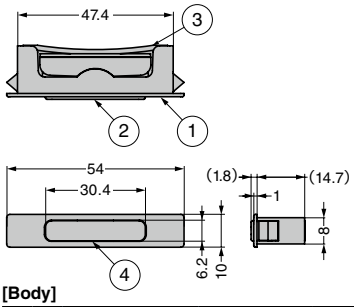
MC-JMF54WT

- The body covered with resin prevents rusting and avoids scattering of metal powder. Contact noise also can be reduced.
- Snap-in magnetic catch for sheet metal application.
- Magnetic surface can pivot for better contact with counter plate.

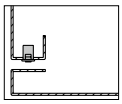
[Applications]
- Steel cabinet, washing machine, kitchen equipment, bathroom, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80°C

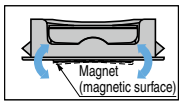
[Sold Separately]
- Counter plate MC-JMP45 2
- Counter plate AS-68 3, MC-JM49 4



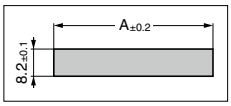
[Installation]



[Movement of Magnet]



[Cut Out Dimensions]



Door Thickness	A
0.7	48
0.8	
1.0	
1.2	
1.6	49
2.0	50

No.	Part Name	Material	Finish / Colour
①	Body	PP	Black/White
②	Body		
③	Spring	POM	White
④	Magnet	Neodymium	Nickel

[Body]

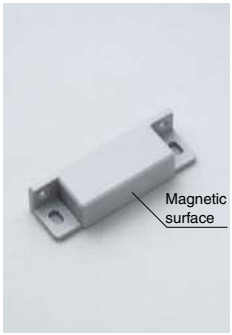
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-026-601	MC-JMF54BL	Black	25	2.6	13	100	1000
G	3D	140-026-602	MC-JMF54WT	White				100	1000

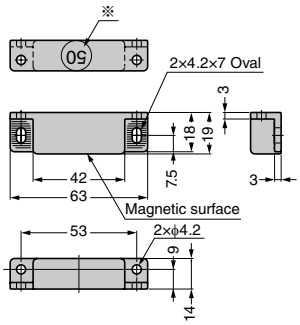
Refer to 1 : P.431, 2 : P.463, 3 4 : P.464

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

SEALED MAGNETIC CATCH MC-JM63G For Clean Room





※The last 2 digits of number of the item name.

- Can be installed vertically or horizontally.
- The body coated with resin prevents rusting, dust and spark.
- Ideal for kitchen or bath equipment by using with the counter plate MC-JMP45 (sold separately).
- Ideal for clean rooms by using with the counter plate MC-JM49 (sold separately).
- AS parts set 1 for installing to aluminium frame also available.

[Applications]
- Clean room, washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2
- Do not use in contact with steam, hot water and water.
  Do not leave strongly acidic or basic detergents to avoid deteriorating.
- Max. temperature: 80˚C

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68, MC-JM49 4

[Recommended Screws]
- M4 or nominal 4 tapping screw (truss or binding head, SUS)

Part Name	Material	Finish / Colour
Body	POM	Grey
Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
Magnet	Neodymium	–
Neoprene Sponge	Chloroprene Rubber	
Cover	POM	Grey

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-153	MC-JM63G-15	14.7	1.5	24	50	500
G	3D	140-050-152	MC-JM63G-30	29.4	3	29	50	500
G	3D	140-050-151	MC-JM63G-50	49	5	40	50	250

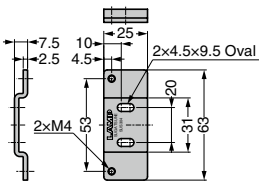
Refer to 1 : P.453, 2 : P.431, 3 : P.463, 4 : P.464

[Counter Plate] Sold Seperately

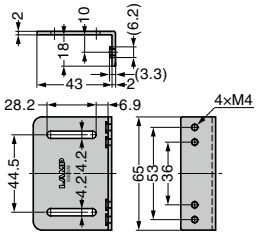
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

BRACKET AS-JM-63G, AS-JM63-SMC-FD

SUS



AS-JM-63G



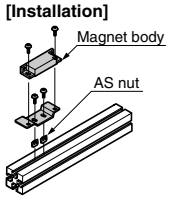
AS-JM63-SMC-FD

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-135	AS-JM-63G	Stainless Steel (SUS304)	Barrel Polished	29	50	500
G	3D	140-010-544	AS-JM63-SMC-FD	Stainless Steel (SUS430)		41	50	400

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

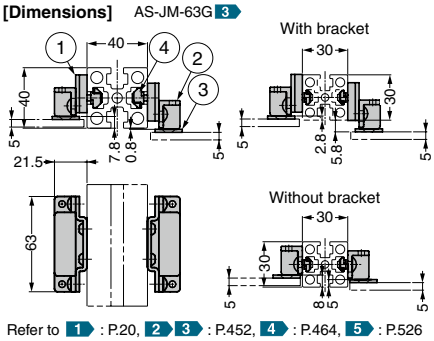
[Installation]



[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

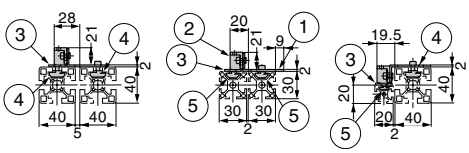
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-515	AS-MC-JM63G-15-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-15 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	85
G	–	140-041-516	AS-MC-JM63G-15-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-15 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	91
G	–	140-041-517	AS-MC-JM63G-30-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-30 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	91
G	–	140-041-518	AS-MC-JM63G-30-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-30 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	96
G	–	140-041-519	AS-MC-JM63G-50-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-50 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	101
G	–	140-041-520	AS-MC-JM63G-50-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-50 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	107

[Dimensions] AS-JM-63G 3



No.	Product Name
①	Bracket AS-JM-63G
②	Sealed Magnetic Catch MC-JM63G
③	Counter Plate AS-68
④	AS Nut

AS-JM63-SMC-FD 3



No.	Product Name
①	Bracket AS-JM63-SMC-FD
②	Sealed Magnetic Catch MC-JM63G
③	Counter Plate AS-68
④	AS Nut AS-8M4 or AS-10M4
⑤	AS Nut AS-8M4 or AS-6M4

Refer to 1 : P.20, 2 3 : P.452, 4 : P.464, 5 : P.526

MAGNETIC CATCH (W/SWITCH) SMC

- Reed switch built-in magnetic catch.
- AS parts set 1 for installing to aluminium frame also available.

[Remarks]

- For the installation that the surface marked with ※ on the drawing below does not contact the magnetic body, install the back plate (included) or the equivalent magnetic body on the surface marked with ※.
- Avoid strong impact to protect the reed switch.
- Do not use or store in a strong magnetic field.
- Make sure that no magnetic body (powder) or adhesive matter adhere to the magnetic surface of the product.
- During use, ensure that the magnetic surface of the body will not project from the couter plate. Otherwise, it may not operate properly.
- When using a counter plate other than the supplied one, please contact local representatives.

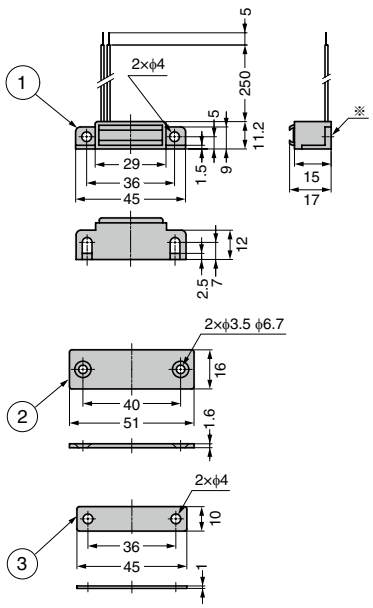
[Parts Included]

- Counter plate, back plate

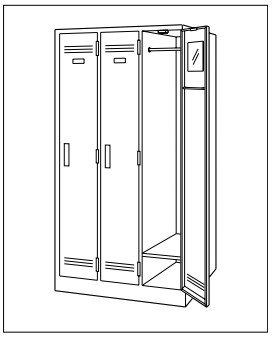
[Properties]

Max. Wattage	10W
Max. Switching Voltage	100V DC
Max. Switching Current	0.5A DC
Max. Contact Resistance	0.15Ω ※1
Operating Temperature	0 ～ 60˚C
Lead Wire ※2	UL3385 AWG＃26/Black
Tensile Strength of Lead Wire	Min. 1kgf

※1: Lead wire conductor resistance excluded.
※2: There is no polarity.



Copying machine



Locker

No.	Part Name	Material	Finish / Colour
①	Body	PC	Black
②	Counter plate	Steel (SPCC)	Nickel
③	Back Plate		

※3 Switch type A: Switch is OFF when the counter plate and magnet are in contact.
Switch type B: Switch is ON when the counter plate and magnet are in contact.
※4 Measured with a weigh installed to the counter plate of 29×16×1.6mm (steel).

RoHS	CAD	Item Code	Item Name	Switch Type ※3	Magnetic Force N ※4	Magnetic Force kgf ※4	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-416	SMC-101B	B	Min. 9.8	Min. 1	28	50	200
G	3D	140-059-417	SMC-103A	A	Min. 29.4	Min. 3		50	200
G	3D	140-059-418	SMC-103B	B				50	200

Refer to 1 : P.455

AS Parts Set for Installing to Aluminium Frame

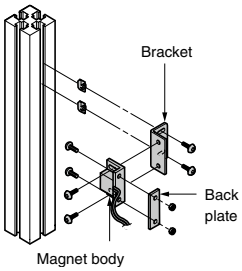
Please refer to the series introduction page 1 for details about AS series.

[AS Parts Set] Parts set of brackets, screws ,counter plate, back plate and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-013-894	AS-SMC-101B-FD-30-6	30×30 Groove Width 6 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-6M3 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs	83
G	–	140-013-895	AS-SMC-103A-FD-30-6			82
G	–	140-013-896	AS-SMC-103B-FD-30-6			80
G	–	140-013-897	AS-SMC-101B-FD-30-8	30×30 Groove Width 8 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC型 : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-8M3 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs	95
G	–	140-013-898	AS-SMC-103A-FD-30-8			94
G	–	140-013-899	AS-SMC-103B-FD-30-8			94
G	–	140-013-900	AS-SMC-101B-FD-40-8	40×40 Groove Width 8 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC型 : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-8M3 : 2 pcs M3×12 Hexagon Socket Countersunk Head Screw : 2 pcs	95
G	–	140-013-901	AS-SMC-103A-FD-40-8			94
G	–	140-013-902	AS-SMC-103B-FD-40-8			94

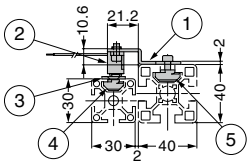
※For the item name of the magnetic catch in the set, please confirm with the above item name. (Included in the above item name)

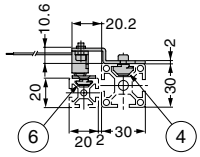
[Installation]



[Dimensions]

Bracket AS-SMC-D

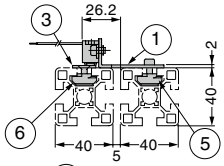


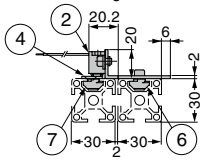


No.	Product Name
①	Bracket AS-SMC-D
②	Magnetic Catch (W/Switch) SMC
③	Counter Plate (Attached to ②)
④	AS Nut AS-8M3 or AS-6M3
⑤	AS Nut AS-8M4 or AS-10M4
⑥	AS Nut AS-6M3

※No item name combined with bracket AS-SMC-D.

BRACKET AS-JM63-SMC-FD (Flat type)



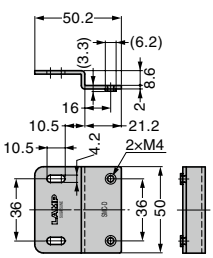


No.	Product Name
①	Bracket AS-JM63-SMC-FD
②	Magnetic Catch (W/Switch) SMC
③	Counter Plate AS-68
④	Counter Plate (Attached to ②)
⑤	AS Nut AS-8M4 or AS-10M4
⑥	AS Nut AS-8M4 or AS-6M4
⑦	AS Nut AS-8M3 or AS-6M3

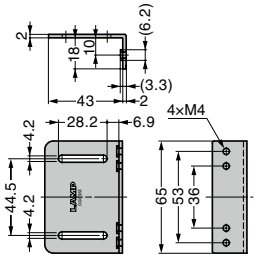
Refer to 1 : P.20, 2 : P.526

BRACKET AS-SMC-D, AS-JM63-SMC-FD

SUS



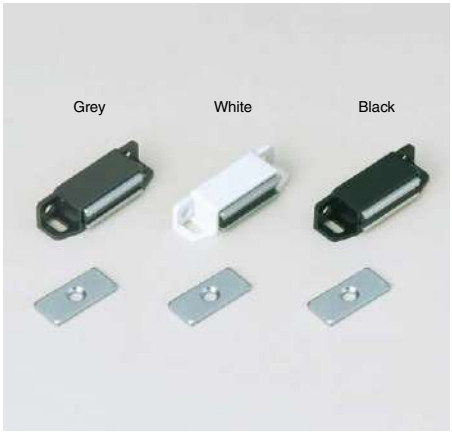
AS-SMC-D



AS-JM63-SMC-FD

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-010-545	AS-SMC-D	Stainless Steel (SUS430)	Barrel Polished	41	50	200
G	3D	140-010-544	AS-JM63-SMC-FD				50	400

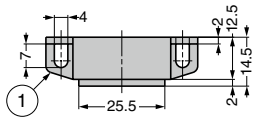
MAGNETIC CATCH MC0099

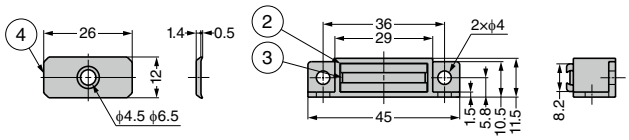


- Can be installed vertically or horizontally.

[Remarks]
- Be sure to read the "Cautions" 1.
- Only grey body with magnetic force 51N (5.2kgf).

[Parts Included]
- Counter plate SP0207 2.





No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
		PC	Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-501	MC0099BP	Black	10.8	1.1	16.3	100	1000
G	3D	140-050-502	MC0099WP	White				100	1000
G	3D	140-050-503	MC0099SBP	Black	37.2	3.8		100	1000
G	3D	140-050-504	MC0099SWP	White				100	1000
G	3D	140-050-505	MC0099GP	Grey	51	5.2		100	1000

Refer to 1 : P.431, 2 : P.464

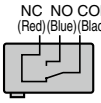
SEALED MAGNETIC CATCH (W/SWITCH) MC-JM74SW-30

IP

[Specifications]

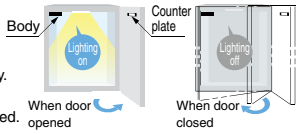
Rated Voltage and Current	AC250V 5A (Load Resistance) AC125V 5A (Load Resistance) DC30V 5A (Load Resistance)
Insulation Resistance	Min. 100MΩ (DC500V)
Contact Resistance (Initial Value)	Max. 100MΩ
Min. Applicable Load	DC5V 160mA
Operating Temperature	-40~+80°C, Max. 60% RH (No Freezing and Condensation)
Lead Wire	Single Core Heat Resistant PVC Cord 0.75 mm² (<PS> E Certification)

[Switch Contact Type]



NC (Red) = Normally Close
NO (Blue) = Normally Open
COM (Black) = Common
The power switch operates depending on opening/closing of door or lid.

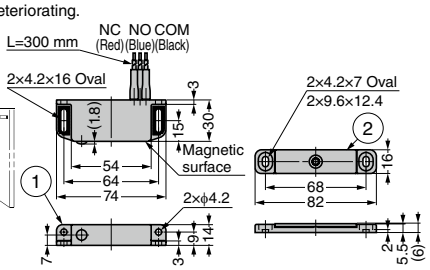
[Two Types of Operation Can Be Choosen by Selecting Connection]
- Connecting NO (Blue) and COM (Black)
  Energised when the counter plate is in contact with the body.
- Connecting NC (Red) and COM (Black)
  Energised when the counter plate and the body are separated.
  Example) To turn on the inspection light when the door opens in cabinet etc., connect NC (red) and COM (black).



- Waterproof switch built-in magnetic catch. It functions as a catch and power switch depending on opening/closing of door or lid.
- Single-pole double-throw switch.
- Conforms to the specified electrical appliances and materials in the Electrical Appliances and Material Safety Act (PSE).
- Can be installed vertically or horizontally.Processing for passing through power cord is required for horizontal installation.
- The body coated with resin prevents dust. And the built-in switch is designed to meet IP67.
- Movable adsorption sheet of counter plate prevents malfunction of catch and switch.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use as a door stopper. Otherwise, it may be damaged.
- If the product containing this product falls under other category than the specified electrical appliances and materials, please report to the regulatory agency.
- Do not use in contact with steam, hot water and water. Do not leave strongly acidic or basic detergents to avoid deteriorating.

[Parts Included]
- Counter plate



RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-017-555	MC-JM74SW-30	29.4	3	80	10	80

No.	Part Name	Material	Finish / Colour
①	Body	POM/Neodymium	Black
②	Counter Plate	POM/Stainless Steel (SUS430)	Black/Barrel Polished

Refer to 1 : P.431

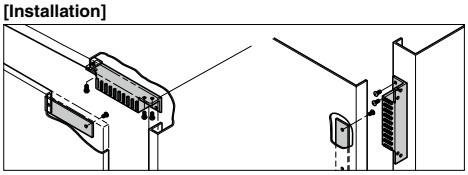
HEAVY DUTY MAGNETIC CATCH MCH

- Can be installed vertically or horizontally.
- Robust die casted body suitable for strong magnetic force.

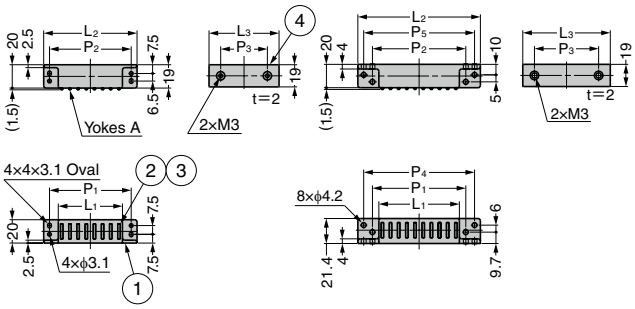
[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate

[Installation]



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)



MCH-40~MCH-80 MCH-105

RoHS	CAD	Item Code	Item Name	L_1	L_2	L_3	P_1	P_2	P_3	P_4	P_5	A	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-145	MCH-40	20	40	22	30	30	12	–	–	3	29	3	56	300	3000
G	3D	140-050-144	MCH-50	27	50	29	40	40	18	–	–	4	68	7	74	250	2500
G	3D	140-050-143	MCH-61	41	61	43	50	50	27	–	–	6	107	11	110	200	2000
G	3D	140-050-142	MCH-80	55	80	60	70	70	40	–	–	8	137	14	140	150	1500
G	3D	140-050-141	MCH-105	69	105	75	80	80	55	95	95	10	147	15	206	24	120

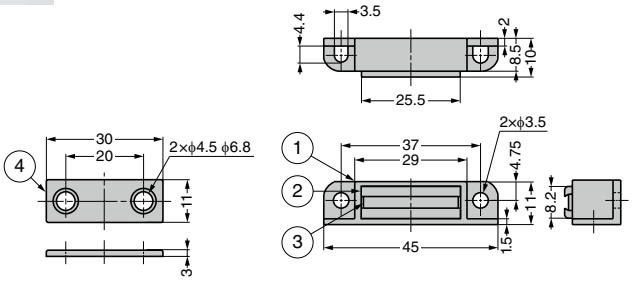
Refer to 1 : P.431

MAGNETIC CATCH MC-110NF Compact & Strong Force Type

- Can be installed vertically or horizontally.
- Small body with strong magnetic force by using neodymium magnet.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80°C
- When adsorbing to sheet metal without using counter plate, the sheet thickness shall be 3mm or more.Otherwise, the magnetic force decreases.
- Colours in the picture may be somewhat different from the actual item.

[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.9×13



No.	Part Name	Material	Finish / Colour
①	Body	PC	White/Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Neodymium	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)

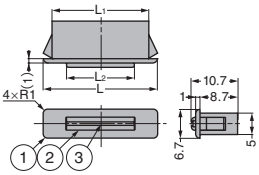
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-335	MC-110NF-WT	White	78.4	8	10	100	800
G	3D	140-050-336	MC-110NF-GR	Grey				100	800

Refer to 1 : P.431

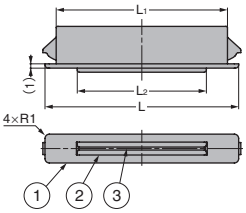
MAGNETIC CATCH MC-FS Snap-in & Single Yoke Type

●Thin body for tight spaces.

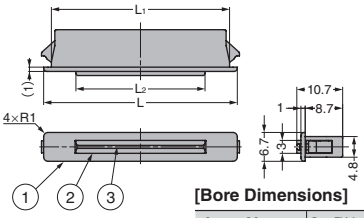
[Remarks]
●Be sure to read the "Cautions" 1.
●Max. temperature for neodymium magnet: 80℃



MC-FS-2, MC-FS-4W



MC-FS-4SW-0810

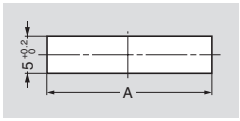


MC-FS-4SW-12

[Bore Dimensions]

Item Name	Door Thickness	A
MC-FS-2	0.8	$22.65^{+0.15}_{0}$
	1.0	$22.8^{+0.1}_{0}$
	1.2	$22.9^{+0.1}_{0}$
MC-FS-4W	0.8	$39.9^{+0.2}_{0}$
	1.0	$40.5^{+0.2}_{0}$
	1.2	$41.8^{+0.2}_{0}$
MC-FS-4SW-0810	0.8	$40.2^{+0.2}_{0}$
	1.0	$40.5^{+0.2}_{0}$
MC-FS-4SW-12	1.2	$41.8^{+0.2}_{0}$

[Cut Out Dimensions]



No.	Part Name	Material		Finish / Colour
①	Body	MC-FS-2, MC-FS-4W: ABS	MC-FS-4SW: POM	White
②	Yoke	Steel (SPCC)		Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite, Neodymium		–

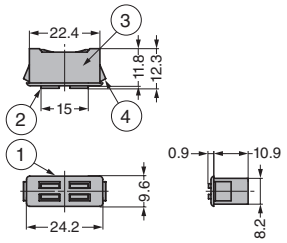
RoHS	CAD	Item Code	Item Name	Material	L	L1	L2	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-013-016	MC-FS-2W	Ferrite	26.5	22.4	16	15	1.5	3.5	400	4000
G	3D	140-013-017	MC-FS-2SW	Neodymium				34	3.5		400	4000
G	3D	140-013-015	MC-FS-4W	Ferrite	45	39.6	30	25	2.5	5.8	200	2000
G	3D	140-046-402	MC-FS-4SW-0810	Neodymium		39.8		69	7	6.7	200	2000
G	3D	140-046-403	MC-FS-4SW-12	Neodymium							200	2000

Refer to 1 : P.431

*The MC-FS-4SW-0810 and MC-FS-4SW-12 are new models for the MC-FS-4SW.

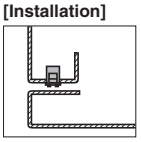
MAGNETIC CATCH MC-FS3 Snap-in Installation

No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	Natural

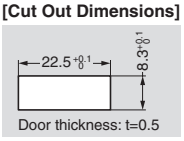


[Remarks]
●Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Body Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-005	MC-FS3W	White	12.7	1.3	5	60	2160
G	3D	140-050-006	MC-FS3B	Black				60	2160

Refer to 1 : P.431

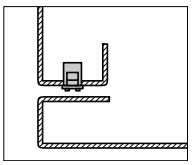
※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MAGNETIC CATCH MC-FS34 Snap-in Installation

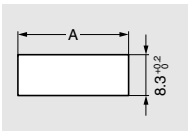
[Remarks]

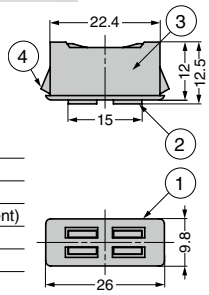
●Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]





[Bore Dimensions]

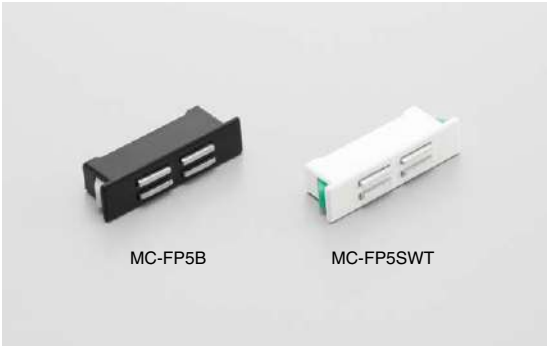
Item Name	Door Thickness	A
MC-FS34 WW/GW	0.5	$22.6^{+0.15}_{0}$
	0.8	$23.7^{+0.15}_{0}$
MC-FS34 WB/BB/GB	1.0	$22.7^{\pm0.1}$
	1.2	$23.5^{\pm0.1}$
	1.4	$24.0^{\pm0.1}$
MC-FS34 WG/GG	1.6	$22.7^{\pm0.1}$
	2.0	$23.8^{\pm0.1}$

No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black, Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	White, Blue, Green

RoHS	CAD	Item Code	Item Name	Body Colour	Spring Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-951	MC-FS34WW	White	White	12.7	1.3	5.3	200	2000
G	3D	140-033-952	MC-FS34GW	Grey		21.6	2.2		200	2000
G	3D	140-033-953	MC-FS34WB	White	Blue	12.7	1.3		200	2000
G	3D	140-033-954	MC-FS34BB	Black					200	2000
G	3D	140-033-955	MC-FS34GB	Grey		21.6	2.2		200	2000
G	3D	140-033-956	MC-FS34WG	White	Green	12.7	1.3		200	2000
G	3D	140-033-957	MC-FS34GG	Grey		21.6	2.2		200	2000

Refer to 1 : P.431

MAGNETIC CATCH MC-FP5 Snap-in Installation



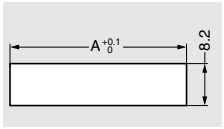
●MC-FP5S: Small body with strong magnetic force by using neodymium magnet.

[Remarks]

●Be sure to read the "Cautions" 1.

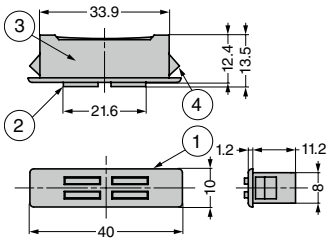
●Max. temperature for MC-FP5S: 80℃

[Cut Out Dimensions]

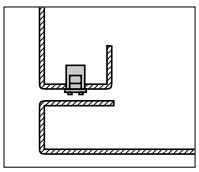


[Bore Dimensions]

Door Thickness	A
0.8	34.1
1.0	
1.2	34.5
1.4	
1.6	35
2.0	36.5



[Installation]



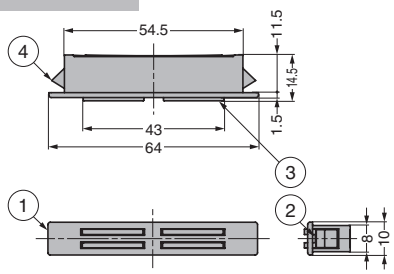
No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite (MC-FP5), Neodymium (MC-FP5S)	–
④	Spring	POM	Natural, Green

RoHS	CAD	Item Code	Item Name	Body Colour	Spring Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-086	MC-FP5W	White	Natural	21.6	2.2	9	200	2000
G	3D	140-050-087	MC-FP5B	Black					200	2000
G	3D	140-050-268	MC-FP5SWT	White	Green	44.1	4.5		200	2000
G	3D	140-050-269	MC-FP5SBL	Black					200	2000

Refer to 1 : P.431

MAGNETIC CATCH MC-FS10, MC-FS17W Snap-in Installation

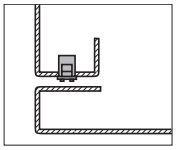
The shape of the spring will change when the current stock is run out.



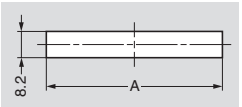
●MC-FS17W has stronger magnetic force than MC-FS10.

[Remarks]
●Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]



[Bore Dimensions]

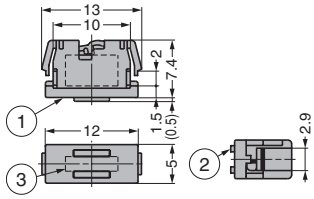
Door Thickness	A
0.8	55
1.0	
1.2	55.5
1.6	56
2.0	56.5

No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black (MC-FS10B)
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	White (MC-FS10), Red (MC-FS17W)

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-293	MC-FS10W	White	44.1	4.5	17.1	50	1000
G	–	140-050-294	MC-FS10B	Black				50	1000
G	3D	140-050-334	MC-FS17W	White	58.8	6	17.8	50	1000

Refer to 1 : P.431

MAGNETIC CATCH CM-2B Snap-in Installation

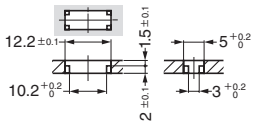


●Small body allows easy installation around the door.
●Uses flame retardant plastic rated UL94V-2.

[Specifications]
●Operating temperature: -10℃~60℃

[Remarks]
●Be sure to read the "Cautions" 1.

[Cut Out Dimensions]

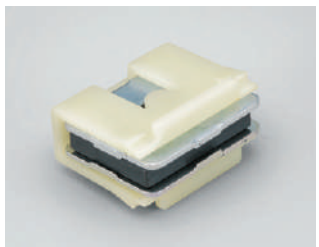


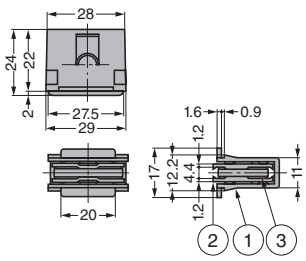
No.	Part Name	Material	Finish / Colour
①	Body	PA	Black
②	Yoke	Steel (SPCC)	Black Chromate (Trivalent)
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-011-122	CM-2B	3.9	0.4	1	200	–

Refer to 1 : P.431

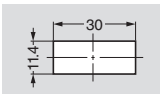
MAGNETIC CATCH MC-SS30 Snap-in Installation





[Remarks]
●Be sure to read the "Cautions" 1.

[Cut Out Dimensions]



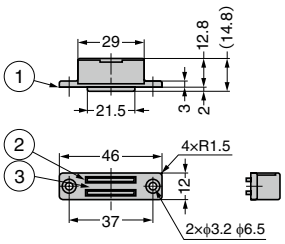
No.	Part Name	Material	Finish / Colour
①	Body	ABS	Ivory
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Door Thickness	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-036	☆MC-SS30	0.8	29.4	3	22	60	600

Refer to 1 : P.431

☆Limited inventory, contact sales associate for details.

MAGNETIC CATCH MC0051



[Remarks]
- Be sure to read the "Cautions" 1.

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-053-503	MC0051	53.9	5.5	17	100	1000

Refer to 1 : P.431

MAGNETIC CATCH NB01

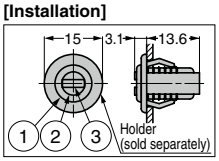
※Holder sold separately.

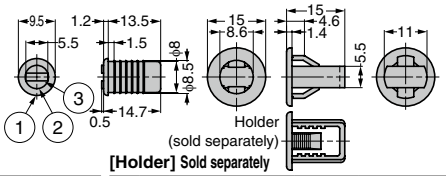
No.	Part Name	Material	Finish / Colour
①	Body	PA	White
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–

[Remarks]
- Be sure to read the "Cautions" 1.

[Sold Separately]
- Holder NB01H

[Installation]





Door Thickness	ϕHole Dia.
0.8~1.4	11.5
1.5~3	12

[Body]

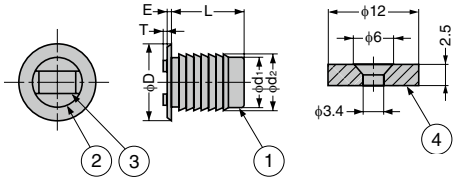
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-322	NB01	10.78	1.1	2	500	5000

Refer to 1 : P.431

[Holder] Sold separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-205	NB01H	PA	White	0.5	500	5000

MAGNETIC CATCH MC-IS



[Remarks]
- Be sure to read the "Cautions" 1.

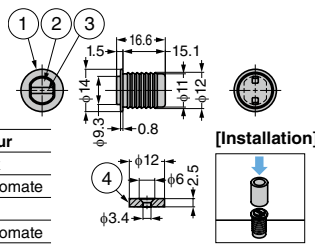
[Parts Included]
- Counter plate W4 2

No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black
②	Yoke	Steel	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	D	L	E	T	d_1	d_2	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-515	MC-IS2WP	White	10	13.8	1	0.7	8	8.6	9.8	1.0	4.7	200	5000
G	3D	140-050-517	MC-IS2BP	Black										200	5000
G	3D	140-050-516	MC-IS4WP	White	14	14	0.7	1.2	11	12	24.5	2.5	7.7	100	3000
G	3D	140-050-518	MC-IS4BP	Black										100	3000

Refer to 1 : P.431, 2 : P.464

MAGNETIC CATCH MC-IS4F Yoke Movable Type



[Installation]

- Movable magnet yoke allows better contact with counter plate and ensures full magnetic force.

[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, please use a cylindrical thing to strike in the front flange part of magnetic catch shown as left.
- Do not use glue. (Or the yoke part may be stuck.)

[Remarks]
- Counter plate W4 2

No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black
②	Yoke	Steel	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-519	MC-IS4FWTP	White	24.5	2.5	7.7	100	1000
G	3D	140-050-520	MC-IS4FBLP	Black				100	1000

Refer to 1 : P.431, 2 : P.464

DOORSTOP MAGNETIC CATCH FOR GLASS DOORS HT-MSG72-ER With Emergency Open Function

INSTRUCTION SUS TEMPERED GLASS

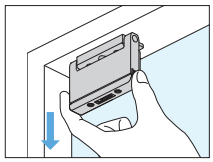
HT-MSG72-ER1-SM

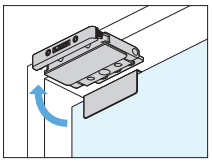
HT-MSG72-ER2-BL

Strike Plate

- A doorstop with a clean design that uses magnetic force to hold the door closed.
- In emergencies, the door can be opened without tools.
- Can be used in areas exposed to water such as shower booths.
- The magnet is coated with silicone rubber to catch doors gently.

[Emergency Open Method]

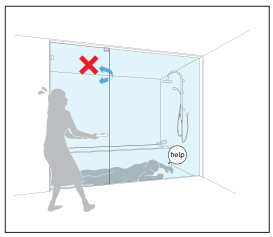

(1) Pull the body lever down.


(2) Lift the body forward.

Video Link

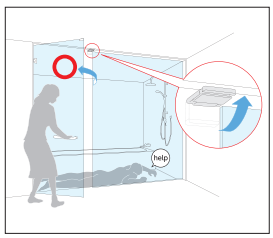
[Emergency Application Example]

Doorstop without emergency open function



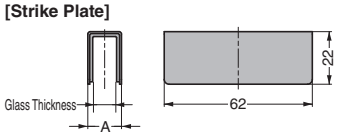
Doorstop interferes and door will not open outward.

Doorstop with emergency open function (this product)



Door can be kept open without tools.

[Strike Plate]



No.	Part Name	Material
①	Mounting Plate	Stainless Steel (SCS13)
②	Body	
③	Bumper	Silicone (Q)
④	Magnet	Neodymium
⑤	Operating Lever	Polypropylene (PP)

[Applications]

- Shower rooms, bathrooms.

[Parts Included]

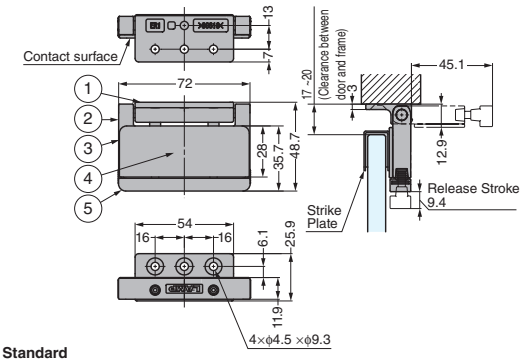
- Operation seal
- Hex socket countersunk head screw M4×16 (stainless steel)

[Remarks]

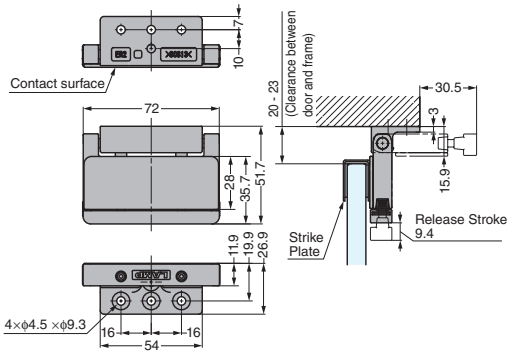
- Install with product side at least 20mm from wall.
- Operating temperature: Max. 80°C.
- Please do not scratch the part of the silicone rubber which comes into contact with the strike plate. It may cause the silicone to break. If you do not use the strike plates sold separately, please make sure to use a flat one instead.
- The strike plate must be installed on the upper section of the door. Installation on the bottom or side of the door may cause misalignment.
- The magnetic force is the value when using with the strike plate.
- Use the product with a vertically opening hinge.

[Catch]

Thin doorframes



Standard



[Catch]

RoHS	CAD	Item Code	Item Name	Finish/Colour	Specifications	Magnetic Force N	Magnetic Force kgf	Weight (g)
G	3D	270-048-315	HT-MSG72-ER1-SM	Mirror	Thin doorframes	35	3.6	210
G	3D	270-048-316	HT-MSG72-ER1-BL	Baked Paint/Black				213
G	3D	270-048-317	HT-MSG72-ER2-SM	Mirror	Standard			223
G	3D	270-048-318	HT-MSG72-ER2-BL	Baked Paint/Black				227

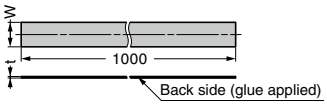
[Strike Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Finish/Colour	Glass Thickness	A	Weight (g)
G	3D	270-043-850	HT-MSG62-U8	Polished	8	12.1	22.3
G	3D	270-043-851	HT-MSG62-U10		10	14.1	22.9
G	3D	270-043-852	HT-MSG62-U12		12	16.4	23.7
G	3D	270-053-371	HT-MSG62-U8-BL	Baked Paint/Black	8	12.1	22.3
G	3D	270-053-372	HT-MSG62-U10-BL		10	14.1	22.9
G	3D	270-053-373	HT-MSG62-U12-BL		12	16.4	23.7

[Packing for Strike Plate] Optional (can be used only with the strike plate for 12 mm glass)

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)
G	–	270-043-853	HT-MSG62-P127	12.7	1.4
G	–	270-043-854	HT-MSG62-P135	13.5	1.1

MAGNETIC RUBBER SHEET KMS Strong Force Type



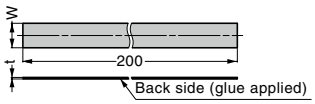
- Easy to cut.
- Easy to apply with glue.

[Remarks]
- Be sure to read the "Cautions" 1.
- Don't use outside.
- Do not use in contact with steam, hot water and water. The cut surface may rust.
- Do not use for installing fragile or heavy items vertically.

RoHS	CAD	Item Code	Item Name	Material	W	t	Magnetic Force N/cm²	Magnetic Force gf/cm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-474	KMS-1-1000	Ferrite/ CPE	12.7	0.8	0.588	60	42	100	–
G	3D	140-059-475	KMS-2-1000		19.1				62	100	–
G	3D	140-059-476	KMS-3-1000		25.4				83	100	–
G	3D	140-059-453	KMS-4-1000		12.7	1.5	0.931	95	73	100	–
G	3D	140-059-492	KMS-5-1000		19.1				110	100	–
G	3D	140-059-493	KMS-6-1000		25.4				146	100	–

Refer to 1 : P.431

MAGNETIC RUBBER SHEET NMS Extra Strong Force Type



- Easy to cut.
- Easy to apply with glue.
- Ultra thin but strong magnetic force by using neodymium magnet.
- Weaker magnetic type (KMS 1) available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Don't use outside.
- Do not use in contact with steam, hot water and water. The cut surface may rust.
- Max. temperature: 80°C
- Do not use for installing fragile or heavy items vertically.

RoHS	CAD	Item Code	Item Name	Material	W	t	Magnetic Force N/cm²	Magnetic Force kgf/cm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-209	NMS-1-200	Neodymium/ Nitrile Rubber (NBR)	12.7	0.8	3.8	0.39	10	100	–
G	3D	140-021-210	NMS-2-200		19.1				16	100	–
G	3D	140-021-211	NMS-3-200		25.4				21	100	–
G	3D	140-021-212	NMS-4-200		12.7	1.5	5.4	0.55	19	100	–
G	3D	140-021-213	NMS-5-200		19.1				30	100	–
G	3D	140-021-214	NMS-6-200		25.4				39	100	–

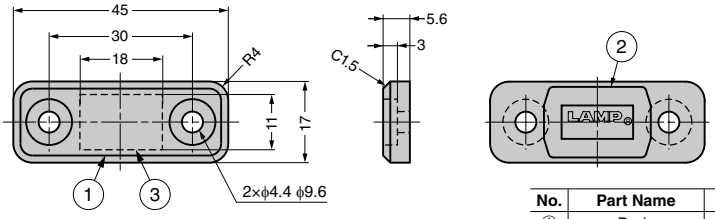
Refer to 1 : P.463, 2 : P.431

SEALED COUNTER PLATE MC-JMP45

- For resin coated magnetic catch.
- The couter plate coated with resin prevents rusting, dust and spark.
- Completely sealed, ideal for high corrosion environments such as kitchen and bath equipment.

[Remarks]
- Do not use in contact with steam, hot water and water. And do not leave strongly acidic or basic detergents
- Coated with resin may decrease the magnetic force of the magnetic catch used together.Please check with actual item.

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)

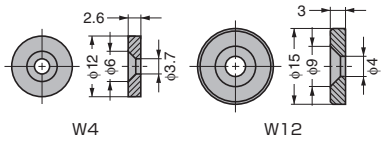


No.	Part Name	Material	Finish / Colour
①	Body	PP	White, Black
②	Body (Back Side)		Blue
③	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	White	7.3	100	1000
G	3D	140-029-241	MC-JMP45BL	Black		100	1000

COUNTER PLATE W

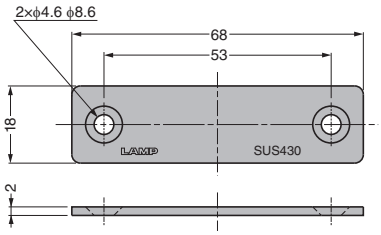
W4 shown.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-051	W4	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)	1.7	1000	10000
G	3D	140-050-113	W12	Steel (SUM)	Nickel	3.3	600	3000

STAINLESS STEEL COUNTER PLATE AS-68

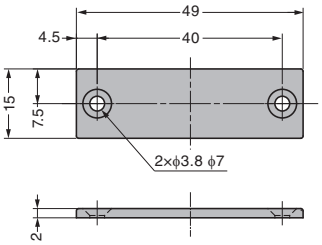
NSF SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	Stainless Steel (SUS430)	Barrel Polished	17	100	1000

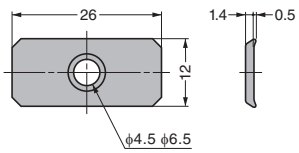
STAINLESS STEEL COUNTER PLATE MC-JM49

NSF SUS



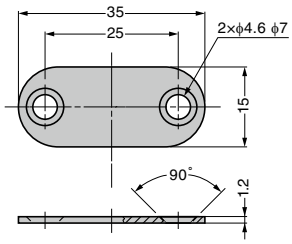
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	Stainless Steel (304 Equivalent)	Polished	10	100	1000

COUNTER PLATE SP0207



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-323	SP0207	Steel	Clear Zinc Chromate	3.1	5000	–

COUNTER PLATE MC-YN001U

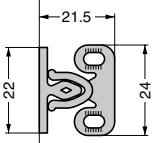


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-555	MC-YN001U	Steel (SPCC)	Nickel	4	5000	–
G	3D	140-038-025	MC-YN001U-BL		Copper Plating (Black)	4	5000	–

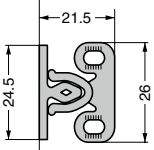
Plastic Catch Size Correlation Diagram (S≒1/2)

[Surface Mount (Vertical) Type]

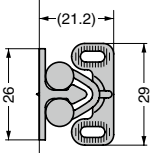
Knuckle Catch
JC-24, JC-24B (P.468)
Push-in Force: 30.4 N (3.1 kgf)
Pulling Force: 26.5 N (2.7 kgf)
Weight: 1.5 g



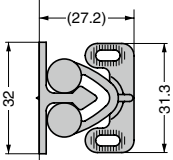
Knuckle Catch
JC-26 (P.468)
Push-in Force: 21.6 N (2.2 kgf)
Pulling Force: 16.7 N (1.7 kgf)
Weight: 2 g



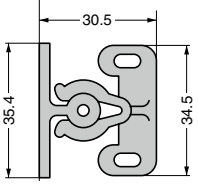
Rotary Catch
RC6900 (P.467)
Push-in Force: 10.8 N (1.1 kgf)
Pulling Force: 15.7 N (1.6 kgf)
Weight: 3 g



Rotary Catch
RC6901 (P.467)
Push-in Force: 21.6 N (2.2 kgf)
Pulling Force: 31.4 N (3.2 kgf)
Weight: 4 g

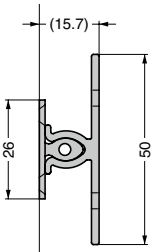


Knuckle Catch
NAC (P.466)
Push-in Force: 55.8 N (5.7 kgf)
Pulling Force: 69.5 N (7.1 kgf)
Weight: 4.5 g



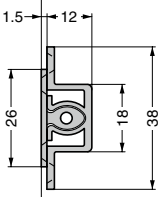
[Surface Mount (Horizontal) Type]

Knuckle Catch
JC-T50 (P.466)
Push-in Force: 19 N (1.9 kgf)
Pulling Force: 20 N (2.0 kgf)
Weight: 3 g

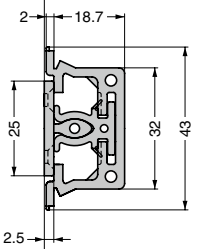


[Mortise Type]

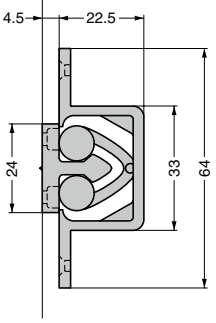
Knuckle Catch
JCU (P.468)
Push-in Force: 19.6 N (2 kgf)
Pulling Force: 22.5 N (2.3 kgf)
Weight: 3.5 g



Knuckle Catch
JCU-F (P.469)
Push-in Force: 19.6 N (2 kgf)
Pulling Force: 19.6 N (2 kgf)
Weight: 5.2 g



Rotary Catch
RCU (P.467)
Push-in Force: 29.4 N (3 kgf)
Pulling Force: 31.4 N (3.2 kgf)
Weight: 8 g

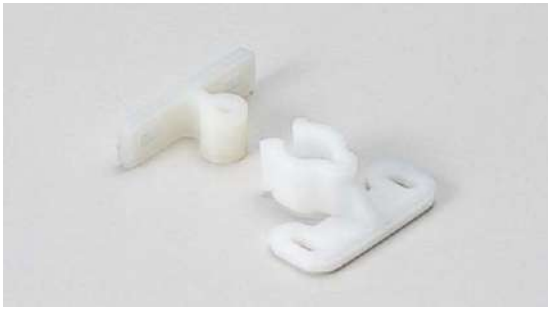


Approx. 50 mm

※Two surface mount types available: vertical or horizontal to mounting surface.

KNUCKLE CATCH NAC

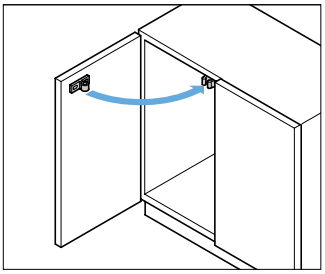
TEST METHOD 10

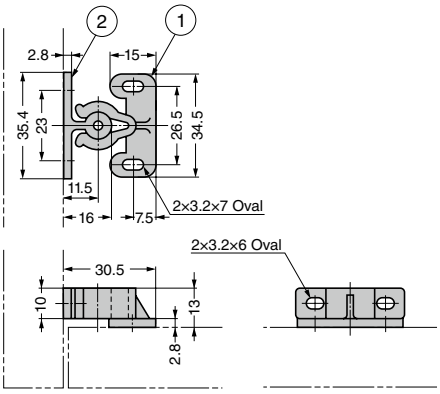


- Holds door tightly and suitable for large door.
- High durability.
- Can be used for overlay and inset door.

[Remarks]
- Catch force varies.Please check with actual item.
- The body colour is different from the striker.
- The push-in and pulling force may vary for ±20-30%. Please check with the actual item

[Installation]





No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-051-013	NAC	58	5.9	69	7.0	4.5	100	1000

KNUCKLE CATCH JC-T50

TEST METHOD 10

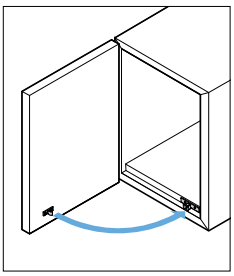
- Can be used for overlay and inset door.
- Suitable for various applications such as swing doors, and drawers, etc.

[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

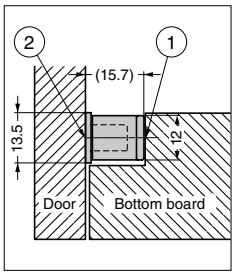
[Remarks]
- Catch force varies.Please check with actual item.
- The push-in force and pulling force may vary for ±20-30%. Please check with the actual item.

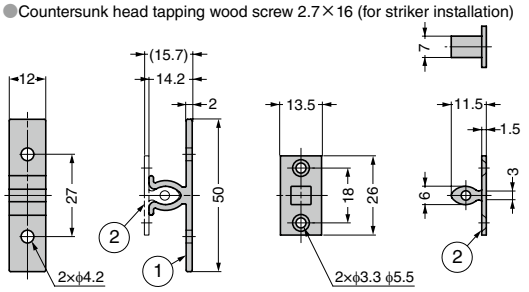
[Parts Included]
- Binding head tapping screw 4×16 (for body installation)
- Countersunk head tapping wood screw 2.7×16 (for striker installation)

[Installation]



[Application Reference]



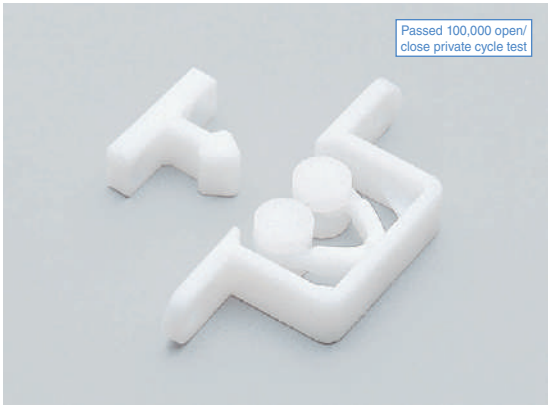


No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-019-545	JC-T50	19	1.9	20	2.0	3	50	500

ROTARY CATCH (MORTISE TYPE) RCU

TEST METHOD 10

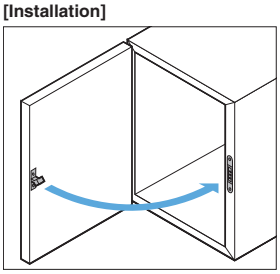


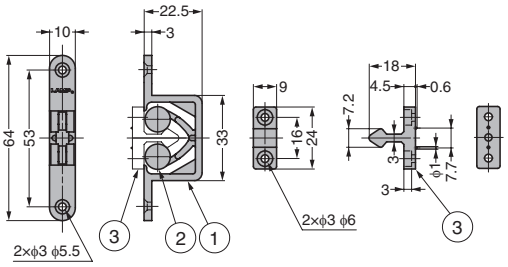
- Mortise type.
- For overlay doors.

[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

[Remarks]
- The push-in force and pulling force may vary for ±20-30%. Please check with the actual item.

[Installation]





No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Roller	PE	
③	Striker	POM	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-014	RCU	27	2.8	32	3.3	8	100	800

ROTARY CATCH RC690

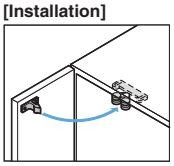
TEST METHOD 10

- High durability (passed 300,000 times durability test).
- Light open/close touch by combining polyacetal resin and roller.
- Can be used for overlay and inset door.
- Brown colour available as special order.(RC6901 only).

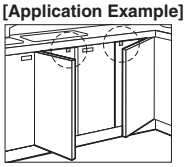
[Applications]
- Suitable for general furniture, kitchen equipment and marine hardware.

[Remarks]
- The push-in force and pulling force may vary for ±20-30%. Please check with actual item.

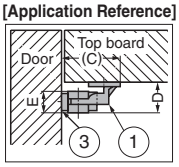
[Installation]

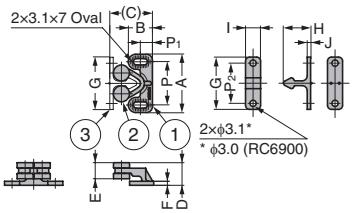


[Application Example]



[Application Reference]





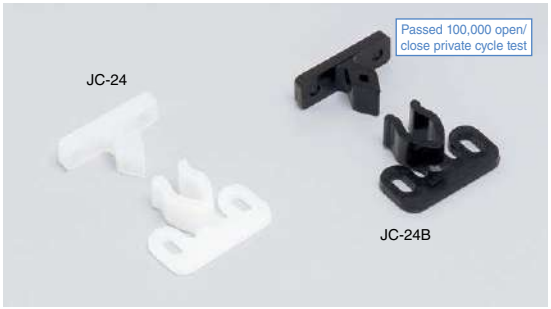
Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf
RC6900	11	1.1	16	1.6
RC6901	24	2.4	29	3.0
RC6901BL	19	1.9	25	2.6

No.	Part Name	Material	Colour
①	Body	POM	Natural/ Black
②	Roller	PE	
③	Striker	POM	

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	P	P_1	G	H	I	J	P_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-209	RC6900	29	12	21.2	11.3	8	2	21.5	6	26	13.5	7.5	1.7	20	3	100	2000
G	3D	140-051-015	RC6901	31.3	14	27.2	12.6	9	2.3	24.4	7.5	32	16.5	9	2	23.6	4	100	2000
G	3D	140-042-155	RC6901BL														4	100	2000

KNUCKLE CATCH JC-24, JC-26

TEST METHOD 10

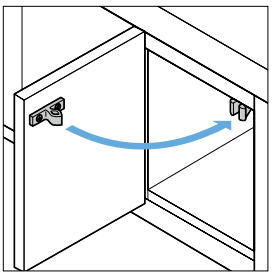


- Can be used for overlay and inset door.

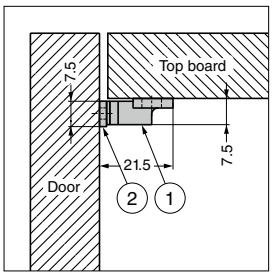
[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

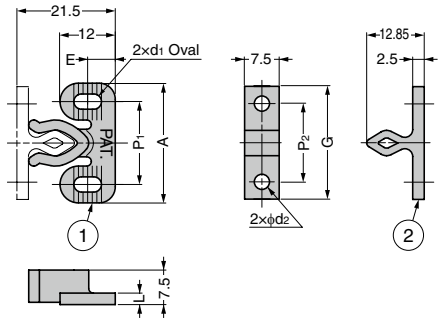
[Remarks]
- Catch force varies. Please check with actual item.
- The push-in and pulling force may vary for ±20-30%. Please check with the actual item.

[Installation]



[Application Reference]



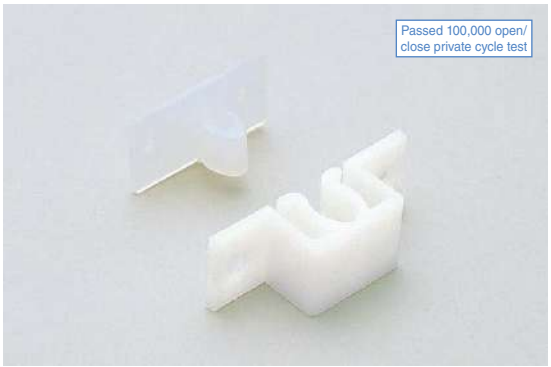


No.	Part Name	Material	Colour
①	Body	POM	Natural/Black
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	A	P1	E	G	P2	L	d1	d2	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-046	JC-24	24	17	7	22	15.7	2	2.5×5.5	2.5	28	2.9	23	2.3	1.5	100	2000
G	3D	140-916-119	JC-24B									25	2.6	21	2.1		100	2000
G	3D	140-051-018	JC-26	26	18	6	24.5	17	2.5	3.3×6	3.3	17	1.7	13	1.3	2	100	5000

KNUCKLE CATCH (MORTISE TYPE) JCU

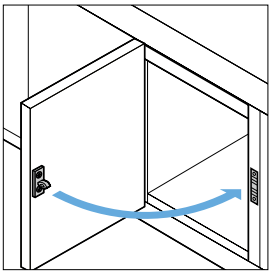
TEST METHOD 10

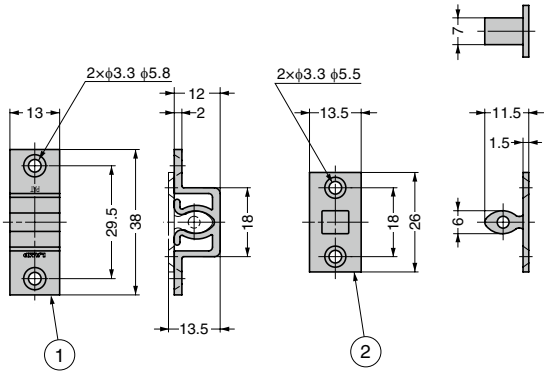


- Durable and reliable.
- For overlay doors.

[Remarks]
- The push-in force and pulling force may vary for ±20-30%.. Please check with the actual item.
- The body colour is different from the striker.

[Application Example]



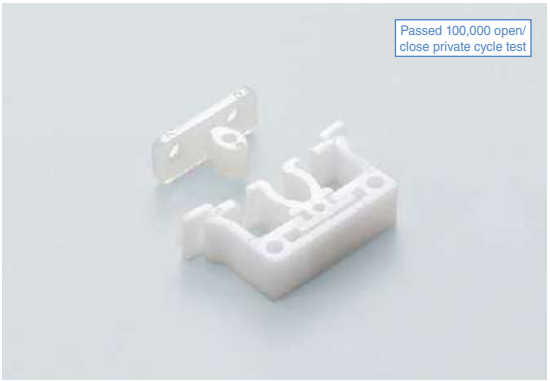


No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-020	JCU	18	1.8	17	1.7	3.5	50	1000

KNUCKLE CATCH (MORTISE TYPE) JCU-F Snap-in Installation

TEST METHOD 10



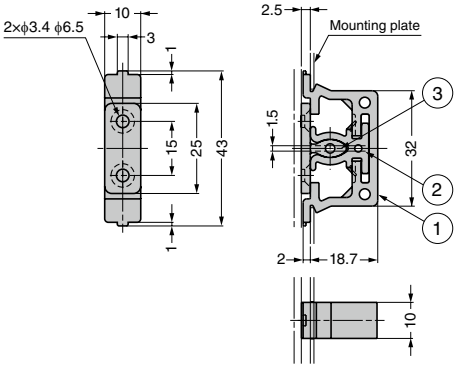
- Body ① can be snapped in the mounting hole.
- Catch ② slides 1.5mm for better alignment with striker ③.

[Remarks]

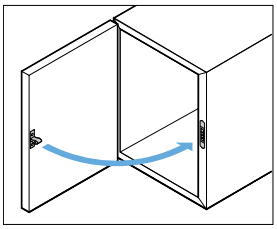
- The push-in force and pulling force may vary for ±20-30%. Please check with the actual item.

[Recommended Screws]

- Countersunk screw M3



[Application Example]



[Cut Out Dimensions]

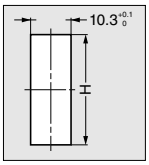


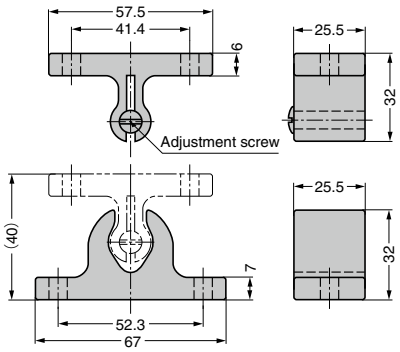
Plate Thickness	Height H
0.8	32.3
1.0	32.9
1.2	33.8

No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Catch		
③	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-051-112	JCU-F	25	2.6	26	2.7	5.2	40	800

ADJUSTABLE KNUCKLE CATCH ESO-6732

- Grabs and holds doors tightly.
- Strong catch force.
- Catch force is adjustable by turning adjustment screw.

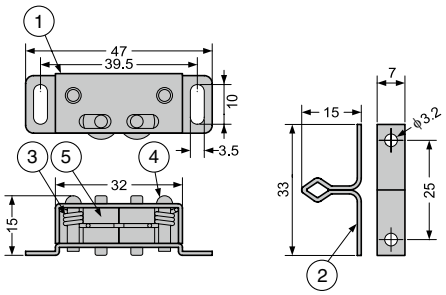


RoHS	CAD	Item Code	Item Name	Material	Colour	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-036-055	ESO-6732/WHT	PA	White	127.4~254.8	13~26	78.4~196	8~20	42	20	200
GT	3D	140-036-056	ESO-6732/BK		Black						20	200

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

ROLLER CATCH S-1080 (STBRC)

SUS



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Plain
②	Counter Plate		
③	Spring		
④	Rivet	Stainless Steel (SUS430)	
⑤	Roller	PE	White

RoHS	CAD	Item Code	Item Name	Push-in Force kgf	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-098-005	S-1080 (STBRC)	1.0	2.7	18	60	1200

TENSION CATCH BCTS

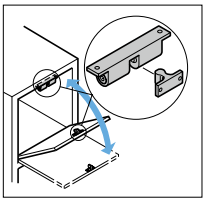
TEST METHOD 10 SUS316

- Can be installed vertically or horizontally.

[Remarks]

- Catch force is not adjustable.Do not turn the slot part.
- Push-in and pulling force may vary. Please check with actual item.

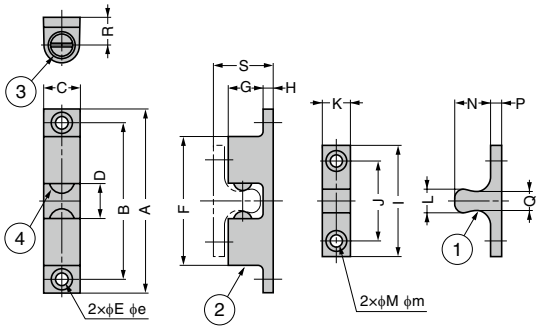
[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Counter Plate	Stainless Steel (SCS14)	Barrel Polished
②	Body		
③	Cover	Stainless Steel (SUS316)	Plain
④	Ball		Barrel Polished
–	Spring	Stainless Steel (SUS304)	Plain

※SCS14 is equivalent to SUS316.

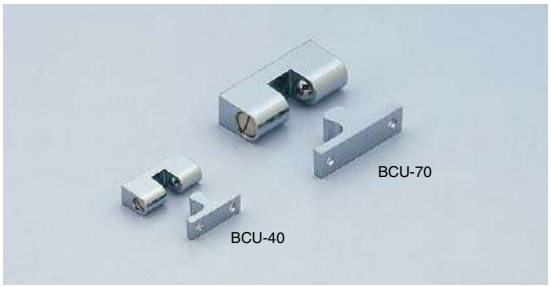


Item Name	A	B	C	D	E	e	F	G	H	I	J	K	L	M	m	N	P	Q	R	S
BCTS-40	43	35	8	5.9	3.2	6.2	28.4	7.5	2.5	25	16	7.5	4.5	3.2	6.2	8.5	2.5	2.7	6	13.5
BCTS-50	50	40	10	7.5	4.2	8.2	31.5	9.3	2.9	30	20	9	6	4.2	8.2	10.3	2.9	3.8	7.2	16.1
BCTS-70	70	60	13	13			51	13	4	42	30	10.5	10			15	4	8	10.5	23

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-242	BCTS-40	20	2	13	1.3	18	50	500
G	3D	140-050-241	BCTS-50	23	2.3	18	1.8	30	50	500
G	3D	140-050-240	BCTS-70	56	5.7	38	3.9	83	25	250

TENSION CATCH BCU

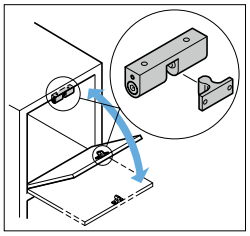
TEST METHOD 10



●Can be installed vertically or horizontally.

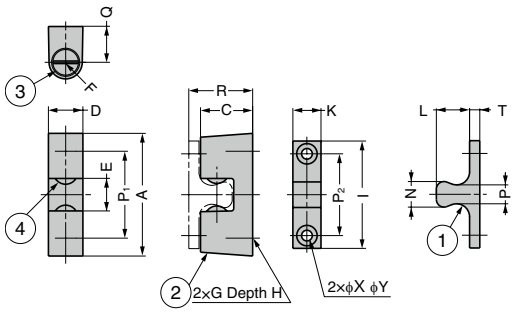
[Remarks]
●Catch force is not adjustable. Do not turn the slot part.
●Push-in and pulling force may vary. Please check with actual item.

[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Counter Plate	Zinc Alloy (ZDC)	Chrome
②	Body		
③	Cover	Brass	Nickel
④	Ball	Steel	Polished
—	Spring	BCU-40: Steel (SWP) BCU-70: Steel (SW)	Plain

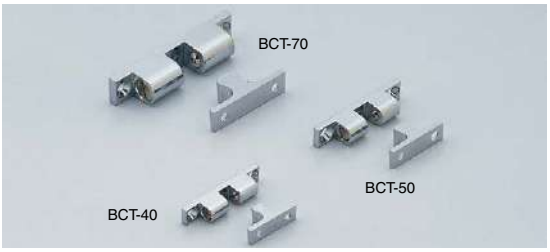


Item Name	A	P1	C	D	E	F	G	H	I	P2	K	L	N	P	T	X	Y	Q	R
BCU-40	28.5	20	12.5	8.3	6.5	R4	M3	5	24	16	8	8.8	5.5	3.7	3	3.2	6.4	8.5	15.7
BCU-70	48	34	20.5	13.5	12.7	R6.5	M5	6	42	32	11	13	10	7.3	4	4.2	8.4	14	24.9

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-103	BCU-40	35.3	3.6	23.5	2.4	18	100	400
G	3D	140-050-104	BCU-70	40.2	4.1	38.2	3.9	75	50	200

TENSION CATCH BCT

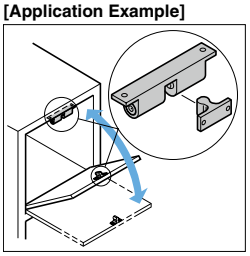
TEST METHOD 10



●Can be installed vertically or horizontally.
● Stainless steel BCTS 1 of the same shape also available.

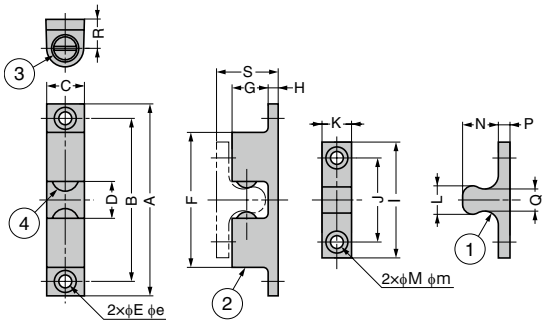
[Remarks]
●Catch force is not adjustable. Do not turn the slot part.
●Push-in and pulling force may vary. Please check with actual item.

[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Male	Zinc Alloy (ZDC)	Chrome
②	Female		
③	Cover	Brass	Nickel
④	Ball	Steel	Polished
—	Spring	Steel (SW)	Plain

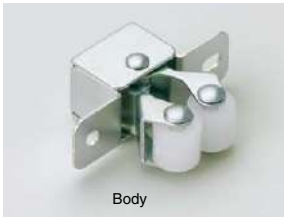


Item Name	A	B	C	D	E	e	F	G	H	I	J	K	L	M	m	N	P	Q	R	S
BCT-40	42.5	35	8	6.3	3.2	6.2	26.7	7.5	2.5	25	16	7.5	5.5	3.2	6.2	8.8	2.5	3.7	6.25	13.8
BCT-50	50	40	10	8.4	4.2	8.2	29.8	9.5	3	30	20	9	7.3	4.5	8.2	9.8		4.7	7.75	15.3
BCT-70	70	60	13.5	12			49	13	4	42	30	10.5	11	4.2		14.2	3	8.2	10.5	21.2

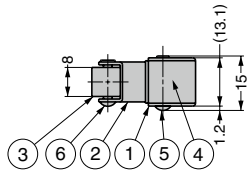
RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-108	BCT-40	43.1	4.4	29.4	3.0	16	100	400
G	3D	140-050-107	BCT-50	40.2	4.1	32.3	3.3	26	100	400
G	3D	140-050-106	BCT-70	45.1	4.6	34.3	3.5	70	50	200

Refer to 1 : P.470

ROLLER CATCH (Mortise Type) R500R

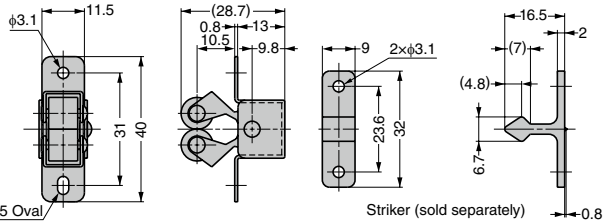

Body

Striker (sold separately)



[Remarks]
- Push-in and pulling force may vary. Please check with actual item.

[Sold Separately]
- Striker RC69010N



No.	Part Name	Material	Finish / Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Arm		
③	Roller	PP	Natural
④	Spring	Steel (SWP)	Coloured Zinc Chromate (Trivalent)
⑤	Rivet A	Steel (SWCH)	
⑥	Rivet B		

[Body] Push-in and pulling force are for using striker RC69010N.

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-039	R500R	25	2.6	64	6.5	14	100	1000

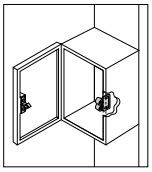
[Striker] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-916-813	RC69010N	POM	White	1	500	5000

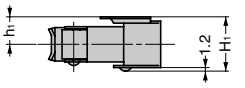
ROLLER CATCH R265, R325 Oval Hole

TEST METHOD 3 SUS

[Application Example]



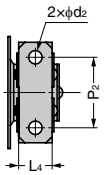
- Polyethylene roller is easy to insert and remove.

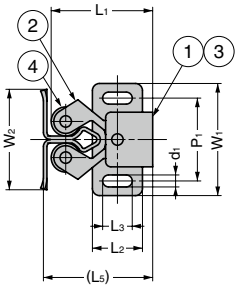


[Applications]
- Small switchboard, measuring equipment, kitchen cabinet, etc

[Remarks]
- Push-in and pulling force may vary. Please check with actual item.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Plain
②	Arm		
③	Spring	Stainless Steel (SUS304)	
④	Roller	PE	Natural





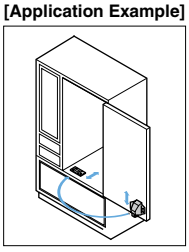
[Parts Included]
- Counter plate

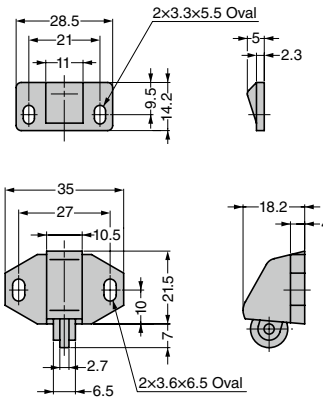
Item Name	L1	L2	L3	L4	L5	W1	W2	H1	h1	P1	P2	d1	d2
R265-SUS	23	12	8	7.2	24	26.9	24.5	13.5	7	19.7	18	3	2.8
R325-SUS	29	14	8.5	9.5	31	31.8	28.5	15.5	7.8	23.5	20	3.5	3.8

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-057-003	R265-SUS	12.7	1.3	23.5	2.4	8	120	1200
G	3D	140-057-005	R325-SUS	9.8	1	30.4	3.1	15	60	1200

ROLLER CATCH C882

[Application Example]

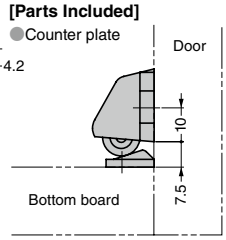




- The catch pulls the door in to ensure proper closing.

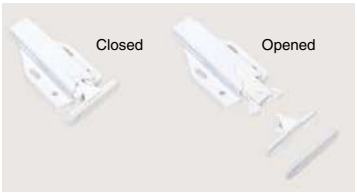
[Remarks]
- Please note the direction of counter plate.

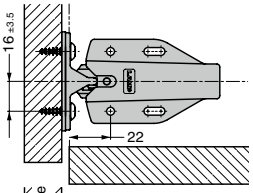
[Parts Included]
- Counter plate



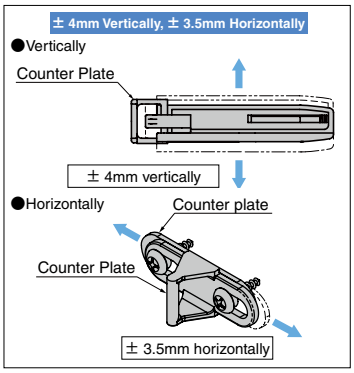
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-203	C882W	PE	White	5	150	1800
G	3D	140-050-204	C882BR		Brown	5	150	1800

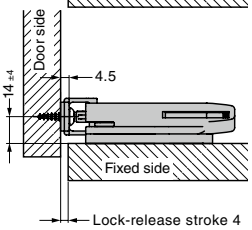
NON-MAGNETIC TOUCH LATCH MLC-100DS-WT ±4mm Vertical Adjustment Type PAT

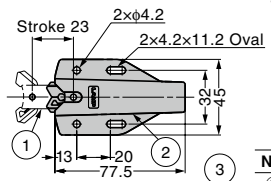


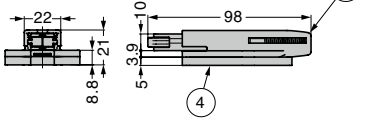


[Adjustment]







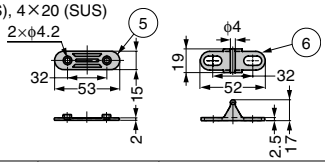


- Wider vertical adjustment range compared with MLC-100 1.
- Adjustment range of counter plate installation position: ±4mm vertically and ±3.5mm horizontally.
- Long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door.When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Installation with rivet is also possible.
- Similar item (vertical adjustment range: ±2mm): MLC-100 1.

[Specifications]
- Passed 100,000 open/close private cycle test

[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

[Parts Included]
- Truss head tapping screw 4×16 (SUS), 4×20 (SUS)

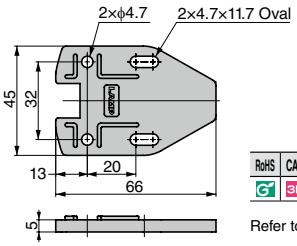


No.	Part Name	Material	Finish/Colour
①	Body 1	Reinforced Nylon	White
②	Body 2	PBT	
③	Spring	Steel	Coloured Zinc Chromate (Trivalent)
④	Spacer	POM	White
⑤	Counter Plate	PBT	
⑥	Counter Plate	POM	

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)
G	3D	140-036-531	MLC-100DS-WT	White	90	9.2	14	1.4	51

Refer to 1 : P.474

SPACER MLC-100-DP5-WT



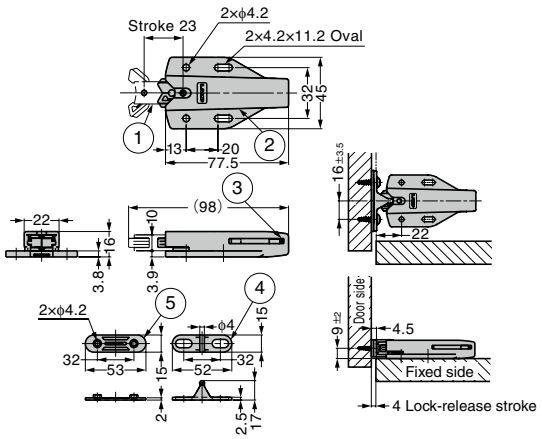
- Spacer for MLC-100 1, MLC-100DS-WT 2.
  Can adjust counter plate installation position +5mm.
- One spacer is included in MLC-100DS-WT.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)
G	3D	140-035-318	MLC-100-DP5-WT	POM	White	16

Refer to 1 : P.474, 2 : P.473

NON-MAGNETIC TOUCH LATCH MLC-100

- Long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Wide adjustment range: ±2mm vertically and ±3.5mm horizontally.
- Installation with rivet is also possible.
- Similar item (heat resistance, stroke 40mm): MLC-HT130BL 1.



[Specifications]
- Passed 100,000 open/close private cycle test

[Parts Included]
- Truss head tapping screw 4×16 (SUS)

[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

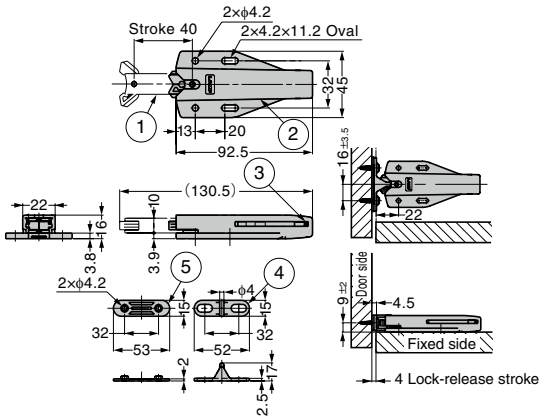
No.	Part Name	Material	Finish / Colour
①	Body 1	Reinforced Nylon	White
②	Body 2	Reinforced PBT	Black
③	Spring	Steel	Coloured Zinc Chromate (Trivalent)
④	Counter Plate	POM	White
⑤	Counter Plate	PBT	Black

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-540	MLC-100WT	White	90	9.2	14	1.4	32	20	240
G	3D	140-033-090	MLC-100BL	Black						20	240

Refer to 1 : P.474

NON-MAGNETIC TOUCH LATCH MLC-HT130BL Long Stroke Type

- Heat-resistance (up to 120˚C) and long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Wide adjustment range: ±2mm vertically and ±3.5mm horizontally.
- Installation with rivet is also possible.
- Similar item (non-heat resistance, stroke 23mm): MLC-100WT 1.



[Specifications]
- Passed 100,000 open/close private cycle test

[Remarks]
- Retaining force may decrease at high temperature.The retaining force at 120˚C is about 29.4N (3kgf), which may vary depending on the environment and conditions.

[Parts Included]
- Truss head tapping screw 4×16 (SUS)

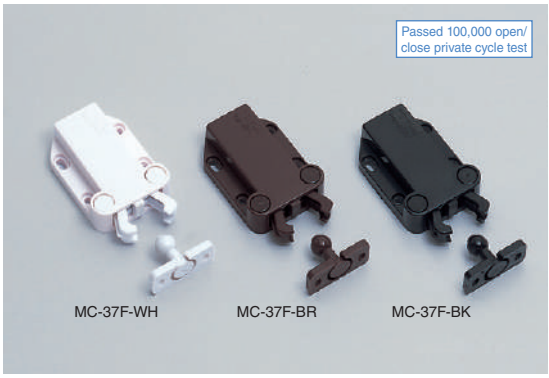
[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

No.	Part Name	Material	Finish / Colour
①	Body 1	Reinforced PA	Black
②	Body 2	Reinforced PBT	
③	Spring	Stainless Steel (SUS304)	Plain
④	Counter Plate	Reinforced PA	Black
⑤	Counter Plate	Reinforced PBT	

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-539	MLC-HT130BL	117.6	12	16.7	1.7	40	20	240

Refer to 1 : P.474

NON-MAGNETIC TOUCH LATCH MC-37F

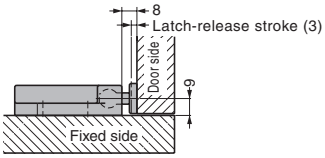


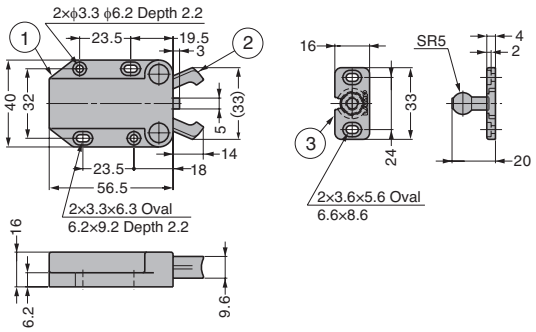
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Floating counter plate for easy alignment.

[Specifications]
- Passed 100,000 open/close private cycle test

[Parts Included]
- Round head wood screw 3.1×13
- Pan head tapping screw 3.5×10

[Installation]





No.	Part Name	Material	Colour
①	Body	ABS	Black, Brown, White
②	Arm	POM	
③	Counter Plate	PA	

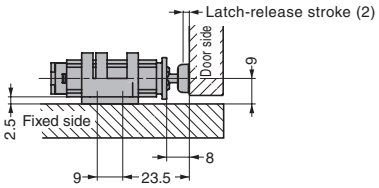
RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-064	MC-37F-BK	Black	78	8	24	30	300
G	3D	140-058-066	MC-37F-BR	Brown				30	300
G	3D	140-058-065	MC-37F-WH	White				30	300

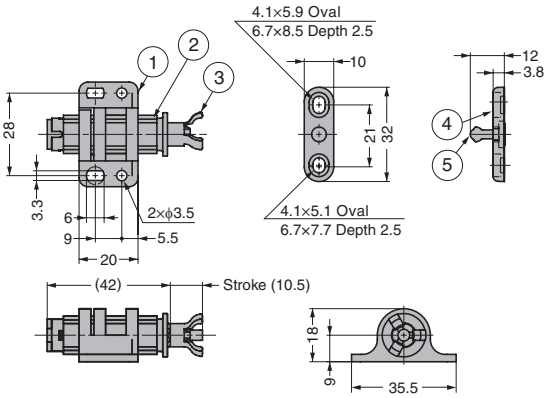
NON-MAGNETIC TOUCH LATCH MC-20

- No handle needed, just push to open/close.
- Easy adjustment (13mm back and forward) by revolving the body.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Round head wood screw 3.1×13

[Installation]





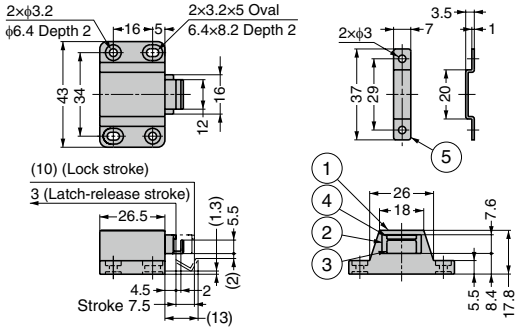
No.	Part Name	Material	Colour
①	Base	PP	Black, White
②	Body		
③	Latch		
④	Counter Plate		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-022-344	MC-20BL	Black	40	4	6	30	600
G	3D	140-022-345	MC-20WT	White				30	600

NON-MAGNETIC TOUCH LATCH PR-21P

- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Counter plate



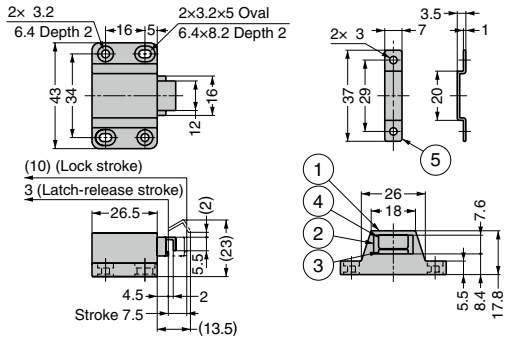
No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Brown
②	Slide	POM	
③	Arm	Steel (SPCC)	Paint/Brown
④	Yoke		GB
⑤	Counter Plate		Chrome

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-277	PR-21PK	Black	16.3	100	800
G	3D	140-050-272	PR-21PD	Brown		100	800

NON-MAGNETIC TOUCH LATCH PR-20P

- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Counter plate



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Brown
②	Slide	POM	
③	Arm	Steel (SPCC)	Paint/Brown
④	Yoke		GB
⑤	Counter Plate		Chrome

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-276	PR-20PK	Black	16.3	100	800
G	3D	140-050-274	PR-20PD	Brown		100	800

NON-MAGNETIC TOUCH LATCH MC-28

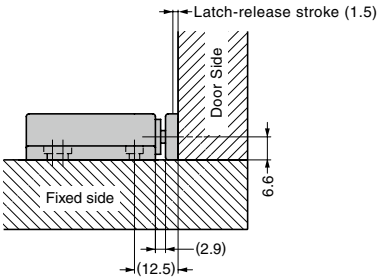
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

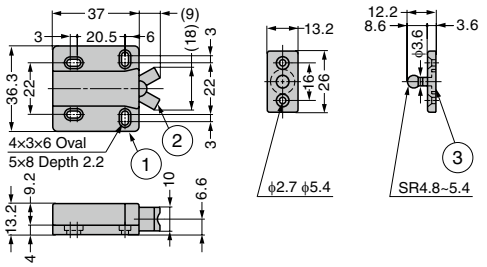
[Specifications]
- Passed 30,000 open/close private cycle test

[Remarks]
- For overlay door, make a 3mm gap between door and cabinet frame.

[Parts Included]
- Pan head wood screw 2.7×13
- Countersunk head wood screw 2.4×10

[Application Example]





No.	Part Name	Material	Colour
①	Body	ABS	Black
②	Arm	POM	
③	Counter Plate	PA	

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-059-203	MC-28	29	3	15	50	500

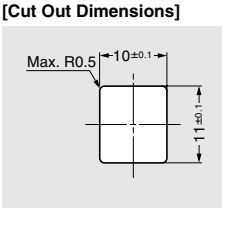
NON-MAGNETIC TOUCH LATCH ESN-195/BLK Snap-in Installation

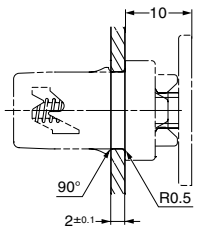
- Compact design with strong retaining force.
- Snap-in type body.
- No handle needed, just push to open/close.
- Lightly push to open the door.When closing, arm will catch the counter plate (sold separately) and hold the door by lightly pushing, too.

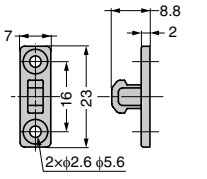
[Sold Separately]
- Counter plate ESN-195-ST

[Recommended Screws]
For counter plate (sold separately)
- Countersunk head screw M2.5
- Countersunk head wood screw nominal 2.4

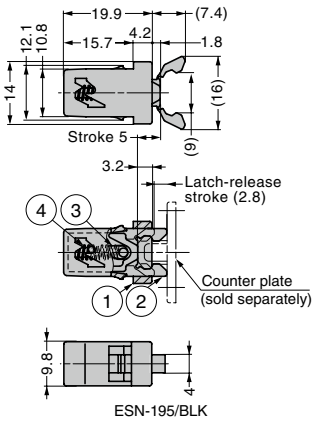
[Cut Out Dimensions]







ESN-195-ST (sold separately)



ESN-195/BLK

[Body]

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-059-195	ESN-195/BLK	34	3.5	2.3	1000	5000

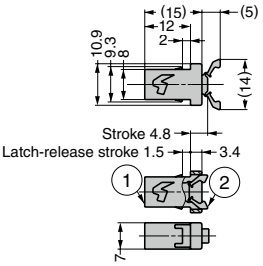
[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-014-075	ESN-195-ST	POM	Black	1	1000	4000

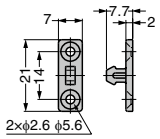
No.	Part Name	Material	Colour
①	Body	PBT	Black
②	Catch	PA	
③	Arm	LCP	
④	Spring	Steel (SUP)	–

NON-MAGNETIC MINI TOUCH LATCH PR4PK-B Snap-in Installation

- Snap-in type (body, counter plate for snap-in).
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate (sold separately) and hold the door by lightly pushing, too.

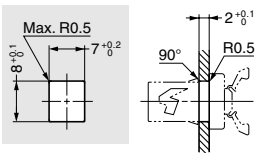


PR4PK-B

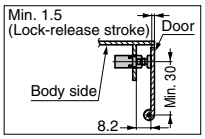


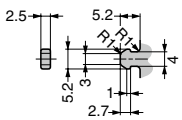
PR4PK-1
(Counter plate for screw mount)
Sold separately

[Cut Out Dimensions for Body]



[Combination with Counter Plate for Screw Mount]





Counter plate head details

[Body]

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-118	PR4PK-B	12	1.2	2	0.7	1000	10000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Product Name	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-019	PR4PK-1	Counter Plate for Screw Mount	POM	0.4	–	1000

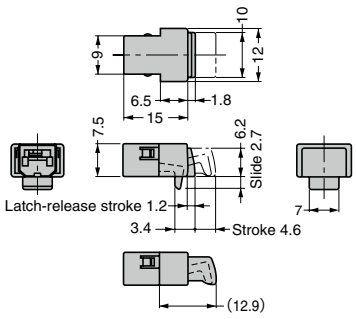
No.	Part Name	Material	Colour
①	Body	POM	Black
②	Arm	PA	

NON-MAGNETIC MINI TOUCH LATCH NS2 Snap-in Installation

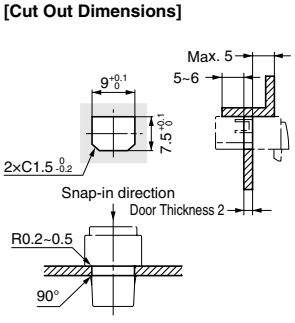
- Miniature design is ideal for small door applications.
- Latch is less likely to be damaged even if forcibly removing the door when locked.
- Snap-in type.
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Remarks]

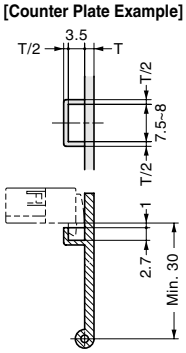
- Counter plate not included. Please prepare the counter plate , for example by forming on the door side.



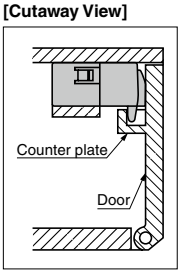
[Cut Out Dimensions]



[Counter Plate Example]



[Cutaway View]



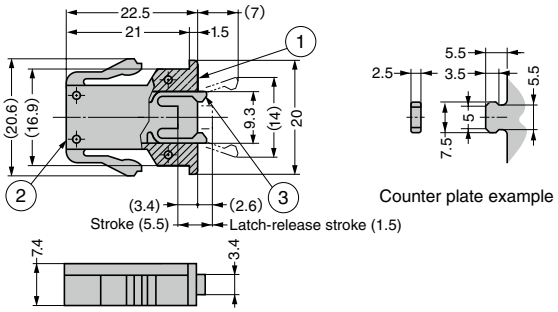
RoHS	CAD	Item Code	Item Name	Material	Colour	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-098	NS2	Polycarbonate	Black	2	1.1	500	–

NON-MAGNETIC TOUCH LATCH PR3PK Snap-in Installation

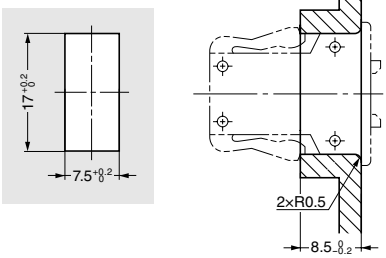
●No handle needed, just push to open/close.

[Remarks]

●Counter plate not included. Please prepare the counter plate, for example by forming on the door side.



[Cut Out Dimensions]

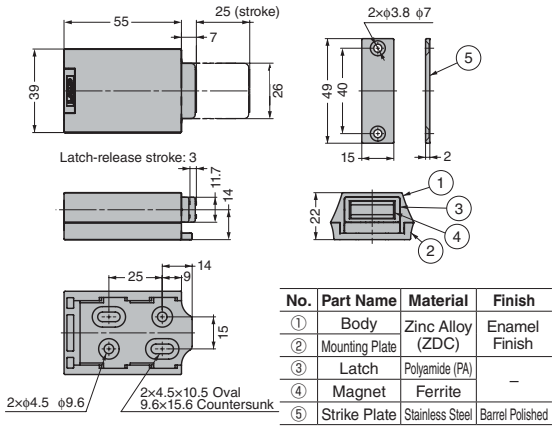


No.	Part Name	Material	Colour
①	Body	ABS	Black
②	Base		Clear
③	Arm	POM	Black

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-050-239	PR3PK	2.5	400	3200

METAL MAGNETIC TOUCH LATCH ML-ZN80

Passed 100,000 open/close private cycle test



No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Enamel Finish
②	Mounting Plate		
③	Latch	Polyamide (PA)	–
④	Magnet	Ferrite	
⑤	Strike Plate	Stainless Steel	Barrel Polished

- The body is made of metal for high durability.
- Designed for use on large doors due to its strong push force.
- Uses flame retardant plastic rated UL94 V-0.
- The magnet part has an allowance of 1.5° on each side to catch the strike plate correctly.
  This helps the magnet to adjust even if there is a slight misalignment.
- Mounting plate screw are hidden from view.
- For overlay doors, please make sure there is correct clearance between the door and side board as shown in the drawings below.

[Application]
- Walk-in closets, Concealed doors.

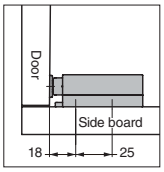
[Remarks]
- The magnetic force may vary. Please comfirm with actual products before use.
- Please install the body at the height where people are supposed to push.
- Please use hinges which do not have catch functions.

[Parts Included]
- Cross-recessed tapping screw M4 × 16
- Cross-recessed tapping screw M3 × 16

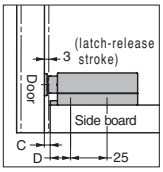
Video Link

[Installation]

- Inset Doors



- Overlay Doors



Please make sure there is the “C clearance” on the side board.
It makes the installation easier to align the edge of the body to the edge of the side board.

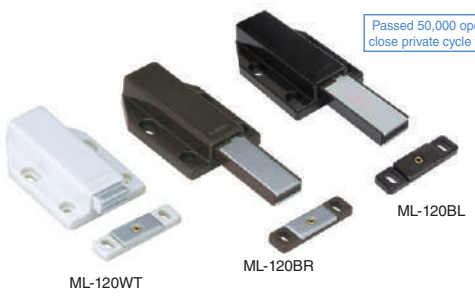
[Dimension]

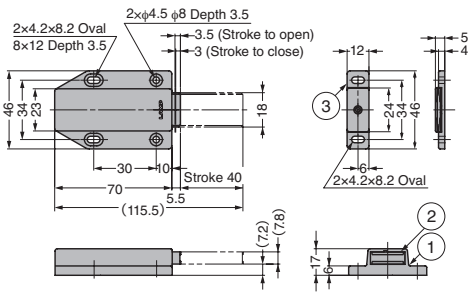
C (mm)	D (mm)
3	15
4	14

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Push Force N	Push Force kgf	Max. Door Specs (reference) Height (mm)	Max. Door Specs (reference) Width (mm)	Max. Door Specs (reference) Weight (kg)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-043-880	ML-ZN80BL	Black	29.4	3	49	5	2440	915	125	160	10	100
G	3D	140-043-881	ML-ZN80WT	White									10	100
G	3D	140-056-849	ML-ZN80BR	Brown									10	100

MAGNETIC TOUCH LATCH ML-120 Long Stroke Type

Passed 50,000 open/close private cycle test



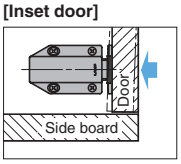


- Large stroke. Can also be used for heavy doors or large doors (tested with W600×H1800×t30 door).
- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.
- Counter plate is movable.

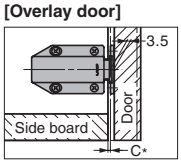
[Remarks]
- Be sure to read the “Cautions” 1.
- Please use hinges without catch. (Or hinges with catch may cause malfunction).
- Do not use as a door stopper.Excessive force may cause damage.
- Pay attention to not pinching fingers when using with a small door.

[Parts Included]
- Counter plate
- Countersunk head tapping screw 4×16

[Inset door]



[Overlay door]



* without including thickness of mounting plate.

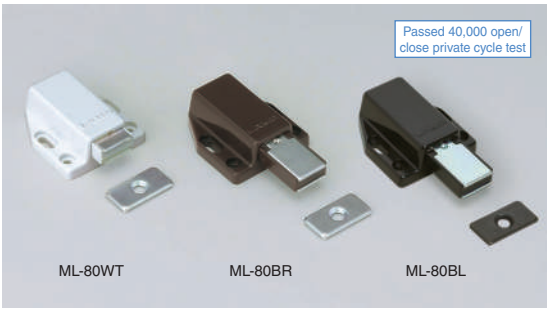
To ensure a push-in allowance of 3.5mm or above in the latch part as shown, please leave a clearance C between door and side board.

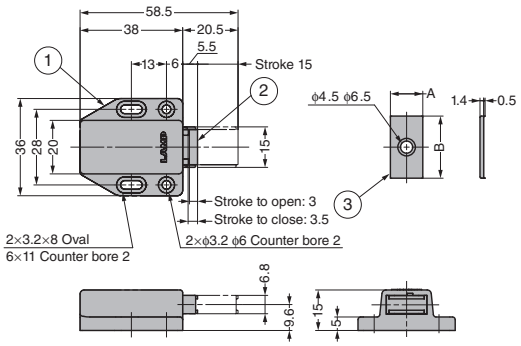
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-338	ML-120BR	Brown	23.5	2.4	53	20	240
G	3D	140-050-337	ML-120WT	White				20	240
G	3D	140-047-124	ML-120BL	Black				20	240

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (trivalent)
③	Counter Plate	ABS/Steel (SPCC)	-Brown/white: Coloured Zinc Chromate (trivalent) -Black: Copper Plating

Refer to 1 : P.431

MAGNETIC TOUCH LATCH ML-80



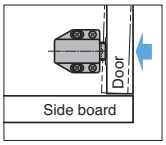


- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.
- For overlay doors, make a 3.5mm gap between door and cabinet frame.

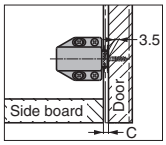
[Remarks]
- Be sure to read the "Cautions" 1.
- For large doors, please use the ML-120 2 or ML-ZN80 3 instead.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (4 pcs)
- Countersunk head wood screw 2.7×13 (1 pc)

[Inset door]



[Overlay door]



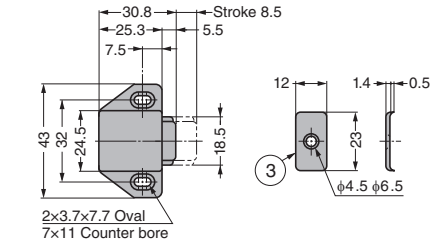
To ensure a push-in allowance of 3.5mm or above in the latch part, please leave a clearance C at the side board.

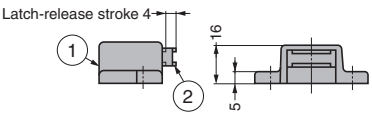
No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White,Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (trivalent)
③	Counter Plate		-Brown/white: Coloured Zinc Chromate(trivalent) -Black: Copper Plating

RoHS	CAD	Item Code	Item Name	Colour	A	B	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-270	ML-80BR	Brown	12	23	15.7	1.6	22	20	400
G	3D	140-050-271	ML-80WT	White						20	400
G	3D	140-050-013	ML-80BL	Black	11.5	22.5				20	400

Refer to 1 : P.431, 2 3 : P.480

MAGNETIC TOUCH LATCH ML-30S





- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- For large doors, please use the ML-120 2 or ML-ZN80 3 instead.
- Please use hinges without catch.

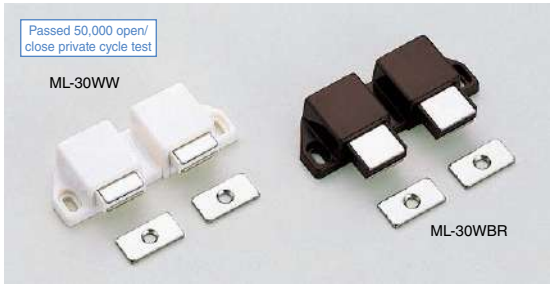
[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 3.1×13 (1 pc)

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Nickel
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-054	ML-30SW	White	11.8	1.2	22.5	50	750
G	3D	140-050-055	ML-30SBR	Brown				50	750

Refer to 1 : P.431, 2 3 : P.480

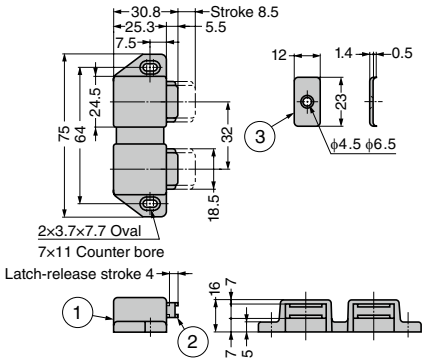
MAGNETIC TOUCH LATCH ML-30W



- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- For large doors, please use the ML-120 2 or ML-ZN80 3 instead.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 3.1×13 (2 pc)



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Nickel
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-056	ML-30WW	White	11.8	1.2	42	30	450
G	3D	140-050-057	ML-30WBR	Brown				30	450

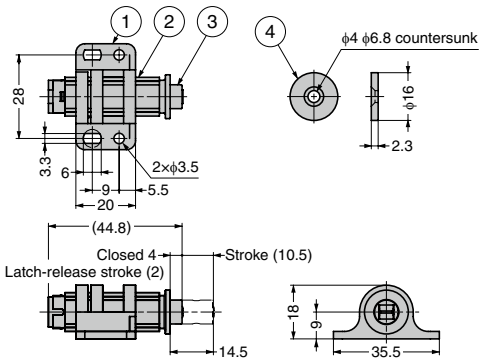
Refer to 1 : P.431, 2 3 : P.480

MAGNETIC TOUCH LATCH MC-25

- Lightly push to open the door.
- Easy adjustment (13mm back and forward) by revolving the body.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (4 pcs)
- Countersunk head wood screw 3.1×13 (1 pc)

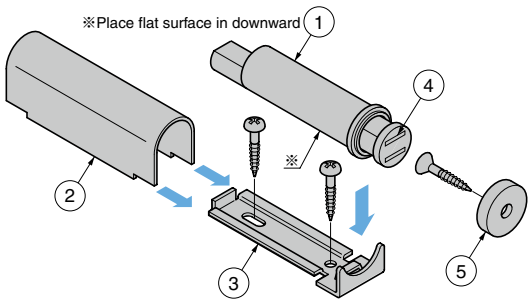


No.	Part Name	Material	Finish / Colour
①	Base	PP	Black, White
②	Body		
③	Latch		
④	Counter Plate	Steel (SUM)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force (Magnetic Force) N	Retaining Force (Magnetic Force) kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-022-347	MC-25BL	Black	4.9	0.5	10	30	600
G	3D	140-022-346	MC-25WT	White				30	600

Refer to 1 : P.431

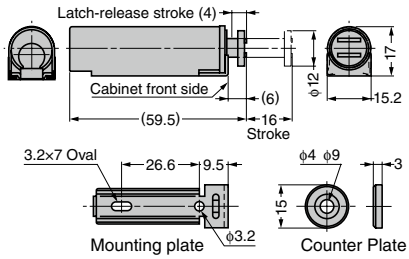
MAGNETIC TOUCH LATCH MC-S60



- Can be used for overlay and inset door.
- Stylish design with stainless steel cover.

[Remarks]
- Be sure to read the "Cautions" 1.
- For small doors.Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate W12 2
- Pan head wood screw 3.1×13, Countersunk head wood screw 3.8×16



No.	Part Name	Material	Finish / Colour
①	Body	ABS/POM	Brown
②	Cover	Stainless Steel (SUS430)	–
③	Mounting Plate	Steel (SPCC)	Nickel
④	Yoke		
⑤	Counter Plate	Steel (SUM)	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-129	MC-S60	10.8	1.1	28.5	30	600

Refer to 1 : P.431, 2 : P.464

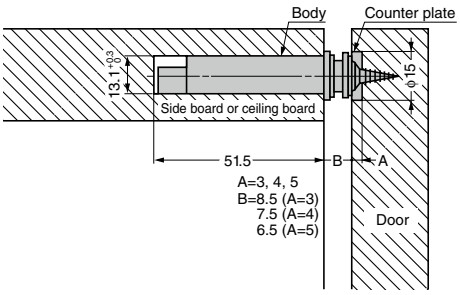
MAGNETIC TOUCH LATCH (MORTISE TYPE) MC-U60

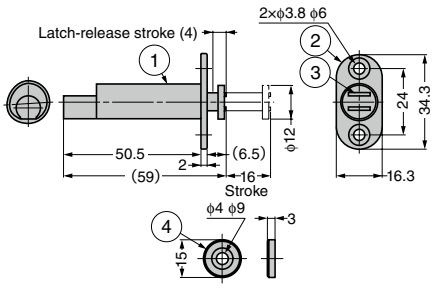
- For overlay doors: Can be embedded in the edge of side board, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Please provide a ϕ15 counterbore of 3~5mm deep at the door for installing the counter plate (for the relation between counterbore depth A and door clearance B, see "Cut Out Dimensions" in the lower left).
- For small overlay door.Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate W12 2
- Pan head wood screw 2.9×13, Countersunk head wood screw 3.8×16

[Cut Out Dimensions]





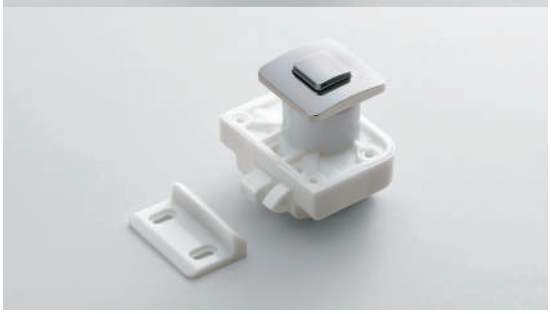
No.	Part Name	Material	Finish / Colour
①	Body	ABS/POM	Brown
②	Mounting Plate	Stainless Steel (SUS430)	–
③	Yoke	Steel (SPCC)	Nickel
④	Counter Plate	Steel (SUM)	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-016	MC-U60	10.8	1.1	19	30	600

Refer to 1 : P.431, 2 : P.464

PUSH KNOB LATCH TLP-S

TEST METHOD 11 | L=R | INSTRUCTION



- Knob is stored flush when pushed in and not in use.
- Knob pops out when pressed to open the door.
- Latch securely locks the door with dead bolt.
- Flexible to suit door thickness (19~30mm) by adjusting screw.
- Can be used for overlay and inset door.
- Rounded push knob and base are also available.

[Specifications]
- Applicable door thickness: 19~30mm

[Remarks]
- Please order Push Knob・Base and Latch Body・Counter plate for complete set.
- The spring loaded latch and the dead bolt are reversed up and down when using for right and left installation.
- Door stopper is required when installing to inset door.

[Parts Included]
- Door thickness adjustment screw: M4×25, M4×31 (attached to ①②)
- Latch body mounting screw: Pan-head tapping screw 3×20 (SUS, attached to ③④)
- Counter plate mounting screw: Pan-head tapping screw 3×16 (SUS, attached to ③④)

[Push Knob and Base]

TLP-S-BB-WB

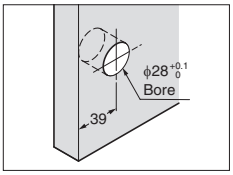
TLP-S-BB-G

TLP-S-BB-CR

[Latch Body and Counter Plate]

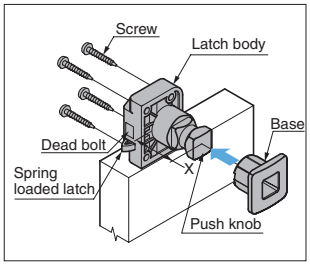
Brown is also available as special order.

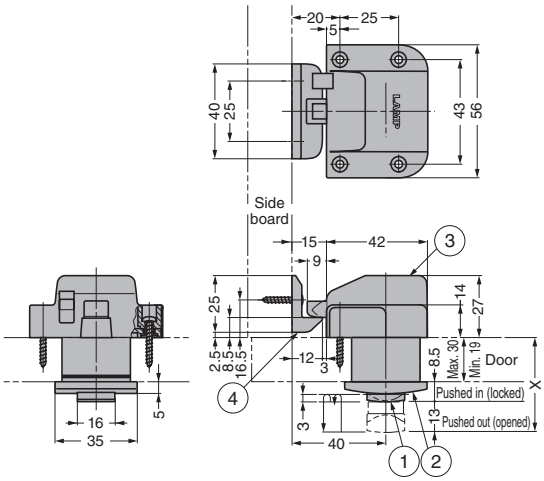
[Bore Dimensions (Door)]



Dimension above is for inset door. Refer to the right figure for overlay door.

[Parts Structure]





[X Dimension]

Screw Length	Door Thickness	X
25	19	40.5
	20	41.5
	21	42.5
	22	43.5
	23	44.5
	24	45.5

Screw Length	Door Thickness	X
31	25	46.5
	26	47.5
	27	48.5
	28	49.5
	29	50.5
	30	51.5

No.	Part Name	Material	Finish / Colour
①	Push knob	Brass	White Bronze Plating, Gold, Chrome
②	Base	Zinc Alloy (ZDC)	
③	Latch Body	PA	White
④	Counter Plate		

[Push Knob① ・ Base②]

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-014-264	TLP-S-BB-WB	Satin Nickel	84	30	150
–	3D	140-014-265	TLP-S-BB-G	Gold	84	30	180
G	3D	140-012-390	TLP-S-BB-CR	Chrome	84	30	150

[Latch Body③ ・ Counter Plate④] Supplied with Installation Instruction

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-060-934	TLP-LBMW	196	20	47	10	100

PUSH KNOB LATCH DPL-RO

TEST METHOD 11 | L=R | INSTRUCTION

- Safe and smart design: Door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]
- Applicable door thickness: 15~25mm

[Remarks]
- Be sure to close the door and then push the knob. Closing the door after pushing the knob may cause damage.

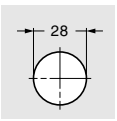
[Parts Included]
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

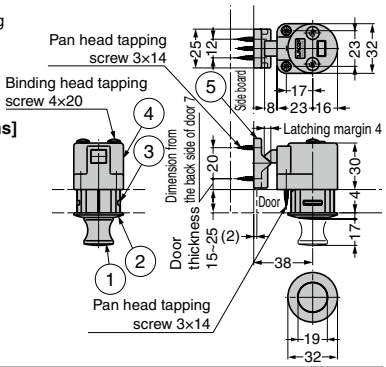
[Push Knob and Surface Ring]

DPL-RO-G DPL-RO-CR

[Latch Body and Counter Plate]

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-739	☆DPL-RO-G	Gold (Paint/Clear)	98	10	72	10	80
G	3D	140-014-740	DPL-RO-CR	Chrome				10	80

☆ Limited stock available. The hole shape of the Counter Plate changes to a long hole.

PUSH KNOB LATCH DPL-OV

TEST METHOD 11 | L=R | INSTRUCTION

- Safe and smart design: Door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]
- Applicable door thickness: 15~25mm

[Remarks]
- Be sure to close the door and then push the knob.Closing the door after pushing the knob may cause damage.

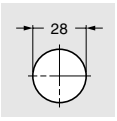
[Parts Included]
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

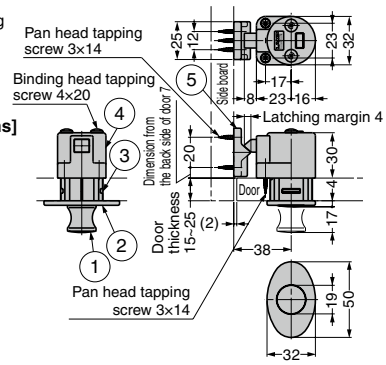
[Push Knob and Surface Ring]

DPL-OV-G DPL-OV-CR

[Latch Body and Counter Plate]

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-734	☆DPL-OV-G	Gold (Paint/Clear)	98	10	83	10	80
G	3D	140-014-735	DPL-OV-CR	Chrome				10	80

☆ Limited stock available. The hole shape of the Counter Plate changes to a long hole.

PUSH KNOB LATCH DPL-SQ

TEST METHOD 11 | L=R | INSTRUCTION

- Safe and smart design: door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]

- Applicable door thickness: 15~25mm

[Remarks]

- Be sure to close the door and then push the knob.Closing the door after pushing the knob may cause damage.

[Parts Included]

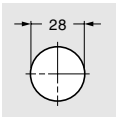
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

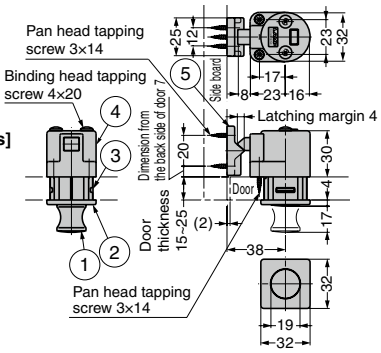
[Push Knob and Surface Ring]

DPL-SQ-G DPL-SQ-CR DPL-SQ-SN

[Latch Body and Counter Plate]

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-737	☆DPL-SQ-G	Gold (Paint/Clear)	98	10	78	10	80
G	3D	140-014-738	DPL-SQ-CR	Chrome				10	80
G	3D	140-014-736	DPL-SQ-SN	Satin Nickel				10	80

☆ Limited stock available. The hole shape of the Counter Plate changes to a long hole.

Latch with Lever Digest

FLUSH SLAM LATCH LC-48 1

SNAP LOCK SX-48

Snap-in Installation & Temporary Holding 2

PANEL LATCH LC-PK32, LC-PL32

Snap-in Installation 3

LC-PK32-L-BL LC-PL32-GR

LC-PL32-L-GR
(Sold separately)

LC-PK32-K
(Sold separately)

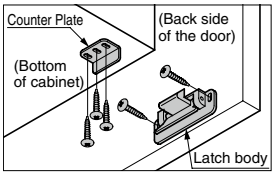
Refer to 1 : P.696, 2 : P.697, 3 : P.698

STAINLESS STEEL LEVER LATCH LL-66S

INSTRUCTION SUS316

- Corrosion resistance: Made of 316 stainless steel.
- Used for overlay doors beyond the lower side of cabinet bottom.
- Latch designed to be used on a door without knobs and handles.
- Door will not open even with shake such as an earthquake.
- Can be installed to a door with gasket.
- Installation position can be adjusted. (body: vertical ±1.5mm, counter plate: horizontal ±1.5mm)

[Cut Out Dimensions]



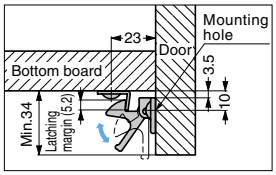
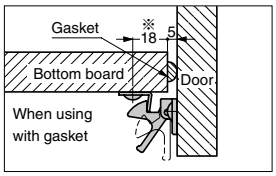
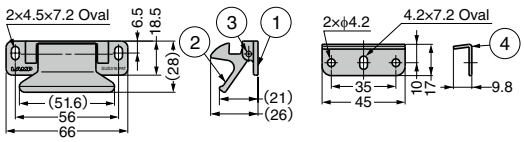


Figure on the right is for the case where the clearance between the bottom board and door is 5mm.
※marked dimension is 23− (clearance between bottom board and door).





[Applications]
- Marine related furniture and equipment etc.

[Remarks]
- Ensure that the latching margin of body and counter plate is 5.2mm.
- Do not store heavy objects in cabnet since excessive impact may get the door opened.

[Parts Included]
- Truss head tapping screw 4×12 (SUS)

No.	Part Name	Material	Finish
①	Latch Body	Stainless Steel (SCS14)	Polished
②	Lever		
–	Spring	Stainless Steel (SUS316)	Plain
③	Shaft		
④	Counter Plate		Polished

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-030	LL-66S	196	20	85	20	100

LEVER LATCH LL-66

TEST METHOD 11 INSTRUCTION

- Used for overlay doors beyond the lower side of cabinet bottom.
- Latch designed to be used on a door without knobs and handles.
- Door will not open even with shake such as an earthquake.
- Can be installed to a door with gasket.
- Installation position can be adjusted. (body: vertical ±1.5mm, counter plate: horizontal ±1.5mm)
- LL-66GR uses flame retardant material rated UL94V-0.

[Cut Out Dimensions]

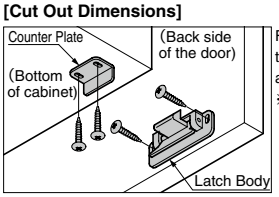
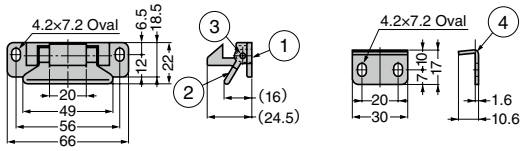


Figure on the right is for the case where the clearance between the bottom board and door is 5mm.
※marked dimension is 24− (clearance between bottom board and door).



[Remarks]
- It may not operate properly in case of door warp or sagging due to long-term use. In this case, please adjust the fitting state of the door or the installation position of the product.
- Ensure that the latching margin of body and counter plate is 6.5mm.
- Do not store heavy objects in cabinet since excessive impact may get the door opened.

[Parts Included]
- Truss head tapping screw 4×12

No.	Part Name	Material	Finish / Colour
①	Latch Body	Chrome:PC/ABS	White, Brown, Grey,
②	Lever	Others: PA	Chrome, Black
–	Spring	Stainless Steel (SUS304)	–
③	Shaft	Steel	Chrome: Clear Zinc Chromate Others: Coloured Zinc Chromate
④	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Type	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-028	LL-66BR	–	Brown	196	20	25	30	300
G	3D	140-051-027	LL-66WT		White				30	300
G	3D	140-051-029	LL-66GR	Flame Retardant	Grey				30	300
G	3D	140-036-236	LL-66CR	–	Chrome			26	30	300
G	3D	140-047-143	LL-66BL		Black			25	30	300

SLIDING DOOR LATCH HC-30R Double-sided Thumb Type

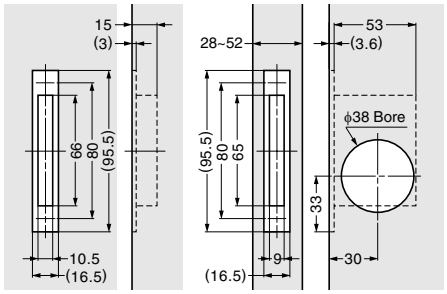
L=R SUS

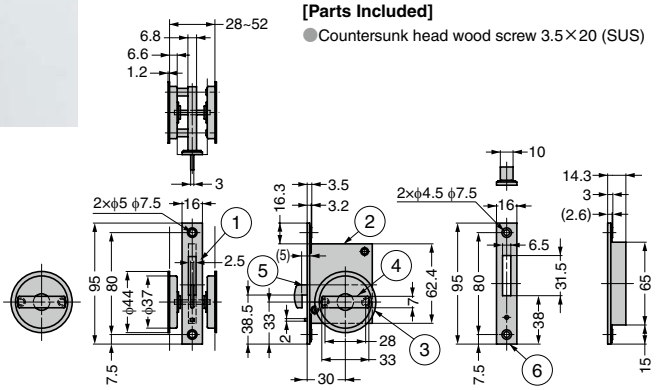
- Ideal for harsh and high corrosion environments.
- Can be latched from both side and prevents unexpected open/close.
- Easy installation, flat and compact design for various application.
- Type combining thumb and indicator and type with large lever on thumb in the same series also available.

[Remarks]
- The dimensions in the “Cut Out Dimensions” are for reference.Please check with actual item.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)

[Cut Out Dimensions]



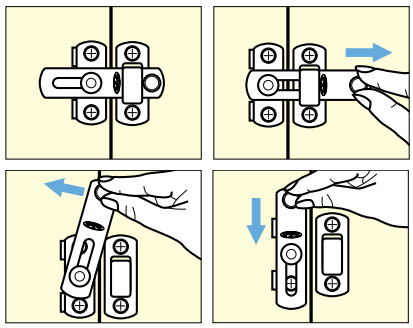


No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Body	Steel (SECC)	(Zinc Chromate)
③	Body	Stainless Steel (SUS304)	Polished
④	Thumb	Zinc Alloy (ZDC)	Chrome
⑤	Dead Bolt	Stainless Steel (SUS304)	Barrel Polished
⑥	Counter Plate		Satin

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-022-282	HC-30R	28~52	290	5	50

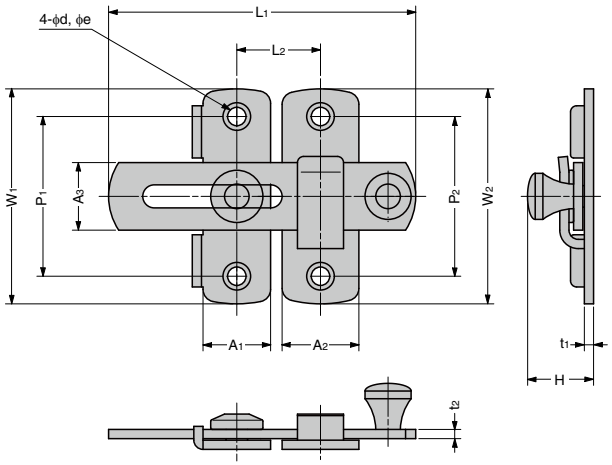
BAR LATCH SSL

Made to Order NSF SUS



- Unique slide-in bar keeps latch locked.
- Slide out and lift the bar to release.

[Remarks]
- MOQ upon request.



Material	Finish
Stainless Steel (SUS304)	Electro Polished

RoHS	CAD	Item Code	Item Name	L_1	L_2	W_1	W_2	A_1	A_2	A_3	P_1	P_2	H	t_1	t_2	d	e	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-179	SSL-50	50	20±4	35	35	13	15	13	26	26	14.5	2	5	4.2	6.2	32	10	150
G	3D	140-059-180	SSL-70	70	28±6	50	50	18	20	18	37	37	19	2	2.5	5.2	8	68	10	150
G	3D	140-059-176	SSL-100	100	45±15	70	70	22	25	22	52	52	21.5	3	3	5.8	9	142	5	80

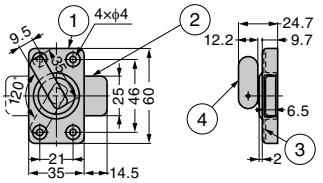
LEVER BOLT HR35

L=R SUS

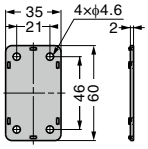
- Turn the latch knob to open/close.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

[Parts Included]
- Countersunk wood screw 3.5×20 (SUS)

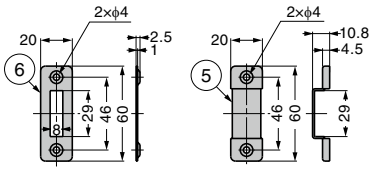
[Sold Separately]
- Spacer HR35SP-B



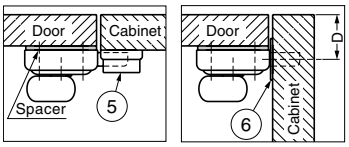
[Spacer] Sold Separately



Spacer (Sold separately)



[Spacer Application Example]



Use when there is a level difference on the mounting surface of the main body and the counter plate (left figure) or increase of dimension D is required (right figure). (Overlap spacer as necessary).

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Slide Plate		Plain
③	Back Plate		Satin
④	Lever Knob		
⑤	Counter Plate A		
⑥	Counter Plate B		

[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-135	HR35	108	10	100

[Spacer] Sold Separately

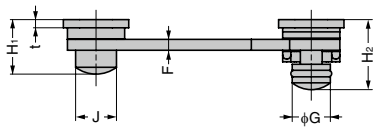
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-002	HR35SP-B	PA	Black	5	250	2500

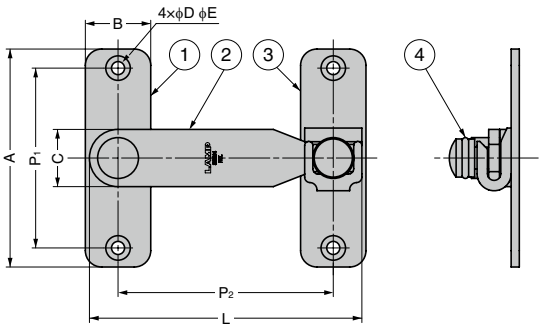
BAR LATCH BLT

L=R SUS

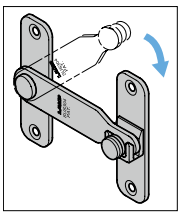
- Thick material used for durability.
- With thumb screw on bar to prevent accidental release.

[Parts Included]
- Countersunk head wood screw (SUS)





[Movement of Latch Bolt]

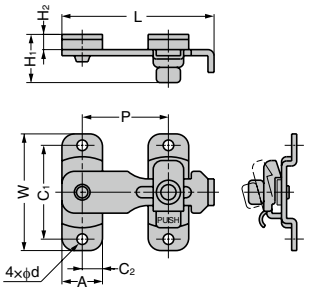


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Latch Bolt		
③	Counter Plate		
④	O-ring	Nitrile Rubber (NBR)	Black

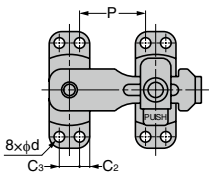
RoHS	CAD	Item Code	Item Name	L	P1	P2	A	B	C	D	E	F	G	H1	H2	J	t	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-050-252	BLT-45	45	30	33	40	14	12	3.5	6	2	9	12	16	9	2	31	3.1×20	20	400
G	3D	140-050-253	BLT-60	60	37	45	48	17	15	3.8	7.5	2.5	10	14.5	17.5	10.8		54		20	400
G	3D	140-050-254	BLT-80	80	53	62	65	21	18	4.3	8	3	12	17	22	13	3	95	3.5×20	10	200
G	3D	140-050-255	BLT-100	100	66	79	80	24	21	4.8	9	4	14	19.8	25.5	15		177	3.8×20	10	100
G	3D	140-050-256	BLT-120	120	73	98	90	28	24	5.1	10		16	22	27.5	18.5	4	243	4.5×20	8	80

BAR LATCH BLL

NSF AS L=R SUS



BLL-45, 60, 80, 100

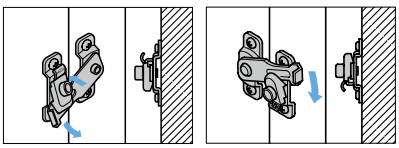


BLL-120, 150

- Latch bolt snaps into the strike to prevent accidental release.
- Push tab on strike to release.
- When installed reversely, latch bolt is easily released just by pushing the PUSH part (see “Application Example”).
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Parts Included]
- Pan head tapping screw (SUS)

[Application Example]



Reverse position — Normal position

Can be used in either normal or reverse position.
When installed reversely, latch bolt is easily released just with a single push.

Material	Finish
Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	L	W	A	C1	C2	C3	H1	H2	P	d	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-059-073	BLL-45	48	40	13	32	6.5	–	17	4.5	23±3	3.2	28	3×10	20	400
G	3D	140-059-074	BLL-60	63	46	16	37	8		20	6	34±4	4.2	50	3.5×16	20	400
G	3D	140-059-075	BLL-80	85	65	20	53	10		22.5	7	47±7	5	100	4.5×16	10	200
G	3D	140-059-076	BLL-100	105	80	25	66	12.5		26.5	8	59±7	5.5	182	5×20	10	100
G	3D	140-059-183	BLL-120	127	100	28.5	80	6.75	15	28		56±10	5.2	270		8	80
G	3D	140-059-184	BLL-150	155	120	30.5	95	7.25	16			74±14		350		6	60

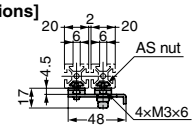
AS Parts Set for Installing to Aluminium Frame

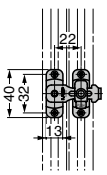
Please refer to the series introduction page 1 for details about AS series.

[AS Parts Set] Parts set of screws and AS nuts used for installing to aluminium frame

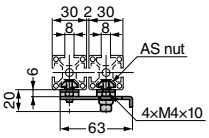
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-521	AS-BLL-60-30-6	30×30 Groove Width 6 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-6M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	61
G	–	140-041-522	AS-BLL-60-30-8	30×30 Groove Width 8 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-8M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	85
G	–	140-041-523	AS-BLL-60-40-8-30-6	Frame: 40×40 Groove Width 8 mm Door: 30×30 Groove Width 6 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs AS Nut AS-6M4 : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs	66
G	–	140-041-524	AS-BLL-60-40-10-30-8	Frame: 40×40 Groove Width 10 mm Door: 30×30 Groove Width 8 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-10M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs AS Nut AS-8M4 : 2 pcs M4×14 Hexagon Socket Button Head Screw : 2 pcs	76
G	–	140-041-525	AS-BLL-80-40-8	40×40 Groove Width 8 mm	Bar Latch BLL-80 : 1 pc AS Nut AS-8M4 : 4 pcs M4×12 Hexagon Socket Button Head Screw : 4 pcs	119
G	–	140-041-526	AS-BLL-80-40-10	40×40 Groove Width 10 mm	Bar Latch BLL-80 : 1 pc AS Nut AS-10M5 : 4 pcs M5×14 Hexagon Socket Button Head Screw : 4 pcs	131

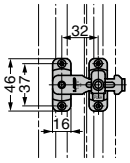
[Dimensions]



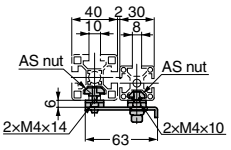


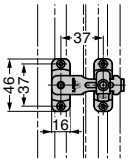
BLL-45



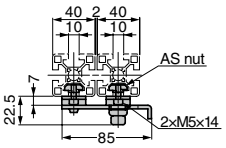


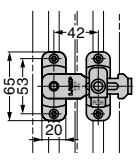
BLL-60





BLL-60





BLL-80

Refer to 1 : P.20, 2 : P.526

BAR LATCH BLL2 For 2-way Mounting

SUS

BLL2-80
Closed

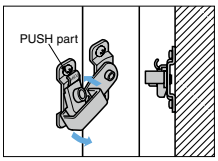
BLL2-80
Open

- Parallel surface mounting and orthogonal mounting are possible.
- Spring force holds the latch down, preventing it from slipping open due to vibration, etc.
- Push the PUSH part to release the latch.
- When installed in reverse, just push the PUSH part once to release the latch (see the Application Example).

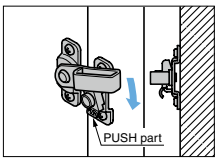
[Parts Included]

- Pan head tapping screw (stainless steel)

[Application Example]

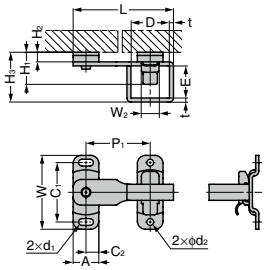


Reverse position

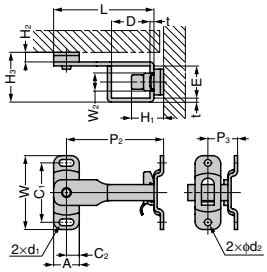


Normal position

Can be used in either normal or reverse position.
When installed reversely, latch bolt is easily released with a single push.



Parallel Surface Mounting



Orthogonal Mounting

Material	Finish
Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	L	W	A	P_1	P_2	P_3	C_1	C_2	H_1	H_2	H_3	D	E	t	W_2	d_1	d_2	Screw
G	3D	140-049-994	BLL2-45	47	40	13	26.5	45	16.5	32	6.5	17	4.5	28.5	24	20	2	10	3.2×7.2	3.2	3×10
G	3D	140-049-995	BLL2-60	62.5	46	16	40	60.5	18.5	37	8	20	6	31			2.5	12	4.2×9.2	4.2	3.5×16
G	3D	140-049-996	BLL2-80	83	65	19	58.5	80.5	20	53	9.5	22.5	7	33			3	14	5×11	5	4.5×16
G	3D	140-049-997	BLL2-100	104	80	23	75.5	100.5	23	66	11.5	26.5	8	38	26	22	4	17	5.5×11.5	5.5	5×20

STAINLESS STEEL HASP HP

NSF L=R SUS

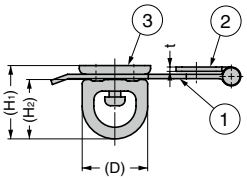
- Rotating pad eye stays fastened tight by four projections without a padlock.
- Installation position can be determined according to the holes on the surface.
- Can be used with padlock 1.
  Please check with actual item.

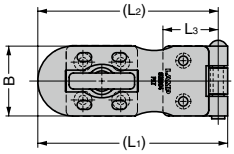
[Parts Included]

- Countersunk head wood screw (SUS)

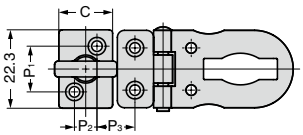
No.	Part Name	Material	Finish
①	Latch Bolt	Stainless Steel (SUS304)	Polished
②	Mounting Plate		
③	Counter Plate		

HP-65

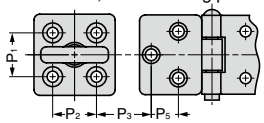




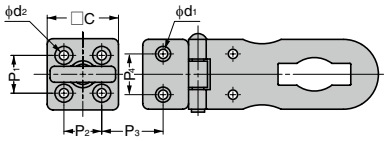
HP-40, 50 When opened



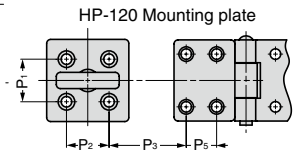
HP-75, 100 Mounting plate



When opened



HP-120 Mounting plate

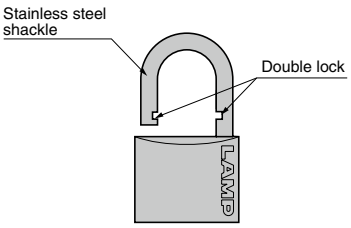


RoHS	CAD	Item Code	Item Name	L1	L2	L3	B	P1	P2	P3	P4	P5	H1	H2	C	D	t	d1	d2	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-050-224	HP-40	40	37	13	22	13	6.4	10.8	12	–	22	17.9	15.3	17.7	1.2	2×ϕ3	2×ϕ3	21.5	2.4×13	30	300
G	3D	140-050-225	HP-50	50	47		22.3		9	16					18.3					24		25	250
G	3D	140-050-226	HP-65	65	62	19	24		13	21.5	14		24.5	20.4	24.5	22.5	1.5	2×ϕ3.2	4×ϕ3.2	41.5	2.7×16	20	200
G	3D	140-050-227	HP-75	75	72	24.8	27	15	15	15.7	16	9.5	27.4	22	27.8	23.2		3×ϕ3.8	4×ϕ3.8	51.5		15	150
G	3D	140-050-228	HP-100	100	95	30	35.5	19	19	29	21	10	32.2	27.9	35.5	31	2	3×ϕ4	4×ϕ4.5	118.5	3.5×20	10	100
G	3D	140-050-229	HP-120	120	115	35.5	40	21	21	38	26	15	34.8		40.5		2.5	4×ϕ5.2	4×ϕ5.2	172		8	80

Refer to 1 : P.873

HIGH SECURITY PADLOCK PWL DIGEST

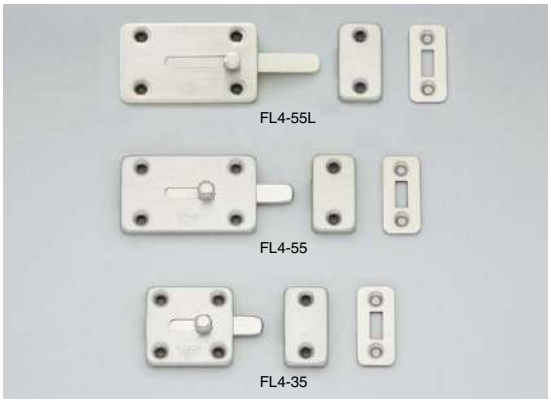
- Provides high security with stainless steel shackle and double lock. Besides, no key number marked in the body prevents illegal use.
- 110 key changes and Master Key system are available.
  Refer to LOCKS 1 for details.



Refer to 1 : P.873

SLIDE BOLT FL4

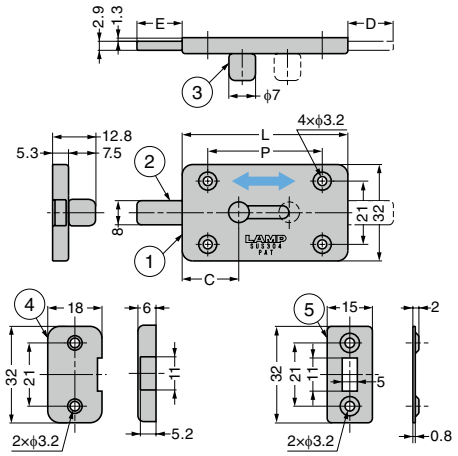
L=R SUS



- Slide the latch knob to lock/release.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

[Parts Included]

- Countersunk head tapping screw 2.7×16 (SUS)

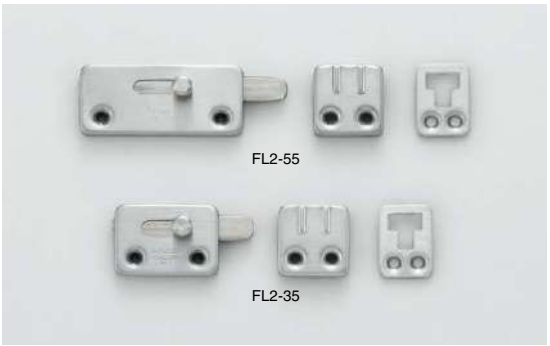


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		Barrel Polished
③	Knob	Stainless Steel (SUS303)	Satin
④	Counter Plate A	Stainless Steel (SUS304)	
⑤	Counter Plate B		

RoHS	CAD	Item Code	Item Name	L	P	C	D	E	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-863	FL4-35	35	23	11.5	12	12	32	30	300
G	3D	140-180-864	FL4-55	55	38	20	15	15	47	30	300
G	3D	140-012-131	FL4-55L				25			30	300

SLIDE BOLT FL2

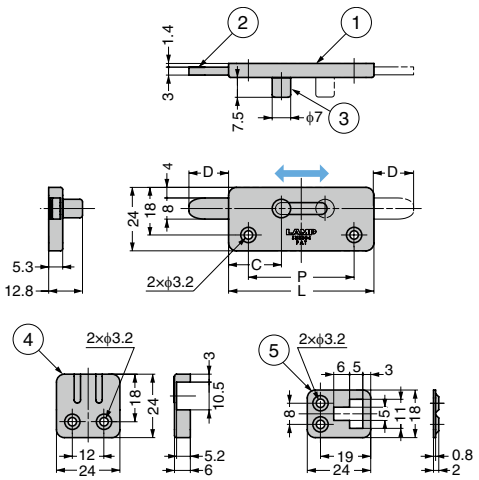
L=R SUS



- Slide the latch knob to lock/release.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

[Parts Included]

- Countersunk head tapping screw 2.7×16 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		Barrel Polished
③	Knob	Stainless Steel (SUS303)	Satin
④	Counter Plate A	Stainless Steel (SUS304)	
⑤	Counter Plate B	Stainless Steel	

RoHS	CAD	Item Code	Item Name	L	P	C	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-136	FL2-35	35	21	11.5	12	28	30	300
G	3D	140-180-137	FL2-55	55	40	20	15	39	30	300

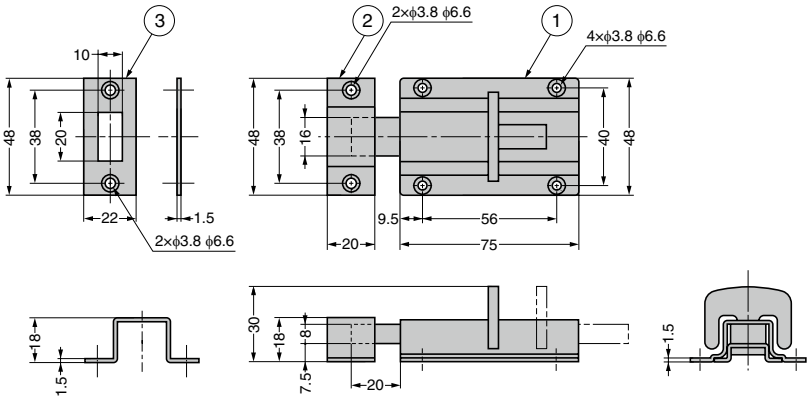
SLIDE BOLT KR75

SUS

●Two different counter plates included for different mountings.

[Parts Included]

●Countersunk head wood screw 3.1×20 (SUS304)

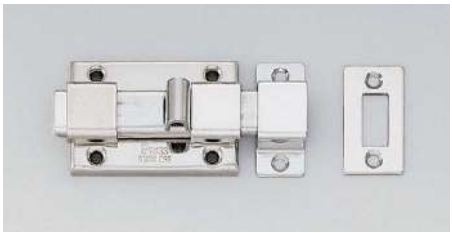


No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Counter Plate A		
③	Counter Plate B		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-059-042	KR75	225	10	100

SLIDE BOLT KR65

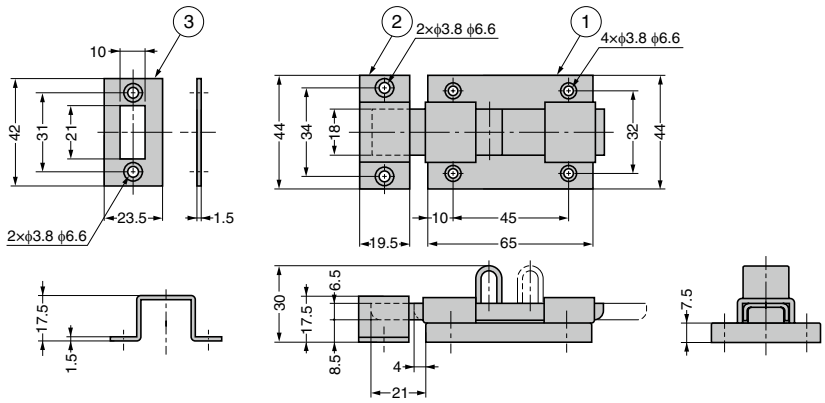
SUS



●Two different counter plates included for different mountings.

[Parts Included]

●Countersunk head wood screw 3.1×20 (SUS304)



No.	Part Name	Material	Finish
①	Body	Stainless Steel	Barrel Polished
②	Counter Plate A		
③	Counter Plate B		

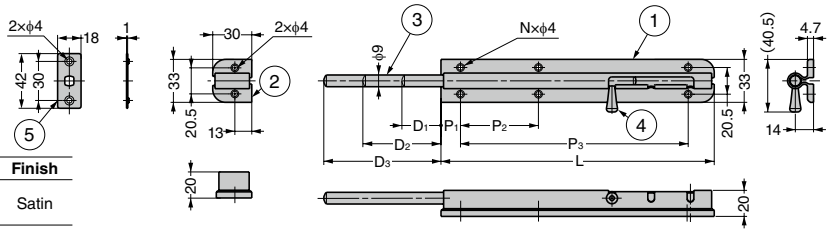
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-054-050	KR65	125	10	100

SPRING LOADED BARREL BOLT BSS2, BSS3 With Position Fixing Function

L=R SUS

- Extra sleeve for locking offers flexibility in application.
- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

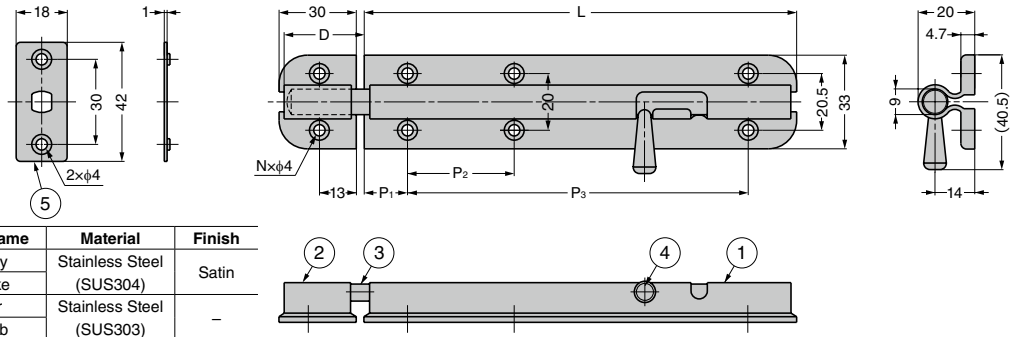
RoHS	CAD	Item Code	Item Name	L	P1	P2	P3	D1	D2	D3	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-042	BSS2-90	90	13	–	60	21	42	–	4	140	15	150
G	3D	140-050-041	BSS2-150	150	15		115	30	60			212	10	100
G	3D	140-050-043	BSS3-240	240		60	205			90	6	320	6	60

SPRING LOADED BARREL BOLT BSS With Position Fixing Function

NSF L=R SUS

- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

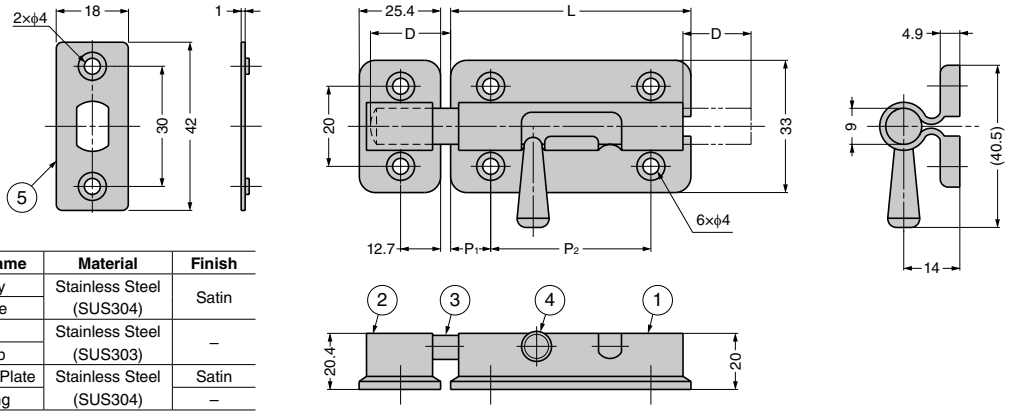
RoHS	CAD	Item Code	Item Name	L	P1	P2	P3	D	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-052-002	BSS-90	90	13	–	60	24	6	142	15	150
G	3D	140-052-003	BSS-150	150	15		115	32		215	10	100
G	3D	140-052-004	BSS-240	240		60	205		8	330	6	60

SPRING LOADED BARREL BOLT BLS With Position Fixing Function

NSF L=R SUS

- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)

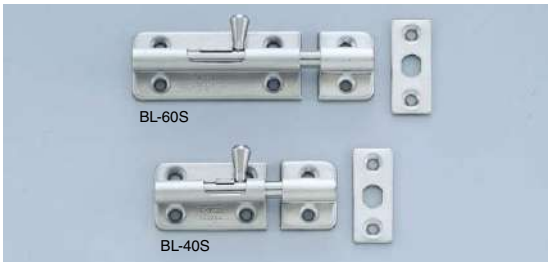


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

RoHS	CAD	Item Code	Item Name	L	P1	P2	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-052-000	BLS-60	60	10	40	17	109	20	200
G	3D	140-052-001	BLS-90	90	12.5	65	24	147	15	150

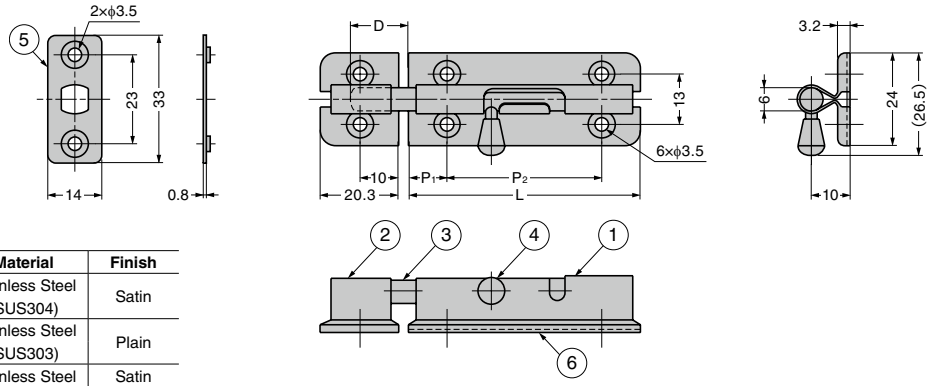
SPRING LOADED BARREL BOLT BL-S With Position Fixing Function

L=R SUS



- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	Plain
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
⑥	Plate		Polished

RoHS	CAD	Item Code	Item Name	L	P1	P2	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-245	BL-40S	40	7.5	25	11	36	30	450
G	3D	140-050-246	BL-60S	60	10	40	15	50	30	450

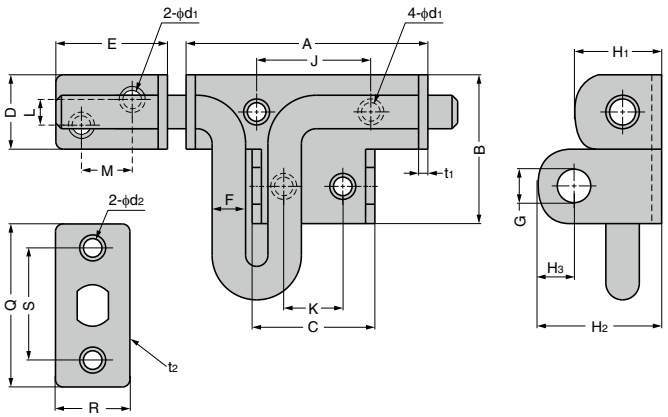
GATE LATCH SSG

Made to Order SUS

- Gate latch with holes for pad lock. (Pad lock not included.)
- Lift and drop design keeps handle out of the way when not in use.

Remarks

- MOQ upon reques



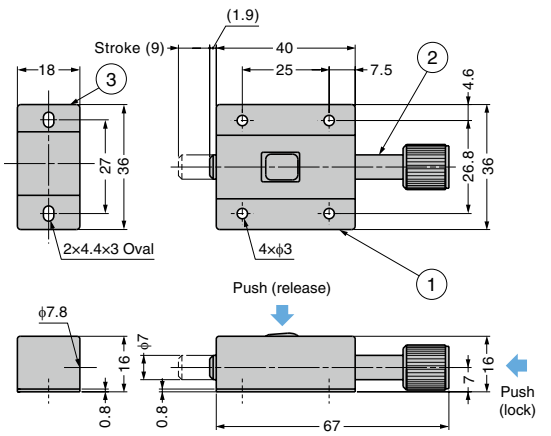
Material	Finish
Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	H1	H2	H3	J	K	L	M	Q	R	S	d1	d2	t1	t2	Weight (g)	Box (pcs)	Carton (pcs)
GT	–	140-059-177	SSG-45	45	28	26	14	21	6	7	16	20.5	7.5	22	11	2	8	32	15	22	4.8	4.8	2.0	1.2	65	20	240
GT	–	140-059-178	SSG-65	65	40	33	20	29	9	10	21.5	29	10	30	14	4	14	40	18	28	5.9	5.9	2.5	1.5	175	10	100
GT	–	140-179-391	SSG-85	85	46	42	26	34	12	10	28	35.5	11	38	21	8	17	48	22	35	6	5.2	3.0	1.5	400	5	60

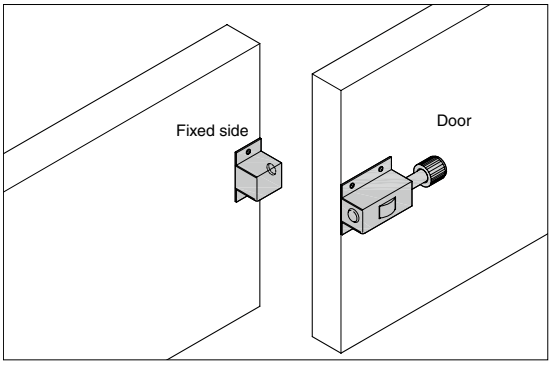
PUSH BARREL BOLT PRS-40

SUS

- Simply push black knob to latch and push front button to release.



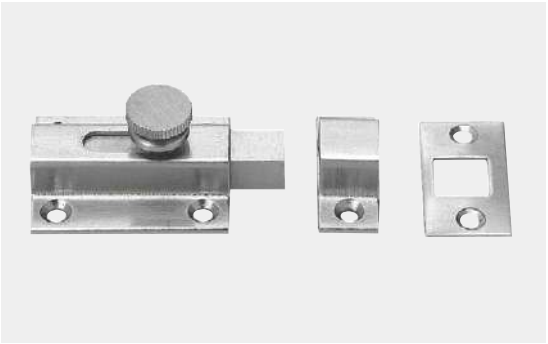
[Installation]



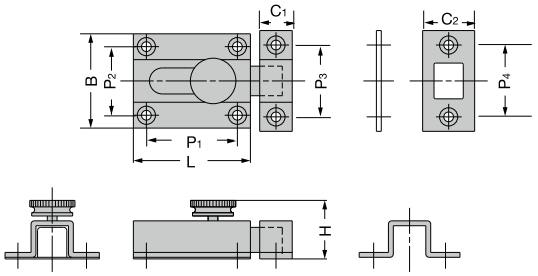
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		
③	Strike		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-049-402	PRS-40	55	–	1

SLIDE BOLT B-KR



- Knurled knob provides easy grip.
- 2 counterplates included for different mountings.

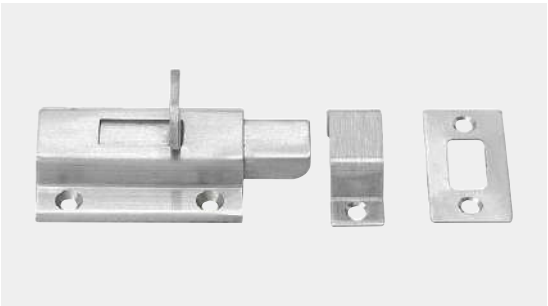


Material	Finish
Brass	Satin Nickel

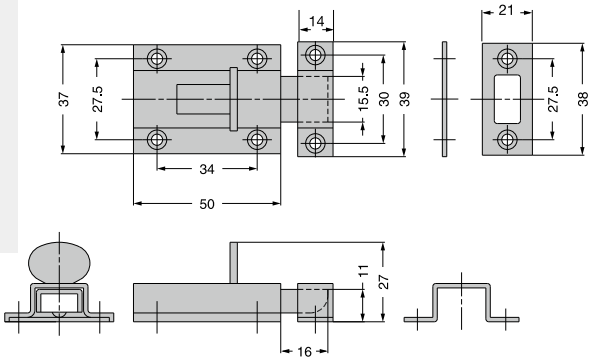
RoHS	CAD	Item Code	Item Name	L	B	H	C_1	C_2	P_1	P_2	P_3	P_4	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-054-048	B-KR-35	36	29	18	11	16	26.5	19	20	21	60	20	200
–	–	140-059-040	B-KR-45	45	30	18.5	12.5	17	33	20	22.5	21.5	80	10	200

SLIDE BOLT KR-50

NSF SUS



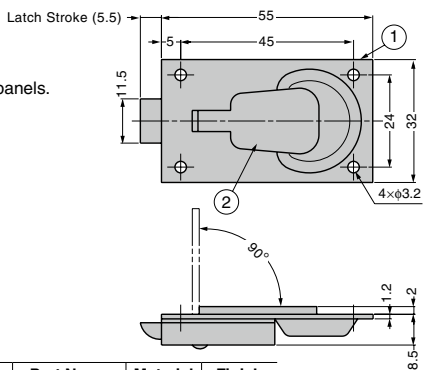
- Tab style knob provides an easy grip.
- 2 counterplates included for different mountings.



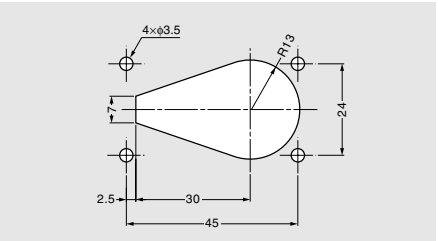
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-913-942	KR-50	Stainless Steel (SUS304)	Satin	80	20	200

FLUSH SLAM LATCH P10-55H

- Flush slam latch ideal for cover panels and small applications.
- Panel is latched when tab is flush, and released by pulling up the tab.
- Tab will stay in both flush and extended position.
- Ideal for multiple latch panels.



[Bore Dimensions]



RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	–	140-049-306	P10-55H	40	–	–

No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Lever		

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

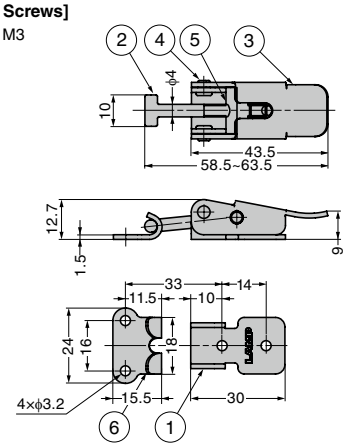
STAINLESS STEEL DRAW LATCH SCC-TF30 Clamping Margin Adjustable

LOAD CAPACITY 500 N | TEST METHOD 7 | SUS

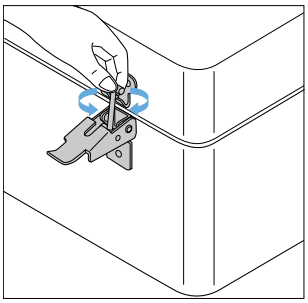
- Screw type arm allows for easy clamping margin adjustment after installation.

[Recommended Screws]

- Pan head screw M3



[Adjustment]



No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Arm	Stainless Steel	–
③	Lever	Stainless Steel (SUS304)	Barrel Polished
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Adjustment Shaft		
⑥	Counter plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-028-716	SCC-TF30	500	51	32	100	400

CLEAN ROOM DRAW LATCH STF-CV150 Clamping Margin Adjustable

LOAD CAPACITY 3300 N | SUS316

- Ideal for clean room, semiconductor, and food industry applications.
- No metal-to-metal contact.
- Clamping margin is adjustable.

[Remarks]

- The load capacities in the table below are values when used with a hook sold separately.

[Sold Separately]

- Heavy Duty Counterplate TF40C 1

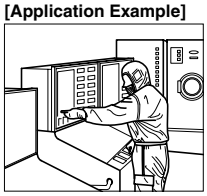
[Recommended Screws]

- Countersunk head screw M5

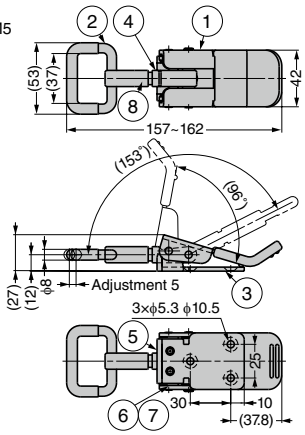
No.	Part Name	Material	Finish / Colour
①	Handle	Stainless Steel (SUS316)/ Cellulose Acetate (CA)	Barrel Polished/White
			Polished/White
②	Hook	Stainless Steel (SCS14)	Barrel Polished/PA Coating
			Polished/PA Coating
③	Base	Stainless Steel (SUS316)	Barrel Polished/Polished
④	Hook Screw	Stainless Steel (SCS14)	
⑤	Bumper	POM	Natural
⑥	Bush		
⑦	Washer		
⑧	O-ring	CR	Black

※SCS14 is equivalent to SUS316.

[Application Example]



Clean room equipment, etc.



[Strike Hook] Sold Separately

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-142	TF40C-ST	Barrel Polished	48	5	20
G	3D	120-014-143	TF40C-STM	Polished		5	50

[Body]

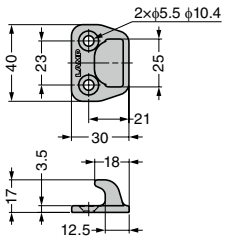
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-481	STF-CV150	Stainless Steel (SUS316)	Barrel Polished	3300	330	248	5	40
G	3D	120-014-141	STF-CV150M		Polished				5	40

Refer to 1 : P.500

STAINLESS STEEL COUNTERPLATE TF40C

SUS316

TF40C-ST



- For STF-CV150 [1].
- Strong structure thanks to lost wax casting.

[Recommended Screws]
- Countersunk head screw M5

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-142	TF40C-ST	Stainless Steel (SCS14)	Barrel Polished	48	5	20
G	3D	120-014-143	TF40C-STM		Polished		5	50

Refer to [1] : P.499

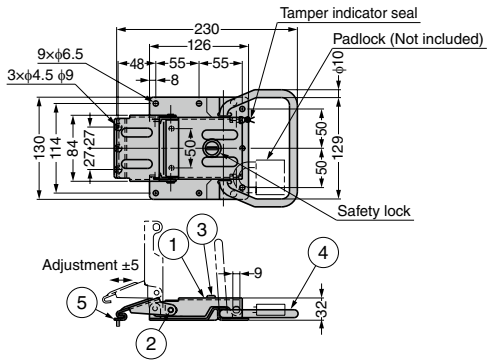
※SCS14 is equivalent to SUS316.

DRAW LATCH (W/ HANDLE) THF-100 Clamping Margin Adjustable

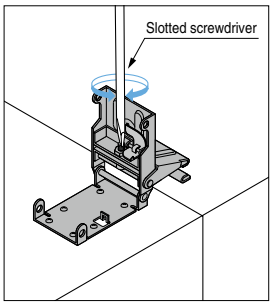
LOAD CAPACITY 980 N

TEST METHOD 7

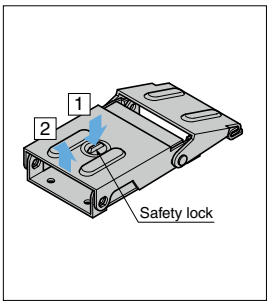
- With safety lock to prevent accidental release.
- Clamping margin is adjustable.
- Clamping adjustment: ±5mm
- Can be used with padlock [1].
- Handle compliant with SEMI standard.



[Adjustment]



[Safety Lock]



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Shaft	Stainless Steel (SUS304)	–
③	Safety Lever		
④	Handle	Steel (SWRCH)	Coloured Zinc Chromate (Trivalent)
⑤	Strike	Steel (SPCC)	

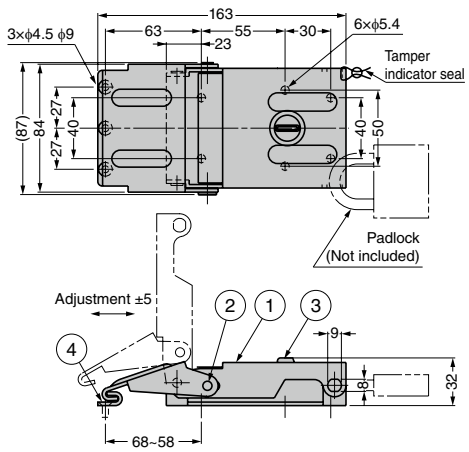
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-506	THF-100	980	100	1064	10	–

Refer to [1] : P.873 ※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

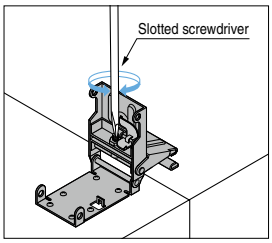
DRAW LATCH THF-75 Clamping Margin Adjustable

LOAD CAPACITY 730 N | TEST METHOD 7

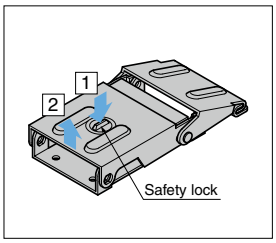
- With safety lock to prevent accidental release.
- Clamping margin is adjustable.
- Clamping adjustment: ±5mm
- Can be used with padlock 1.



[Adjustment]



[Safety Lock]



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Shaft	Stainless Steel (SUS304)	–
③	Safety Lever		
④	Strike	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-505	THF-75	730	75	657	20	–

Refer to 1 : P.873 ※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL DRAW LATCH (W/ SAFETY LOCK) STF100

LOAD CAPACITY 784 N | NSF | TEST METHOD 7 | INSTRUCTION | SUS

- With safety lock to prevent accidental release.
- Spring loaded latch provides constant holding tension for secure latching.

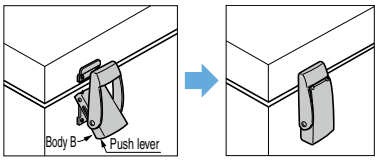
[Remarks]

- The installation pitch between mounting plate ⑥ of body B and strike ⑦ shall be $32^{+0.5}_{0}$. Other installation pitch than that specified may interfere with locking operation. Confirm the actual item before use.
- Clamping force varies at standard installation. Please check with actual item.

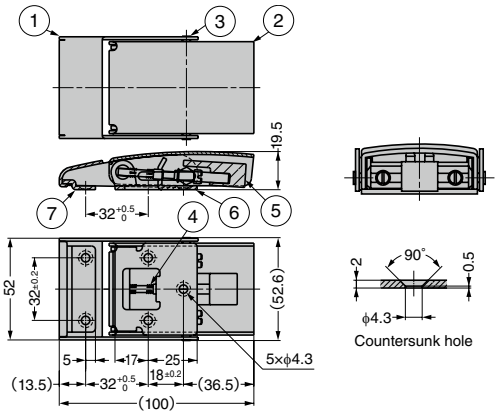
[Recommended Screws]

- M4 countersunk head screw

[How to Operate]



1. Releasing: push the lever while lifting the body B.
2. Locking: Just push down the body B to lock by the latch mechanism.



No.	Part Name	Material	Finish/Colour
①	Body A	Stainless Steel (SUS304)	Satin
②	Body B		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring	Stainless Steel (SUS304)	
⑤	Push Lever	Nitrile Rubber (NBR)	Black
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Strike		Satin

RoHS	CAD	Item Code	Item Name	Clamping Force N	Clamping Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-044-024	STF100	137.2	14	784	80	190	6	120

STAINLESS STEEL DRAW LATCH (W/ SAFETY LOCK) STF82L

LOAD CAPACITY 784 N | TEST METHOD 7 | INSTRUCTION | SUS

- With safety lock to prevent accidental release.

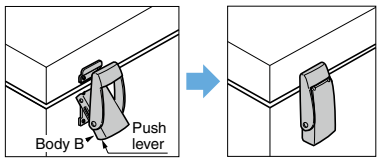
[Remarks]

- Gap occurs between mounting plate and strike in the installation determined by the specified dimensions. To eliminate the gap, please provide Cushion material as shown in Fig.1 between mounting plate ⑥ side and strike ⑦ side of the cabinet.

[Recommended Screws]

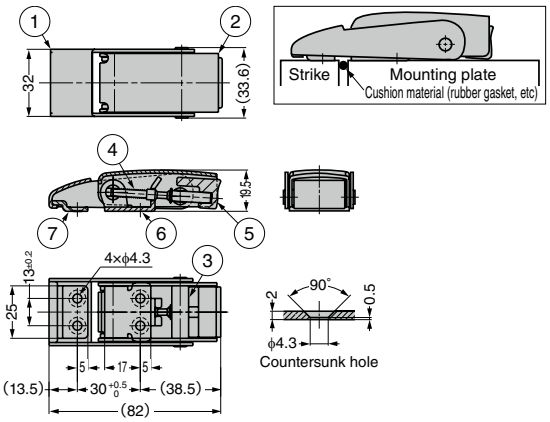
- M4 countersunk head screw

[How to Operate]



1. Releasing: push the lever while lifting the body B.
2. Locking: Just push down the body B to lock by the latch mechanism.

[Installation on Cabinet] Fig.1



No.	Part Name	Material	Finish / Colour
①	Body A	Stainless Steel (SUS304)	Satin finish
②	Body B		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring	Stainless Steel (SUS304)	
⑤	Push lever	Nitrile Rubber (NBR)	Black
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Strike		Satin finish

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-913-101	STF82L	784	80	111	12	180

STAINLESS STEEL DRAW LATCH (SPRING LOADED) STF80

LOAD CAPACITY 784 N | TEST METHOD 7 | TEST METHOD 8 | INSTRUCTION | SUS

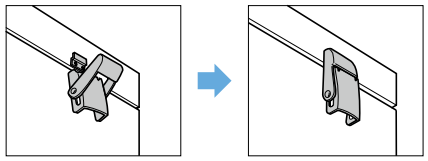
- Spring loaded latch provides constant holding tension for secure latching.

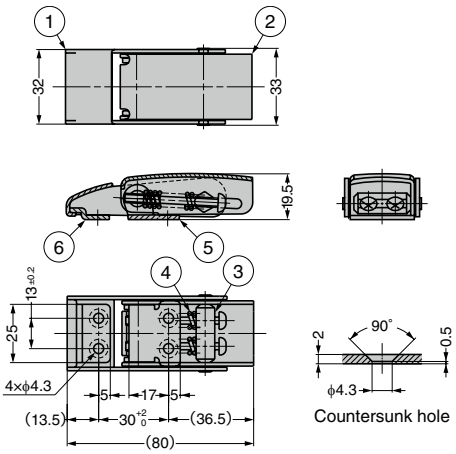
[Remarks]

- Clamping force varies at standard installation. Please check with actual item.

[Recommended Screws]

- M4 countersunk head screw



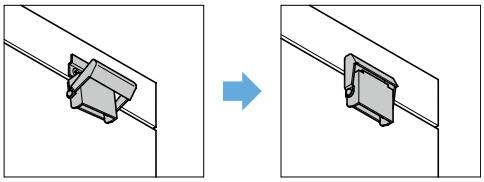


No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Satin finish
②	Body B		
③	Shaft		–
④	Spring		
⑤	Mounting Plate		Barrel Polished
⑥	Strike		Satin finish

RoHS	CAD	Item Code	Item Name	Clamping Force N	Clamping Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-914-490	STF80	58.8	6	784	80	110	12	180

STAINLESS STEEL DRAW LATCH STF40

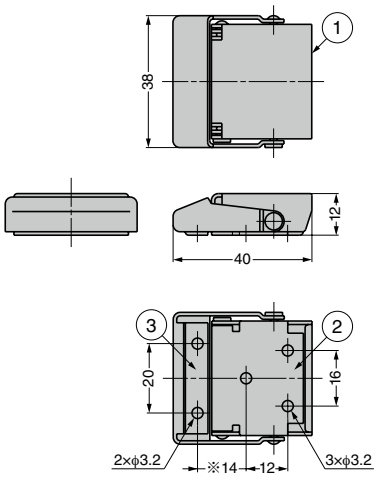
LOAD CAPACITY 300 N | TEST METHOD 8 | SUS



- Ideal for industrial equipment, vehicle equipment and leisure equipment, etc.

[Recommended Screws]

- M3 pan head screw



※In case that overlap allowance is 0 mm.

[Clamping Force by Overlap Allowance]

Overlap Allowance mm	Clamping Force N	Clamping Force kgf
1	49	5

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Mounting Plate		
③	Strike		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-025	STF40	300	30.6	30	30	300

DRAW LATCH 934 Clamping Margin Adjustable

LOAD CAPACITY 1000, 1500 N | TEST METHOD 7 | SUS316

- Clean appearance.
- Concealed mounting screws prevent mischief.
- Can be used with padlock 1.
- Clamping margin is adjustable.
- Black version is now available.

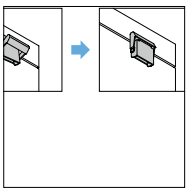
[Applications]

- Ships, etc.

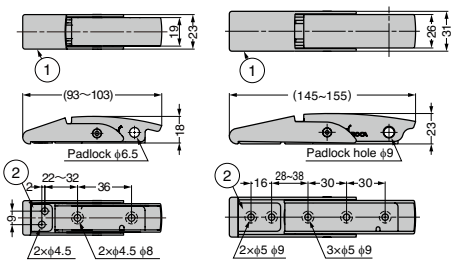
[Recommended Screws]

- 934151, 934152: M4 countersunk head screw (for body), M4 truss head screw (for strike)
- 934161, 934162 : M5 countersunk head screw

[Adjustment]



[Application Example]



934151, 934152 | 934161, 934162

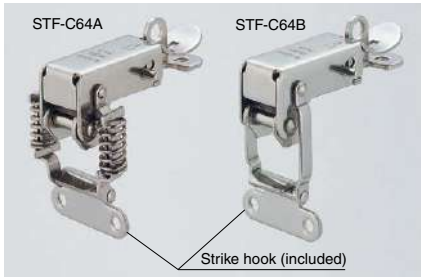
No.	Part Name	Material	Finish
①	Body	Stainless Steel	Polished, Satin
②	Strike	(SUS316)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-025-088	934151	Polished	1000	102	83	200	–
G	3D	120-025-089	934152	Satin				200	–
–	3D	120-058-118	934471	Black				200	–
G	3D	120-025-090	934161	Polished	1500	153	208	50	–
G	3D	120-025-091	934162	Satin				50	–

Refer to 1 : P.873

CORNER FASTENER (W/ LOCK) STF-C64A/STF-C64B With/Without Spring

LOAD CAPACITY 330 N SUS



- Designed to allow front operation.
- Can be used with corner fastener hinge STH-C64 1.
- With safety lock to prevent accidental release.
- Can be used with padlock 2.
- Available with or without spring.
- Strike hooks are also sold separately.

[Applications]
- Doors and covers required for dust proof, drip proof and vibration prevention, measuring equipment, communication equipment, machine tools, etc.

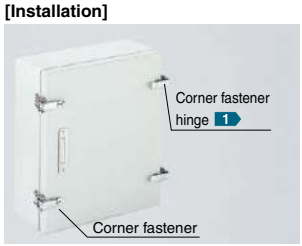
[Remarks]
- The clamping margin of STF-C64A shall not exceed 4mm.

[Parts Included]
- Strike hook

[Sold Separately]
- Sealing pin 502-7SS, 502-9SS, 613-9SS
- Strike hook 02-613SS, 07-613SS

Corner fastener hinge 1 also available.

[Installation]

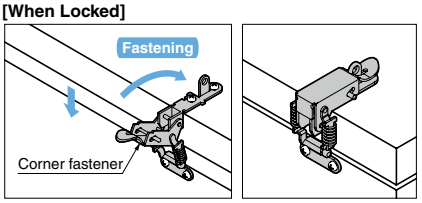


When locked

Pull lever and lift latch to open.

When opened

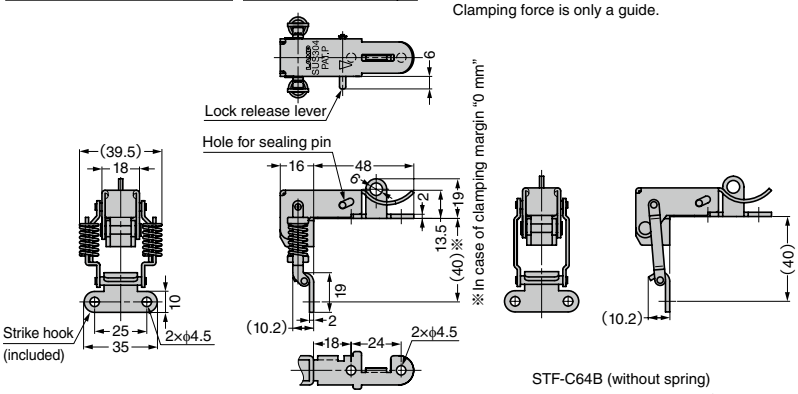
[When Locked]



[STF-C64A Clamping Force]

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	15	1.5
2	30	3.1
3	45	4.6
4	60	6.1

Clamping force is only a guide.



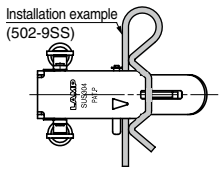
[Body]

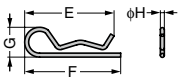
RoHS	CAD	Item Code	Item Name	Type	Door Thickness	Load Capacity N	Load Capacity kgf	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-042-200	STF-C64A	With Spring	14~28	330	34	Stainless Steel (SUS304)	Barrel	66.5	15	210
G	3D	120-042-201	STF-C64B	Without Spring					Polished	60	15	210

[Sealing Pin] Sold Separately

Material	Finish
Stainless Steel (SUS304)	Plain

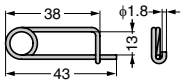
Used for preventing malfunction of lock release lever.





RoHS	CAD	Item Code	Item Name	E	F	G	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-823	502-9SS	63	66	18	2.6	–	1	–
G	3D	120-041-825	613-9SS	55	59	15	2.3	4	1	–

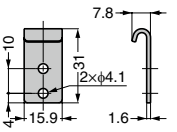
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-822	502-7SS	3	1	–



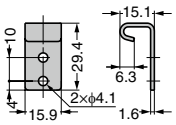
[Strike Hook] Sold Separately

Material	Finish
Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-421	02-613SS	7	1	–



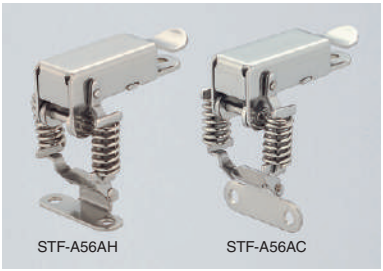
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-452	07-613SS	10	1	–



Refer to 1 : P.284, 2 : P.873

CORNER FASTENER STF-A56AH/STF-A56AC Parallel Mount Type / Perpendicular Mount Type

SUS



- Designed to allow front operation.

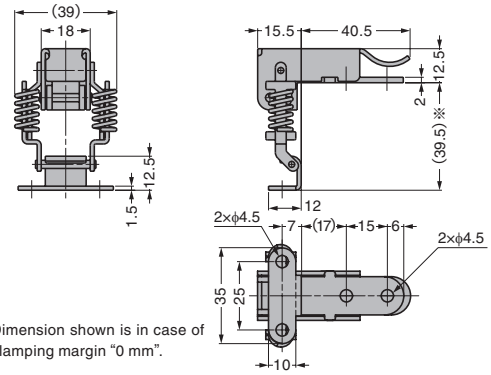
[Applications]

- Doors and covers required for dust proof and drip proof, etc.
- Doors and covers required for fastening, etc.
- Measuring equipment, communication equipment, machine tools, etc.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	60	6.1
2	86	8.8
3	112	11.4
4	138	14.1

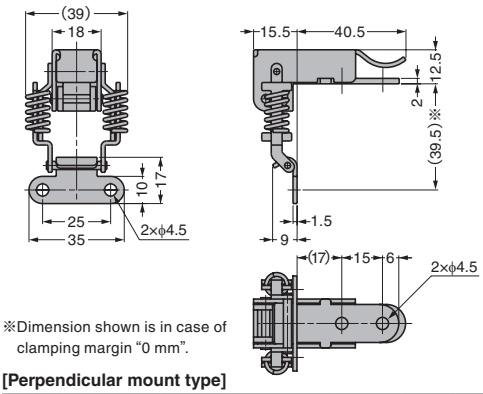
*Clamping Force is only a guide.

STF-A56AH (Parallel mount type)



※Dimension shown is in case of clamping margin "0 mm".

STF-A56AC (Perpendicular mount type)



※Dimension shown is in case of clamping margin "0 mm".

[Parallel mount type]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-480	STF-A56AH	Stainless Steel (SUS304)	Barrel Polished	56	–	–

[Perpendicular mount type]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-479	STF-A56AC	Stainless Steel (SUS304)	Barrel Polished	55	100	–

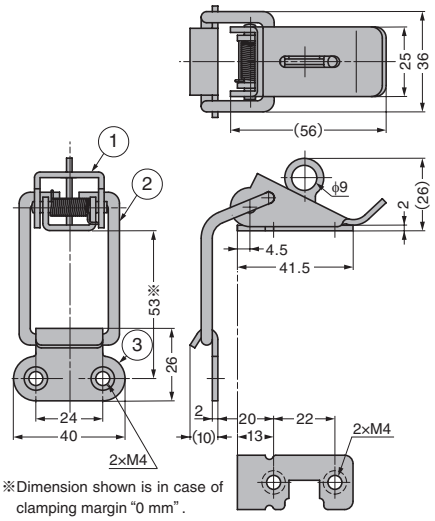
CORNER FASTENER PS34A

SUS

- Designed to allow front operation.
- Can be used with padlock 1.

[Applications]

- Doors and covers required for dust proof and drip proof, etc.
- Doors and covers required for fastening, etc.
- Measuring equipment, communication equipment, machine tools, etc.



※Dimension shown is in case of clamping margin "0 mm".

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Hook		
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Tension Force※N	Tension Force※kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-193	PS34A	147	15	88	1	–

Refer to 1 : P.873

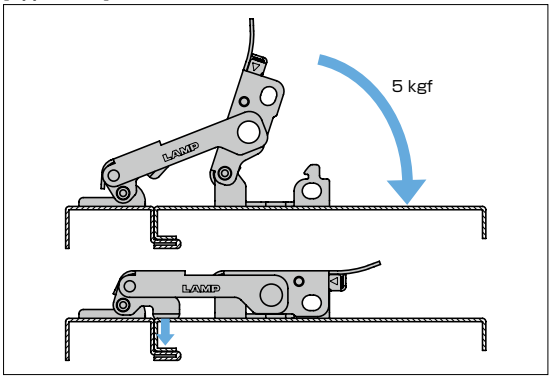
※In case of clamping margin "0.5mm"

STAINLESS STEEL COMPRESSION LATCH STF-CP140 Compressing Force Adjustable

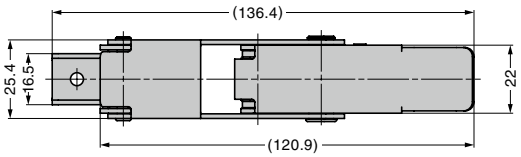
LOAD CAPACITY 600 N SUS

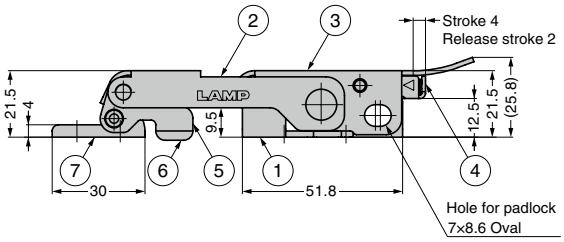
- Compression arm with rubber allows to fasten the door tightly.
- Compressing force is adjustable.
- With safety lock to prevent accidental release.
- Push safety button to release the lock.
- Can be used with padlock 1 or sealing tool series.

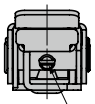
[Application]



Compressing force works in the direction (⬇ in the figure) vertical to the mounting surface .

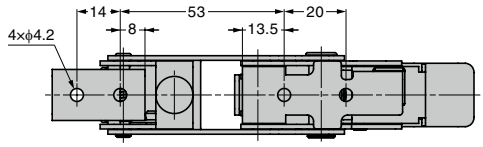




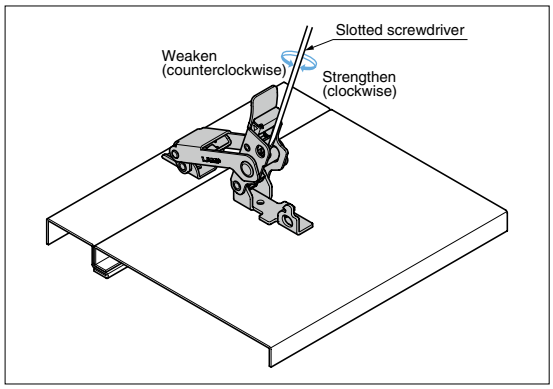


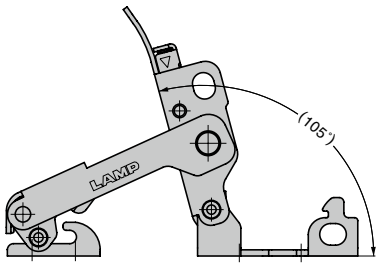
Adjustment slit

Compressing force adjustable by adjusting the ※ marked value ±2mm



[How to Adjust Compressing Force]





Fully opened

No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Lever		
④	Safety Button		
⑤	Compression Arm		
⑥	Rubber	EPDM	Black
⑦	Counter Plate	Stainless Steel (SUS304)	Barrel Polished

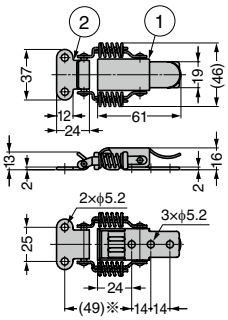
RoHS	CAD	Item Code	Item Name	Compressing Force N	Compressing Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	120-025-504	STF-CP140	245	25	600	61	130	10	80

Refer to 1 : P.873

※In case of the lever operation force in 5kgf.

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-60

LOAD CAPACITY 600 N SUS



※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	80	8.2
2	120	12.2
3	160	16.3

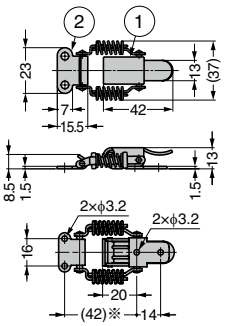
※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-043-981	SCC-60	600	61	75	20	200

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-40

LOAD CAPACITY 250 N SUS



※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	55.5	5.7
2	68	6.9
3	80.5	8.2

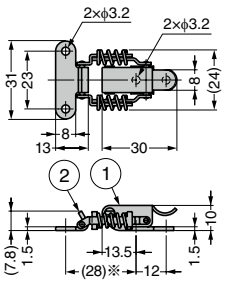
※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-043-980	SCC-40	250	25	36	40	400

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-30

LOAD CAPACITY 200 N SUS



※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	30	3.1
2	45	4.6

※Clamping force is only a guide.

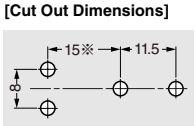
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

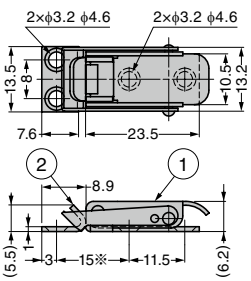
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-693	SCC-30	200	20	14	100	1000

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-25

LOAD CAPACITY 100 N SUS

[Cut Out Dimensions]





※In case of clamping margin "0 mm".

●Concealed spring provides clean appearance.
●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	75	7.6

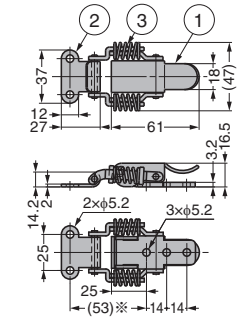
※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-021-949	SCC-25	100	10	6	100	1000

DRAW LATCH (SPRING LOADED) SCCA-60

LOAD CAPACITY 330 N



※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	60	6.1
2	80	8.2
3	100	10.2

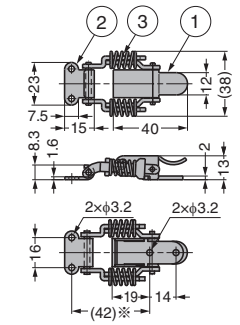
※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		
③	Spring	Steel (SW)	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-303	SCCA-60	330	34	102	100	–

DRAW LATCH (SPRING LOADED) SCCA-40

LOAD CAPACITY 200 N



※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

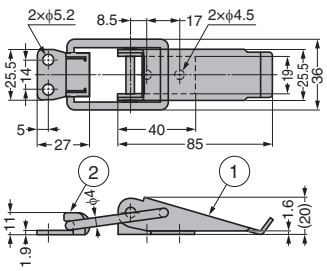
Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	80	8.2
2	97.5	9.9
3	115	11.7

※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		
③	Spring	Steel (SW)	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-179	SCCA-40	200	20	38	200	–

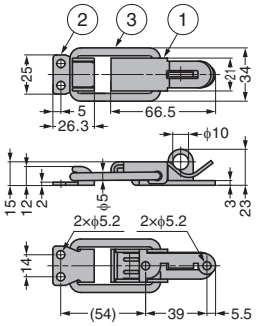
DRAW LATCH P91



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-507	P91	300	31	79	500	–

DRAW LATCH P34



●Can be used with padlock 1.

[Recommended Screws]

●Pan head screw M5

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		
③	Arm	Steel (SWRM)	

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-015	P34	400	41	89	1	–

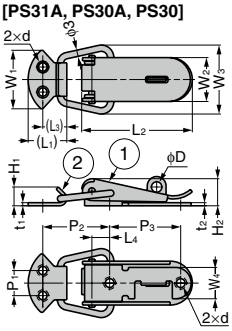
Refer to 1 : P.873

Limited stock available. Please contact with your vender.

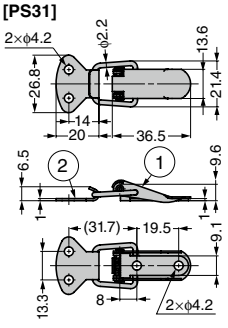
DRAW LATCH PS, P

SUS

[PS31A, PS30A, PS30]



[PS31]



PS30A (with hole for padlock) shown.

- Spring loaded to hold lever in retracted position.
- Available with or without hole for padlock 1.
- Stainless steel and brass material available.

[Applications]

- Control boards, measuring equipment, distribution boards, machine tools, etc.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

[Stainless Steel PS Type]

RoHS	CAD	Item Code	Item Name	Type	L1	L2	L3	L4	W1	W2	W3	W4	H1	H2	t1	t2	P1	P2	P3	D	d	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-476	PS31A	With Hole	16	40	10	8	23	16	26	13	9	10	1.2	1	10	30	23	5	Counterbore for	98	10	27	–	400
G	3D	120-040-475	PS30A	for Padlock	18	53	11.5	8.5	28	21	32	15	10	13	1.5	1.5	12	33	34	5.5	M3	147	15	38	–	200
G	3D	120-049-188	PS31	Without Hole	19	39	11	7	24	16	25.5	13	8	9.5	1.2	1	10	(30)	23	–	φ3.4φ5.2	98	10	18	500	–
G	3D	120-049-671	PS30	for Padlock	18	53	11.5	8.5	28	21	32	15	10	13	1.5	1.5	12	33	34		Counterbore for M3	147	15	40	500	–

* When the current stock of PS30 runs out, L3 will be 10.5, H1 will be 9.5, H2 will be 13.2, P2 will be 31.5.

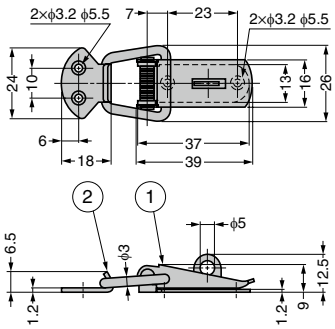
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Counter Plate		

[Brass P Type]

RoHS	CAD	Item Code	Item Name	Type	L1	L2	L3	L4	W1	W2	W3	W4	H1	H2	t1	t2	P1	P2	P3	D	d	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-313	P31A	With Hole	18	39	10.5	7	24	16	26	13	8	9.5	1.2	1	10	(28)	23	5	φ3.4φ5.2	78	8	4	500	–
G	3D	120-049-311	P30A	for Padlock	18.5	52	11.5	8.5	28	22	31.5	15	9	13	1.5	1.5	12	(32)	34	5.2	φ3.2φ6.2	98	10	43	500	–
G	3D	120-049-314	P31	Without Hole	18	39	10.5	7	24	16	26	13	8	9.5	1.2	1	10	(28)	23	–	φ3.4φ5.2	78	8	21	500	–
G	3D	120-049-312	P30	for Padlock	18.5	52	11.5	8.5	28	22	31.5	14.8	9	13	1.5	1.5	12	(32)	34		φ3.2φ6.2	98	10	–	500	–

Refer to 1 : P.873

DRAW LATCH P11



- Spring loaded to hold lever in retracted position.
- Can be used with padlock 1.

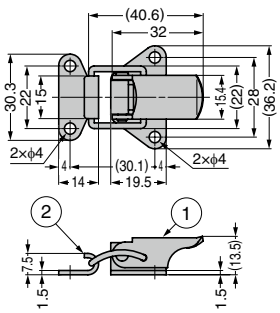
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Nickel
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-004	P11	17.3	200	1000

Refer to 1 : P.873

STAINLESS STEEL DRAW LATCH P100SUS

SUS



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-003	P100SUS	22.5	200	800

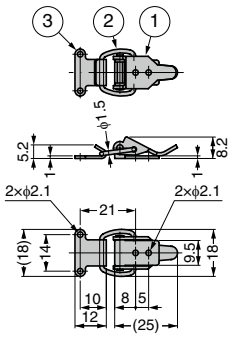
DRAW LATCH P

SUS

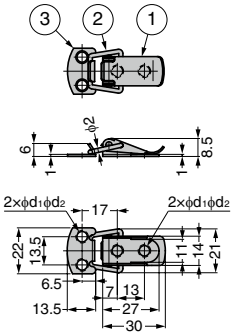
●Spring loaded to hold lever in opened/closed position (PS32, P32).

[Applications]

●Small measuring equipment, control boards, distribution boards, etc.

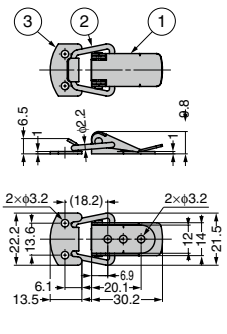


PS33



P32

In case of clamping margin "0mm"



PS32

No.	Part Name	Material			Finish		
		PS33	PS32	P32	PS33	PS32	P32
①	Body	Stainless		Steel (SPCC)	Barrel Polished		Clear Zinc Chromate (Trivalent)
②	Hook	Steel		Steel (SWRH)	–		
③	Counter Plate	(SUS304)		Steel (SPCC)	Barrel Polished		

[Without Lever Holding Function]

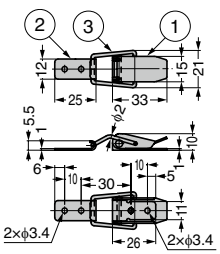
RoHS	CAD	Item Code	Item Name	Material	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-672	PS33	Stainless Steel (SUS304)	49	5	6	200	2000

[With Lever Holding Function When Opened / Closed]

RoHS	CAD	Item Code	Item Name	Material	d_1	d_2	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-059-452	PS32	Stainless Steel (SUS304)	3.2	5.2	78	8	11	500	–
G	3D	120-049-318	P32	Steel	4.8	6.2			12	500	–

STAINLESS STEEL DRAW LATCH PS35

SUS



[Applications]

●Small measuring equipment, lightweight boxes, etc.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		
③	Hook		–

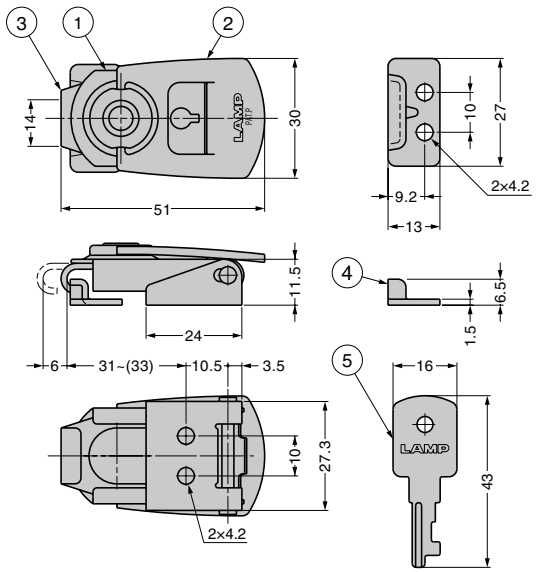
RoHS	CAD	Item Code	Item Name	Material	Finish	Tension Force N※	Tension Force kgf※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-345	PS35	Stainless Steel (SUS304)	Barrel Polished	19	2	15	500	–

※In case of clamping margin "0.5mm"

STAINLESS STEEL DRAW LATCH PN-51 With Spring

LOAD CAPACITY 686 N | TEST METHOD 7 | SUS

[Remarks]
- When locked, check if the lever does not rise.
- Key changes are not available.

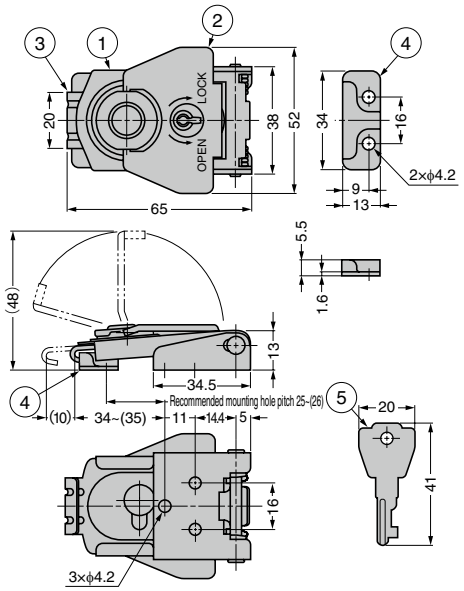


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Plain
②	Lever		
③	Hook		
④	Counter Plate		
⑤	Key	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Key Type	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-040-489	PN-51	Key Alike	686	70	50	40	240

DRAW LATCH P1040 With Spring

[Remarks]
- When locked, check if the lever does not rise.

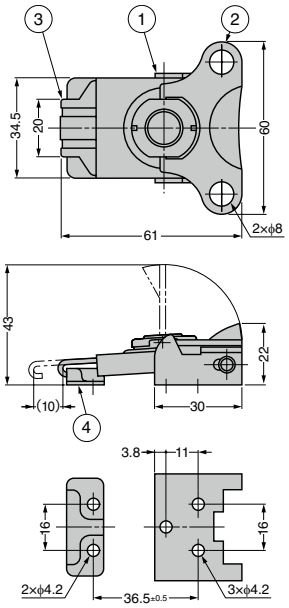


No.	Part Name	Material		Finish
		P1040SCR	P1040SUS	
①	Body	Steel	Stainless Steel (SUS304)	Chrome
②	Lever			
③	Hook	Stainless Steel (SUS430)	Stainless Steel (SUS430)	–
④	Counter Plate (P100H02)	Steel (SPCC)	Stainless Steel (SUS304)	Chrome
⑤	Key		Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-049-240	P1040SCR	Key Alike	105	60	–
GT	3D	120-049-413	P1040SUS		105	60	240

DRAW LATCH P102H With Spring

- Available in steel and stainless steel.
- P102H-SUS (stainless steel) is made to order (Minimum order quantity: 60 pieces).

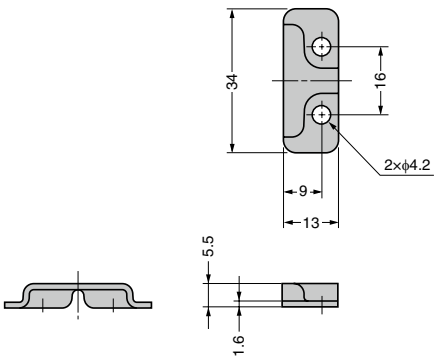


No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Lever		
③	Hook	Stainless Steel (SUS430)	–
④	Counter Plate (P100H02)	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-233	P102HSCR	85	60	240
G	3D	120-049-234	P102HSUS		60	600

COUNTER PLATE P100H02

- Counter plate for draw latches P1040 1 and P102H 2 draw latch.



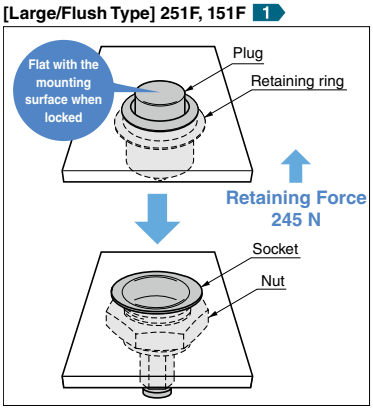
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-231	P100H02	Steel (SPCC)	Chrome	6	1	–

Refer to 1 : P.511, 2 : P.512

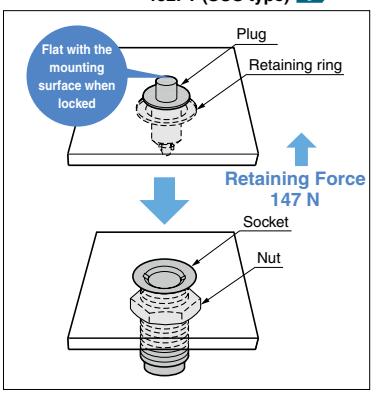
Introduction of Push Lock Fastener Series

- Ideal connector for easy and reliable assembly, detachment and disassembly of aircraft, OA equipment, medical equipment, laboratory equipment, and maintenance equipment, etc.
- Insert plug into socket and push to lock/unlock.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- There are flush/button types that the plug becomes flat with/comes out from the mounting surface when locked.Large and mini sizes are available, and large size is flush type only.
- AS parts set available for mini size.
- Resin and metal types available.

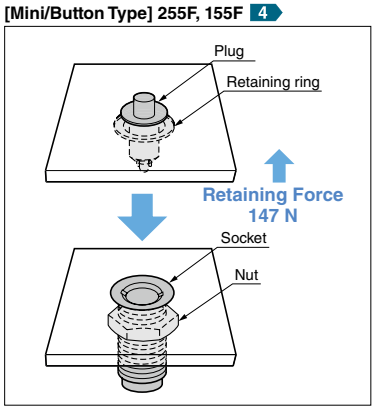
[Large/Flush Type] 251F, 151F 1



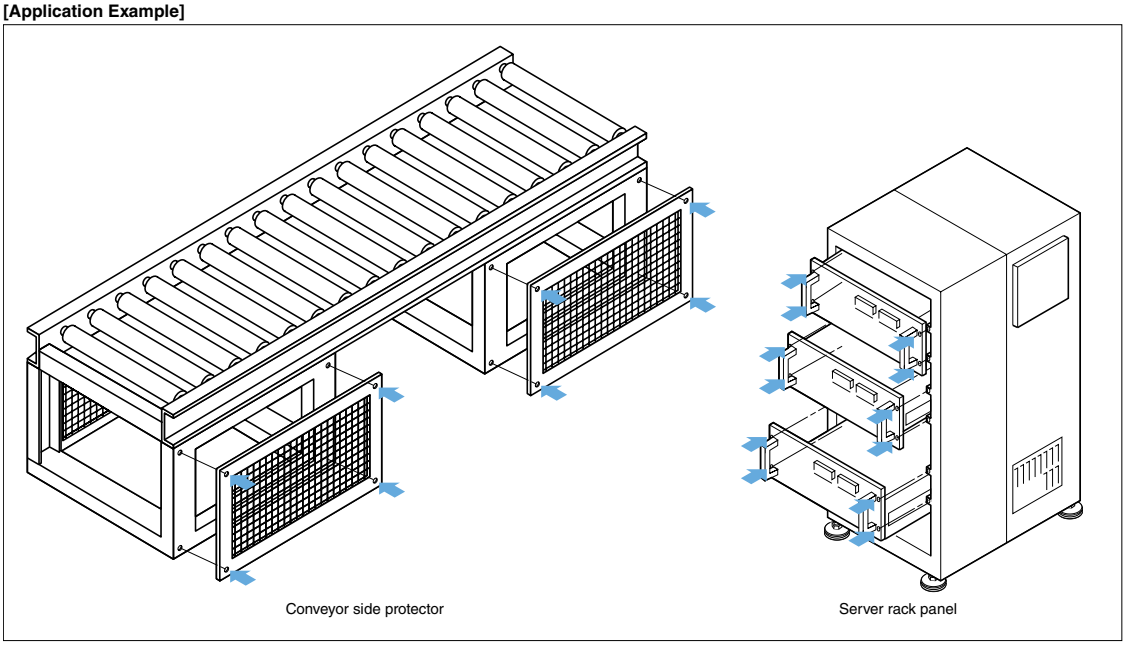
[Mini/Flush Type] 252F, 152F 2
152FT (SUS type) 3



[Mini/Button Type] 255F, 155F 4



[Application Example]



Refer to 1 : P.514, 2 : P.516, 3 : P.515, 4 : P.518

PUSH LOCK FASTENER 251F, 151F Large/Flush Type

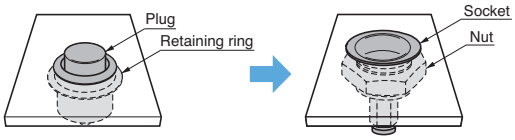
251F/Black (Resin type)　251F/White (Resin type)

151F (Metal type)

- Insert plug into socket and push to lock/unlock.
- Resin and metal types available.
- Flush locked design prevents snagging.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.

[Remarks]

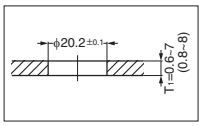
- Load applied directly to the body may cause damage.



Consists of four parts: “plug”, “ring” , “socket” and “nut” .

[Preparation (Plug)]

Board thickness T_1=0.6~5 (0.8~5)

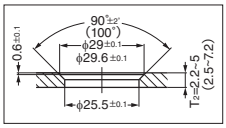


( ) dimension for 151F

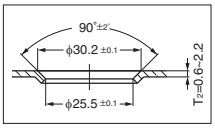
[Preparation (Socket)]

Countersink hole

Board thickness T_2=2.2~5 (2.5~7.2)



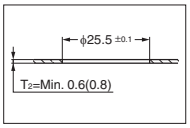
Board thickness T_2=0.6~2.2

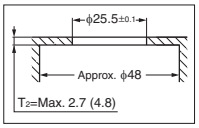


( ) dimension for 151F

[Straight hole]

Board thickness T_2=0.6~2.7 (0.8~4.8)





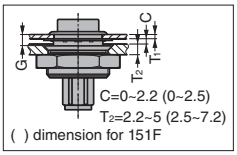
( ) dimension for 151F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2(0~ 2.5), grip dimension G=T_1+C+0.7

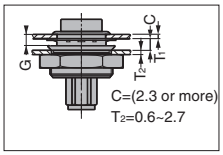


( ) dimension for 151F

In case of T_1=1, C=0.7 and T_2=3, grip dimension G=1+0.7+0.7=2.4
Set item name…251F-02-3

Straight hole 1

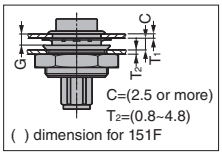
In case of clearance C=2.3 or more, grip dimension G=T_1+C-1.4



In case of T_1=1, C=2.5 and T_2=1, grip dimension G=1+2.5-1.4=2.1
Set item name…251F-02-3

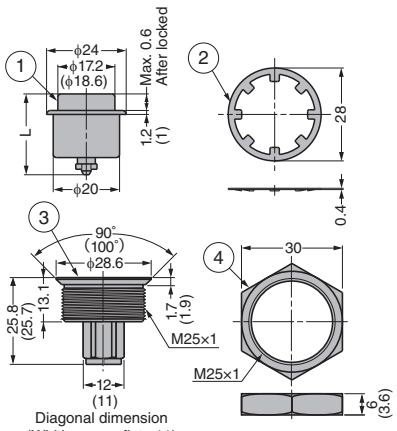
Straight hole 2

In case of clearance C=2.5 or more, grip dimension G=T_1+C-1.7



( ) dimension for 151F

In case of T_1=1, C=2.5 and T_2=1, grip dimension G=1+2.5-1.7=1.8
Set item name…151F-01-2



Diagonal dimension
(Width across flats 11)

( ) dimension for 151F

[251F] Resin type

RoHS	CAD	Item Code	Set Item Name	Colour	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)
G	3D	120-040-259	251F-01-3	Black	1.2~2	20.5	245	25	15
G	3D	120-054-546	251F-01-3WT	White					
G	3D	120-040-260	251F-02-3	Black	2~2.8	21			
–	3D	120-054-547	251F-02-3WT	White					
G	3D	120-040-261	251F-03-3	Black	2.8~3.6	22			
G	3D	120-054-548	251F-03-3WT	White					
G	3D	120-040-262	251F-04-3	Black	3.6~4.4	23			
G	3D	120-054-549	251F-04-3WT	White					
G	3D	120-040-263	251F-05-3	Black	4.4~5.2	23.5			
G	3D	120-054-550	251F-05-3WT	White					
G	3D	120-040-264	251F-06-3	Black	5.2~6	24.5			
G	3D	120-054-551	251F-06-3WT	White					

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[151F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)
–	3D	120-013-718	151F-01-2	1.2~2	20.5	245	25	51
–	3D	120-013-719	151F-02-2	2~2.8	21			
–	3D	120-013-720	151F-03-2	2.8~3.6	22			
–	3D	120-013-721	151F-04-2	3.6~4.4	23			
–	3D	120-013-722	151F-05-2	4.4~5.2	23.5			
–	3D	120-013-723	151F-06-2	5.2~6	24.5			

No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	Brass	Nickel
④	Nut	Zinc Alloy (ZDC)	

STAINLESS STEEL PUSH LOCK FASTENER 152FT Mini/Flush Type

SUS

- Insert plug into socket and push to lock/unlock.
- Flush locked design prevents accidental release. Push with sharp-pointed object to release.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- Stainless steel construction suitable for corrosive environments.

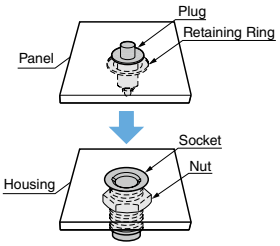
[Remarks]

- Load applied directly to the body may cause damage.

[When plug is pushed]

[Installation Image]

Flush to prevent release afterward

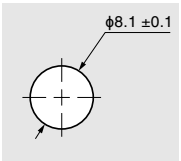


Consists of four parts: “plug”, “ring” , “socket” and “nut” .

[Panel Side Mounting Hole Dimensions]

Hole

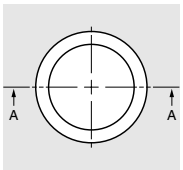
Door thickness T_1 = 0.8 to 4.8

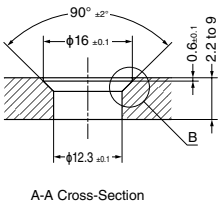


[Housing Side Mounting Hole Dimensions]

Countersink hole

Door thickness T_2 = 2.2 to 9

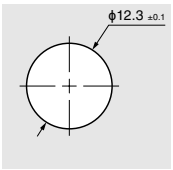


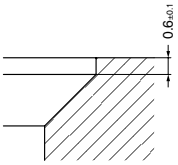


A-A Cross-Section

No countersink hole

Door thickness T_2 = 0.8 to 7.5

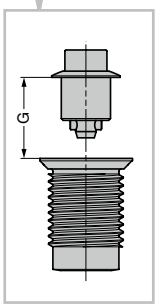




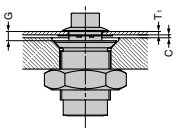
Detailed Figure B

[Grip Dimensions]

Grip dimension G	The distance from the plug flange bottom surface to the socket top surface is the grip dimension G. **Set so that the grip dimension G is 1.2 to 6.**

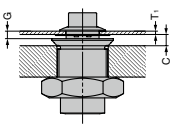


For countersink hole



G = panel thickness T_1 + clearance C + 0.7

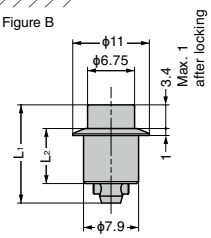
For non-countersink hole



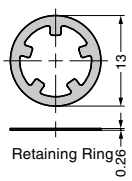
G = panel thickness T_1 + clearance C - 1.7

Clearance C = 2.4 or higher

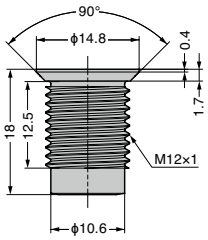
Short!



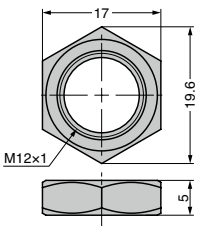
Plug



Retaining Ring



Socket



Nut

RoHS	CAD	Item Code	Item Name	Material	Grip Dimension G	Plug Dimension L_1	Plug Dimension L_2	Retaining Force N	Retaining Force kgf	Weight (g)
G	3D	120-050-628	152FT-12-SS	Stainless Steel	1.2~2	14.1	7.9	147	15	18
G	3D	120-050-629	152FT-20-SS		2~2.8	14.9				
G	3D	120-050-630	152FT-28-SS		2.8~3.6	15.7				
G	3D	120-050-631	152FT-36-SS		3.6~4.4	16.5	10.3			
G	3D	120-050-632	152FT-44-SS		4.4~5.2	17.3				
G	3D	120-050-633	152FT-52-SS		5.2~6	18.1				

PUSH LOCK FASTENER 252F, 152F Mini/Flush Type

252F/Black (Resin type)

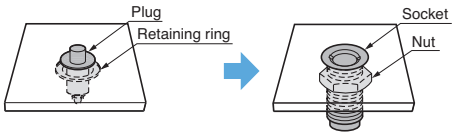
252F/White (Resin type)

152F (Metal type)

- Insert plug into socket and push to lock/unlock.
- Flush locked design prevents accidental release.Push with sharp-pointed object to release.
- Resin and metal types available.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- AS part set for installing to aluminium frame also available 1.

[Remarks]

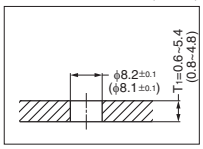
- Load applied directly to the body may cause damage.



Consists of four parts: “plug“, “ring” , “socket” and “nut” .

[Preparation (Plug)]

Board thickness T1=0.6~5.4 (0.8~4.8)

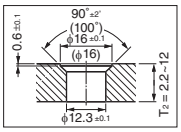


( ) dimension for 152F

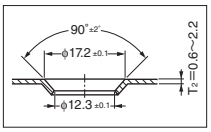
[Preparation (Socket)]

Countersink hole

Board thickness T2= 2.2~12



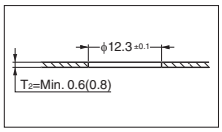
Board thickness T2= 0.6~2.2

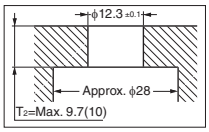


( ) dimension for 152F

Straight hole

Board thickness T2=0.6~9.7 (0.8~1.0)





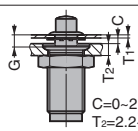
( ) dimension for 152F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2 (0~2.5), grip dimension G=T1+C+0.7



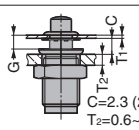
C=0~2.2 (0~2.5)
T2=2.2~12
( ) dimension for 152F

How to select

In case of T1=1, C=1 and T2=1, grip dimension G=1+1+0.7=2.7
Set item name…252F-02-3

Straight hole

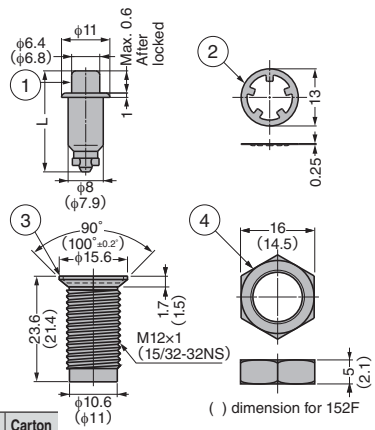
In case of clearance C=2.3 (2.2) or more, grip dimension G=T1+C-1.4



C=2.3 (2.2) or more
T2=0.6~2.2(0.8~10)
( ) dimension for 152F

How to select

In case of T1=3, C=2.6 and T2=1, grip dimension G=3+2.6-1.4=4.2
Set item name…152F-04-1



( ) dimension for 152F

[252F] Resin type

RoHS	CAD	Item Code	Set Item Name	Colour	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-279	252F-01-3	Black	1.2~2	18.5	147	15	6	1	1
G	3D	120-054-552	252F-01-3WT	White						1	1
G	3D	120-040-280	252F-02-3	Black	2~2.8	19.0				1	1
G	3D	120-054-553	252F-02-3WT	White						1	1
G	3D	120-040-281	252F-03-3	Black	2.8~3.6	20				1	1
G	3D	120-054-554	252F-03-3WT	White						1	1
–	3D	120-040-282	252F-04-3	Black	3.6~4.4	20.5				1	1
G	3D	120-054-555	252F-04-3WT	White						1	1
–	3D	120-040-283	252F-05-3	Black	4.4~5.2	21.5				1	1
G	3D	120-054-556	252F-05-3WT	White						1	1
G	3D	120-040-284	252F-06-3	Black	5.2~6	22.5				1	1
G	3D	120-054-557	252F-06-3WT	White						1	1

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[152F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-013-709	152F-01-1	1.2~2	16.5	147	15	6	–	1
–	3D	120-013-710	152F-02-1	2~2.8	17				–	1
–	3D	120-013-711	152F-03-1	2.8~3.6	18				–	1
–	3D	120-013-712	152F-04-1	3.6~4.4	18.5				–	1
–	3D	120-013-713	152F-05-1	4.4~5.2	19.5				–	1
–	3D	120-013-714	152F-06-1	5.2~6	20.5				–	1

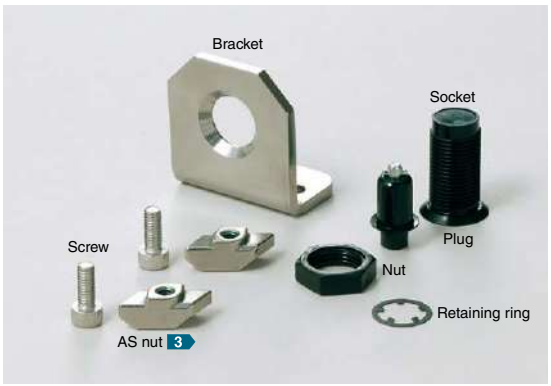
No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Stainless Steel (SUS304)	Passivation
③	Socket	Zinc Alloy (ZDC)	Coloured Zinc Chromate
④	Nut	Steel	Chromate

Refer to 1 : P.517

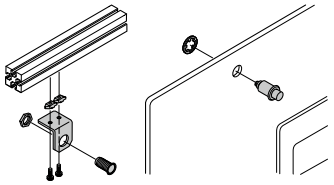
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

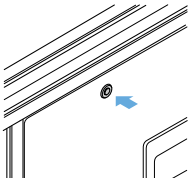
[AS Parts Set : For Push Lock Fastener 252F Resin Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



[Installation]

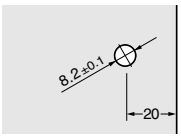


[Lock Release]

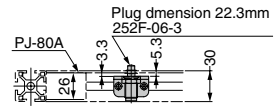


Push plug head with sharp-pointed object.

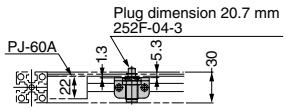
[Cut Out Dimensions of Panel]



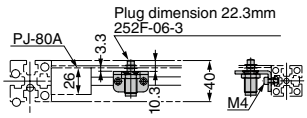
[Dimensions]



In case of PJ-80A+30×30 mm frame



In case of PJ-60A+30×30 mm frame



In case of PJ-80A+40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
GT	–	120-014-252	AS-252F-03-3-30-6	30×30 Groove Width 6mm	Push Lock Fastener 252F-03-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-6M4 : 2pcs M4×10 Hexagon Socket Head Cap Screw : 2pcs	45
–	–	120-014-253	AS-252F-06-3-40-8	40×40 Groove Width 8mm	Push Lock Fastener 252F-06-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-8M4 : 2pcs M4×12 Hexagon Socket Head Cap Screw : 2pcs	50
–	–	120-014-254	AS-252F-06-3-30-8	30×30 Groove Width 8mm	Push Lock Fastener 252F-06-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-8M4 : 2pcs M4×10 Hexagon Socket Head Cap Screw : 2pcs	51

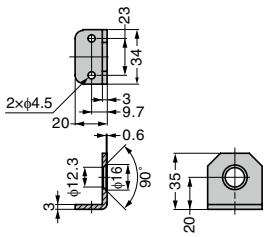
※The push lock fastener sets suitable for installing to aluminium frame are above item names only. Please contact us for other than above.

Refer to 1 : P.20, 2 : P.516, 3 : P.526

BRACKET FOR PUSH LOCK FASTENER AS-252F

SUS

●Used for installing push lock fastener to aluminium frame.



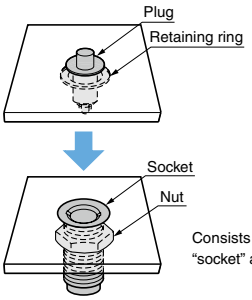
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-010-542	AS-252F	Stainless Steel (SUS430)	Barrel Polished	32	50	400

PUSH LOCK FASTENER 255F, 155F Mini/Button Type

- Insert plug into socket and push to lock/unlock.
- No special tool is required for locking and unlocking.
- Resin and metal types available.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- AS parts set 1 for installing to aluminium frame also available.

[Remarks]

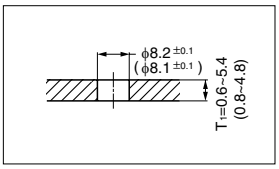
- Load applied directly to the body may cause damage.



Consists of four parts: “plug”, “ring”, “socket” and “nut”.

[Preparation (Plug)]

Board thickness T_1=0.6~5.4 (0.8~4.8)

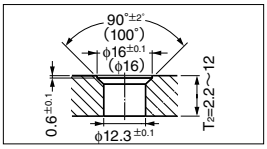


( ) dimension for 155F

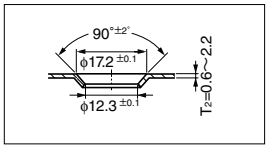
[Preparation (Socket)]

Countersink hole

Board thickness T_2=2.2~12



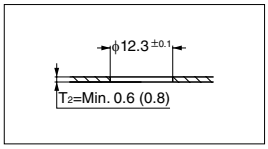
Board thickness T_2=0.6~2.2

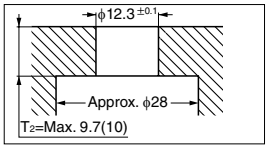


( ) dimension for 155F

Straight hole

Board thickness T_2=0.6~9.7 (0.8~10)





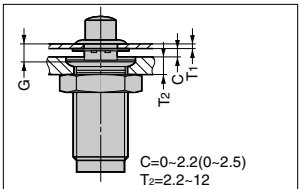
( ) dimension for 155F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2 (0~2.5),
grip dimension G=T_1+C+0.7



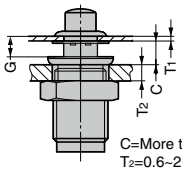
( ) dimension for 155F

How to select

In case of T_1=1, C=1 and T_2=1,
grip dimension G=1+1+0.7=2.7
Set item name…255F-01-3

Straight hole

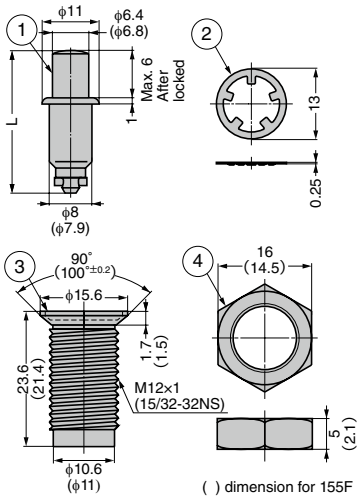
In case of clearance C=2.3 (2.2) or more,
grip dimension G=T_1+C-1.4



( ) dimension for 155F

How to select

In case of T_1=3, C=2.6 and T_2=1,
grip dimension G=3+2.6-1.4=4.2
Set item name…155F-03-1



( ) dimension for 155F

[255F] Resin type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-299	255F-01-3	1.2~2.8	23.5	147	15	6	1	1
–	3D	120-040-300	255F-03-3	2.8~4.4	25				1	1
–	3D	120-040-301	255F-05-3	4.4~6	26.5				1	1

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[155F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-013-715	155F-01-1	1.2~2.8	21.5	147	15	6	–	1
–	3D	120-013-716	155F-03-1	2.8~4.4	23				–	1
–	3D	120-013-717	155F-05-1	4.4~6	24.5				–	1

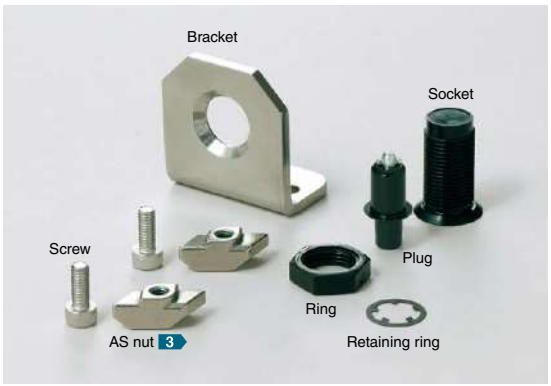
No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Stainless Steel (SUS304)	Passivation
③	Socket	Zinc Alloy (ZDC)	Clear Zinc Chromate
④	Nut	Steel	Chromate

Refer to 1 : P.519

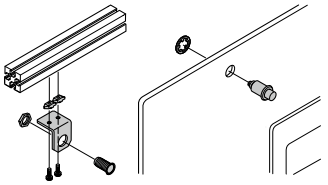
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

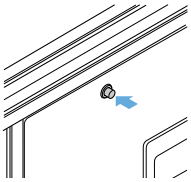
[AS Parts Set : For Push Lock Fastener 255F Resin Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



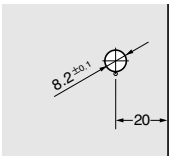
[Installation]



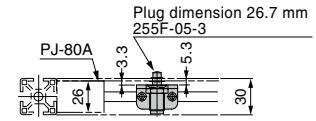
[Lock Release]



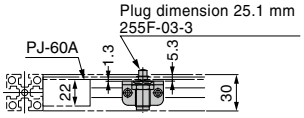
[Cut Out Dimensions of Panel]



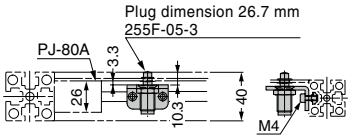
[Dimensions]



In case of PJ-80A＋30×30 mm frame



In case of PJ-60A＋30×30 mm frame



In case of PJ-80A＋40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
–	–	120-014-246	AS-255F-03-3-30-6	30×30 Groove Width 6 mm	Push Lock Fastener 255F-03-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	46
–	–	120-014-247	AS-255F-05-3-40-8	40×40 Groove Width 8 mm	Push Lock Fastener 255F-05-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs	51
–	–	120-014-248	AS-255F-05-3-30-8	30×30 Groove Width 8 mm	Push Lock Fastener 255F-05-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	52

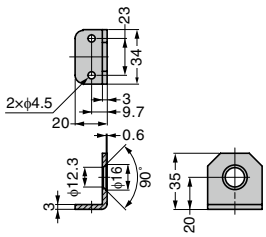
※ The push lock fastener sets suitable for installing to aluminium frame are above item names only. Please contact us for other than above.

Refer to 1 : P.20, 2 : P.518, 3 : P.526

BRACKET FOR PUSH LOCK FASTENER AS-252F

SUS

●Used for installing push lock fastener to aluminium frame.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-010-542	AS-252F	Stainless Steel (SUS430)	Barrel Polished	32	50	400

PUSH LOCK FASTENER 149FN Push-turn Type for Horizontal Use Only

Plug

Socket

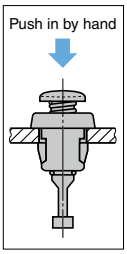
- Just push in the pin to lock and rotate its head to remove. An easily operated fastener for definite connection.
- Lock can be opened just by rotating the pin head 90° to left or right with a screwdriver.
- Composed of two parts (plug body and socket), each with one-touch installation.

[Remarks]

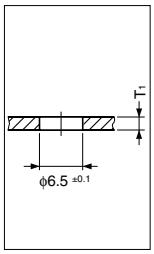
- For horizontal use only. Use for sideways or ceiling mounting, with load directly applied to the body, may cause damage.

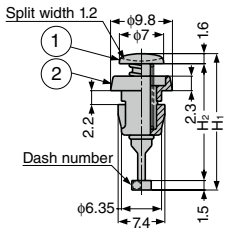
[Plug]

Installation Dimensions

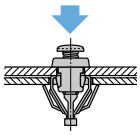


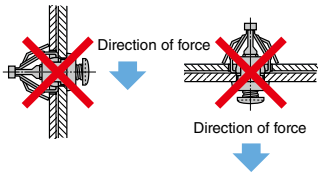
Mounting Hole Dimensions





[Application Example]

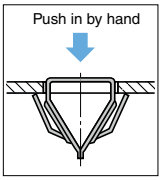




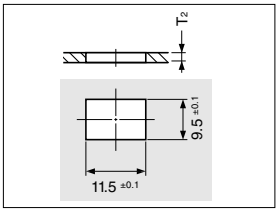
No.	Part Name	Material	Finish/Colour
①	Pin	Stainless Steel (SUS430)	Plain
②	Cap	Polyacetal (POM)	Grey

[Socket]

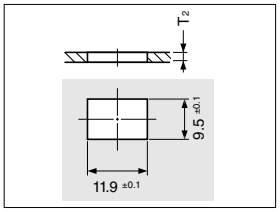
Installation Dimensions

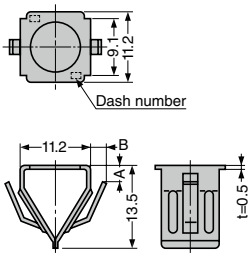


Mounting Hole Dimensions: When board thickness T_2=1.2 - 2.5



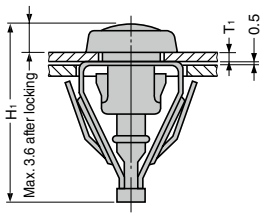
Mounting Hole Dimensions: When board thickness T_2=2.6



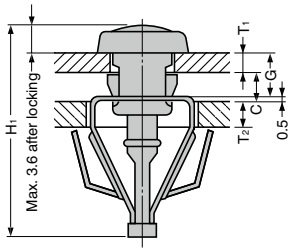


[Plug Selection]

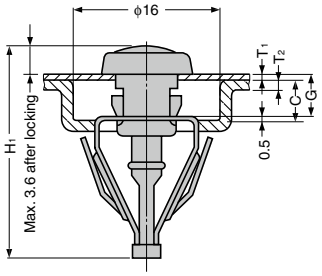
Ⓐ Plug board thickness T_1 is thin (0.6 - 2.2mm)



Ⓑ Clearance C between plug board thickness T_1 and socket board thickness T_2



Ⓒ No clearance C between plug board thickness T_1 and socket board thickness T_2



[Ⓐ]

Item Name	Plug Board Thickness T_1	H_1
149FN-1-2/149FN-1-3	0.6 - 1.4	19.2
149FN-2-2/149FN-2-3	1.4 - 2.2	20

[Ⓑ, Ⓒ]

Item Name	$G=T_1+C-0.5$	Plug Board Thickness T_1	C
149FN-1-2/149FN-1-3	0.6 - 1.4	0.6 - 1.4	1.3 - 0.5
149FN-2-2/149FN-2-3	1.4 - 2.2	0.6 - 2.2	2.1 - 0.5

Note) The combination of T_1 and C in each line of the table above refers to [T_1+C-0.5≤G max. value].
1. T_1(0.8)+C(1.0)−(0.5)=G
G=1.3 → Use 149FN-1-2/149FN-1-3
2. T_1(0.8)+C(1.3)−(0.5)=G
G=1.6 → Use 149FN-2-2/149FN-2-3

Sold in pairs (plug and socket 1 pc each). When ordering, "1" is for one set.

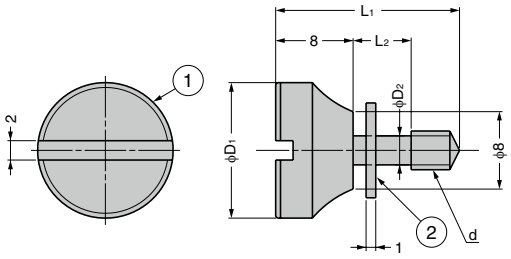
RoHS	CAD	Item Code	Item Name	H_1	H_2	A	B	Socket Board Thickness T_2	Socket Material	Weight (g)
G	3D	120-052-835	149FN-1-2	19.2	16.1	2.9	1.5	1.2 - 1.8	Stainless Steel (SUS304)	3
G	3D	120-052-836	149FN-1-3			3.8	2.1	1.8 - 2.6		
G	3D	120-052-837	149FN-2-2	20	16.9	2.9	1.5	1.2 - 1.8		
G	3D	120-052-838	149FN-2-3			3.8	2.1	1.8 - 2.6		

KNOB FASTENER BRT Fall-preventing Screw

●With washer for fall prevention.

[Applications]

●Switch boards, control boards, distribution boards, etc.

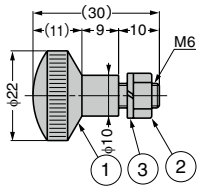


No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Brass	Chrome
②	Resin Washer	PA	Natural

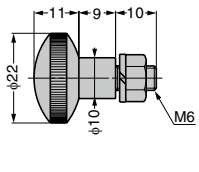
RoHS	CAD	Item Code	Item Name	L1	L2	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-231	BRT4-10CR	19	6	14	3	M4	7	1	–
G	3D	100-019-244	BRT4-15CR	24.5	10				8	1	–
G	3D	100-014-070	BRT4-20CR	29.5	12				9	1	–
G	3D	100-014-069	BRT4-27CR	37	17				10	1	–
G	3D	100-014-068	BRT5-22CR	32	14	15	4	M5	11	1	–
G	3D	100-014-067	BRT5-27CR	37	17				12	1	–
G	3D	100-019-809	BRT5-37CR	46.5	22				13	1	–

KNOB FASTENER BRT-L6-10CR, SRT-L6-10S

SUS



BRT-L6-10CR



SRT-L6-10S

[Applications]

●Switch boards, control equipment, distribution boards, etc.

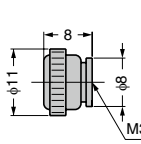
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-847	BRT-L6-10CR	Refer to the right table	Refer to the right table	40	1	–
G	3D	100-010-160	SRT-L6-10S	Stainless Steel (SUS304)	Polished		100	400

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

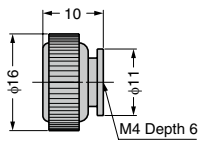
BRT-L6-10CR Parts List

No.	Part Name	Material	Finish
①	Knurled Knob	Brass	Chrome
②	Hexagon Nut	Steel (SWCH)	Coloured Zinc
③	Spring Washer	Steel	Chromate (Trivalent)

KNOB FASTENER BRT-NC



BRT-NC3-4CR



BRT-NC4-6CR

[Applications]

●Switch boards, control boards, distribution boards, etc.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-849	BRT-NC3-4CR	Brass	Chrome	4	1	–
G	3D	100-019-052	BRT-NC4-6CR			12	1	–

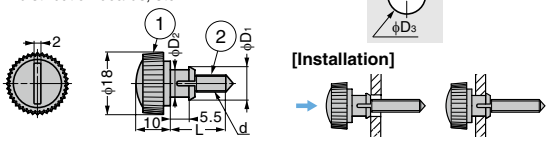
KNOB FASTENER DBN Snap-in Installation

- Push into the mounting hole of panel to snap-in. Few installation steps reduce cost.
- No retaining ring or washer is required for installation.
- Resin installation part prevents scratches on the painted surface.

[Applications]
- Switch boards, control equipment, distribution boards, etc.

[Cut Out Dimensions]

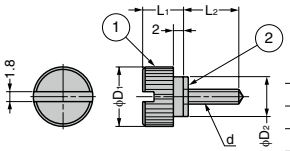
[Installation]



No.	Part Name	Material	Finish / Colour
①	Knob	POM	Black
②	Screw	See Below	See Below

RoHS	CAD	Item Code	Item Name	Screw Material	Screw Finish	L	D1	D2	d	Hole Dia. D3	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-915	DBN4-21SUS	Stainless Steel	Plain	22	9.5	8.2	M4	8.5	Max. 5	4.8	100	2000
G	3D	100-011-916	DBN4-27SUS			27						5.3	100	2000
G	3D	100-011-917	DBN5-21SUS			21	10.5	9	M5	9.5		6.4	100	2000
G	3D	100-011-918	DBN5-26SUS			26						7	100	2000
G	3D	100-011-919	DBN5-36SUS			36						8.2	100	2000
G	3D	100-011-920	DBN6-21SUS			21	11.5	10	M6	10.5		8.5	100	2000
G	3D	100-011-921	DBN6-26SUS			26						9.3	100	2000
G	3D	100-011-922	DBN6-36SUS			36						11	100	2000
G	3D	100-011-907	DBN4-21	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)	22	9.5	8.2	M4	8.5		4.5	100	2000
G	3D	100-011-908	DBN4-27			27						5.2	100	2000
G	3D	100-011-909	DBN5-21			21	10.5	9	M5	9.5		6.4	100	2000
G	3D	100-011-910	DBN5-26			26							100	2000
G	3D	100-011-911	DBN5-36			36						8.1	100	2000
G	3D	100-011-912	DBN6-21			21	11.5	10	M6	10.5		8.4	100	2000
G	3D	100-011-913	DBN6-26			26						9.2	100	2000
G	3D	100-011-914	DBN6-36			36						11	100	2000

KNOB FASTENER BRF



No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Brass	Chrome
②	Resin Washer	PA	Natural

[Applications]
- Switch boards, control equipment, distribution boards, etc.

RoHS	CAD	Item Code	Item Name	L1	L2	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-825	BRF-A3-6CR	8	6.5	12	8	M3	6	1	–
G	3D	100-019-823	BRF-A4-8CR	10	8	15	10	M4	13	1	–
G	3D	100-019-822	BRF-A4-13CR		13				14	1	–
G	3D	100-019-821	BRF-A5-7CR		7.5		12	M5		1	–
G	3D	100-019-820	BRF-A5-12CR		12.5				15	1	–

QUICK RELEASE LATCH DIGEST Panel fasteners with latch also available.

Flush Slam Latch LC-65A 1

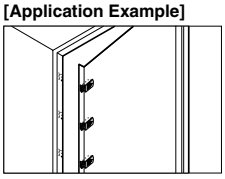
[Application Example]

Quick Release Latch With Locking LC-PK32, LC-PL32 Snap-in Installation 2

LC-PK32-L-BL LC-PL32-GR LC-PL32-L-GR (sold separately) LC-PK32-K (sold separately)

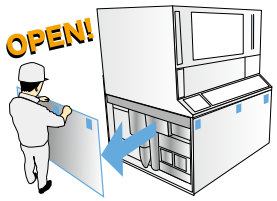
Quick Release Latch SX-48 Snap-in Installation & Temporary Holding 3

[Application Example]



[Application Example]

Three latches can be released by one person.



Refer to 1 : P.696, 2 : P.698, 3 : P.697

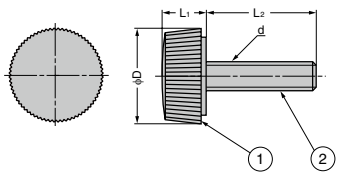
KNOB FASTENER RTS-W (New Model of the UN)

The previous model "UN" has been discontinued.
New model is the "RTS" which has a plastic knob.

No.	Part Name	Material	Finish / Colour
①	Knob	Polyamide (PA)	White
②	Screw	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

●Specified screw length within allowable dimension range available by made to order.
In this case, minimum order quantity is 5000~10000 pcs.

[Applications]
●Switch boards, control equipment, distribution boards, etc.



Sold in packs.

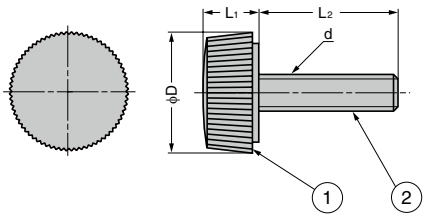
RoHS	CAD	Item Code	Item Name	L1	L2	D	d	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	120-046-675	RTS-2000W-P100	6	6	11	M3	100	10	–
G	3D	120-046-676	RTS-2003W-P100		16			100	10	–
G	3D	120-046-677	RTS-2006W-P100		8		M4	100	10	–
G	3D	120-046-678	RTS-2007W-P100		12			100	10	–
G	3D	120-046-679	RTS-2008W-P100		16			100	10	–
G	3D	120-046-680	RTS-2010W-P100	7	8	14		100	5	–
G	3D	120-046-681	RTS-2011W-P100		10			100	5	–
G	3D	120-046-682	RTS-2012W-P100		12			100	5	–
G	3D	120-046-683	RTS-2013W-P100		16			100	5	–
G	3D	120-046-684	RTS-2016W-P100		9		M5	100	5	–
G	3D	120-046-685	RTS-2017W-P100		15			100	5	–
G	3D	120-046-686	RTS-2018W-P100		27			100	5	–
G	3D	120-046-687	RTS-2022W-P100	8	9	17		100	5	–
G	3D	120-046-688	RTS-2026W-P100		12		M6	100	5	–

KNOB FASTENER RTS-B (New Model of the UN)

The previous model "UN" has been discontinued.
New model is the "RTS" which has a plastic knob.

●Specified screw length within allowable dimension range available by made to order.In this case, minimum order quantity is 5,000~10,000 pcs.

[Applications]
●Switch boards, control equipment, distribution boards, etc.



No.	Part Name	Material	Finish / Colour
①	Knob	Polyamide (PA)	Black
②	Screw	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

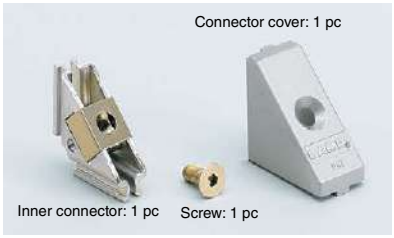
Sold in packs.

RoHS	CAD	Item Code	Item Name	L1	L2	D	d	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	120-046-689	RTS-2000B-P100	6	6	11	M3	1	100	10	–
G	3D	120-046-690	RTS-2003B-P100		16			1	100	10	–
G	3D	120-046-691	RTS-2006B-P100		8		M4	2	100	10	–
G	3D	120-046-692	RTS-2010B-P100	7		14		2	100	5	–
G	3D	120-046-693	RTS-2011B-P100		10			2	100	5	–
G	3D	120-046-694	RTS-2013B-P100		16			3	100	5	–

CORNER CONNECTOR PJ One-touch Connector Post-installation Type

- Used for easily installing single-groove aluminium frames to each other.
- Conductive type and standard type are available.
- Can be directly installed to the desired position (see installation procedure below).
- Easy connection of aluminium frames with one screw.
- Unique installation system shortens working time.
- Widely applied to various aluminium frames.
- Only 3 parts.
- PJ-80HA and PJ-100HA can be used to install 5mm panel by changing the direction of connector cover (choose the type with screw hole).
- Clean appearance.

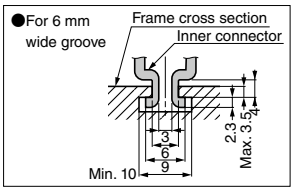
[Parts]

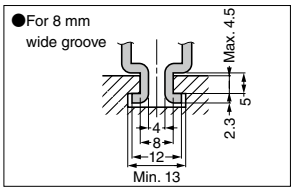


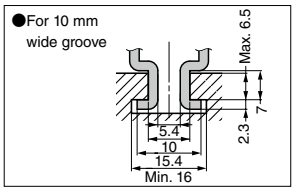
[Remarks]

- Aluminium frames to be connected shoud be of the same size and shape.
- Applicable frame size is for reference. Please check with actual item.
- Recommended tightening torque varies depending on installation conditions. Determine torque value by test before use.
- Conductive type cannot guarantee perfect conduction.In addition, reusing corner connector may cause poor conductivity. Please make conductivity check after assembly.
- The failure load in the table below is the static load when the corner connector is damaged and the aluminium frames dropped out by the “Failure load test method”. It does not guarantee the strength.

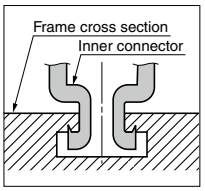
[Applicable Frame Reference Dimensions]



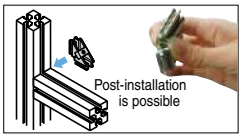




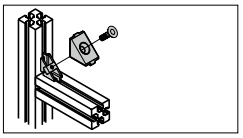
[Conductive Type Cutaway View]



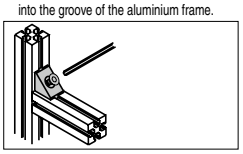
[Installation]



1. As show in the figure, fit the Inner connector into the groove of the aluminium frame.

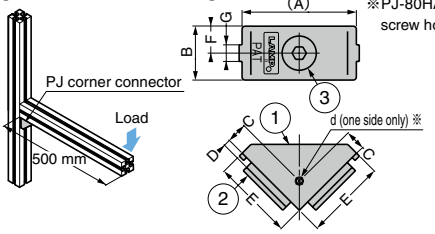


2. Put the connector cover on the Inner connector.



3. Tighten with the supplied mounting screw.

[Failure load Test Method]



※PJ-80HA and PJ-100HA have screw holes on both sides.

No.	Part Name	Material	Finish
①	Connector cover	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Inner connector	Steel	Coloured Zinc Chromate (Trivalent)
③	Hexagon Socket Countersunk Head Screw		Nickel

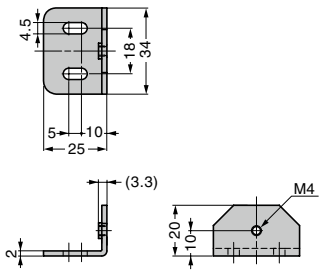
[Conductive Type]

RoHS	CAD	Item Code	Item Name	d	Groove Width	A	B	C	D	E	F	G	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Failure Load N	Failure Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-012-423	PJ-60AE	w/o	For 6 mm	55	22	10	1~3	39	11	6	M6×16	6	61.2	284	29	69	40	240
G	3D	120-012-424	PJ-60ATE	M4														67	40	240
G	3D	120-012-425	PJ-80AE	w/o	For 8 mm		26		1.5~4.5		13	8	M8×16	13	133	392	40	82	35	210
G	3D	120-012-426	PJ-80ATE	M4														83	35	210

[Standard Type]

RoHS	CAD	Item Code	Item Name	d	Groove Width	A	B	C	D	E	F	G	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Failure Load N	Failure Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-251	PJ-60A	w/o	For 6 mm	55	22	10	1~3	39	11	6	M6×16	6	61.2	284	29	67	40	240
G	3D	120-041-250	PJ-60AT	M4														67	40	240
G	3D	120-041-253	PJ-80A	w/o	For 8 mm		26		1.5~4.5		13	8	M8×16	13	133	392	40	81	35	210
G	3D	120-041-252	PJ-80AT	M4														82	35	210
G	3D	120-040-557	PJ-80HA	M5		57	25	12	1.5~4.7	40	15	10	M6×18	6	61.2			80	35	210
G	3D	120-040-558	PJ-100HA		For 10 mm	71	32.5		4.5~7	50			M8×25	13	133	833	85	165	15	90

PANEL FIXING MIDDLE BRACKET AS-PTB



- Used for preventing panel flapping when installed to aluminium frame.
- For corner connector PJ type with screw hole.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

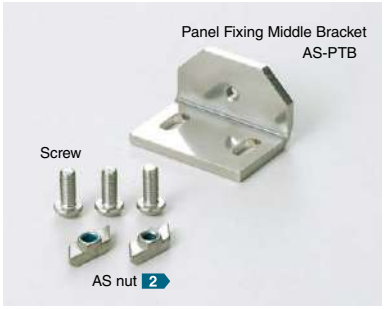
[Remarks]

- Mounting screws not included when ordering single bracket. Please prepare mounting screws of appropriate length according to aluminium frames.

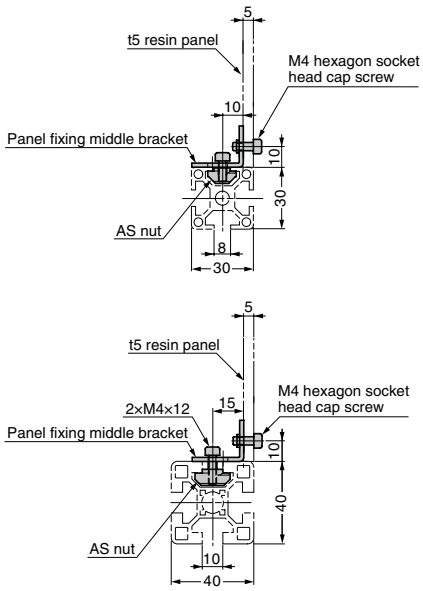
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-010-541	AS-PTB	Stainless Steel (SUS430)	Barrel Polishe	20	50	400

AS Parts Set for Installing to Aluminium Frame

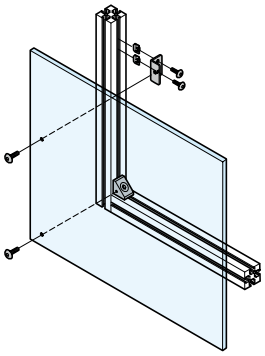
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



[Installation]



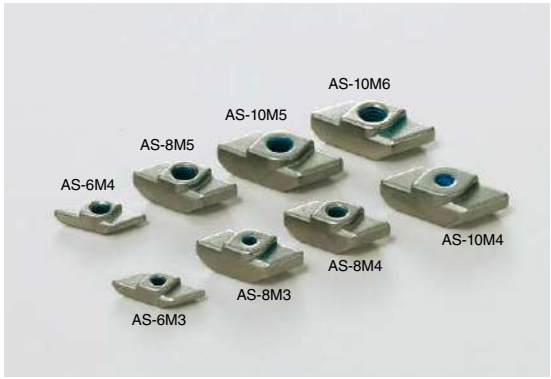
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	210-041-815	AS-PTB-30-6	30×30 Groove Width 6 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 3 pcs	29
G	–	210-041-816	AS-PTB-40-8	40×40 Groove Width 8 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 1 pc	34
G	–	210-041-817	AS-PTB-30-8	30×30 Groove Width 8 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 3 pcs	35
G	–	210-041-818	AS-PTB-40-10	40×40 Groove Width 10 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-10M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 1 pc	40

Refer to 1 : P.20, 2 : P.526

STAINLESS STEEL AS NUT Post-installation Type

AS SUS316

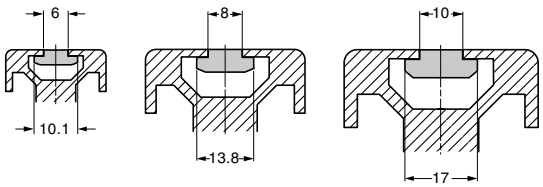


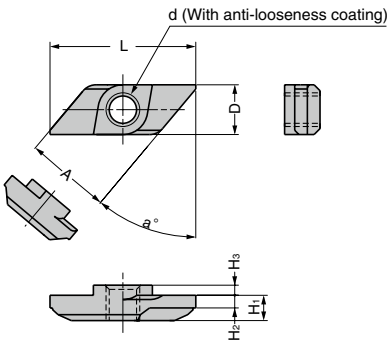
- Used for fixing a part to aluminium frame and makes post-installation possible.
- With coating to prevent looseness of screw.
- Can fix aluminium frame and hardware securely.
- Improved work efficiency with few installation mistakes.
- Widely applied to various aluminium frames.
- Refer to the product page 1 for details on AS series.

[Remarks]

- Install with the recommended tightening torque. AS nut not included in the parts set of AS series (for installing to aluminium frame).
- The effect of anti-looseness coating weakens when used repeatedly. Please use at most 2~3 times as a guide.
- Mounting screws not included when ordering single AS nut. Please prepare mounting screws of appropriate length according to aluminium frames.

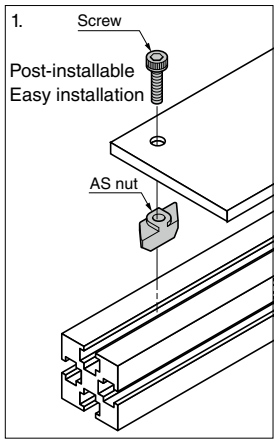
[Applicable Groove Width]



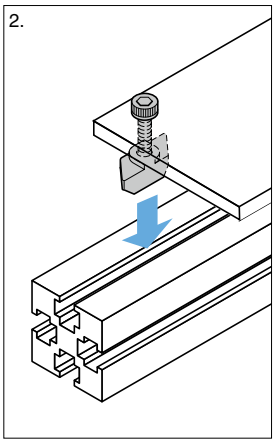


RoHS	CAD	Item Code	Item Name	Type	d	L	D	A	H_1	H_2	H_3	a	Material	Finish	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-676	AS-6M3	For 6 mm Groove	M3	17.3	5.9	10.1	3	1.5	1.2	40	Stainless Steel (SUS316)	Barrel Polished	0.63~1.14	6.4~11.6	1.9	1000	10000
G	3D	120-040-684	AS-6M4		M4										1.5~2.7	15.3~27.5	1.3	1000	10000
G	3D	120-040-677	AS-8M3	For 8 mm Groove	M3	20	7.9	13.8	6	3	1.5	32			0.63~1.14	6.4~11.6	4.3	500	3000
G	3D	120-040-685	AS-8M4		M4										1.5~2.7	15.3~27.5	4.1	500	3000
G	3D	120-040-686	AS-8M5		M5										3~5.4	30.6~55.1	3.9	500	3000
G	3D	120-040-678	AS-10M4	For 10 mm Groove	M4	24	9.8	17			1.8				1.5~2.7	15.3~27.5	7	250	1500
G	3D	120-040-687	AS-10M5		M5										3~5.4	30.6~55.1		250	1500
G	3D	120-040-679	AS-10M6		M6										5.2~9.2	53~93.8	6	250	1500

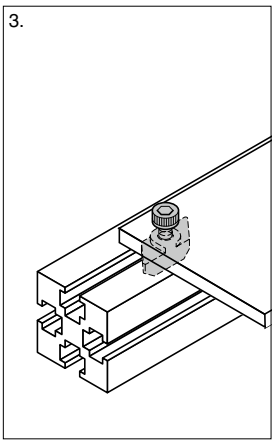
[Installation]



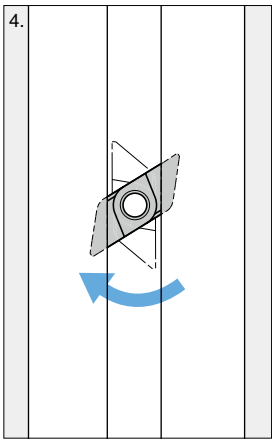
1. Temporarily fix the AS nut to the functional hardware with mounting screw.



2. Insert the AS nut into the groove of the aluminium frame.



3. Make sure that the AS nut is in the groove, and then tighten the screw.



4. When tightening the screw, AS nut rotates and is caught on the aluminium frame and fixes the functional hardware securely.

Refer to 1 : P.20

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  Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

DAMPER CATCH DC

L=R INSTRUCTION TEMPERED GLASS

Soft close
"Smooth and soft closing"

DC-90 DC-100

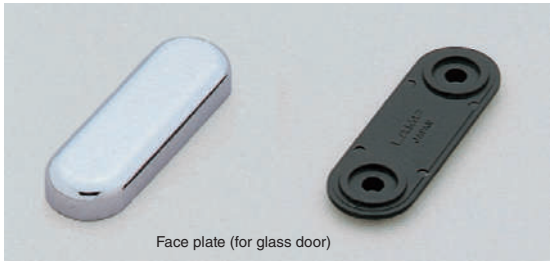
- For swing doors.
- Suitable for both right and left opening.
- Four models available depending on door specification, installation method, weight and size.
- DC-90 is installed vertically to the front of cabinet, not interfering with storage.
- DC-100 can be positioned simply by pressing the body against the top board bottom and aligning it with the cabinet edge.

Video Link

[Remarks]
- Screws are not included for installing to sheet metal (recommended screw: truss head screw M4).

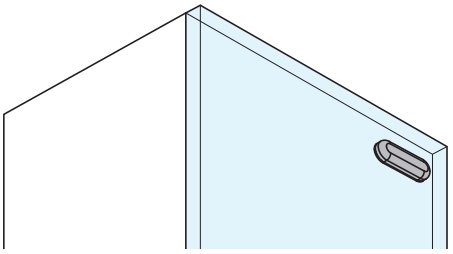
[Parts Included]
- Truss head tapping screw 4×30
- Truss head tapping screw 4×16
- Truss head screw 4×12 (Only included in DC-90G, DC-100G)
- Counter plate Jig
- Face plate (Only included in DC-90G, DC-100G)

※Face plate (below) is included for glass door

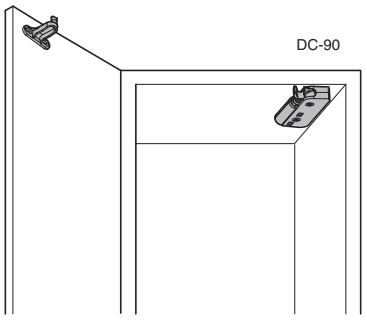


Face plate (for glass door)

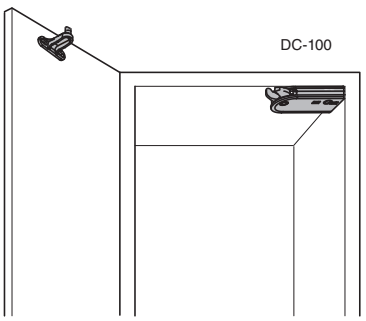
[Face Plate Installation]



[Installation]

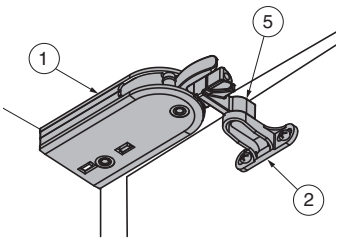


Installing vertically to the cabinet door.



Installing horizontally to the cabinet door.

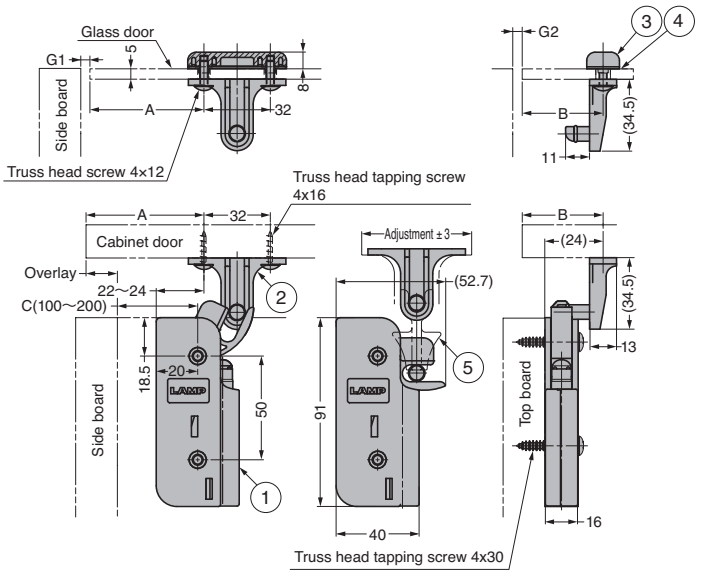
[Counter Plate Installation]



If installing jig ⑤ to body ① as shown in the figure, the installation position of counter plate ② on the door is determined. (View from the inside of door)

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door height	Glass Thickness	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-697	DC-90	–	Max. 450	Max. 600	–	1～4	46	25	200
G	3D	140-021-698	DC-90G	For Glass Door			5		71	25	200
G	3D	140-021-699	DC-100	–	Max. 600	Max. 800	–	1.5～7	66	25	200
G	3D	140-021-700	DC-100G	For Glass Door			5		91	25	200

[DC-90]

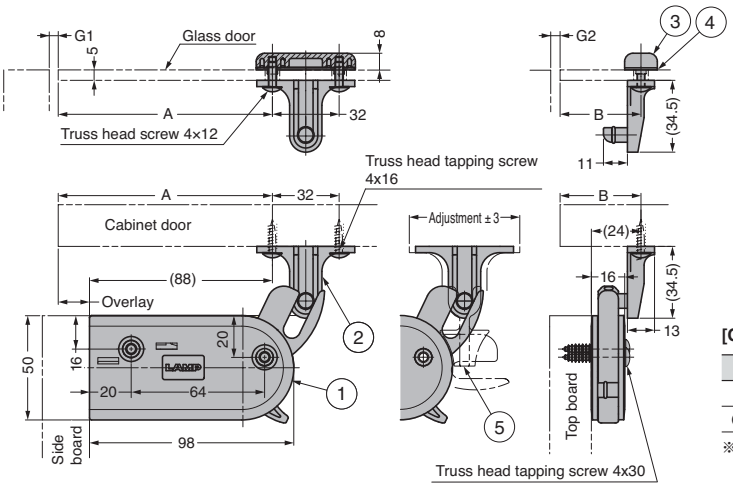


[Counter Plate Installation Position for DC-90]

	A	B
Inset Door	C-G1+3	24-G2
Overlay Door	C+Overlay+3	Overlay+24

※For inset door, please shift the installation position of body away from cabinet edge to the inside by the door thickness.

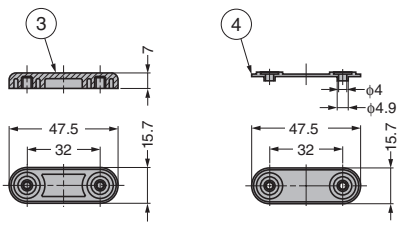
[DC-100]



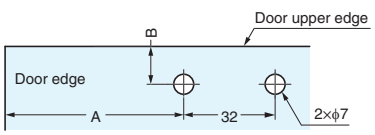
[Counter Plate Installation Position for DC-100]

	A	B
Inset Door	88-G1	24-G2
Overlay Door	Overlay+88	Overlay+24

※For inset door, please shift the installation position of body away from cabinet edge to the inside by the door thickness.



[Cut Out Dimensions for Glass Door]



No.	Product Name	Material	Finish / Colour
①	Body	POM /PBT	Dark Grey/Light Grey
②	Counter Plate	POM	Dark Grey
③	Face Plate	Zinc Alloy (ZDC)	Chrome
④	Spacer	ABS	Black
⑤	Jig	PBT	Light Grey

DAMPER CATCH DC-200

Lapcon L=R

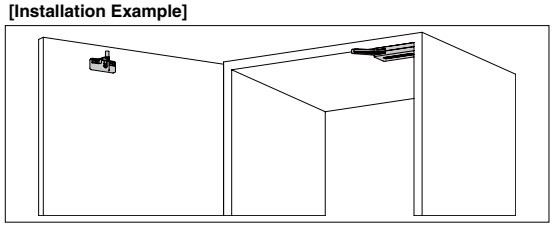
- Damper and catch combination for sideways opening doors.
- Prevents doors from slamming.
- Holds doors in closed position.
- Easy to install by simply aligning body with the interior wall.
- Non-handed.
- Can handle doors up to 40 kg. (When using DC-200 - 40).
- Strike can be adjusted post-installation: horizontally ±5 mm, vertically ±4 mm.
- Passed 50,000 open/close cycles in a private test.

[Recommended hinges]
- Heavy Duty Concealed Hinge J95 (With catch type)
- 3way Adjustable Concealed Hinge HES3D-90
- Single axis furniture hinges

[Caution]
- The screws for installing on sheet metal are not included. We recommend the following screws:
  Recommended screws for body: Cross binding head M4 × 30
  Recommended screws for counter plate: Cross binding head M4 × 15
- Do not install to body or strike to hollow surfaces.
- If there is a large resistant force during closing, the door may not close fully.

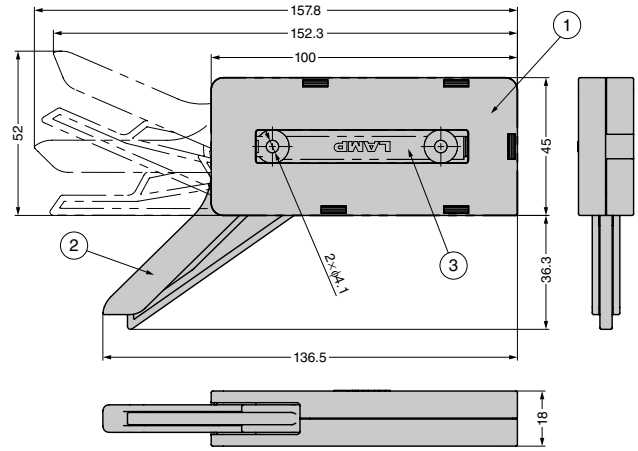
[Parts included]
- Body Cover
- Counter
- Screws to attach body: 3.5 × 30
- Screws to attach counter: 3.5 × 15

[Installation Example]

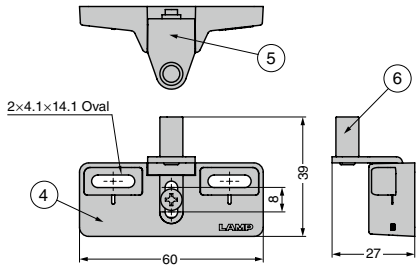


Attach to the interior of the cabinet.

[Body]



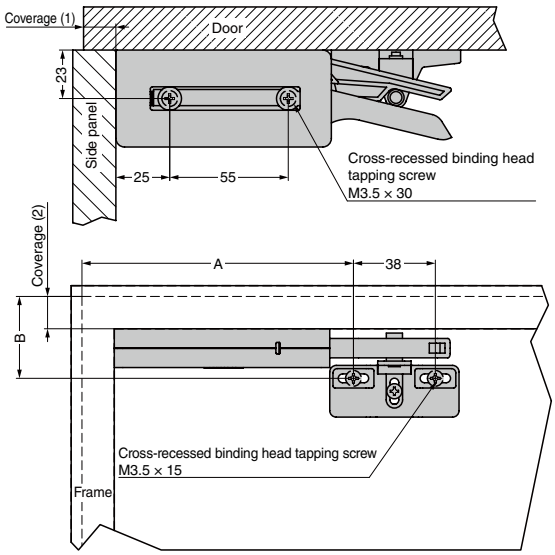
[Counter Plate]



No.	Item Name	Materials	Finish/Colour
①	Body	PC/ABS	White / Black
②	Arm	PA	White / Black
③	Body Cover	ABS	White / Black
④	Counter	PC/ABS	White / Black
⑤	Counter Plate	Steel (SPCC)	Nickel Plating
⑥	Bumper	Elastomer	Gray

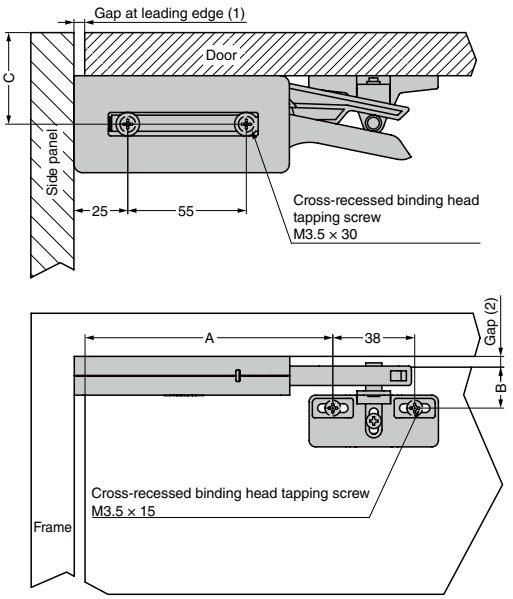
RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Load Capacity (kg)	Weight (g)
G	3D	140-043-604	DC-200-25WT	White	450 - 900	Under 2400	7 - 25	105
G	3D	140-043-605	DC-200-25BL	Black				
G	3D	140-043-606	DC-200-40WT	White			25 - 40	
G	3D	140-043-607	DC-200-40BL	Black				

[For lapped (outset) doors]



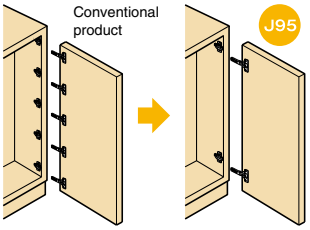
[For inset doors]

Install a door stopper in addition to this product.



	A	B	C
Outset Doors	114 + Coverage (1)	24 + Coverage (2)	
Inset Doors	114 - gap at leading edge (1)	24 - gap (2)	23+Door Thickness

HEAVY DUTY CONCEALED HINGE J95



Two pieces will do the job of five conventional hinges!

- A sliding hinge for heavy doors that can be used together with the DC-200 damper catch.
- Use the type with a catch **if using together** with the DC-200 damper catch.
- Supports large doors weighing up to 25 kg with 2 hinges or up to 40 kg with 3 hinges.
- Enables one-touch installation and removal of the door.
- Enables three-dimensional adjustment of the door. (+1.5 mm/-2.5 mm forward/back, ±3 mm up/down, +0 mm/ -4 mm coverage adjustment [left/right])
- Streamlined design free of protrusions such as adjustment screws on the body top. To ensure safety, the lock lever does not protrude from the back of the body.

LAPCON DOOR DAMPER LDD-S,LDD-V

LDD-S

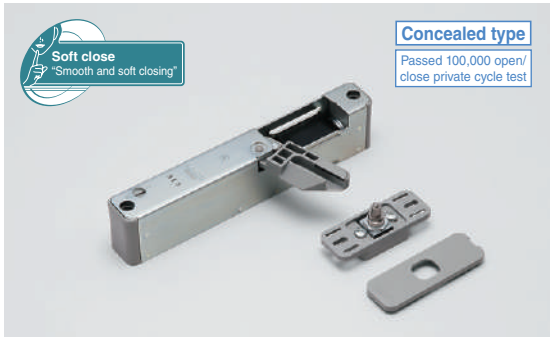
- A damper for doors (fixtures).
- Enables the door to be opened with less force than with door closers.

LDD-V

- Supports doors weighing up to 40 kg.
- Contact us if your door is wider than 900 mm.

DOOR DAMPER LDD-V Concealed

Lapcon INSTRUCTION



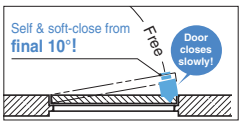
LDD-V-R (right-handed) shown. LDD-V-L (left-handed) is symmetrical.

- Damper body is completely hidden when the door is closed.
- Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.
- Door can be opened more easily as compared with door closer.
- Damper force can be switched between two levels.
- Counter plate is 3-way adjustable.
- Surface mount door damper LDD-S 1 also available.

[Parts Included]
- Binding head tapping screw 4×45
- Binding head tapping screw 3.5×20

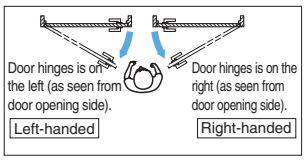
Door damper is completely hidden when the door is closed. (Picture: right-handed)

[Door Movement]

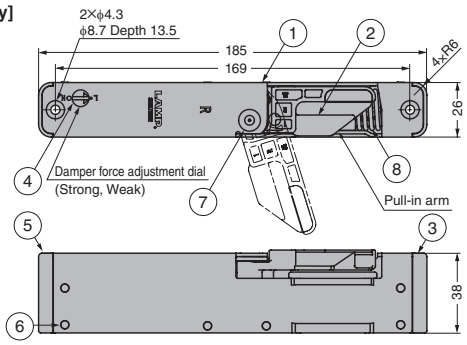


LDD-V-R (right-handed) shown.
LDD-V-L (left-handed) is symmetrical.

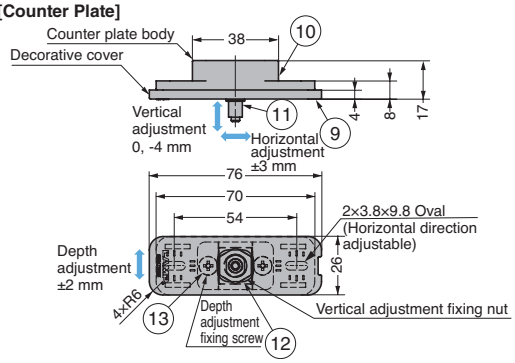
[Door Hinge Side]



[Body]



[Counter Plate]

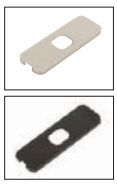


Video Link | Video Link | Video Link

No.	Part Name	Material	Finish / Colour
①	Body Case	Steel (SPCC)	Clear Zinc Chromate
②	Arm	POM	Grey
③	Spring Base		
④	Damper Force Adjustment Shaft		
⑤	Damper Base		
⑥	Countersunk Hollow Pin	Steel (SWCH)	Clear Zinc Chromate
⑦	Shoulder Shaft	Steel (SUM)	Nickel
⑧	Spring	Steel (SWP)	Clear Zinc Chromate
⑨	Counter Plate Cover	POM	Grey
⑩	Counter Plate Case		
⑪	Counter Plate Shaft	Steel (SUM)	Nickel
⑫	Vertical Adjustment Screw	Steel (SWRCH)	Clear Zinc Chromate
⑬	Depth Adjustment Screw	Steel (SWCH)	

Cover Optional

Item Code	Item Name	Material	Colour
270-054-108	LDD-V-COVER-WT	POM	White
270-062-092	LDD-V-COVER-BL	POM	Black



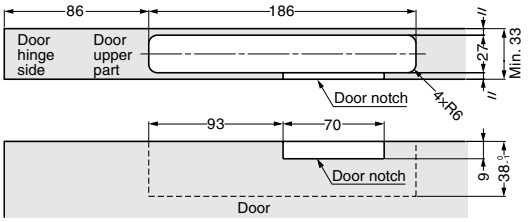
※Refer to 2 for the cut out dimensions, installation and safety cautions.

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door Thickness	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-017-563	LDD-V-R	Right-handed	Max. 900	Min. 33	15~40	427	1	24
G	3D	270-017-564	LDD-V-L	Left-handed				427	1	24

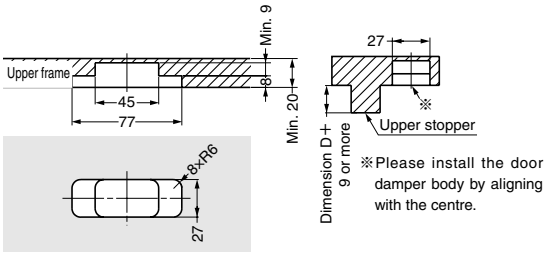
Refer to 1 : P.536, 2 : P.533

[Cut Out Dimensions] Door Damper Body

Figure below is for LDD-V-R (right-handed). LDD-V-L (left-handed) is symmetrical.



[Cut Out Dimensions] Counter Plate

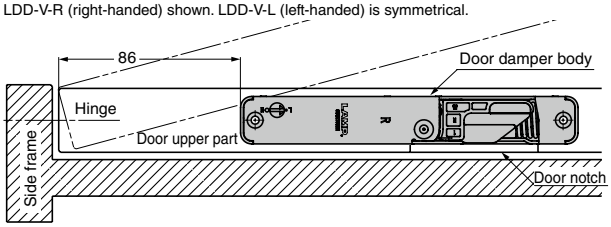


※Please install the door damper body by aligning with the centre.

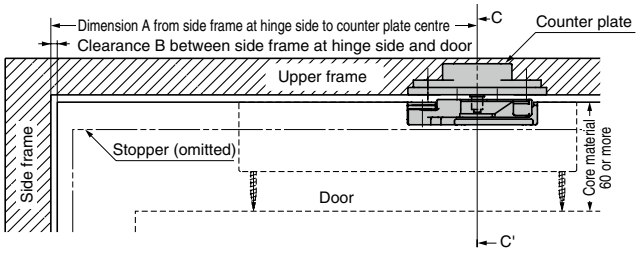
The installation position of counter plate from door hinge side varies depending on the hinges used.

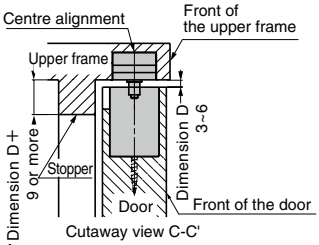
[Installation]

LDD-V-R (right-handed) shown. LDD-V-L (left-handed) is symmetrical.



The installation position of counter plate from door hinge side varies depending on the hinges used.





Embed the door damper body into the upper edge of the door and the counter plate into the upper frame.

[Dimension A from Side Frame at Hinge Side to Counter Plate Centre]

Door Hinge	Clearance B Between Side Frame at Hinge Side and Door				
	1	2	3	4	5
HES3D-120	220	221	222	223	224
HES3D-E160 HES3D-E190	221	222	223	224	225
HES3D-V135LGR	218	219	220	221	222
Butt Hinges	224	225	226	227	228

※If the clearance between the side frame at the hinge side and the door is beyond the range of the above table, calculate as per the table on the right.

Door Hinge	Dimension A from side frame at hinge side to counter plate centre
HES3D-120 HES3D-120-A100 HES3D-H120-36 HES2S-140-A125	219+Clearance B Between Side Frame at Hinge Side and Door
HES1F-140 HES3D-E160 HGS3D-S160SH HES3D-E190 HES3D-W190	220+Clearance B Between Side Frame at Hinge Side and Door
HES3D-V135LGR HES2S-150-A110	217+Clearance B Between Side Frame at Hinge Side and Door
Butt Hinges	223+Clearance B Between Side Frame at Hinge Side and Door

※ Refer to 1 for 3-way adjustable concealed hinge HES3D.

⚠ Safety Cautions

- **Do not drop or give strong impact to this product.**
- This product can not resist strong wind. Do not use under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use. Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0℃ ~ 40℃ .
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- Please install this product horizontally.Otherwise, it may not operate properly.
- After vertical adjustment of counter plate, tighten the fixing nut firmly.
- This product is supplied with installation instruction. Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

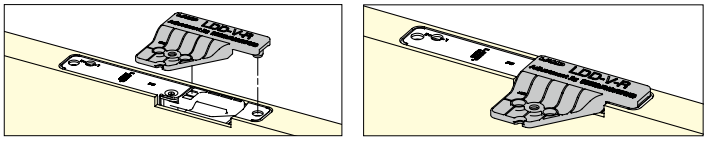
Refer to 1 : P.152

ADJUSTMENT JIG FOR COUNTER PLATE OF LDD-V LDD-V-JIG

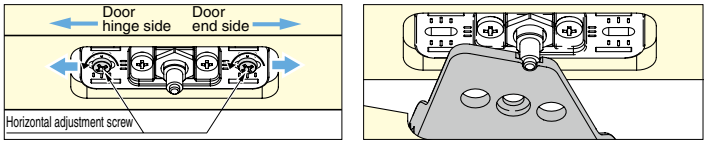
- For Lapcon door damper LDD-V 1 only.
- Used for adjusting the counter plate position of LDD-V.

[How to Use]

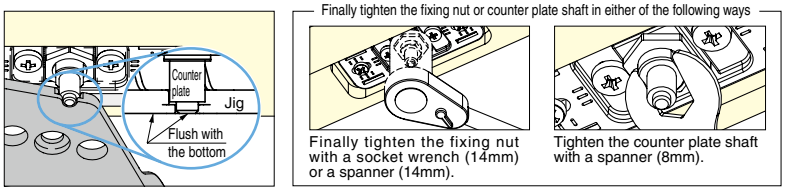
●1. Install the adjustment jig
①Fit the adjustment jig firmly into the body.
※Right-handed and left-handed available.
※Be sure to adjust the counter plate position after adjusting the installation position of the hinges.



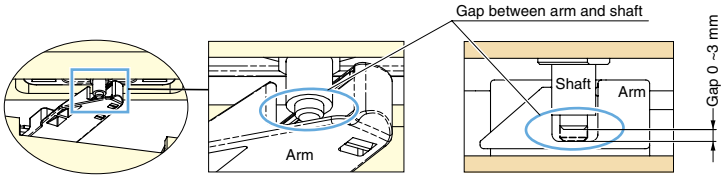
●2. Horizontally adjust the counter plate
①Loosen the horizontal adjustment screws.
②While holding the adjustment jig by hand, slowly close the door and align the counter plate shaft with the groove.
③Tighten the horizontal adjustment screws.



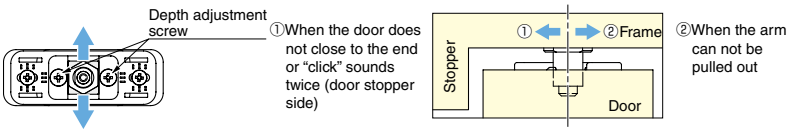
●3. Vertically adjust the counter plate
①Loosen the fixing nut.
②While holding the adjustment jig by hand, slowly close the door and align the top of counter plate shaft with the bottom of jig.
③Tighten the fixing nut or the counter plate shaft firmly.



●4. Check
①When removing the jig and closing the door slowly to the end, “click” sounds once.
※If the door does not close to the end or “click” sounds twice, perform depth adjustment.
②When opening the door, “click” sounds once, and the arm is pulled out.
※If the arm can not be pulled out, perform depth adjustment.
③Check if the clearance between the arm and the counter plate shaft is appropriate.



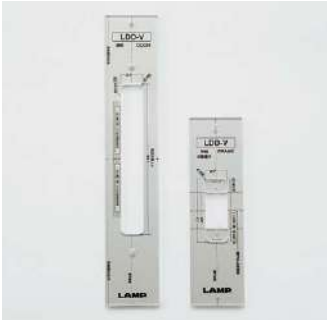
※Depth adjustment of the counter plate (adjustment jig LDD-V-JIG can not be used for depth adjustment).
①Loosen the depth adjustment screws.
②Align the centre of the counter plate shaft with that of the door thickness.
③Tighten the depth adjustment screws.



RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	270-025-276	LDD-V-R-JIG	Right-handed	ABS	Orange	11	500	–
G	–	270-025-275	LDD-V-L-JIG	Left-handed			11	500	–

Refer to 1 : P.532

TEMPLATE FOR LDD-V LDD-V-TMP



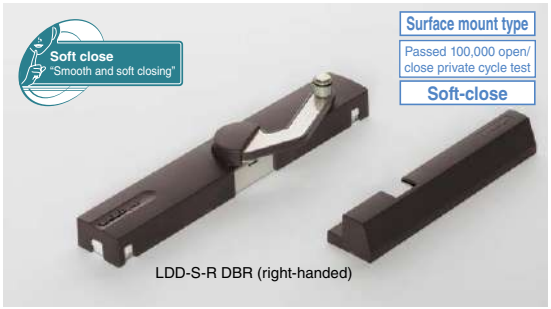
- Easy to make mortise on wood door and frame for LDD-V 1 .
- Possible to use repeatedly.
- Two templates included: for door & frame.
- Recommended working tool is a straight bit with guide bearings of which guide diameter and bit diameter are the same.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	270-024-568	LDD-V-TMP	Methacrylic Resin (PMMA)	Clear	194	1	50

Refer to 1 : P.532

DOOR DAMPER LDD-S Surface Mount

Lapcon INSTRUCTION



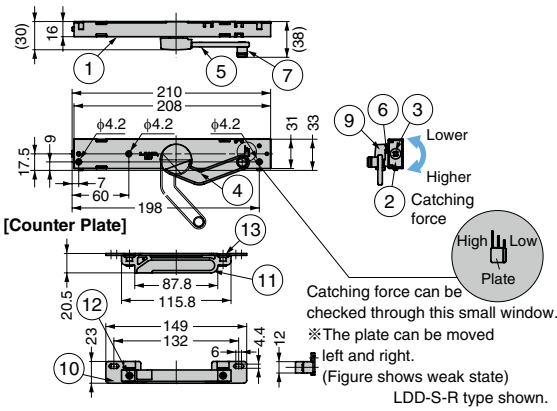
LDD-S-R DBR (right-handed)

- Surface mount type.
- Easy to determine installation position.
- Counter plate position and pull-in force (catching force) adjustable after installation.
- Unobtrusive design: damper unit is only 20mm high, easily fits most door frames.
- Self & soft-close from final 15°. Door starts to close slowly from a earlier position compared with conventional products, reducing the load applied on the hinges.
- Door can be opened more easily as compared with door closer.
- Self & soft-close function can be turned off when the arm is pulled in with door opened. (When the arm is pulled out, self & soft-close function can be turned on again.)
- Concealed type door damper LDD-V 1 also available.

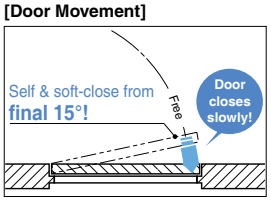
When opening, the arm comes off from the counter plate and the door can rotate freely!

[Specifications]
- Passed 100,000 open/close private cycle test.

[Parts Included]
- Countersunk head tapping screw 3.5×30
- Binding head tapping screw 4×16

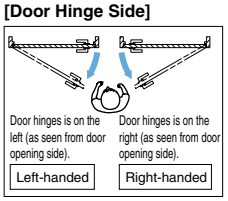


[Door Movement]



Right-handed type shown.Left-handed type is symmetrical.

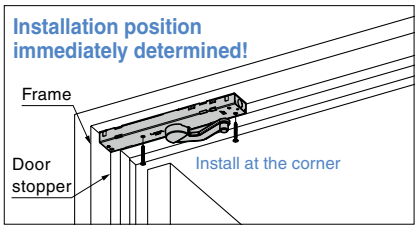
[Door Hinge Side]



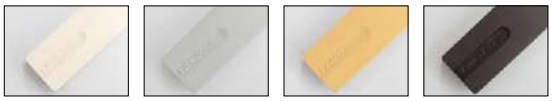
Video Link

Video Link

[Easy to Install and Adjust]



[Available Colours]

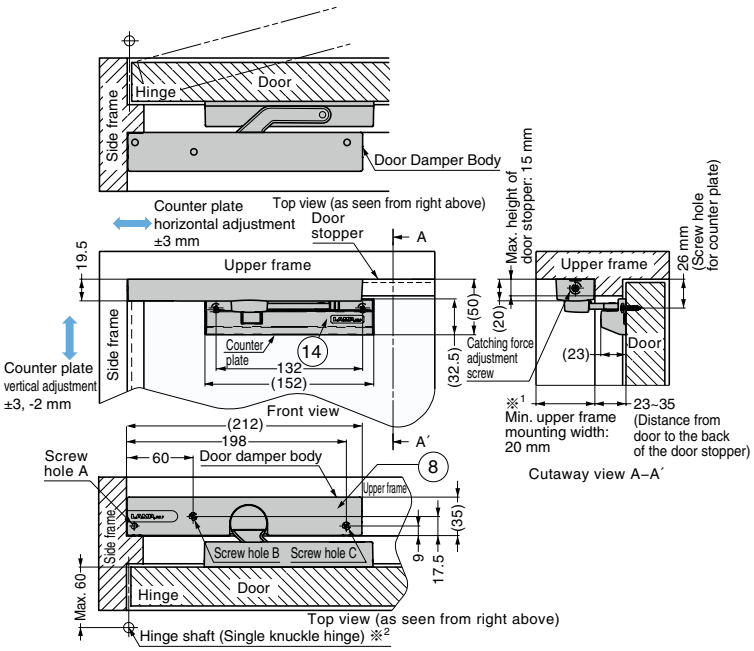

White | Light grey | Light brown | Dark brown

No.	Part Name	Material	Finish / Colour
①	Case	Steel (SGCC)	Chromate
②	Block	POM	Natural
③	Catching Force Adjustment Screw	Steel	Chromate
④	Arm	Stainless Steel (SUS304)	Plain
⑤	Arm Spacer	POM	See Below
⑥	Arm Axis	Zinc Alloy (ZDC)	Chromate
⑦	Roller	POM	Grey
⑧	Body Cover 2	ABS	See Below
⑨	Arm Cover		
⑩	Counter Plate	Steel (SPCC)	Chromate
⑪	Guide	Zinc Alloy (ZDC)	
⑫	Screw	Steel (SWCH)	Nickel
⑬	Nut	Steel (SPCC)	
⑭	Counter Plate Cover 2	ABS	See Below

RoHS	CAD	Item Code	Item Name	Colour	Type	Door Width	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-018-984	LDD-S-RWT	White	Right-handed	Max. 900	15~40	550	1	20
G	3D	270-018-985	LDD-S-LWT		Left-handed			550	1	20
G	3D	270-018-986	LDD-S-RLGR	Light Grey	Right-handed			550	1	20
G	3D	270-018-987	LDD-S-LLGR		Left-handed			550	1	20
G	3D	270-018-988	LDD-S-RLBR	Light Brown	Right-handed			550	1	20
G	3D	270-018-989	LDD-S-LLBR		Left-handed			550	1	20
G	3D	270-018-990	LDD-S-RDBR	Dark Brown	Right-handed			550	1	20
G	3D	270-018-991	LDD-S-LDBR		Left-handed			550	1	20

Refer to 1 : P.532, 2 : P.537

[Installation]



※1 Top view above is for the upper frame mounting width above 25mm.When the distance from door to the back of the door stopper is 20mm~25mm, please use the screw hole A and C.
※2 Refer to 1 for 3-way adjustable concealed hinge HES3D. ※Can not be used with HES3D-90 2.

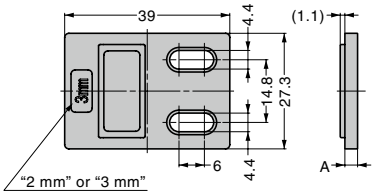
Refer to 1 : P.152, 2 : P.161

Safety Cautions

- **Do not drop or give strong impact to this product.**
- This product can not resist strong wind.Do not use under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use.Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0℃ ~ 40℃ .
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- This product is supplied with installation instruction.
  Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

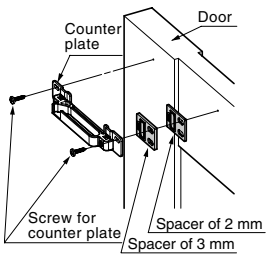
SPACER FOR LDD-S LDD-S-P

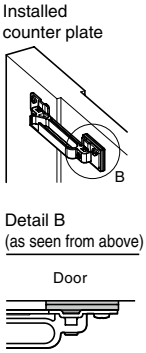
- For Lapcon door damper LDD-S 1.
- Used when installing LDD-S to a door with gap.
- Two types available: 2mm thickness and 3mm thickness.
- Two spacers can be used in combination for gaps of 4, 5, 6mm.
- Counter plate of LDD-S adjustable vertically and horizontally with the spacer installed.



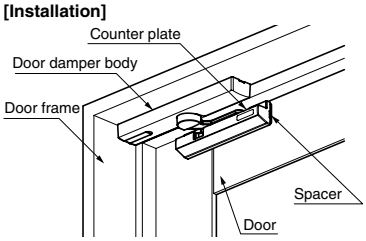
[Installation] In case of 5mm thickness gap

- Place the counter plate spacer on the gap part of the door and pinch it with the counter plate.



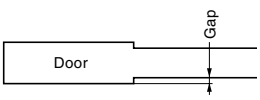


[Installation]



[Remarks Before Installation]

- Check the gap of the door surface and choose the suitable spacer (combination of spacers).

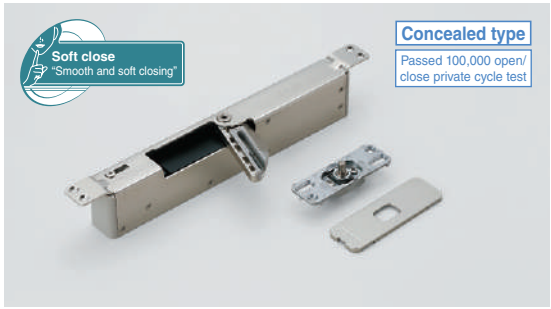


RoHS	CAD	Item Code	Item Name	Material	Colour	A	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-021-019	LDD-S-P2BL	ABS	Black	2	1.8	100	1000
G	3D	270-021-020	LDD-S-P3BL			3	2.8	100	1000

Refer to 1 : P.536

DOOR DAMPER LDD-V100 For Heavy Doors / Concealed

Lapcon INSTRUCTION



LDD-V100-NI-L shown.

- Unique door damper applicable to door weight up to 100 kg.
- Suitable for door weight 40~100 kg.
- Damper body is completely hidden when the door is closed.
- Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.
- Door can be opened more easily as compared with door closer.
- Damper force is adjustable.
- Counter plate is 3-way adjustable.
- iF Design Award winner 2019.
- Reddot Product Design winner 2019.
- Can be used with the following hinges.
  - HES3D-E190 1
  - HES3D-E160 2

Counter plate cover (Nickel/Dark brown)

reddot award 2019 winner

iF DESIGN AWARD 2019

GOOD DESIGN

Video Link

Video Link

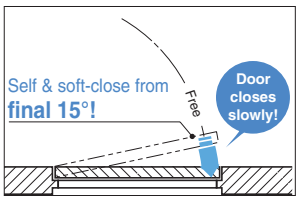
[Applications]

- Heavy duty interior door (shop, housing)

[Parts Included]

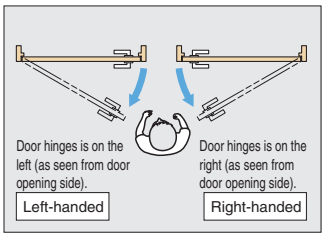
- Tapping screw 3.5×20
- Attachment Jig
- Cutout template

[Door Movement]

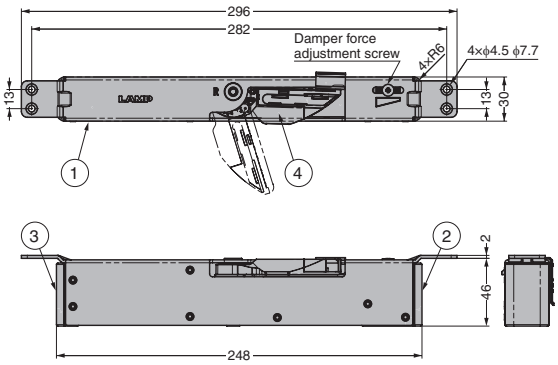


Right-handed type shown.Left-handed type is symmetrical.

[Door Hinge Side]

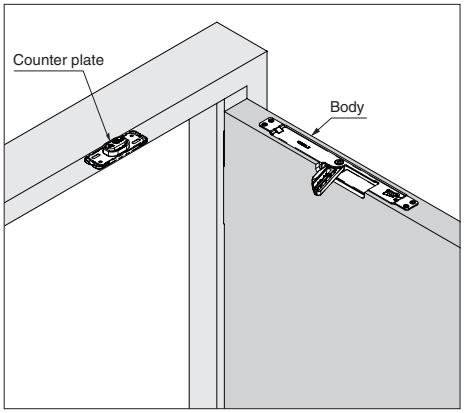


[Body]

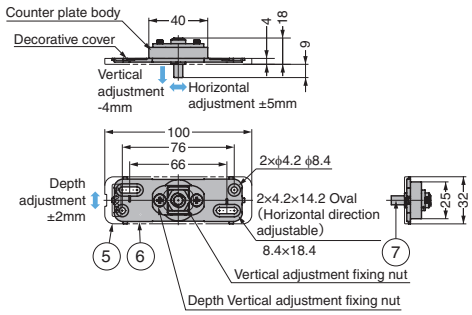


※Below drawing shows right-handed type. Left-handed type is symmetrica

●**Installation**



[Counter Plate]



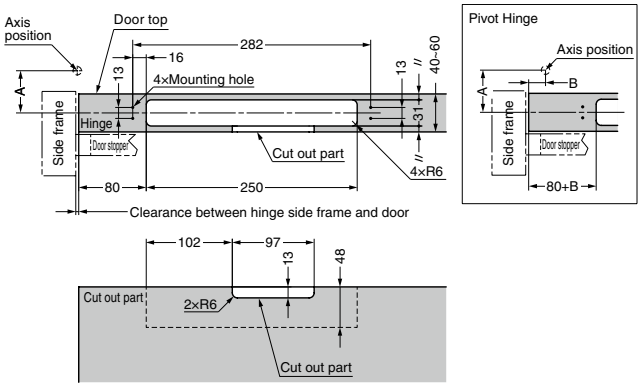
No.	Part Name	Material	Finish / Colour
①	Case	Steel (SPCC)	Nickel
②	Damper Base	POM	Grey
③	Spring Base	POM	Grey
④	Arm Cover	POM	Grey
⑤	Arm	Zinc Alloy (ZDC)	Nickel
⑥	Counter Plate Cover	ABS	Dark Brown/Nickel
⑦	Counter Plate Base	Zinc Alloy (ZDC)	–
⑧	Counter Plate Shaft	Steel (SUM)	Nickel

RoHS	CAD	Item Code	Item Name	Type	Counter Plate Cover	Door Width	Door Thickness	Door Weight (kg)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-034-821	LDD-V100-DBR-R	Right-handed	Dark Brown	Max. 900	40~60	40~100	920	1	10
G	3D	270-034-822	LDD-V100-DBR-L	Left-handed					920	1	10
G	3D	270-034-823	LDD-V100-NI-R	Right-handed	Nickel				920	1	10
G	3D	270-034-824	LDD-V100-NI-L	Left-handed					920	1	10

Refer to 1 : P.156, 2 : P.157

[Cut Out Dimensions for Door]

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



※Please use a door structure (core material) that can maintain sufficient strength even after cutting out.

Dimension from frame to bore position of counter plate (mm)

Door Hinge		Clearance Between Hinge Side Frame and Door (mm)				
		1	2	3	4	5
HES3D-E160, E190		217	218	219	220	221
Butt Hinge	A=20~35	220	221	222	223	224
	A=35~50	223	224	225	226	227
Pivot Hinge	A=20~35	220+B	221+B	222+B	223+B	224+B
	A=35~50	223+B	224+B	225+B	226+B	227+B

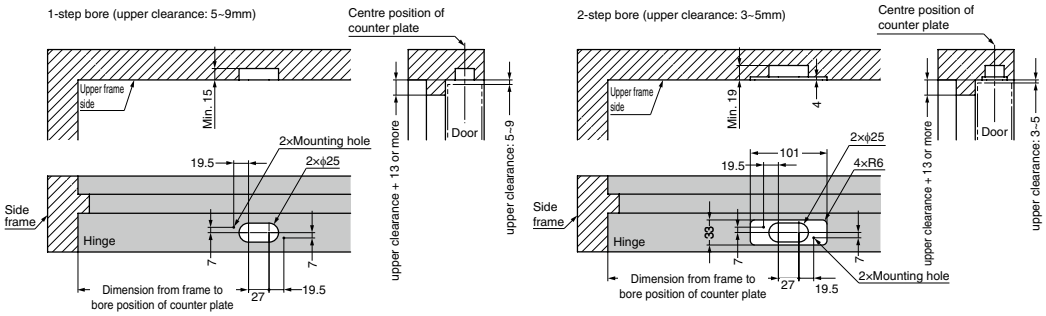
※If clearance between hinge side frame and door is beyond the range in the table above, calculate as per the table below.

Door Hinge		Dimension from Frame to Bore Position of Counter Plate (mm)
HES3D-E160, E190		216 + Clearance Between Hinge Side Frame and Door
Butt Hinge	A=20~35	219 + Clearance Between Hinge Side Frame and Door
	A=35~50	222 + Clearance Between Hinge Side Frame and Door
Pivot Hinge	A=20~35	219 + B + Clearance Between Hinge Side Frame and Door
	A=35~50	222 + B + Clearance Between Hinge Side Frame and Door

※ Refer to 1 for 3-way adjustable concealed hinge HES3D.

[Cut Out Dimensions for Frame]

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



Safety Cautions

◆**Do not drop or give strong impact to this product.**

- This product can not resist strong wind. Do not use it under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use. Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0℃ ~ 40℃
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- Please install this product horizontally. Otherwise, it may not operate properly.
- After vertical adjustment of counter plate, tighten the fixing nut firmly.
- This product is supplied with installation instruction. Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

Refer to 1 : P.152

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

- Check new product information
- View product introduction video
- Browse digital web catalogue Refer to Back Cover
- Use product selection tool Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

DRAWER SLIDES

Drawer slides are parts of linear motion mechanism.

[Drawer Slides]
Sugatsune offers a broadest line of products in the industry, from small and thin slides to ultra heavy duty ones with a load capacity up to 272 kgf/pair.
In terms of functionality, standard products are equipped with soft-close, push-to-open, 2-ways, bumper and other functions.
Besides, we also offer made-to-order specifications even for small lot, such as setting a pocket or claw for installing on the slide, or processing a clinching nut in advance for screwing.

[Linear Slides]
Linear slides are used for the linear motion parts of various kinds of equipment. In recent years, they are also used for opening/closing of station platform doors, etc. Sugatsune mainly offer roller type, ball type and ball bearing-less (sliding) type.

SUGATSUNE

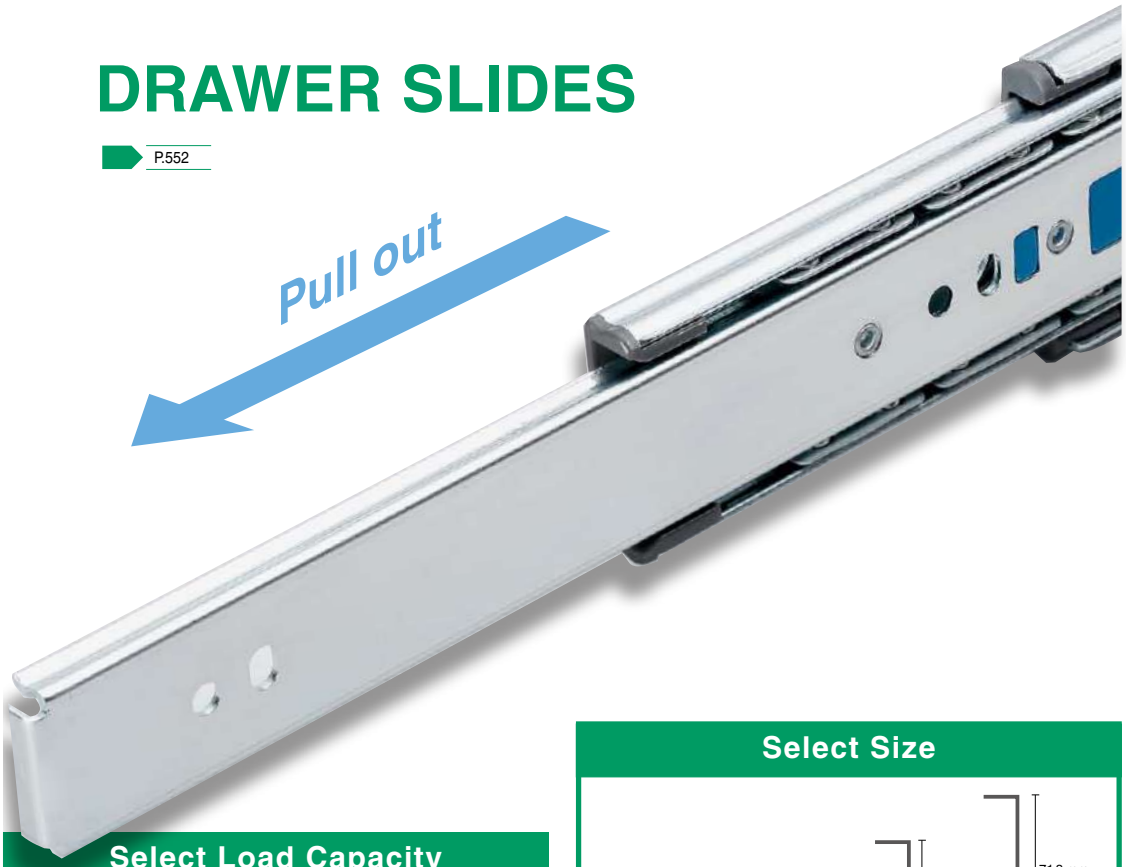
June 2022

SOFT-CLOSE SLIDES
PUSH-TO-OPEN SLIDES
MINI SLIDES
MEDIUM SIZE SLIDES (STAINLESS STEEL)
MEDIUM SIZE SLIDES (ALUMINIUM)
MEDIUM SIZE SLIDES (OTHERS)
LINEAR SLIDES
STAINLESS STEEL
ALUMINIUM
STEEL

Wide Variation

DRAWER SLIDES

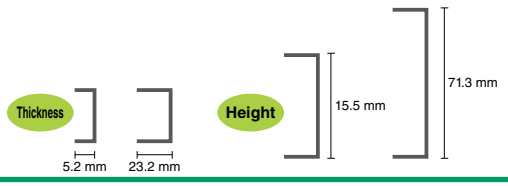
P.552



Select Load Capacity

11N~2667N

Select Size



Select Material

Steel | Aluminium | Stainless Steel

Extra Functions

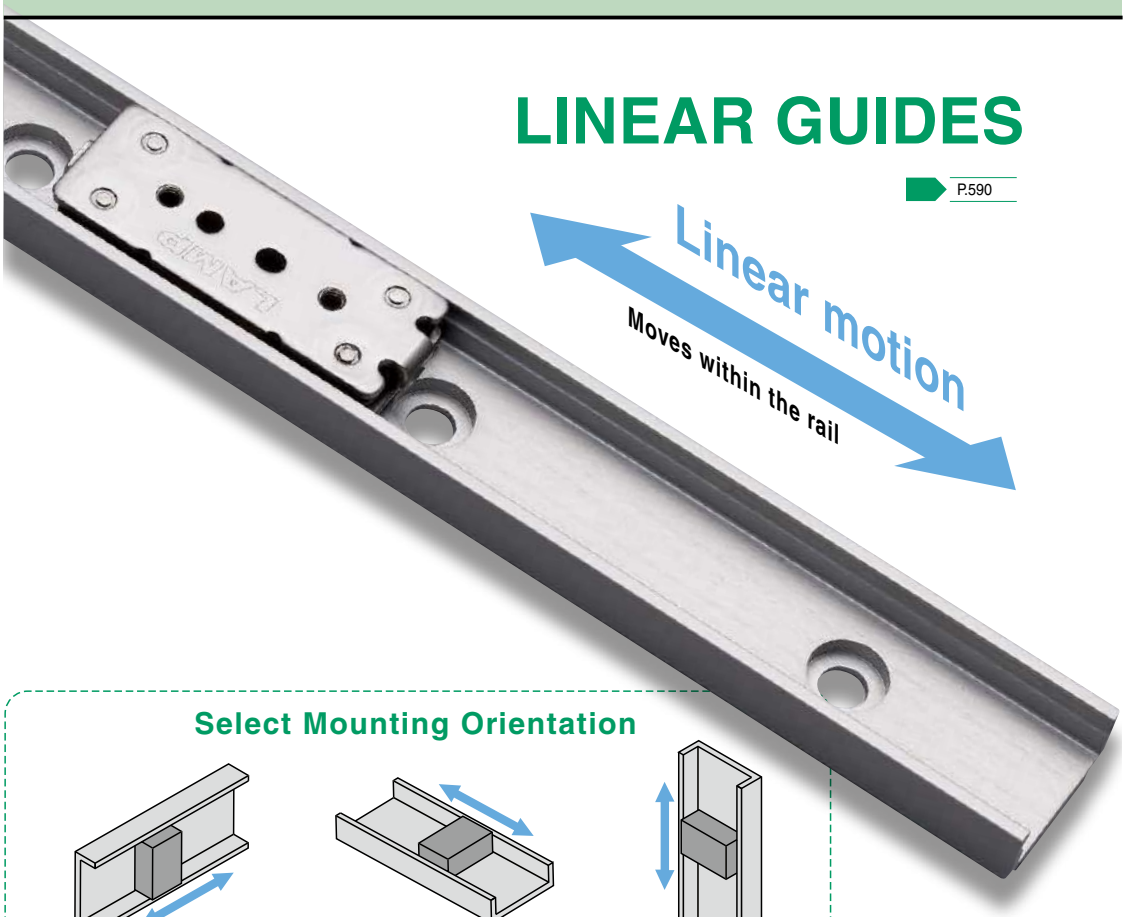
Soft-closing ▶ P.552

Push-open ▶ P.558

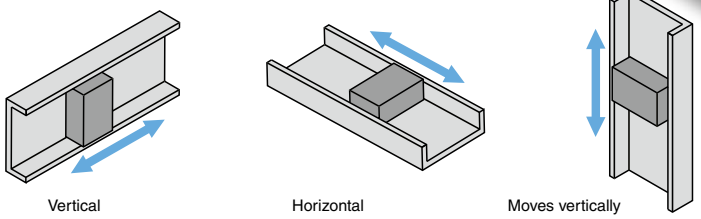
Abundant variety | **Plentiful inventory** | **Custom orders available**

LINEAR GUIDES

P.590



Select Mounting Orientation



Select Material

- Steel
- Aluminium
- Stainless Steel

Select Type

- Roller P.590~
- Ball P.602~
- Sliding (Greaseless) P.592~

LINEAR GUIDES PICKUP

LGB P.598~

MRS P.592~

MLG P.590~

SCRL2 P.565~

ARL2-16 P.562~

TSSL P.602~

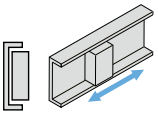
Be Sure to Read

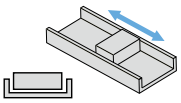
Drawer Slides

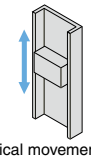
- For one cabinet, select slides from the same series. Or the sliding feeling and noise may change greatly.
- Some stainless steel slides use certain plastic parts. Please confirm when using under high temperature and chemical environment.
- Detachable ball bearing type slides (not including those with drawer bracket) combine the inner member and outer member with high precision fitting, so do not change the combination arbitrarily.
- For slides with holding function in closed/opened position, holding force varies depending on their structure.
- The structure of self-closing mechanism varies depending on slides.
- Slides with a bumper reduce the metal-to-metal noise at the end of the course, but cannot completely mute the noise. Also noted that the noise from retainer movement cannot be relaxed.

Linear Slides

- Linear slide has different load capacity for vertical use and horizontal use.
- For vertical movement, some linear slides can be used, some cannot or unsuitable. Refer to relevant product pages for details.


Vertical use


Horizontal use


Vertical movement

Functions

LOAD CAPACITY — The range of load capacity is in N (Newton).

LOCK CLOSED — The drawer can be locked in fully closed position. Released by lever operation.

LOCK OPENED — The drawer can be locked in fully opened position. Released by lever operation.

FRICTION — The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

DETACH — The drawer is detachable.

L=R — Non-handed.

HOLD CLOSED — The drawer can be held in fully closed position.

HOLD OPENED — The drawer can be held in fully opened position.

BUMPER — With a bumper to avoid metal-to-metal noise at the end of the course.

2-WAYS — The drawer can be moved to two ways.

CATCH — Self-closing system catches the drawer when closing.

INDEX

Drawer Slides

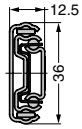
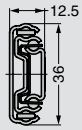
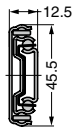
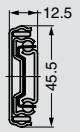
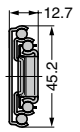
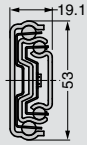
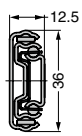
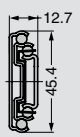
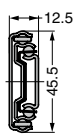
INDEX by Specifications P.545
Cautions for Slide Selection and Installation P.549

Linear Slides

INDEX by Specifications P.551

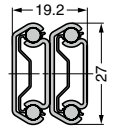
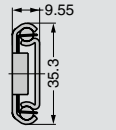
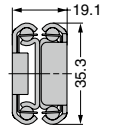
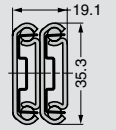
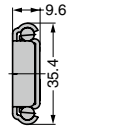
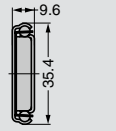
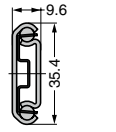
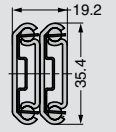
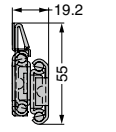
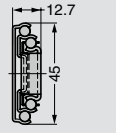
INDEX by Drawer Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pair (200 / 400 / 600 / 800 / 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Soft-Close Slides	Steel	3670 	147~196	3 Members				○			○		P.552
		3670 Black 	147~196					○			○		P.553
		4670 	147~392					○			○		P.554
		4670 Black 	147~392					○			○		P.555
	Stainless Steel	ESR4670 	157~343					○	○				P.556
	Steel	5370 for Heavy Duty 	784~980					○					P.557
Push-to-Open Slides	Steel	3660 	147~196					○			○		P.558
		4638 	265~441					○		○			P.559
		4660 	147~441					○			○		P.560

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Mini Slides	Aluminium Alloy	AR3-16	20~39	3 Members									P.561
		ARW2-16	11~69	2 Members								○	P.562
	Stainless Steel	SCR3	98~118	3 Members									P.563
		SCR3-15S	98~118										P.563
		SCRW2	137~177	2 Members								○	P.564
		SCRW2-15S	137~177									○	P.564

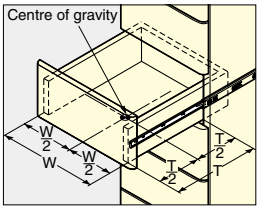
Type	Material	Product Name	Load Capacity N/pair	Slide	Hold When Closed	Detachable	With Bumper	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	ESR-DC4513	392~529	3 Members	○	○		P.566
		ESR-3813	284~441		○	○		P.567
		ESR2021	108~157	2 Members				P.568
		ESR2031	127~167	3 Members				P.569
		SNS27S	176~255	2 Members				P.570
		SNS27D	275~373	3 Members				P.571
		272SL	137~177	2 Members		○		P.572

Type	Material	Product Name	Load Capacity N/pair (200 400 600 800 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	273SL 	118~177	3 Members				○					P.573
		SNS35S 	245~481	2 Members									P.574
		SNS35D 	441~588	3 Members									P.575
		SNS35W 	355~623					○		○			P.576
		ESR1 	245~481	2 Members			○	○					P.577
		ESR13 	245~481						○				P.578
		ESR8 	245~481			○		○					P.579
		ESR7 	355~623	3 Members		○		○					P.580
		ESR3 	422~637					○			○		P.581
		ESR4658 	314~490					○	○				P.582

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	5302S For Heavy Duty	627~1137	3 Members				○		P.583
		ESR5 For Heavy Duty	785~1118	2 Members						P.584
		ESR10 For Heavy Duty	1785~2667	3 Members						P.585
Medium Size Slides (Aluminium Alloy)	Aluminium Alloy	AR2 For Light Weight	80~150	2 Members						P.586
		AR3 For Light Weight	30~110	3 Members						P.586
		AR2-K With Hold-out Detent	85~125	2 Members					○	P.587
		AR3-K With Hold-out Detent	85~105	3 Members					○	P.587

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Others)	Stainless Steel	RKA5	147	2 Members				○					P.588

Cautions for Slide Selection and Installation

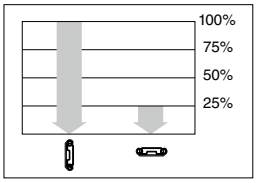


Calculation of slide centre of gravity

The load capacity is determined with the drawer centre of gravity at the centre of travel length and width in the lateral direction. (Refer to left figure). Conditions are set to slide installation width 300mm, about 10 times of withdrawal per month, static load, and the slide is securely fixed to the cabinet and drawer and installed vertically.

※Load capacity change by installation method

Load capacity changes greatly with slide not installed vertically.
For example, the load capacity with slide installed horizontally may be less than 25% of that listed in this catalogue.



[Cautions for Slide Selection]

Slide performance varies depending on its use condition. The durability and load capacity of slide varies greatly depending on cabinet dimensions and centre-of-gravity position, frequency of use, slide installation method, cabinet installation place, etc.

●Slide selection reference

Application examples

※The slide must be installed properly.

Load: 588N (60kgf) Frequency: 1 time / 3 months Installation place: Laboratory, computer room	Load: 196N (20kgf) Frequency: 10 times / day Installation place: Office	Load: 588N (60kgf) Frequency: 1 time / day Installation place: Special places
Recommended slide: Models with load capacity of 588N (60kgf)	**Recommended slide: Models with load capacity of 588N (60kgf)**	**Recommended slide: Models with load capacity of 1176~1960N (120~200kgf)**

●Do not change the combination of inner member and outer member.

[Temperature Range]

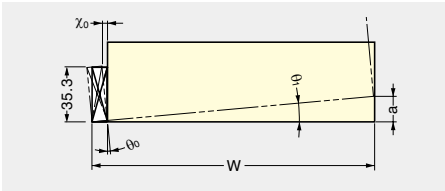
5℃~35℃

Cautions for Slide Installation

※Various kinds of the parts are made of roll-formed metal sheet which may present sharp edges. Please be careful when to install.

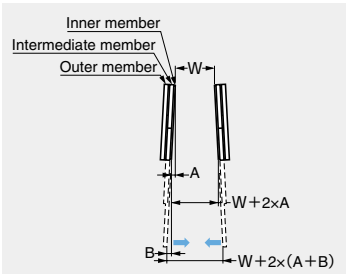
[Installation Parallelism]

1. Front



Although it depends on the parallelism (θ_0), even if the angle is small, the wider the front width (W), the greater the value of a. Large front width and inconsistent parallelism of left and right slides may cause lateral swing. So please minimise the parallelism.

2. Front / Rear



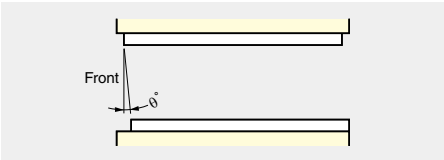
When the rear side is narrowly [widely] installed

When the slide is fully closed, the installation width difference between the front and rear sides is A for single side. When the slide is fully opened, it becomes A+B. The installation width difference between the rear side when fully closed and the front side when fully opened is 2×(A+B). Even if the parallelism deviation is very small, the installation width difference when fully opened becomes larger with the increase of travel length. This difference may cause a force pulling to the inside [outside] on the slide. As the force increases, the ball sliding surface may sag and the strength may be decreased. Also, the slide may not move smoothly. Therefore, please minimise the value of A while considering the installation-side accuracy and installation method (refer to 1 <Installation Example>).

※Allowable range of A: Varies depending on the slide length, travel length, model, and slide use conditions, etc.

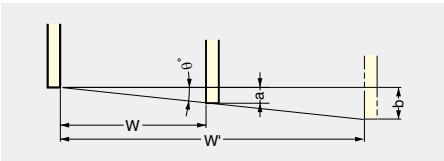
Refer to 1 : P.550

[Installation Perpendicularity]



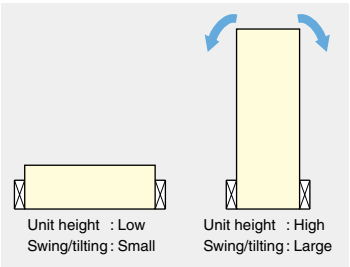
Please minimise the perpendicularity (θ°) to reduce the occurrence of ※ ball creep 1 and lateral swing.

[Installation Width]



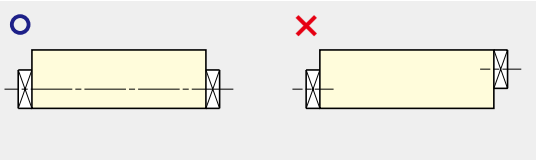
When the slide installation width is large, even if the swing factor of slide is small, the swing becomes strong as the width increases. Also, depending on the handle position and shape, swing may be caused by unstable opening/closing operation of drawer (opening/closing operation is not performed at the centre of the front plate).

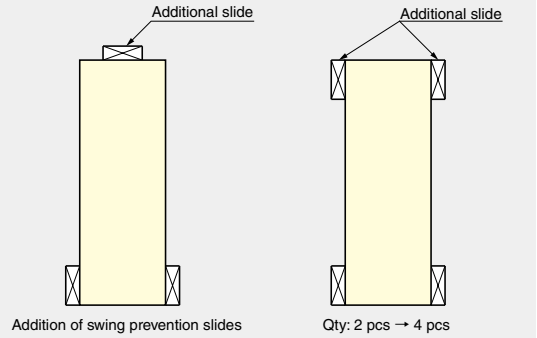
[Drawer Unit Height]



If the drawer unit is high, depending on the installation position, the swing (tilting) of the drawer unit may apply large load to the slide, causing deflection or damage.

[Installation Position of Left and Right Slides with Respect to Drawer Unit]



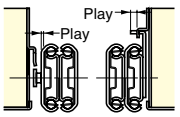


Therefore, please consider model selection, installation position, number of used slides (adding slides for preventing swing) and other conditions such as load.
Refer to <Installation Example>

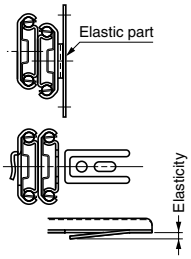
The allowable swing and tolerance may be larger for more flexible slide installation part. For increasing the allowance, please devise the installation method carefully.

<Installation Example>

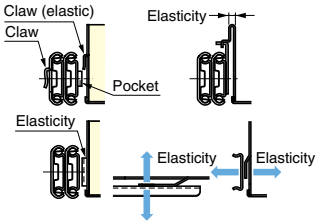
1. Give a play between the slide and the installation part.



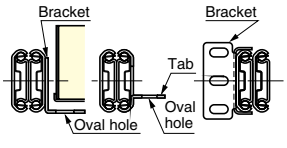
2. Make the slide elastic.



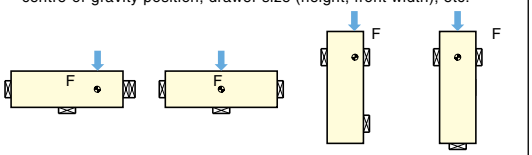
3. Make the installation part elastic.



4. Use bracket and tab to make oval mounting hole.



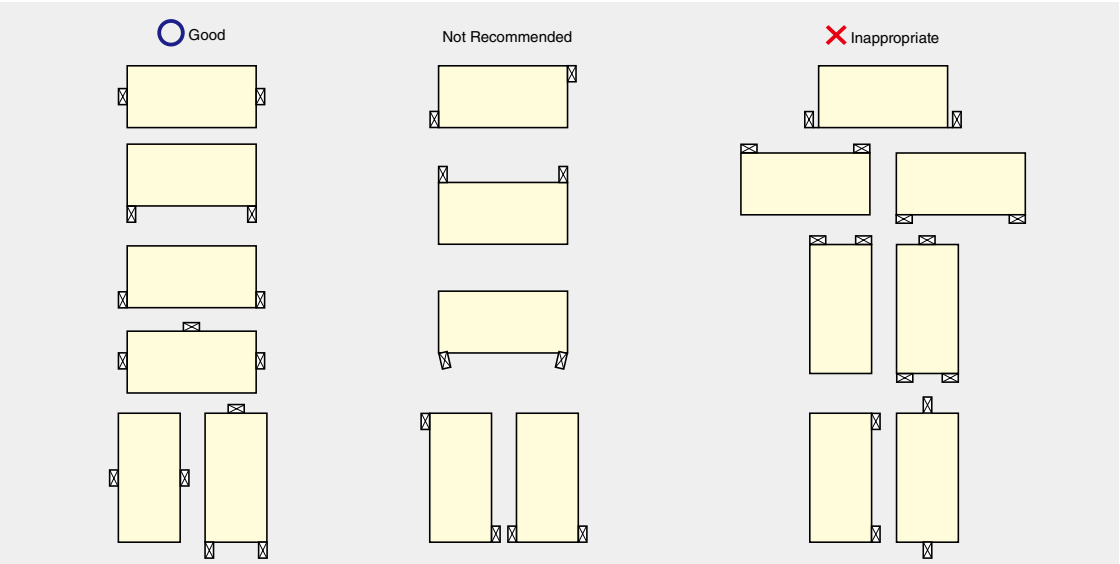
5. Determine the number and models of slides depending on the load, centre-of-gravity position, drawer size (height, front width), etc.



Load: Heavy Centre of gravity: Eccentric Front width: Wide	Load: Heavy Centre of gravity: Centre Front width: Wide	Load: Heavy Centre of gravity: Eccentric Drawer: High	Load: Heavy Centre of gravity: Centre Drawer: High

[Installation of Drawer Slides]

There are following possible installation methods, which may be good, not recommended or inappropriate.
The most important thing for slide installation is to install the slides in parallel.



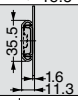
※What is ball creep?

Sometimes the slide can only move within a range less than the travel length. This is called ball creep. Ball creep is likely to occur when slides are not installed in parallel, when not using all the travel length, when not moving smoothly, or when sliding up and down, etc.
Ball creep may be corrected by forcibly opening the slide fully. At this time, please pull it out slowly. Fast opening or strong shock may cause damage.

INDEX by Linear Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (100 200 300 400 500)	Page
Mini Guide Rails	Aluminium Alloy	MRS15	30	100	P.594
		MRS-20	175	300	P.595
		MRS-30	305	520	P.596
		MRS40	490	700	P.597

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (pair) (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (pair) (100 200 300 400 500)	Page
Linear Slides	Aluminium Alloy	ARL2-16	20~49	8~18	P.562
	Stainless Steel	SCRL2	177~235		P.565
		SCRL2-15S	177~235		P.565
	Aluminium Alloy	MLG20	40	40	P.591
		LGB30		294	P.598
	Stainless Steel	ESR9 For Light Weight ※Suitable for 2 slides use and door weight below 5kg. 			P.602
		TSSL			P.602

INDEX (Others)

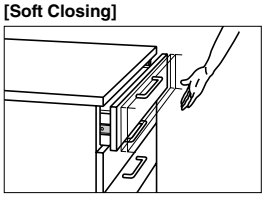
Type	Material	Product Name	Load Capacity N/pc (100 200 300 400 500)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Others	Stainless Steel	ESR2 Under-mount Type	49~78	2 Members			○	○					P.603

FULL EXTENSION SOFT-CLOSE SLIDE 3670

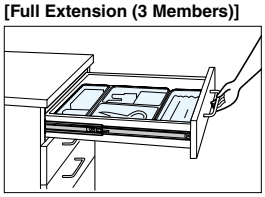
LOAD CAPACITY 147 N,196 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

- Full extension (3 members).
- The drawer can be fully pulled out for slide length 300mm or above.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of the cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.
- Type 4670 with slide width 45.5mm, load capacity 15~40kgf / pair (black chromate: 1, clear zinc chromate 2) also available.

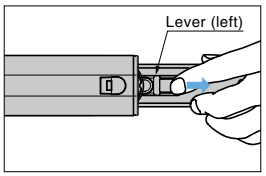
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



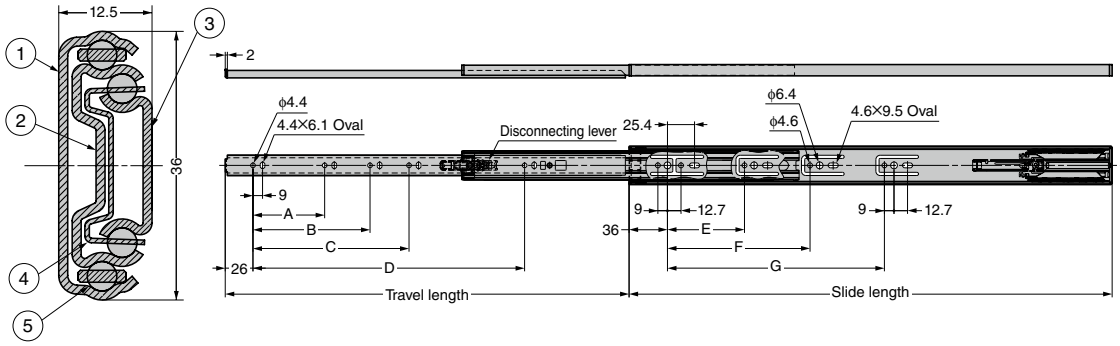
Move the left and right levers towards you at the same time.

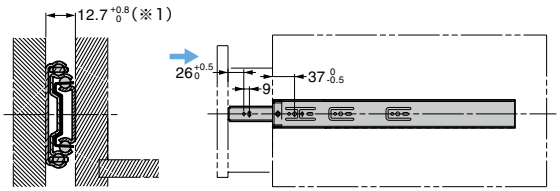
[Remarks]

- Be sure to read the "Cautions" 3.
- Gap between drawer and cabinet beyond the range ※1 in the drawing below may cause unexpected damage to the slide.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Parts Included]

- Truss head tapping screw 4x12





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-027-543	3670-250	250	200	124	–	–	–	87	–	–	147	15	0.54	20	–
G	3D	190-027-544	3670-300	300	300	174				119					0.66	20	–
G	3D	190-027-545	3670-350	350	350	96	224				183	–			0.78	10	–
G	3D	190-027-546	3670-400	400	400	160	256				199		196	20	0.9	10	–
G	3D	190-027-547	3670-450	450	450	96	192	306			247				1.02	10	–
G	3D	190-027-548	3670-500	500	500	128	224	356			215	295			1.12	10	–
G	3D	190-027-549	3670-550	550	550			352	406			343			1.24	10	–
G	3D	190-027-550	3670-600	600	600			384	456		247	375			1.38	10	–

Refer to 1 : P.555, 2 : P.554, 3 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SOFT-CLOSE SLIDE 3670 Black

L=R INSTRUCTION

Soft Closing

- 3-member Soft-Close Slide.
- Smooth sliding even with some cabinet distortion due to the shock absorbing effect of the outer member installation part.
- The inner member is detachable by lifting the lever.

[Specifications]

- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- The maximum width of the drawer is the slide length + 200mm.

[Other]

- Type 1 with slide height 45.5mm, load capacity 15 - 40kgf/pair (black chromate) also available.

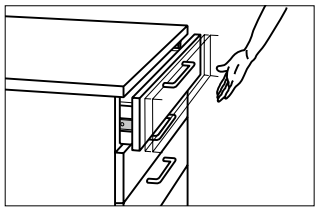
[Parts Included]

- Truss head tapping screw 4×12 (black chromate)

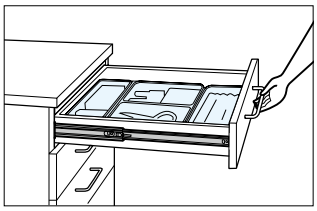
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not push forcefully when the soft-closing mechanism is operating. Otherwise, it may cause oil leakage.
- Handle with care, as scratches stand out on black.

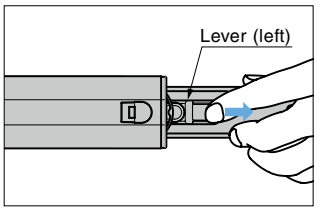
[Soft Closing]



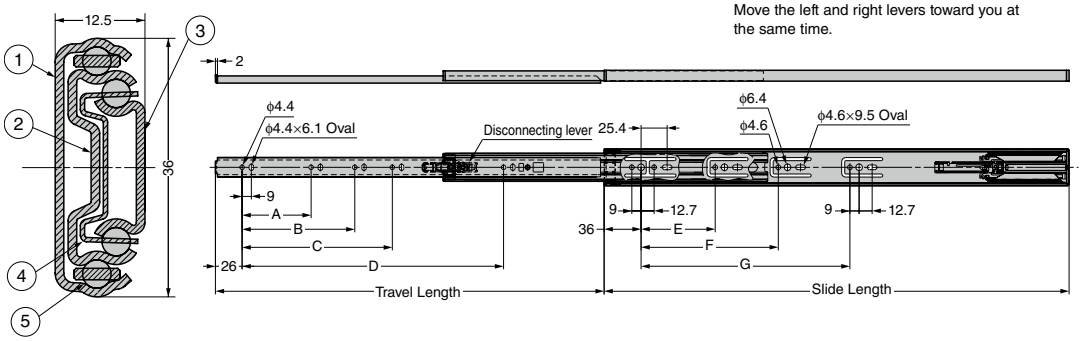
[3-member Type]



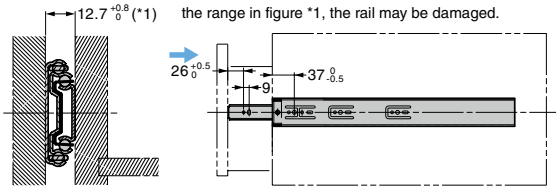
[Easy to Detach]



Move the left and right levers toward you at the same time.



If the clearance between the drawers and the cabinet exceeds the range in figure *1, the rail may be damaged.



No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Electroplating/Black
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	190-048-809	3670-250BL	250	200	124	–	–	–	87	–	–	147	15	540	20	–
G	3D	190-048-810	3670-300BL	300	300	174				119					660	20	–
G	3D	190-048-811	3670-350BL	350	350	96	224				183				780	10	–
G	3D	190-048-812	3670-400BL	400	400	160	256				199		196	20	900	10	–
G	3D	190-048-813	3670-450BL	450	450	96	192	306			247				1020	10	–
G	3D	190-048-814	3670-500BL	500	500	128	224	356			215	295			1120	10	–
G	3D	190-048-815	3670-550BL	550	550			352	406			343			1240	10	–
G	3D	190-048-816	3670-600BL	600	600			384	456		247	375			1380	10	–

Refer to 1: P.555, 2: P.549

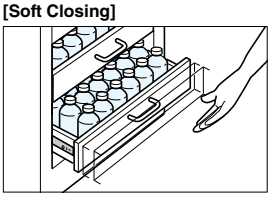
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SOFT-CLOSE SLIDE 4670

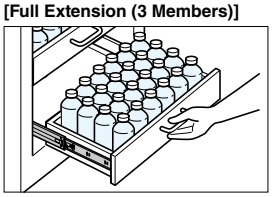
LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With soft closing mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be pulled out beyond the slide length for slide length above 350mm.
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

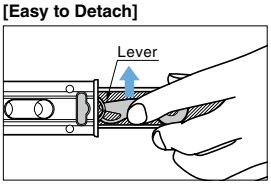
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



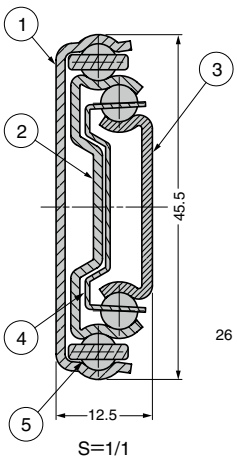
Simultaneously move the left lever upwards and the right lever downwards.

[Remarks]

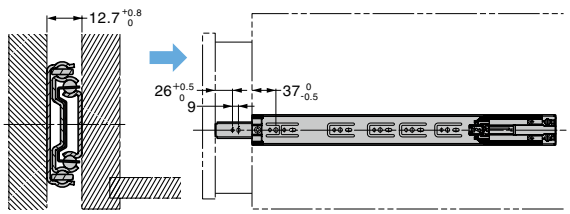
- Be sure to read the "Cautions" 1.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

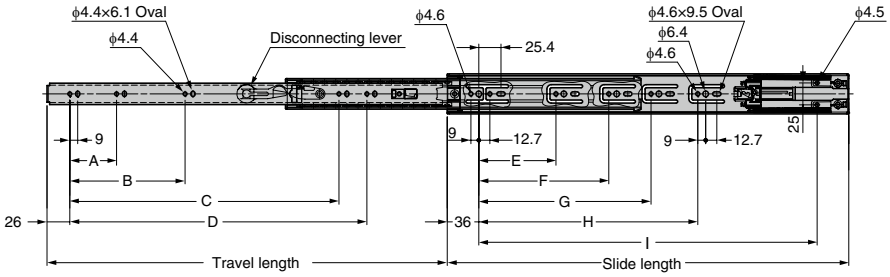
[Parts Included]

- Truss head tapping screw 4x12



S=1/1





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-265	4670-250	250	175	–	–	124	–	87	–	–	–	179	147	15	0.71	10	–
G	3D	190-021-266	4670-300	300	275			174		119				229	196	20	0.85	10	–
G	3D	190-021-267	4670-350	350	353	96		224			183	–		279	245	25	0.99	10	–
G	3D	190-021-268	4670-400	400	404			254			199			329			1.13	10	–
G	3D	190-021-269	4670-450	450	455	128		294	–		247		–	379	294	30	1.27	10	–
G	3D	190-021-270	4670-500	500	505	96	160	344			295			429	343	35	1.44	10	–
G	3D	190-021-271	4670-550	550	556			394						479	392	40	1.59	6	–
G	3D	190-021-272	4670-600	600	606	128	192	444			215	343		529	294	30	1.77	6	–
G	3D	190-021-273	4670-650	650	653		224	416	494				439	579			1.92	6	–
G	3D	190-021-274	4670-700	700	704			480	544				487	629			2.07	6	–

Refer to 1 : P.549

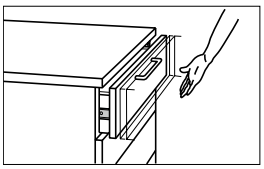
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SOFT-CLOSE SLIDE 4670 Black

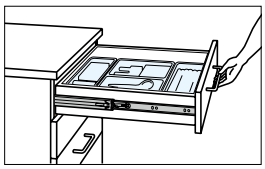
LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

- Full extension (3 members).
- Black version of slide 4670 1.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With soft closing mechanism built-in, easy to install as with conventional slides.
- The drawer can be fully pulled out for slide length 350mm or above.
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

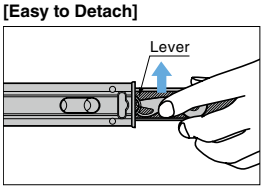
[Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



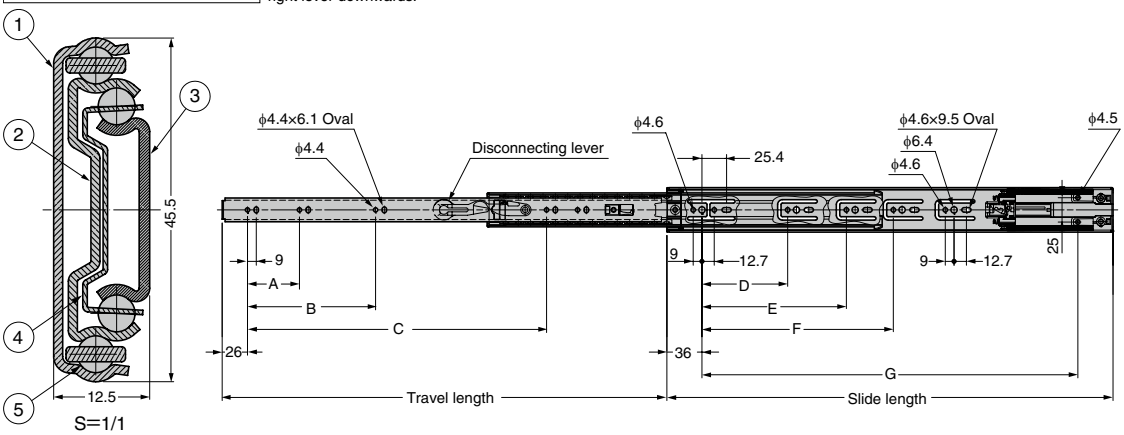
Simultaneously move the left lever upwards and the right lever downwards.

[Remarks]

- Be sure to read the "Cautions" 2.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.
- Noted that scratch is conspicuous on black surface.

[Parts Included]

- Truss head tapping screw 4x12 (black chromate)



No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Black Electrodeposition
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-028-947	4670-250BL	250	175	–	–	124	87	–	–	179	147	15	0.71	10	–
G	3D	190-028-948	4670-300BL	300	275			174	119			229	196	20	0.85	10	–
G	3D	190-028-949	4670-350BL	350	353	96		224		183		279	245	25	0.99	10	–
G	3D	190-028-950	4670-400BL	400	404			254		199		329			1.13	10	–
G	3D	190-028-951	4670-450BL	450	455	128		294		247		379	294	30	1.27	10	–
G	3D	190-028-952	4670-500BL	500	505	96	160	344		295		429	343	35	1.44	10	–
G	3D	190-028-953	4670-550BL	550	556			394		215	343	479	392	40	1.59	6	–
G	3D	190-028-954	4670-600BL	600	606	128	192	444				529	294	30	1.77	6	–

Refer to 1 : P.554, 2 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SOFT-CLOSE SLIDE ESR4670 Stainless steel

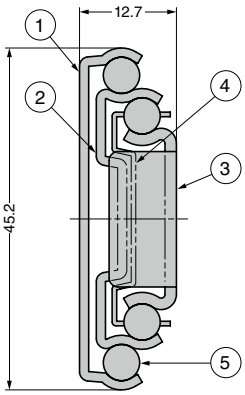
LOAD CAPACITY 157~343 N/pair | L=R | DETACH | HOLD CLOSED | CATCH | INSTRUCTION | SUS

- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With soft closing mechanism built-in, possible to install as with conventional slides.
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The maximum width of the drawer is the slide length +200mm.

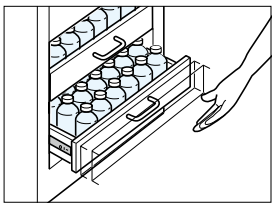
[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Recommended Screws]
- For metal: M4 screw (except for countersunk head)
- For wood: M4 tapping screw (except for countersunk head)

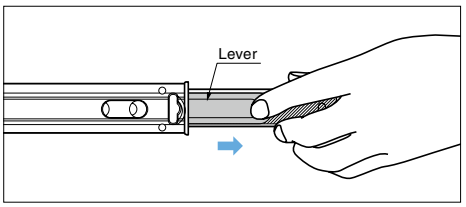
- Slide cross section S=1/1



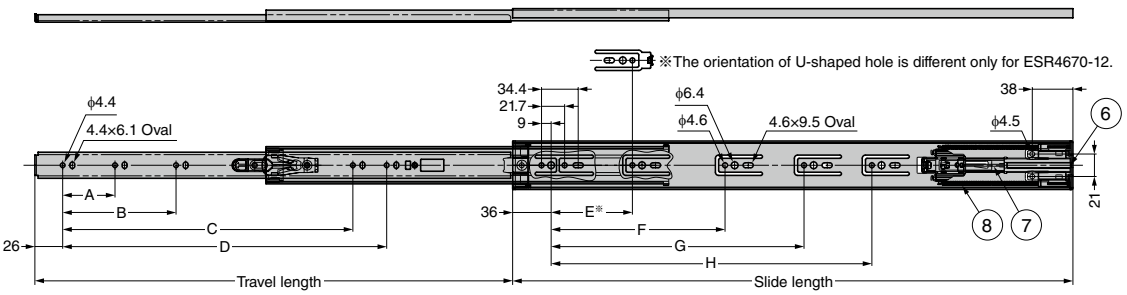
[Soft Closing]



[Easy to Detach]



The drawer can be detached by pulling the lever in the direction of the arrow.



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Intermediate Member	
③	Inner Member	
④	Retainer	
⑤	Balls	
⑥	Damper Case	POM
⑦	Shaft	Stainless Steel (SUS303)
⑧	Spring	Stainless Steel (SUS304)

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-033-964	ESR4670-12	300	265	–	–	–	174	145	–	–	–	157	16	0.78	10	–
G	3D	190-033-965	ESR4670-14	350	340				224	151						0.93	10	–
G	3D	190-033-966	ESR4670-16	400	400	96			256	167				196	20	1.07	10	–
G	3D	190-033-967	ESR4670-18	450	450	128			306	119	215			294	30	1.21	10	–
G	3D	190-033-968	ESR4670-20	500	500	96	160		344		279			343	35	1.36	10	–
G	3D	190-033-969	ESR4670-22	550	550				394		215	311				1.46	10	–
G	3D	190-033-970	ESR4670-24	600	600	128	192		444		247	375				1.66	10	–
G	3D	190-033-971	ESR4670-26	650	650		224	416	494		215	311	407			1.81	10	–
G	3D	190-033-972	ESR4670-28	700	700			480	544			343	471			1.96	10	–

Refer to 1 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

SOFT-CLOSE SLIDE 5370 For Heavy Duty

LOAD CAPACITY 784~980 N/pair

Soft Closing

- A soft-closing rail for heavy weights (load capacity up to 100 kgf).
- Soft-closing spring force can be manually switched.
- The inner member is detachable by lifting the lever.

[Specifications]

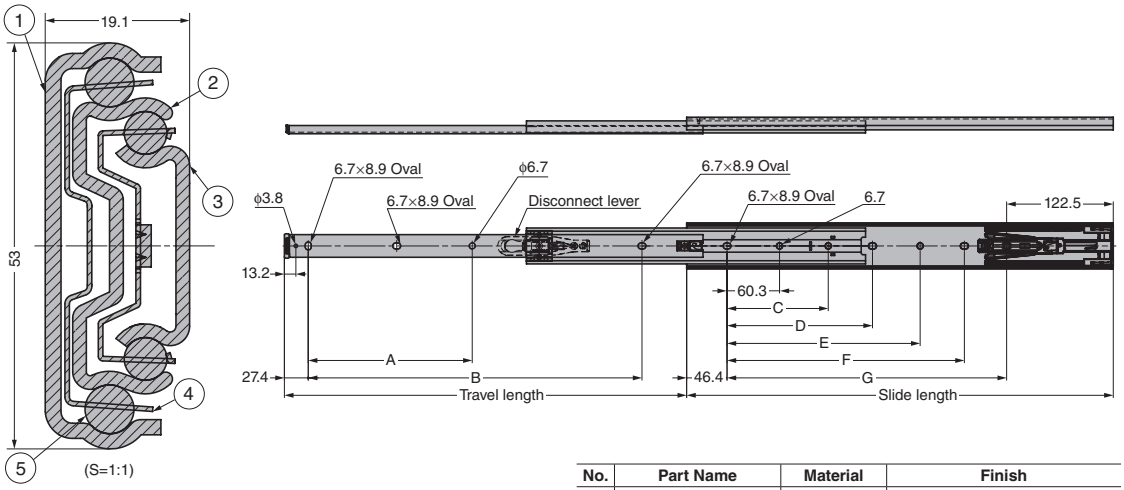
- Soft-closes at 55 mm distance from closed position.

[Remarks]

- Be sure to read the "Cautions" 1.
- Install a stopper to prevent the slide from being pushed in too far when stored.

[Recommended Screws]

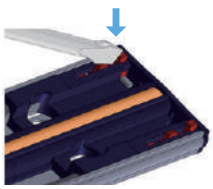
- M5 flat head screws



No.	Part Name	Material	Finish
①	Outer Member	Steel	Bright Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

[Adjusting the Soft Closing Force]

For greater pull-in force



For lower pull-in force

*When adjusting, keep the two springs (red parts) at the same position.

Sold in pairs (2 pcs).

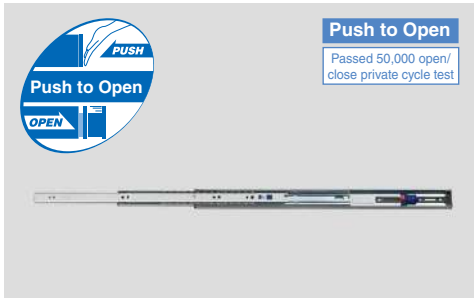
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pair)
G	3D	190-045-778	5370-400	400	375	–	317.5	–	–	127	177.8	231.1	784	80	2150
G	3D	190-045-779	5370-450	450	450		355.6			177.8	228.6	281.1	882	90	2450
G	3D	190-045-780	5370-500	500	500	228.6	406.4			228.6	279.4	331.1	931	95	2750
G	3D	190-045-781	5370-550	550	550		457.2			279.4	330.4	381.1	980	100	3050
G	3D	190-045-782	5370-600	600	600		508			330.2	381	431.1	882	90	3350
G	3D	190-045-783	5370-650	650	650		558.8	228.6	279.4	381	431.8	481.1			3650
G	3D	190-045-784	5370-700	700	700		584.2			431.8	482.6	531.1			3930

Refer to 1 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

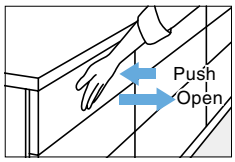
FULL EXTENSION PUSH-TO-OPEN SLIDE 3660

LOAD CAPACITY 147 N,196 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY

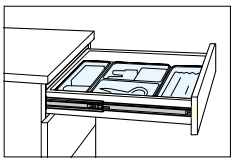


- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- Full extension (3 members).
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see※1 below) may reduce swing during close, and the drawer can be opened even though the push position of front board (push area, see※2 below) is slightly staggered with the centre.
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.
- Type 4660 with slide width 45.5mm, load capacity 15~45kgf / pair also available. Refer to 1.

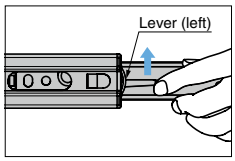
[Push to Open]



[Full Extension (3 Members)]



[Easy to Detach]



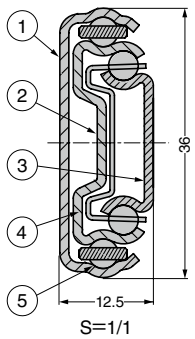
Simultaneously move the left lever upwards and the right lever downwards.

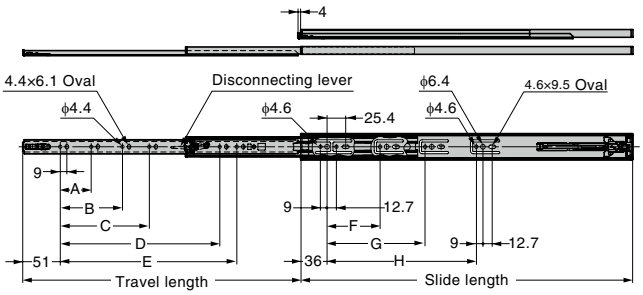
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range※3 shown below.
- The gap between drawer and cabinet beyond the range※3 shown below may cause unexpected damage to the slide.

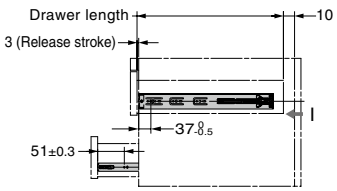
[Parts Included]

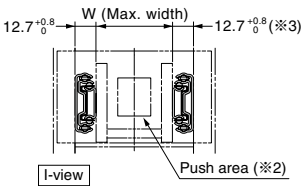
- Truss head tapping screw 4x12
- Hex key



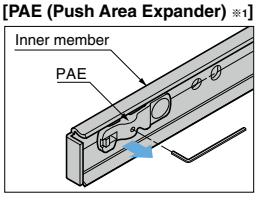


No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–





[PAE (Push Area Expander) ※1]



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-027-551	3660-250	250	250	–				121	87			450			0.56	20	–
G	3D	190-027-552	3660-300	300	300	71	–			171		–		500	147	15	0.68	20	–
G	3D	190-027-553	3660-350	350	350			–		221		183	–	550			0.80	10	–
G	3D	190-027-554	3660-400	400	400		231		–	271		199		600			0.92	10	–
G	3D	190-027-555	3660-450	450	450	103	263			321	119	247		650			1.04	10	–
G	3D	190-027-556	3660-500	500	500		167	295		371		215	295	700	196	20	1.16	10	–
G	3D	190-027-557	3660-550	550	550		199	327		421			345	750			1.28	10	–
G	3D	190-027-558	3660-600	600	600				391	471		247	375	800			1.40	10	–

Refer to 1 : P.560, 2 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION PUSH-TO-OPEN SLIDE 4638

LOAD CAPACITY 265~441 N/pair | L=R | DETACH | HOLD OPENED

- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- With push-to-open mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be held in fully opened position. Release by pressing the front plate.
- The drawer is detachable by lifting the lever.
- High load capacity due to sequential mechanism.

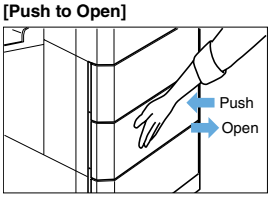
[Remarks]

- Be sure to read the "Cautions" 1.
- When the drawer is closed, pressing the front plate may unexpectedly open the drawer.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- Do not pull the drawer strongly in closed position. Otherwise, the slide may be damaged.

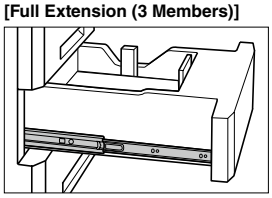
[Recommended Screws]

- M4 round head screw, nominal 4 or M4 binding head screw , nominal 4 or M4 truss head screw.

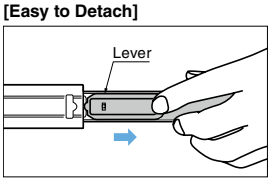
[Push to Open]



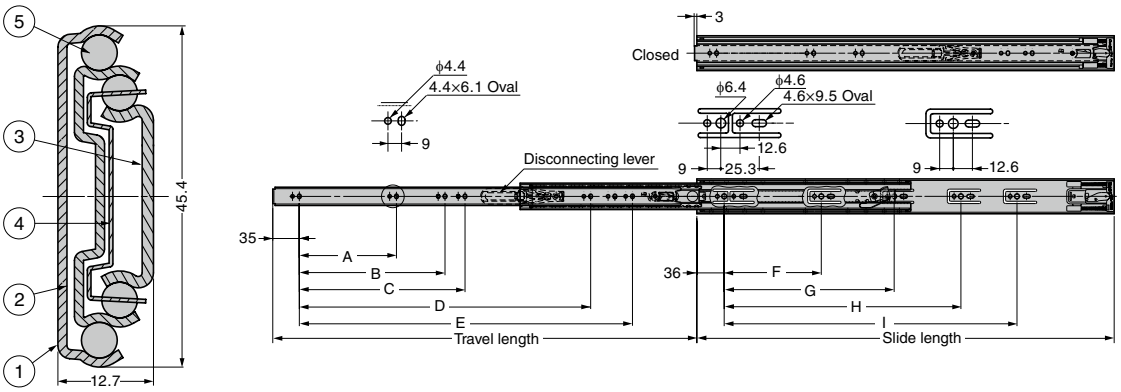
[Full Extension (3 Members)]



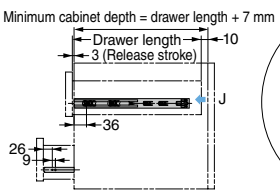
[Easy to Detach]

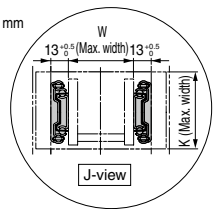


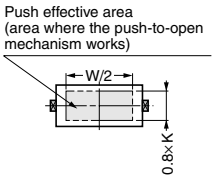
The drawer can be detached by pulling the lever in the direction of the arrow.



S=1/1







No.	Part Name	Material	Finish
①	Outer Member	Steel	Clear Zinc Chromate
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–

Sold in pairs (2 pcs).

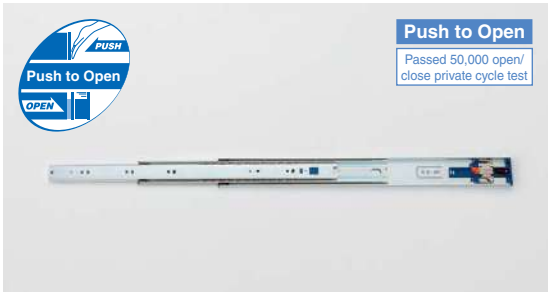
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Max. Drawer Length W	Max. Drawer Length K	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-012-468	4638-14	350	356	–	–	–	–	224	128	–	–	224	550	215	441	45	1	20	–
G	3D	190-012-469	4638-16	400	406					288		256			600	250	422	43	1.14	20	–
G	3D	190-012-470	4638-18	450	457	128	–			320	–		320	–	650	280	392	40	1.28	10	–
G	3D	190-012-471	4638-20	500	508			–		384		224	352		700	310	373	38	1.42	10	–
G	3D	190-012-472	4638-22	550	559				192	416	128		320	416	750	340	353	36	1.56	10	–
G	3D	190-012-473	4638-24	600	610				416	480		–		448	800	375	333	34	1.7	10	–
G	3D	190-012-474	4638-26	650	660		224			512			352	512	850	405	304	31	1.84	10	–
G	3D	190-012-475	4638-28	700	711			448	512	576				544	900	435	265	27	1.98	10	–

Refer to 1 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

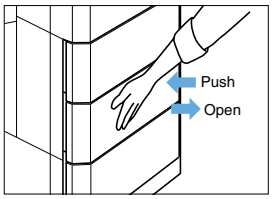
FULL EXTENSION PUSH-TO-OPEN SLIDE 4660

LOAD CAPACITY 147~441 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY

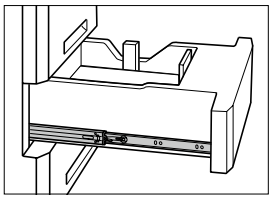


- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see ※2 below) may expand the front plate pushing area when opening the drawer (push area, see ※3 below).
- Plastic spring reduces the metal-to-metal noise at the end of the course.
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.

[Push to Open]



[Full Extension (3 Members)]

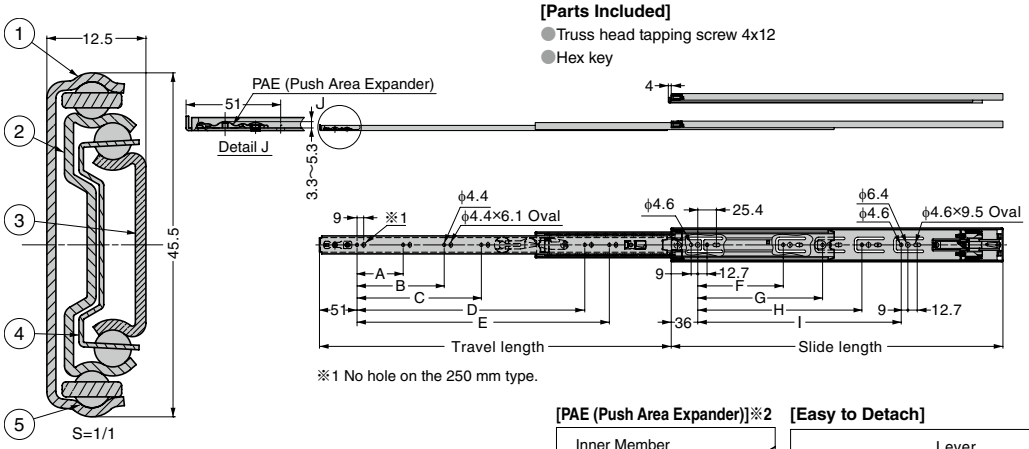


[Remarks]

- Be sure to read the "Cautions" 1.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range ※4 shown below.
- The gap between drawer and cabinet beyond the range ※4 shown below may cause unexpected damage to the slide.

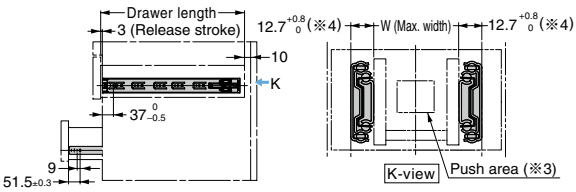
[Parts Included]

- Truss head tapping screw 4x12
- Hex key

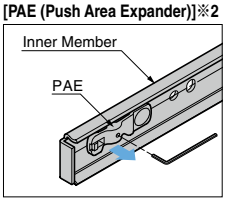


※1 No hole on the 250 mm type.

Minimum cabinet depth = drawer length +10 mm

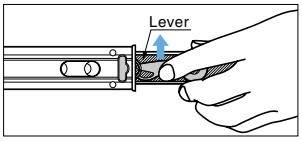


[PAE (Push Area Expander)]※2



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

[Easy to Detach]



No.	Part Name	Material	Finish
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		—

Sold in pairs (2 pcs).

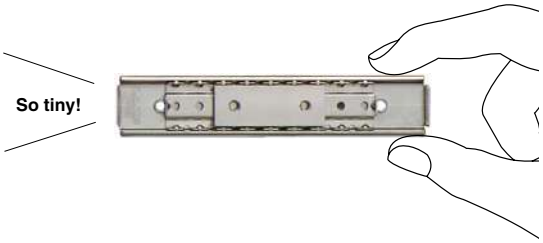
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-275	4660-250	250	200	–	–	–	117	–	87	–	–	–	450	147	15	0.72	10	–
G	3D	190-021-276	4660-300	300	296				167						500	196	20	0.86	10	–
G	3D	190-021-277	4660-350	350	348	71			217	–		183	–		550	245	25	1.01	10	–
G	3D	190-021-278	4660-400	400	406	103			267			215			600	294	30	1.16	10	–
G	3D	190-021-279	4660-450	450	458	71	135		317			279			650	343	35	1.31	10	–
G	3D	190-021-280	4660-500	500	509				327	367	119		335		700	392	40	1.46	10	–
G	3D	190-021-281	4660-550	550	560	103	167		359	417		215		343	750	441	45	1.62	6	–
G	3D	190-021-282	4660-600	600	611		199		391	467					800	343	35	1.78	6	–
G	3D	190-021-283	4660-650	650	661				441	517					850			1.94	10	–
G	3D	190-021-284	4660-700	700	712			263	491	567				535	900			2.11	6	–

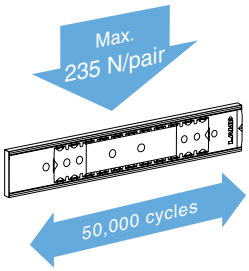
Refer to 1 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

COMPACT SLIDE RAIL – SERIES DIGEST

- Special inner and intermediate profile allows ultra thin size.
- All SCR types successfully passed for the 50,000 open/close cycle test.





16
15.5
(mm)

Item Name	SCR3	SCRW2	SCRL2	ARW2-16	AR3-16	ARL2-16
Load Capacity (N)	98~118	137~177	177~235	11~69	20~39	8~49
Material	Stainless Steel			Aluminium Alloy		

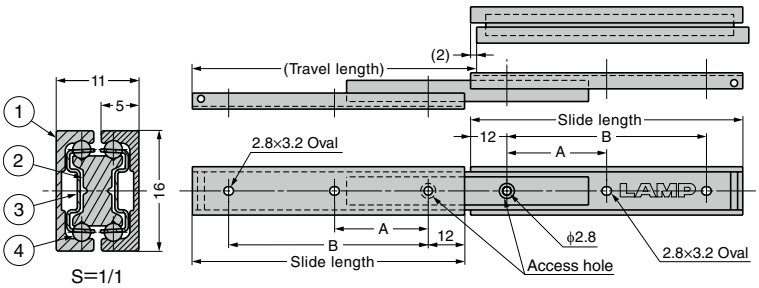
ALUMINIUM MINI SLIDE (FULL EXTENSION) AR3-16

LOAD CAPACITY 20~39 N/pair L=R

- Full extension (3 members).
- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.5 low head screw



*The product shape will be changed once existing inventory runs out.

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-012-581	AR3-16-80	80	77	–	56	20	2	31.44	50	–
G	3D	190-012-582	AR3-16-100	100	117	38	76	29	3	35.6	50	–
G	3D	190-012-583	AR3-16-150	150	151	63	126	39	4	54.3	50	–

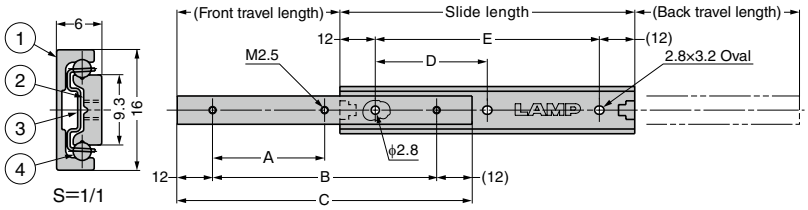
ALUMINIUM MINI SLIDE (2-WAY) ARW2-16

LOAD CAPACITY 11~69 N/pair | L=R | 2-WAYS

- 3/4 extension (2 members).
- Retainer allows smooth movement.
- Only 16mm in height with small deflection, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- For outer member: M2.5 low head screw
- For inner member: M2.5 screw



*The product shape will be changed once existing inventory runs out.

Slide Installation Direction

Vertical | Horizontal

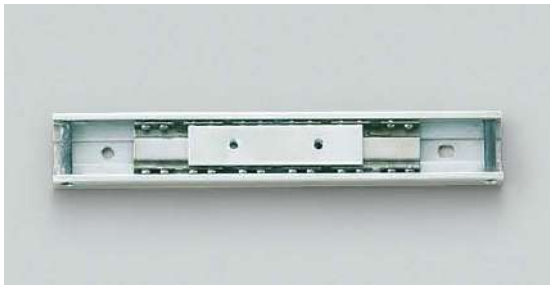
No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length		A	B	C	D	E	Vertical Installation		Horizontal Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
					Front	Back						Load Capacity N/pair	Load Capacity kgf/pair	Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-012-578	ARW2-16-70	70	32	32	–	46	70	–	46	29	3	11	1.1	15.34	100	–
G	3D	190-012-579	ARW2-16-100	100	40	40	38	76	100	38	76	49	5	20	2	21.2	100	–
G	3D	190-012-580	ARW2-16-150	150	79	79	63	126	150	63	126	69	7	30	3.1	29.1	100	–

ALUMINIUM MINI GUIDE ARL2-16

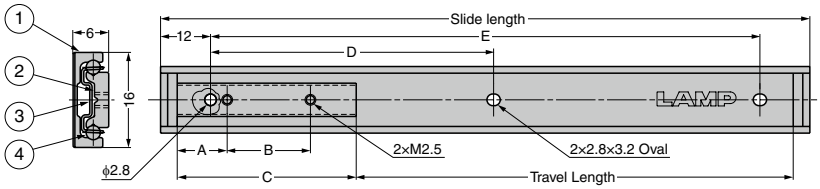
LOAD CAPACITY 8~49 N/pair | L=R



- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- For outer member: M2.5 low head screw
- For inner member: M2.5 screw



*The product shape will be changed once existing inventory runs out.

Slide Installation Direction

Vertical | Horizontal

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Vertical Installation		Horizontal Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
											Load Capacity N/pair	Load Capacity kgf/pair	Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-012-584	ARL2-16-70	70	30	5	18	28	–	46	20	2	8	0.8	13.37	100	–
G	3D	190-012-585	ARL2-16-100	100	52	10	19	39	38	76	49	5	18	1.8	17.98	100	–
G	3D	190-012-586	ARL2-16-150	150	96				63	126					23.28	100	–

MINI SLIDE (FULL EXTENSION) SCR3

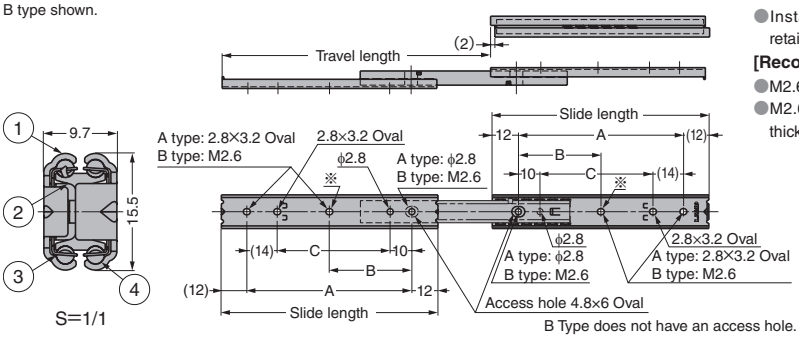
LOAD CAPACITY 98~118 N/pair L=R

B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm



B Type does not have an access hole.

No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
										Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-026-614	SCR3-15-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-615	SCR3-15-100A		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-616	SCR3-15-150A		150	177	126	63	102	118	12	70	50	200
G	3D	190-026-617	SCR3-15-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-618	SCR3-15-100B		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-619	SCR3-15-150B		150	177	126	63	102	118	12	70	50	200

Refer to 1 : P.550

ALL STAINLESS STEEL MINI SLIDE (FULL EXTENSION) SCR3-15S

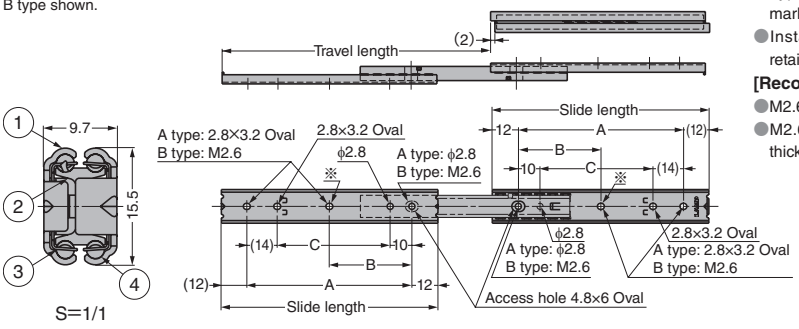
LOAD CAPACITY 98~118 N/pair L=R SUS

B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
										Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-034-800	SCR3-15S-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-801	SCR3-15S-100A		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-802	SCR3-15S-150A		150	177	126	63	102	118	12	70	–	–
G	3D	190-034-803	SCR3-15S-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-804	SCR3-15S-100B		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-805	SCR3-15S-150B		150	177	126	63	102	118	12	70	–	–

Refer to 1 : P.550

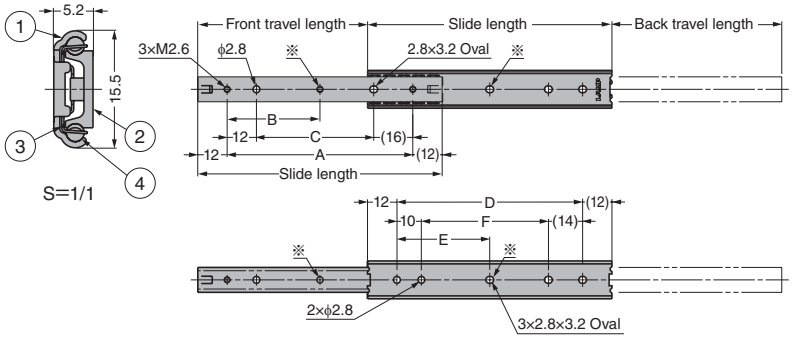
MINI SLIDE (2-WAY) SCRW2

LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS

- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-026-620	SCRW2-15-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	200	400
G	3D	190-026-621	SCRW2-15-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	200	400
G	3D	190-026-622	SCRW2-15-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	100	200

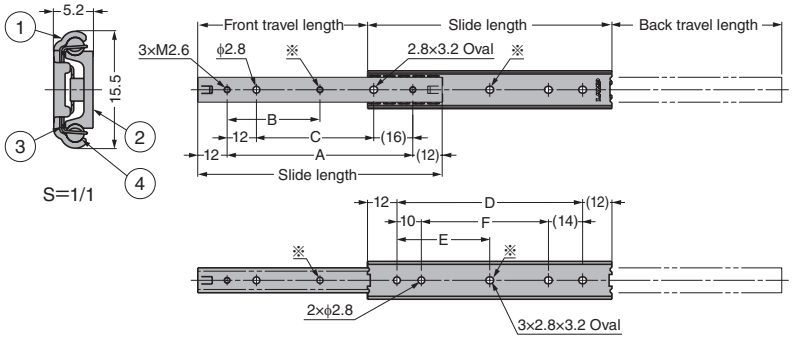
ALL STAINLESS STEEL MINI SLIDE (2-WAY) SCRW2-15S

LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS | SUS

- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



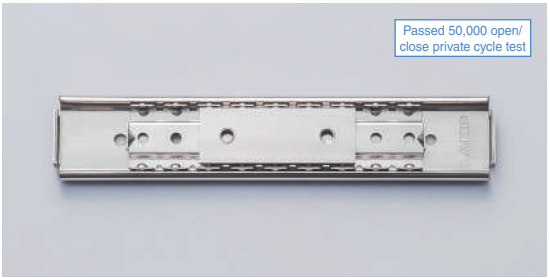
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

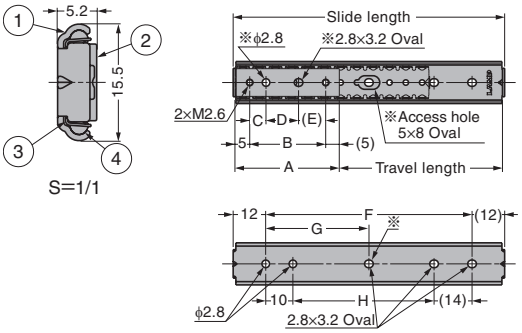
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-034-806	SCRW2-15S-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	–	–
G	3D	190-034-807	SCRW2-15S-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	–	–
G	3D	190-034-808	SCRW2-15S-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	–	–

MINI GUIDE SCRL2

LOAD CAPACITY 177~235 N/pair L=R





- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm

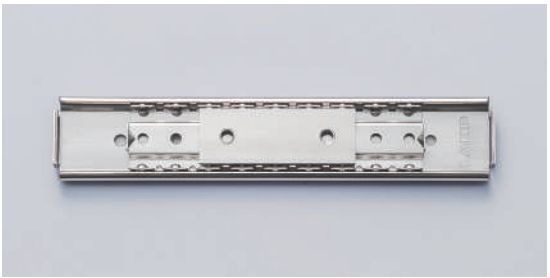
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

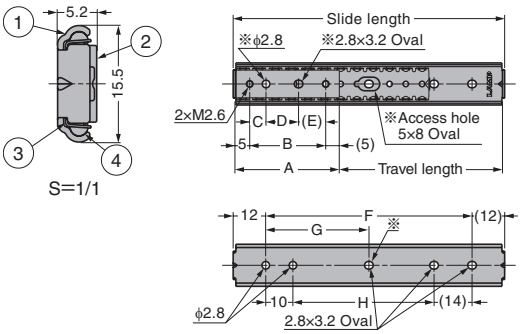
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-026-623	SCRL2-15-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	200	400
G	3D	190-026-624	SCRL2-15-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	200	400
G	3D	190-026-625	SCRL2-15-150A	150	109						126	63	102			29	100	200
G	3D	190-026-626	SCRL2-15-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	100	200

ALL STAINLESS STEEL MINI GUIDE SCRL2-15S

LOAD CAPACITY 177~235 N/pair L=R SUS





- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm

No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-034-809	SCRL2-15S-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	–	–
G	3D	190-034-810	SCRL2-15S-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	–	–
G	3D	190-034-811	SCRL2-15S-150A	150	109						126	63	102			29	–	–
G	3D	190-034-812	SCRL2-15S-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	–	–

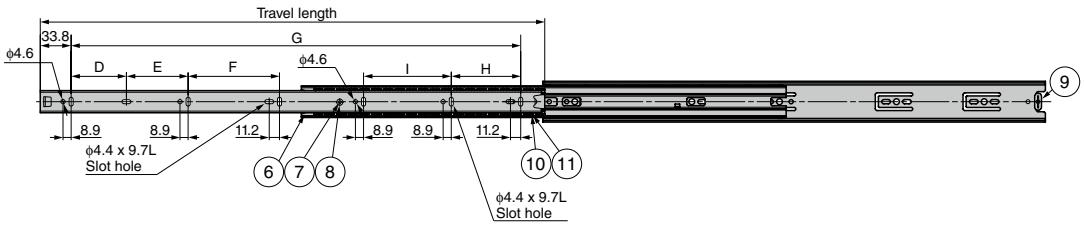
FULL EXTENSION SLIDE ESR-DC4513

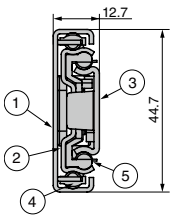
LOAD CAPACITY 40~54 kgf | DETACH | HOLD CLOSED | L=R | SUS

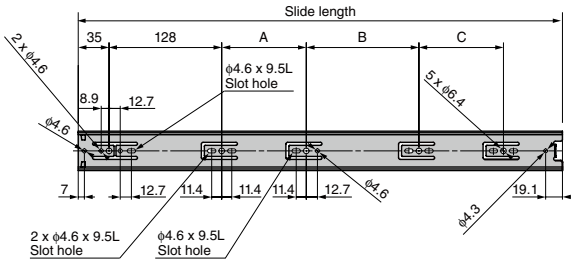
- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

[Recommended Screws]

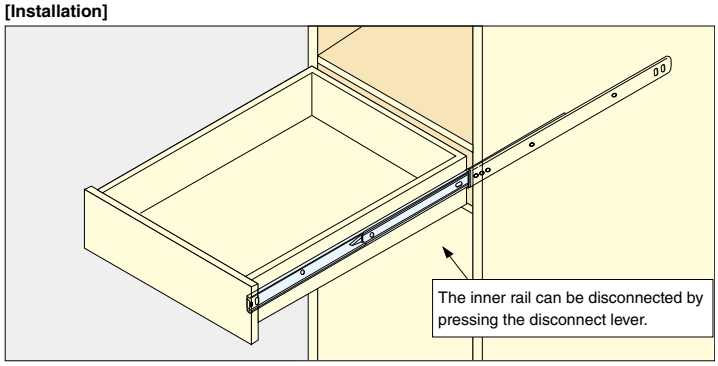
- M4 or #8 Binding, or Pan head screws







[Installation]



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Middle Member	
③	Inner Member	
④	Retainer	Polypropylene
⑤	Ball Case	Stainless Steel (SUS304)
⑥	Stopper (Guide)	Nylon 6
⑦	Disconnector	Nylon 66
⑧	Rivet	Stainless Steel (SUS304)
⑨	Stopper	Urethane
⑩	Balls	Stainless Steel (SUS304)
⑪	Grease	H1 Grade

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g)	Box (pair)
–	3D	190-043-692	ESR-DC4513-8	200	200	–			–			142			529	54	447	10
–	3D	190-035-153	ESR-DC4513-10	250	250		–			–		192			510	52	603	10
–	3D	190-035-154	ESR-DC4513-12	300	300							242	–		490	50	754	10
–	3D	190-035-155	ESR-DC4513-14	350	350			–			–	292		–	480	49	919	10
–	3D	190-035-156	ESR-DC4513-16	400	400		96					342			461	47	1064	10
–	3D	190-035-157	ESR-DC4513-18	450	450		128		60.5			392	72		451	46	1228	10
–	3D	190-035-158	ESR-DC4513-20	500	500	96	192			67.5		442	122		431	44	1373	10
–	3D	190-035-159	ESR-DC4513-22	550	550			96				492	76	96	421	43	1528	10
–	3D	190-035-160	ESR-DC4513-24	600	600		128	128				542	126	–	412	42	1687	10
–	3D	190-035-161	ESR-DC4513-26	650	650			192			96	592	48	128	402	41	1854	10
–	3D	190-035-162	ESR-DC4513-28	700	700							642	98		392	40	2020	10

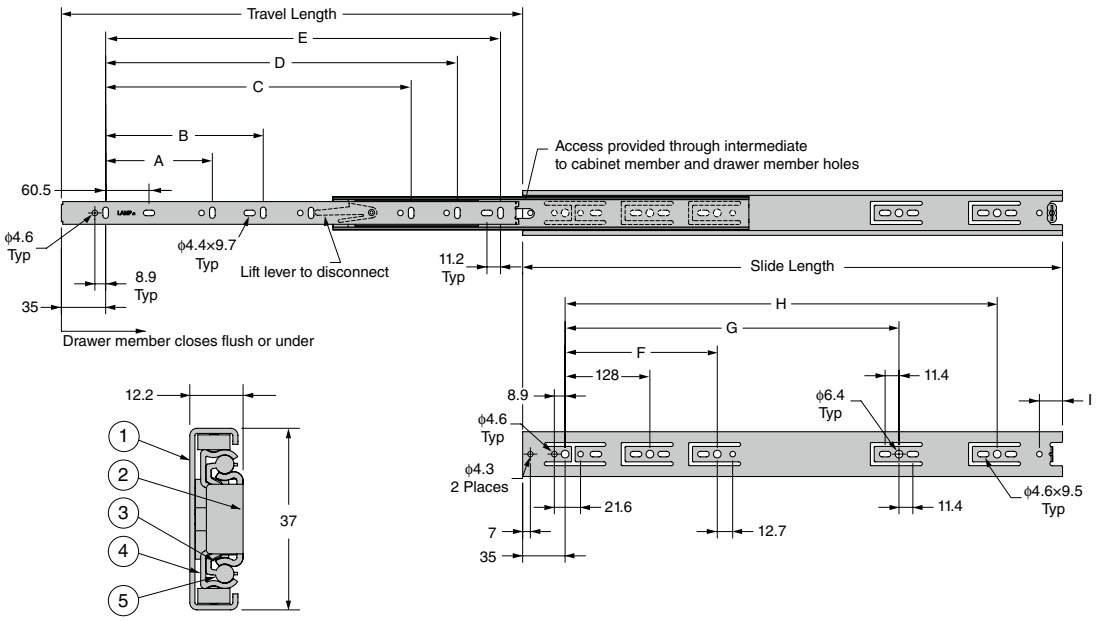
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SLIDE ESR-3813

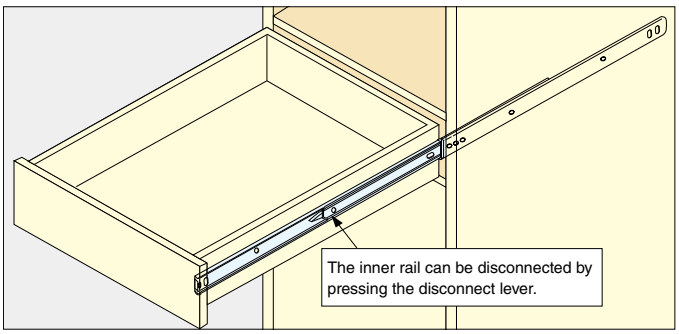
LOAD CAPACITY 29~45 kgf | DETACH | HOLD CLOSED | L=R | SUS

- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

* Mount with M4 or #8 Binding, Pan, or Truss head screws.



[Installation]



No.	Part Name	Material
①	Outer Rail	Stainless Steel (304)
②	Inner Rail	
③	Retainer	
④	Intermediate Member	
⑤	Balls	

Sold in pairs.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Rating (kgf/pair)	Weight (kg/pair)	Box (pairs)	Carton (pairs)
–	3D	190-118-877	ESR-3813-8	200	200	–				142	–			–	45	0.40	10	–
–	3D	190-118-878	ESR-3813-10	250	243					192		–		19.1	42	0.53	10	–
–	3D	190-118-879	ESR-3813-12	300	305	128	–	–	–	242	224		–		42	0.63	10	–
–	3D	190-118-880	ESR-3813-14	350	355					292					38	0.72	10	–
–	3D	190-118-881	ESR-3813-16	400	406					342		320			36	0.81	10	–
–	3D	190-118-882	ESR-3813-18	450	457			320		392		352			34	0.91	10	–
–	3D	190-118-883	ESR-3813-20	500	508					442		416			33	1	10	–
–	3D	190-118-884	ESR-3813-22	550	559				416	492		352	448		31	1.09	10	–
–	3D	190-118-885	ESR-3813-24	600	610		224	416	–	542			480		29	1.18	10	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

3/4 EXTENSION SLIDE ESR2021

LOAD CAPACITY 108~157 N/pair | L=R | SUS

- 3/4 extension (2 members).

[Others]

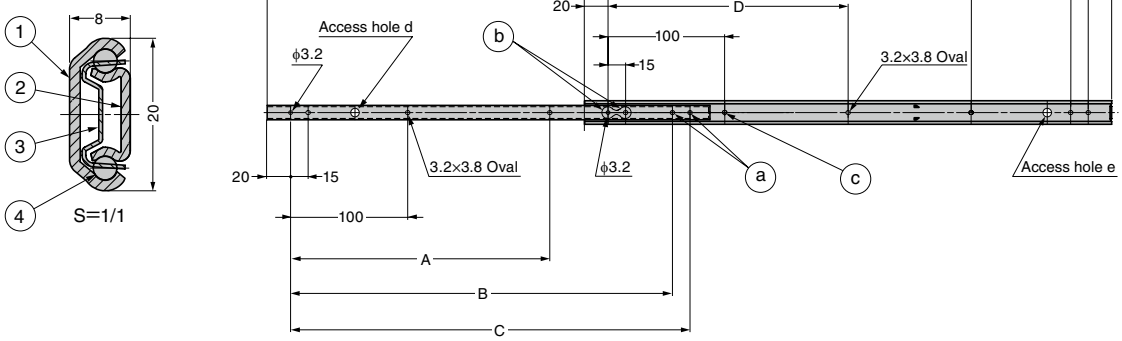
- When fixing the mounting hole ⓑ, move the inner member backwards and use access hole "e".
- When fixing the mounting hole ⓒ for slides above 450mm, move the inner member backwards and use access hole "d".
- Mounting hole ⓐ is unnecessary in normal installation.

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M3 screw with binding or truss head



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-649	ESR2021-200	200	134	–	145	160	–	–	145	160	127	13	0.10	200	–
G	3D	190-011-650	ESR2021-250	250	184	150	195	210			195	210	147	15	0.13	100	–
G	3D	190-011-651	ESR2021-300	300	224	190	245	260	–	160	245	260	157	16	0.15	100	–
G	3D	190-011-652	ESR2021-350	350	244		295	310		210	295	310			0.18	100	–
G	3D	190-011-653	ESR2021-400	400	294	265	345	360		260	345	360	147	15	0.20	100	–
G	3D	190-011-654	ESR2021-450	450	334	300	395	410	205	310	395	410	127	13	0.23	100	–
G	3D	190-011-655	ESR2021-500	500	384	337	445	460	230	360	445	460	108	11	0.25	100	–

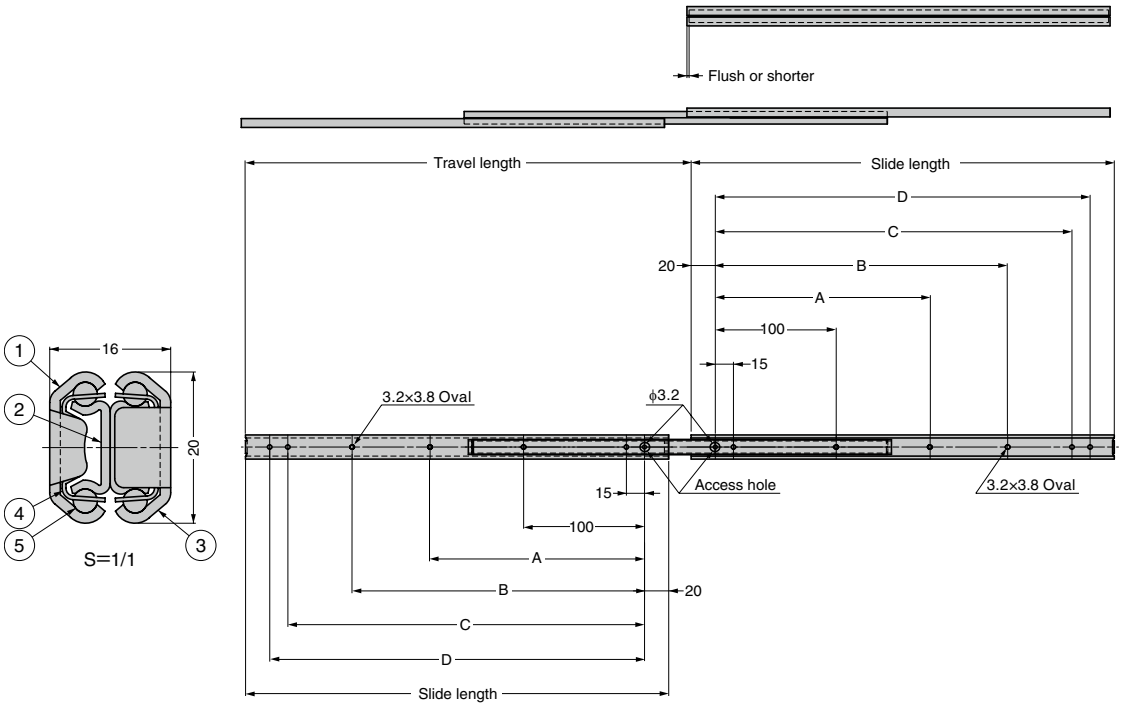
Refer to 1 : P.549

FULL EXTENSION SLIDE ESR2031

LOAD CAPACITY 127~167 N/pair L=R SUS

●Full extension (3 members).

[Remarks]
●Be sure to read the "Cautions" 1.
[Recommended Screws]
●M3 screw with binding or truss head



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-656	ESR2031-200	200	229	–	–	145	160	167	17	0.20	96	–
G	3D	190-011-657	ESR2031-250	250	269			195	210			0.25	48	–
G	3D	190-011-658	ESR2031-300	300	329		160	245	260			0.30	48	–
G	3D	190-011-659	ESR2031-350	350	369		210	295	310			0.35	48	–
G	3D	190-011-660	ESR2031-400	400	429		260	345	360			0.40	48	–
G	3D	190-011-661	ESR2031-450	450	469	205	310	395	410	157	16	0.45	48	–
G	3D	190-011-662	ESR2031-500	500	529	230	360	445	460	127	13	0.50	48	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE SNS27S

LOAD CAPACITY 176~255 N/pair | L=R | SUS

●3/4 extension (2 members).

[Remarks]

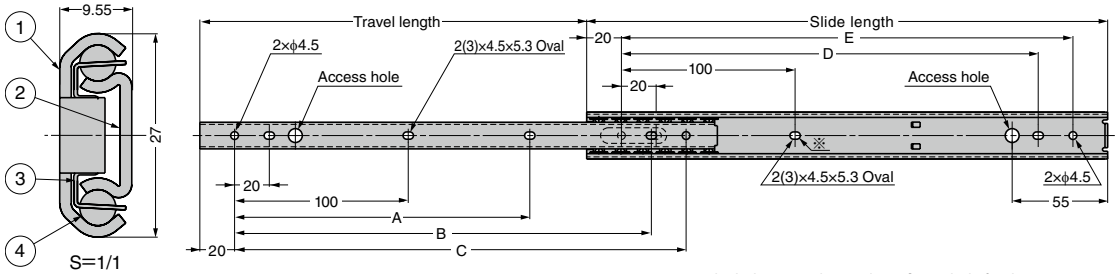
●Be sure to read the “Cautions” 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw

When closed

When opened



※The hole cannot be used as a fitting hole for the SNS27S-50

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-177	SNS27S-20	200	135	–	140	160	140	160	255	26	0.17	40	–
G	3D	190-110-178	SNS27S-25	250	185	150	190	210	190	210	235	24	0.21	40	–
G	3D	190-110-179	SNS27S-30	300	222	190	240	260	240	260			0.25	40	–
G	3D	190-110-180	SNS27S-35	350	260	225	290	310	290	310	225	23	0.29	40	–
G	3D	190-110-181	SNS27S-40	400	297	265	340	360	340	360	206	21	0.33	40	–
G	3D	190-110-182	SNS27S-45	450	334	300	390	410	390	410	196	20	0.37	40	–
G	3D	190-110-183	SNS27S-50	500	371	337	440	460	440	460	176	18	0.41	40	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS27D

LOAD CAPACITY 275~373 N/pair L=R SUS

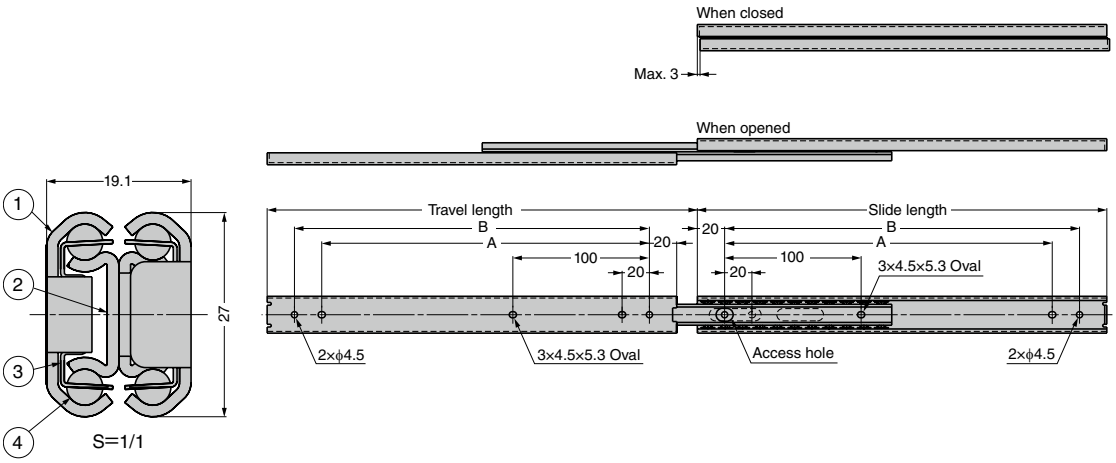
●Full extension (3 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-184	SNS27D-20	200	216.8	140	160	373	38	0.34	20	–
G	3D	190-110-185	SNS27D-25	250	266	190	210	363	37	0.42	20	–
G	3D	190-110-186	SNS27D-30	300	315.2	240	260	353	36	0.50	20	–
G	3D	190-110-187	SNS27D-35	350	364.4	290	310	333	34	0.58	20	–
G	3D	190-110-188	SNS27D-40	400	413.6	340	360	313	32	0.66	20	–
G	3D	190-110-189	SNS27D-45	450	462.8	390	410	294	30	0.74	20	–
G	3D	190-110-190	SNS27D-50	500	512	440	460	275	28	0.82	20	–

Refer to 1 : P.549

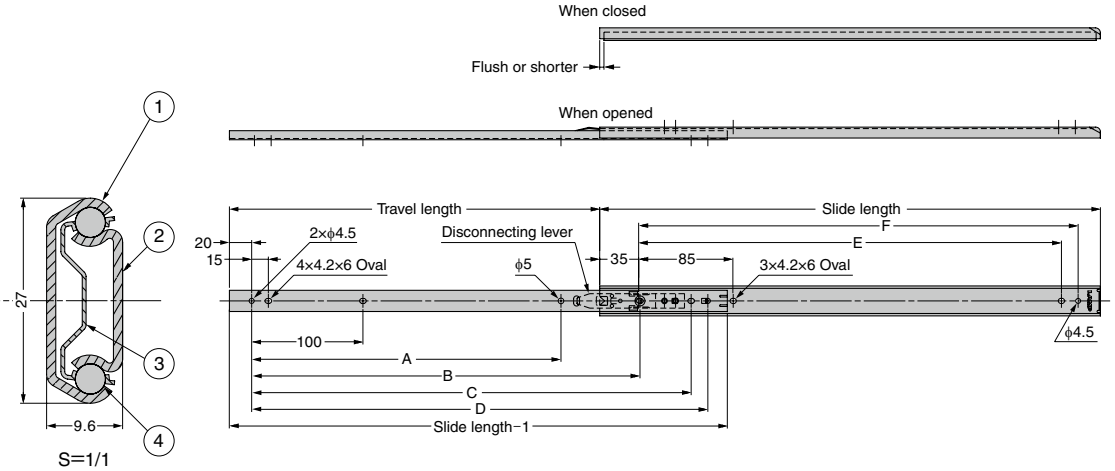
3/4 EXTENSION SLIDE 272SL

LOAD CAPACITY 137~177 N/pair | L=R | DETACH | SUS

- 3/4 extension (2 members).
- The drawer is detachable by lifting the lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold in pairs (2pcs)

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-116-707	272SL-300	300	220	165	236	–	–	230	245	177	18	0.43	20	–
G	3D	190-116-708	272SL-350	350	261	206	277			280	295	167	17	0.5	20	–
G	3D	190-116-709	272SL-400	400	301	246	317		362.5	330	345	157	16	0.56	20	–
G	3D	190-116-710	272SL-450	450	333	278	349	395	410	380	395	147	15	0.65	20	–
G	3D	190-116-711	272SL-500	500	373	318	389	445	460	430	445	137	14	0.7	20	–

Refer to 1 : P.549

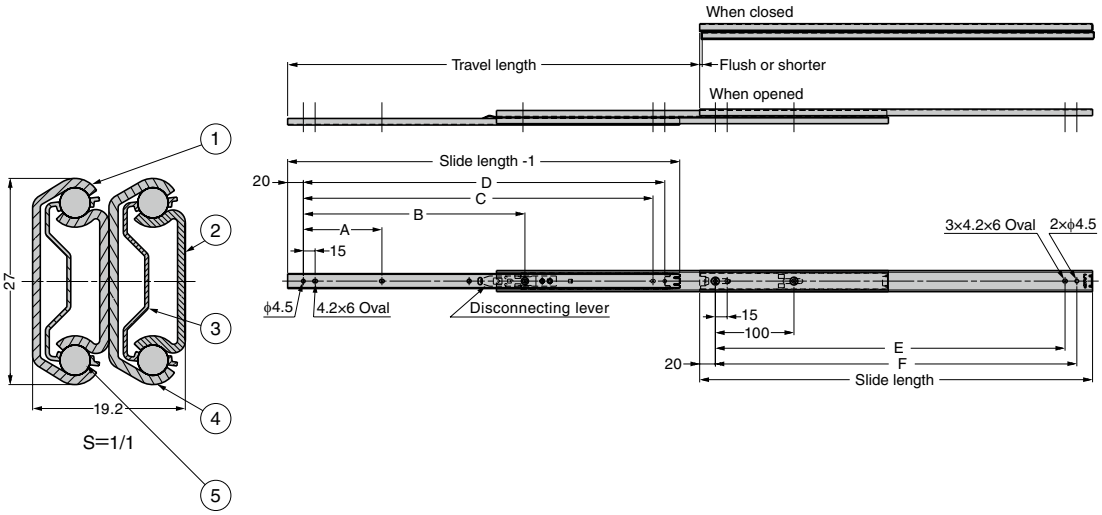
FULL EXTENSION SLIDE 273SL

LOAD CAPACITY 118~177 N/pair | L=R | DETACH | SUS

- Full extension (3 members).
- The drawer is detachable by lifting the disconnecting lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Intermediate Member		
⑤	Balls		–

Sold in pairs (2pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-116-712	273SL-200	200	221	–	135	–	–	145	160	177	18	0.6	10	–
G	3D	190-116-713	273SL-250	250	280		143.5	195	210	195	210	167	17	0.7	10	–
G	3D	190-116-714	273SL-300	300	327	100	188	245	260	245	260	157	16	0.8	10	–
G	3D	190-116-715	273SL-350	350	376		211.5	295	310	295	310	147	15	1	10	–
G	3D	190-116-716	273SL-400	400	426		236	345	360	345	360	137	14	1.1	10	–
–	3D	190-116-717	273SL-450	450	478		261.5	395	410	395	410	128	13	1.2	10	–
G	3D	190-116-718	273SL-500	500	524		282	445	460	445	460	118	12	1.4	10	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE SNS35S

LOAD CAPACITY 245~481 N/pair | L=R | SUS

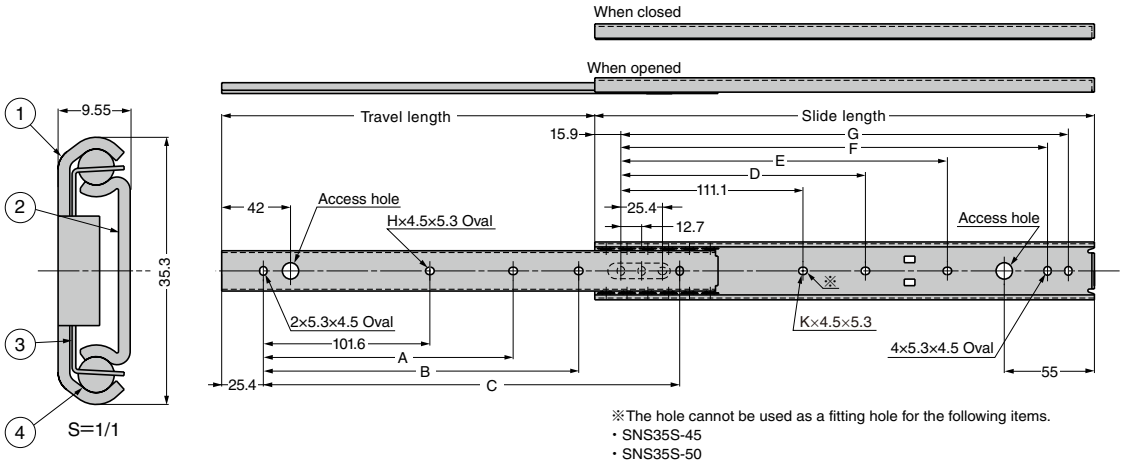
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



※The hole cannot be used as a fitting hole for the following items.

- SNS35S-45
- SNS35S-50
- SNS35S-55
- SNS35S-60
- SNS35S-65
- SNS35S-70

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	K	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-191	SNS35S-30	304.8	228.6	–	152.4	254	–	149.2	260.3	273	2	3	481	49	0.31	40	–
G	3D	190-110-192	SNS35S-35	355.6	279.4		203.2	304.8		200	311.1	323.8			461	47	0.36	40	–
G	3D	190-110-193	SNS35S-40	406.4	304.8		254	355.6		250.8	361.9	374.6			422	43	0.41	40	–
G	3D	190-110-194	SNS35S-45	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	3	4	402	41	0.46	40	–
G	3D	190-110-195	SNS35S-50	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2			363	37	0.51	40	–
G	3D	190-110-196	SNS35S-55	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527			333	34	0.56	40	–
G	3D	190-110-197	SNS35S-60	609.6	431.8	279.4	457.2	558.8	288.9	454	565.1	577.8			294	30	0.61	40	–
G	3D	190-110-198	SNS35S-65	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6			265	27	0.66	40	–
G	3D	190-110-199	SNS35S-70	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4			245	25	0.71	40	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS35D

LOAD CAPACITY 441~588 N/pair | L=R | SUS

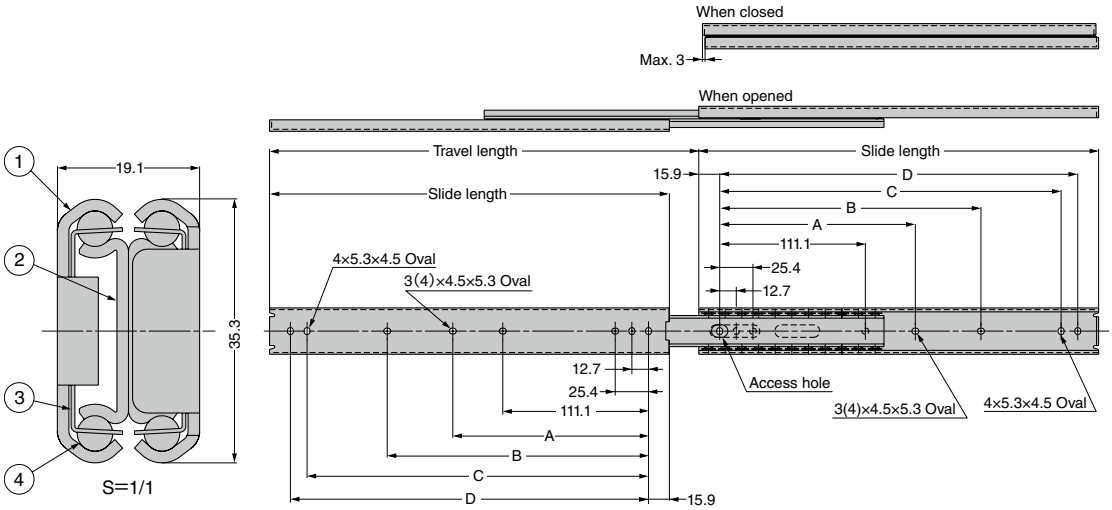
●Full extension (3 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-200	SNS35D-30	304.8	327.2	–	149.2	260.3	273	588	60	0.62	10	–
G	3D	190-110-201	SNS35D-35	355.6	377.9		200	311.1	323.8	579	59	0.72	10	–
G	3D	190-110-202	SNS35D-40	406.4	428.7		250.8	361.9	374.6	559	57	0.82	10	–
G	3D	190-110-203	SNS35D-45	457.2	479.5	212.7	301.6	412.7	425.4	549	56	0.92	10	–
G	3D	190-110-204	SNS35D-50	508	530.3	238.1	352.4	463.5	476.2	530	54	1.03	10	–
G	3D	190-110-205	SNS35D-55	558.8	580.3	263.5	403.2	514.3	527	500	51	1.13	10	–
G	3D	190-110-206	SNS35D-60	609.6	631.9	288.9	454	565.1	577.8	481	49	1.23	10	–
G	3D	190-110-207	SNS35D-65	660.4	682.7	314.3	504.8	615.9	628.6	461	47	1.33	10	–
G	3D	190-110-208	SNS35D-70	711.2	733.5	339.7	555.6	666.7	679.4	441	45	1.43	10	–

Refer to 1 : P.549

FULL EXTENSION SLIDE SNS35W

LOAD CAPACITY 355~623 N/pair | L=R | DETACH | HOLD OPENED | SUS

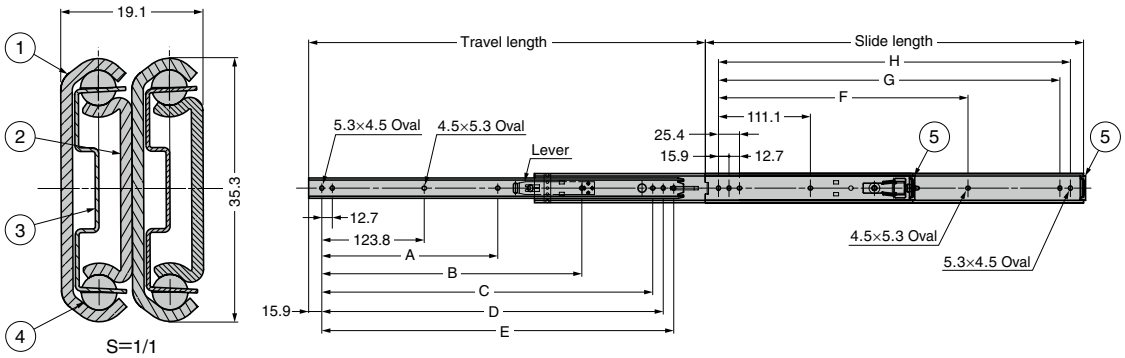
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The drawer can be held in fully opened position.

[Remarks]

- Be sure to read the “Cautions” 1.
- Some parts of this product are made of plastic.

[Recommended Screws]

- M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–
⑤	Bumper	Elastomer (TPE)	Black

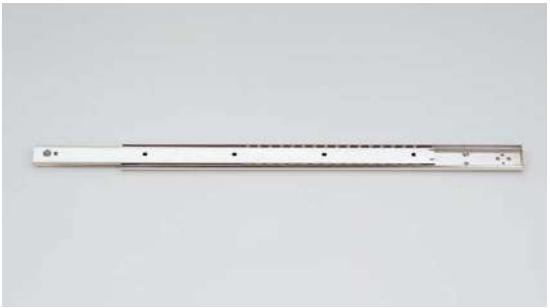
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-231	SNS35W-30	304.8	327.2			–	260.3	273		260.3	273	623	64	0.78	10	–
G	3D	190-112-232	SNS35W-35	355.6	377.9	–	–	298.4	311.1	323.8	–	311.1	323.8	586	60	0.903	10	–
G	3D	190-112-233	SNS35W-40	406.4	428.7			349.2	361.9	374.6	250.8	361.9	374.6	555	57	1.028	10	–
G	3D	190-112-234	SNS35W-45	457.2	479.5	212.7		400	412.7	425.4	301.6	412.7	425.4	516	53	1.151	10	–
G	3D	190-112-235	SNS35W-50	508	530.3	238.1	365.1	450.8	463.6	476.2	352.4	463.6	476.2	475	48	1.275	10	–
G	3D	190-112-236	SNS35W-55	558.8	581.2	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444	45	1.399	10	–
G	3D	190-112-237	SNS35W-60	609.6	631.9	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413	42	1.523	10	–
G	3D	190-112-238	SNS35W-65	660.4	682.7	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	382	39	1.647	10	–
G	3D	190-112-239	SNS35W-70	711.2	733.5	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355	36	1.77	10	–

Refer to 1 : P.549

3/4 EXTENSION SLIDE ESR1

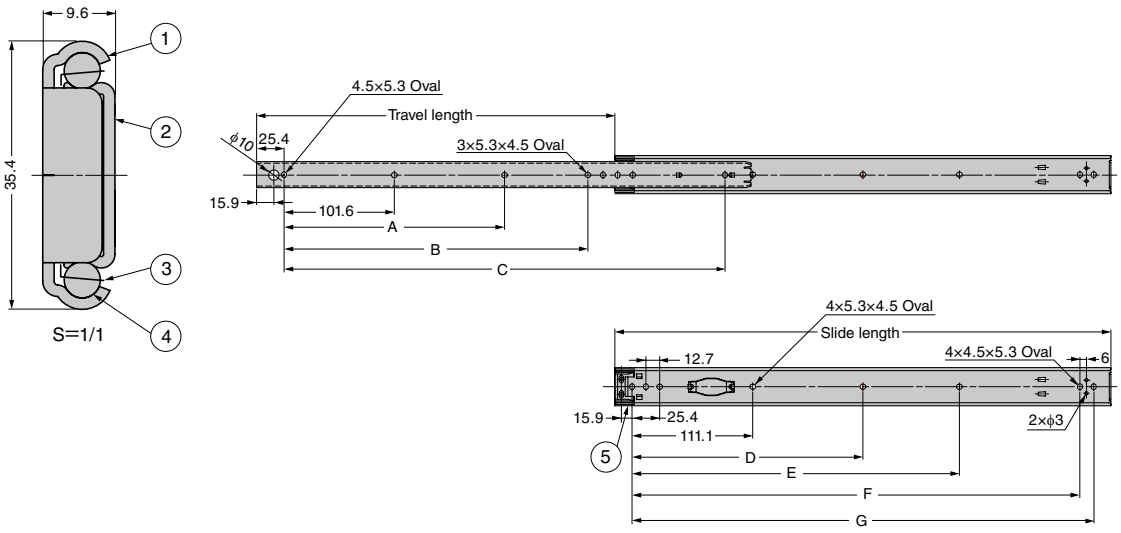
LOAD CAPACITY 245~481 N/pair | L=R | FRICTION | DETACH | SUS



- 3/4 extension (2 members).
- The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw or M4 truss head screw



No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-301	ESR1-12	304.8	228.6	–	152.4	254	–	149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-302	ESR1-14	355.6	279.4		203.2	304.8		200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-303	ESR1-16	406.4	304.8		254	355.6		250.8	361.9	374.6	422	43	0.44	30	–
G	3D	190-111-304	ESR1-18	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-305	ESR1-20	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	363	37	0.55	30	–
G	3D	190-111-306	ESR1-22	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	333	34	0.60	30	–
G	3D	190-111-307	ESR1-24	609.6	432.8	279.4	457.2	558.8	288.9	454	565.1	577.8	294	30	0.65	30	–
G	3D	190-111-308	ESR1-26	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	265	27	0.71	30	–
G	3D	190-111-309	ESR1-28	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	245	25	0.77	30	–

Refer to 1 : P.549

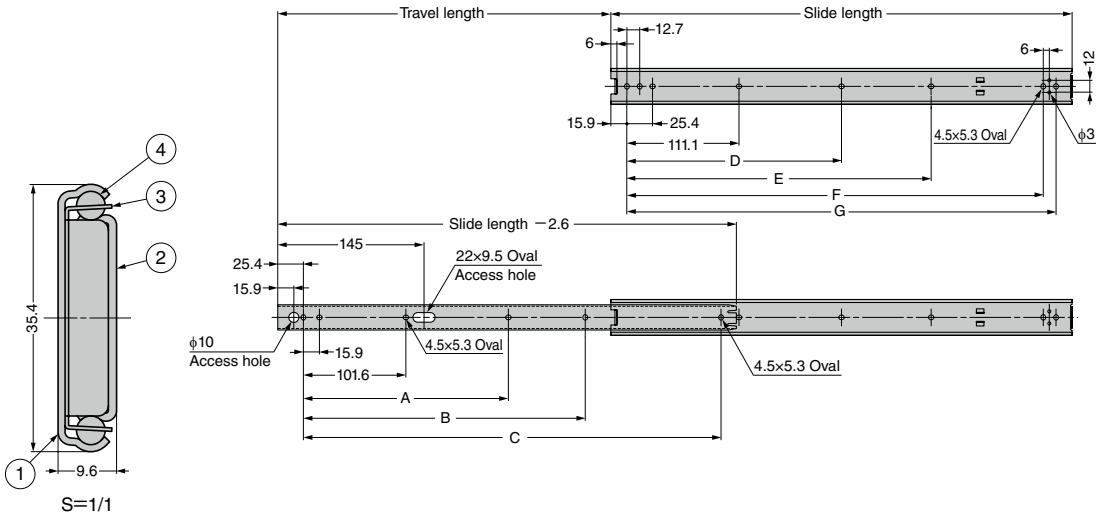
3/4 EXTENSION SLIDE ESR13

LOAD CAPACITY 245~481 N/pair | L=R | HOLD CLOSED | SUS

- 3/4 extension (2 members).
- The drawer can be held in fully closed position.

[Remarks]

- Be sure to read the “Cautions” 1.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-345	ESR13-12	304.8	228.6		177.8	258		149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-346	ESR13-14	355.6	279.4	–	228.6	308.8	–	200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-347	ESR13-16	406.4	304.8		254	359.6		250.8	361.9	374.6	422	43	0.42	30	–
G	3D	190-111-348	ESR13-18	457.2	330.2	203.2	279.4	410.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-349	ESR13-20	508	381	228.6	330.2	461.2	238.1	352.4	463.5	476.2	363	37	0.54	30	–
G	3D	190-111-350	ESR13-22	558.8	406.4		355.6	512	263.5	403.2	514.3	527	333	34	0.59	30	–
G	3D	190-111-351	ESR13-24	609.6	431.8	254	381	562.8	288.9	454	565.1	577.8	294	30	0.63	30	–
–	3D	190-111-352	ESR13-26	660.4	482.6		431.8	613.6	314.3	504.8	615.9	628.6	265	27	0.68	30	–
–	3D	190-111-353	ESR13-28	711.2	508	279.4	457.2	664.4	339.7	555.6	666.7	679.4	245	25	0.75	30	–

Refer to 1 : P.549

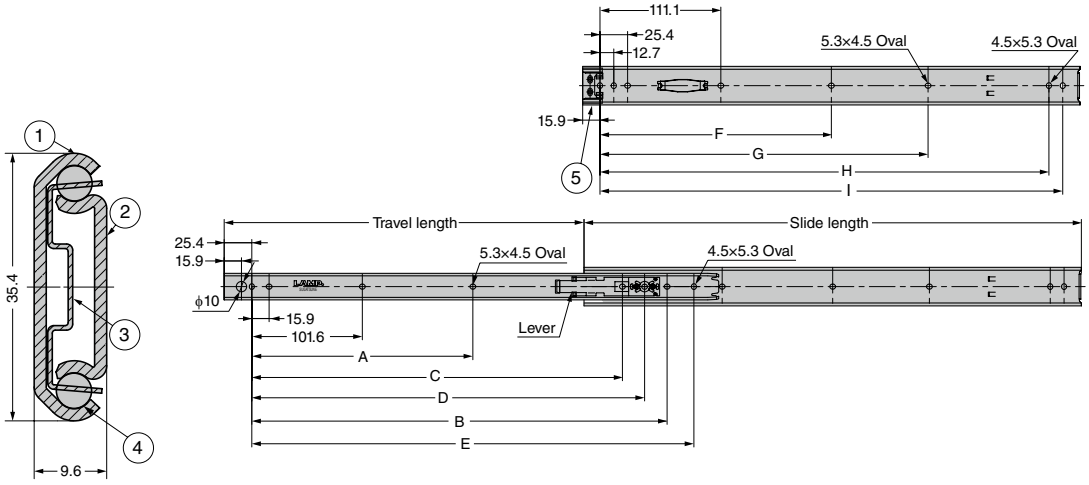
3/4 EXTENSION SLIDE ESR8

LOAD CAPACITY 245~481 N/pair | L=R | LOCK OPENED | DETACH | SUS

- 3/4 extension (2 members).
- The drawer can be held in fully opened position. Released by lever operation.
- The drawer is detachable by lifting the lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.



Side view (S=1/1)

No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-327	ESR8-12	304.8	228.6	152.4	–	–	259.5	–	–	149.2	260.3	273	481	49	0.3	30	–
G	3D	190-111-328	ESR8-14	355.6	279.4	203.2			310.3			200	311.1	323.8	461	47	0.4	30	–
G	3D	190-111-329	ESR8-16	406.4	304.8				335.7	355.6		250.8	361.9	374.6	422	43	0.4	30	–
G	3D	190-111-330	ESR8-18	457.2	330.2			340.7	366.1	406.4	212.7	301.6	412.7	425.4	402	41	0.5	30	–
G	3D	190-111-331	ESR8-20	508	381	228.6		391.5	411.9	457.2	238.1	352.4	463.5	476.2	363	37	0.5	30	–
G	3D	190-111-332	ESR8-22	558.8	406.4	254		416.9	437.3	508	263.5	403.2	514.3	527	333	34	0.6	30	–
G	3D	190-111-333	ESR8-24	609.6	432.8	279.4		443.3	463.7	558.8	288.9	454	565.1	577.8	294	30	0.6	30	–
–	3D	190-111-334	ESR8-26	660.4	482.6	304.8		493.1	513.5	609.6	314.3	504.8	615.9	628.6	265	27	0.7	30	–
G	3D	190-111-335	ESR8-28	711.2	508	330.2	558.9	538.9	558.8	660.4	339.7	555.6	666.7	679.6	245	25	0.7	30	–

Refer to 1 : P.549

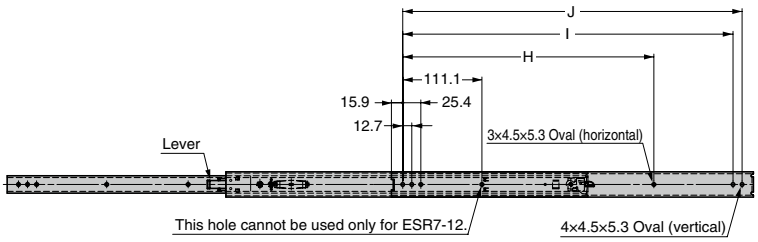
FULL EXTENSION SLIDE ESR7

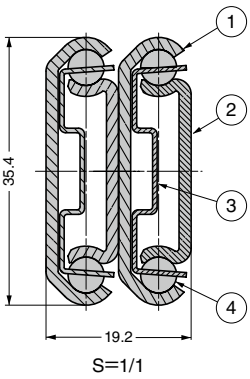
LOAD CAPACITY 355~623 N/pair | L=R | LOCK OPENED | DETACH | SUS

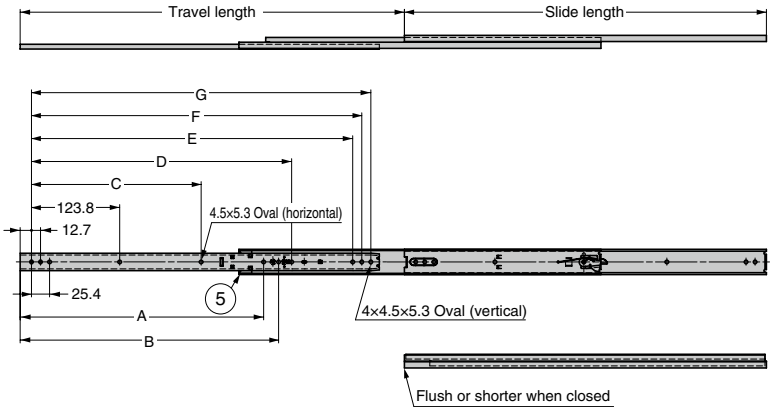
- Full extension (3 members).
- The drawer can be held in fully opened position. Released by lever operation.
- The drawer is detachable by lifting the lever.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw or M4 truss head screw







For mounting holes of inner and outer members, the first and second from both ends are vertical oval holes. The rest are horizontal oval holes.

No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

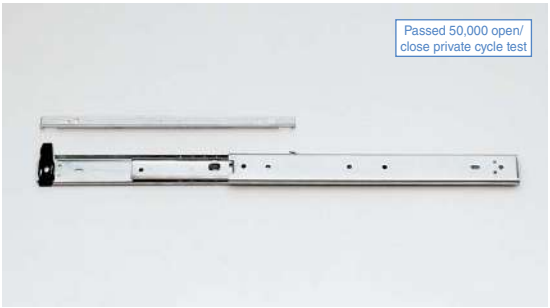
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	J	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-318	ESR7-12	304.8	336	228	248.4			–	260.3	273	–	260.3	273	623	63.5	0.62	16	–
G	3D	190-111-319	ESR7-14	355.6	386.8	278.8	299.2	–			311.1	323.8		311.1	323.8	586	59.8	0.73	16	–
G	3D	190-111-320	ESR7-16	406.4	437.6	291.5	311.9		–	349.2	361.9	374.6	250.8	361.9	374.6	555	56.6	0.84	16	–
G	3D	190-111-321	ESR7-18	457.2	488.4	316.9	337.3	212.7		400	412.7	425.4	301.6	412.7	425.4	516	52.6	0.94	16	–
G	3D	190-111-322	ESR7-20	508	539.2	342.3	362.7	238.1		450.8	463.5	476.2	352.4	463.5	476.2	476	48.5	1.06	16	–
G	3D	190-111-323	ESR7-22	558.8	590	367.7	388.1	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444	45.3	1.17	16	–
G	3D	190-111-324	ESR7-24	609.6	640.8	393.1	413.5	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413	42.1	1.27	16	–
G	3D	190-111-325	ESR7-26	660.4	691.6	418.5	438.9	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	383	39	1.38	16	–
G	3D	190-111-326	ESR7-28	711.2	742.4	443.9	464.3	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355	36.2	1.49	16	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR3

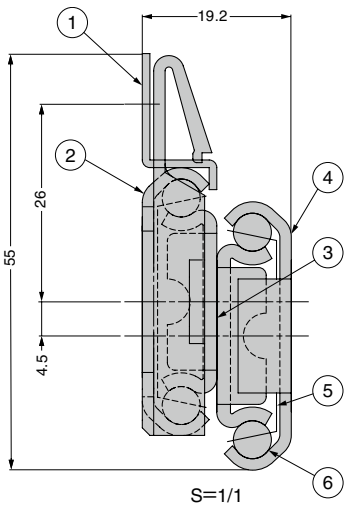
LOAD CAPACITY 422~637 N/pair | DETACH | BUMPER | SUS



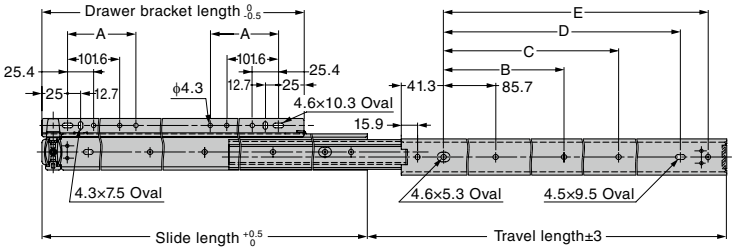
- Full extension (3 members).
- The drawer can be easily detached by using drawer bracket.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw



S=1/1



Right-handed shown.

No.	Part Name	Material	Finish
①	Drawer Bracket	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Intermediate Member		
④	Outer Member		
⑤	Retainer		
⑥	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Drawer Bracket Length	A	B	C	D	E	Outer Member Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-115-206	ESR3-12	304.8	348.4	273	–	–	123.1	218.3	245.3	6	637	65	1.35	6	–
G	3D	190-115-207	ESR3-14	355.6	399.2				173.9	269.1	296.1		598	61	1.56	6	–
G	3D	190-115-208	ESR3-16	406.4	450	375			224.7	319.9	346.9				1.83	6	–
G	3D	190-110-413	ESR3-18	457.2	500.8			187.3	275.5	370.7	397.7	7	549	56	2.05	6	–
G	3D	190-115-210	ESR3-20	508	551.6			212.7	326.3	421.5	448.5		510	52	2.25	6	–
G	3D	190-115-211	ESR3-22	558.8	602.4	527	177.8	238.1	377.1	472.3	499.3				2.57	6	–
G	3D	190-115-212	ESR3-24	609.6	653.2			263.5	427.9	523.1	550.1		471	48	2.76	6	–
G	3D	190-110-417	ESR3-26	660.4	704	575.3		288.9	478.7	573.9	600.9		422	43	2.99	6	–
G	3D	190-115-214	ESR3-28	711.2	754.8			314.3	529.5	624.7	651.7				3.19	6	–

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR4658

LOAD CAPACITY 314~490 N/pair | L=R | DETACH | HOLD CLOSED | SUS

- Full extension (3 members).
- The drawer is detachable by lifting the lever.

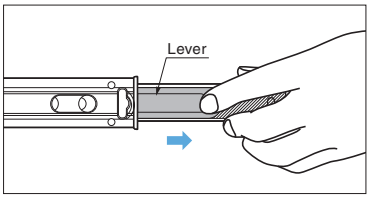
[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

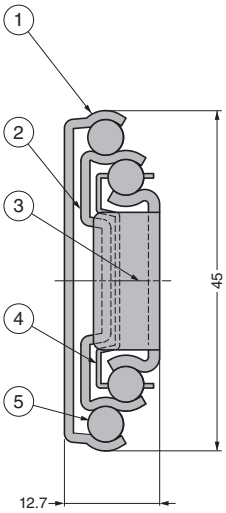
[Recommended Screws]

- For metal: M4 screw (except for countersunk head)
- For wood: nominal 4 tapping screw (except for countersunk head)

[Easy to Detach]



The drawer can be detached by pulling the lever in the direction of the arrow.



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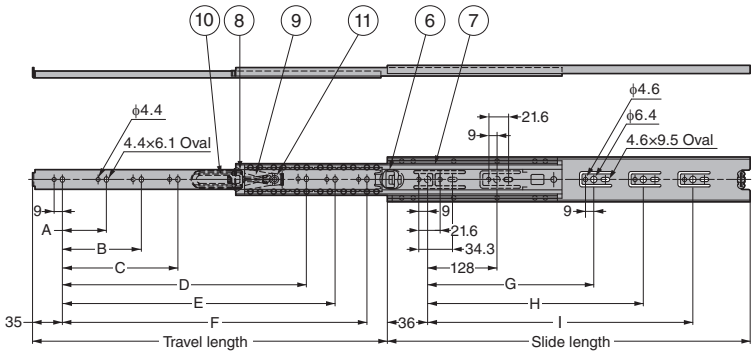
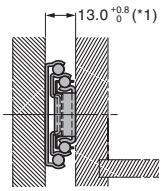




*1 Make sure the clearance is in the range for safe use.

No.	Part Name	Material	Finish/Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–
⑥	Rubbing Prevention Bumper	PP	Natural
⑦	Retainer	PE	Grey
⑧	Guide Block	PA	Black
⑨	Lever 1	POM	
⑩	Lever 2	PA	
⑪	Rivet	Stainless Steel (SUS302)	–

Sold in pairs (2 pcs).

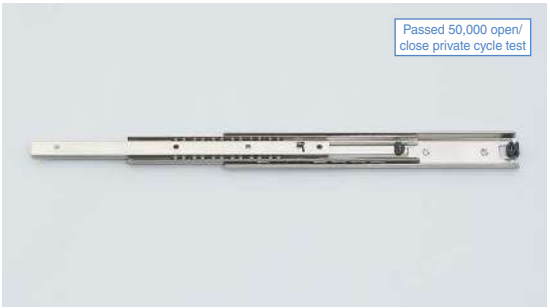
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-110-706	ESR4658-14	350	356	–		–			292		–		490	50	0.99	10	–
G	3D	190-110-707	ESR4658-16	400	406			320	–		342		320	–	470	48	1.13	10	–
G	3D	190-110-708	ESR4658-18	450	457		–			–	392		352		441	45	1.28	10	–
G	3D	190-110-709	ESR4658-20	500	508			352			442	224	416		421	43	1.42	10	–
G	3D	190-110-710	ESR4658-22	550	559	128					492			448	402	41	1.57	10	–
G	3D	190-110-711	ESR4658-24	600	610			–	416		542		352	480	382	39	1.71	10	–
G	3D	190-110-712	ESR4658-26	650	660		224			544	592			544	353	36	1.86	10	–
G	3D	190-110-713	ESR4658-28	700	711				448		642				314	32	2	10	–

Refer to 1 : P.549

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FULL EXTENSION SLIDE 5302S For Heavy Duty

LOAD CAPACITY 627~1137 N/pair | L=R | HOLD CLOSED | SUS



- Full extension (3 members).
- The drawer can be held in fully closed position.

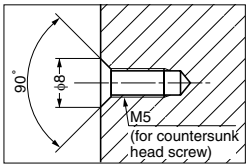
[Remarks]

- Some parts of this product are made of plastic.
- The head of mounting screw (countersunk head screw) may protrude from the slide. Please make countersink processing as shown below.

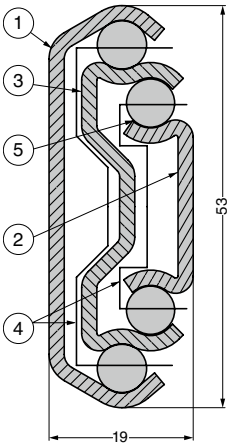
[Recommended Screws]

- nominal 5 countersunk head tapping screw or M5 countersunk head screw

[Cut Out Dimensions]



The same processing for outer member and inner member.



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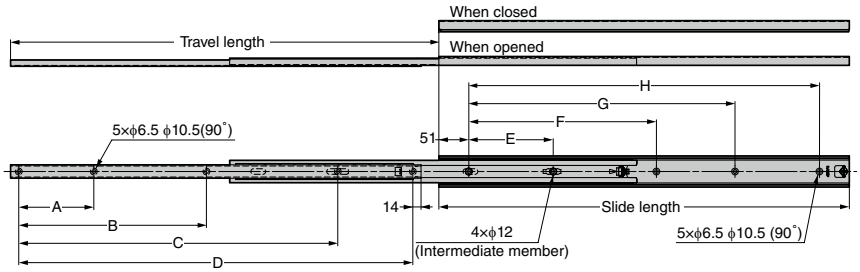


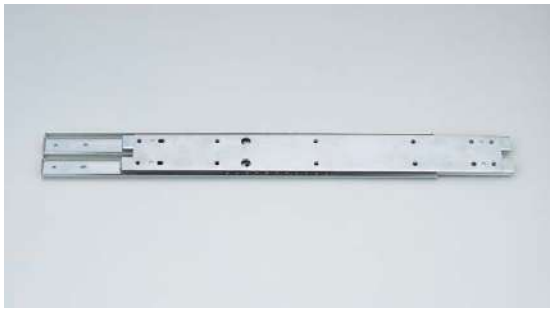
No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Intermediate Member		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-730	5302S-300	300	334	128	256	–		112	192	–		1137	116	0.86	20	–
G	3D	190-112-731	5302S-350	350	384	160	320			144	240			1088	111	1	20	–
G	3D	190-112-732	5302S-400	400	433		256	352			224	304		970	99	1.14	16	–
G	3D	190-112-733	5302S-450	450	482	128	288	416	–	80	272	352	–	941	96	1.28	16	–
G	3D	190-112-734	5302S-500	500	532			448		112		384		902	92	1.43	10	–
G	3D	190-112-735	5302S-550	550	580	192	320	512			288	448		843	86	1.57	10	–
G	3D	190-112-736	5302S-600	600	630	208	336	544			336	496		794	81	1.71	10	–
G	3D	190-112-737	5302S-650	650	677	128	288	480	608		272	416	544	745	76	1.85	10	–
G	3D	190-112-738	5302S-700	700	728		336	544	672	144	304	448	592	696	71	2	8	–
G	3D	190-112-739	5302S-750	750	777	192	370	530	722	176	336	496	648	666	68	2.14	8	–
G	3D	190-112-740	5302S-800	800	826	224	388	548	772	192	384	576	688	627	64	2.28	8	–

3/4 EXTENSION SLIDE ESR5 For Heavy Duty

LOAD CAPACITY 785~1118 N/pair L=R SUS



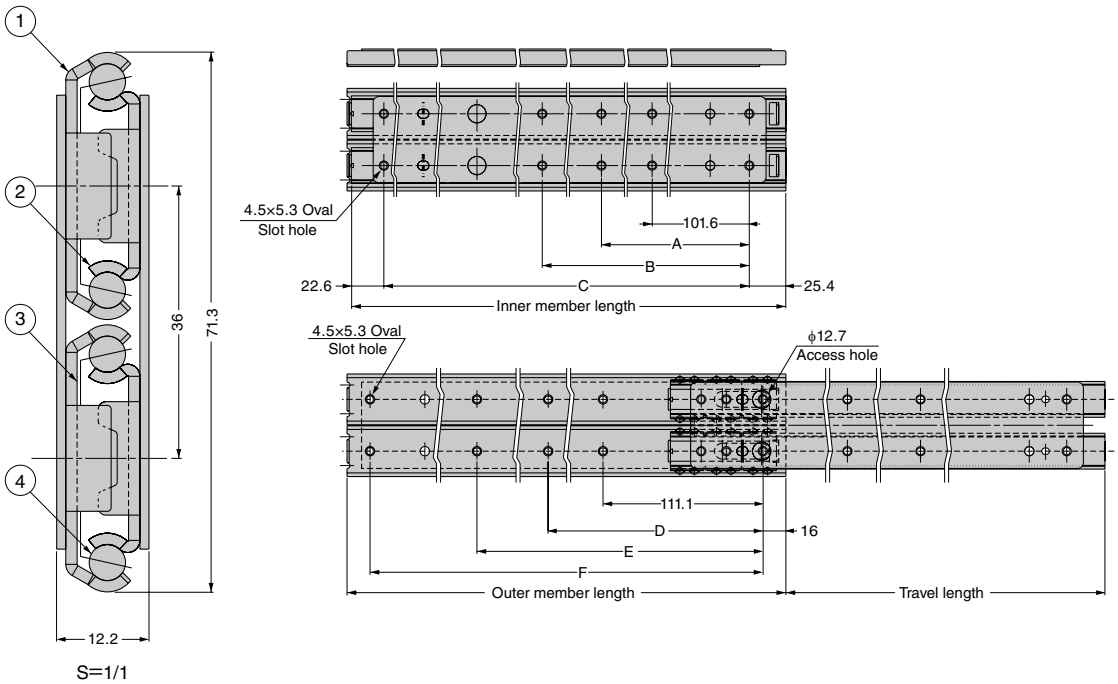
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 binding head screw or M4 truss head screw



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Polished
②	Inner Member		
③	Retainer		Plain
④	Balls		

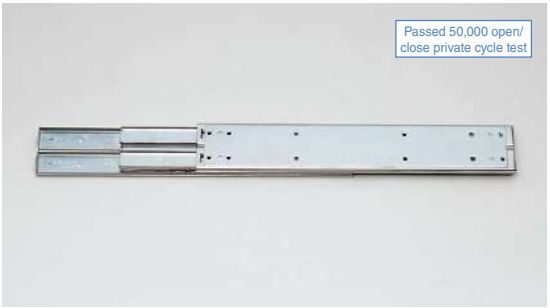
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Holes		Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)
												Inner Member	Outer Member				
G	3D	190-110-428	ESR5-12	305	221.8	–	152.4	254	–	149.2	273	6	8	1118	114	0.9	12
G	3D	190-110-429	ESR5-14	355.8	259.9		203.2	304.8		200	323.8			1069	109	1	12
G	3D	190-110-430	ESR5-16	406.6	298		254	355.6		250.8	374.6			1020	104	1.2	12
G	3D	190-110-431	ESR5-18	457.4	348.8	203.2	304.8	406.4	212.7	301.6	425.4		10	1000	102	1.3	12
G	3D	190-110-432	ESR5-20	508.2	361.5	228.6	355.6	457.2	238.1	352.4	476.2			971	99	1.6	12
G	3D	190-110-433	ESR5-22	559	425	254	406.4	508	263.5	403.2	527			922	94	1.7	12
G	3D	190-110-434	ESR5-24	609.8	450.4	279.4	457.2	558.8	288.9	454	577.8			873	89	1.8	12
G	3D	190-110-435	ESR5-26	660.6	463.1	304.8	508	609.6	314.3	504.8	628.6			843	86	1.9	12
G	3D	190-110-436	ESR5-28	711.4	501.2	330.2	558.8	660.4	339.7	555.6	679.4			785	80	2.1	12

Refer to 1 : P.549

FULL EXTENSION SLIDE ESR10 For Heavy Duty

LOAD CAPACITY 1785~2667 N/pair | L=R | SUS



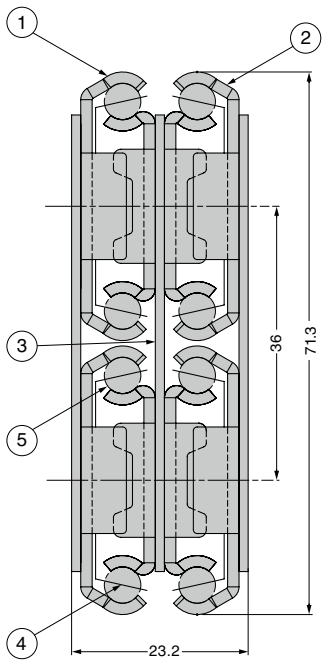
●Full extension (3 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 round head screw



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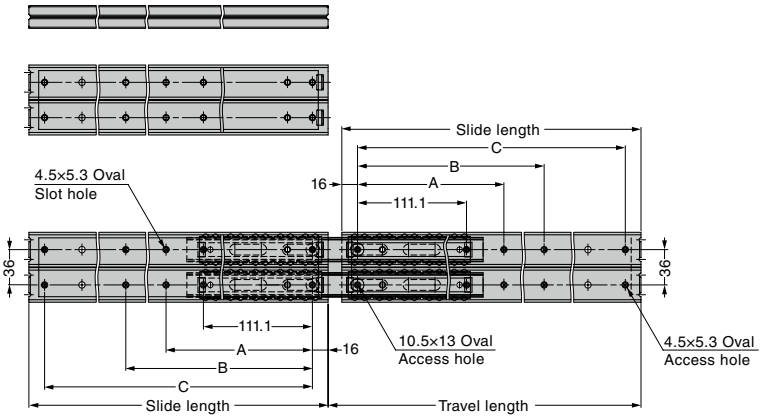


No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Polished
②	Inner Member		
③	Intermediate Member		
④	Retainer		–
⑤	Balls		

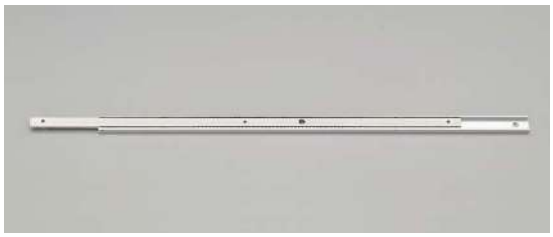
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-419	ESR10-12	305	319	–	149.2	273	2667	272	1.7	8	–
G	3D	190-110-420	ESR10-14	355.8	369.8		200	323.8	2628	268	1.9	8	–
G	3D	190-110-421	ESR10-16	406.6	420.6		250.8	374.6	2540	259	2.4	6	–
G	3D	190-110-422	ESR10-18	457.4	471.4	212.7	301.6	425.4	2452	250	2.5	6	–
G	3D	190-110-423	ESR10-20	508.2	522.2	238.1	352.4	476.2	2363	241	2.8	6	–
G	3D	190-110-424	ESR10-22	559	573	263.5	403.2	527	2246	229	3.1	6	–
G	3D	190-110-425	ESR10-24	609.8	623.8	288.9	454	577.8	2118	216	3.5	4	–
G	3D	190-110-426	ESR10-26	660.6	674.6	314.3	504.8	628.6	1961	200	3.8	4	–
G	3D	190-110-427	ESR10-28	711.4	725.4	339.7	555.6	679.4	1785	182	4	4	–

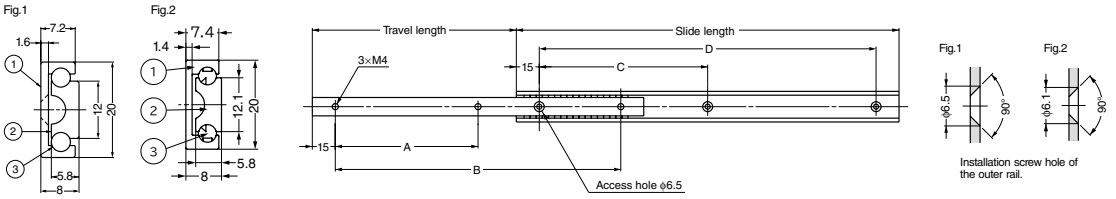
Refer to 1 : P.549

3/4 EXTENSION SLIDE AR2 For Light Weight

LOAD CAPACITY 80~150 N/pair L=R



- 3/4 extension (2 members).
- Small size and light weight.



No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

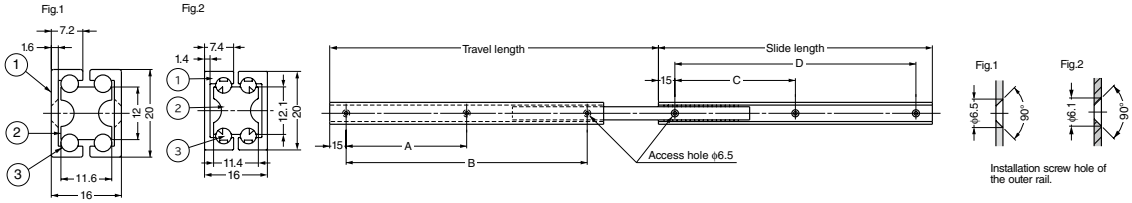
RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-533	AR2-100	100	60	–	70	–	70	150	15.3	31	1000	–
G	3D	190-119-534	AR2-200	200	120	85	170	85	170	120	12.2	63	500	–
G	3D	190-119-535	AR2-300	300	180	135	270	135	270	100	10.2	76	250	–
G	3D	190-119-536	AR2-400	400	240	185	370	185	370	90	9.2	129	200	–
G	3D	190-119-537	AR2-500	500	300	235	470	235	470	80	8.2	161	200	–

*The box quantity and shape of this product will be changed from Fig. 1 to Fig. 2 once existing inventory runs out.

FULL EXTENSION SLIDE AR3 For Light Weight

LOAD CAPACITY 30~110 N/pair L=R

- Full extension (3 members).
- Small size and light weight.



No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

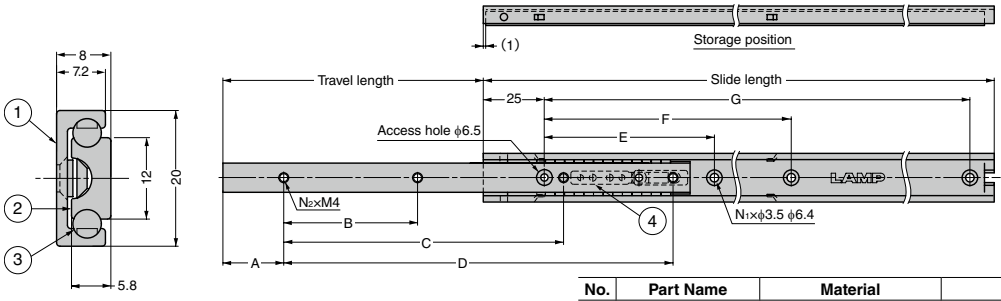
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-538	AR3-100	100	100	–	70	–	70	110	11.2	63	500	–
G	3D	190-119-539	AR3-200	200	223	85	170	85	170	90	9.2	128	250	–
G	3D	190-119-540	AR3-300	300	345	135	270	135	270	70	7.1	194	125	–
G	3D	190-119-541	AR3-400	400	460	185	370	185	370	50	5.1	260	100	–
G	3D	190-119-542	AR3-500	500	576	235	470	235	470	30	3.1	325	100	–

*The box quantity and shape of this product will be changed from Fig. 1 to Fig. 2 once existing inventory runs out.

3/4 EXTENSION SLIDE AR2-K With Hold-out Detent

LOAD CAPACITY 85~125 N/pair | HOLD OPENED | L=R

- 3/4 extension (2 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–
④	Detent Catch	Stainless Steel (SUS304)	

Sold by piece.

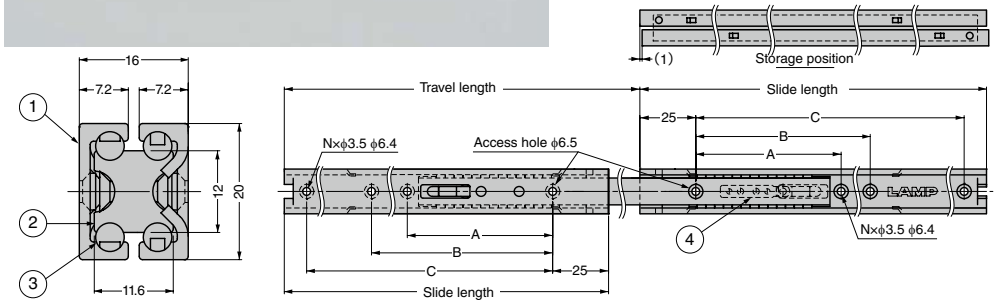
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	N₁	N₂	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-251	AR2-K200	200	110	25	60	160	–	150	–	–	2	3	125	12.7	64	500	–
G	3D	190-112-252	AR2-K300	300	170		100	230			250		3		110	11.2	97	250	–
G	3D	190-112-253	AR2-K400	400	230	45	150	270	330	130	280	350	4	4	95	9.7	130	200	–
G	3D	190-112-254	AR2-K500	500	290		190	340	430			450			85	8.7	162	200	–

*When current stock runs out, the box quantity will be changed.

FULL EXTENSION SLIDE AR3-K With Hold-out Detent

LOAD CAPACITY 85~105 N/pair | HOLD OPENED | L=R

- Full extension (3 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–
④	Detent Catch	Stainless Steel (SUS304)	

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	N	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-255	AR3-K200	200	214	150	–	–	2	105	10.7	130	250	–
G	3D	190-112-256	AR3-K300	300	314	130	250		3	100	10.2	198	125	–
G	3D	190-112-257	AR3-K400	400	414		280	350	4	90	9.2	263	100	–
G	3D	190-112-258	AR3-K500	500	514			450		85	8.7	304	100	–

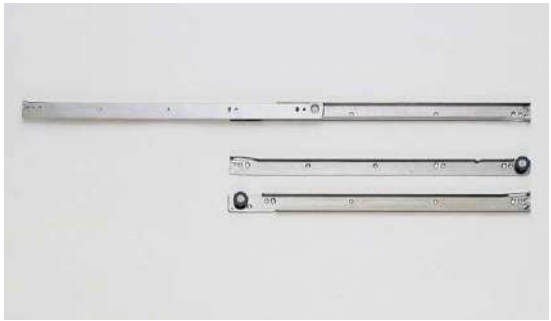
*When current stock runs out, the box quantity will be changed.

3/4 EXTENSION SLIDE RKA5

LOAD CAPACITY 147 N/pair

DETACH

CATCH



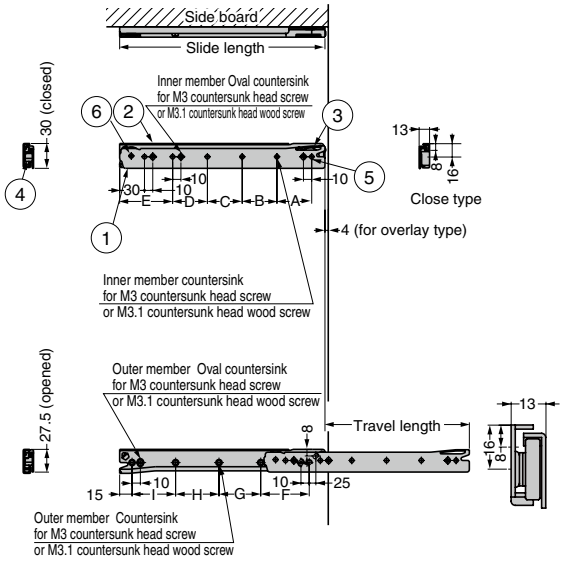
- 3/4 extension (2 members).
- R-shaped (inclined) slide ends allow complete closing.
- Urethane roller provides silent and smooth movement.
- Reduced in left and right backlash of the drawer.

[Remarks]

- Be sure to read the “Cautions” 1.

[Recommended Screws]

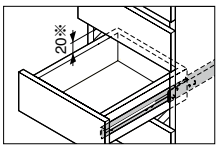
- M3/M3.5 countersunk head tapping screw or M3/M3.5 countersunk head screw



Right-handed shown.
(Right inner member: Close type)

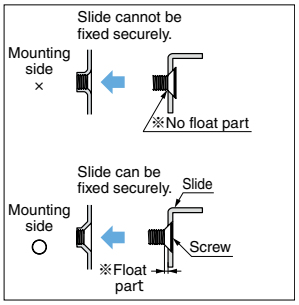
Side view of left slide shown.
(Left inner member: Open type)

[Application Example]



Dimension marked with ※ is that required for drawer attaching/detaching.

[Installing to Metal]



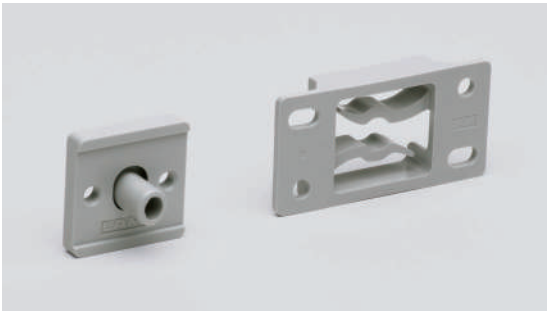
No.	Part Name	Material	Finish/Colour
①	Inner Member	Stainless Steel (SUS430)	–
②	Outer Member		
③	Roller	PUR/POM	Black/White
④	Rail Guide	POM	White
⑤	Roller Washer	Stainless Steel (SUS430)	–
⑥	Shaft		

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Inner Member A	B	C	D	E	Holes	Outer Member F	G	H	I	Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	–	190-110-170	RKA5-300 (SUS430)	296	205	165	–			115	6	112.5	112.5	–		6			0.48	20	–
G	3D	190-110-171	RKA5-350 (SUS430)	346	250	105	105	–		120		91.5	92	91.5					0.57	20	–
G	–	190-110-172	RKA5-400 (SUS430)	396	295	127.5	127.5			125	7	108.5	108	108.5	–	7			0.65	20	–
G	3D	190-110-173	RKA5-450 (SUS430)	446	340	100	100	100	–	130		125	125	125			147	15	0.7	10	–
G	3D	190-110-174	RKA5-500 (SUS430)	496	380	113	114	113		140	8	106	106.5	106.5	106	8			0.82	10	–
G	3D	190-110-175	RKA5-550 (SUS430)	546	420	126.5	127	126.5		150		119	118.5	118.5	119				0.9	10	–
G	3D	190-110-176	RKA5-600 (SUS430)	596	460	105	105	105	105	160	9	131.5	131	131	131.5				0.98	10	–

Refer to 1 : P.549

TWO-WAY CATCH FOR SLIDES JC-30TW



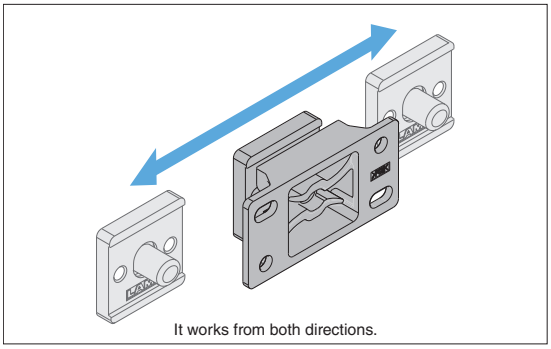
- Holds a slide in position from both directions.
- Retaining force can be adjusted by rotating the strike.
- Designed to be used with a two-way travel slide, holding it in the center.
- Can be used with slides between 19 and 21 mm in thickness.

[Applications]
- A two-way travel slide to hold in the center.
- A one-way travel slide to hold in open or closed position.
- A one-way travel slide to hold in the middle.

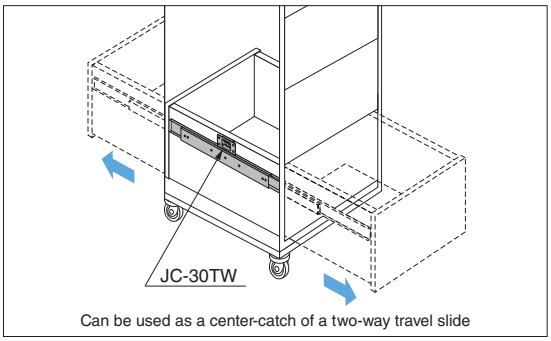
[Remarks]
- Should be used with slides.
- It is recommended to use one per slide.
- Retaining force may vary. Please check actual performance with an actual product.

[Parts Included]
- Truss head tapping tapping screw 4 × 16

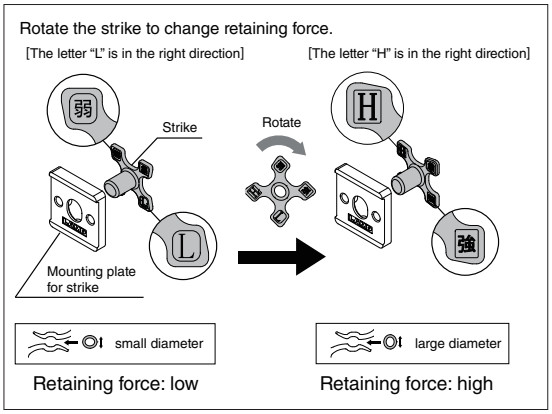
[Recommended Screw]
- M4 binding head screw, M4 truss head screw

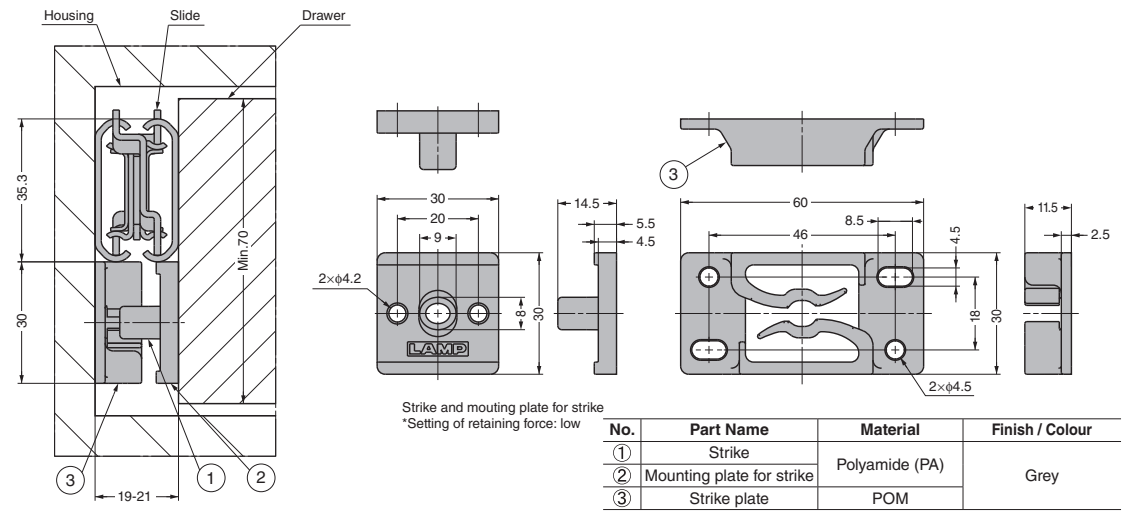


[Application Example]



[Adjusting Retaining Force]





Strike and mouting plate for strike
*Setting of retaining force: low

No.	Part Name	Material	Finish / Colour
①	Strike	Polyamide (PA)	Grey
②	Mounting plate for strike		
③	Strike plate	POM	

RoHS	CAD	Item Code	Item Name	Push-in Force N		Push-in Force kgf		Pulling Force N		Pulling Force kgf		Weight (g)	Box (pcs)	Carton (pcs)
				Low	High	Low	High	Low	High	Low	High			
GT	3D	140-041-094	JC-30TW	18.5	27.9	1.9	2.8	32.6	65.9	3.3	6.7	12.4	30	300

MULTI-ROLLER LINEAR SLIDE SYSTEM MLG Mini Type

Passed 300,000 open/close private cycle test

Compact | Vertical | Radial | Thrust

- Allows for smooth movement with the unique mechanism called "multi-roller".

[Application]
- Medical equipment, food machine, amusement machine, analytical instruments.

[Recommended Bolt]
- Hexagon socket bolt M4 (for the rail)

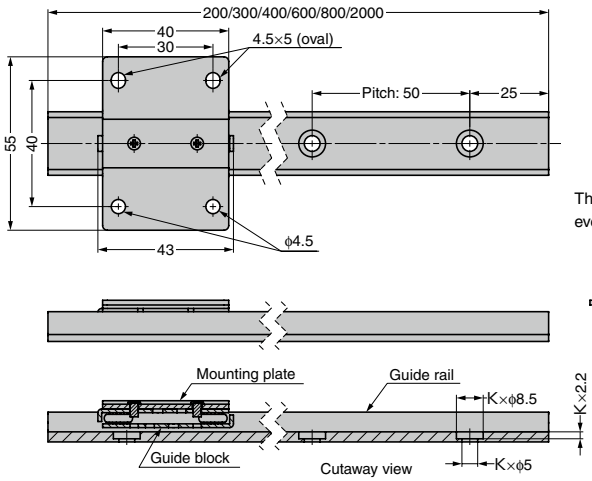
[Remarks]
- Please use with stoppers.
- The finish of the mounting holes and the rail edge is plain.

[Parts Included]
- #0-1 pan head screw M2.6 × 4 (for the mounting plate)

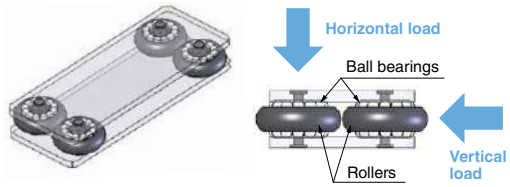
[Recommended Screw]
- Hexagon socket bolt M4 (for the rail)
- Screw M2.6 × 4 (Max. length: sheet thickness + 4 mm)
- Screw M4 (for the plate)

[Combination Drawings]

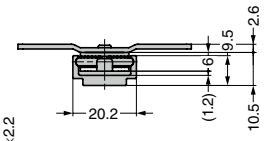
The guide rail, guide block, and mouting plate are used.



[The Unique Mechanism]



The multi-roller mechanism makes it possible to have smooth movements even with loads applied in vertical or horizontal directions.



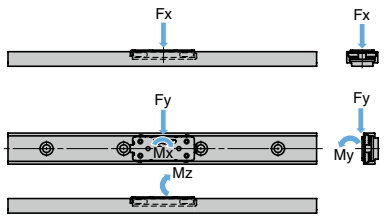
[Rated Load Reference Values] The rated load refers to the load limit .

- Max. load = Static rated load × Static safety coefficient
- Operating load = Max. load × Dynamic safety coefficient
- Max. moment = Static rated moment × Static safety coefficient
- Operating moment = Max. moment × Static safety coefficient

Use Conditions	Static Safety Coefficient	Dynamic Safety Coefficient
Low movement frequency with gentle movement	0.4~0.5	0.9~1.0
High movement frequency with smooth movement	0.3~0.4	0.6~0.8
High movement frequency with vibration or impact	0.2~0.3	0.3~0.5

Item Name	Horizontal Static Rated Load Fx		Vertical Static Rated Load Fy	
	N	kgf	N	kgf
MLG-20C	40	4.0	40	4.0

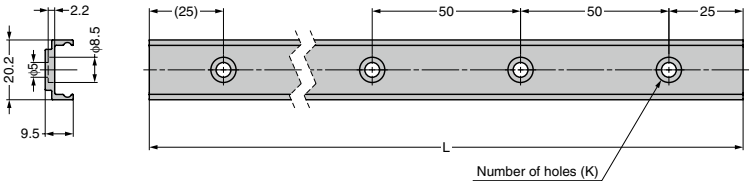
Item Name	Vertical Static Rated Moment Mx		Horizontal Static Rated Moment My		Horizontal Static Rated Moment Mz	
	N·m	kgf·cm	N·m	kgf·cm	N·m	kgf·cm
MLG-20C	1.2	12.2	0.4	4.0	0.8	8.1



The calculation formula above is for reference purpose only.
Please comfirm with the actual item before use.

GUIDE RAIL MLG20 MLG Series

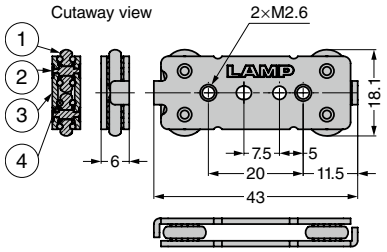
[Recommended Screw]
●Hexagon socket bolt M4



RoHS	CAD	Item Code	Item Name	Length (L)	Number of Holes (K)	Material	Finish	Weight (g)	Box (pcs)
G	3D	190-045-763	MLG20-200	200	4	Aluminium Alloy	Anodised Silver	36	200
G	3D	190-045-764	MLG20-300	300	6			54	100
G	3D	190-045-765	MLG20-400	400	8			72	100
G	3D	190-050-438	MLG20-600	600	12			108	20
G	3D	190-050-439	MLG20-800	800	16			144	20
G	3D	190-050-440	MLG20-2000	2000	40			359	20

MULTI-ROLLER GUIDE BLOCK MLG-20C MLG Series

[Recommended Screw]
●Screw M2.6 (Max. length: sheet thickness + 4 mm)



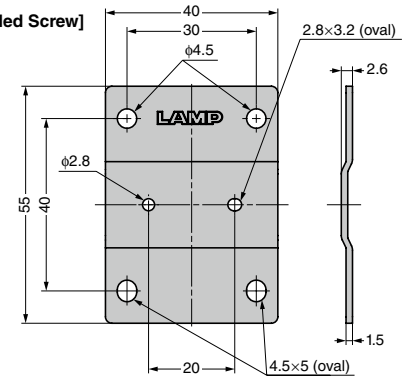
No.	Part Name	Material
①	Roller	POM
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	190-045-762	MLG-20C	13	200

MOUNTING PLATE MLG-20-P55-40 MLG Series

[Parts Included]
●#0-1 pan head screw M2.6 × 4

[Recommended Screw]
●Screw M4



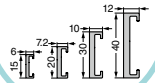
RoHS	CAD	Item Code	Item Name	Material	Weight (g)	Box (pcs)
G	3D	190-045-766	MLG20-P55-40	Stainless Steel (SUS304)	26	100

MINI GUIDE RAIL MRS

Simple
Ideal when precision is not required.

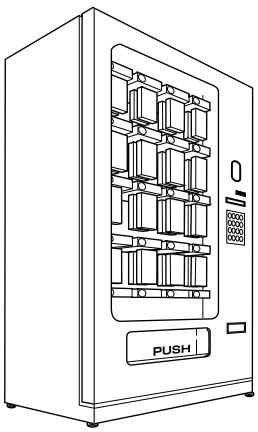
Greaseless

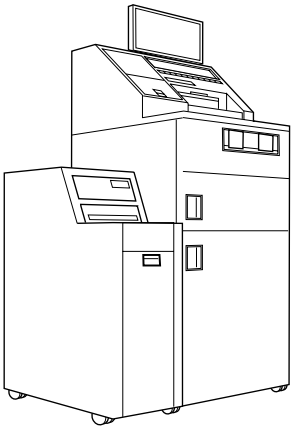
Compact

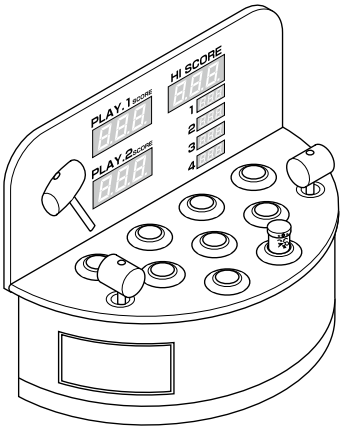


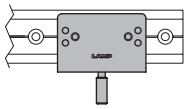
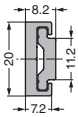
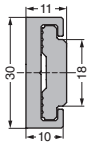
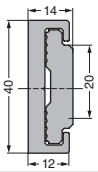
- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.
- Preload type carriage with minimal gap is also available (MRS-20, 30, 40 only).

[Installation Image]







Item Name	Size	Slide Length	Max. Load Fx Guidelines*	Max. Load Fy Guidelines*	Preload Type	Options	Page
MRS 15		100 ~ 1200	No moment load Approx. 5.1 kg Approx. 0.61 kg with vibration/ impact	No moment load Approx. 1.5 kg Approx. 0.18 kg with vibration/ impact	×	 Temporary retaining and positioning clamps are available.	P.594
MRS 20		100 ~ 2000	Approx. 15.3 kg Approx. 1.8 kg with vibration/ impact	Approx. 8.9 kg Approx. 1.1 kg with vibration/ impact	○		P.595
MRS 30		100 ~ 2000	Approx. 26.5 kg Approx. 3.2 kg with vibration/ impact	Approx. 15.6 kg Approx. 1.9 kg with vibration/ impact	○		P.596
MRS 40		400 ~ 2000	Approx. 35.7 kg Approx. 4.3kg with vibration/ impact	Approx. 25 kg Approx. 3 kg with vibration/ impact	○	×	P.597

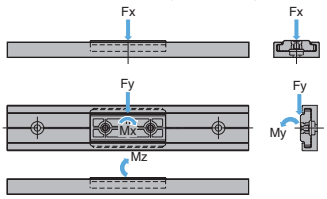
*The max. load capacity guidelines, which apply to the rated load below, are values found by multiplying the static rated load and the static safety coefficient.

[Operating Dynamic Load Guidelines]

- Max. Static Load = Static Rated Load x Static Safety Coefficient
- Operating Dynamic Load = Max. Static Load x Dynamic Safety Coefficient
- Max. Moment Load = Static Rated Moment Load x Static Safety Coefficient
- Operating Moment Load = Max. Moment Load x Dynamic Safety Coefficient

Usage Conditions	Static Safety Coefficient	Dynamic Safety Coefficient
Low travel frequency and loose travel conditions	0.4 ~ 0.5	0.9 ~ 1.0
High travel frequency and demand for smooth running performance	0.3 ~ 0.4	0.6 ~ 0.8
High travel frequency with vibration/impact	0.2 ~ 0.3	0.3 ~ 0.5

Item Name	Horizontal static rated load Fx		Vertical static rated load Fy	
	N	kgf	N	kgf
MR-15CS	100	10.2	30	3.0
MR-20CS	300	30.6	175	17.8
MR-30CS	520	53.0	305	31.1
MR-40CS	700	71.4	490	50.0



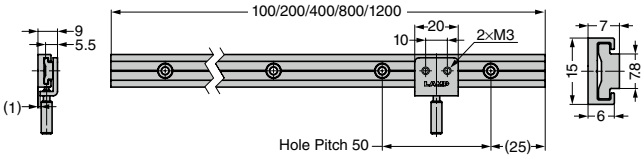
The above formulae are guidelines.
Confirm with the actual product for use.
Use MR-15CS so that moment load is not applied.

Item Name	Vertical static rated moment load Mx		Horizontal static rated moment load My		Horizontal static rated moment load Mz	
	N·m	kgf·cm	N·m	kgf·cm	N·m	kgf·cm
MR-15CS	-	-	-	-	-	-
MR-20CS	3	30.6	1.5	15.3	1.5	15.3
MR-30CS	5	51.0	2.5	25.5	2.5	25.5
MR-40CS	7	71.4	3.5	35.7	3.5	35.7

MINI GUIDE RAIL MRS15

- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.

Combination Dimensions for Guide Rail, Carriage, & Clamp



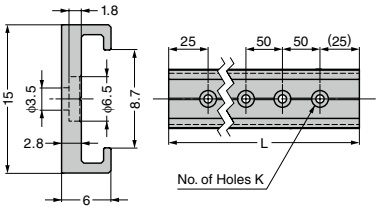
[Recommended Mounting Screws]

- (Rail) M3 hexagon socket button head screw or M3 pan head machine screw

[Remarks]

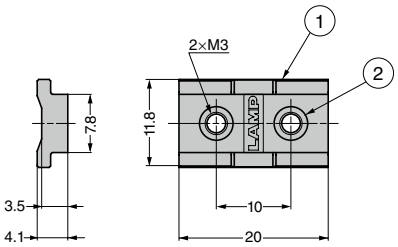
- Refer to the Rated Load Guidelines 1 to prevent moment from being applied.
- The rail mounting holes and ends are plain.

[MINI GUIDE RAIL MRS15]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-027-331	MRS15-100	100	2	Aluminium Alloy	Silver Anodised	14.5
G	3D	190-027-332	MRS15-200	200	4			29
G	3D	190-027-333	MRS15-400	400	8			58
G	3D	190-027-334	MRS15-800	800	16			117
G	3D	190-046-490	MRS15-1200	1200	24			174

[MINI GUIDE CARRIAGE MR-15CS]



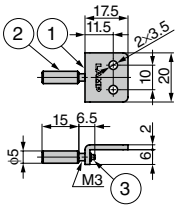
[Specifications]

- Operating temperature: 0˚ C ~ 40˚ C

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-027-335	MR-15CS	1

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

[MINI GUIDE CLAMP MR-15CLP]



- Tighten the knob to the rail for simple fixing.
- Mount to the carriage with screws.

[Remarks]

- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-310	MR-15CLP	7 or below	0.05 or below	8.6

Refer to 1 : P.593

MINI GUIDE RAIL MRS-20

- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.
- Preload type carriage with minimal gap is also available.

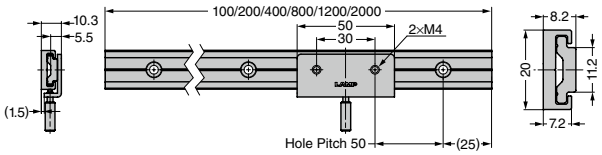
[Recommended Mounting Bolts]

- (Rail) M4 hexagon socket button head screws

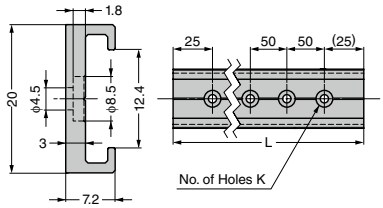
[Remarks]

- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

Combination Dimensions for Guide Rail, Carriage, & Clamp

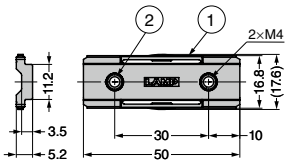


[MINI GUIDE RAIL MRS-20]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-111-491	MRS20-100	100	2	Aluminium Alloy	Silver Anodised	20
G	3D	190-111-492	MRS20-200	200	4			40
G	3D	190-111-493	MRS20-400	400	8			80
G	3D	190-111-494	MRS20-800	800	16			160
G	3D	190-046-491	MRS20-1200	1200	24			240
G	3D	190-111-495	MRS20-2000	2000	40			400

[MINI GUIDE CARRIAGE MR-20CNB Preload Type]



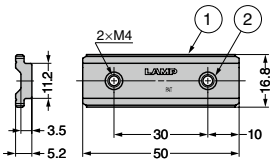
[Specifications]

- Operating temperature: 0˚C ~ 40˚C

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-037-638	MR-20CNB	5

[MINI GUIDE CARRIAGE MR-20CS]



[Specifications]

- Operating temperature: 0˚C ~ 40˚C

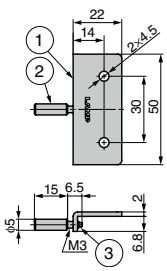
[Remarks]

- The carriage unit working force changes depending on the operating temperature.

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-111-496	MR-20CS	6

[MINI GUIDE CLAMP MR-20CLP]



- Tighten the knob to the rail for simple fixing.
- Mount to the carriage with screws.

[Remarks]

- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-311	MR-20CLP	7 or below	0.05 or below	22.6

MINI GUIDE RAIL MRS-30

- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.
- Preload type carriage with minimal is also available.

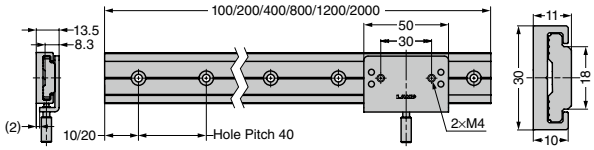
[Recommended Mounting Bolts]

- (Rail) M4 hexagon socket button head screws

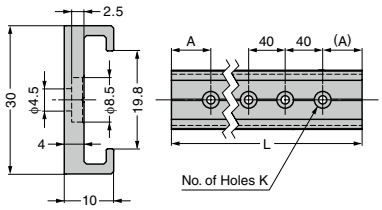
[Remarks]

- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

Combination Dimensions for Guide Rail, Carriage, & Clamp

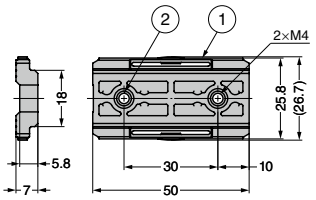


[MINI GUIDE RAIL MRS-30]



RoHS	CAD	Item Code	Item Name	L	A	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-112-860	MRS30-100	100	10	3	Aluminium Alloy	Silver Anodised	39
G	3D	190-112-861	MRS30-200	200	20	5			79
G	3D	190-112-862	MRS30-400	400		10			159
G	3D	190-112-863	MRS30-800	800		20			312
G	3D	190-046-492	MRS30-1200	1200		30			468
G	3D	190-112-864	MRS30-2000	2000		50			790

[MINI GUIDE CARRIAGE MR-30CNB Preload Type]



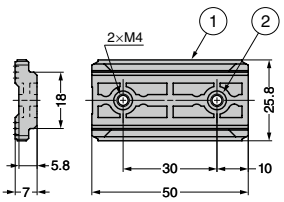
[Specifications]

- Operating temperature: 0° C ~ 40° C

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-037-639	MR-30CNB	7

[MINI GUIDE CARRIAGE MR-30CS]



[Specifications]

- Operating temperature: 0° C ~ 40° C

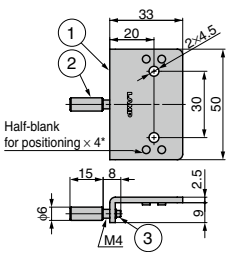
[Remarks]

- The carriage unit working force changes depending on the operating temperature.

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-111-489	MR-30CS	7

[MINI GUIDE CLAMP MR-30CLP]



*Only MR-30CLP is half-blanked for positioning.

- Tighten the knob to the rail for simple fixing.
- Mount to the carriage with screws.

[Remarks]

- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-312	MR-30CLP	14 or below	0.1 or below	40.8

MINI GUIDE RAIL MRS40

- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.
- Preload type carriage with minimal is also available.

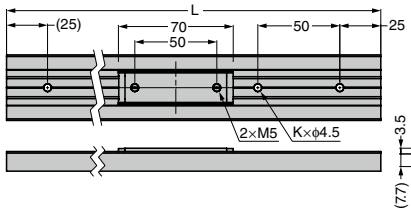
[Recommended Mounting Screws]

- (Rail) M4 hexagon socket button head screw, M4 hexagon socket low head bolt, or M4 binding machine screw

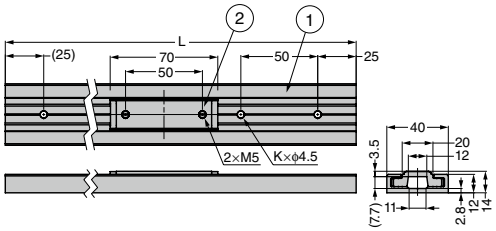
[Remarks]

- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.
- The carriage unit working force changes depending on the operating temperature.

Combination Dimensions for Guide Rail & Carriage

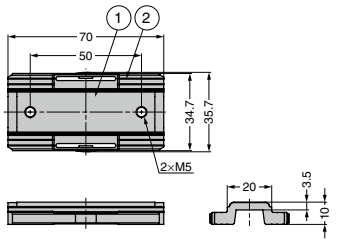


[MINI GUIDE RAIL MRS40]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-037-686	MRS40-400	400	8	Aluminium Alloy	Silver Anodised	236
G	3D	190-037-687	MRS40-800	800	16			472
G	3D	190-043-711	MRS40-1200	1200	24			708
G	3D	190-037-688	MRS40-2000	2000	40			1180

[MINI GUIDE CARRIAGE MR-40CNB Preload Type]



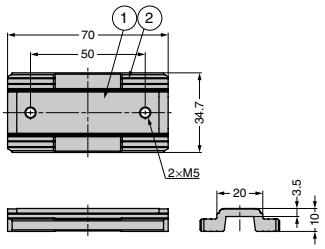
[Specifications]

- Operating temperature: 0˚C ~ 40˚C

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-041-093	MR-40CNB	40

[MINI GUIDE CARRIAGE MR-40CS]



[Specifications]

- Operating temperature: 0˚C ~ 40˚C

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-041-092	MR-40CS	41

LINEAR ROLLER GUIDE RAIL LGB30

- Bearing roller used in guide block allows for smooth movement.
- The guide block features a noise-reducing bearing roller using a plastic outer ring.
- Clearance between the guide rail and guide block provides versatility.

[Specifications]
- Temperature: 0~40°C

[Applications]
- Vending machine, amusement machine, medical equipment, semiconductor equipment, food processing equipment, and washing machine.

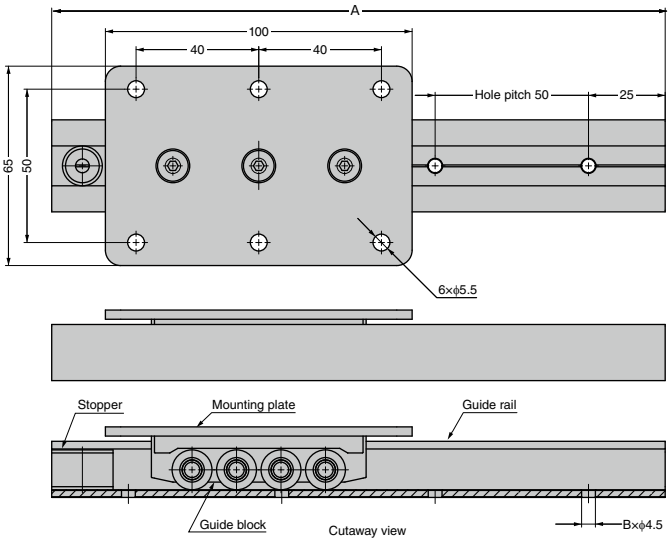
[Remarks]
- The surface of the mounting hole and both ends is not treated.
- Do not use it under the condition that moment load is applied.

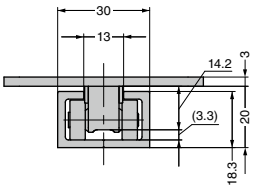
[Parts Included]
- For plate: Hexagon socket countersunk bolt M5 (stainless steel)

[Recommended Screws]
- For rail: Hexagon socket button head screw M4, cross-recessed binding screw M4, cross-recessed binding tapping screw nominal 4

Combination dimensions of guide rail, guide block, stopper and mounting plate

Combination example: Guide rail LGB30, guide block LGB-30CM 1, stopper LGB30-ST and mounting plate LGB30-P65-100 2



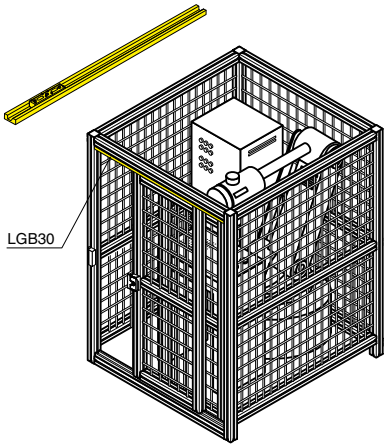


Guide rail

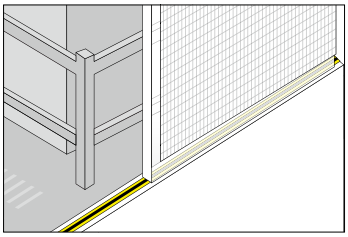
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

Refer to 1 : P.600, 2 : P.601

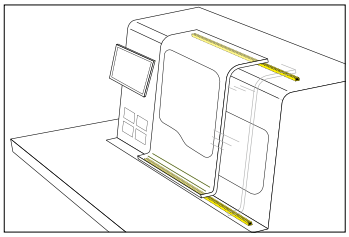
【Application Example】



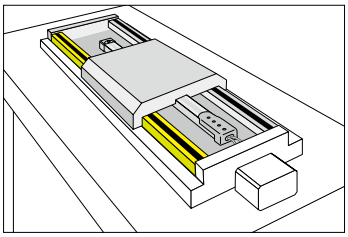
For safety fences for industrial robots



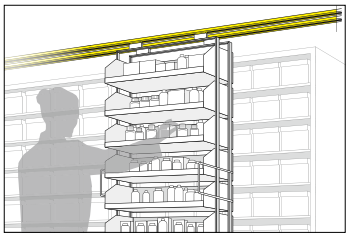
For safety fences in factories



For sliding doors of factory equipment



For transfer system of production facilities



For sliding shelves in pharmacies and hospitals

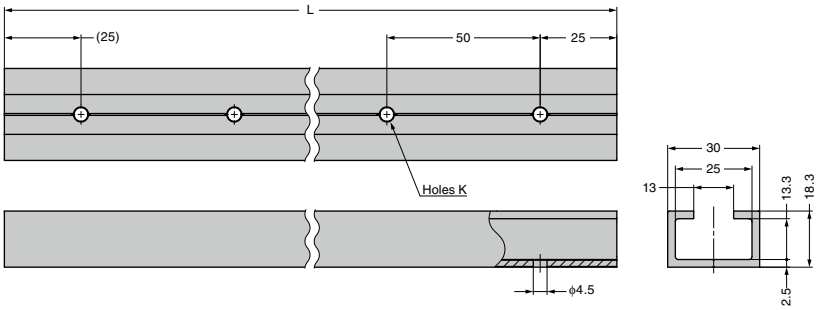
GUIDE RAIL LGB30

[Recommended Screws]

- Hexagon socket button head screw M4
- Binding head screw M4
- Binding head tapping screw 4

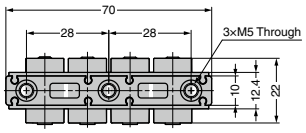
[Remarks]

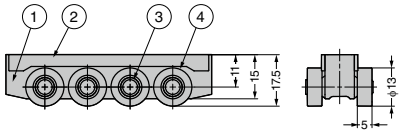
- Mounting holes and both ends are not surface treated.
- Do not use under moment load.



RoHS	CAD	Item Code	Item Name	L	K	Material	Finish	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	–
G	3D	190-036-274	LGB30-800	800	16			390	25	–
G	3D	190-036-275	LGB30-2000	2000	40			875	10	–

GUIDE BLOCK LGB-30CM Silent Type



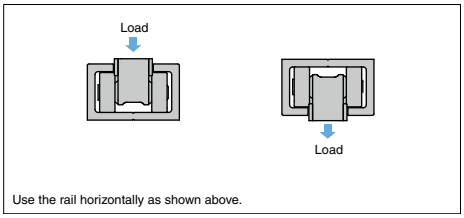


- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller.
- For guide rail LGB30 1 only.

[Remarks]

- Do not remove the slide protector.

[Load Direction]

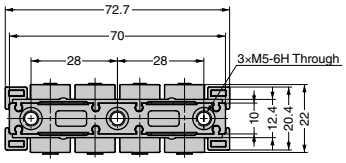


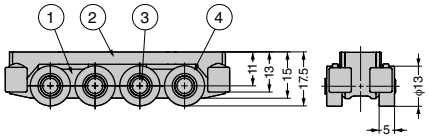
No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-158	LGB-30CM	Max. 294	Max. 30	76	200	2000

Refer to 1 : P.598

GUIDE BLOCK LGB-30CB Silent Type / Bidirectional Preloaded



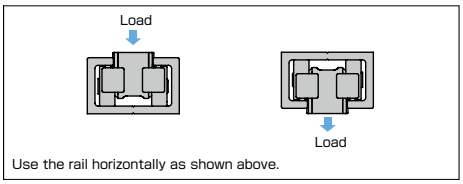


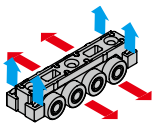
- Preloaded in two directions to significantly reduce the rattling between the guide block and rail.

[Remarks]

- Do not remove the slide protector.
- Not designed to free-stop objects. Do not use it in a vertical or diagonal position.

[Load Direction]





Pre-load direction

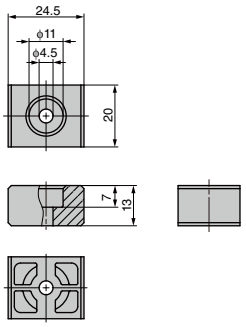
No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)
●	●	190-054-829	LGB-30CB	294	30	76

STOPPER LGB30-ST

- Used for preventing guide block LGB-30CM 1 from coming off.
- Install to guide rail LGB30 2 with screws. Mounting screws not included.

[Remarks]
- Do not use for stopping guide block collision.



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-127	LGB30-ST	POM	Black	5.6	240	960

Refer to 1 : P.600, 2 : P.598

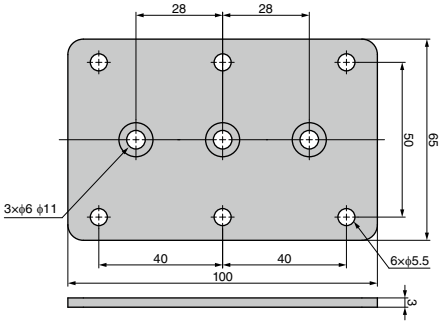
MOUNTING PLATE LGB30-P65-100

[Installation]

- The mounting plate facilitates attachment when mounting requires additional contact area and mounting holes.
- Install to guide block LGB-30CM 1 with supplied screws.

[Parts Included]
- Hexagon socket countersunk head screw M5×16 3 pcs (SUS)

[Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	–

Refer to 1 : P.600

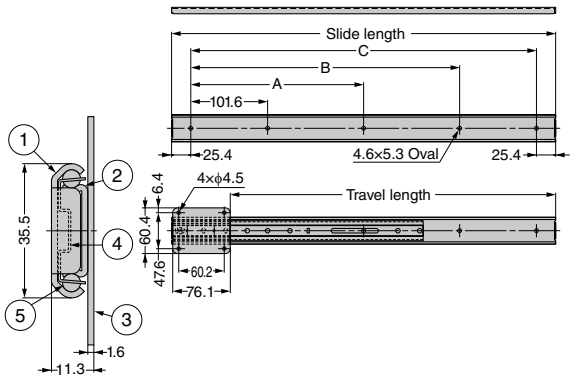
LINEAR BALL BEARING GUIDE ESR9 For Light Weight

L=R SUS

- Inner member is located inside the retainer for precise movement.
- Ideal for doors of small cabinets. 2 slides can support up to 5 kg.

[Remarks]

- Outer member cannot be used in full stroke since the erected parts at its both ends are low in strength against strong shock and continuous movement. Install a stopper with a space from the erected part.
- Ball retainer may shift depending on inner member movement frequency and other conditions. In this case, correct by moving the inner member left or right to the end.
- Retainer may shift downwards In case of moving in the vertical direction.



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Mounting Plate		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-336	ESR9-12	304.8	225	–	152.4	254	0.14	24	–
G	3D	190-111-337	ESR9-14	355.6	276		203.2	304.8	0.16	24	–
G	3D	190-111-338	ESR9-16	406.4	327		254	355.6	0.17	24	–
G	3D	190-111-339	ESR9-18	457.2	378	203.2	304.8	406.4	0.19	24	–
G	3D	190-111-340	ESR9-20	508	428	228.6	355.6	457.2	0.20	24	–
G	3D	190-111-341	ESR9-22	558.8	479	254	406.4	508	0.22	24	–
G	3D	190-111-342	ESR9-24	609.6	530	279.4	457.2	558.8	0.24	24	–
G	3D	190-111-343	ESR9-26	660.4	581	304.8	508	609.6	0.25	22	–
G	3D	190-111-344	ESR9-28	711.2	632	330.2	558.8	660.4	0.27	24	–

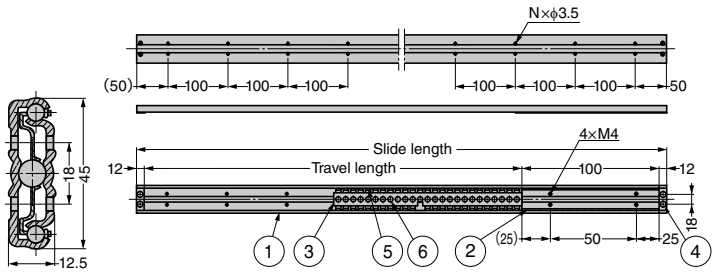
LINEAR BALL BEARING GUIDE TSSL

SUS

- Inner and outer members are supported with 3 steel balls for smooth movement.
- Inner member is located inside the retainer for precise movement.

[Remarks]

- Movement is affected by the use environment. Please check with actual item.
- Do not use for vertical movement.



No.	Part Name	Material	Finish/Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	End Stopper	PA	Black
⑤	Balls	Carbon Steel	–
⑥			

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Holes N	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-600	TSSL-300-100	300	176	6	0.44	12	–
G	3D	190-110-601	TSSL-400-100	400	276	8	0.57	12	–
G	3D	190-110-602	TSSL-500-100	500	376	10	0.68	12	–
G	3D	190-110-603	TSSL-600-100	600	476	12	0.82	12	–
G	3D	190-110-604	TSSL-800-100	800	676	16	1.04	12	–
G	3D	190-110-605	TSSL-1000-100	1000	876	20	1.33	12	–

☆ Limited inventory, contact sales associate for details.

3/4 EXTENSION SLIDE ESR2 Under-mount Type

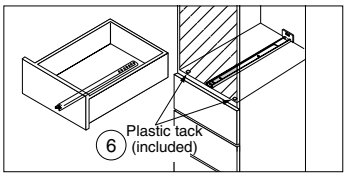
LOAD CAPACITY 49~78 N/pc | L=R | FRICTION | DETACH | SUS

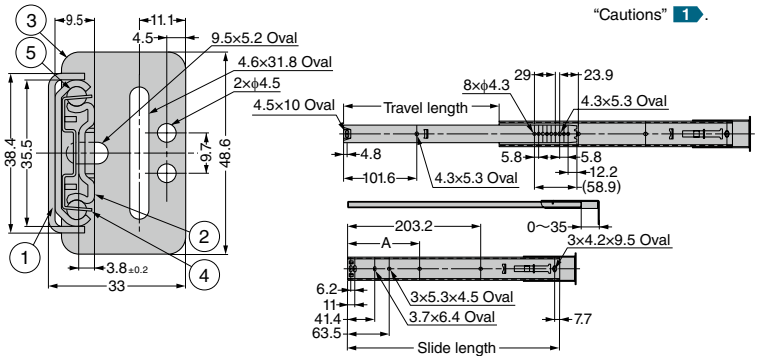
- 3/4 extension (2 members).
- Installed to the bottom of the drawer.
- The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

[Remarks]

- Be sure to read the "Cautions" 1.

[Application Example]





No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Bracket		
④	Retainer		
⑤	Balls		–
⑥	Plastic Tack	Plastic	

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg/pc)	Box (pcs)	Carton (pcs)
–	3D	190-111-310	ESR2-12	323.8	215.9	109.9	78	8	0.4	20	–
–	3D	190-111-311	ESR2-14	374.6	266.7	160.7	74	7.5	0.43	20	–
–	3D	190-111-312	ESR2-16	425.4	304.8	–	69	7	0.48	20	–
–	3D	190-111-313	ESR2-18	476.2	317.5	262.3			0.53	20	–
–	3D	190-111-314	ESR2-20	527	368.3	313.1	64	6.5	0.57	20	–
–	3D	190-111-315	ESR2-22	577.8	419.1	363.9	59	6	0.62	20	–
–	3D	190-111-316	ESR2-24	628.6	444.5	414.7	54	5.5	0.66	20	–
–	3D	190-111-317	ESR2-26	679.4	495.3	465.5	49	5	0.71	20	–

Refer to 1 : P.549

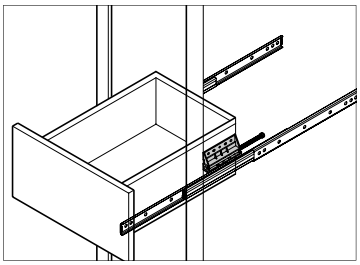
DRAWER DAMPER GDSR144-R

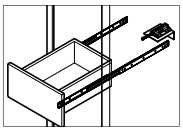
- Used with the slide to reduce the shock when closing the drawer.

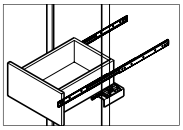
[Remarks]

- Latch is required to hold the drawer in closed position.
- It is an oil damper. Noted that oil leak may occur due to failure.
- Conduct verification before use.
- Noted that the dimension marked with ※ below shall be 30mm or more.
- This product is right type. For left type, please contact local representatives.
- Use with the slide to ensure straight contact with the damper.

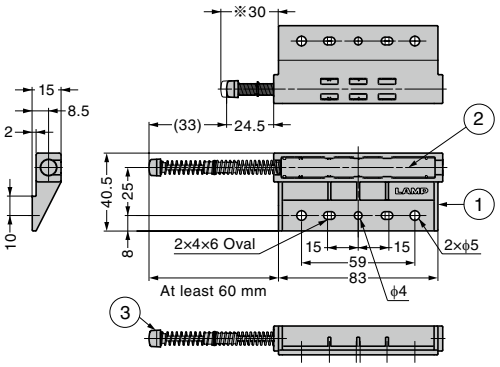
[Installation]







With a damper, drawers in the kitchen and office can be soft-closed.



No.	Part Name	Material	Colour
①	Bracket	ABS	Light Grey
②	Body	POM	Grey
③	Bumper	PUR	Red

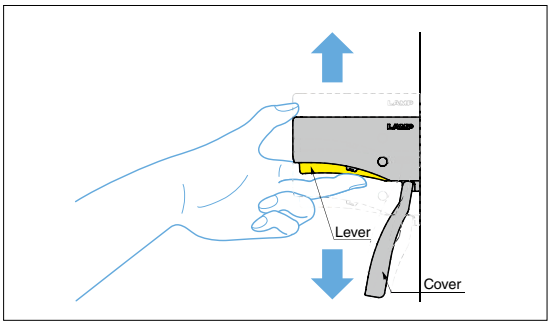
RoHS	CAD	Item Code	Item Name	Reaction Force N	Reaction Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-118-835	GDSR144-R	20	2	24	240	–

ADJUSTABLE MOUNT FSL-V36

INSTRUCTION HEX KEY

- Holds at any height on aluminium frames.
- The cover prevents unintentional lock release.
- Designed for use with the FSL-L, an aluminium frame.
  Can also be used with other companies' aluminium frames that are over 40 mm in width. Please see the drawing below for details.
- The locking mechanism prevents only downward motion.
- Can be installed to an aluminium frame that is already assembled.
- A monitor can be mounted on the FSL-V36 when used with the FSL-MB, an optional monitor-mounting bracket.

[Holds at any height]



[Application]
- Control panels, monitors

[Remarks]
- It is recommended to use one per frame.
- Please use only with vertical sliding applications.

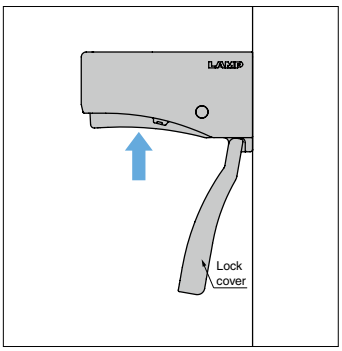
[Parts Included]
- Hex bar spanner (nominal 2.5)

[Optional Parts]
- FSL-MB, Monitor Mounting Bracket
- FSL-L, Aluminium Frame

[Recommended Screw]
- M5 screws

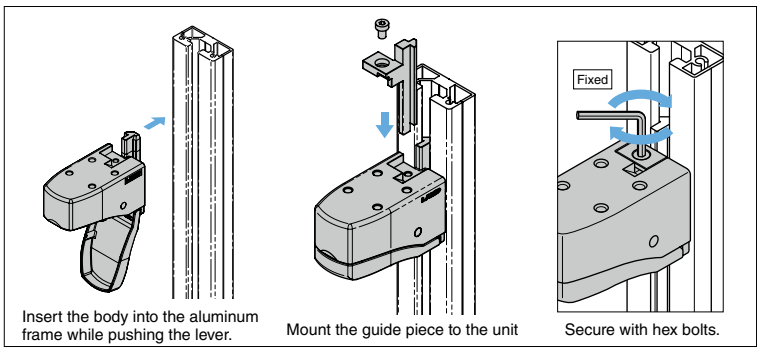
Video Link

[Operation]



Open the cover and push the lever to move the unit up or down. The unit stops where the lever is released.

[Installation]

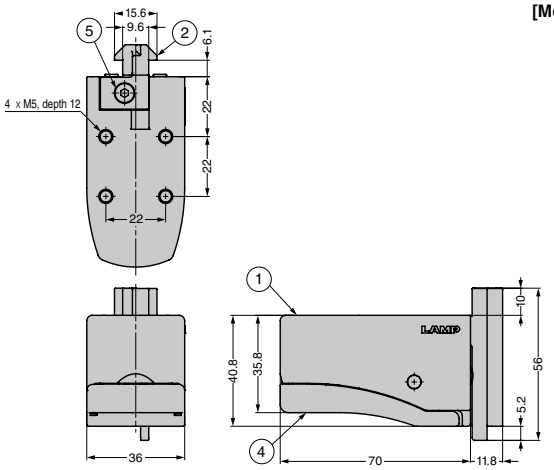


Insert the body into the aluminum frame while pushing the lever.

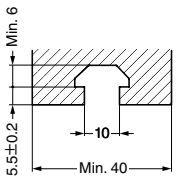
Mount the guide piece to the unit

Secure with hex bolts.

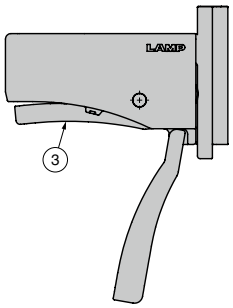
Can be installed to an aluminium frame that is already assembled. (see the instruction manual for details)



[Mountable Aluminium Frame]



[When cover is opened]



No.	Part Name	Material	Finish/Colour
①	Main Body	Zinc Alloy (ZDC)	Satin Chrome Plating
②	Guide Piece		
③	Lever		
④	Lock Cover	ABS Resin	White
⑤	Hexagonal socket cap low head bolt M4×6	Stainless Steel	Plain

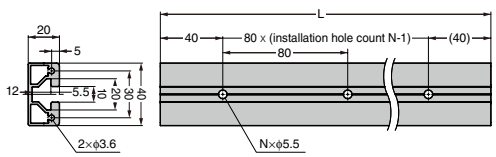
RoHS	CAD	Item Code	Item Name	Vertical Load Capacity N	Vertical Load Capacity kgf	Allowable Moment N·m	Allowable Moment kgf-cm	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	190-042-160	FSL-V36	117	12	20	204	310	1	18

ALUMINIUM FRAME FSL-L

Video Link

[Recommended Screws]
- Hexagon Socket Head Bolt

[Optional Parts]
- FSL-EC End Cap
- FSL-S4 Stopper



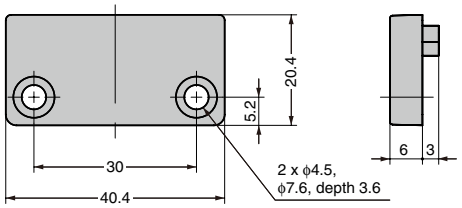
RoHS	CAD	Item Code	Item Name	L	Installation Hole Count N	Material	Finish	Weight (g)	Box (pcs)
G	3D	190-042-162	FSL-L400	400	5	Aluminium Alloy	Silver Anodising	333	30
G	3D	190-042-163	FSL-L800	800	10			665	15
G	3D	190-042-164	FSL-L1200	1200	15			998	9
G	3D	190-042-165	FSL-L2000	2000	25			1663	6

END CAP FSL-EC

Video Link

- End cap for the FSL-L Aluminium Frame.

[Parts Included]
- Size 4 x 8 cross-recessed pan head tapping screws

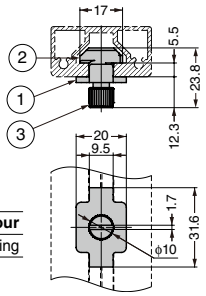


RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	190-042-166	FSL-EC	ABS Resin	Grey	3.1	200

STOPPER FSL-S4

Video Link

- A stopper for the FSL-L Aluminium Frame.
- Can also be used with other companies' aluminium frames that are over 40 mm in width. Please see the drawing of the FSL-V36 for details.



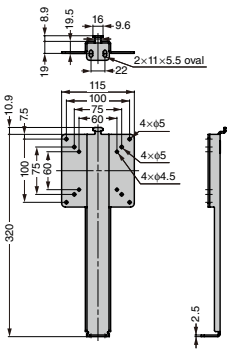
No.	Part Name	Material	Finish/Colour
①	Body	SPCC	Chrome Plating
②	AS Nut	Stainless Steel (SUS316)	Barrel Polished
③	Knurled Knob	Steel	Nickel Plating

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	190-042-167	FSL-S4	22	200

MONITOR MOUNTING BRACKET FSL-MB

[Application]

Used with FSL-V36 and KA-T100S50



- Enables mounting of monitors with hole pitch compliant with the VESA standard (75 x 75 mm, 100 x 100 mm).
- The KA-T100S50, a monitor mount can also be mounted to the FSL-V36, an adjustable mount.

[Sold Separately]
- KA-T100S50, Monitor Mount

*Angle adjustment: 180° swiveling, and 40° tilting

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)
G	3D	190-042-161	FSL-MB	Steel (SPCC)	Enamel Silver	566	20

BRACKET FOR SENSOR MR-30BKT

Horizontal Mount Type　　Vertical Mount Type

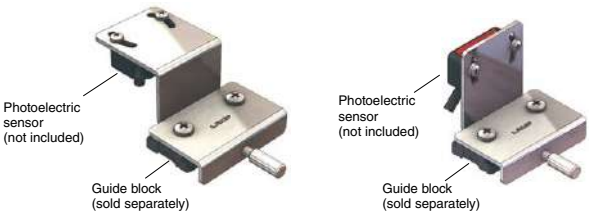
- Mounts photoelectric sensors on the guide block (MRS-30).
- Compatible with sensors which have hole interval of 25.4 mm.
- Height and angle of photoelectric sensors are adjustable.

[Application]
- Production line, test equipment

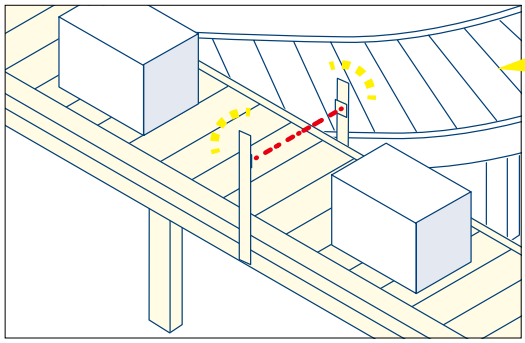
[Remarks]
- Fixing position may shift when an external force more than the retaining force (reference value) is applied.
- Knob tip may be damaged when the knob tightening torque is exceeded.

[Included Parts]
- Pre-assembled cross-recessed pan head screw (p=4) stainless steel M3 x 12 (for photoelectric sensor)
- Cross-recessed pan head screw stainless steel M4 x 8 (for guide block)

[With a Photoelectric Sensor]



[Application]

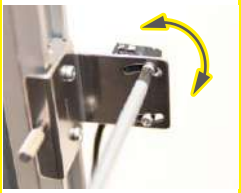


Easy Position Adjustments

[Height]

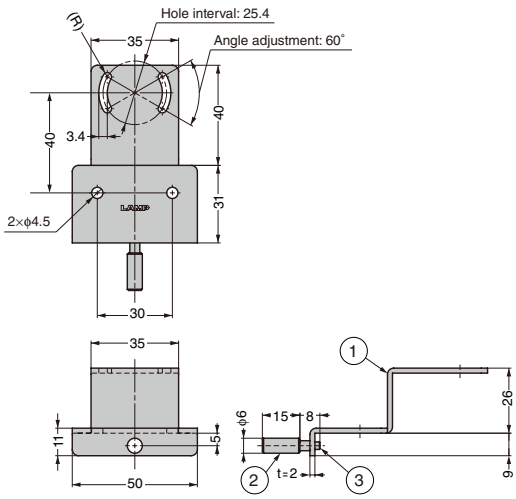
Turn the knob to adjust the height of the photoelectric sensor.

[Angle]

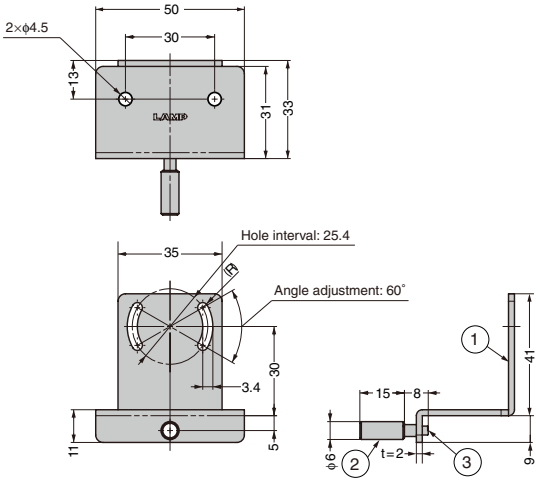


Turn the screws to adjust the angle of the photoelectric sensor.

[Horizontal Mount Type]



[Vertical Mount Type]



RoHS	CAD	Item Code	Item Name	Mount Type	Retaining Force N (reference)	Knob Tightening Torque N	Weight (g)
G	3D	190-048-569	MR-30BKT-PH	Horizontal	14 and under	0.1 and under	60
G	3D	190-048-568	MR-30BKT-PV	Vertical			50

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body		Plain
③	Knob Tip	POM	Black

LAMP®

HANDLES, PULLS & KNOBS

Handles, pulls & knobs are a kind of hardware used as handgrip when opening/closing doors or lids.

In recent years, for handles which affect the appearance of the device, high requirements are imposed in terms of not only functionality and operability, but also appearance design.
Sugatsune has developed a wide range of products, such as those with delicate appearance and those made of SUS316, carbon fibre, titanium and PVC, suitable for various applications and environments.

SUGATSUNE

June 2022

LARGE HANDLES
HANDLES (FRONT SCREW MOUNT)
HANDLES (BACK SCREW MOUNT)
RECESSED PULLS
PULLS & KNOBS
LATCH HANDLES

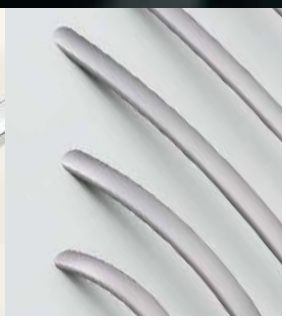
[Handle Type]

Large Handles P.618
Handles (Back Screw Mount) ... P.642
Pulls & Knobs P.687
Handles (Front Screw Mount) ... P.635
Recessed Pulls P.667
Latch Handles P.695

[Search by Series]

Design Handle Series

P.616~



Large Handle

MDH

MTH

SSH

SOR

TBH

SBH

MSH

AGH-L/AGH-T

Handle (Front / Back Screw Mount)

KMH

ZL-2001

Recessed Pull

XLA-HHA

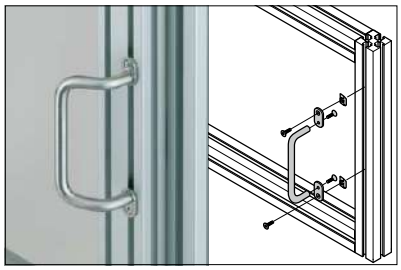
Latch Handle

MDHL

Aluminium Frame Support System AS Series

P.646~P.651

Innovative system for installing various functional parts to aluminium frame by post-installation. Besides, parts for connecting aluminium frame also available.



Handle H-42-C

Bracket AS-H30

SEMI Standard-Compliant Series

P.635~

MG

MH-P

HH-P

HH

HH-KL160

HH-KP150

MJH

MG

HH-UD

[Search by Type]

Large Handles P.618~

MACHINERY HANDLE TBH P.618

MACHINERY HANDLE SBH P.619

MACHINERY HANDLE MMH P.620

MACHINERY HANDLE MGH P.621

MACHINERY HANDLE MSH P.622

ALUMINIUM GRIP HANDLE AGH-L/AGH-T P.623

ALUMINIUM GRIP HANDLE AGH-F P.624

ALUMINIUM DOOR HANDLE SRH P.625

ALUMINIUM DOOR HANDLE ASH P.626

ALUMINIUM DOOR HANDLE SOR P.627

EXTRUDED ALUMINIUM HANDLE ALH P.628

ALUMINIUM DOOR HANDLE SYH P.628

ALUMINIUM PIPE HANDLE MTH P.629

ALUMINIUM PIPE HANDLE APH P.629

DESIGN DOOR HANDLE MDH P.630

STAINLESS STEEL DOOR HANDLE SLH P.631

STAINLESS STEEL DOOR HANDLE ZL-1508 P.632

STAINLESS STEEL DOOR HANDLE ZL-1507 P.633

STAINLESS STEEL DOOR HANDLE SSH P.634

STAINLESS STEEL DOOR HANDLE RH-760 P.634

STAINLESS STEEL DOOR HANDLE MP P.635

Handles (Front Screw Mount) P.635~

STAINLESS STEEL HANDLE MG P.635

STAINLESS STEEL HANDLE FT-R P.636

STAINLESS STEEL HANDLE FT-T P.636

STAINLESS STEEL HANDLE FT-S280 P.637

STAINLESS STEEL HANDLE FT P.637

HANDLE (STAINLESS, TITANIUM) 2LC P.637

STAINLESS STEEL HANDLE 4LC P.638

STAINLESS STEEL HANDLE 3LC P.638

STAINLESS STEEL HANDLE EC-Y P.638

STAINLESS STEEL HANDLE EC-H P.639

STAINLESS STEEL HANDLE FT P.639

STAINLESS STEEL HANDLE FT P.639

STAINLESS STEEL HANDLE FT-100-6.4 P.640

STAINLESS STEEL HANDLE FT-110S P.640

STAINLESS STEEL HANDLE US P.640

HANDLE KMH P.641

HANDLE MJH P.642

HANDLE CJH P.643

HANDLE SJH P.644

HANDLE MH-P P.645

STAINLESS STEEL FOLDING HANDLE HKM P.663

Handles (Back Screw Mount) P.642~

HANDLE MJH P.642

HANDLE CJH P.643

HANDLE SJH P.644

STAINLESS STEEL HANDLE H-42-C P.646

STAINLESS STEEL HANDLE H-42-F14 P.647

STAINLESS STEEL HANDLE MG P.647

HANDLE T-100-8 P.647

STAINLESS STEEL HANDLE H-75-BL-100 P.647

STAINLESS STEEL HANDLE LF-12 P.648

STAINLESS STEEL HANDLE H-75-C P.649

STAINLESS STEEL HANDLE H-42-B P.650

TITANIUM HANDLE H-42-BT P.650

TITANIUM HANDLE H-42-CT P.650

BRACKET FOR HANDLE AS-H30 P.651

BRACKET FOR STAINLESS STEEL HANDLE H-42-Z P.651

ALUMINIUM HANDLE AM P.652

PLASTIC HANDLE PC P.652

HANDLE SGH-200 P.653

STAINLESS STEEL HANDLE HGH P.653

STAINLESS STEEL HANDLE ZL-2001 P.654

STAINLESS STEEL HANDLE ZL-2002 P.654

BRACKET FOR STAINLESS STEEL HANDLE ZL-2301 P.655

STAINLESS STEEL HANDLE XL-JS P.655

STAINLESS STEEL HANDLE XL-JSR P.655

STAINLESS STEEL HANDLE H-35 P.656

STAINLESS STEEL HANDLE H-29 P.656

[Search by Type]

Handles (Back Screw Mount) P.642~

STAINLESS STEEL HANDLE XL-CU P.657

STAINLESS STEEL HANDLE FB P.657

STAINLESS STEEL HANDLE KPH P.658

STAINLESS STEEL HANDLE EC P.658

STAINLESS STEEL HANDLE ECH P.658

STAINLESS STEEL HANDLE KB P.659

STAINLESS STEEL HANDLE DS P.659

STAINLESS STEEL HANDLE DL P.659

STAINLESS STEEL HANDLE KB-SUS304 P.660

STAINLESS STEEL HANDLE DS-SUS304 P.660

STAINLESS STEEL HANDLE DL-SUS304 P.660

HANDLE 936 P.661

HANDLE 937-102SCR P.661

HANDLE AKH P.661

PULL AOT35 P.661

HANDLE SAZ-121CR P.662

HANDLE SAZ-122 P.662

FOLDING HANDLE HK P.662

EXTRUDED ALUMINIUM HANDLE HA-NE P.663

EXTRUDED ALUMINIUM HANDLE HA-SQS P.664

EXTRUDED ALUMINIUM HANDLE HA-SQB P.664

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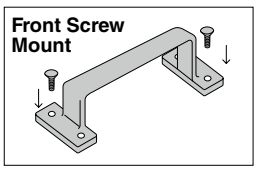
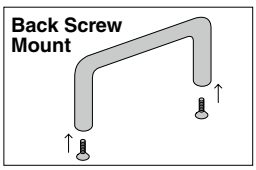
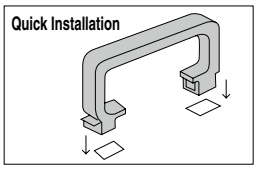
1066	SSH-25115	Stainless Steel		P.634
1200	MDH-PC1200	Plastic		P.630
1200	MDH-PS1200	Stainless Steel		







Toughness & Beautility
HANDLE

Sugatsune offers a wide range of handles that combine rugged and durable construction "toughness" for a range of operating environments with functional beauty "beautility" that provides optimum ease of use.

Lineup

MSH
» P.622

TBH
» P.618

SBH
» P.619

AGH-L
AGH-T
» P.623

AGH-F
» P.624

SOR
» P.627

MDH
» P.630

MDHL
» P.700

CJH
» P.643

SJH
» P.644

KMH
» P.641

SYH
» P.628

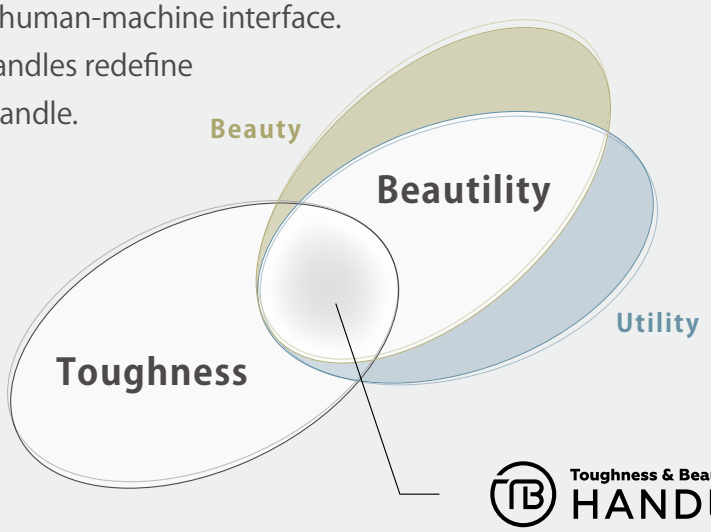
ALH
» P.628

HGH
» P.653

HH-UD
» P.680

Concept

The "Toughness and Beautility"
range of functional handles from Sugatsune
Handles are the ultimate human-machine interface.
Toughness & Beautility handles redefine
the very concept of the handle.



Toughness

Sugatsune handles are designed and manufactured in accordance with stringent load testing standards and production criteria that are based on client requirements and specifications across a wide range of industries.

Beautility

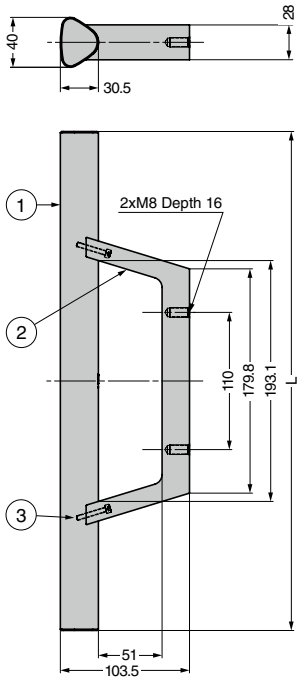
Sugatsune produces handles that are stylish in their own right while blending in beautifully with any environment, as well as comfortable and easy to use.

MACHINERY HANDLE TBH Straight Type

- Revolutionary design aesthetic combines purity of form with solidity of feel.
- Consists of a triangle-shaped bar and a bracket in the centre.
- Rich individuality and excellent overall coordination.

[Applications]

- Main doors of machine tools, etc.



Video Link

No.	Part Name	Material	Finish
①	Bar	Aluminium Alloy	Matte Silver/Anodised (SL) Matte Black/Anodised (BL)
②	Bracket	Zinc Alloy (ZDC)	Paint/Black
③	Hexagon Socket Head Bolt M4x35	Stainless steel	–

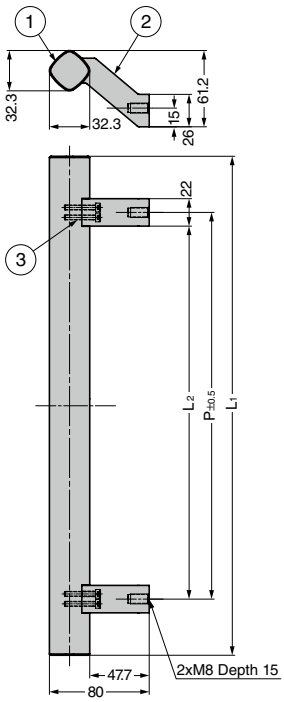
RoHS	CAD	Item Code	Item Name	Bar / Finish	L	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-948	TBH-400SL	Matte Silver/Anodised	400	500	51	1877	1	5
G	3D	100-036-949	TBH-400BL	Matte Black/Anodised					1	5
G	3D	100-036-950	TBH-600SL	Matte Silver/Anodised	600			2363	1	5
G	3D	100-036-951	TBH-600BL	Matte Black/Anodised					1	5

MACHINERY HANDLE SBH Offset Type

- A minimalist yet functional profile.
- Square handle fits perfectly in the hand.
- The unique design creates the impression of a floating handle.

[Applications]

- Main doors of machine tools, etc.



Video Link

No.	Part Name	Material	Finish
①	Bar	Aluminium Alloy	Matte Silver/Anodised (SL) Matte Black/Anodised (BL)
②	Bracket	Zinc Alloy (ZDC)	Paint/Black
③	Hexagon Socket Head Bolt M4x25	Stainless steel	–

RoHS	CAD	Item Code	Item Name	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-952	SBH-400SL	Matte Silver/Anodised	400	288	310	500	51	1079	1	6
G	3D	100-036-953	SBH-400BL	Matte Black/Anodised							1	6
G	3D	100-036-954	SBH-600SL	Matte Silver/Anodised	600	488	510			1456	1	6
G	3D	100-036-955	SBH-600BL	Matte Black/Anodised							1	6
G	3D	100-036-956	SBH-800SL	Matte Silver/Anodised	800	688	710			1833	1	6
G	3D	100-036-957	SBH-800BL	Matte Black/Anodised							1	6

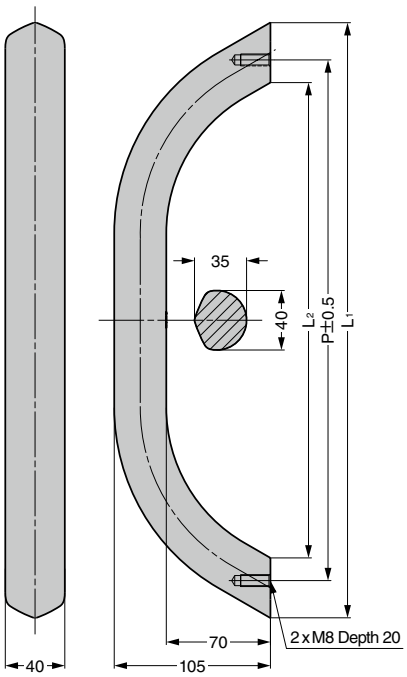
MACHINERY HANDLE MMH

TEST METHOD 20

- Cross-section is thicker than the MSH 1, which makes this handle suitable for use in large machine tools.
- Ideal for inset sliding doors. The handle is designed to be higher than common handles, which prevents hands from accidentally hitting the doorframe when sliding.
- Back side of the handle is large and round, which prevents hands from hurting even when grasping tightly.
- Harmonious design. The handle has a centerline helping it harmonise with machine tools with chamfered edges.

[Remarks]

- Load capacity represents the strength of the pull itself. Actual load capacity may vary depending on wall and cabinet materials. Please install the pull at places with sufficient strength or in places that are reinforced.
- Surface colour of installation side may discolour. This does not affect the performance.



Video Link

RoHS	CAD	Item Code	Item Name	Material	Finish	L_1	L_2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pc)
G	3D	100-043-781	MMH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	319.5	350	1000	102	1250	1
G	3D	100-043-782	MMH-350BL		Matte Black/Anodised							1
G	3D	100-043-783	MMH-550SL		Matte Silver/Anodised	600	519.5	550			1830	1
G	3D	100-043-784	MMH-550BL		Matte Black/Anodised							1
G	3D	100-043-785	MMH-750SL		Matte Silver/Anodised	800	719.5	750			2400	1
G	3D	100-043-786	MMH-750BL		Matte Black/Anodised							1

Refer to 1 : P.622

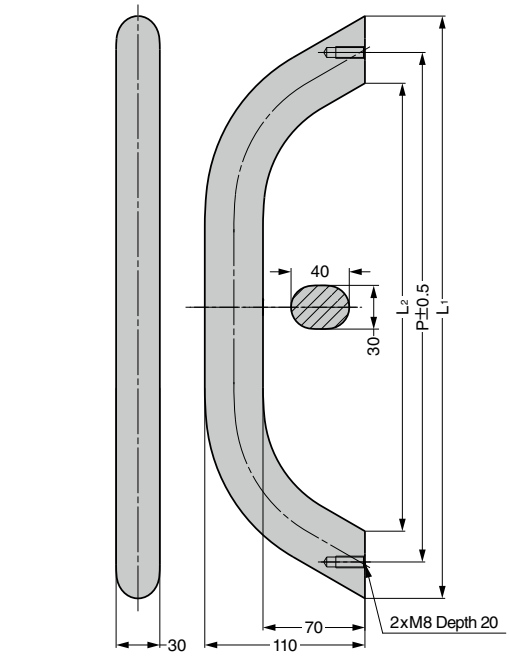
MACHINERY HANDLE MGH

TEST METHOD 20

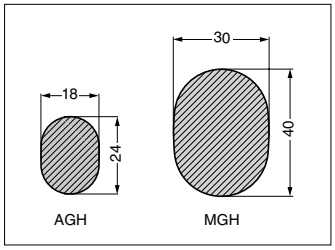
- Cross-section is thicker than the AGH 1, which makes this handle suitable for use in large machine tools.
- Ideal for inset sliding doors. The handle is designed to be higher than common handles, which prevents hands from accidentally hitting the doorframe when sliding.
- Back side of the handle is large and round, which prevents hands from hurting even when grasping tightly.
- Easy-to-use design. The ellipse cross-section allows it to comfortably fit a human hand.

[Remarks]

- Load capacity represents the strength of the pull itself. Actual load capacity may vary depending on wall and cabinet materials. Please install the pull at places with sufficient strength or in places that are reinforced.
- Surface colour of installation side may discolour. This does not affect the performance.



[Cross-section]



Video Link

Can be used with the AGH 1 for design harmonisation.

RoHS	CAD	Item Code	Item Name	Material	Finish	L_1	L_2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pc)
G	3D	100-043-775	MGH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	308	350	1000	102	1170	1
G	3D	100-043-776	MGH-350BL		Matte Black/Anodised							1
G	3D	100-043-777	MGH-550SL		Matte Silver/Anodised	600	508	550			1710	1
G	3D	100-043-778	MGH-550BL		Matte Black/Anodised							1
G	3D	100-043-779	MGH-750SL		Matte Silver/Anodised	800	708	750			2250	1
G	3D	100-043-780	MGH-750BL		Matte Black/Anodised							1

Refer to 1 : P.623

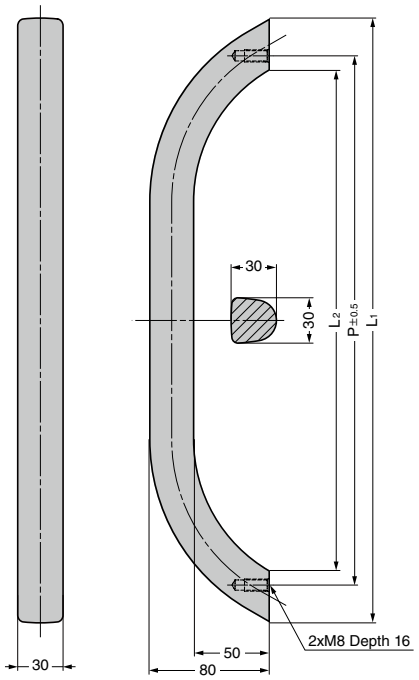
MACHINERY HANDLE MSH Straight Type

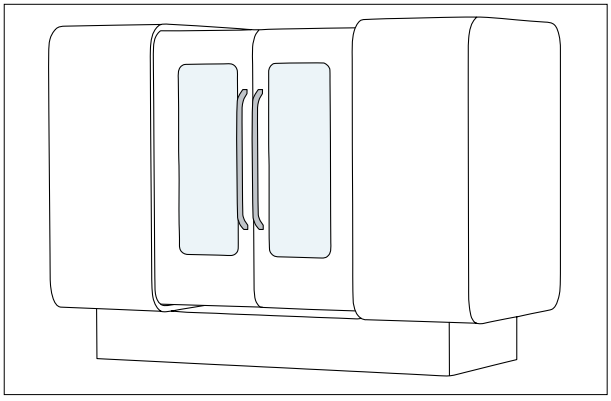
TEST METHOD 20

- Flat surface creates a refined impression.
- A beautifully simple design with weight and size that provides a firm and comfortable grip.

[Applications]

- Main doors of machine tools, etc.





Video Link

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-942	MSH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	330.7	350	500	51	850	–	–
G	3D	100-036-943	MSH-350BL		Matte Black/Anodised							–	–
G	3D	100-036-944	MSH-550SL		Matte Silver/Anodised	600	530.7	550			1256	–	–
G	3D	100-036-945	MSH-550BL		Matte Black/Anodised							–	–
G	3D	100-036-946	MSH-750SL		Matte Silver/Anodised	800	730.7	750			1663	–	–
G	3D	100-036-947	MSH-750BL		Matte Black/Anodised							–	–

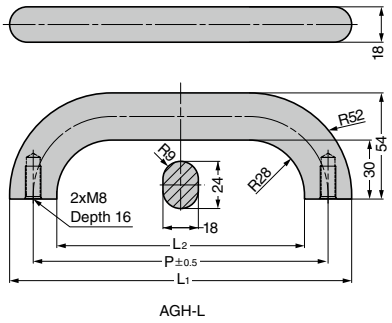
ALUMINIUM GRIP HANDLE AGH-L/AGH-T Straight Type

TEST METHOD 20

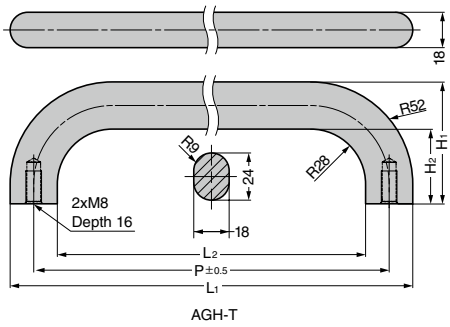
- Elliptical profile combines minimalist look with maximum grip.
- Choice of heights.

[Applications]

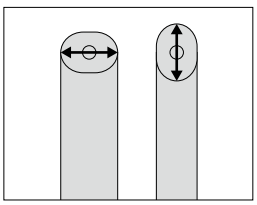
- Handle for operation panel.



AGH-L



AGH-T



Standard handle (flat ellipse) | This product (tall ellipse)

Video Link

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-962	AGH-L150SL	Aluminium Alloy	Matte Silver/Anodised	174	126	150	350	36	191	–	–
G	3D	100-036-963	AGH-L150BL		Matte Black/Anodised							–	–
G	3D	100-036-964	AGH-L200SL		Matte Silver/Anodised	224	176	200			240	–	–
G	3D	100-036-965	AGH-L200BL		Matte Black/Anodised							–	–
G	3D	100-044-389	AGH-L250SL		Matte Silver/Anodised	274	226	250			289	–	–
G	3D	100-044-390	AGH-L250BL		Matte Black/Anodised							–	–
G	3D	100-036-966	AGH-L350SL		Matte Silver/Anodised	374	326	350			387	–	–
G	3D	100-036-967	AGH-L350BL		Matte Black/Anodised							–	–
G	3D	100-036-968	AGH-L500SL		Matte Silver/Anodised	524	476	500			536	–	–
G	3D	100-036-969	AGH-L500BL		Matte Black/Anodised							–	–

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	H1	H2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-958	AGH-T350SL	Aluminium Alloy	Matte Silver/Anodised	374	326	62	38	350	350	36	402	–	–
G	3D	100-036-959	AGH-T350BL		Matte Black/Anodised									–	–
G	3D	100-036-960	AGH-T500SL		Matte Silver/Anodised	524	476	64	40	500			553	–	–
G	3D	100-036-961	AGH-T500BL		Matte Black/Anodised									–	–

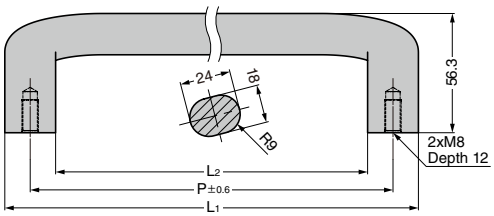
ALUMINIUM GRIP HANDLE AGH-F Offset Type

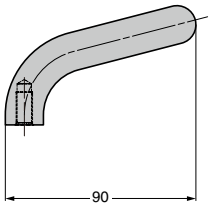
TEST METHOD 20

- Handles that are delightful to hold.

[Applications]

- Handle for operation panel.





Video Link

RoHS	CAD	Item Code	Item Name	Material	Finish	L_1	L_2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-970	AGH-F300SL	Aluminium Alloy	Matte Silver/Anodised	324	276	300	500	51	443	–	–
G	3D	100-036-971	AGH-F300BL		Matte Black/Anodised							–	–
G	3D	100-036-972	AGH-F400SL		Matte Silver/Anodised	424	376	400			540	–	–
G	3D	100-036-973	AGH-F400BL		Matte Black/Anodised							–	–

ALUMINIUM DOOR HANDLE SRH Antibacterial Type

TEST METHOD 20 ANTIBACTERIAL

Toughness & Beautility HANDLE

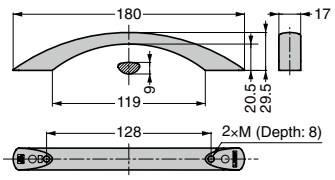
- Sleek handle with flowing curve design.
- Designed to protrude only a small amount.
- Has anti-bacterial coating.

[Applications]
- Medical and diagnostic equipment.

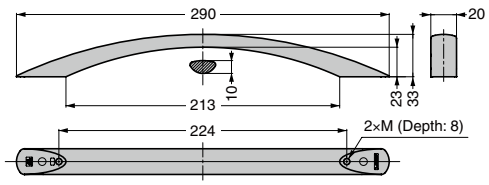
SRH-128SL

SRH-224SL

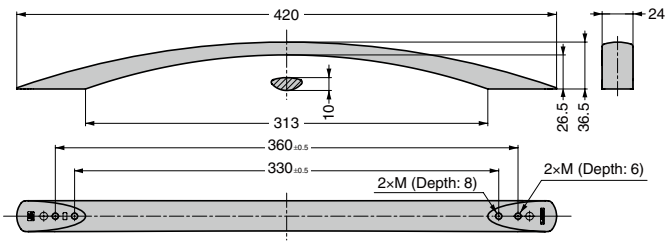
SRH-330SL SRH-330BL



SRH-128



SRH-224



SRH-330

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	M	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-044-288	SRH-128SL-M4	Aluminium Alloy (ADC)	Silver Enamel Finish	4	500	51	68	10	80
G	3D	100-044-289	SRH-128SL-M5			5				10	80
G	3D	100-044-290	SRH-128BL-M4		Matt Black Enamel Finish	4				10	80
G	3D	100-044-291	SRH-128BL-M5			5				10	80
G	3D	100-044-292	SRH-224SL-M4		Silver Enamel Finish	4			130	10	80
G	3D	100-044-293	SRH-224SL-M5			5				10	80
G	3D	100-044-294	SRH-224BL-M4		Matt Black Enamel Finish	4				10	80
G	3D	100-044-295	SRH-224BL-M5			5				10	80
G	3D	100-044-296	SRH-330SL-M4		Silver Enamel Finish	4	400	41	233	10	40
G	3D	100-044-297	SRH-330SL-M5			5				10	40
G	3D	100-044-298	SRH-330BL-M4		Matt Black Enamel Finish	4				10	40
G	3D	100-044-299	SRH-330BL-M5			5				10	40

ALUMINIUM DOOR HANDLE ASH

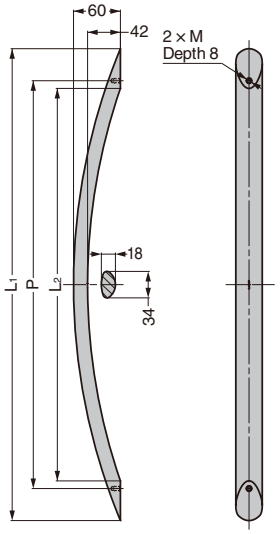
TEST METHOD 20

[Remarks]

- Designed for single-sided mount. (Not available with double-sided mount)

[Recommended Screw]

- M6 screw, M8 screw



[3 Finishes]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	L_1	L_2	P	M	Load Capacity N	Load Capacity kgf	Weight (g)	Box (psc)
G	3D	100-042-506	ASH-400SL	Aluminium Alloy	Satin and Silver/Anodised	391.9	323	335	M6	500	51	482	10
G	3D	100-042-507	ASH-400BL		Satin and Black/Anodised								10
G	3D	100-042-508	ASH-400ST		Satin and Stainless Steel/Anodised								10
G	3D	100-042-509	ASH-600SL		Satin and Silver/Anodised	604	502	522				725	10
G	3D	100-042-510	ASH-600BL		Satin and Black/Anodised								10
G	3D	100-042-511	ASH-600ST		Satin and Stainless Steel/Anodised								10
G	3D	100-042-512	ASH-800SL		Satin and Silver/Anodised	822.7	686	710	M8			978	5
G	3D	100-042-513	ASH-800BL		Satin and Black/Anodised								5
G	3D	100-042-514	ASH-800ST		Satin and Stainless Steel/Anodised								5

ALUMINIUM DOOR HANDLE SOR

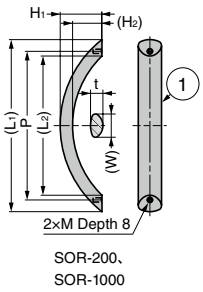
Toughness & Beautility HANDLE

- Flowing cureves that adapt gracefully to any surface.
- Other handle sizes are possible at surcharge.

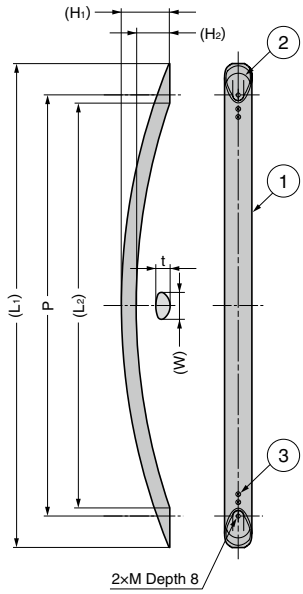
[Applications]
- Machine tools and railway vehicles, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M6 screw, M8 screw



SOR-200、SOR-1000



SOR-400、SOR-600、SOR-800

Video Link

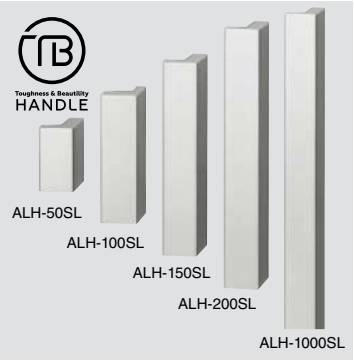
No.	Part Name	Material
①	Body	Aluminium Alloy
②	Insert	Stainless Steel (SCS13)
③	Screws	Stainless Steel

※SCS13 is equivalent to SUS304.

RoHS	CAD	Item Code	Item Name	Finish	L_1	L_2	P	H_1	H_2	W	t	M	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)
G	3D	100-028-297	SOR-200S	Stainless Steel/Anodised	222	180	192	54	38	30	16	M6	490	50	228	10
G	3D	100-028-298	SOR-200BL	Black/Anodised												10
G	3D	100-010-961	SOR-400S	Stainless Steel/Anodised	392	323	335	60	42	34	18				385	30
G	3D	100-010-963	SOR-400BL	Black/Anodised												30
G	3D	100-010-962	SOR-600S	Stainless Steel/Anodised	604	502	522								495	20
G	3D	100-010-964	SOR-600BL	Black/Anodised												20
G	3D	100-010-960	SOR-800S	Stainless Steel/Anodised	823	686	710					M8			605	15
G	3D	100-010-965	SOR-800BL	Black/Anodised												15
G	3D	100-028-299	SOR-1000S	Stainless Steel/Anodised	1090	939.8	975	80	59.8	38	20.2				1647	4
G	3D	100-028-300	SOR-1000BL	Black/Anodised												4

EXTRUDED ALUMINIUM HANDLE ALH

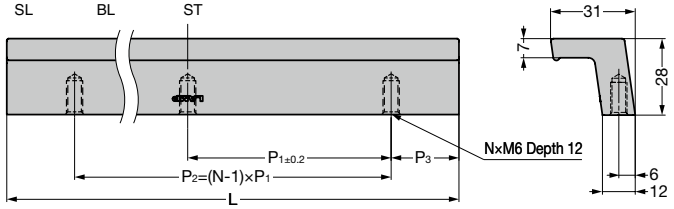
TEST METHOD 20



- Stylish in form and function.
- Design innovations include anti-slip bump along the edges and angled surface to prevent dust accumulation.

[Applications]

- Control equipment, measuring equipment, drawers, etc.



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P1	P2	P3	N	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-006	ALH-50SL	Aluminium Alloy	Matte Silver Anodised	50	30	30	10	2	500	51	58	–	–
G	3D	100-037-007	ALH-50BL		Matte Black Anodised									–	–
G	3D	100-037-008	ALH-50ST		Satin and Stainless Steel Anodised									–	–
G	3D	100-037-009	ALH-100SL		Matte Silver Anodised	100	60	60	20				118	–	–
G	3D	100-037-010	ALH-100BL		Matte Black Anodised									–	–
G	3D	100-037-011	ALH-100ST		Satin and Stainless Steel Anodised									–	–
G	3D	100-037-012	ALH-150SL		Matte Silver Anodised	150	100	100	25				178	–	–
G	3D	100-037-013	ALH-150BL		Matte Black Anodised									–	–
G	3D	100-037-014	ALH-150ST		Satin and Stainless Steel Anodised									–	–
G	3D	100-037-015	ALH-200SL		Matte Silver Anodised	200	75	150		3			237	–	–
G	3D	100-037-016	ALH-200BL		Matte Black Anodised									–	–
G	3D	100-037-017	ALH-200ST		Satin and Stainless Steel Anodised									–	–
G	3D	100-037-018	ALH-1000SL		Matte Silver Anodised	1000	150	900	50	7			1191	–	–
G	3D	100-037-019	ALH-1000BL		Matte Black Anodised									–	–
G	3D	100-037-020	ALH-1000ST		Satin and Stainless Steel Anodised									–	–

Video Link

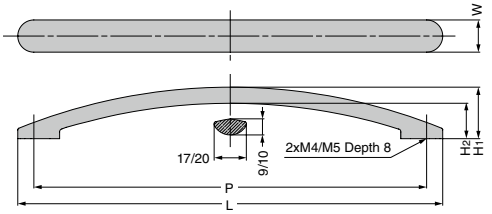
ALUMINIUM DOOR HANDLE SYH

TEST METHOD 20 ANTIBACTERIAL

- A flowing handle with a feature line down the centre.
- Aluminium material and streamline shape create a soft impression. Low profile design ensures that the handle will not noticeably protrude.
- With anti-bacterial coating to reduce risk of infection.

[Applications]

- Medical and analytical equipment, etc.

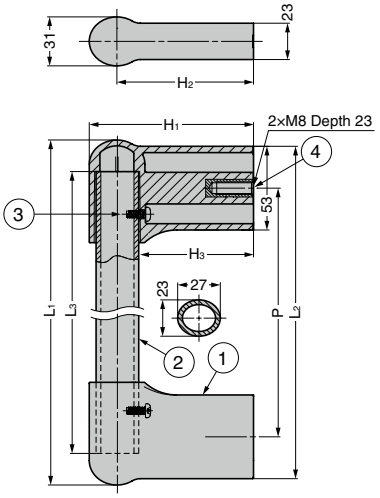


Video Link

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	W	M	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-002	SYH-128SL-M4	Aluminium Alloy	Antibacterial Paint/Silver	165	128	30	21	17	M4	500	51	53	10	80
G	3D	100-037-003	SYH-128SL-M5								M5				10	80
G	3D	100-037-004	SYH-224SL-M4			264	224	32	22	20	M4			105	10	80
G	3D	100-037-005	SYH-224SL-M5								M5				10	80
G	3D	100-043-685	SYH-128BL-M4		Antibacterial Paint/Black	165	128	30	21	17	M4			53	10	80
G	3D	100-043-686	SYH-128BL-M5								M5				10	80
G	3D	100-043-687	SYH-224BL-M4			264	224	32	22	20	M4			105	10	80
G	3D	100-043-688	SYH-224BL-M5								M5				10	80

ALUMINIUM PIPE HANDLE MTH

LOAD CAPACITY 500 N | TEST METHOD 1



- Position of bracket (MTH-T) is higher than common handles, suitable for inset sliding door of machine tool.
- MTH-L with the same height as common handles for total coordination with handle of machine tool.
- Pipe and bracket are connected with screws, preventing pipe loosening and idling.
- Elliptical pipe shape allows for easy gripping and sliding.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M8 screw

No.	Part Name	Material	Finish / Colour
①	Bracket	Glass Filled Polyamide	Black
②	Pipe	Aluminium Alloy	Anodised Silver
③	Countersunk head tapping screw 5×12	Steel	Coloured Zinc Chromate (Trivalent)
④	Nut	Brass	Plain

RoHS	CAD	Item Code	Item Name	L_1	L_2	L_3	P	H_1	H_2	H_3	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-032-610	MTH-L300	360	352	320	300	74	56.5	43	500	51	360	1	15
–	3D	100-032-611	MTH-L450	510	502	470	450						445	1	15
–	3D	100-032-612	MTH-L600	660	652	620	600						530	1	15
–	3D	100-032-613	MTH-T300	360	352	320	300	104	86.5	73			430	1	15
–	3D	100-032-614	MTH-T450	510	502	470	450						515	1	15
–	3D	100-032-615	MTH-T600	660	652	620	600						600	1	15

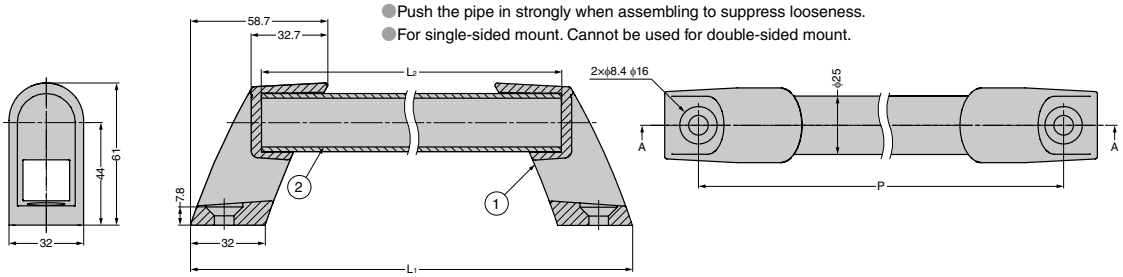
ALUMINIUM PIPE HANDLE APH

- Possible to fix with screws from the front.
- 4 lengths of pipes are available. By cutting the pipe, the handle length can be changed freely.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.
- High precision assembly of pipe and bracket.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- Push the pipe in strongly when assembling to suppress looseness.
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- Countersunk head screw M8



A-A Cutaway view

[Bracket]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-029-942	APH-B	34	150	600

No.	Part Name	Material	Finish / Colour
①	Bracket	PA	Black
②	Pipe	Aluminium Alloy	Anodised Silver

[Pipe]

RoHS	CAD	Item Code	Item Name	L_1	L_2	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-035-462	APH-P300	328.9	268	300	104.8	–	130
–	3D	100-035-463	APH-P400	428.9	368	400	119.3	–	100
–	3D	100-035-464	APH-P500	528.9	468	500	133.7	–	70
–	3D	100-035-465	APH-P600	628.9	568	600	287.9	–	70

DESIGN DOOR HANDLE MDH

TEST METHOD 1 | INSTRUCTION | SUS

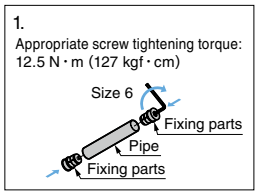
- Brackets and pipes can be combined freely.
- Two types of brackets available: In-line type and offset type.
- Pipes are made of stainless steel or carbon fibre reinforced plastic, either has 5 lengths available. By cutting the pipe, the total length can be changed freely.
- Carbon fibre reinforced plastic pipes are subject to UV-cut treatment to prevent discoloration.
  ※Features of Carbon fibre reinforced plastic.
  It is a light weight, high-strength materials also widely used for aircraft, etc., contributing to the weight reduction of structure.
  Also, the delicate mesh pattern brings a unique texture and high-quality feeling.
- Pipes may be sold separately.
- Latch handle MDHL 1 of the same design used for sliding doors also available.

Video Link

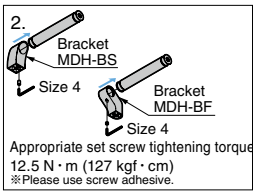
[Applications]
- Machine tools and large doors, etc.

[Remarks]
- Brackets and pipes have separate item numbers. Please order together by indicating each specification.
- Bracket is sold in pairs.

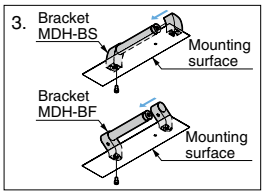
[How to Install]



Insert the fixing parts (attached to the bracket) into both ends of the pipe until their flanges contact the pipe ends, and then tighten the screws with a hex key size 6 (not included).



Insert one bracket into the pipe, and tighten the set screws (attached to the bracket) with a hex key size 4 (not included).



Install one bracket to the mounting surface with M8 screws (not included). Install the other bracket in the same procedure after being preliminarily assembled.

[Bracket]

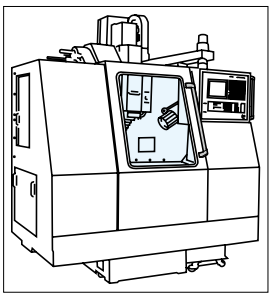
MDH-BS (Straight type)

MDH-BF (Offset type)

[Fixing Parts]

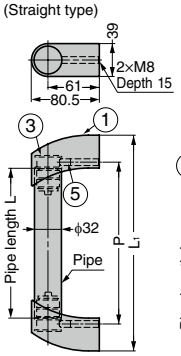
Attached to the bracket

[Application Example]

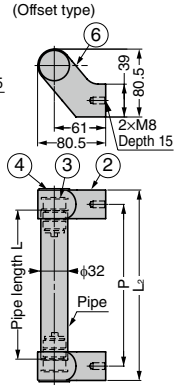


[Installation of Bracket and Pipe]

Bracket MDH-BS (Straight type)



Bracket MDH-BF (Offset type)



[Bracket]

No.	Part Name	Material	Finish/Colour
①	Bracket (Straight)	Zinc Alloy (ZDC)	Matte Chrome
②	Bracket (Offset)		
③	Fixing Parts		Plain
④	Cover	POM	Black
⑤	Hexagon Socket Set Screw M8×15	Stainless Steel	Plain
⑥	Hexagon Socket Set Screw M8×8		

[Bracket]

RoHS	CAD	Item Code	Item Name	Type	Parts	Weight (g)	Box (sets)	Carton (sets)
G	3D	100-022-158	MDH-BS	Straight	①③⑤ (Each 2 pcs)	1010	1	1
G	3D	100-022-159	MDH-BF	Offset	②③④⑥ (Each 2 pcs)	1122	1	1

[Pipe]

RoHS	CAD	Item Code	Item Name	Material	Finish	Pipe Length L	L_1	L_2	P	Pipe Thickness	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-022-161	MDH-PS192	Stainless Steel (SUS304)	Satin	177	256	226	192	2	490	50	384	1	10
G	3D	100-022-162	MDH-PS350			335	414	384	350				727	1	10
G	3D	100-022-163	MDH-PS500			485	564	534	500				1050	1	10
G	3D	100-022-164	MDH-PS800			785	864	834	800				1700	1	10
G	3D	100-022-165	MDH-PS1200			1185	1264	1234	1200				2570	1	7
G	3D	100-022-166	MDH-PC192	Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	177	256	226	192	2.5			70	1	1
G	3D	100-022-167	MDH-PC350			335	414	384	350				132	1	1
G	3D	100-022-168	MDH-PC500			485	564	534	500				191	1	1
G	3D	100-022-169	MDH-PC800			785	864	834	800				309	1	1
G	3D	100-022-170	MDH-PC1200			1185	1264	1234	1200				467	1	1

Refer to 1 : P.700

STAINLESS STEEL DOOR HANDLE SLH

TEST METHOD 20 SUS

Toughness & Beautility HANDLE

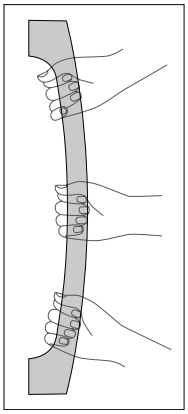
- All parts are made of stainless steel for high corrosion resistance.
- Has smooth streamlined shape and premium satin finish.
- Ergonomically designed. It is easy to hold any part of the handle.

SLH-3240SH

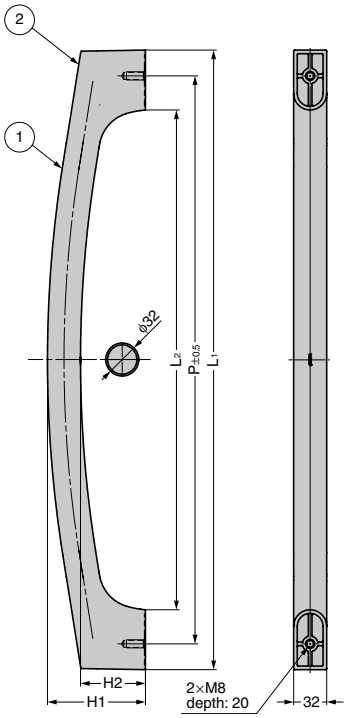
SLH-3260SH

SLH-3280SH

[Ergonomic Design]



Easy to hold any part of the handle.



No.	Part Name	Material
①	Pipe	Stainless Steel (SUS304)
②	Bracket	Stainless Steel (SCS13)

[Premium Satin Finish]

RoHS	CAD	Item Code	Item Name	Finish	L_1	L_2	P	H_1	H_2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pc)
G	3D	100-045-419	SLH-3240SH	Satin	400	284	350	87	55	600	61	2030	1
G	3D	100-045-420	SLH-3260SH		600	484	550	95	63			2290	1
G	3D	100-045-421	SLH-3280SH		800	684	750	102	70			2560	1

Zwei L STAINLESS STEEL DOOR HANDLE ZL-1508

SUS316 TEMPERED GLASS HEX KEY

The curving design is sharp.

Zwei L Finish

- The curving design is sharp.
- Ultrapremium Zwei L finish. Zwei L finish: Using top class polishing technology, these products combine the elegance of Satin with the deep glow of a Mirror.
- Made of highly corrosion resistant SUS316.
- Can be installed on both sides of glass, metal or wooden doors. Can also be installed on a single side of glass, wood or metal doors.

[Specifications]

- Dual side handle sets ZL-1508-WN are attached by ZL-1508-OS (for the outside) and ZL-1508-IS (for the inside).

[Parts Included]

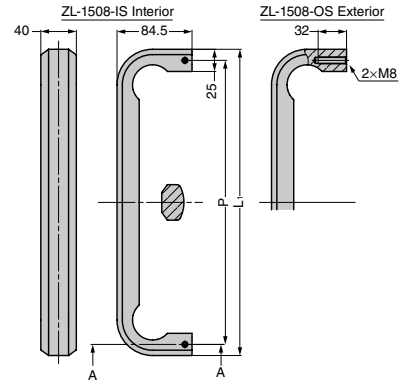
- ZL-1508-IS (single side specs): Hex key, hex socket set screw, mounting bracket
  ZL-1508-WN (dual side specs): Hex key, bolt set

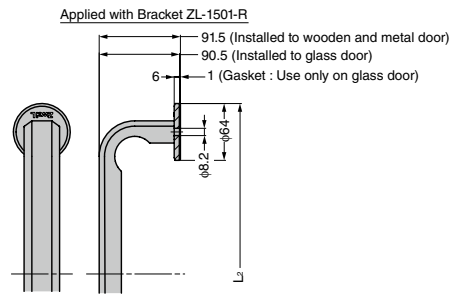
[Optional Parts]

- Bracket ZL-1501-R

[Remarks]

- Screws are not included in ZL-1508-OS and ZL-1508-IS. Prepare screws suitable for the door specifications.
- Bore holes with ±1 mm tolerance.
- While dimensions and installation are not expected to change, there may be changes to the internal structure. Please take note.
- When installing on a door outside the applicable thickness range, prepare separate bolts.





[Bracket ZL-1501-R (Sold Separately)]

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name
G	–	100-011-015	ZL-1501-R

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	L_1	L_2	P
G	3D	100-048-628	ZL-1508-OS-320	Exterior	Stainless Steel (SUS316)	Zwei L Finish	345	384	320
G	3D	100-048-629	ZL-1508-IS-320	Interior					
G	3D	100-048-632	ZL-1508-WN-320	Back-to-Back					
G	3D	100-048-630	ZL-1508-OS-640	Exterior			665	704	640
G	3D	100-048-631	ZL-1508-IS-640	Interior					
G	3D	100-048-633	ZL-1508-WN-640	Back-to-Back					

Zwei L STAINLESS STEEL DOOR HANDLE ZL-1507

SUS316 TEMPERED GLASS HEX KEY

- The curving design is sharp.
- Ultrapremium Zwei L finish. Zwei L finish: Using top class polishing technology, these products combine the elegance of Satin with the deep glow of a Mirror.
- Made of highly corrosion resistant SUS316.
- Can be installed on both sides of glass, metal or wooden doors. Can also be installed on a single side of glass, wood or metal doors.

[Specifications]

- Dual side handle sets ZL-1507-WN are attached by ZL-1507-OS (for the outside) and ZL-1507-IS (for the inside).

[Parts Included]

- ZL-1507-IS (single side specs): Hex key, hex socket set screw, mounting bracket
  ZL-1507-WN (dual side specs): Hex key, bolt set

[Optional Parts]

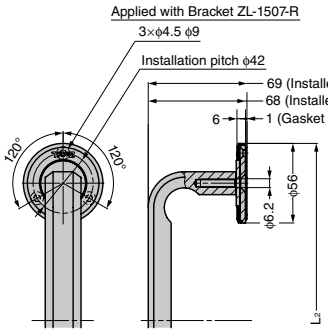
- Bracket ZL-1507-R

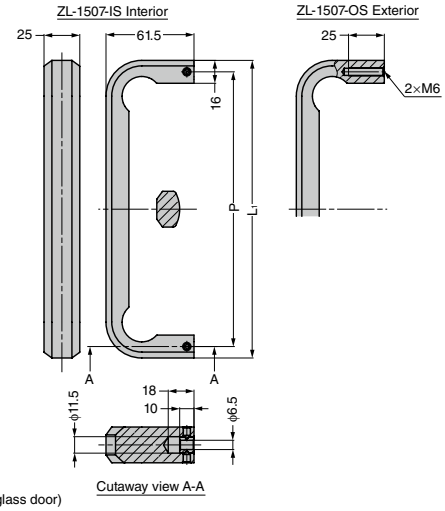
[Remarks]

- Screws are not included in ZL-1507-OS and ZL-1507-IS. Prepare screws suitable for the door specifications.
- Bore holes with ±1 mm tolerance.
- While dimensions and installation are not expected to change, there may be changes to the internal structure. Please take note.
- When installing on a door outside the applicable thickness range, prepare separate bolts.

The curving design is sharp.

Zwei L Finish





[Bracket ZL-1507-R (Sold Separately)]

Sold in pairs (2 pcs).

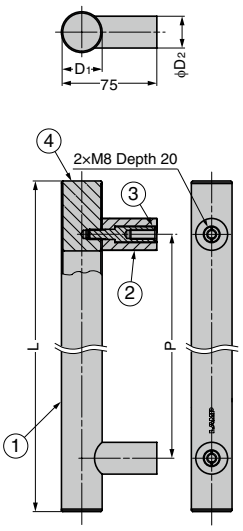
RoHS	CAD	Item Code	Item Name
G	–	100-048-634	ZL-1507-R

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	L_1	L_2	P
G	3D	100-048-619	ZL-1507-OS-192	Exterior	Stainless Steel (SUS316)	Zwei L Finish	208	248	192
G	3D	100-048-620	ZL-1507-IS-192	Interior					
G	3D	100-048-625	ZL-1507-WN-192	Back-to-Back					
G	3D	100-048-621	ZL-1507-OS-320	Exterior			336	376	320
G	3D	100-048-622	ZL-1507-IS-320	Interior					
G	3D	100-048-626	ZL-1507-WN-320	Back-to-Back					
G	3D	100-048-623	ZL-1507-OS-640	Exterior			656	696	640
G	3D	100-048-624	ZL-1507-IS-640	Interior					
G	3D	100-048-627	ZL-1507-WN-640	Back-to-Back					

STAINLESS STEEL DOOR HANDLE SSH

SUS



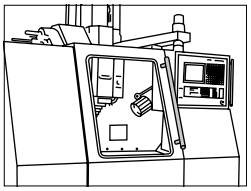
- Stainless steel handle with simple design.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M8 screw

[Application Example]

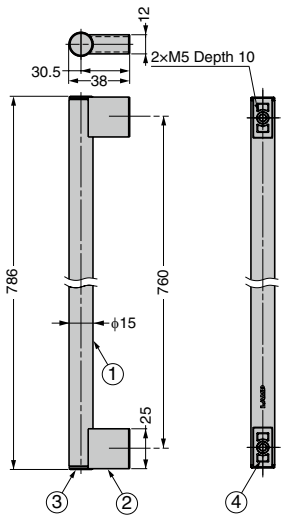


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Stem		
③	Screws		
④	Cover		

RoHS	CAD	Item Code	Item Name	L	P	D1	D2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-181-413	SSH-2540	400	316	25	19	665	10	–
G	3D	100-181-414	SSH-2560	600	516			750	10	–
G	3D	100-181-415	SSH-2580	800	716			840	10	–
G	3D	100-049-978	SSH-25115	1150	1066			1210	5	–
G	3D	100-181-416	SSH-3240	400	316	32	25	1175	5	–
G	3D	100-181-417	SSH-3260	600	516			1290	5	–
G	3D	100-181-418	SSH-3280	800	716			1400	5	–

STAINLESS STEEL DOOR HANDLE RH-760

SUS



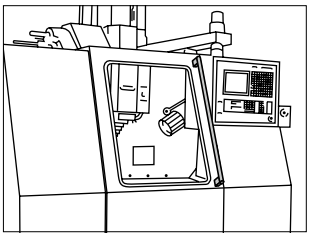
- Stainless steel handle with small projection from mounting surface and simple design.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- FA equipment, OA equipment, and specially-equipped vehicles, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M5 screw

[Application Example]

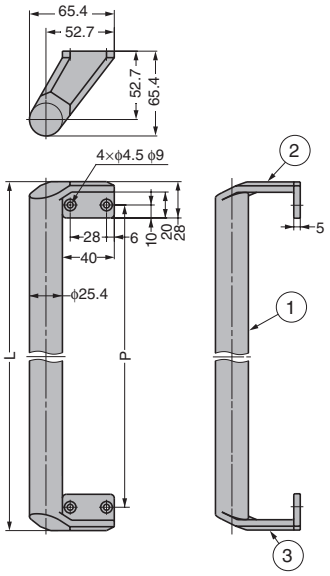


No.	Part Name	Material	Finish / Colour
①	Pipe	Stainless Steel (SUS304)	Satin
②	Stem		
③	End Cap	Stainless Steel (SUS303)	
④	Spacer	PP	Natural

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-341	RH-760	340	–	20

STAINLESS STEEL DOOR HANDLE MP

SUS316



No.	Part Name	Material
①	Pipe	Stainless Steel (SUS316)
②	Strike Plate (L)	Stainless Steel (SCS14)
③	Strike Plate (R)	Stainless Steel (SCS14)

- Simple design and front screw mount.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- Railway vehicles, specially-equipped vehicles, ships, large doors, and auxiliary handrails, etc.

[Recommended Screws]
- Countersunk head screw M4
- Countersunk head tapping screw 4
- Countersunk head wood screw 4.1

[Application Example]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-500	MP-500	Stainless Steel (SUS316)	Polished	500	464	1000	2	20
G	3D	100-010-501	MP-750			750	714	1300	2	16
G	3D	100-010-502	MP-1000			1000	964	1600	2	12

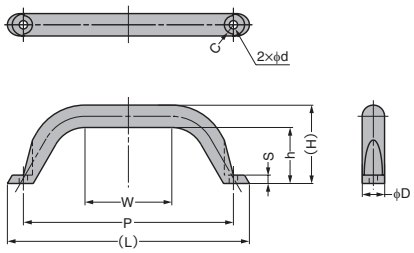
STAINLESS STEEL HANDLE MG SEMI Compliance

TEST METHOD 1 NSF SUS316

- Compliant with SEMI standard (SEMI S8-0701).
- Passed 1960N (200kgf) load capacity test.
- MG-270T option passed 2700N (270kgf) load capacity test.
- Larger height and width allows for easy gripping with gloved hand.
- For mounting screws, truss head can be used. (Screws not included)

[Applications]
- Semiconductor manufacturing equipment, special vehicles, large doors, and transport equipment, etc.

[Recommended Screws]
- MG-150: Hexagon socket head cap screw M5
- MG-190, MG-250: Hexagon socket head cap screw M6
- MG-230T, MG-270T, MG-300T: Hexagon socket head cap screw M8



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	D	W	h	S	C	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-483	MG-150	Stainless Steel (SUS316)	Polished	172.8	56	150	16	62	40	6	R6.5	6	295	10	40
G	3D	100-010-484	MG-190			216.7	63	190	18	92	45	8	R7.5	7	460	5	20
G	3D	100-010-485	MG-250			275.5	68	250		145	50				595	5	20
G	3D	100-021-952	MG-230T			260	70	230	20	129		10	R9	9	665	5	20
G	3D	100-048-361	MG-270T			302	76	270	26	158			R9.5		1330	1	6
G	3D	100-021-953	MG-300T			330	70	300	20	199			R9		820	5	20

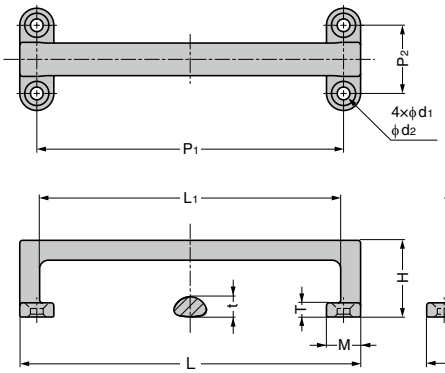
STAINLESS STEEL HANDLE FT-R

SUS

- A rounded handle for a comfortable grip.
- Wide grip.

[Parts Included]

- FT-R-120: Raised countersunk head tapping screw 4×20 (SUS)
- FT-R-160: Raised countersunk head tapping screw 5×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-034-130	FT-R-120	Stainless Steel (SCS13)	Polished	120	106	36	12	27	5.5	7	12	108	24	4.5	8.5	140	10	60
G	3D	100-034-131	FT-R-160			160	142	48	16.3	36	7	9	16	144	32	5.5	10.5	285	5	20

※SCS13 is equivalent to SUS304.

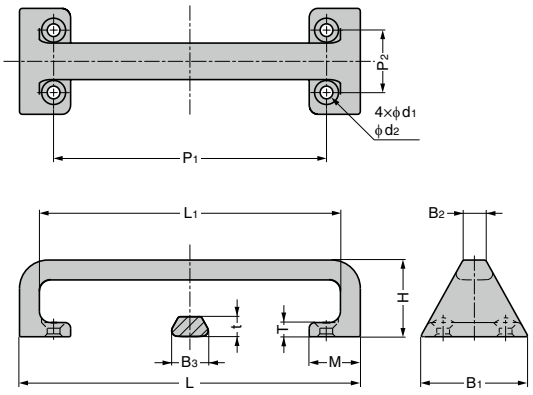
STAINLESS STEEL HANDLE FT-T

SUS316

- A shape with heavy feeling and rounded inside allows for easy gripping.
- Wide grip.

[Parts Included]

- FT-T-120: Raised countersunk head tapping screw 4×20 (SUS)
- FT-T-170: Raised countersunk head tapping screw 5×25 (SUS)
- FT-T-220: Raised countersunk head tapping screw 6×35 (SUS)

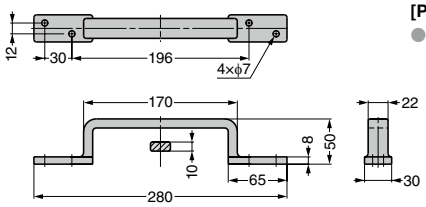


RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	B3	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-034-132	FT-T-120	Stainless Steel (SCS14)	Polished	120	105	39.3	10	15.1	28.5	6	7	19	96	24	4.5	8.5	225	10	40
G	3D	100-034-133	FT-T-170			170	150	53.3	12	18.7	38	7.5	10	25.5	135	32	5.5	10.5	500	5	20
G	3D	100-034-134	FT-T-220			220	200	69.3	15	24.3	49.5	9.3	13	32.5	176	41	6.5	12.5	1000	1	10

※SCS14 is equivalent to SUS316.

STAINLESS STEEL HANDLE FT-S280 Large Type

NSF SUS316



[Parts Included]
- Binding head tapping screw 6×35 (SUS)

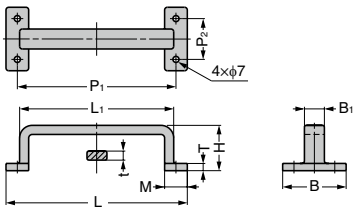
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-071	FT-S280	Stainless Steel (SCS14)	Polished	612	1	20

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

※SCS14 is equivalent to SUS316.

STAINLESS STEEL HANDLE FT Large Type

NSF SUS316



[Parts Included]
- Binding head tapping screw 6×35 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L_1	B	B_1	H	T	t	M	P_1	P_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-069	FT-200	Stainless Steel (SCS14)	Polished	200	170	70	22	50	8	10	25	175	45	586	1	20
G	3D	100-010-070	FT-280			280	250	80	26	62	10	12	27	253	55	1088	1	10

※SCS14 is equivalent to SUS316.

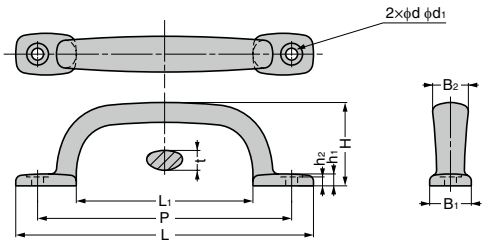
HANDLE (STAINLESS, TITANIUM) 2LC

NSF TITANIUM SUS316

- Easy to grab.
- 2 types of materials available: Light weight and strong titanium with excellent corrosion resistance, and cast steel SCS14 equivalent to stainless steel SUS316.
- Titanium handle hardly causes metal allergy. In addition, since it is non-magnetic, suitable for medical devices such as MRI.

[Remarks]
- Screws are not included for titanium handles.

[Parts Included]
- For only stainless handle: Pan head tapping screw (SUS)

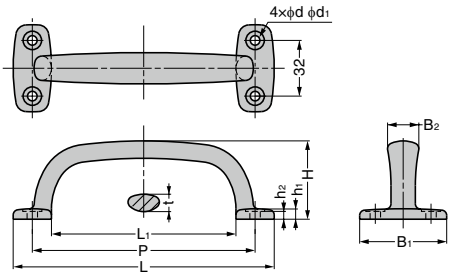


RoHS	CAD	Item Code	Item Name	Material	Finish	L	L_1	P	B_1	B_2	H	h_1	h_2	t	d	d_1	Weight (g)	Included Screws	Recommended Screws	Box (pcs)	Carton (pcs)
–	3D	100-010-355	2LC-80TI	Titanium	Shot Blast	80	32	64	16	14	35	5.5	4	8	5	9.5	37	–	M4	30	144
–	3D	100-010-354	2LC-120TI			120	64	96	18	16	36		4.5	9			62			20	96
–	3D	100-010-353	2LC-150TI			150	89	128	21	18	42	6		10	6	11	96		M5	6	72
G	3D	100-010-131	2LC-80	Stainless Steel (SCS14)	Polished	80	32	64	16	14	35	5.5	4	8	5	9.5	70	4×20	M4	12	144
G	3D	100-010-132	2LC-120			120	64	96	18	16	36		4.5	9			106			8	96
G	3D	100-010-133	2LC-150			150	89	128	21	18	42	6		10	6	11	172	5×30	M5	6	72
G	3D	100-010-134	2LC-180			180	118	160	23	20	45	6.5	5				225			3	36

※SCS14 is equivalent to SUS316.

STAINLESS STEEL HANDLE 4LC

NSF SUS316



●Titanium handle is available as a special order.

[Remarks]
●Recommended screws given in the table below not included.

[Parts Included]
●4LC-82, 4LC-114: Pan head tapping screw (SUS) 4×20
●4LC-150, 4LC-180: Pan head tapping screw (SUS) 5×30

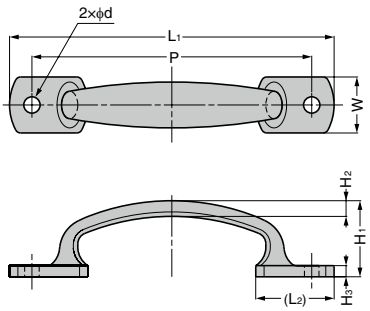
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P	B1	B2	H	h1	h2	t	d	d1	Weight (g)	Recommended Screw	Box (pcs)	Carton (pcs)
G	3D	100-010-135	4LC-82	Stainless Steel (SCS14)	Polished	82	46	64	48	16	36.5	5.5	4	8	5	9.5	110	M4	8	96
G	3D	100-010-136	4LC-114			114	78	96			40	6	4.5	9			148		6	72
G	3D	100-010-137	4LC-150			150	106	128	50	18	45			10	6	11	210	M5	3	36
G	3D	100-010-138	4LC-180			180	140	160		20	48	6.5	5				270		2	24

※SCS14 is equivalent to SUS316.

STAINLESS STEEL HANDLE 3LC

SUS

Discontinued
Limited stock available.
Please contact your vendor.



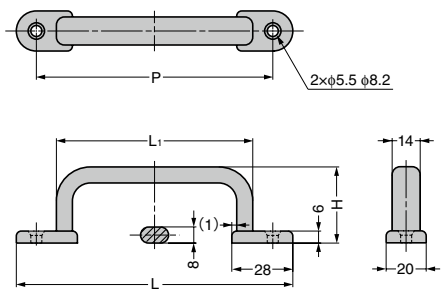
[Applications]
●Indoor and outdoor medium sized doors.

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	W	H1	H2	H3	P	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-846	3LC-120	Stainless Steel (SCS14)	Polished	120	29	20	30	6	5	105	5.5	90	100	–
G	3D	100-019-845	3LC-130	Stainless Steel (SCS13)		130	30	22	33	7	6	115		120	–	–
G	3D	100-019-747	3LC-145	Stainless Steel (SCS14)		145	35	25	34			125	6.5	155	150	–

※SCS14 is equivalent to SUS316.
※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE EC-Y

SUS

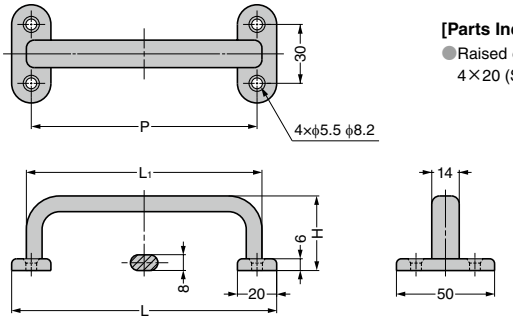


[Parts Included]
●Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-831	EC-Y-140	Stainless Steel (SUS303)	Polished	138	100	38	120	142	5	100
G	3D	100-012-832	EC-Y-160			158	120	40	140	160	3	51
G	3D	100-012-833	EC-Y-190			188	150	42	170	185	2	50

STAINLESS STEEL HANDLE EC-H

SUS

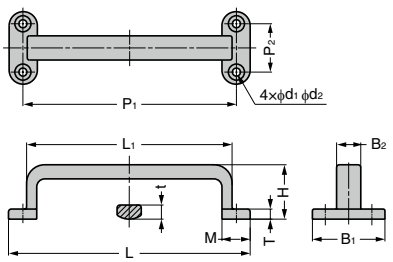


[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-056	EC-H-135	Stainless Steel (SUS303)	Polished	135	120	40	115	191	5	50
G	3D	100-010-057	EC-H-165			165	150	42	145	216	5	48

STAINLESS STEEL HANDLE FT Double-hole Type

NSF SUS



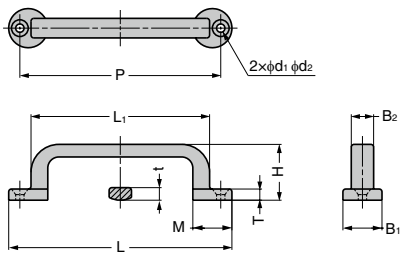
[Parts Included]
- FT-120: Raised countersunk head wood screw (SUS) 3.8×20
- FT-150: Raised countersunk head wood screw (SUS) 5.1×25

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-067	FT-120	Stainless Steel (SCS13)	Polished	120	102	36	12	27	5	7	14	106	24	4.1	8	105	10	120
G	3D	100-010-068	FT-150			150	129	45	15	33	6	8	18	132	30	5.3	10.4	191	5	40

※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE FT Single-hole Type

NSF SUS



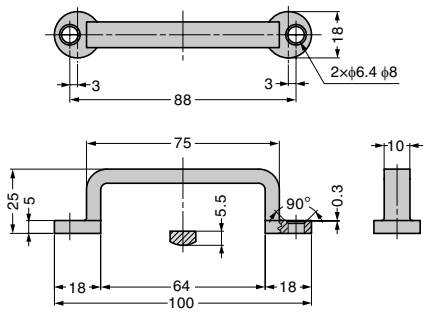
[Parts Included]
- FT-65, FT-80: Raised countersunk head wood screw (SUS) 3.1×16
- FT-100: Raised countersunk head wood screw (SUS) 3.8×20

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-847	FT-65	Stainless Steel (SCS13)	Polished	65	47	13	7	16	3.5	4	13	57	3.3	6.4	19	40	480
G	3D	100-012-848	FT-80			80	61	14	8	20	4	4.5	14	72			32	30	360
G	3D	100-012-849	FT-100			100	75	18	10	25	5	5.5	18	88	4.1	8	58	20	240

※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE FT-100-6.4

SUS



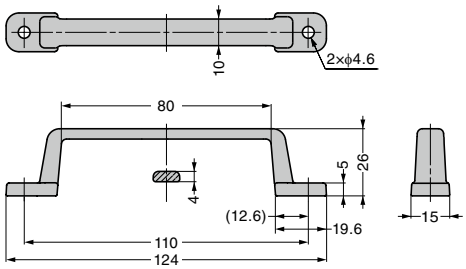
- Wider mounting hole relative to conventional FT handle.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-167	FT-100-6.4	Stainless Steel (SCS13)	Polished	54	20	200

※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE FT-110S

SUS



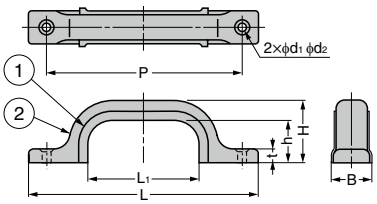
[Recommended Screws]
- M4 screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-029	FT-110S	Stainless Steel (SCS13)	Satin	60	50	200

※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE US

NSF SUS



- Rubber grip allows for an easy and comfortable grip.
- Stainless steel (SUS304) is used for the surface part of the handle.
- Knob type HS 1 also available.

[Parts Included]
- Raised countersunk head wood screw (SUS)

No.	Part Name	Material	Finish / Colour
①	Pad	Elastomer (TPE)	Black
②	Frame	Stainless Steel (SUS304)	Satin and Polished Combination

RoHS	CAD	Item Code	Item Name	Finish	L	L₁	P	B	H	h	t	d₁	d₂	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	100-012-243	☆US-70S	Satin	70	20	54	17	28	21	5.5	3.3	6.6	20	3.1×16	20	200
G	3D	100-012-240	★US-70M	Polished												20	200
G	3D	100-012-244	US-120S	Satin	120	57	102	19	32		6.5	3.8	7.6	45	3.5×20	20	200
G	3D	100-012-241	US-120M	Polished												20	200
G	3D	100-012-245	US-160S	Satin	160	88	140	22	37.5	23	7.5	4.1	8.1	70	4.1×25	10	100
G	3D	100-012-242	US-160M	Polished												10	100

Refer to 1 : P.688

★Discontinued ☆Limited inventory, contact sales associate for details.

HANDLE KMH

TEST METHOD 1

※Caps are sold separately.

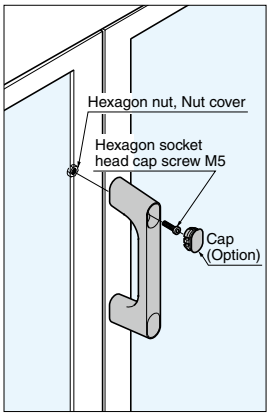
- Cap hides screw heads for clean appearance (option). 4 colours available.
- Stylish flat surface.
- Rounded inside allows for easy gripping.
- Caps are tightly fixed to prevent from falling off.
- Possible to customise cap colour from 10,000 pcs.

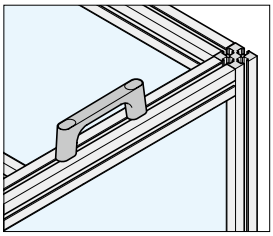
[Remarks]
- Truss head screws can not be used.
- Caps are sold separately. Sold by piece. Please order together with handle.

[Recommended Screws]
- Hexagon socket head cap screw M5 or Pan head screw M5

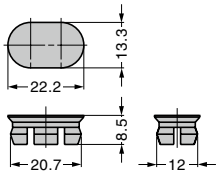
[Caps] Option

[Installation]

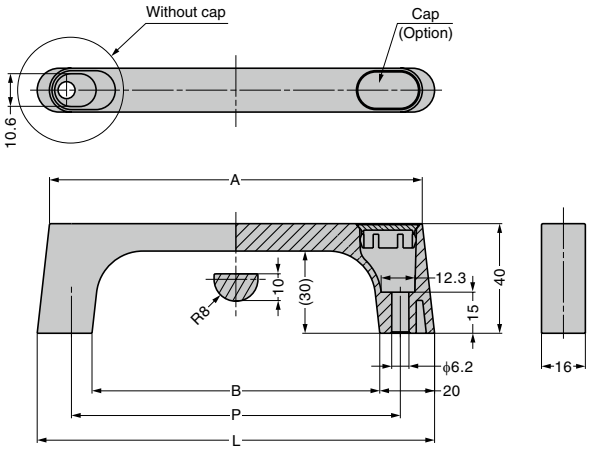




[Without Cap]



Cap (Option)



Video Link

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	B	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-063	KMH-100	Zinc Alloy (ZDC)	Satin Chrome	125	116	85	100	500	51	162	10	100
G	3D	100-024-064	KMH-120			145	136	105	120			180	10	60
G	3D	100-024-065	KMH-150			175	166	135	150			206	10	60

[Caps] Option (Sold by piece)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	100-024-066	KMHC-WT	PBT	White	0.7	100	2000
G	–	100-024-067	KMHC-GR		Grey		100	2000
G	–	100-024-068	KMHC-BU		Light Blue		100	2000
G	–	100-024-924	KMHC-BL		Black		100	2000

HANDLE MJH

TEST METHOD 1

※Caps are sold separately.

- Handle can be installed from both front and back. Cap hides screw heads for clean appearance (option). 3 colours available.
- Rounded inside allows for easy gripping.
- Caps are tightly fixed to prevent from falling off.
- Possible to customise cap colour from 3,000 pcs.
- MJH-150 is compliant with SEMI standard (SEMI S8-0308).

[Remarks]

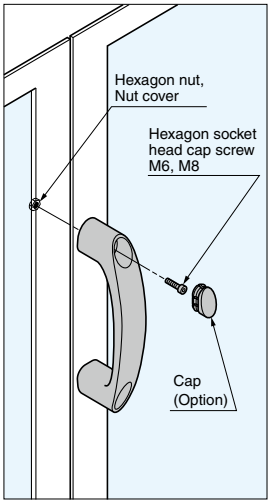
- Only hexagon socket head cap screw is available for front mounting.
- Caps are sold separately. Sold by piece. Please order together with handle.

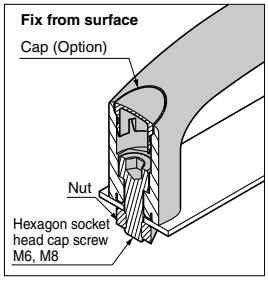
[Recommended Screws]

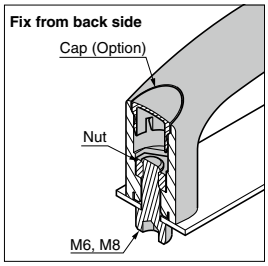
- MJH-93 : Hexagon socket head cap screw M6
- MJH-120, MJH-150 : Hexagon socket head cap screw M8

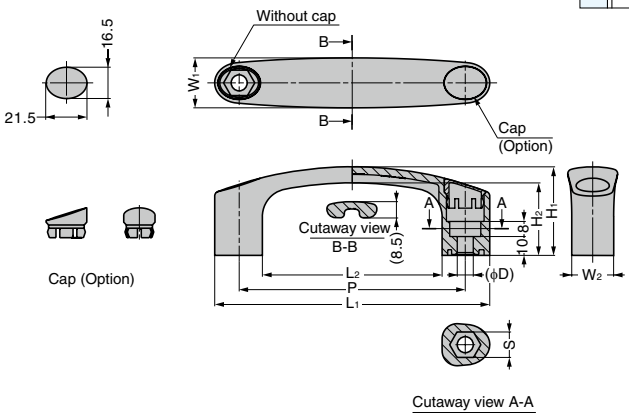
[Caps] Option

[Installation]









Cutaway view A-A

[Body]

RoHS	CAD	Item Code	Item Name	Material	Colour	P	L_1	L_2	D	S	H_1	H_2	W_1	W_2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-534	MJH-93	Reinforced Nylon	Black	93	116.5	68.5	6.5	10.2	42	33.5	25	19.2	450	46	41	100	–
G	3D	100-026-535	MJH-120			120	143	96	8.5	13.2	47	38.5	26.5	19			48	50	–
G	3D	100-026-536	MJH-150			150	173	126			52	43.5	28	18.8			58	50	–

[Caps] Option (Sold by piece)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-537	MJHC-BL	Reinforced Nylon	Black	1.4	100	–
G	3D	100-026-538	MJHC-GR		Grey		100	–
G	3D	100-026-539	MJHC-YE		Yellow		100	–

HANDLE CJH

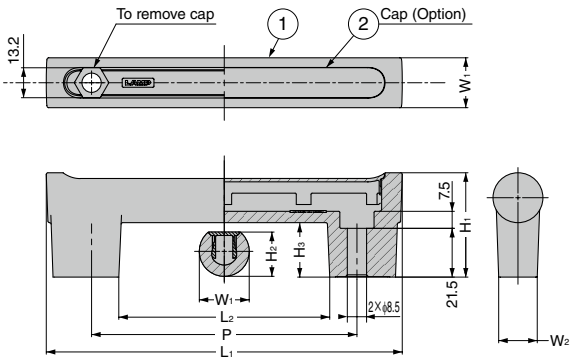
Toughness & Beautility HANDLE

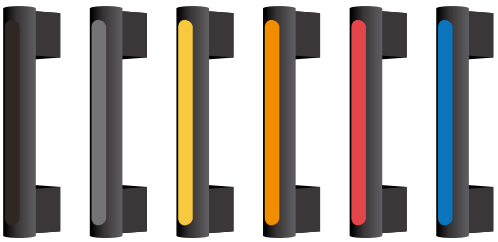
CJH-117/CJHC-117GR

- Long colour cap facilitates intuitive operation.
- The cover colours are used for indicating dangerous regions and different work areas.
- Handle can be fixed from either the front or back with screws.

[Applications]

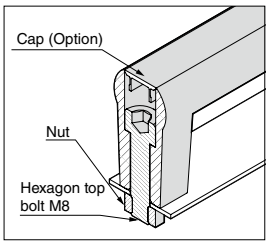
- Maintenance doors, etc.



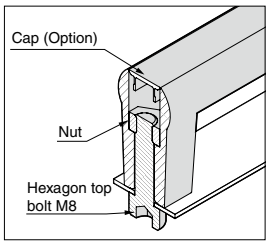


BL GR YE YR RD BU

[Fix from surface]



[Fix from back side]



Video Link

No.	Part Name	Material
①	Body	Reinforced nylon
②	Cap	POM

[Body] Handle

RoHS	CAD	Item Code	Item Name	Colour	L_1	L_2	W_1	W_2	H_1	H_2	H_3	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)
G	3D	100-036-974	CJH-117	Black	157	93	22	17	46	19.5	24	117	500	51	64	50
G	3D	100-036-975	CJH-150		190	125.5	24	18.5	52	21.4	28	150			89	50

[Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Available Handle	Box (pcs)
G	3D	100-036-976	CJHC-117BL	Black	5.6	CJH-117	100
G	3D	100-036-977	CJHC-117GR	Grey			100
G	3D	100-036-978	CJHC-117YE	Yellow			100
G	3D	100-036-979	CJHC-117YR	Orange			100
G	3D	100-036-980	CJHC-117RD	Red			100
G	3D	100-036-981	CJHC-117BU	Blue			100
G	3D	100-036-982	CJHC-150BL	Black	7.1	CJH-150	100
G	3D	100-036-983	CJHC-150GR	Grey			100
G	3D	100-036-984	CJHC-150YE	Yellow			100
G	3D	100-036-985	CJHC-150YR	Orange			100
G	3D	100-036-986	CJHC-150RD	Red			100
G	3D	100-036-987	CJHC-150BU	Blue			100

HANDLE SJH

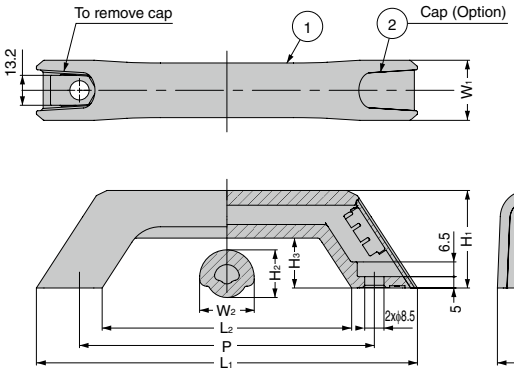
Toughness & Beautility
HANDLE

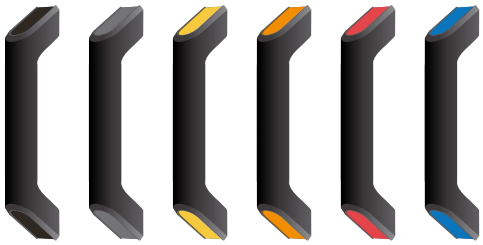
SJH-162/SJHC-162YR

- A rounded handle for a comfortable grip.
- Handle can be fixed from either the front or back with screws.

[Applications]

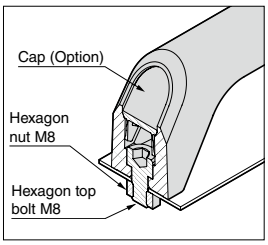
- Maintenance doors, etc.



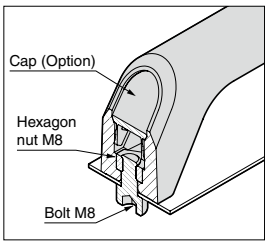


BL GR YE YR RD BU

[Front Side Mount]



[Back Side Mount]



Video Link

No.	Part Name	Material
①	Body	Reinforced nylon
②	Cap	PA

[Body]

RoHS	CAD	Item Code	Item Name	Material	L1	L2	W1	W2	H1	H2	H3	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-988	SJH-130	Reinforced nylon	168	110	26.5	24	43	21	22	130	500	51	76	40	160
G	3D	100-036-989	SJH-160		198	140	28.5	26	49	23	26	160			103	30	120

[Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Compatible Model	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-990	SJHC-130BL	PA	Black	SJH-130	1.5	100	1000
G	3D	100-036-991	SJHC-130GR		Grey			100	1000
G	3D	100-036-992	SJHC-130YE		Yellow			100	1000
G	3D	100-036-993	SJHC-130YR		Orange			100	1000
G	3D	100-036-994	SJHC-130RD		Red			100	1000
G	3D	100-036-995	SJHC-130BU		Blue			100	1000
G	3D	100-036-996	SJHC-160BL		Black	SJH-160	1.9	100	1000
G	3D	100-036-997	SJHC-160GR		Grey			100	1000
G	3D	100-036-998	SJHC-160YE		Yellow			100	1000
G	3D	100-036-999	SJHC-160YR		Orange			100	1000
G	3D	100-037-000	SJHC-160RD		Red			100	1000
G	3D	100-037-001	SJHC-160BU		Blue			100	1000

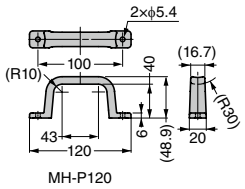
HANDLE MH-P SEMI Compliance

TEST METHOD 1

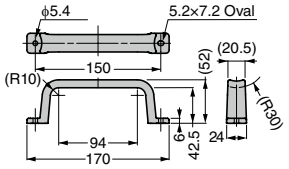
- Clear body suitable for acrylic, etc.
- Allows for easy gripping with glove on (compliant with SEMI standard, SEMI S8-0308).
- Made from weather-proof, chemical-resistance, lead-free PVC.

[Recommended Screws]

- M5 screw



MH-P120

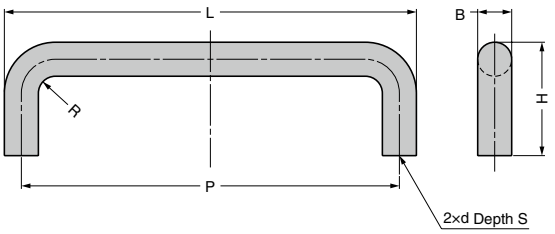


MH-P170

RoHS	CAD	Item Code	Item Name	Material	Colour	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-021-823	MH-P120	PVC	Clear	200	20	34	64	–
GT	3D	100-019-999	MH-P170			262	27	56	48	–

STAINLESS STEEL HANDLE H-42-C

- Optional bracket H-42-Z 1 is available.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.
- Titanium handles 2 of the same size as H-42-C-2, H-42-C-4 and H-42-C-15 also available.(L and B dimensions are slightly different from H-42-C-2)



[Handle]

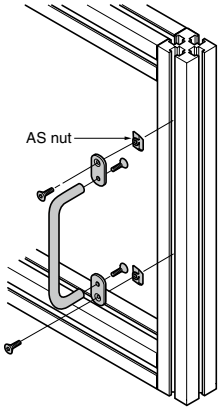
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-560	H-42-C-8	Stainless Steel (SUS304)	Polished	66	22	6	60	3	M4	7	18	100	500
G	3D	100-010-562	H-42-C-14			86			80				25	50	250
G	3D	100-010-561	H-42-C-1			75	30	7	68	3.5	M5	8	30	50	250
G	3D	100-010-563	H-42-C-2			109		9	100	4.5			65	50	150
G	3D	100-010-564	H-42-C-3			120	40	10	110	5	M6		100	50	150
G	3D	100-010-565	H-42-C-4			130			120				105	50	150
G	3D	100-010-566	H-42-C-15			162	50	12	150	6	M8	10	185	30	60
G	3D	100-010-567	H-42-C-5			200			188				220	30	60
G	3D	100-010-568	H-42-C-6			250			238				265	20	40
G	3D	100-010-569	H-42-C-7			300			288				300	20	40

Refer to 1 : P.651, 2 : P.650

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

[How to Install]



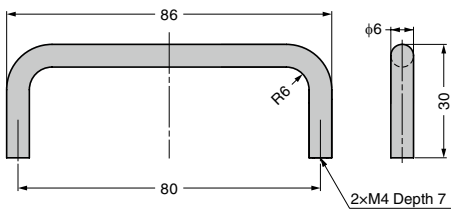
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-484	AS-H-42-C-1-8	Groove Width 8 mm	Handle H-42-C-1 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-485	AS-H-42-C-1-10	Groove Width 10 mm	Handle H-42-C-1 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-486	AS-H-42-C-2-8	Groove Width 8 mm	Handle H-42-C-2 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-487	AS-H-42-C-2-10	Groove Width 10 mm	Handle H-42-C-2 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

Refer to 1 : P.20, 2 : P.651, 3 : P.526

STAINLESS STEEL HANDLE H-42-F14

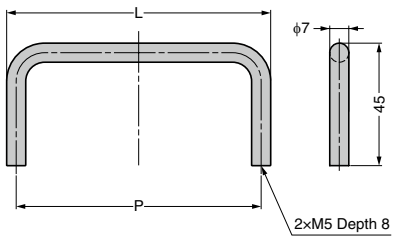
SUS316



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-233	H-42-F14	Stainless Steel (SUS316)	Polished	25	50	250

STAINLESS STEEL HANDLE MG

SUS

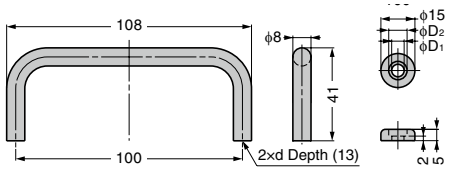


- Higher profile allows for easy gripping with glove on.
- MG-68 is compliant with SEMI standard (SEMI S8-0307).

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-488	MG-68	Stainless Steel (SUS304)	Polished	75	68	42	100	300
G	3D	100-010-073	MG-90			97	90	48	100	300

HANDLE T-100-8

SUS



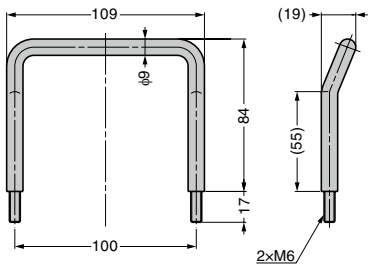
- Higher profile allows for easy gripping with glove on.

RoHS	CAD	Item Code	Item Name	Material	Finish	d	D_1	D_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-224	T-100-8S	Stainless Steel (SUS304)	Polished	M5	5.5	8.2	72	100	300
G	3D	100-019-855	☆T-100-8CR	Brass	Chrome	M4	4.5	8	78	50	–

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL HANDLE H-75-BL-100

NSF SUS



- Angled grip for a comfortable grip.

[Remarks]

- Please use washers for wood or melamine resin. (Not included)

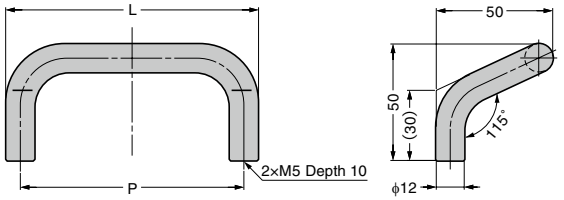
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-604	H-75-BL-100	Stainless Steel (SUS304)	Polished	130	20	80

STAINLESS STEEL HANDLE LF-12

- Angled grip for a comfortable grip.
- ϕ12mm stable and strong handle.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Parts Included]

- Pan head screw M5×30



[Handle]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-520	LF-12-96	Stainless Steel (SUS304)	Satin	108	96	441	45	182	10	80
G	3D	100-010-521	LF-12-128			140	128			211	10	60
G	3D	100-010-522	LF-12-160			172	160			236	10	60

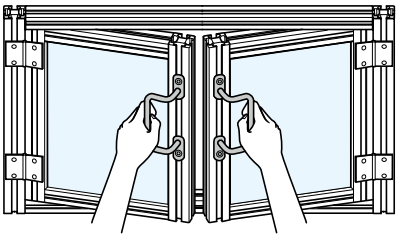
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

[Application Example]

For double door

No worry of pinching your fingers by handles.



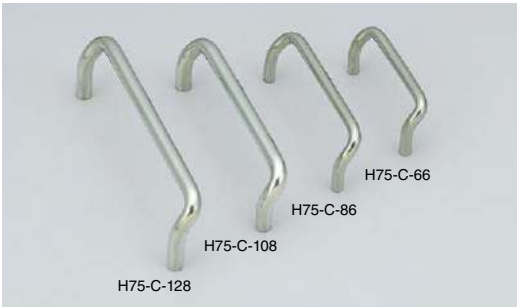
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-492	AS-LF-12-96-8	Groove Width 8 mm	Handle LF-12-96 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-493	AS-LF-12-96-10	Groove Width 10 mm	Handle LF-12-96 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-494	AS-LF-12-128-8	Groove Width 8 mm	Handle LF-12-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-495	AS-LF-12-128-10	Groove Width 10 mm	Handle LF-12-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-496	AS-LF-12-160-8	Groove Width 8 mm	Handle LF-12-160 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-497	AS-LF-12-160-10	Groove Width 10 mm	Handle LF-12-160 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

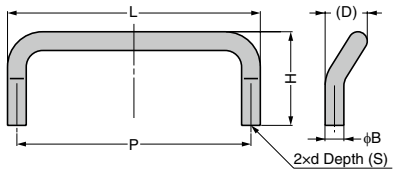
Refer to 1 : P.20, 2 : P.651, 3 : P.526

STAINLESS STEEL HANDLE H-75-C

AS SUS



- Angled grip for a comfortable grip.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.



[Handle]

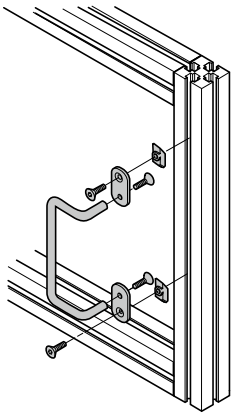
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	D	B	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-605	H-75-C-66	Stainless Steel (SUS304)	Polished	66	30	16	6	60	M4	7	23	100	400
G	3D	100-010-606	H-75-C-86			86	31.5			80			28	100	400
G	3D	100-010-607	H-75-C-108			108	32	18	8	100	M5	10	54	50	200
G	3D	100-010-608	H-75-C-128			128	40			120			70	50	200

AS Parts Set for Installing to Aluminium Frame

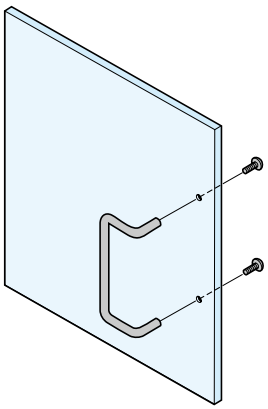
Please refer to the series introduction page 1 for details about AS series.

[How to Install]

Frame Installation



Panel Installation



[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-488	AS-H-75-C-108-8	Groove Width 8 mm	Handle H-75-C-108 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-489	AS-H-75-C-108-10	Groove Width 10 mm	Handle H-75-C-108 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-490	AS-H-75-C-128-8	Groove Width 8 mm	Handle H-75-C-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-491	AS-H-75-C-128-10	Groove Width 10 mm	Handle H-75-C-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

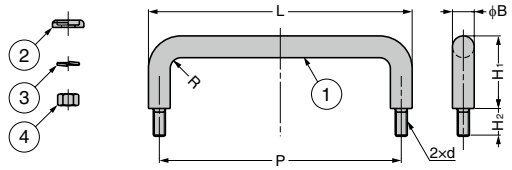
Refer to 1 : P.20, 2 : P.651, 3 : P.526

STAINLESS STEEL HANDLE H-42-B

SUS

●Bracket H-42-Z 1 is included. Bracket can also be ordered separately.

[Remarks]
●Be sure to use supplied brackets for installation.
[Parts Included]
●Bracket H-42-Z 1
●Spring washer
●Hexagon nut



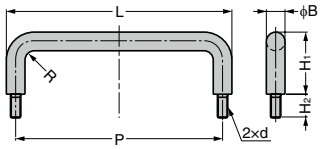
No.	Part Name	Material	Finish
①	Handle	Stainless Steel (SUS304)	Polished
②	Bracket H-42-Z		Barrel Polished
③	Spring Washer		Plain
④	Hexagon Nut		

RoHS	CAD	Item Code	Item Name	L	H1	H2	B	P	R	d	Weight (g)	Bracket	Box (pcs)	Carton (pcs)
G	3D	100-019-765	H-42-B-9	46	22	8.5	6	40	3	M4	15	H-42-Z-6	50	500
G	3D	100-010-550	H-42-B-8	66		7		60			20		100	500
G	3D	100-010-552	H-42-B-14	86	30	10		80			27		50	250
G	3D	100-010-551	H-42-B-1	75		11	7	68	3.5	M5	40	H-42-Z-7	50	250
G	3D	100-010-553	H-42-B-2	109			9	100	4.5		80	H-42-Z-9	50	150
G	3D	100-010-554	H-42-B-3	120	40		10	110	5	M6	120	H-42-Z-10	50	150
G	3D	100-010-555	H-42-B-4	130				120			125		50	150
G	3D	100-010-556	H-42-B-15	162	50	20	12	150	6	M8	235	H-42-Z-12	30	60
G	3D	100-010-557	H-42-B-5	200				188			270		30	60
G	3D	100-010-558	H-42-B-6	250				238			320		20	40
G	3D	100-010-559	H-42-B-7	300				288			365		20	40

Refer to 1 : P.651

TITANIUM HANDLE H-42-BT

TITANIUM



[Recommended Screws]
●Hexagon nut (back screw mount)

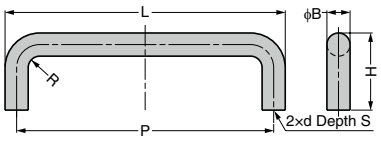
●Ideal for places with light weight and rust resistance requirements.
●Titanium handle hardly causes metal allergy.
●Since it is non-magnetic, suitable for medical devices such as MRI.
●Titanium brackets and mounting nuts also available.
●Stainless steel handle H-42-B 1 of the same shape also available.

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H1	H2	B	P	R	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-350	H-42-BT-2	Titanium	Polished	108	30	11	8	100	4.5	M5	40	20	80
G	3D	100-010-349	H-42-BT-4			130	40		10	120	5	M6	63	20	80
G	3D	100-010-348	H-42-BT-15			162	50	20	12	150	6	M8	112	20	80

Refer to 1 : P.650

TITANIUM HANDLE H-42-CT

TITANIUM



[Recommended Screws]
●d× (Door thickness+5~S)

●Ideal for places with light weight and rust resistance requirements.
●Titanium handle hardly causes metal allergy.
●Since it is non-magnetic, suitable for medical devices such as MRI.
●Titanium mounting screws also available.
●Stainless steel handle H-42-C 1 of the same shape also available.

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-352	H-42-CT-2	Titanium	Polished	108	30	8	100	4.5	M5	8	37	20	80
G	3D	100-010-351	H-42-CT-4			130	40	10	120	5	M6		59	20	80
G	3D	100-010-549	H-42-CT-15			162	50	12	150	6	M8	10	105	20	80

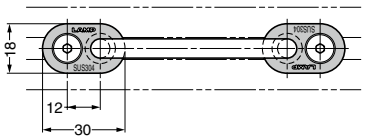
Refer to 1 : P.646

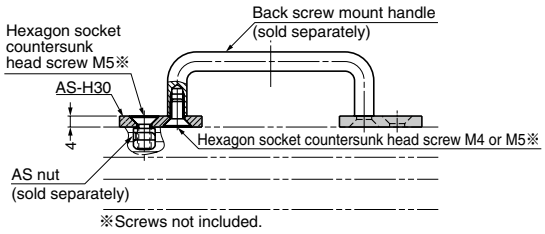
BRACKET FOR HANDLE AS-H30

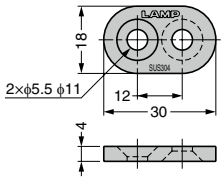
- Used for installing back screw mount handle from the front side of aluminium frame.
- Use AS nuts 1 for installation.
- Nuts not included for installing to 6mm groove width aluminium frame.

[Application Example]

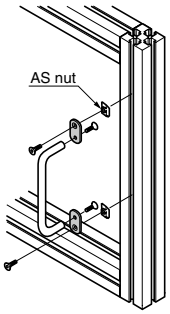
[Dimensions]







[How to Install]

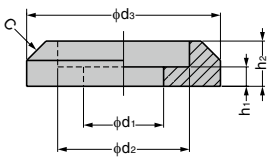


1. Fix bracket AS-H30 and back screw mount handle (sold separately) with mounting screws.
2. Lightly fix AS nut (sold separately) and bracket with mounting screws.
3. Put AS nut (sold separately) into the groove of aluminium frame, and fix it by tightening the screw.

RoHS	CAD	Item Code	Item Name	Material	Finish	Aluminium Frame	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-080-026	AS-H30	Stainless Steel (SUS304)	Barrel Polished	Groove Width 8, 10	13	100	1000

Refer to 1 : P.526

BRACKET FOR STAINLESS STEEL HANDLE H-42-Z

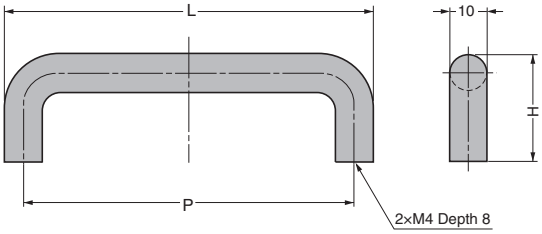


- Bracket for wire pull.
- Suitable sizes of handle diameter and screw are as below.

RoHS	CAD	Item Code	Item Name	Material	Finish	h1	h2	d1	d2	d3	C	Handle Diameter	Screw Size	Weight (g)	1 pack	Box (packs)	Carton (packs)
G	3D	100-010-570	H-42-Z-6	Stainless Steel (SUS304)	Barrel Polished	1.5	2.5	4.5	6.2	10	1	6	M4	1	2 pcs	200	2000
G	3D	100-010-571	H-42-Z-7			1	3	5.2	7.2			7	M5	0.9		200	2000
G	3D	100-010-572	H-42-Z-9						9.2	13		9		1.6		200	2000
G	3D	100-010-573	H-42-Z-10			1.5	3.5	6.2	10.2	15	1.5	10	M6	2.7		200	2000
G	3D	100-010-574	H-42-Z-12				4.5	8.2	12.2	18		12	M8	4.9		200	2000

ALUMINIUM HANDLE AM

[Parts Included]
●Truss head screw M4×28

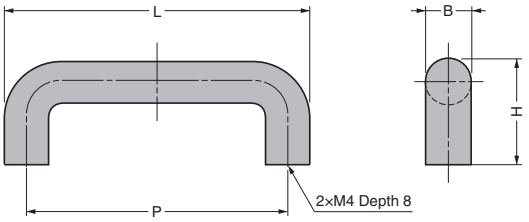


RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-600	AM-60I	Aluminium Alloy	Paint	Ivory	60	29	50	15.8	30	–
G	3D	100-017-603	AM-80I				80		70	19.8	30	–
G	3D	100-017-609	AM-120I				120		110	26.8	30	–
G	3D	100-017-601	AM-60B			Black	60		50	15.8	30	–
G	3D	100-017-610	AM-120B				120		110	26.8	30	–
G	3D	100-017-608	AM-100S		Anodised Silver	–	100		90	23.4	30	600
G	3D	100-017-611	AM-120S				120		110	26.8	30	–
G	3D	100-017-614	AM-310S				310	38	300	67	10	–

PLASTIC HANDLE PC

●Plastic handle contributes to weight reduction of doors.

[Remarks]
●Size and finish varies. Please check with actual item.
[Parts Included]
●Truss head screw M4×28

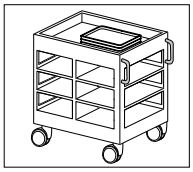


RoHS	CAD	Item Code	Item Name	Material	Colour	L	H	P	B	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-015-502	PC-45-W	PS	White	45	28	35	10	7.5	60	–
G	3D	100-015-503	PC-80-W			80		68	12	14	60	–
G	3D	100-015-504	PC-120-W			120	29	108		18.3	60	–
G	3D	100-015-505	PC-45-B		Black	45	28	35	10	7.5	60	–
G	3D	100-015-506	PC-80-B			80		68	12	14	60	–
G	3D	100-015-507	PC-120-B			120	29	108		18.3	60	–

HANDLE SGH-200 Antistatic & Antibacterial Type

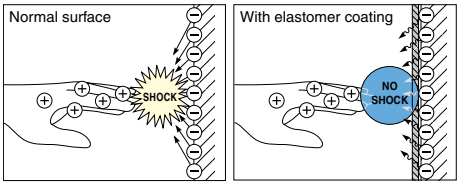
ANTIBACTERIAL

[Application Example]



- Elastomer coating provides static eliminating and antibacterial effect.
- Antibacterial material which complies with the "JIS Z 2801" is used. (Japan Industrial Standards).
- Designed to reduce discomfort caused by static when touching a metal handle.
- Textured, soft handle surface improves grip in manufacturing environments where lubricants are used.

[Pathway of Releasing Electrical Discharge]



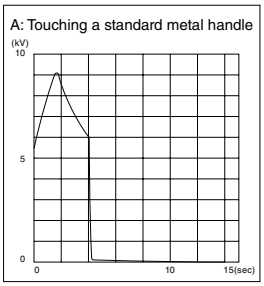
[Specifications]
- Operating temperature: -30℃~80℃

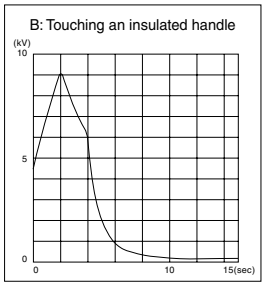
[Applications]
- Wagon, medical equipment, pharmaceutical manufacturing equipment, semiconductor manufacturing and measurement equipment, school facilities, and other facilities requiring static elimination and antibacterial, etc.

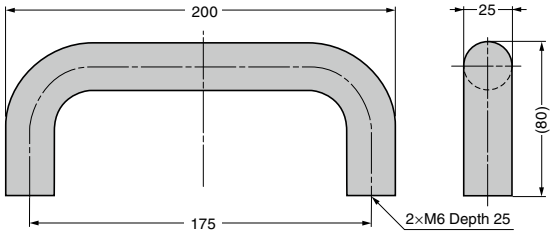
[Remarks]
- Install to a conductive surface to eliminate static. Non-conductive surface has no static eliminating effect. Discharge by grounding is required.
- This product can reduce the pain feeling, but not eliminate it. The sense of pain varies for different people.

[Parts Included]
- Pan head screw M6×20 SUS (spring washer and round washer included)

[Properties of Special Elastomer Coating]







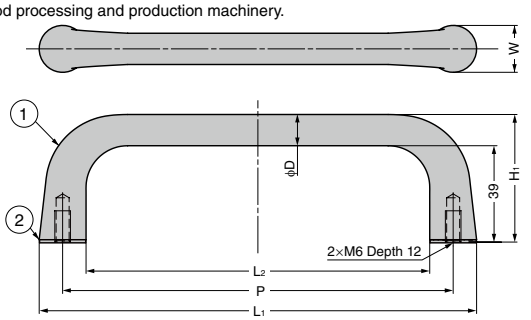
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-013-022	SGH-200	Base Material: PA, Coating: Elastomer	Blue	250	1	20

STAINLESS STEEL HANDLE HGH

SUS

- Wider base for easy cleaning.
- Silicone rubber gasket is compliant with the Food Sanitation Act.

[Applications]
- Food processing and production machinery.



Video Link

The handle shape and the mirror finish are designed to discourage dust accumulation. This helps to suppress bacterial propagation and allows for faster and easier cleaning.

The silicone rubber mount provides a snug fit between the handle and the mounting surface.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SCS13)	Mirror
②	Gasket	Silicone rubber (Q)	Blue

RoHS	CAD	Item Code	Item Name	L1	L2	W	H1	P	D	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-021	HGH-115SM	130	100	15	49	115	10	400	40.8	144	6	72
G	3D	100-037-022	HGH-150SM	168	132	18	51	150	12	500	51	244	8	48
G	3D	100-037-023	HGH-200SM	222.5	177.5	22.5	54	200	15			463	2	28

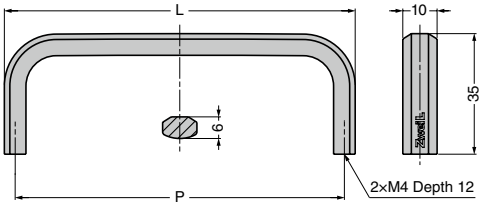
Zwei L STAINLESS STEEL HANDLE ZL-2001

SUS316

●Superior "Zwei L Finish".
Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]
●When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]
●Truss head screw M4×30 (SUS)

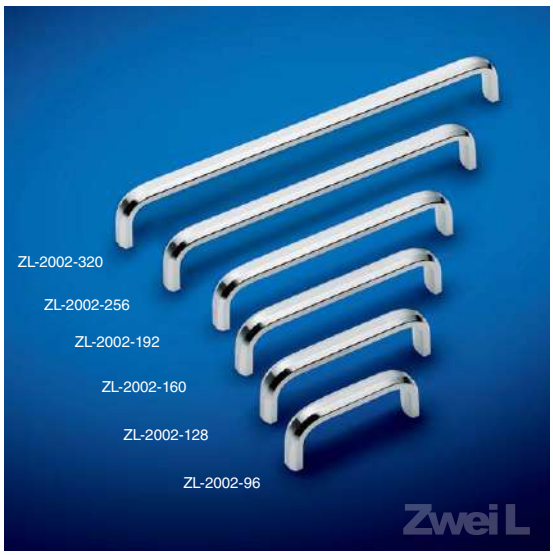


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-000	ZL-2001-32	Stainless Steel (SUS316)	Zwei L Finish	38	32	34	20	–
G	3D	100-011-001	ZL-2001-64			70	64	46	12	–
G	3D	100-011-002	ZL-2001-96			102	96	59	12	–
G	3D	100-011-003	ZL-2001-128			134	128	72	10	–
–	3D	100-011-037	ZL-2001-160			166	160	86	10	–
–	3D	100-011-038	ZL-2001-192			198	192	100	6	–
–	3D	100-011-039	ZL-2001-256			262	256	125	6	–

Video Link

Zwei L STAINLESS STEEL HANDLE ZL-2002

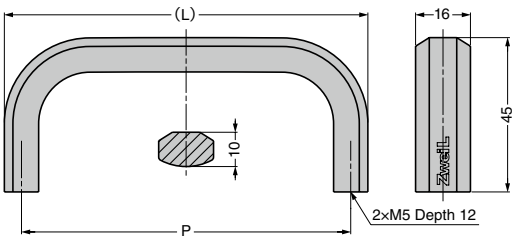
SUS316



●Superior "Zwei L Finish".
Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]
●when installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]
●Truss head screw M5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-004	ZL-2002-96	Stainless Steel (SUS316)	Zwei L Finish	106	96	165	12	–
G	3D	100-011-005	ZL-2002-128			138	128	194	12	–
G	3D	100-011-006	ZL-2002-160			170	160	233	12	–
G	3D	100-011-007	ZL-2002-192			202	192	265	6	–
G	3D	100-011-008	ZL-2002-256			266	256	332	6	–
G	3D	100-011-009	ZL-2002-320			330	320	395	6	–
G	3D	100-014-431	ZL-2002-416			426	416	491	4	–
G	3D	100-014-432	ZL-2002-512			522	512	587	4	–

Video Link

Zwei L BRACKET FOR STAINLESS STEEL HANDLE ZL-2301 For Handle ZL-2001 and ZL-2002 SUS316

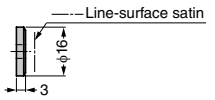
Handles are sold separately.

- Bracket for installing handle ZL-2001 and ZL-2002 of Zwei L series on glass door.
- Superior "Zwei L Finish" .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.
- For glass door of 4, 5 and 6mm thickness.

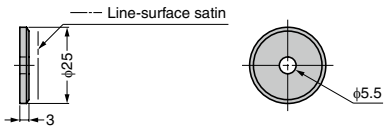
[Remarks]

- When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

①ZL glass mounting bracket ϕ16



②ZL glass mounting bracket ϕ25



③Gasket for ZL glass mounting bracket ϕ14
④Gasket for ZL glass mounting bracket ϕ20

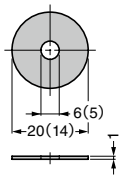
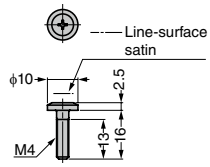


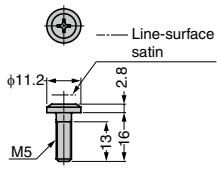
Figure above shows ④.
Dimensions in ( ) are for ③.

⑤ZL countersunk head screw M4×16



Glass processing hole
ϕ5 (glass thickness 4, 5)
ϕ6 (glass thickness 6)

⑥ZL countersunk head screw M5×16



Glass processing hole ϕ6

[Bracket Set for ZL-2001 ϕ16] w/Screw
Parts set

No.	Part Name	Material	Finish / Colour	Carton (pcs)
①	Bracket (ϕ16)	Stainless Steel (SUS316)	Zwei L Finish	2
③	Gasket (ϕ14)	Elastomer (TPE)	Clear	4
⑤	Truss Head Screw M4×16	Stainless Steel	Zwei L Finish	2

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-978	ZL-2301-2016	18	4	–

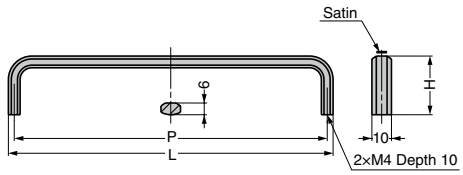
[Bracket Set for ZL-2002 ϕ25] w/Screw
Parts set

No.	Part Name	Material	Finish / Colour	Carton (pcs)
②	Bracket (ϕ25)	Stainless Steel (SUS316)	Zwei L Finish	2
③	Gasket (ϕ14)	Elastomer (TPE)	Clear	
④	Gasket (ϕ20)			
⑥	Truss Head Screw M5×16	Stainless Steel	Zwei L Finish	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-979	ZL-2301-2025	34	4	–

STAINLESS STEEL HANDLE XL-JS

SUS316



- Finish: Combination of polished and satin.

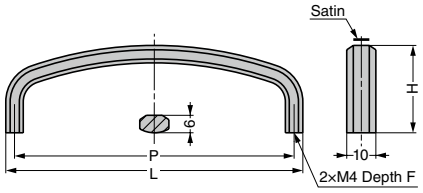
[Parts Included]

- Truss head screw M4×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-792	XL-JS165TT	Stainless Steel (SUS316)	Polished and Satin Combination	166	160	30	81	15	150
G	3D	100-012-793	XL-JS260TT			260	254	33	122	10	100
G	3D	100-012-794	XL-JS360TT			358	352	36	166	10	100

STAINLESS STEEL HANDLE XL-JSR

SUS316



- Finish: Combination of polished and satin.

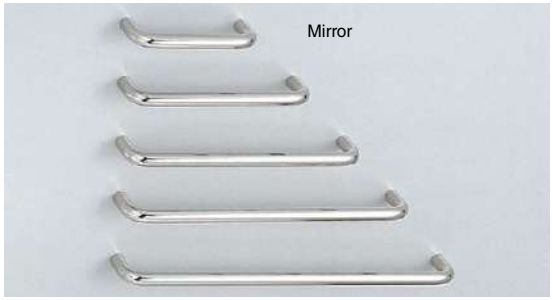
[Parts Included]

- Truss head screw M4×25 (SUS)

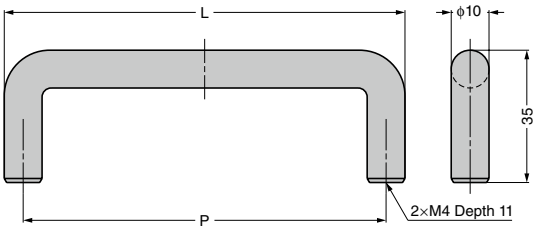
RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	F	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-795	XL-JSR40TT	Stainless Steel (SUS316)	Polished and Satin Combination	38	32	27	10	26	30	300
G	3D	100-012-796	XL-JSR70TT			70	64	30		35	20	200
G	3D	100-012-797	XL-JSR100TT			102	96		9	51	20	200
G	3D	100-012-798	XL-JSR135TT			134	128			63	15	150

STAINLESS STEEL HANDLE H-35

SUS



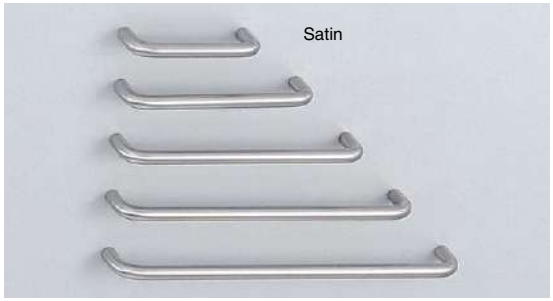
[Parts Included]
● Truss head screw M4×45



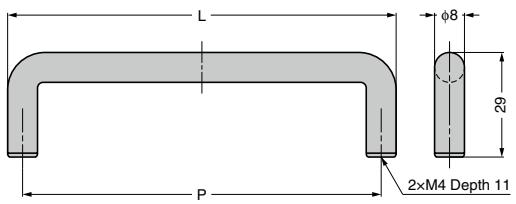
RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-723	H-35-96-SS	Stainless Steel (SUS304)	Satin	106	96	86	25	–
G	3D	100-036-724	H-35-96-SM		Mirror	106	96	86	25	–
G	3D	100-036-725	H-35-128-SS		Satin	138	128	106	25	–
G	3D	100-036-726	H-35-128-SM		Mirror	138	128	106	25	–
G	3D	100-036-727	H-35-160-SS		Satin	170	160	125	25	–
G	3D	100-036-728	H-35-160-SM		Mirror	170	160	125	25	–
G	3D	100-036-729	H-35-192-SS		Satin	202	192	145	25	–
G	3D	100-036-730	H-35-192-SM		Mirror	202	192	145	25	–
G	3D	100-036-731	H-35-288-SS		Satin	298	288	204	25	–
G	3D	100-036-732	H-35-288-SM		Mirror	298	288	204	25	–

STAINLESS STEEL HANDLE H-29

SUS



[Parts Included]
● Truss head screw M4×45

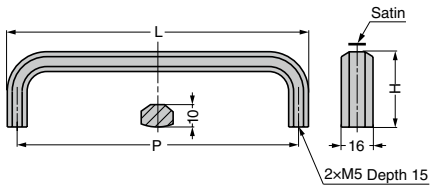


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-733	H-29-64-SS	Stainless Steel (SUS304)	Satin	72	64	39	25	–
G	3D	100-036-734	H-29-64-SM		Mirror	72	64	39	25	–
G	3D	100-036-735	H-29-96-SS		Satin	104	96	52	25	–
G	3D	100-036-736	H-29-96-SM		Mirror	104	96	52	25	–
G	3D	100-036-737	H-29-128-SS		Satin	136	128	64	25	–
G	3D	100-036-738	H-29-128-SM		Mirror	136	128	64	25	–
G	3D	100-036-739	H-29-160-SS		Satin	168	160	77	25	–
G	3D	100-036-740	H-29-160-SM		Mirror	168	160	77	25	–
G	3D	100-036-741	H-29-192-SS		Satin	200	192	90	25	–
G	3D	100-036-742	H-29-192-SM		Mirror	200	192	90	25	–

STAINLESS STEEL HANDLE XL-CU

●Finish: Combination of polished and satin.

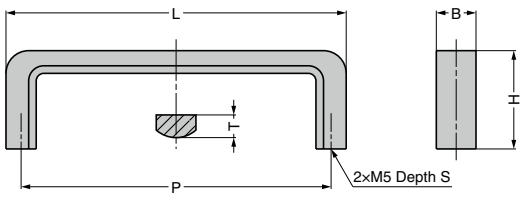
[Parts Included]
●Truss head screw M5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-470	XL-CU80TT	Stainless Steel (SUS303)	Polished and Satin Combination	82	32	72	112	10	100
G	3D	100-010-471	XL-CU100TT			102	34	92	136	10	100
G	3D	100-010-472	XL-CU120TT			122	36	112	163	10	100
G	3D	100-010-473	XL-CU150TT			152	38	142	200	8	80
G	3D	100-010-474	XL-CU180TT			182	40	172	234	8	80
G	3D	100-010-475	XL-CU220TT			222	42	212	282	8	40
G	3D	100-010-476	XL-CU300TT			302	44	292	372	6	30

STAINLESS STEEL HANDLE FB

[Parts Included]
●Pan head screw M5×25

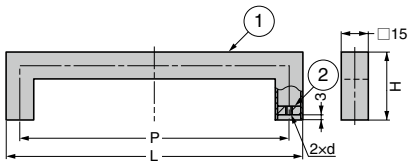


RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	T	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-074	FB-90	Stainless Steel (SCS13)	Polished	90	26	10.5	6	82	10	45	35	280
G	3D	100-010-075	FB-110			110	28	12.5	7	102	12	60	25	200
G	3D	100-010-076	FB-130			130	32	14.5	8	120	14	93	20	160

※SCS13 is equivalent to SUS304.

STAINLESS STEEL HANDLE KPH

SUS



- Light handle with hollow body.

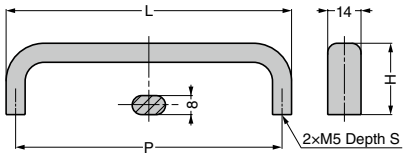
[Recommended Screws]
- d×(Door thickness +10~15)

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Nut		Plain

RoHS	CAD	Item Code	Item Name	L	H	P	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-195	KPH-160	176	40	160	M4	100	10	100
G	3D	100-019-196	KPH-192	208		192		115	10	100
G	3D	100-019-197	KPH-224	240	50	224	M5	130	10	100
G	3D	100-019-198	KPH-256	272		256		143	10	100
G	3D	100-019-199	KPH-288	304		288		160	10	100

STAINLESS STEEL HANDLE EC

NSF SUS

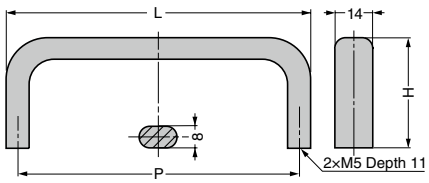


[Parts Included]
- Truss head screw M5×28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-232	EC-80S	Stainless Steel (SUS304)	Satin	80	30	72	10	84	20	200
G	3D	100-017-226	EC-80M		Polished						20	200
G	3D	100-017-233	EC-100S		Satin	100	32	92		102	15	150
G	3D	100-017-227	EC-100M		Polished						15	150
G	3D	100-017-234	EC-120S		Satin	120	34	112	12	120	15	150
G	3D	100-017-228	EC-120M		Polished						15	150
G	3D	100-017-235	EC-150S		Satin	150	36	142		148	10	100
G	3D	100-017-229	EC-150M		Polished						10	100
G	3D	100-017-236	EC-180S		Satin	180	37	172		174	10	100
G	3D	100-010-049	EC-180M		Polished						10	100
G	3D	100-017-237	EC-220S		Satin	220	38	212		205	8	80
G	3D	100-010-050	EC-220M		Polished						8	80

STAINLESS STEEL HANDLE ECH

SUS

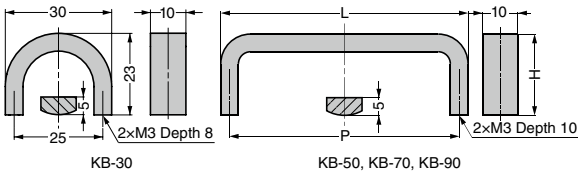


[Parts Included]
- Truss head screw M5×28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-249	ECH-75S	Stainless Steel (SUS303)	Satin	83	40	75	115	10	100
G	3D	100-017-241	ECH-75M		Polished					10	100
G	3D	100-017-252	ECH-100S		Satin	108		100	135	15	150
G	3D	100-017-242	ECH-100M		Polished					15	150
G	3D	100-017-251	ECH-125S		Satin	133		125	153	10	100
G	3D	100-017-243	ECH-125M		Polished					10	100
G	3D	100-017-244	ECH-150M			158	50	150	190	7	70
G	3D	100-017-245	ECH-200M			208		200	244	10	100
G	3D	100-017-246	ECH-250M			258		250	280	5	50
G	3D	100-017-247	ECH-300M			308		300	306	5	50

STAINLESS STEEL HANDLE KB

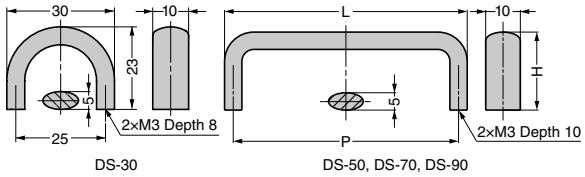
[Parts Included]
- Truss head screw M3×28 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-094	KB-30S	Stainless Steel (SUS303)	Satin	As Above	As Above	As Above	18	40	400
G	3D	100-011-093	KB-30M		Polished					40	400
G	3D	100-011-096	KB-50S		Satin	50	22	45	26	30	300
G	3D	100-011-095	KB-50M		Polished					30	300
G	3D	100-011-098	KB-70S		Satin	70	22.5	65	33	30	300
G	3D	100-011-097	KB-70M		Polished					30	300
G	3D	100-011-100	KB-90S		Satin	90	23	85	40	20	200
G	3D	100-011-099	KB-90M		Polished					20	200

STAINLESS STEEL HANDLE DS

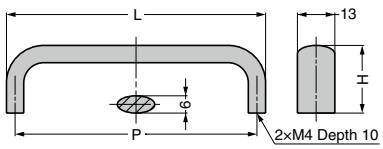
[Parts Included]
- Truss head screw M3×28 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-112	DS-30S	Stainless Steel (SUS303)	Satin	As Above	As Above	As Above	15	40	400
G	3D	100-011-111	DS-30M		Polished					40	400
G	3D	100-011-114	DS-50S		Satin	50	22	45	22	30	300
G	3D	100-011-113	DS-50M		Polished					30	300
G	3D	100-011-116	DS-70S		Satin	70	22.5	65	28	30	300
G	3D	100-011-115	DS-70M		Polished					30	300
G	3D	100-011-118	DS-90S		Satin	90	23	85	35	20	200
G	3D	100-011-117	DS-90M		Polished					20	200

STAINLESS STEEL HANDLE DL

[Parts Included]
- Truss head screw M4×28 (SUS)



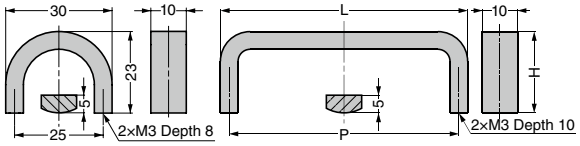
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-102	DL-70S	Stainless Steel (SUS303)	Satin	70	23	64	44	20	200
G	3D	100-011-101	DL-70M		Polished					20	200
G	3D	100-011-104	DL-90S		Satin	90	23.5	84	55	20	200
G	3D	100-011-103	DL-90M		Polished					20	200
G	3D	100-011-106	DL-110S		Satin	110	24	104	65	15	150
G	3D	100-011-105	DL-110M		Polished					15	150
G	3D	100-011-108	DL-130S		Satin	130	24.5	124	75	15	150
G	3D	100-011-107	DL-130M		Polished					15	150
G	3D	100-011-110	DL-150S		Satin	150	25	144	86	15	150
G	3D	100-011-109	DL-150M		Polished					15	150

STAINLESS STEEL HANDLE KB-SUS304

SUS

[Parts Included]

● Truss head screw M3×28 (SUS)



KB-30 KB-50, KB-70, KB-90

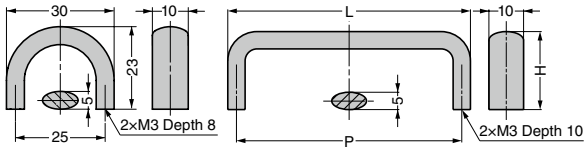
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-581	KB-30S-SUS304	Stainless Steel (SUS304)	Satin	As Above	As Above	As Above	18	40	400
G	3D	100-904-580	KB-30M-SUS304		Polished					40	400
G	3D	100-904-583	KB-50S-SUS304		Satin	50	22	45	26	30	300
G	3D	100-904-582	KB-50M-SUS304		Polished					30	300
G	3D	100-904-585	KB-70S-SUS304		Satin	70	22.5	65	33	30	300
G	3D	100-904-584	KB-70M-SUS304		Polished					30	300
G	3D	100-904-587	KB-90S-SUS304		Satin	90	23	85	40	20	200
G	3D	100-904-586	KB-90M-SUS304		Polished					20	200

STAINLESS STEEL HANDLE DS-SUS304

SUS

[Parts Included]

● Truss head screw M3×28 (SUS)



DS-30 DS-50, DS-70, DS-90

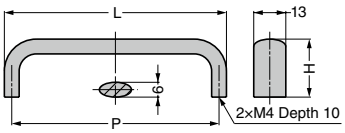
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-573	DS-30S-SUS304	Stainless Steel (SUS304)	Satin	As Above	As Above	As Above	15	40	400
G	3D	100-904-572	DS-30M-SUS304		Polished					40	400
G	3D	100-904-575	DS-50S-SUS304		Satin	50	22	45	22	30	300
G	3D	100-904-574	DS-50M-SUS304		Polished					30	300
G	3D	100-904-577	DS-70S-SUS304		Satin	70	22.5	65	28	30	300
G	3D	100-904-576	DS-70M-SUS304		Polished					30	300
G	3D	100-904-579	DS-90S-SUS304		Satin	90	23	85	35	20	200
G	3D	100-904-578	DS-90M-SUS304		Polished					20	200

STAINLESS STEEL HANDLE DL-SUS304

SUS

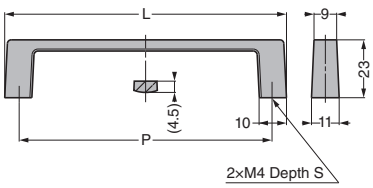
[Parts Included]

● Truss head screw M4×28 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-563	DL-70S-SUS304	Stainless Steel (SUS304)	Satin	70	23	64	44	20	200
G	3D	100-904-562	DL-70M-SUS304		Polished					20	200
G	3D	100-904-565	DL-90S-SUS304		Satin	90	23.5	84	55	20	200
G	3D	100-904-564	DL-90M-SUS304		Polished					20	200
G	3D	100-904-567	DL-110S-SUS304		Satin	110	24	104	65	15	150
G	3D	100-904-566	DL-110M-SUS304		Polished					15	150
G	3D	100-904-569	DL-130S-SUS304		Satin	130	24.5	124	75	15	150
G	3D	100-904-568	DL-130M-SUS304		Polished					15	150
G	3D	100-904-571	DL-150S-SUS304		Satin	150	25	144	86	15	150
G	3D	100-904-570	DL-150M-SUS304		Polished					15	150

HANDLE 936



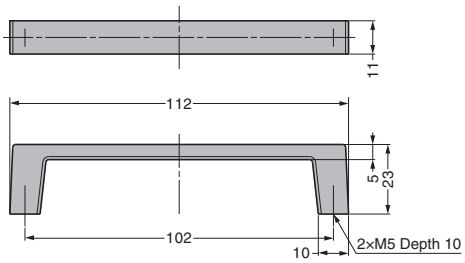
[Remarks]
- Screws are not included in nickel finish.

[Parts Included]
- 936-55-SCR Truss head screw M4×25
- 936-100-DC Truss head screw M4×28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-101	936-55-SCR	Zinc Alloy (ZDC)	Satin Chrome	66.5	55	8	40	50	200
G	3D	100-019-096	936-55-SNI		Nickel					50	300
G	3D	100-010-003	936-100-DC		Dull Chrome + Enamel Finish/Clear	112	100.5	10	52	50	200
G	3D	100-019-127	936-100-SNI		Nickel					50	200

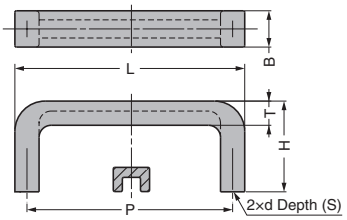
HANDLE 937-102SCR

Discontinued
Limited stock available.
Please contact your vendor.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-520	937-102SCR	Zinc Alloy (ZDC)	Satin Chrome	50	–	1

HANDLE AKH



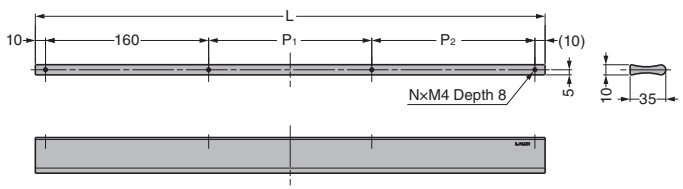
- Simple design allows for harmonising with various kinds of equipment.

[Remarks]
- The appearance of the product may slightly vary based on the polishing finish applied.

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	T	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-803	AKH-76	Zinc Alloy (ZDC)	Satin Chrome	76	30	12	8	68	M5	8	55	30	300
G	3D	100-019-799	AKH-108			108		14		100			80	10	240
G	3D	100-019-802	AKH-120			120	40	16	10	110	M6		130	1	–
G	3D	100-019-801	AKH-130			130				120			145	–	1
G	3D	100-010-575	AKH-200			200	50	18	12	188	M8	10	250	10	–

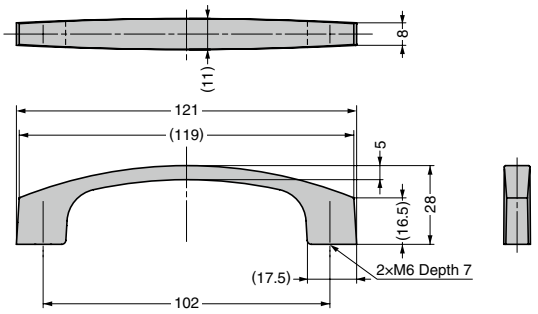
PULL AOT35

- Smooth and beautiful appearance.



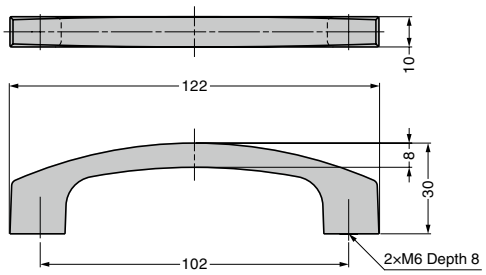
RoHS	CAD	Item Code	Item Name	Material	Finish	L	P1	P2	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-523	AOT35-180	Aluminium Alloy	Anodised	180	–	–	2	129	100	–
G	3D	100-012-524	AOT35-340			340	160		3	243	50	–
G	3D	100-012-525	AOT35-500			500		160	4	358	30	–

HANDLE SAZ-121CR



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-105	SAZ-121CR	Zinc Alloy (ZDC)	Chrome	63	50	200

HANDLE SAZ-122

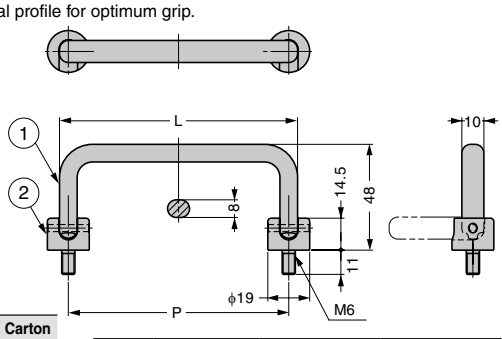


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-790	SAZ-122	Zinc Alloy (ZDC)	Chrome	85	1	–

FOLDING HANDLE HK

NSF TEST METHOD 1 SUS

- 90-degree folding handle.
- Handle clicks into open and closed position.
- Oval profile for optimum grip.



[Applications]

- Storage handles for various kinds of equipment, etc.

[Parts Included]

- Toothed washer size 6 (SUS)
- Hexagon nut for M6 (SUS)

RoHS	CAD	Item Code	Item Name	L	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-011	HK-80	88	80	490	50	125	10	100
G	3D	100-010-012	HK-100	108	100			136	10	100
G	3D	100-010-013	HK-120	128	120			146	10	100

No.	Part Name	Material	Finish
①	Handle	Stainless Steel (SUS304)	Polished
②	Base		

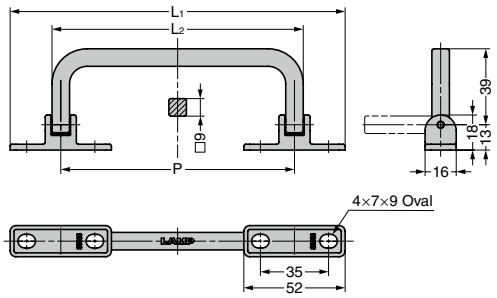
STAINLESS STEEL FOLDING HANDLE HKM Front Screw Mount

TEST METHOD 20 SUS

- 90-degree folding handle.
- Handle clicks (temporary holding function) into open and closed position.
- Can be installed on an aluminium frame.

[Applications]
- Storage handle for various kinds of equipment, etc.

[Recommended Screws]
- M6 screws



RoHS	CAD	Item Code	Item Name	Material	Finish	L_1	L_2	P	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-047-045	HKM-120	Stainless Steel (SCS13)	Mirror	172	129	120	490	50	177
G	3D	100-047-046	HKM-150			202	159	150			194
G	3D	100-047-047	HKM-180			232	189	180			214

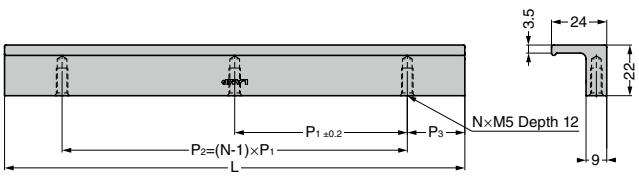
※SCS13 is equivalent to SUS304.

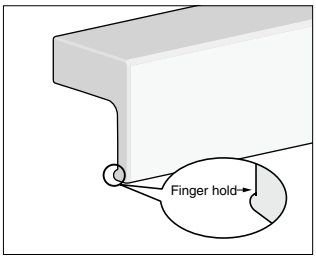
EXTRUDED ALUMINIUM HANDLE HA-NE

TEST METHOD 20

- Has anti-slip bump along the edges.
- ALH 1 is also available for total design coordination with this product.

[Parts Included]
- Countersunk truss head screw M5×30 (stainless steel)



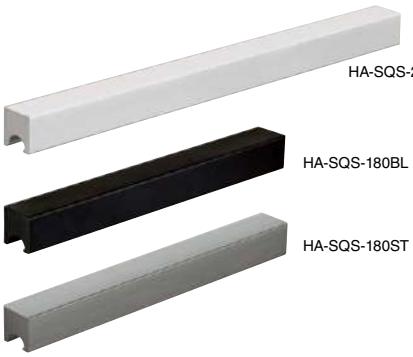


RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P_1	P_2	P_3	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-649	HA-NE-100SL	Aluminium Alloy	Anodised	Silver	100	60	60	20	2	200	20	67
G	3D	100-049-650	HA-NE-100BL			Black								
G	3D	100-049-651	HA-NE-100ST			Satin and Stainless Steel								
G	3D	100-049-652	HA-NE-200SL			Silver	200	75	150	25	3	300	31	134
G	3D	100-049-653	HA-NE-200BL			Black								
G	3D	100-049-654	HA-NE-200ST			Satin and Stainless Steel								

Refer to 1: P.628

EXTRUDED ALUMINIUM HANDLE HA-SQS

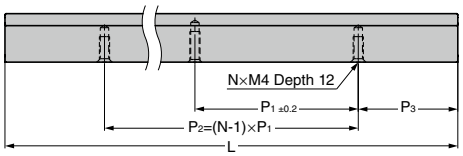
TEST METHOD 20

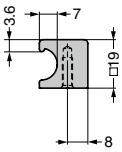


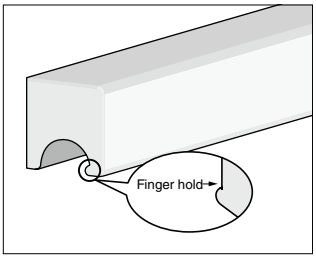
- Has anti-slip bump along the edges.
- HA-SQB 1 is also available for total design coordination with this product.

[Parts Included]

- Countersunk truss head screw M4×30 (stainless steel)







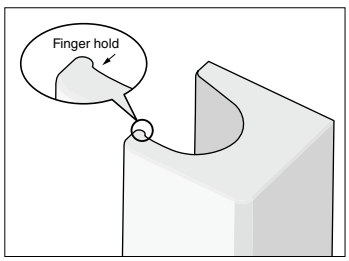
RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P_1	P_2	P_3	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-483	HA-SQS-180SL	Aluminium Alloy	Anodised	Silver	180	64	128	26	3	300	31	134
G	3D	100-049-484	HA-SQS-180BL			Black								
G	3D	100-049-485	HA-SQS-180ST			Satin and Stainless Steel								
G	3D	100-049-486	HA-SQS-270SL			Silver	270		192	39	4			202
G	3D	100-049-487	HA-SQS-270BL			Black								
G	3D	100-049-488	HA-SQS-270ST			Satin and Stainless Steel								

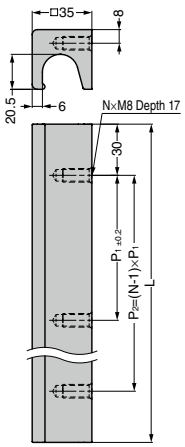
Refer to 1 : P.664

EXTRUDED ALUMINIUM HANDLE HA-SQB

TEST METHOD 20

- Has anti-slip bump along the edges.
- HA-SQS 1 is also available for total design coordination with this product.





RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P_1	P_2	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-744	HA-SQB-400SL	Aluminium Alloy	Anodised	Silver	400	85	340	5	400	41	877
G	3D	100-049-745	HA-SQB-400BL			Black							
G	3D	100-049-746	HA-SQB-600SL			Silver	600	135	540				1320
G	3D	100-049-747	HA-SQB-600BL			Black							
G	3D	100-049-748	HA-SQB-800SL			Silver	800	185	740				1770
G	3D	100-049-749	HA-SQB-800BL			Black							

Refer to 1 : P.664

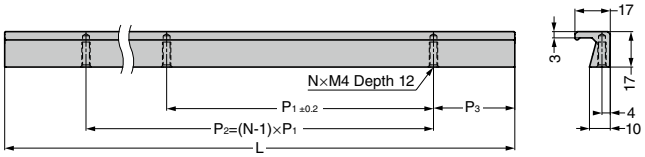
EXTRUDED ALUMINIUM HANDLE XLA-HA-CM

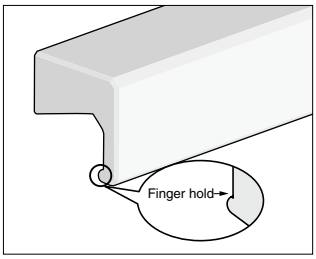
TEST METHOD 20

- A handle with a sharp chamfered shape.
- Has anti-slip bump along the edges.

[Parts Included]

- Countersunk truss head screw M4×30 (stainless steel)

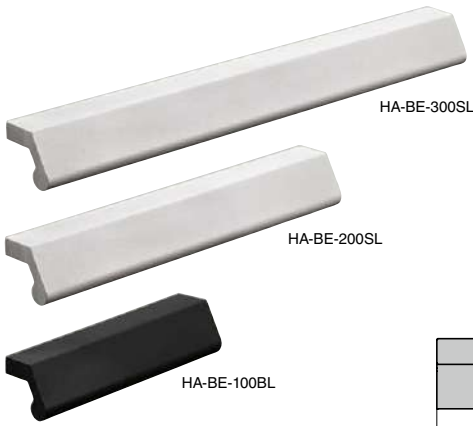




RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P1	P2	P3	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-691	XLA-HA-CM-80SL	Aluminium Alloy	Anodised	Silver	80	64	64	8	2	200	20	35
G	3D	100-049-692	XLA-HA-CM-80BL			Black								
G	3D	100-049-693	XLA-HA-CM-80ST			Satin and Stainless Steel								
G	3D	100-049-694	XLA-HA-CM-160SL			Silver	160	96	96	32				70
G	3D	100-049-695	XLA-HA-CM-160BL			Black								
G	3D	100-049-696	XLA-HA-CM-160ST			Satin and Stainless Steel								
G	3D	100-049-697	XLA-HA-CM-590SL			Silver	590	128	512	37	5			260
G	3D	100-049-698	XLA-HA-CM-590BL			Black								
G	3D	100-049-699	XLA-HA-CM-590ST			Satin and Stainless Steel								

EXTRUDED ALUMINIUM HANDLE HA-BE

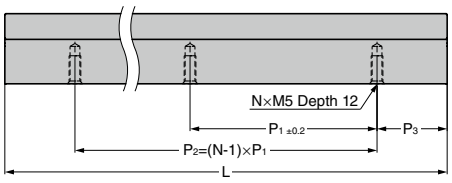
TEST METHOD 20



- A tilted handle for easy grasping.
- The grip shape applies minimal load to fingers.

[Parts Included]

- Countersunk truss head screw M5×30 (stainless steel)



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P1	P2	P3	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-732	HA-BE-100SL	Aluminium Alloy	Anodised	Silver	100	60	60	20	2	200	20	89
G	3D	100-049-733	HA-BE-100BL			Black								
G	3D	100-049-734	HA-BE-200SL			Silver	200	75	150	25	3	300	31	179
G	3D	100-049-735	HA-BE-200BL			Black								
G	3D	100-049-736	HA-BE-300SL			Silver	300	80	240	30	4			268
G	3D	100-049-737	HA-BE-300BL			Black								

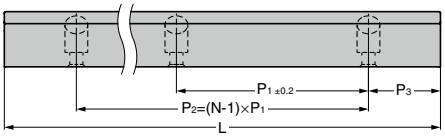
EXTRUDED ALUMINIUM HANDLE HA-FR

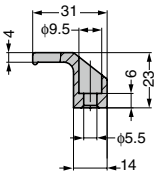
TEST METHOD 20

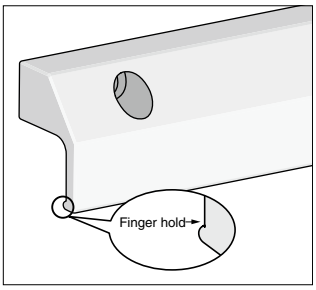
- A front-screw handle where screws remain inconspicuous.
- Has anti-slip bump along the edges.

[Recommended Screws]

- Hex socket bolts M5 or cross-recessed pan head screws M5





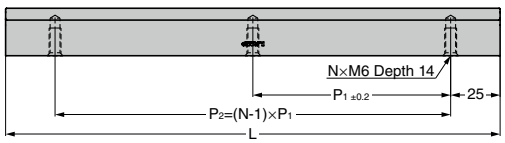


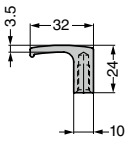
RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P_1	P_2	P_3	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-738	HA-FR-100SL	Aluminium Alloy	Anodised	Silver	100	60	60	20	2	300	31	80
G	3D	100-049-739	HA-FR-100BL			Black								
G	3D	100-049-740	HA-FR-200SL			Silver	200	75	150	25	3			163
G	3D	100-049-741	HA-FR-200BL			Black								
G	3D	100-049-742	HA-FR-300SL			Silver	300	80	240	30	4			246
G	3D	100-049-743	HA-FR-300BL			Black								

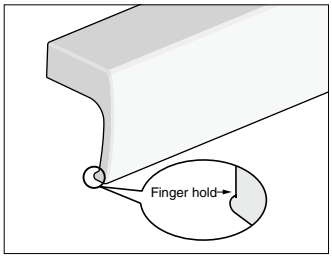
EXTRUDED ALUMINIUM HANDLE HA-RU

TEST METHOD 20

- A handle shaped of soft and gentle curves.
- Has anti-slip bump along the edges.



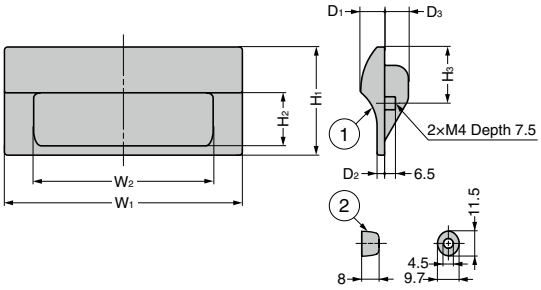




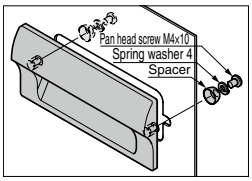
RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P_1	P_2	N	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	100-049-496	HA-RU-150SL	Aluminium Alloy	Anodised	Silver	150	100	100	2	300	31	126
G	3D	100-049-497	HA-RU-150BL			Black							
G	3D	100-049-498	HA-RU-250SL			Silver	250		200	3			210
G	3D	100-049-499	HA-RU-250BL			Black							

RECESSED PULL HH-JS Screw Mount

[Parts Included]
- Pan head screw M4×10
- Spring washer 4

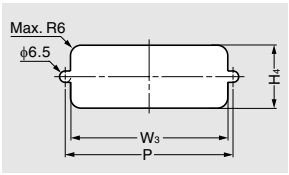


[How to Install]



Designed to install by pinching the mounting panel with supplied spacers, spring washers and screws.

[Cut Out Dimensions]

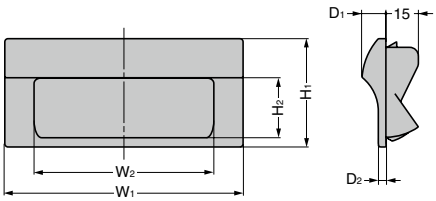


No.	Part Name	Material	Finish / Colour
①	Body	ABS + PC	Black, Ivory
②	Spacer	Steel	Clear Zinc Chromate (Trivalent)

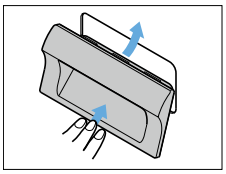
RoHS	CAD	Item Code	Item Name	Colour	W1	W2	H1	H2	H3	D1	D2	D3	P	W3	H4	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-573	HH-JS70-BL	Black	70	43	38	17	19	10.5	3	9	58	48	25	0.5~3.2	20	10	200
G	3D	100-024-574	HH-JS70-IV	Ivory													20	10	200
G	3D	100-024-575	HH-JS90-BL	Black	90	63	44	21.5	22	11		11	78	68	31		25	10	200
G	3D	100-024-576	HH-JS90-IV	Ivory													25	10	200
G	3D	100-024-577	HH-JS110-BL	Black	110	82	50	24.4	26		3.5		96	90	36		38	10	200
G	3D	100-024-578	HH-JS110-IV	Ivory													34	10	200
G	3D	100-024-579	HH-JS140-BL	Black	140	109	64	34	33	11.5			126	116	48		56	10	200
G	3D	100-024-580	HH-JS140-IV	Ivory													56	10	200

RECESSED PULL HH-JW Quick Installation

- Easy installation by snap-in.

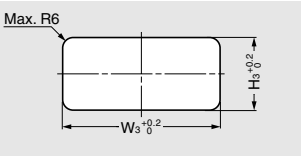


[How to Install]



One-touch installation.

[Cut Out Dimensions]



[Hole Dimensions]

Item Name	W3	H3			
		Board Thickness 0.8	Board Thickness 1.0~1.2	Board Thickness 1.5~2.0	Board Thickness 2.3
HH-JW70	46	28.7	29	29.4	30.8
HH-JW90	66	34.7	35	35.4	36.8
HH-JW110	88	40.7	41	41.4	42.8
HH-JW140	114	54.7	55	55.4	56.8

RoHS	CAD	Item Code	Item Name	Material	Colour	W1	W2	H1	H2	D1	D2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-581	HH-JW70-BL	ABS + PC	Black	70	43	38	18.5	10.5	3	14	10	200
G	3D	100-024-582	HH-JW70-IV		Ivory							14	10	200
G	3D	100-024-583	HH-JW90-BL		Black	90	63	44	22.9	11		21	10	200
G	3D	100-024-584	HH-JW90-IV		Ivory							21	10	200
G	3D	100-024-585	HH-JW110-BL		Black	110	83	50	26.8	11.5	3.5	35	10	200
G	3D	100-024-586	HH-JW110-IV		Ivory							35	10	200
G	3D	100-024-587	HH-JW140-BL		Black	140	109	64	37.8			53	10	200
G	3D	100-024-588	HH-JW140-IV		Ivory							54	10	200

RECESSED PULL HH-P SEMI Compliance

- Rounded design allows for easy gripping and handling with gloved hand (compliant with SEMI standard, SEMI S8-0308).
- Clear body suitable for transparent door such as acrylic.
- Lead-free PVC material with excellent weather and chemical resistance.

[Applications]

- Semiconductor manufacturing equipment and liquid crystal manufacturing equipment, etc.

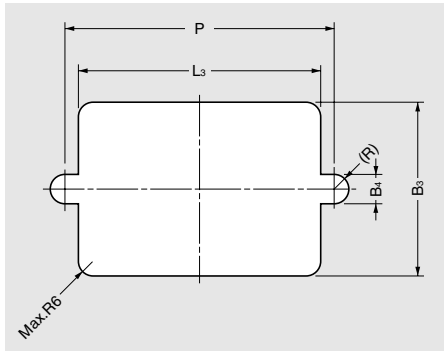
[Remarks]

- Supplied screws are suitable for panel thickness 1~5mm.Other than that, please prepare screws with threaded length above 10mm according to the panel thickness.

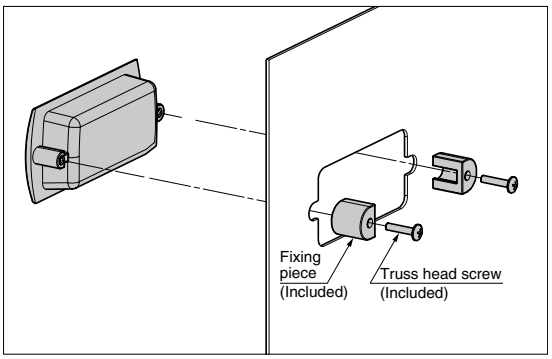
[Parts Included]

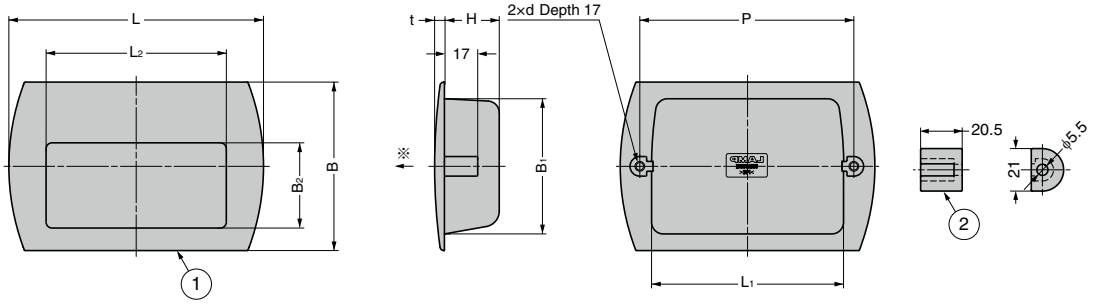
- Fixing piece
- Truss head screw M4×20 (HH-P118)
- Truss head screw M5×20 (HH-P130)

[Cut Out Dimensions]



[Installation]



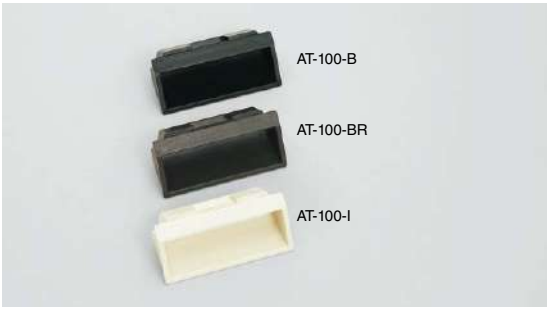


No.	Part Name	Material	Colour
①	Body	PVC	Clear
②	Fixing Piece		

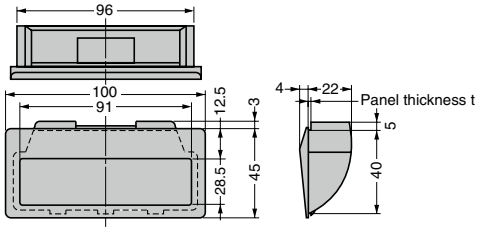
RoHS	CAD	Item Code	Item Name	L	L_1	L_2	B	B_1	B_2	H	P	d	t	L_3	B_3	B_4	Board Thickness	Load Capacity N※	Load Capacity kgf※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-021-824	HH-P118	118	93	90	58	47	25.5	21.5	104	M4	4	95	48	11	1~11	312	31.8	43	45	–
G	3D	100-013-957	HH-P130	130	98	92	86	69	43.5	28	110	M5	5	99	71	12		460	47	100	30	–

Load capacity is for the direction of ※ marked on above drawings.

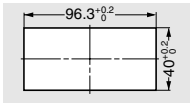
RECESSED PULL AT-100 Quick Installation



●Easy installation by snap-in.



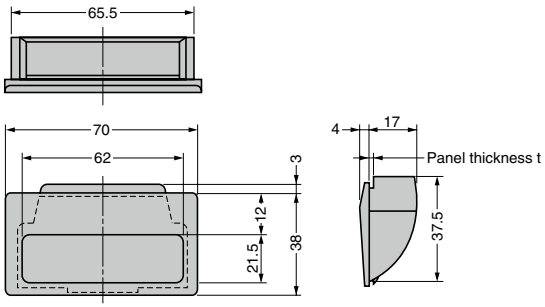
[Cut Out Dimensions]



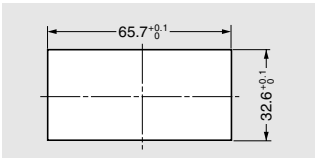
RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-625	AT-100-I	ABS	Ivory	0.8	23	250	–
G	3D	100-017-626	AT-100-BR		Brown			250	–
G	3D	100-019-414	AT-100-B		Black			250	–
G	3D	100-013-211	AT-100-10I		Ivory	1.0	22.6	250	–
G	3D	100-013-212	AT-100-10BR		Brown			250	–
G	3D	100-013-213	AT-100-10B		Black			250	–
G	3D	100-013-214	AT-100-12I		Ivory	1.2	22.4	250	–
G	3D	100-013-215	AT-100-12BR		Brown			250	–
G	3D	100-013-216	AT-100-12B		Black			250	–
G	3D	100-013-217	AT-100-16I		Ivory	1.6	22.3	500	–
G	3D	100-013-218	AT-100-16BR		Brown			250	–
G	3D	100-013-219	AT-100-16B		Black			250	–

RECESSED PULL AT-70 Quick Installation

●Easy installation by snap-in.

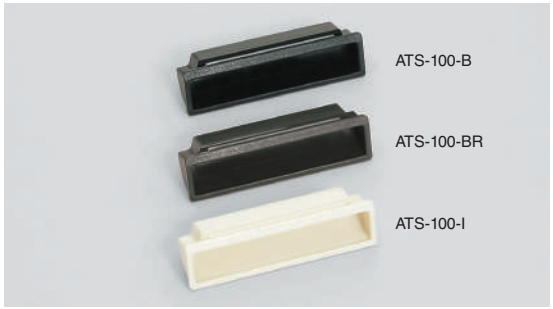


[Cut Out Dimensions]

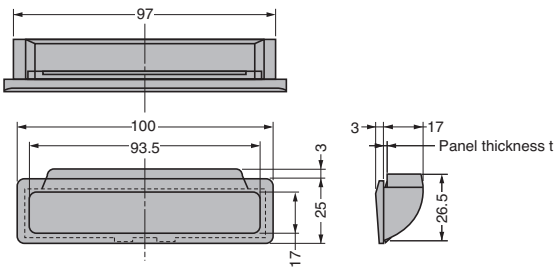


RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-015-001	AT-70-I	ABS	Ivory	0.8	12	550	–
G	3D	100-017-627	AT-70-BR		Brown			550	–
G	3D	100-015-000	AT-70-B		Black			550	–
G	3D	100-013-220	AT-70-12I		Ivory	1.2	12.8	1100	–
G	3D	100-013-221	AT-70-12BR		Brown			1100	–
G	3D	100-013-222	AT-70-12B		Black			1100	–
G	3D	100-013-223	AT-70-16I		Ivory	1.6		1100	–
G	3D	100-013-224	AT-70-16BR		Brown			1100	–
G	3D	100-013-225	AT-70-16B		Black			1100	–

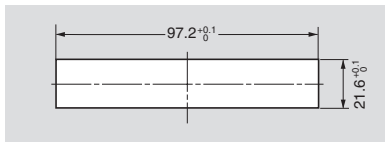
RECESSED PULL ATS-100 Quick Installation



- Easy installation by snap-in.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-180	ATS-100-I	ABS	Ivory	0.8	12.5	550	–
G	3D	100-015-002	ATS-100-BR		Brown			50	–
G	3D	100-019-476	ATS-100-B		Black			550	–
G	3D	100-013-226	ATS-100-16I		Ivory	1.6	12	1100	–
G	3D	100-013-227	ATS-100-16BR		Brown			1100	–
G	3D	100-013-228	ATS-100-16B		Black			1100	–

RECESSED PULL HH-PS99

- Designed to install from the back side of cabinet with screws (see below).Pull and screws do not appear on the panel surface for clean appearance.
- Finger hooking part inclined upwards allows for easy holding.

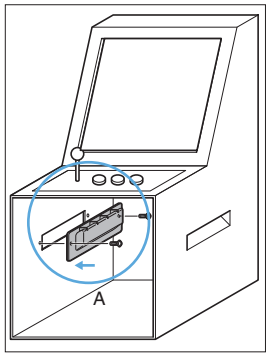
[Applications]

- Amusement equipment, PA (for carrying music apparatus), and furniture, etc.

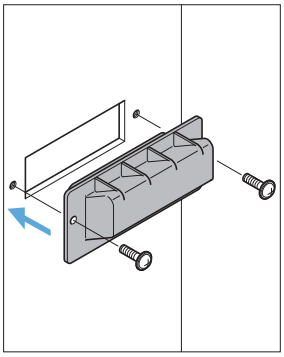
[Parts Included]

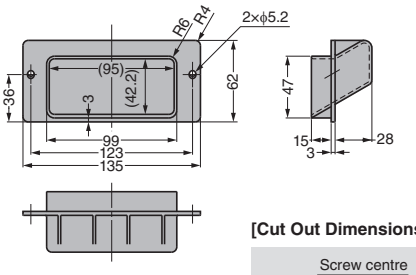
- Binding head tapping screw 4×12

[Application Example]

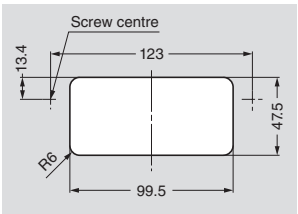


[Enlarged View of A]





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-343	HH-PS99	PP	Black	15	41	200	–

RECESSED PULL WITH VENTILATOR UTA-105

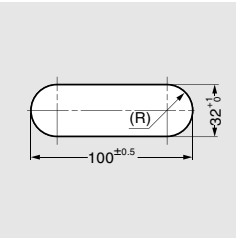
SUS

- With finger hooking part.
- With ventilator function.
- Ventilating area is invisible from the front.
- Excellent chemical resistance.

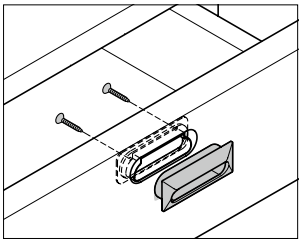
[Parts Included]

- Countersunk head tapping screw 4×20 (SUS)

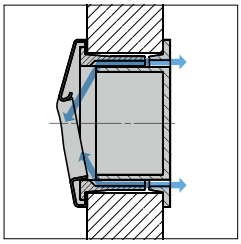
[Cut Out Dimensions]

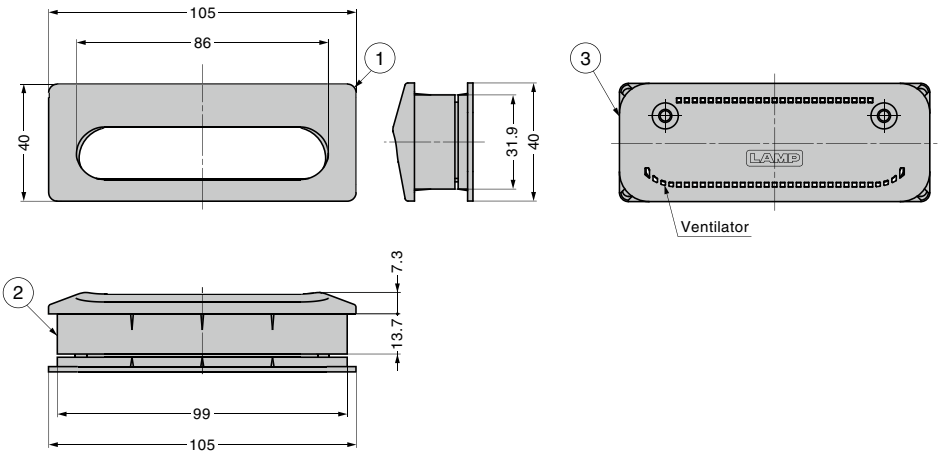


[Installation]



[Air Flow]

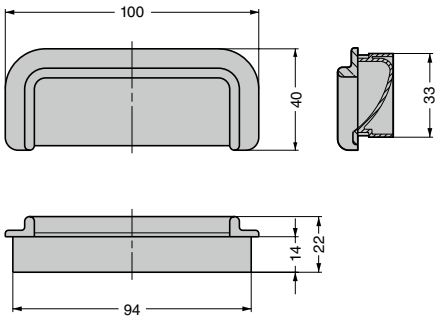




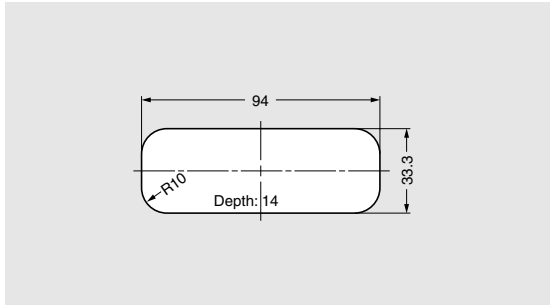
No.	Material	Finish
①	Stainless Steel (SUS304)	Satin
②	ABS	–
③		

RoHS	CAD	Item Code	Item Name	Colour	Max. Exhaust Area mm²	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-733	UTA-105BL	Black	136	18~25	40	15	150
G	3D	100-026-734	UTA-105GR	Light Grey				15	150
G	3D	100-026-735	UTA-105IV	Ivory				15	150

RECESSED PULL UP-600



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-236	UP-600	ABS	Chrome, Black	25	50	300

RECESSED PULL XLA-HHA

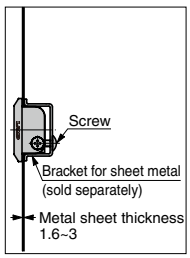
- Two types of total lengths available: 300mm and 600mm.
- Can be cut into appropriate length.
- Beautiful design based on lines and faces.
- Size can also be made to order. For further details, please contact local representatives.

[Remarks]
- Use 4 brackets (sold separately) for one pull.

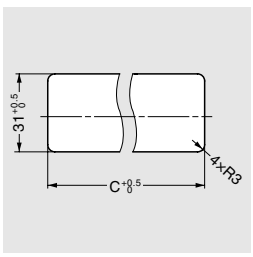
[Parts Included]
- Truss head screw M4×10 (SUS)

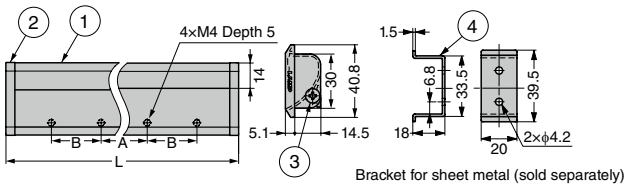
[Sold Separately]
- Bracket for sheet metal XLA-HHA40B

[Installation]



[Cut Out Dimensions]





Bracket for sheet metal (sold separately)

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Silver Anodised
②	Cover	Zinc Alloy (ZDC)	Chrome
③	Countersunk Head Screw M4×10	Stainless Steel	–
④	Bracket for Sheet Metal (Sold Separately)	Stainless Steel (SUS430)	Barrel Polished

[Body]

RoHS	CAD	Item Code	Item Name	L	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-190	XLA-HHA300	300	100	50	297	140	100	–
G	3D	100-010-191	XLA-HHA600	600	200	150	597	245	50	–

[Bracket for Sheet Metal] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-189	XLA-HHA40B	330	500	–

LARGE RECESSED PULL HH-M

SUS

HH-M400

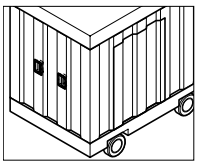
- Large type allows for easy handling with glove on.
- Handlebar does not protrude from the face of the handle.
- All stainless steel pull with handlebar length 200mm and 400mm.

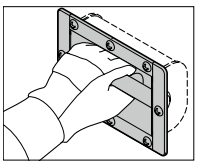
[Applications]
- Special vehicles, containers, large doors and ships, etc.

[Remarks]
- Load capacity represents the strength of the pull itself. Actual load capacity may vary depending on wall and cabinet materials. Please install the pull at places with sufficient strength or places reinforced.

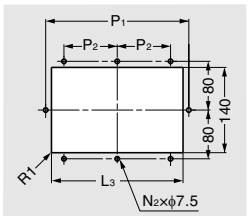
[Parts Included]
- Truss head screw M6×16 (SUS)
- Nut M6 (SUS)

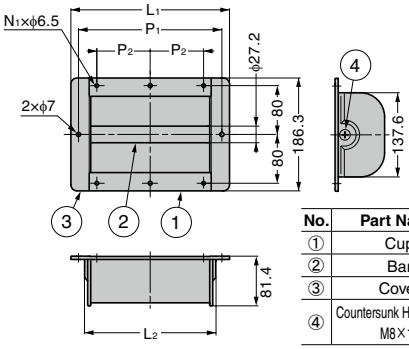
[Application Example]





[Cut Out Dimensions]





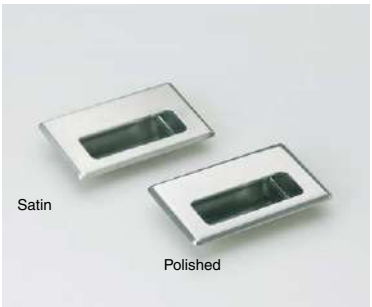
No.	Part Name	Material	Finish
①	Cup	Stainless Steel (SUS304)	Polished
②	Bar		
③	Cover	Stainless Steel (SCS13)	
④	Countersunk Head Screw M8×15	Stainless Steel	–

※SCS13 is equivalent to SUS304.

RoHS	CAD	Item Code	Item Name	L1	L2	L3	P1	P2	N1	Holes N2	Load Capacity N	Load Capacity kgf	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	100-012-306	HH-M200	260	215	218	235	87.5	6	8	4500	459	2.6	1	4
G	3D	100-012-305	HH-M400	460	415	418	435	125	8	10	2200	224	3.7	1	2

STAINLESS STEEL RECESSED PULL HH

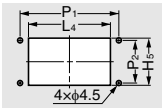
NSF SUS

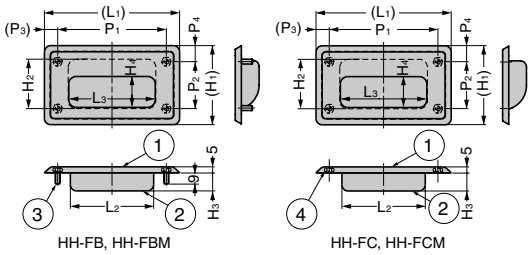


- Simple design.
- Satin and polished finish available.
- HH-FB-1, HH-FC-1, HH-FB-1M and HH-FC-1M are compliant with SEMI standard (SEMI S8-0308).

[Parts Included]
- Only for M4 bolt type: Hexagon nut M4 (SUS), washer 4, spring washer 4

[Cut Out Dimensions]





No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin, Polished
②	Back Cover		Barrel Polished
③	Hexagon Head Bolt M4×10		Plain
④	Hexagon Nut M4		

RoHS	CAD	Item Code	Item Name	Bolt/Nut	Material	Finish	L1	L2	L3	L4	H1	H2	H3	H4	H5	P1	P2	P3	P4	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-090	HH-FB-1	M4 Bolt	Stainless Steel (SUS304)	Satin	138	96	95	99	88	62	21	35	64	110	65	14	11.5	170	10	50
G	3D	100-010-091	HH-FC-1	M4 Nut																	10	50
G	3D	100-010-092	HH-FB-2	M4 Bolt			109.5	71	70	73	64	40	14.5	25	42	88	38	10.75	13	100	10	100
G	3D	100-010-093	HH-FC-2	M4 Nut																	10	100
G	3D	100-010-094	HH-FB-3	M4 Bolt			94	61	60	63	60	43	12		45	76	32	9	14	80	10	100
G	3D	100-010-095	HH-FC-3	M4 Nut																	10	100
G	3D	100-012-104	HH-FB-1M	M4 Bolt		Polished	138	96	95	99	88	62	21	35	64	110	65	14	11.5	170	10	50
G	3D	100-012-105	HH-FC-1M	M4 Nut																	10	50
G	3D	100-012-106	HH-FB-2M	M4 Bolt			109.5	71	70	73	64	40	14.5	25	42	88	38	10.75	13	100	10	100
G	3D	100-012-107	HH-FC-2M	M4 Nut																	10	100
G	3D	100-012-108	HH-FB-3M	M4 Bolt			94	61	60	63	60	43	12		45	76	32	9	14	80	10	100
G	3D	100-012-109	HH-FC-3M	M4 Nut																	10	100

STAINLESS STEEL RECESSED PULL HH-KL160 SEMI Compliance

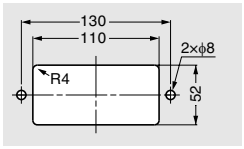
NSF SUS

- All-metal material suitable for equipment with electromagnetic shielding requirements.
- Compliant with SEMI standard (SEMI S8-0600).
- Use optional spacer when installing to sheet metal.

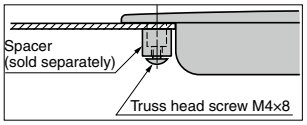
[Parts Included]
- Truss head screw M4×8 (SUS)

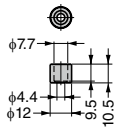
[Sold Separately]
- Spacer BSP-8

[Cut Out Dimensions]

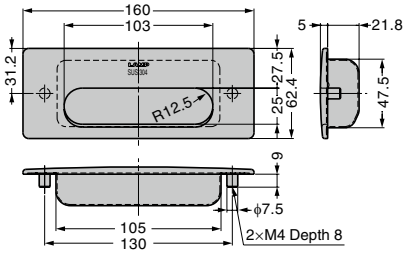


[Installation]





Spacer (sold separately)



[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-959	HH-KL160	260	8	48

No.	Part Name	Material	Finish
①	Pull	Stainless Steel (SCS13)	Satin
②	Cup	Stainless Steel (SUS304)	

※SCS13 is equivalent to SUS304.

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Zinc Chromate	6	–	4000

STAINLESS STEEL RECESSED PULL HH-KPR150 SEMI Compliant

TEST METHOD 20 SUS

HH-KPR150-SH

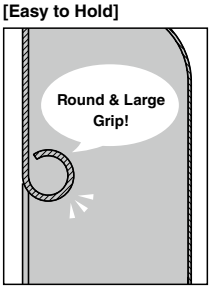
HH-KPR150-BL

- Compliant with SEMI standard. (SEMI S8-0218 section 6.8)
- The bolts are designed to swing for easy installation
- A black version is now available.

[Application]
- Semiconductor and liquid crystal manufacturing equipment

[Parts Included]
- Hexagon head bolts M5 (stainless steel)

[Easy to Hold]



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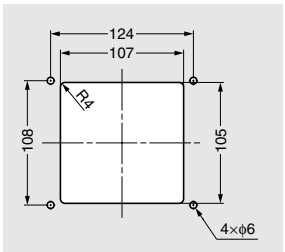
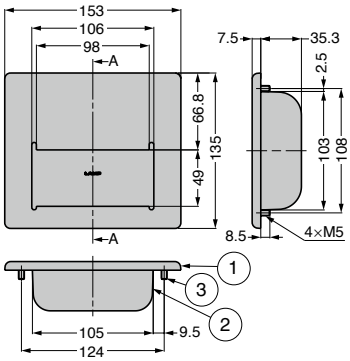
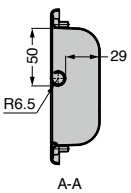






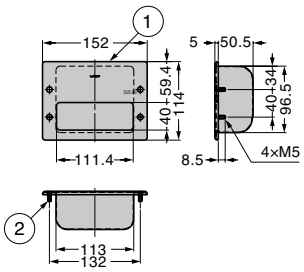
A-A
Cross-section

No.	Part Name	Material	Finish
①	Plate	Stainless Steel (SUS304)	Satin, Black
②	Cup		
③	Hexagon Head Bolt M5×12	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-044-558	HH-KPR150-SH	Satin	400	41	443	5	50
G	3D	100-056-744	HH-KPR150-BL	Black				5	50

STAINLESS STEEL RECESSED PULL HH-KP150 SEMI Compliance

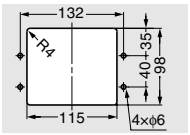
NSF SUS



- All-metal material suitable for equipment with electromagnetic shielding requirements.
- Compliant with SEMI standard (SEMI S8-0600).

[Parts Included]
- M5 Hexagon nut (SUS)

[Cut Out Dimensions]

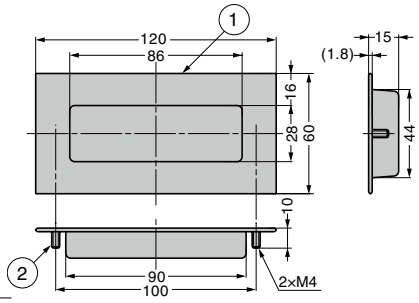


No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Thread Part	(SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-960	HH-KP150	390	5	50

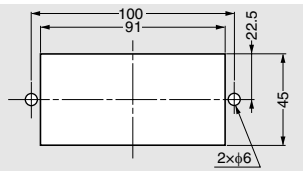
STAINLESS STEEL RECESSED PULL HH-AS2

NSF SUS



[Parts Included]
- M4 nut, washer 4 (both clear zinc chromate)

[Cut Out Dimensions]

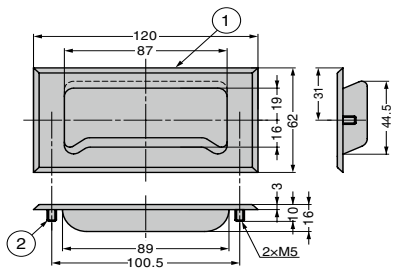


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Thread Part	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-030	HH-AS2-N	50	12	240

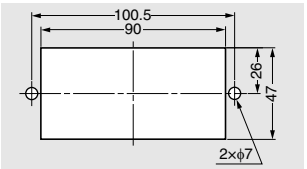
STAINLESS STEEL RECESSED PULL HH-AS3

SUS



[Parts Included]
- M5 nut (clear zinc chromate)

[Cut Out Dimensions]

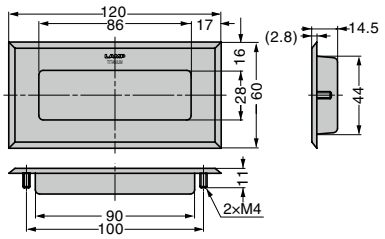


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Thread Part	Steel	Copper Plating

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-008	HH-AS3	50	12	240

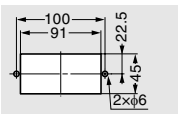
TITANIUM RECESSED PULL HH-AS2-TI

TITANIUM



- Ideal for places with light weight and rust resistance requirements.
- Titanium pull hardly causes metal allergy.
- Titanium mounting screws also available.

[Cut Out Dimensions]

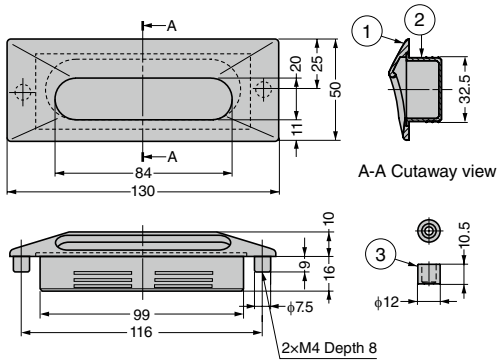


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-582	HH-AS2-TI	Titanium	Blast	30	12	240

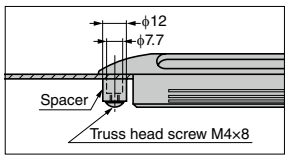
RECESSED PULL UTZ-130

●A black version is now available.

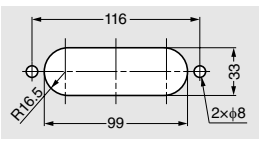
[Parts Included]
●Truss head screw M4×8
●Spacer



[Installation]



[Cut Out Dimensions]

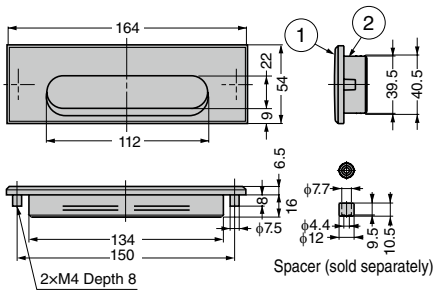


No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome, Satin Nickel, Bronze, Black
②	Cup	Plastic (HIPS)	Black
③	Spacer	Steel (SUM)	Clear Zinc Chromate

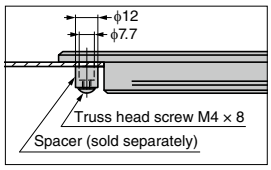
RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-225	UTZ-130WB	Satin Nickel	130	10	60
G	3D	100-010-226	UTZ-130CR	Chrome		10	60
G	3D	100-010-717	UTZ-130SCP	Bronze		10	60
G	3D	100-055-460	UTZ-130BL	Black		10	60

RECESSED PULL SD-160

[Parts Included]
●Truss head screw M4×28 (for wood)
[Sold Separately]
●Spacer BSP-8
[Recommended Screws]
●Truss head screw M4×8



[Installation]



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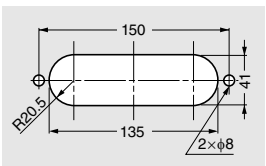


[Body]

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-194	SD-160WB	White Bronze Plating	184	10	60
G	3D	100-010-181	SD-160CR	Chrome	176	10	60

[Spacer] Sold Separately

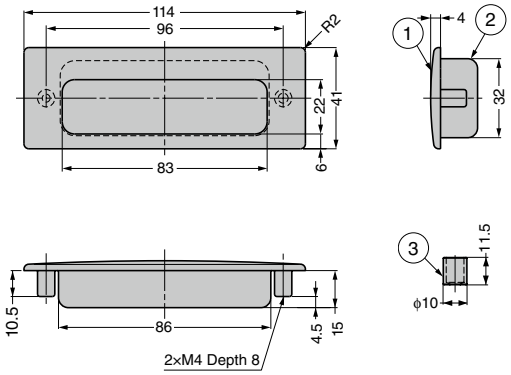
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Zinc Chromate	6	–	4000

No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	White Bronze Plating, Chrome
②	Cup	ABS	Black

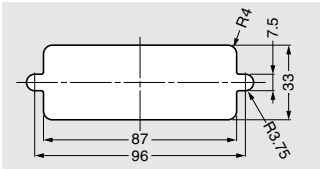
STAINLESS STEEL RECESSED PULL HH-KS114

SUS316

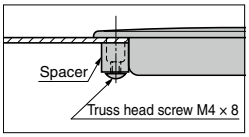
[Parts Included]
- Spacer
- For sheet metal t = 2: truss head tapping screw M4×8 (SUS)
- For wood panel t = 20: truss head tapping screw M4×15 (SUS)



[Cut Out Dimensions]



[Installation]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished/Satin
②	Cup	Stainless Steel (SUS304)	Satin
③	Spacer		–

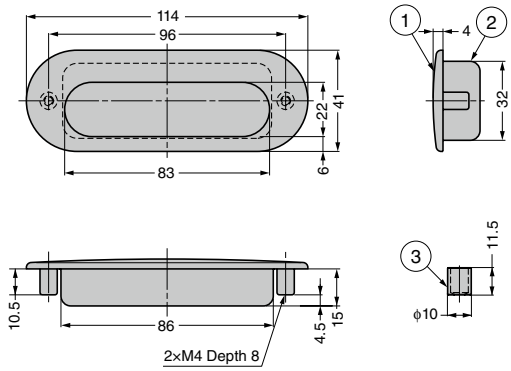
※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-583	HH-KS114M	Polished	110	10	60
G	3D	100-010-584	HH-KS114S	Satin		10	60

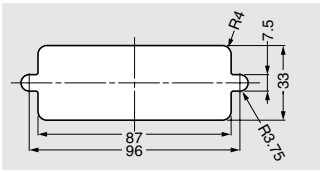
STAINLESS STEEL RECESSED PULL HH-DS114

SUS316

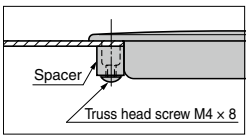
[Parts Included]
- Spacer
- For sheet metal t = 2: truss head tapping screw M4×8 (SUS)
- For wood panel t = 20: truss head tapping screw M4×15 (SUS)



[Cut Out Dimensions]



[Installation]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished/Satin
②	Cup	Stainless Steel (SUS304)	Satin
③	Spacer		–

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-585	HH-DS114M	Polished	105	10	60
G	3D	100-010-586	HH-DS114S	Satin		10	60

STAINLESS STEEL RECESSED PULL HH-K

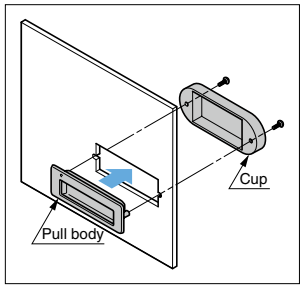
NSF SUS316

- Designed to install by pinching the door with body and cup. (Sheet metal thickness: Max. 2mm).

[Parts Included]

- For sheet metal t = 2: truss head tapping screw M4×10 (SUS)
- For wood panel t = 20: truss head tapping screw M4×15 (SUS)

[How to Install]



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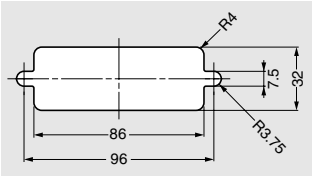
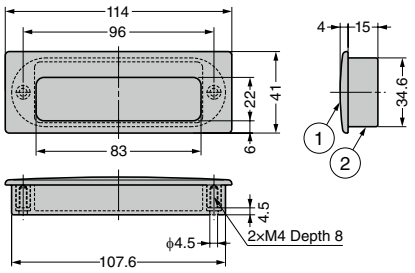




No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Cup	ABS	Black

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-952	HH-K	Max. 2	90	10	60

STAINLESS STEEL RECESSED PULL HH-D

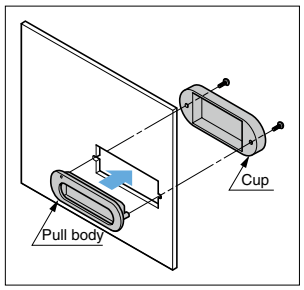
NSF SUS316

- Designed to install by pinching the door with body and cup. (Sheet metal thickness: Max. 2mm).

[Parts Included]

- For sheet metal t = 2: truss head tapping screw M4×10 (SUS)
- For wood panel t = 20: truss head tapping screw M4×15 (SUS)

[How to Install]



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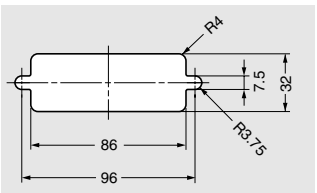
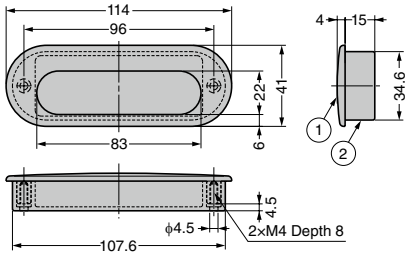




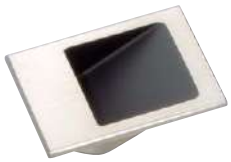
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Cup	ABS	Black

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-951	HH-D	Max. 2	85	10	60

RECESSED PULL HH-DN

HH-DN-50WB



HH-DN-40WB

HH-DN-29WB

●Small flush pull handle made of metal.

[Remarks]

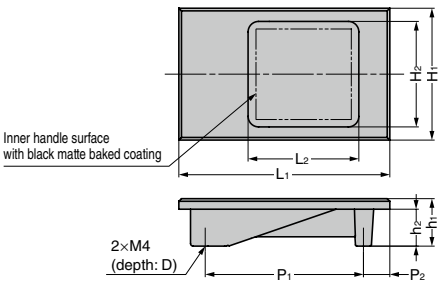
●Recommended tightening torque: 0.75 N·m

[Parts Included]

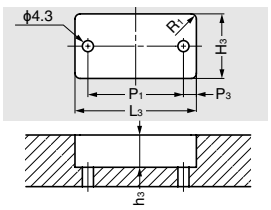
●Countersunk truss head screw M4 x 12 (for wood installation)

[Optional Parts]

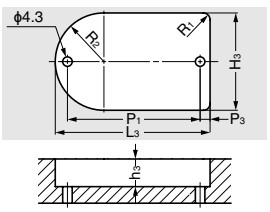
●Bracket for Sheet Metal HH-DN-BKT



[Installation on Wood]

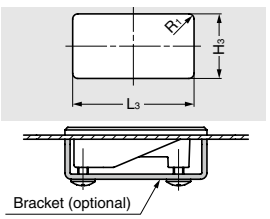


HH-DN-29WB / HH-DN-40WB

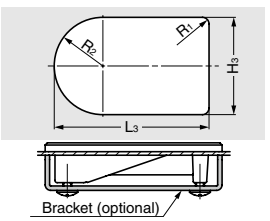


HH-DN-50WB

[Installation on Sheet Metal]



HH-DN-29WB / HH-DN-40WB



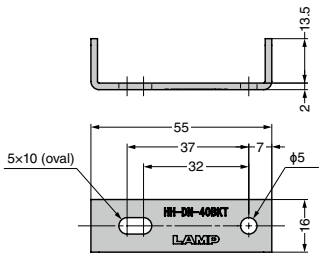
HH-DN-50WB

RoHS	CAD	Item Code	Item Name	Old Name	Material	Finish	L1	L2	H1	H2	h1	h2	P1	P2	D	L3	H3	P3	R1	R2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-049-509	HH-DN-29WB	–	Zinc Alloy (ZDC)	White Bronze	55	32	29	20	15.5	12.5	37	11	8.5	47	25	4	2	–	50	40	160
G	3D	100-014-085	HH-DN-40WB	5103-55				31.5	40	31.5			32	16	7	46	36	10			35	40	160
G	3D	100-014-084	HH-DN-50WB	5103-80			80	42	50	40	18	14	60	10	10	70	44	4.5	3	22	85	20	80

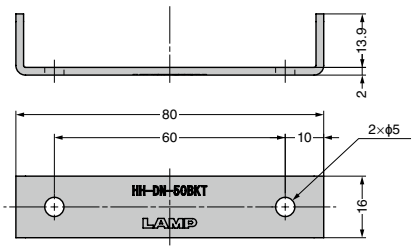
BRACKET FOR SHEET METAL HH-DN-BKT

HH-DN-50BKT

HH-DN-40BKT



HH-DN-40BKT



HH-DN-50BKT

[Parts Included]

●Cross-recessed truss head screw M4 x 10

RoHS	CAD	Item Code	Item Name	Material	Finish	Available Pull	Avialable Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-049-510	HH-DN-40BKT	Steel	Coloured Chromate (trivalent)	HH-DN-29WB / HH-DN-40WB	0.8 - 2.3	19	40	160
G	3D	100-049-511	HH-DN-50BKT			HH-DN-50WB	0.8 - 3.2	26	40	160

RECESSED PULL HH-UD

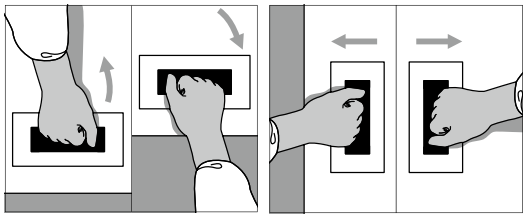
SUS

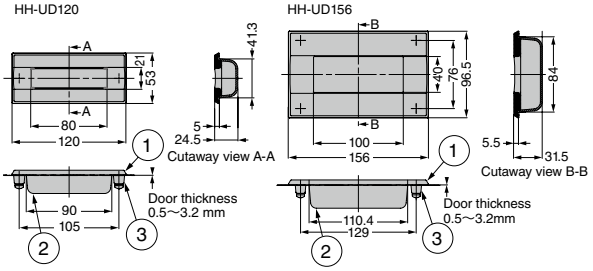
- Grips on both sides allow the door to be moved in either direction.
- Solid grip interior with rounded edges for optimum comfort.
- The HH-UD156 is compliant with the SEMI S8-0915.

[Recommended Screw]

- M5 screw (length: board thickness +0mm/-3mm)

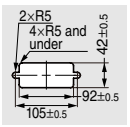
Video Link



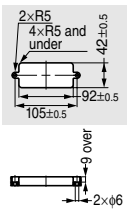


[Cut Out Dimensions]

Sheet metal

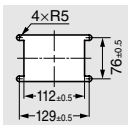


Wood

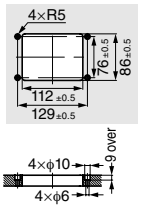


[Cut Out Dimensions]

Sheet metal



Wood



No.	Part Name	Material
①	Body	Stainless Steel (SCS13)
②	Cup	ABS and PC
③	Spacer	Stainless Steel (SUS304)

RoHS	CAD	Item Code	Item Name	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-024	HH-UD120SH	Satin	500	51	193	1	40
G	3D	100-037-025	HH-UD120SM	Mirror				1	40
G	3D	100-037-026	HH-UD156SH	Satin			502	1	40
G	3D	100-037-027	HH-UD156SM	Mirror				1	40

STAINLESS STEEL RECESSED PULL DFHH-DS170

SUS

DFHH-DS170BL

DFHH-DS170SH

- Grips on both sides allow the door to be moved in either direction.

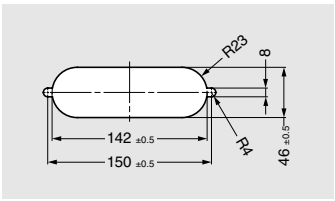
[Parts Included]
- Countersunk truss head screw M4×14 (for wood installation)

[Sold Separately]
- Spacer BSP-8 (for sheet metal)

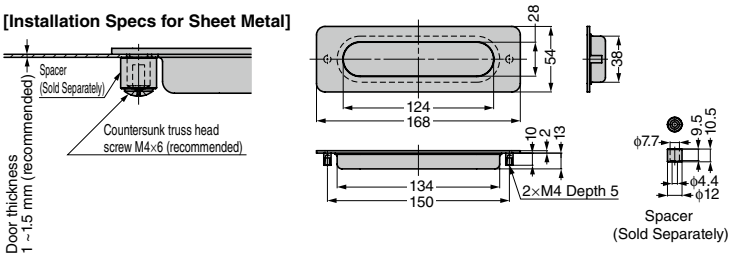
[Recommended Screws]
- Countersunk truss head screw M4×6 (for sheet metal)

*Door thickness 1 ~1.5 mm

[Cut Out Dimensions for Sheet Metal]



[Installation Specs for Sheet Metal]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)
G'	3D	100-049-761	DFHH-DS170SH	Stainless Steel (SUS304)	Satin	125
G'	3D	100-049-762	DFHH-DS170BL		Paint/Black	

Spacer (Sold Separately)

RoHS	CAD	Item Code	Item Name	Material	Finish
G'	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Chromate

STAINLESS STEEL RECESSED PULL DFHH-KS170

SUS

DFHH-KS170BL

DFHH-KS170SH

- Grips on both sides allow the door to be moved in either direction.

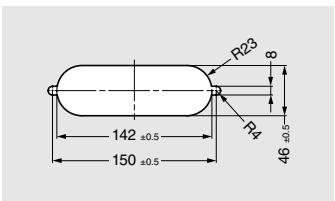
[Parts Included]
- Countersunk truss head screw M4×14 (for wood installation)

[Sold Separately]
- Spacer BSP-8 (for sheet metal)

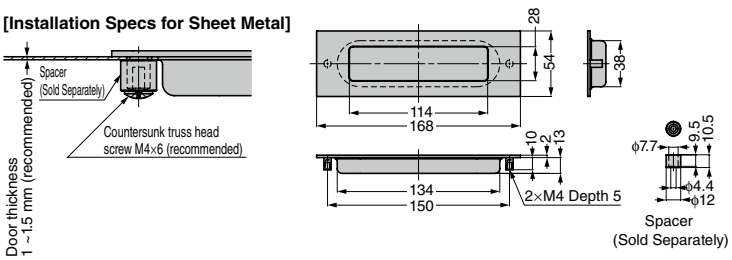
[Recommended Screws]
- Countersunk truss head screw M4×6 (for sheet metal)

*Door thickness 1 ~1.5 mm

[Cut Out Dimensions for Sheet Metal]



[Installation Specs for Sheet Metal]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)
G'	3D	100-049-763	DFHH-KS170SH	Stainless Steel (SUS304)	Satin	140
G'	3D	100-049-764	DFHH-KS170BL		Paint/Black	

Spacer (Sold Separately)

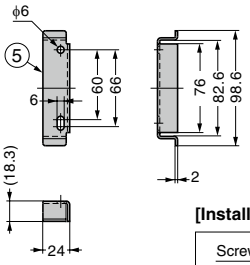
RoHS	CAD	Item Code	Item Name	Material	Finish
G'	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Chromate

STAINLESS STEEL TRUNK HANDLE HCT-150 High Load Capacity

INSTRUCTION SUS316

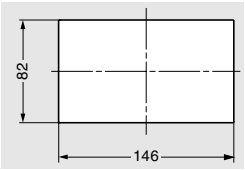
- The handle retracts automatically by a spring.

[Parts Included]
- Truss head screw M5x12 (SUS)
- Bracket for sheet metal (SUS)

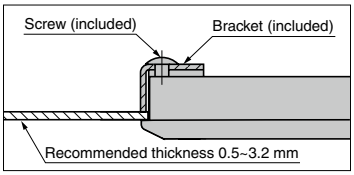


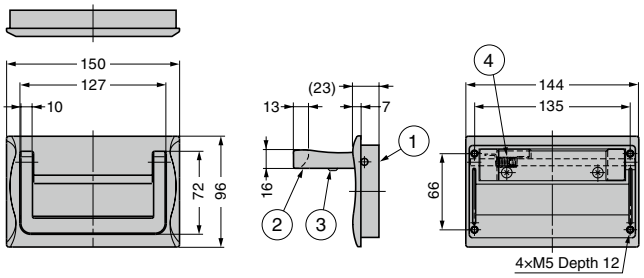
Bracket

[Cut Out Dimensions]



[Installation]





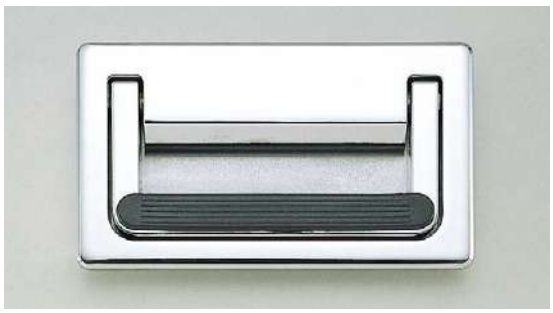
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Handle		
③	Bumper	EPDM	Black
④	Spring	Stainless Steel (SUS316)	–
⑤	Bracket for Sheet Metal		Barrel Polished

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-557	HCT-150	980	100	990	1	1

TRUNK HANDLE MUD-140

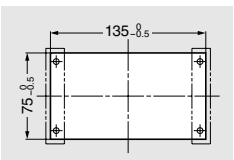
TEST METHOD 1 INSTRUCTION



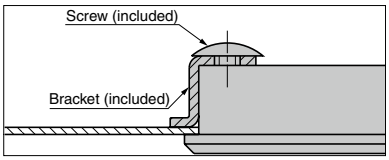
- The handle retracts automatically by a spring.

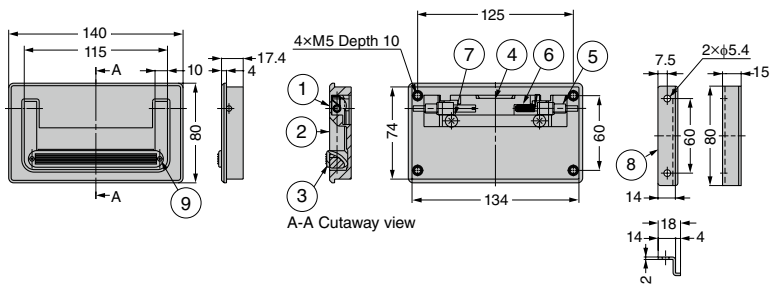
[Parts Included]
- Truss head screw M5x8
- Bracket for sheet metal

[Cut Out Dimensions]



[Installation]





No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Handle		
③	Grip	Elastomer (TPE)	Dark Blue
④	Back Cover	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑤	Shaft	Zinc Alloy (ZDC)	
⑥	Spring	Steel (SWP)	
⑦	Screw	Steel (SWCH)	–
⑧	Bracket	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑨	Screw	Stainless Steel	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-901-272	MUD-140	294	30	620	5	20

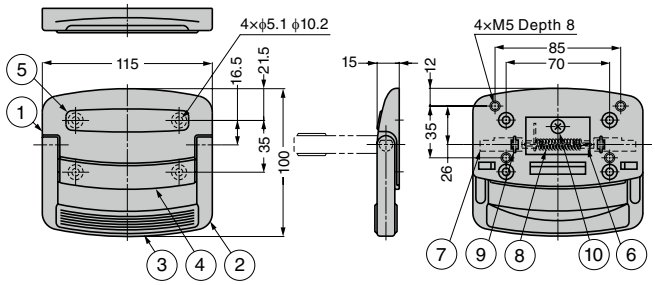
TRUNK HANDLE TMU-115

TEST METHOD 1 INSTRUCTION

- Both back screw mount and front screw mount is available.
- Spring loaded trunk handle.
- Small type (TMU-100) also available. For further details, please contact local representatives.

[Parts Included]

- For back screw mount: Truss head screw M5×6
- For front screw mount: Countersunk head wood screw 4.8×25 and 4.8×20



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Handle		
③	Grip	Elastomer (TPE)	Dark Blue
④	Case Cover 1		
⑤	Case Cover 2		
⑥	Back Cover	Steel (SPCC)	Coloured Zinc Chromate
⑦	Shaft	Zinc Alloy (ZDC)	Nickel
⑧	Spring	Steel (SWP)	Coloured Zinc Chromate
⑨	Pivot Ring	–	5103-31
⑩	Screw	Steel (SWCH)	Coloured Zinc Chromate

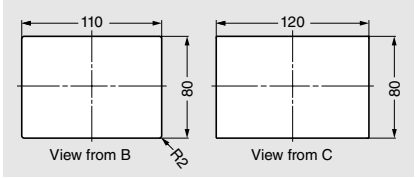
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-901-273	TMU-115	392	40	460	10	40

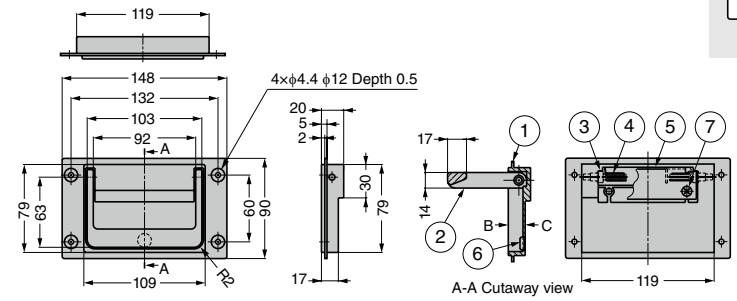
TRUNK HANDLE PT-148

TEST METHOD 1

- Spring loaded trunk handle.

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Grey Enamel
②	Handle		Finish
③	Shaft		Plain
④	Spring	Steel (SW)	Clear Zinc Chromate (Trivalent)
⑤	Back Cover	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑥	Bumper	PUR	Clear
⑦	Countersunk Head Screw	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

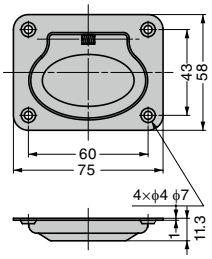
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-019-183	PT-148	490	50	645	20	–

STAINLESS STEEL RING PULL 980643

TEST METHOD 2 SUS

●The handle retracts automatically by a spring when not in use.

[Parts Included]
●Tapping screw 3.5×16 (SUS)



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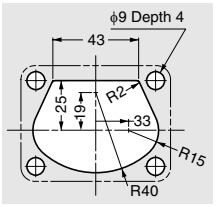
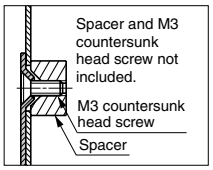


[For Sheet Metal]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-739	980643	Stainless Steel (SUS304)	Polished	245	25	51	10	200

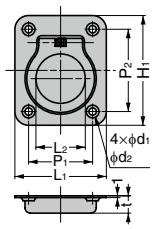
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL RING PULL 980641, 980642

TEST METHOD 2 SUS

●The handle retracts automatically by a spring when not in use.

[Parts Included]
●980641: Tapping screw 3×16 (SUS)
●980642: Tapping screw 3.5×16 (SUS)



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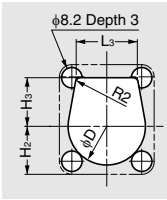
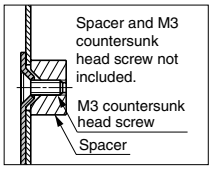


[For Sheet Metal]



RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	L3	H1	H2	H3	D	t	P1	P2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-737	980641	Stainless Steel (SUS304)	Polished	38	18	24.5	44	19	19.5	31	10	28	34	4	6.2	196	20	21	10	500
G	3D	100-011-738	980642			50	27	25	60	25	25	41	9.5	35	45	4.4	7	245	25	36	10	200

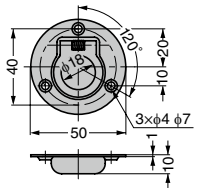
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL RING PULL 980640

TEST METHOD 2 SUS

●The handle retracts automatically by a spring when not in use.

[Parts Included]
●Tapping screw 3×16 (SUS)



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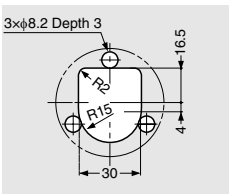

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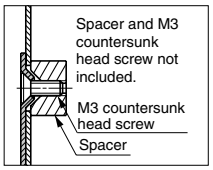


RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-740	980640	Stainless Steel (SUS304)	Polished	196	20	23	10	300

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

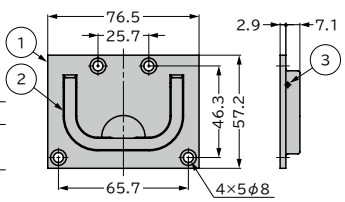
STAINLESS STEEL RING PULL 26700

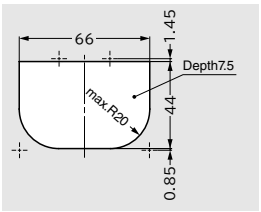
SUS316

[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Mirror
②	Handle		
③	Pin	Stainless Steel (SCS14) Stainless Steel (SUS304)	Plain

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-096-011	26700	Body and Handle : Stainless Steel (SCS14) Pin : Stainless Steel (SUS304)	Mirror	120	10	100
G	–	100-043-251	26700-1	All Stainless Steel (SCS14)		–	10	100

※The 26700-1 is suitable for exterior use. (e.g. marine)

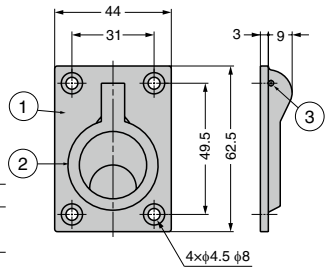
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL RING PULL 26901

SUS316

[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5



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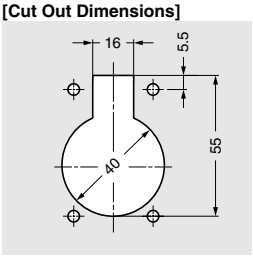


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Mirror
②	Handle		
③	Pin	Stainless Steel (SUS304)	Plain

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-096-010	26901	Stainless Steel (SCS14)	Polished	85	20	100

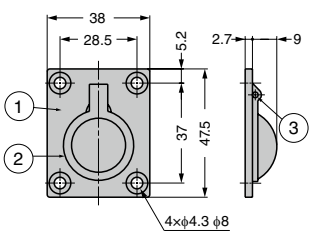
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL RING PULL 26900

SUS316

[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5



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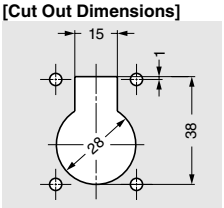


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Mirror
②	Handle		
③	Pin	Stainless Steel (SUS304)	Plain

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-096-009	26900	Stainless Steel (SCS14)	Polished	45	20	100

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL HATCH PULL ST-90, ST-115

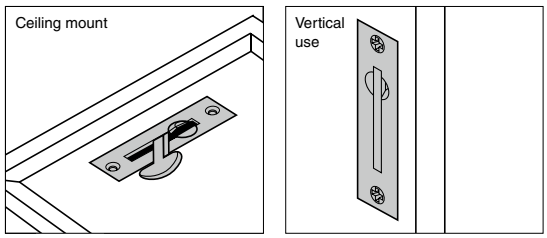
- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.
- Built-in spring prevents handle from hanging out.
- Vertical use and ceiling mount are possible.

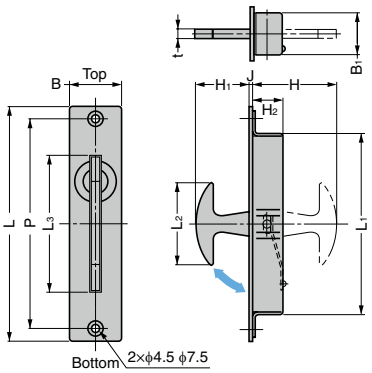
[Applications]
- Control panels, switch boards, and inspection ports, etc.

[Remarks]
- For vertical use and ceiling mount only. Do not use on the floor.
- For vertical use, please install the top and bottom correctly.

[Parts Included]
- ST-90: Countersunk head wood screw 3.5×22 (SUS)
- ST-115: Countersunk head wood screw 3.5×25 (SUS)

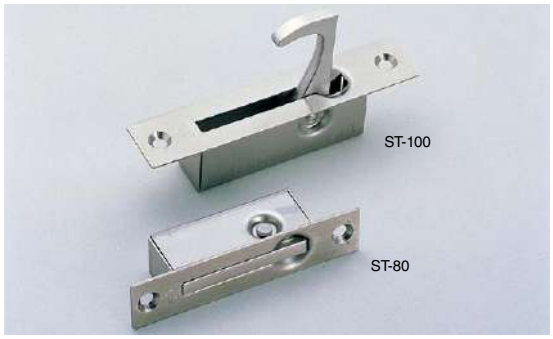
[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	L3	H	H1	H2	J	B	B1	t	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-240	ST-90	Stainless Steel (SUS304)	Satin	90	66.2	30.2	57	35.5	23.2	10.5	2.2	22	18.5	3.8	80	68	30	300
G	3D	100-010-241	ST-115			115	86.2	40	67	42	26	13	2.5	25	20	4	102	102	20	200

STAINLESS STEEL HATCH PULL ST-80, ST-100



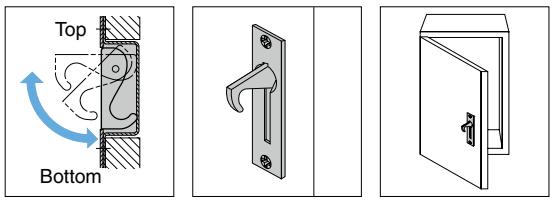
- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.
- Thick and smooth handle.

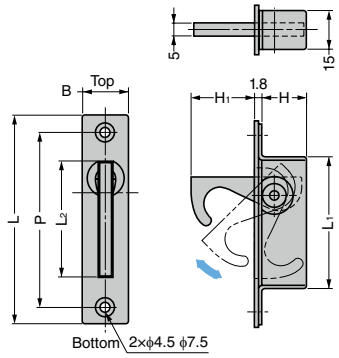
[Applications]
- Control panels, switch boards, and inspection ports, etc.

[Remarks]
- For vertical use only.Do not use on the ceiling and floor.
- Please install the top and bottom correctly.

[Parts Included]
- ST-80: Countersunk head wood screw 3.5×16 (SUS)
- ST-100: Countersunk head wood screw 3.5×20 (SUS)

[Application Example]

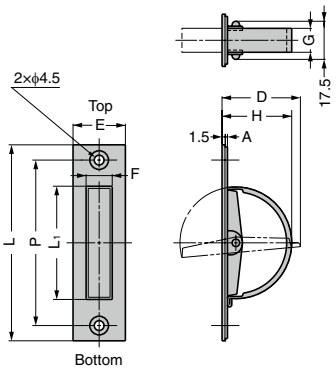




RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	H	H1	B	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-244	ST-80	Stainless Steel (SUS304)	Satin	80	50	45	18	25	18	68	48	30	300
G	3D	100-010-245	ST-100			100	63	55.2	21	32	20	85	66	20	200

STAINLESS STEEL HATCH PULL HR

TEST METHOD 2 SUS



- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.

[Applications]
- Control panels, switch boards, and inspection ports, etc.

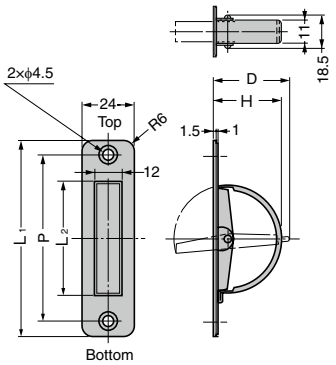
[Remarks]
- For vertical use, please install the top and bottom correctly.

[Parts Included]
- HR-90S: Countersunk head wood screw 3.5×22 (SUS)
- HR-110S & HR-135S: Countersunk head wood screw 3.5×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P	H	D	A	E	F	G	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-614	HR-90S	Stainless Steel (SUS304)	Satin	90	52	76	32	36	1	24	12	11	127	13	49	30	300
G	3D	100-012-615	HR-110S			110	64	94	38	42					98	10	59	20	200
G	3D	100-012-817	HR-135S			135	90	115	50	55	1.2	25	12.2	12	74	7.5	88	15	150

STAINLESS STEEL HATCH PULL HR-RS

TEST METHOD 2 SUS



- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.

[Applications]
- Control panels, switch boards, and inspection ports, etc.

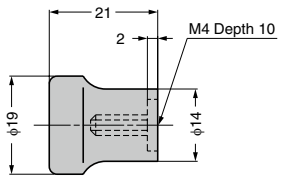
[Remarks]
- For vertical use, please install the top and bottom correctly.

[Parts Included]
- Countersunk head wood screw 3.5×22 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	H	D	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-058	HR-90RS	Stainless Steel (SUS304)	Satin	90	52	76	32	36	127	13	46	30	300
G	3D	100-019-059	HR-110RS			110	64	94	38	42	98	10	55	20	200

KNOB GD-20

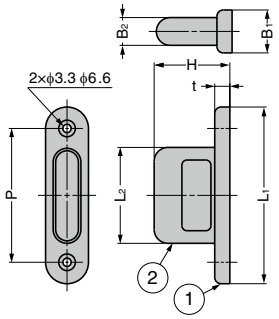
[Parts Included]
- Truss head screw M4×25



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-074	GD-20	ABS	Black	5	50	500

STAINLESS STEEL PULL HS

SUS



- Elastomer material provides soft and comfortable touch feeling.
- Stainless steel is used for the base part.
- Stainless steel pull US 1 also available.

[Parts Included]
- Raised Countersunk head wood screw 3.1×20 (SUS)

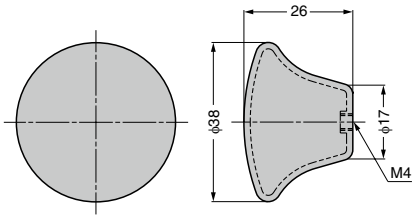
No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Satin
②	Knob	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	L1	L2	P	B1	B2	H	t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-192	HS-60S	60	30	44	16	9	25	5	13	40	400
G	3D	100-012-193	HS-70S	70	38	53	17	11	30	6	20	30	300

Refer to 1 : P.640

STAINLESS STEEL KNOB RS-38S

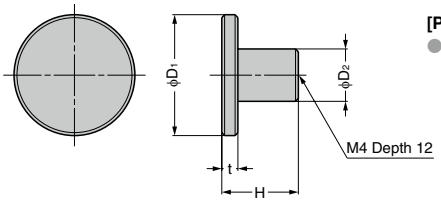
NSF SUS



[Parts Included]
- Truss head screw M4×30 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-198	RS-38S	Stainless Steel (SUS304)	Satin	20	20	200

KNOB EXSEL



[Parts Included]
- Truss head screw M4×25

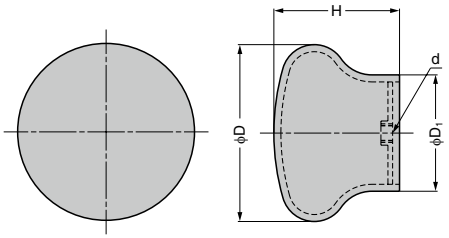
RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	H	t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-080	EXSEL20	Aluminium Alloy	Stainless Steel/Anodised	20	10	18	4	5	48	1152
G	3D	100-012-081	EXSEL25			25	11	18.5	4.5	8.5	48	1152
G	3D	100-012-082	EXSEL30			30	12	19	5	15	48	1152
G	3D	100-012-083	EXSEL35			35	13			16.5	24	576
G	3D	100-050-636	EXSEL20BL		Black/Anodised	20	10	18	4	5	48	1152
G	3D	100-050-637	EXSEL25BL			25	11	18.5	4.5	8.5	48	1152
G	3D	100-050-638	EXSEL30BL			30	12	19	5	15	48	1152
G	3D	100-050-639	EXSEL35BL			35	13			16.5	24	576

STAINLESS STEEL KNOB RSS

- Hollow and light.

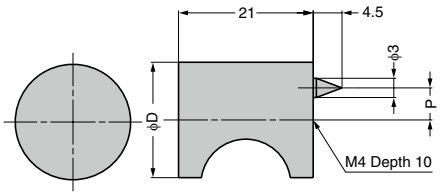
[Applications]
- Medical/professional sinks, cars, and ships, etc.

[Parts Included]
- RSS-25S, RSS-25M, RSS-30S, RSS-30M: Truss head screw M4×30 (SUS)
- RSS-38S, RSS-38M, RSS-50S, RSS-50M: Truss head screw M5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	D	D_1	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-194	RSS-25S	Stainless Steel (SUS304)	Satin	22	25	18	M4	8.5	20	200
G	3D	100-011-190	RSS-25M		Polished						20	200
G	3D	100-011-195	RSS-30S		Satin	23	30	20		11	20	200
G	3D	100-011-191	RSS-30M		Polished						20	200
G	3D	100-011-196	RSS-38S		Satin	27	38	25	M5	16	20	200
G	3D	100-011-192	RSS-38M		Polished						20	200
G	3D	100-011-197	RSS-50S		Satin	34	50	35		30	20	200
G	3D	100-011-193	RSS-50M		Polished						20	200

KNOB MRB

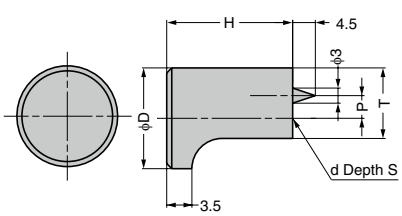


[Remarks]
- Pin position and size may vary.

[Parts Included]
- Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	D	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-721	MRB-18	Brass	White Bronze Plating	18	5	38	30	300
–	3D	100-010-722	MRB-24			24	5.5	70	30	300

KNOB GLA

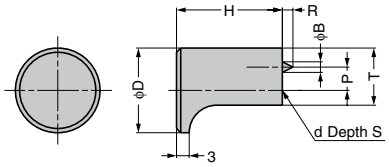


[Remarks]
- Pin position and size may vary.

[Parts Included]
- GLA-12: Truss head screw M3×25
- GLA-16, GLA-20: Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	T	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-718	GLA-12	Brass	White Bronze Plating	12	18	8.5	3.5	M3	8	14	50	500
–	3D	100-012-323	GLA-16			16	22	11	4	M4	10	29	40	400
–	3D	100-010-720	GLA-20			20	25	14	4.5			52	40	400

KNOB SGL



- Uses flame retardant material rated UL94HB.

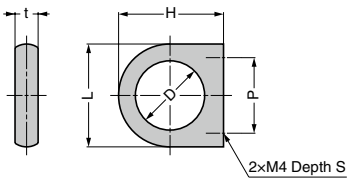
[Remarks]
- Pin position and size may vary.

[Parts Included]
- SGL-12: Truss head screw M3×28
- SGL-16, SGL-20: Truss head screw M4×28

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	T	P	B	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-016	SGL-12	ABS	Satin Chrome	12	18	8.5	3	2	2	M3	9.5	1	60	1800
G	3D	100-012-017	SGL-16			16	22	11	4		2.5	M4	13.5	2	40	1200
G	3D	100-012-018	SGL-20			20	25	13.5	5	2.5			15.5	3.5	30	900

STAINLESS STEEL PULL SD

SUS

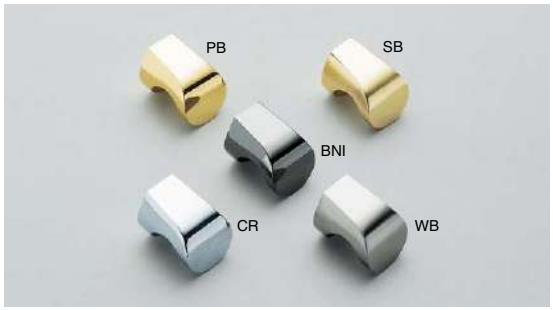


[Parts Included]
- Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	t	D	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-015-022	SD-24S	Stainless Steel (SCS13)	Satin	24.5	25	5.5	16.5	18	5	10	80	800
G	3D	100-015-023	SD-24M		Polished								80	800
G	3D	100-015-020	SD-30S		Satin	30.5	31.5	6.5	20.5	21	6	22	50	500
G	3D	100-015-021	SD-30M		Polished								50	500

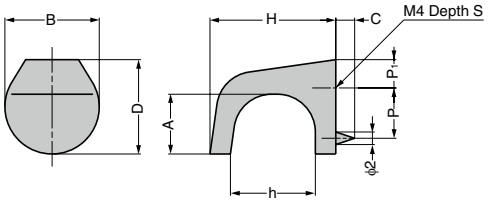
※SCS13 is equivalent to SUS304.

KNOB MKZ



[Remarks]
- Pin position and size may vary.

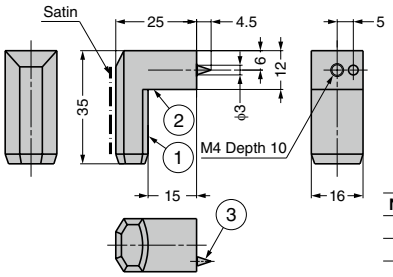
[Parts Included]
- Truss head screw M4×25



RoHS	CAD	Item Code	Item Name	Material	Finish	D	A	B	C	H	h	P	P_1	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-018-042	MKZ-15PB	Zinc Alloy (ZDC)	Brass/Clear	16	8	15	2	20	13.5	8	5.5	6	11	50	500
G	3D	100-018-043	MKZ-15CR		Chrome											50	500
–	3D	100-018-044	MKZ-15BNI		Black Nickel											50	500
G	3D	100-018-045	MKZ-15WB		White Bronze Plating											50	500
G	3D	100-018-046	MKZ-15SB		Satin Gold											50	500
G	3D	100-018-047	MKZ-21PB		Brass/Clear	21	12.5	20	3	26	17	12	4.5	7	29	50	500
G	3D	100-018-048	MKZ-21CR		Chrome											50	500
G	3D	100-018-049	MKZ-21BNI		Black Nickel											50	500
G	3D	100-018-050	MKZ-21WB		White Bronze Plating											50	500
G	3D	100-018-051	MKZ-21SB		Satin Gold											50	500

STAINLESS STEEL KNOB CU-L-35

SUS



●Finish: Combination of polished and satin.

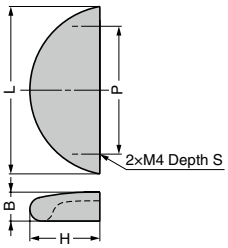
[Remarks]
●Pin position and size may vary.
[Parts Included]
●Truss head screw M4×25 (SUS)

No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS303)	Polished and Satin Combination
②	Body 2	Stainless Steel (SUS304)	Polished
③	Pin	Stainless Steel (SUS303)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-824	CU-L-35	60	10	–

STAINLESS STEEL PULL RD

SUS316



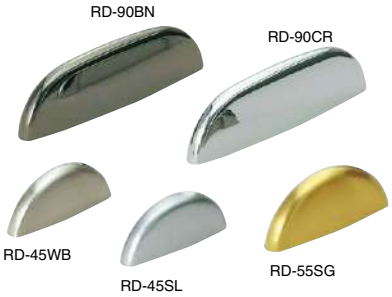
●Easy to grasp.

[Parts Included]
●Truss head screw M4×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-901-049	RD-55SM	Stainless Steel (SCS14)	Polished	55	23	9.5	42	8	50	30	360
G	3D	100-901-050	RD-90SM			90	25.5	10.5	74	10	80	20	240

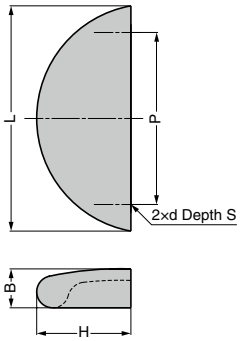
※SCS14 is equivalent to SUS316.

PULL RD



●Easy to grasp.

[Parts Included]
●Truss head screw



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	B	d	S	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	100-012-331	RD-45CR	Zinc Alloy (ZDC)	Chrome	45	32	19	8.2	M3	7	22	M3×28	40	480
G	3D	100-012-333	RD-45WB		White Bronze Plating									40	480
G	3D	100-012-330	RD-45BN		Black Nickel									40	480
G	3D	100-012-332	RD-45SG		Gold									40	480
G	3D	100-012-387	RD-45SL		Paint/Silver									40	480
G	3D	100-012-335	RD-55CR		Chrome	55	42	23	9.5	M4	8	35	M4×28	30	360
G	3D	100-012-337	RD-55WB		White Bronze Plating									30	360
G	3D	100-012-334	RD-55BN		Black Nickel									30	360
–	3D	100-012-336	RD-55SG		Gold									30	360
G	3D	100-012-162	RD-90CR		Chrome	90	74	25.5	10.5		9.5	63		20	240
G	3D	100-012-341	RD-90WB		White Bronze Plating									20	240
G	3D	100-012-338	RD-90BN		Black Nickel									20	240
–	3D	100-012-340	RD-90SG		Gold									20	240

PUSH KNOB PK04

INSTRUCTION

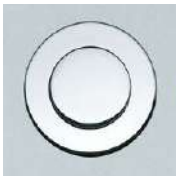
- Knob can be pushed in when not in use. And no projection from the door surface.
- Able to install to door thickness 15~35mm with cap included, 29~39mm with PK04VB (sold separately).

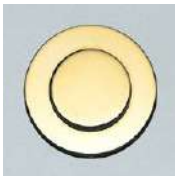
[Remarks]
- When processing the mounting holes on wooden door, please clear wood scraps before installation.
- When installing knob body and supplied screws, do not tighten with excessive force. (Recommended tightening torque: 4kgf・cm)
- Bracket for sheet metal not included.

[Parts Included]
- Truss head screw M3×20

[Sold Separately]
- Cap for thick door (PK04VB)

BN

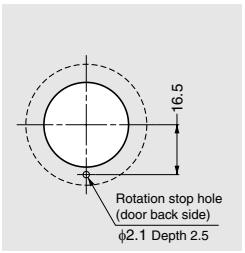

CR

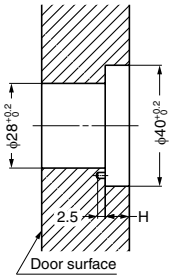

GA

DN

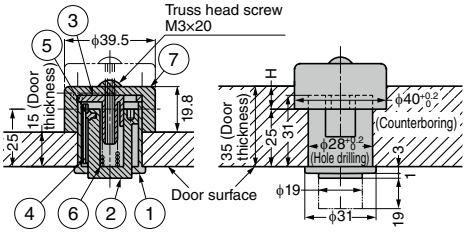
PK04VB (sold separately)

[Cut Out Dimensions]

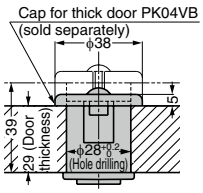




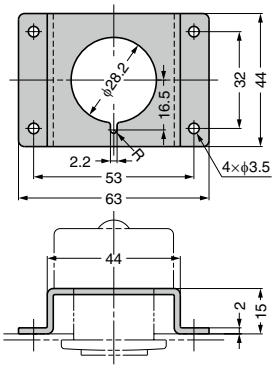
[Door Thickness 15~25] **[Door Thickness 26~35]**



[Door Thickness 29~39]



[Bracket for Sheet Metal] Example



No.	Part Name	Material	Finish / Colour
①	Body	ABS	See Below
②	Knob	Zinc Alloy (ZDC)	
③	Cover		Coloured Zinc Chromate
④	Guide Plate		
⑤	Rotor		
⑥	Spring	Stainless Steel	Plain
⑦	Cap	ABS	Black
–	Spring Pin	Stainless Steel	–

[Body]

RoHS	CAD	Item Code	Item Name	Finish	Door Thickness (DT) ※	Bore Depth H	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-015-025	PK04GA	Gold	15~35	DT 15~25 : H = None (ϕ28 Hole), DT 26~35 : H = DT - 25	76	20	200
G	3D	100-015-024	PK04CR	Chrome				20	200
G	3D	100-015-026	PK04BN	Black Nickel				20	200
G	3D	100-012-554	PK04DN	Nickel				20	200

※ When using the supplied cap.

[Cap for Thick Doors] Option

RoHS	CAD	Item Code	Item Name	Door Thickness	Bore Depth H	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-910-039	PK04VB	29~39	None (ϕ28 Hole)	Stainless Steel (SUS430)	Plain	13	100	800

Zwei L STAINLESS STEEL PUSH KNOB ZL-1908

INSTRUCTION SUS316

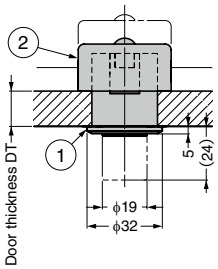
- Knob can be pushed in when not in use. And no projection from the door surface.
- Superior "Zwei L Finish" .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

Video Link

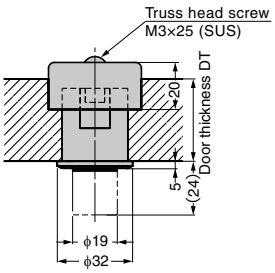
[Parts Included]

- Truss head screw M3×25 (SUS)

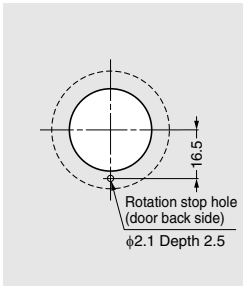
[Door Thickness 13~23 mm]

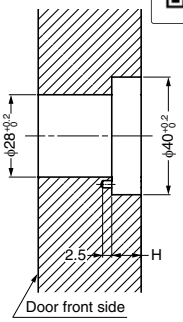


[Door Thickness 24~23 mm]



[Cut Out Dimensions]

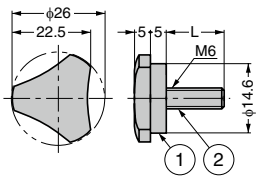




No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS316)	Zwei L Finish
②	Cap	ABS	Black

RoHS	CAD	Item Code	Item Name	Door Thickness DT	Bore Depth H	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-011-033	ZL-1908	13~33	DT 13~23 : H = None (ϕ28 Hole), DT 24~33 : H = DT - 23	134	1	–

KNOB (SMALL) 117

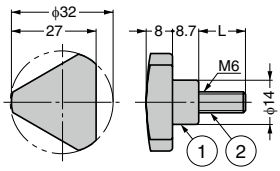


[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	PP	White, Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	L	Weight (g)	Pack (pcs)	Box (packs)	Carton (pcs)
G	3D	100-038-024	117-10116-P20	Black	15	8	20	5	–

KNOB (MEDIUM) 117

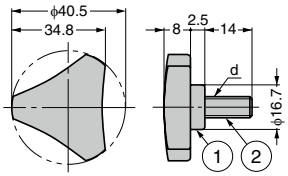


[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	ABS	Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	L	Weight (g)	Pack (pcs)	Box (packs)	Carton (pcs)
G	3D	100-038-031	117-11707-P20	12	10	20	5	–

KNOB (LARGE) 117



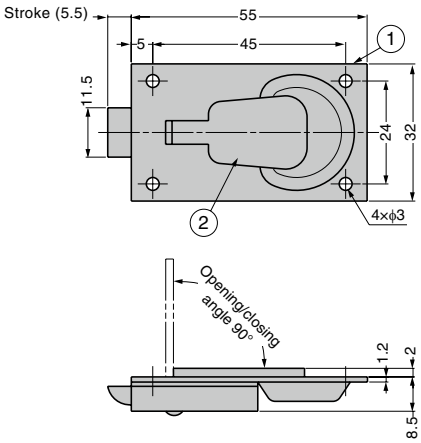
[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	PE	Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

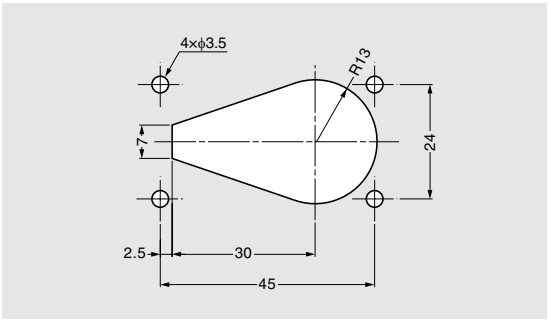
RoHS	CAD	Item Code	Item Name	d	Weight (g)	Pack (pcs)	Box (packs)	Carton (pcs)
G	3D	100-038-027	117-10327-P20	M8	15	20	5	–

FLUSH SLAM LATCH P10-55H

- Low profile allows for directly installing to panel surface.
- Pull lever to open.
- Lever can be held in the raised state.
- Latch bolt comes out when lever is pushed down.
- Lever snaps to the end when slightly pushed down.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Lever		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-049-306	P10-55H	40	500	–

FLUSH SLAM LATCH LJ-61

- Suitable for various door thicknesses.
- Can also be installed to a thin panel by changing the installation position of back plate.
- Recessed latch with little projection from door surface.
- Can be released from inside.

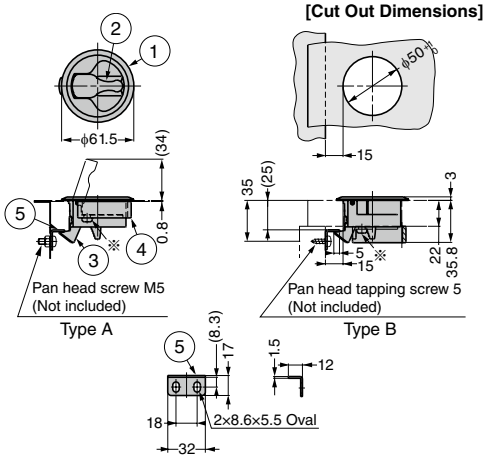
[Parts Included]
- Pan head screw M5×12 (SUS316)
- Pan head screw M5×18 (SUS316)

No.	Part Name	Material	Finish / Colour
①	Cup	PC	Black, White
②	Lever		
③	Latch	POM	
④	Back Plate	PC	
⑤	Counter Plate	Stainless Steel (SUS316)	Barrel Polished

[Screws] ※marked part on the drawings

Type	Door Thickness	Screw
Type A	0.8~7.5	Pan Head Tapping Screw M5×12
	8~12	Pan Head Tapping Screw M5×18
Type B	12.5~18.5	Pan Head Tapping Screw M5×12
	19~22	Pan Head Tapping Screw M5×18

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-031	LJ-61-BL	Black	147	15	60	10	120
G	3D	140-059-200	LJ-61-WT	White				10	120

FLUSH SLAM LATCH LC-65A

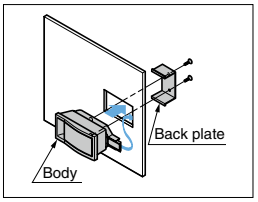
- Pull paddle handle to open.
- Door will be latched when closed.
- Mounting screws are invisible from door surface.
- Easy installation. Insert the latch body through cut out section and simply screw-on the back plate.
- Latching margin: 5mm (Small R is required at the corners on the frame side)

[Remarks]
- Please contact us when using other than the recommended door thickness.

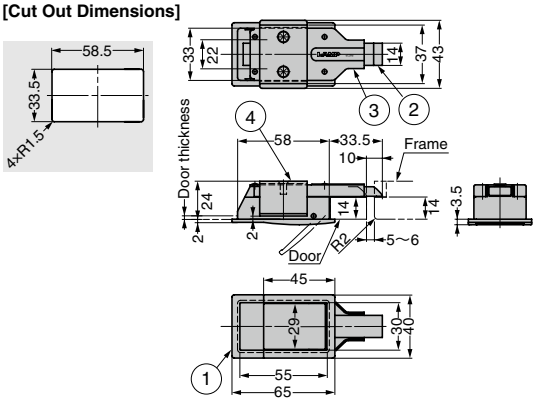
[Parts Included]
- Pan head screw M4×8 (SUS)

[Application Example]

[Installation]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Silver
②	Latch Bolt	POM	White
③	Cover	Stainless Steel (SUS304)	Barrel Polished
④	Back plate		

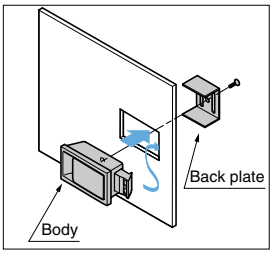
RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-206	LC-65A	2~3.2	108	10	100

FLUSH SLAM LATCH LC-48

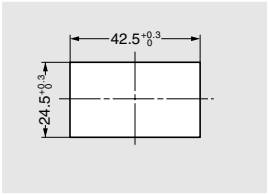
- Door will be latched when closed.
- Low profile eliminates worries about protruding to the inside of equipment.
- Mounting screws are invisible from door surface.
- Uses flame retardant plastic rated UL94V-0.
- Non-Handed. Can be installed on left or right side.
- Easy installation. Insert the latch body through cut out section and simply screw-on the back plate.

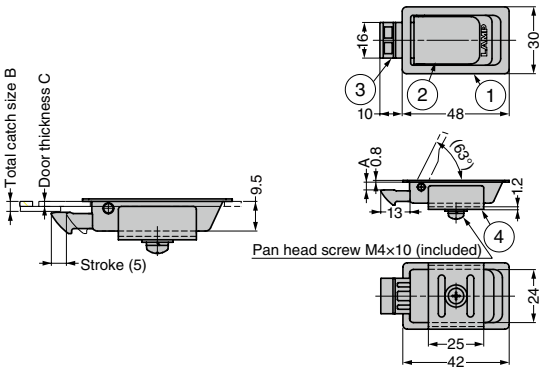
[Parts Included]
- Pan head screw M4×10 (SUS)

[Installation]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Handle		
③	Latch	PBT (Glass Reinforced)	White
④	Back Plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	A	Total Catch Size B	Door Thickness C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-199	LC-48-3	3.5	3.2	1~1.6	35	40	400
G	3D	140-021-200	LC-48-5	5.1	4.6	1~2.3		40	400

FLUSH SLAM LATCH LC-60

SUS

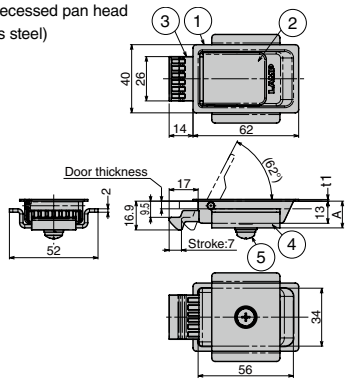
- Automatically locks doors when closed.
- Has a large finger pull for easy operation.
- The slim design does not take space inside the cabinet.
- Screws are hidden from outside.
- Uses flame retardant plastic rated UL94HB.

[Application]

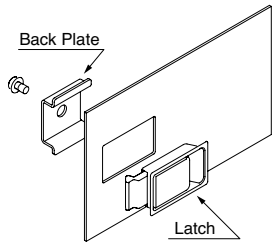
- Maintenance doors of control panels

[Parts Included]

- Spring washer / Cross-recessed pan head screw M6 x 12 (stainless steel)

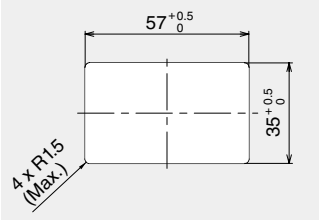


[Easy Installation]



Insert the latch through the cutout, and fix it with the back plate and screw.

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	A	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-048-546	LC-60-3	15.7~16.9	2~3.2	94	20	120
GT	3D	140-048-547	LC-60-5	15.7	4.5		20	120

No.	Part Name	Material	Finish
①	Case	Stainless Steel (SUS304)	Barrel Polished
②	Handle		
③	Latch Bolt	Polyamide (Glass reinforced)	Plain
④	Back Plate	Stainless Steel (SUS304)	
⑤	Cross-recessed pan head screw M6x12	Stainless Steel	

SNAP LOCK SX-48 Quick Installation & Temporary Holding

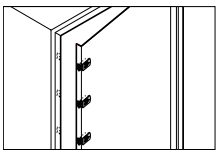
TEST METHOD 11

- Door or lid can be opened/closed with a single touch.
- Easy installation by one-touch.
- With temporary holding function.
  Even if multiple latches are installed, door can also be opened at once by keeping all of them temporarily held.
- Uses flame retardant material rated UL94.

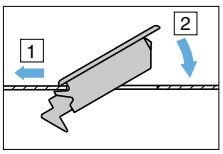
[Remarks]

- If the door may fall off like a ceiling door, please fix it separately with screws.

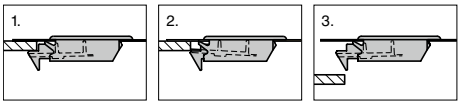
[Application Example]



[Installation]



[How to Operate]

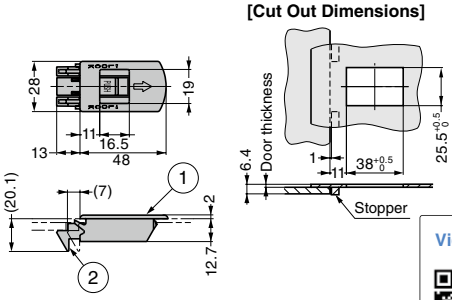


The door will be latched when closed.

To temporarily hold the door, slide the lever to the end.

The lever and latch return to their original positions when the door is opened.

[Cut Out Dimensions]



Video Link

No.	Part Name	Material
①	Body	PA (UL94V-2)
②	Latch	POM (UL94HB)
–	Spring	Stainless Steel (SUS304)

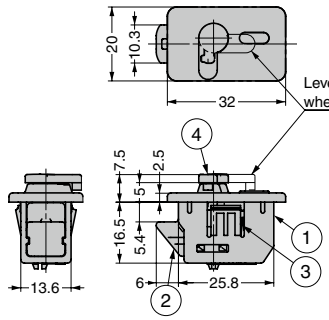
RoHS	CAD	Item Code	Item Name	Door thickness	Colour	Retaining Force N/pc	Retaining Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-050-037	SX-48	0.8~2.3	Black	49	5	11	40	400

PANEL LATCH LC-PK32, LC-PL32 Quick Installation

LC-PL32-L-GR
(sold separately)

LC-PK32-K
(sold separately)

- Two types of lock/unlock methods available: lever type and key type.
- Lever and key are compatible.
- Turning the lever or key 90˚ counterclockwise to unlock the latch.
- With temporary holding function that holds the latch in unlocked state. Even if multiple latches are installed, door can also be opened at once by keeping all of them temporarily held.
- Key type prevents the door from opening unexpectedly.
- Uses flame retardant material rated UL94V-0. Built-in spring is made of stainless steel (SUS304).

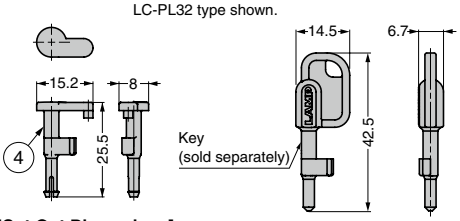


LC-PL32 type shown.

[Product Ordering]
- Lock/unlock with key: Order body (without lever) + key.
- Lock/unlock with lever: Order body (with lever).
- Change from key to lever: Order lever.

[Remarks]
- Do not use the lever or key as a knob. It may cause damage.
- Do not reuse the lever once removed from the body.

[Sold Separately]
- Lever (attached to LC-PL32)
- Key

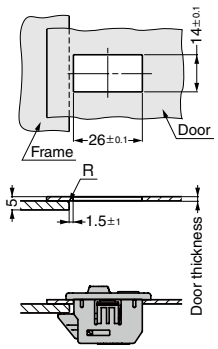


No.	Part Name	Material
①	Body	PP
②	Latch	PBT
③	Spring	Stainless Steel (SUS304)
④	Lever ※	PBT

※The lever attached to LC-PL32 is the same as the optional lever.

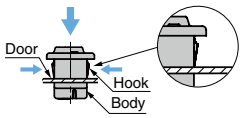
Video Link

[Cut Out Dimensions]

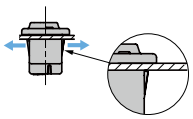


[Quick Installation]

1. When inserting the body in the mounting hole, the hook is stored inside the body.

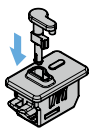


2. After installing, the hook returns to its original position.

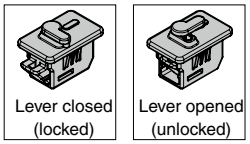


[How to Install the Lever]

1. Insert the lever straight.

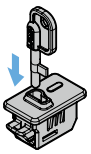


2. Until it snaps, check if the lever tip completely protrudes the body bottom.

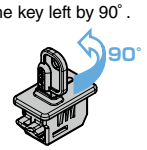


[How to Unlock with Key]

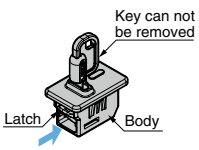
1. Insert the key.



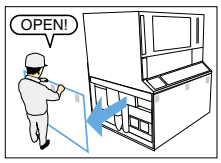
2 Turn the key left by 90˚.



3. The latch is stored in the body. At this moment, the latch will not return to its original position even if you release the key.



[Application Example]



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Door thickness	Description	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-694	LC-PK32-L-BL	Black	1.2, 1.5, 1.6	Without Lever	6	75	750
G	3D	140-020-695	LC-PK32-L-GR	Grey			6	75	750
G	3D	140-023-570	LC-PL32-BL	Black		With Lever	7	72	720
G	3D	140-023-569	LC-PL32-GR	Grey			7	72	720

[Lever] Sold Separately

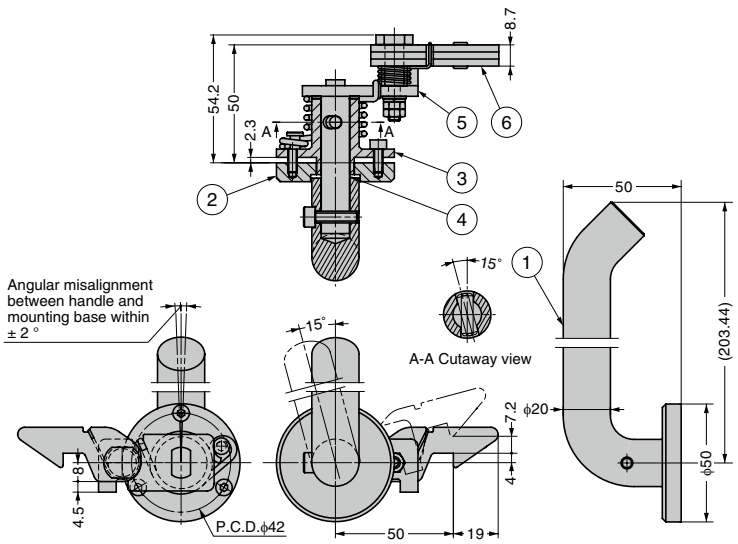
RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-023-568	LC-PL32-L-BL	Black	1	200	2000
G	3D	140-023-567	LC-PL32-L-GR	Grey	1	200	2000

[Key] Sold Separately

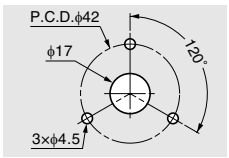
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-696	LC-PK32-K	Zinc Alloy (ZDC)	Nickel	7	200	2000

LATCH HANDLE LH-203

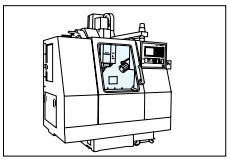
- Handle with latch.
- Suitable for sliding covers.



[Cut Out Dimensions]



[Application Example]



No.	Part Name	Material	Finish
①	Handle	Aluminium Alloy	Black Enamel Finish
②	Bracket	Brass	
③	Body	Steel (S45C)	Coloured Zinc Chromate
④	Shaft		
⑤	Plate A	Steel (SPHC)	
⑥	Plate B	Steel (SPCC)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-010-223	LH-203	500	2	24

Zwei L STAINLESS STEEL DOOR HANDLE ZL-1506 DIGEST

SUS316 TEMPERED GLASS

- Superior “Zwei L Finish” .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.
- Suitable for double-sided mount for glass/wooden/metal doors and single-sided mount for wooden/glass doors.

Video Link

LATCH HANDLE MDHL

SUS

- Latch handle for sliding doors of machine tools, etc.
- Latch is released when pulling the handle.
- Brackets and pipes can be combined freely.
- Two types of brackets available: In-line type and offset type.
- Pipes are made of stainless steel or carbon fibre reinforced plastic, either has 6 lengths available. By cutting the pipe, the total length can be changed freely.
- Carbon fibre reinforced plastic pipes are subject to UV-cut treatment to prevent discoloration.
  What is carbon fibre reinforced plastic?
  It is a light weight, high-strength materials also widely used for aircraft, etc., contributing to the weight reduction of structure. Also, the delicate mesh pattern brings a unique texture and high-quality feeling.
- Pipes may be sold separately.
- Linear rail for sliding doors with latch handles also available.
- Design door handle MDH 1 of the same appearance without latch also available.

[Remarks]

- Brackets and pipes have separate item numbers.
  Please order together by indicating each specification.
- Bracket is sold by piece.
- Hold the centre of handle for operation.
  Otherwise, the latch may not operate properly.

Video Link

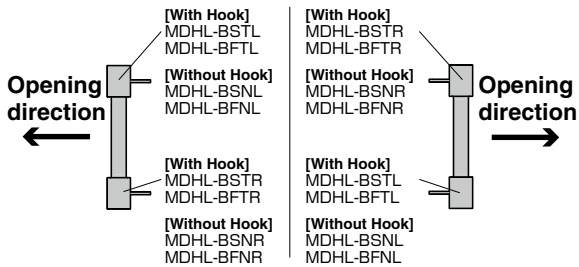
[Bracket]

MDHL-BSTL

MDHL-BFTL

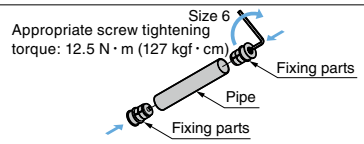
DESIGN DOOR HANDLE MDH 1

[Installation Direction of Bracket]



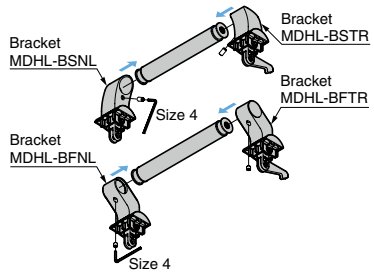
[How to Install]

1.



Insert the fixing parts (attached to the bracket) into both ends of the pipe until their flanges contact the pipe ends, and then tighten the screws with a hex key size 6 (not included).

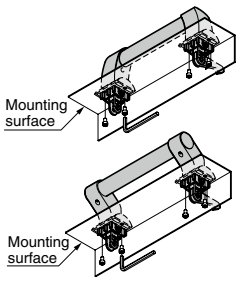
2.



Appropriate screw tightening torque: 12.5 N・m (127 kgf・cm)
※Please use screw adhesive.

Insert the brackets on both sides into the pipe, and tighten the set screws (attached to the bracket) with a hex key size 4 (not included).

3.

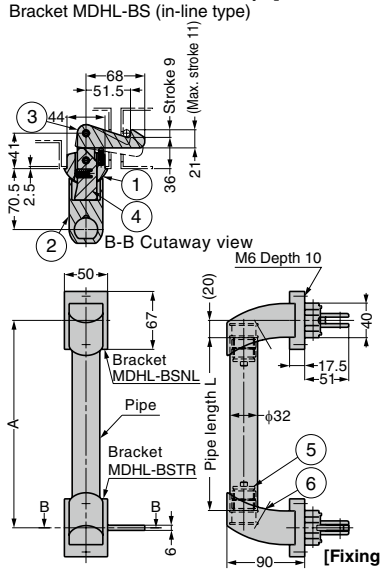


Fix on the mounting surface with M6 screws (not included).

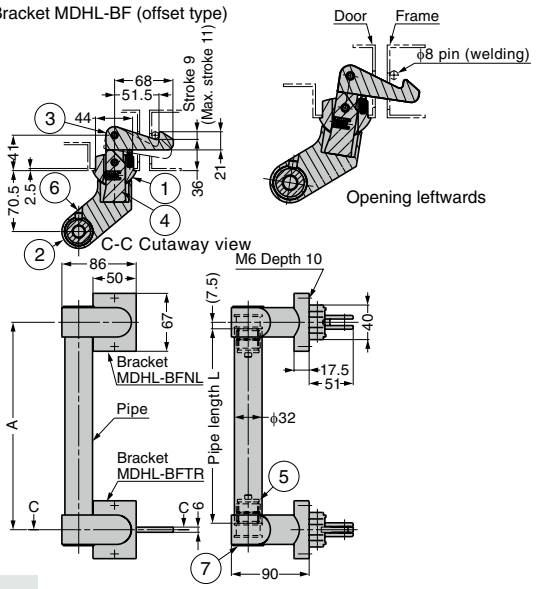
Refer to 1 : P.630

[Installation of Bracket and Pipe]

Bracket MDHL-BS (in-line type)



Bracket MDHL-BF (offset type)

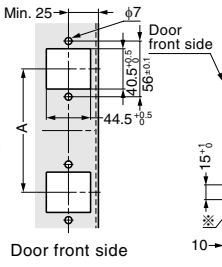


[Bracket]

No.	Part Name	Material	Finish / Colour
①	Base	Zinc Alloy (ZDC)	Matte Chrome
②	Arm		
③	Hook	Steel (SPHC)	
④	Rotating Parts	Zinc Alloy (ZDC)	
⑤	Fixing Parts		Plain
⑥	Hexagon Socket Set Screw M8×8	Stainless Steel	
⑦	Cap	POM	Black

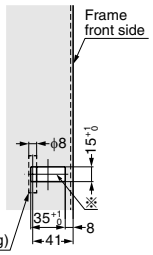
[Fixing Parts⑤]

[Cut Out Dimensions for Door]



Door front side

[Cut Out Dimensions for Frame]



In the above drawings, the upper parts are for MDHL-BSNL or MDHL-BFNL, and the lower parts are for MDHL-BSTR or MDHL-BFTR.

When processing ※ marked part, noted to align it with the centre of hook ③ of bracket.

[Bracket]

RoHS	CAD	Item Code	Item Name	Hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-025-544	MDHL-BSTL	w/	1004	1	1
G	3D	140-025-545	MDHL-BSNL	w/o	940	1	1
G	3D	140-025-546	MDHL-BSTR	w/	999	1	1
G	3D	140-025-547	MDHL-BSNR	w/o	935	1	1
G	3D	140-025-548	MDHL-BFTL	w/	1091	1	1
G	3D	140-025-549	MDHL-BFNL	w/o	1026	1	1
G	3D	140-025-550	MDHL-BFTR	w/	1095	1	1
G	3D	140-025-551	MDHL-BFNR	w/o	1028	1	1

[Pipe]

RoHS	CAD	Item Code	Item Name	Bracket	Material	Finish	Pipe Length L	Mounting Hole Pitch A	Pipe Thickness	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-025-552	MDHL-SPS240	MDHL-BS	Stainless Steel (SUS304)	Satin	200	240	2	490	50	285	1	10
G	3D	140-025-553	MDHL-SPS340				300	340				430	1	10
G	3D	140-025-554	MDHL-SPS440				400	440				566	1	10
G	3D	140-025-555	MDHL-SPS540				500	540				712	1	10
G	3D	140-025-556	MDHL-SPS640				600	640				845	1	10
G	3D	140-025-557	MDHL-SPS740				700	740				997	1	10
G	3D	140-025-558	※MDHL-SPC240		Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	200	240	2.5			–	25	–
G	3D	140-025-559	MDHL-SPC340				300	340				107	25	–
G	3D	140-025-560	MDHL-SPC440				400	440				142	25	–
G	3D	140-025-561	※MDHL-SPC540				500	540				–	25	–
G	3D	140-025-562	※MDHL-SPC640				600	640				–	13	–
G	3D	140-025-563	※MDHL-SPC740				700	740				–	13	–
G	3D	140-025-564	MDHL-FPS240	MDHL-BF	Stainless Steel (SUS304)	Satin	225	240	2			318	1	10
G	3D	140-025-565	MDHL-FPS340				325	340				465	1	10
G	3D	140-025-566	MDHL-FPS440				425	440				603	1	10
G	3D	140-025-567	MDHL-FPS540				525	540				749	1	10
G	3D	140-025-568	MDHL-FPS640				625	640				883	1	10
G	3D	140-025-569	MDHL-FPS740				725	740				1032	1	10
G	3D	140-025-570	※MDHL-FPC240		Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	225	240	2.5			–	25	–
G	3D	140-025-571	※MDHL-FPC340				325	340				–	25	–
G	3D	140-025-572	※MDHL-FPC440				425	440				–	25	–
G	3D	140-025-573	※MDHL-FPC540				525	540				–	25	–
G	3D	140-025-574	※MDHL-FPC640				625	640				–	13	–
G	3D	140-025-575	※MDHL-FPC740				725	740				–	13	–

※Made to order.

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

- Check new product information
- View product introduction video
- Browse digital web catalogue Refer to Back Cover
- Use product selection tool Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

HOOKS & BRACKETS

Hooks & brackets are a kind of hardware used for suspending or hanging objects.
Sugatsune has a long history of manufacturing hooks & brackets, setting industrial standards with basic design and highly-durable stainless steel material.
We offer a wide range of hooks & brackets, from large ones used for hanging thick cables and chains, to those suitable for various installation places.

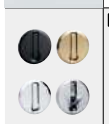
SUGATSUNE

June 2022

INDEX by Type

Recessed Hooks

●Hook automatically closes and retracts into body when not used.

Product Name	Material	Load Capacity
📖P.711 Resin Folding Hook NF-47D With Soft Closing Function	Polycarbonate (PC)	75 N (7.6 kgf)
📖P.709 Recessed Hook NF-45D	Aluminium Alloy (ADC)	93 N (9.5 kgf) (Tip) 500 N (51 kgf) (Base)
📖P.710 Recessed Hook NF-60	Aluminium Alloy (ADC)	196 N (20 kgf)
 📖P.712 Recessed Hook NF-R	Zinc Alloy (ZDC)	196 N (20 kgf)
📖P.713 Recessed Hook NF-K	Zinc Alloy (ZDC)	196 N (20 kgf)
📖P.709 Recessed Hook NF-60DF Soft Close/Surface Mount on Sheet Metal	Aluminium Alloy (ADC)	294 N (30 kgf)
📖P.710 Recessed Hook NF-60D With Soft Closing Mechanism	Aluminium Alloy (ADC)	294 N (30 kgf)
📖P.714 Bracket for Sheet Metal NF-45DB	Steel (SPCC)	Bracket for NF-45D
📖P.714 Bracket for Sheet Metal NF-50D	Steel (SPCC)	Bracket for NF-60D, NF-R52/77, NF-K52/77
📖P.714 Bracket for Sheet Metal NF-50	Steel (SPCC)	Bracket for NF-60, NF-R64, NF-K64
📖P.714 Bracket for Recessed Hook NF-47DB	Steel (SPCC)	Bracket for NF-47D

Latch Hooks

●Hook is spring loaded to retract, preventing hooked items from falling off.

Product Name	Material	Load Capacity
📖P.715 Counter Hook HK-CH35	Aluminium Alloy (ADC)	98 N (10 kgf)
📖P.719 Latch Hook WH	SUS	147 N (15 kgf)
📖P.717 Latch Hook EN-R80	SUS316	196 N (20 kgf)
📖P.717 Latch Hook EN-R80-K Suitable for Padlock	SUS316	196 N (20 kgf)
📖P.716 Latch Hook EN-K	SUS316	196 N (20 kgf) 588 N (60 kgf)
📖P.716 Latch Hook EN-E107	SUS316	392 N (40 kgf)
📖P.718 Large Latch Hook JN-T100 With Friction	SUS	392 N (40 kgf)
📖P.718 Latch Hook EN-R100F With Friction	SUS316	588 N (60 kgf)

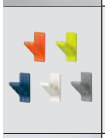
Swing Hooks

●Hooks are swivellable, and types that swinging is prevented by friction (resistance function) also available.

Product Name	Friction	Material	Load Capacity
P.725 Rotating Hook RF-50S	–	SUS	40 N (4 kgf)/hook
P.724 Swing Hook UC	–	SUS	55 N (5.6 kgf) 66 N (6.7 kgf)
P.721 Butterfly Hook TZ-360	–	SUS	60 N (6 kgf) ※ Flat Surface Mount
P.725 Rotating Swing Hook RF-U50	–	SUS	60 N (6 kgf)/hook
P.724 Rotating Swing Hook UJ	–	SUS	66 N (7 kgf) 87 N (9 kgf)
P.722 Stainless Steel Rotating Ball Hook (w/friction) TK-W-45F	○	SUS	80 N (8.2 kgf) ※ Load capacity values are for one side only.
P.721 Swing Hook TK, TKF	○	SUS	90 N (9 kgf) 118 N (12 kgf)
P.723 Butterfly Hook DZ-270	–	SUS	100 N (10 kgf) ※ Flat Surface Vertical Mount
P.720 Stainless Steel Friction Type Large Hook with Spherical Tip HK-TS	○	SUS	100 N (10.2 kgf) 260 N (26.5 kgf)
P.720 Stainless Steel Friction Type Large Hook with Spherical Tip HK-TT	○	SUS	100 N (10.2 kgf) 260 N (26.5 kgf) ※ Load capacity values are for one side only.
P.723 Swing Hook RF-D35	–	SUS	104 N (10.6 kgf) ※ Ceiling Mount
P.719 Swing Hook (w/friction) JF-T	○	SUS	170 N (17 kgf) 392 N (40 kgf)

Product Name	Friction	Material	Load Capacity
P.724 Swing Hook XL-JSF40TT High Load Capacity	–	SUS	490 N (50 kgf)
P.725 Heavy Duty Folding Pad Eye EY-R	○	SUS 316	4900 N (500 kgf) 7840 N (800 kgf) 11760 N (1200 kgf)

Small Hooks

Product Name	Material	Load Capacity
P.738 Magnetic Hook MJ-30	Aluminium Alloy ABS	9.8 N (1 kgf)
 P.736 Magnetic Hook (Mini Nordic Rubber Series) PXB-GN05M-101	Zinc Alloy (ZDC) Silicone Rubber	40 N (4.1 kgf) ※ Screw mount
P.728 Hanger Bracket CK	SUS	14.7 N (1.5 kgf)
P.738 Magnetic Hook MJ-45	ABS	19.6 N (2 kgf)
P.736 Hook (Mini Nordic Rubber Series) PXB-GN05-101	Zinc Alloy (ZDC) Silicone Rubber	10 N (1.1 kgf)
P.728 Double Hook RI-074	SUS	50 N (5 kgf)
P.727 Hook 2H	SUS	60 N (6 kgf) 98 N (10 kgf)
P.737 Plastic Hook HK-CM40	Polyamide(PA)	78 N (8 kgf)
P.735 Hook (Mini Nordic Rubber Series) PXB-GN05-111	Stainless Steel Silicon Rubber	80 N (8.1 kgf)

Small Hooks

Product Name	Material	Load Capacity
P.726 Hook DS-H	SUS	98 N (10 kgf)
P.730 Hook HK-FH	Zinc Alloy (ZDC)	98 N (10 kgf) 147 N (15 kgf)
P.727 Hook HJU	SUS	98 N (10 kgf)
P.733 Hook FC	SUS	98 N (10 kgf) 117.6 N (12 kgf) 222 N (23 kgf) 294 N (30 kgf)
P.731 Stainless Steel Hook JF2B-40M	SUS	100 N (10.2 kgf)
P.734 Stainless Steel Hook DFHK-SQ30	SUS	100 N (10.2 kgf)
P.735 Double Hook (Rubber Ranger Series) PXB-GR05-211	Stainless Steel Silicon Rubber	100 N (10.2 kgf)
P.735 Hook (Rubber Ranger Series) PXB-GR05-111	Stainless Steel Silicon Rubber	100 N (10.2 kgf)
P.737 Rubber Hook Twin Type PXB-GR05-212	Stainless Steel Silicon Rubber	100 N (10.2 kgf) ※The load capacity is intended for each arm.
P.728 Double Hook RB-102	SUS	130 N (13 kgf)
P.727 Hook HJ	SUS	140 N (14 kgf)
P.726 Hook XL-HJT	SUS	150 N (15 kgf) 200 N (20 kgf)

Product Name	Material	Load Capacity
P.726 Hook HJT	SUS	150 N (15 kgf) 200 N (20 kgf)
P.731 Stainless Steel Hook HK-LB	SUS316	150 N (15.3 kgf)
P.732 Stainless Steel Hook HK-DF-G	SUS	150 N (15.2 kgf)
P.732 Stainless Steel Hook HK-DF	SUS	150 N (15.2 kgf)
P.739 Hook 4HJU-40M	SUS	150 N (15.3 kgf)
P.729 Hook TA3	SUS	180 N (18 kgf)
P.730 Hook HK-RH	SUS	196 N (20 kgf) 245 N (25 kgf)
P.726 Hook EU	SUS316	196 N (20 kgf) 294 N (30 kgf)
P.730 Hook EW	SUS	200 N (20 kgf)
P.739 Hook 5HJU-60M	SUS	200 N (20.4 kgf)
P.729 Hook EP	SUS	240 N (24 kgf)
P.729 Hook EL	SUS	240 N (24 kgf)

Small Hooks

Product Name	Material	Load Capacity
P.734 Stainless Steel Hook DFHK-RWS60	SUS	250 N (25.5 kgf)
P.734 Stainless Steel Hook DFHK-RWD60	SUS	250 N (25.5 kgf) ※ Load capacity is the total for two hooks.
P.734 Stainless Steel Top Mount Hook DFHK-RWT60	SUS	250 N (25.5 kgf) ※ Flat Horizontal Mounting
P.729 Hook KB-H	SUS	280 N (29 kgf) 340 N (35 kgf)
P.733 Hook KB-F-70	SUS	–
P.733 Hook KB-F-75	SUS	–

Large Hooks

Product Name	Material	Load Capacity
P.742 Large Utility Hook JF45M, JF70M, JF110M	SUS	98 N (10 kgf) 150 N (15 kgf)
P.744 Large Utility Hook JFT180M, JFT260M For Ceiling Mount	SUS	98 N (10 kgf) 147 N (15 kgf)
P.745 Large Utility Hook JF1B	SUS	100 N (10.2 kgf)
P.745 Large Utility Hook JF2B-55M	SUS	100 N (10.2 kgf)
P.741 Large Utility Hook XL-CUJ	SUS	138 N (14 kgf) 200 N (20 kgf)

Product Name	Material	Load Capacity
P.741 Large Utility Hook XL-CUF	SUS	147 N (15 kgf) 314 N (32 kgf)
P.746 Stainless Steel Big Hook DFHK-BJ	SUS	150 N (15.3 kgf) 200 N (20.4 kgf)
P.746 Stainless Steel Big Hook DFHK-BJL Long Type	SUS	150 N (15.3 kgf) 200 N (20.4 kgf)
P.742 Large Utility Hook JF50M, JF80M, JF120M	SUS	150 N (15 kgf) 196 N (20 kgf) 216 N (22 kgf)
P.738 Large Utility Hook 4H	SUS	170 N (17 kgf) 260 N (27 kgf) 290 N (30 kgf)
P.743 Large Aluminium Hook HK-AJ100	Aluminium	200 N (20.4 kgf)
P.740 Large Utility Hook 5H	SUS	330 N (34 kgf) 350 N (36 kgf) 370 N (38 kgf)
P.740 Large Utility Hook XL-SF	SUS	360 N (39 kgf)
P.744 Large Utility Hook XL-SB Large Hat Hook	SUS	380 N (39 kgf) ※ Bottom Hook
P.743 Giant Aluminium Hook HK-AJ180	Aluminium Alloy	1000 N (102 kgf)

Angle Brackets, Brackets

P.748~

Angle Brackets, Brackets

Angle Bracket SV

Angle Bracket XL-SA01

Folding Bracket BOS

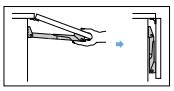
Bracket BT, BTK

Angle Bracket SSA

Product Name	Support Part Depth (mm) ~100 ~200 ~300 ~400 ~500	Material	Load Capacity N/pc	Load Capacity kgf/pc	Page
Angle Bracket SSA	25mm	SUS	1470N	150kgf	P.760
Angle Bracket SU	30~60mm	SUS	39~59N	4~6kgf	P.760
Angle Bracket SV	40~80mm	SUS	78.4~137.2N	8~14kgf	P.758
Angle Bracket SU-B	50~80mm	SUS	98~235N	10~24kgf	P.759
Angle Bracket SU-A	70~180mm	SUS	88~235N	9~24kgf	P.759
Angle Bracket XL-SA01	120~240mm	SUS	118~226N	12~23kgf	P.758
Folding Bracket BOS	181~240mm	SUS	325~392N	33~40kgf	P.756
Folding Bracket EB-DA Built-in Damper	305.5mm	SUS	495N	50kgf	P.751
Folding Bracket EB-F Multi Angle Locking	305.5mm	SUS	495N	50kgf	P.752
Bracket BTK-UB	199~318mm	Steel	117.6~245N	12~25kgf	P.749
Folding Bracket EB	199.5~317mm	SUS	1471~1961N	150~200kgf	P.750
Folding Bracket BTO	241~320mm	Steel, SUS	200N	20.4kgf	P.756
Bracket BT, BTK	69~400mm	Steel, SUS	147~808.5N	15~82.5kgf	P.748

Spring Loaded Folding Brackets, Folding Brackets

Product Name	Material	Load Capacity N/pc	Load Capacity kgf/pc	Page
Spring Loaded Folding Bracket GTS-300	SUS	58.8N /2pcs	6kgf /2pcs	P.757
Folding Bracket 388	Aluminium Alloy	250~360N	25~36kgf	P.754
Folding Bracket 388-D	Aluminium Alloy	309~360N	31~36kgf	P.755



Shelf Standards & Shelf Supports

P.762~

●Sugatsune's shelf standards and shelf supports with the widest range of types in Japan. ※ Please select from the product list of P.762 and P.763 according to the load capacity. ※ According to our investigation.

SPHL Shelf Standard Series For Heavy Duty

Heavy duty shelf standard with 1.2 mm thickness.

SUS P.764

SPE Shelf Standard Series

Thin shelf standard of 3 mm thickness.

SUS P.766

SPN Shelf Standard Series

Only 8 mm width with large load capacity.

SUS P.767

SPW Shelf Standard Series

Mounting holes for shelf support invisible from the front.

SUS P.768

SPH Shelf Standard Series

Not apt to deform due to load.

SUS P.769~

SP, SPS Shelf Standard Series

Standard type with rich varieties.

SUS P.771~

SM Shelf Standard Series With Blind

With blind to cover mounting hole for shelf support.

SUS P.774

AP Aluminium Shelf Support Series

Easy to cut to desired length.

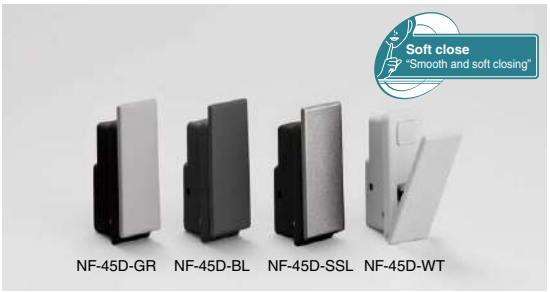
P.775~

Plenty of optional parts also available.

Angle Adjustable Shelf

Support Bracket for Shelf Standard

RECESSED FOLDING HOOK NF-45D soft-close type



- Self-retracting hook with soft-close mechanism.
- The hook tip is designed for easy opening.
- Becomes flat when retracted.
- The edges are gently rounded for safe use.

Video Link

[Applications]
- Cabinet, trains

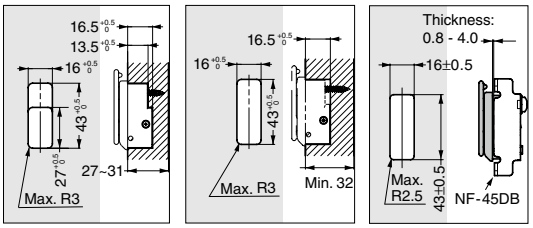
[Sold Separately]
- Hook bracket for sheet metal NF-45DB

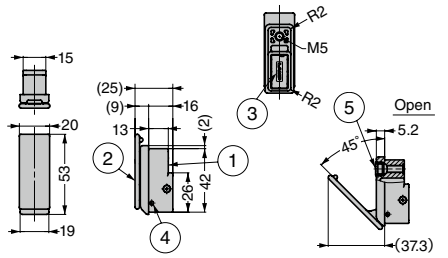
[Recommended Screw]
- 27 - 31 mm thick wood: cross-recessed countersunk tapping screw 4 × 25
- 32 mm or thicker wood: cross-recessed countersunk tapping screw 4 × 30

[Retractable]

[Cut Out Dimensions]

- Wood (27 - 31 mm thick)
- Wood (31 mm or thicker)
- Sheet metal





RoHS	CAD	Item Code	Item Name	Colour	Load Capacity of the Tip		Load Capacity of the Base		Weight (g)	Box (pcs)	Carton (pcs)
					N	kgf	N	kgf			
G	3D	110-044-460	NF-45D-GR	Grey	93	9.5	500	51	32	10	200
G	3D	110-044-461	NF-45D-BL	Black						10	200
G	3D	110-044-462	NF-45D-SSL	Silver						10	200
G	3D	110-046-695	NF-45D-WT	White						10	200

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Black /White
②	Arm		Gray / Black / Silver / White
③			
④	Cover	POM	Black
⑤	Knurling Pin	Stainless Steel (SUS304)	Plain
⑥	Spring		
⑦	Cushion Rubber	Chloroprene Rubber (CR)	Black /White

RECESSED FOLDING HOOK NF-60DF soft-close type / Surface Mount on Sheet Metal

TEST METHOD 18

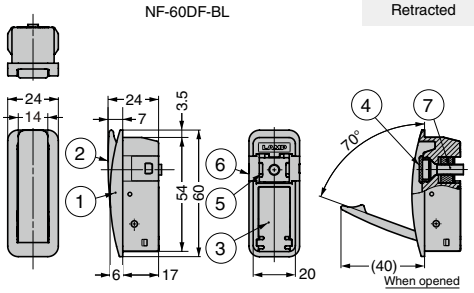
NF-60DF-BL

Retracted

- Easy installation and removal. Surface mount type on sheet metal.
- Arm automatically and slowly closes when hooked items are removed.
- Handhold at hook tip allows for easy opening.
- Little projection when hook is retracted.

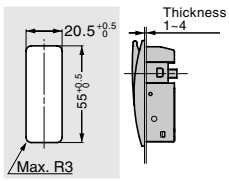
[Applications]
- Cabinet, vehicle, etc.

[Remarks]
- Please take off the cushion rubber when tighten the screw and put it on again when finished.
- Please do not tighten the screw too much (recommended fastening torque: 3N·m).

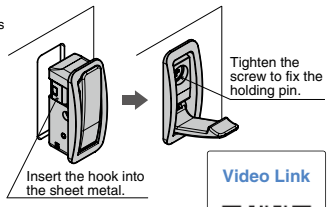


[Cut Out Dimensions]

Sheet Metal



[Installation]



Video Link

No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Black, Metallic Silver
②	Arm		
③	Cover	POM	Dark Grey
④	Cushion Rubber	CR	Black, Metallic Silver
⑤	Nut	ZDC	Chromate
⑥	Holding Pin		
⑦	Screw	Stainless Steel (SUS304)	Plain

[Body]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-037-738	NF-60DF-BL	Black	294	30	54	10	200
–	3D	110-037-740	NF-60DF-MSL	Metallic Silver				10	200

RECESSED FOLDING HOOK NF-60D soft-close type

TEST METHOD 18

NF-60D-BL

NF-60D-GR

NF-60D-SL

NF-60D-MSL

Soft close
"Smooth and soft closing"

When installed

- Arm automatically and slowly closes when hooked items removed.
- Handhold at hook tip allows for easy opening.
- Little projection when hook retracted.
- Possible to install to sheet metal by using bracket NF-50D 1.
- Special colours can be made to order. For further details, please contact local representatives.

[Applications]
- Cabinet, vehicle, etc.

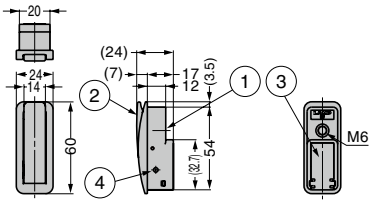
[Remarks]
- Please take off the cushion rubber when installing on a wooden panel.

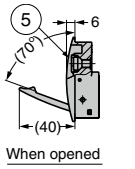
[Sold Separately]
- Bracket NF-50D 1

[Recommended Screws]
For wooden board
- Thickness 25~29mm : Countersunk head tapping screw 5×20
- Thickness min 30mm : Countersunk head tapping screw 5×25

Video Link

Video Link





When opened

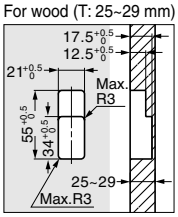
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Black, Dark Grey, Silver, Metallic Silver Enamel Finish
②	Arm		
③	Cover	POM	Dark Grey
④	Knurled Pin	Stainless Steel (SUS304)	Plain
–	Spring		
⑤	Cushion Rubber	CR	Black

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-044-237	NF-60D-BL	Black	294	30	49	10	200
G	3D	110-022-191	NF-60D-GR	Dark Grey				10	200
G	3D	110-024-598	NF-60D-SL	Silver				10	200
G	3D	110-027-560	NF-60D-MSL	Metallic Silver				10	200

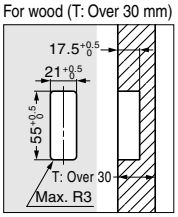
Refer to 1 : P.714

[Cut Out Dimensions]

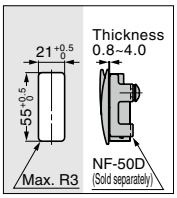
For wood (T: 25~29 mm)



For wood (T: Over 30 mm)



For sheet metal



RECESSED FOLDING HOOK NF-60

TEST METHOD 18

When closed

When opened

- Hook automatically closes and retracts into body when hooked items removed.
- Handhold at hook tip allows for easy opening.
- Little projection when hook retracted.
- Possible to install to sheet metal by using bracket NF-50 1.
- Special colours can be made to order. For further details, please contact local representatives.

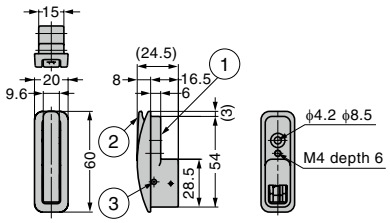
[Applications]
- Cabinet, vehicle, etc.

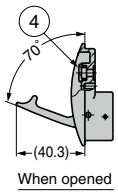
[Remarks]
- Please take off the cushion rubber when installing on a wooden panel.

[Sold Separately]
- Bracket NF-50 1

[Recommended Screws]
- Pan head tapping screw 4

Video Link



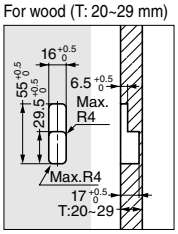


When opened

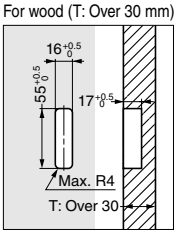
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Dark Grey
②	Arm		Enamel Finish
③	Knurled Pin	Stainless Steel (SUS304)	Plain
–	Spring		
④	Cushion Rubber	CR	Black

[Cut Out Dimensions]

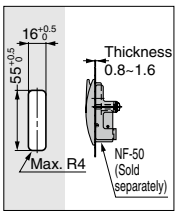
For wood (T: 20~29 mm)



For wood (T: Over 30 mm)



For sheet metal



[Body]

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-067	NF-60	196	20	31	10	200

Refer to 1 : P.714

RECESSED FOLDING HOOK NF-47D soft-close type

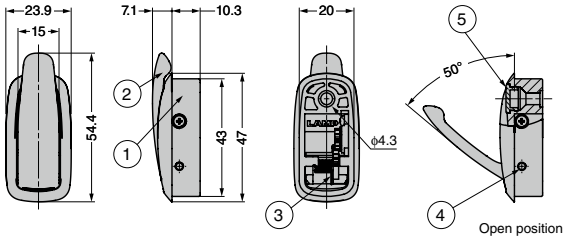
TEST METHOD 18

- Soft closing function automatically closes the hook gradually after items on hook are removed.
- The tip of the hook has a grip for easy opening.
- Streamlined design with minimum protrusion when the hook is closed.
- Uses flame retardant material rated UL94HB.
- Also available in special colours. Contact us for details.

[Application]
- Cabinets, train cars, etc.

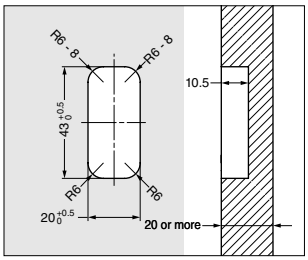
[Remarks]
- Attach the cushioning rubber after installation.

[Recommended Screw]
- M4 cross-recessed screw or size 4 countersunk head tapping screw



[Cut Out Dimensions]

Wood Mounting (20 mm or thicker)



Video Link

No.	Part Name	Material	Finish
①	Main Body	Polycarbonate (PC)	Partial Blast Finish
②	Arm		
③	Spring	Stainless Steel (SUS304)	Plain
④	Shaft		
⑤	Cushioning Rubber	Chloroprene Rubber (CR)	–

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-041-087	NF-47D-GR	Grey	75	7.6	11	40	360
G	3D	110-041-088	NF-47D-DGR	Dark Grey				40	360
G	3D	110-041-089	NF-47D-WT	White				40	360

RECESSED HOOK NF-R

TEST METHOD 18

Matte Black　Gold　Chrome　Pearl Chrome

- The arm section is spring powered and automatically folds back in when no force is exerted on it.
- The product does not protrude when the arm is folded in, creating a neat design and ensuring safety.
- Can also be mounted to sheet metal using the NF-50D or NF-50 bracket (sold separately).
- A square type is also available.

[Remarks]

- Remove the cushioning rubber before mounting to a wooden surface.

[Sold Separately]

- NF-50D bracket, NF-50 bracket (P.129)

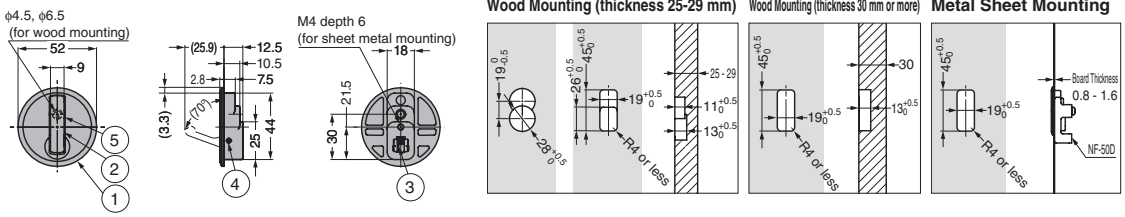
[Recommended Screw]

- Wood mounting (thickness 25-29 mm): Size 4 x 15 cross-recessed pan head tapping screws
- Wood mounting (thickness 30 mm or more): Size 4 x 20 cross-recessed pan head tapping screws

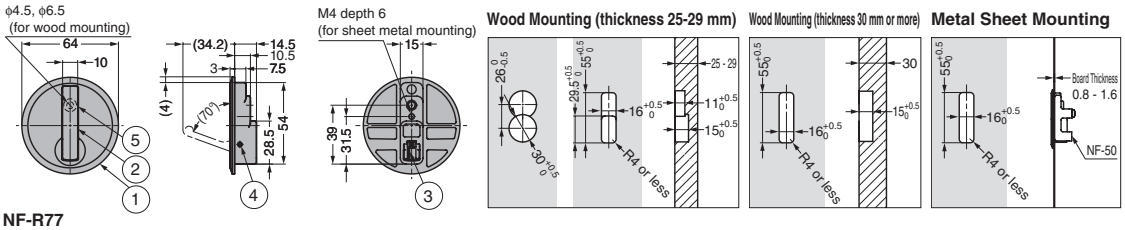
[Application Example]

No.	Part Name	Material
①	Main Body	Zinc Alloy (ZDC)
②	Arm	
③	Spring	Stainless Steel (SUS304)
④	Knurled Pin	Stainless Steel (SUS303)
⑤	Cushioning Rubber	Chloroprene Rubber (CR)

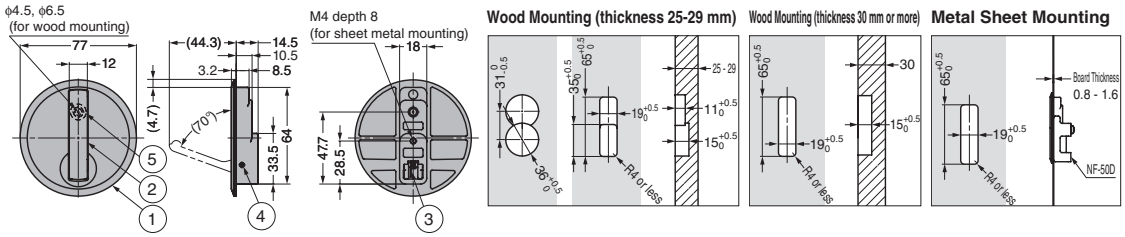
NF-R52



NF-R64



NF-R77



RoHS	CAD	Item Code	Item Name	Finish/Colour	Load Capacity N	Load Capacity kgf	Bracket for Sheet Metal	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-041-175	NF-R52-SCR	Pearl Chrome Plating	196	20	NF-50D	70	10	120
G	3D	110-041-176	NF-R52-CR	Chrome Plating					10	120
G	3D	110-041-177	NF-R52-BL	Baked Enamel Finish/Matte Black					10	120
G	3D	110-020-068	NF-R64-SCR	Pearl Chrome Plating			NF-50	90	10	120
G	3D	110-041-178	NF-R64-CR	Chrome Plating					10	120
G	3D	110-041-179	NF-R64-BL	Baked Enamel Finish/Matte Black					10	120
G	3D	110-034-954	NF-R64-GP	24K Gold Plating, Clear Coating					8	96
G	3D	110-041-180	NF-R77-SCR	Pearl Chrome Plating			NF-50D	130	10	80
G	3D	110-041-181	NF-R77-CR	Chrome Plating					10	80
G	3D	110-041-182	NF-R77-BL	Baked Enamel Finish/Matte Black					10	80

RECESSED HOOK NF-K

TEST METHOD 18

- The arm section is spring powered and automatically folds back in when no force is exerted on it.
- The product does not protrude when the arm is folded in, creating a neat design and ensuring safety.
- Can also be mounted to sheet metal using the NF-50D or NF-50 bracket (sold separately).
- A round type is also available.

[Remarks]

- Remove the cushioning rubber before mounting to a wooden surface.

[Sold Separately]

- NF-50D bracket, NF-50 bracket (P.129)

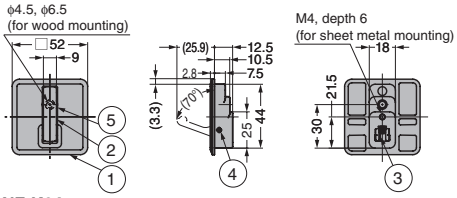
[Recommended Screw]

- Wood mounting (thickness 25-29 mm): Size 4 x 15 cross-recessed pan head tapping screws
- Wood mounting (thickness 30 mm or more): Size 4 x 20 cross-recessed pan head tapping screws

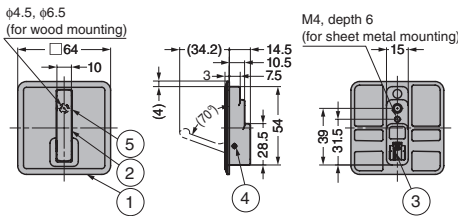
[Application Example]

No.	Part Name	Material
①	Main Body	Zinc Alloy (ZDC)
②	Arm	
③	Spring	Stainless Steel (SUS304)
④	Knurled Pin	Stainless Steel (SUS303)
⑤	Cushioning Rubber	Chloroprene Rubber (CR)

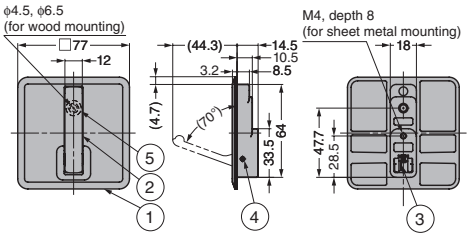
NF-K52



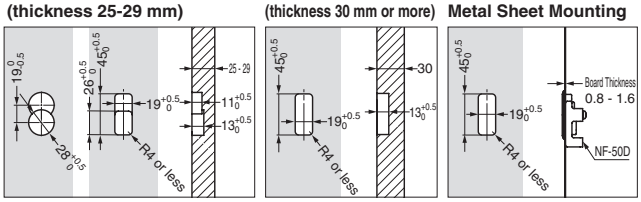
NF-K64



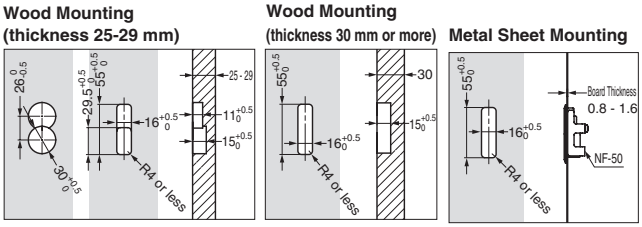
NF-K77



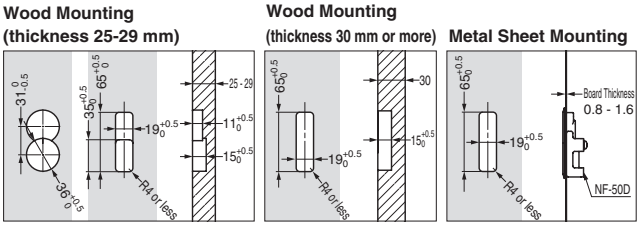
Wood Mounting (thickness 25-29 mm) / **Wood Mounting (thickness 30 mm or more)** / **Metal Sheet Mounting**



Wood Mounting (thickness 25-29 mm) / **Wood Mounting (thickness 30 mm or more)** / **Metal Sheet Mounting**

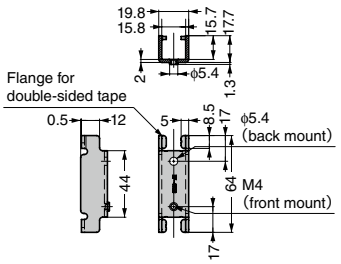


Wood Mounting (thickness 25-29 mm) / **Wood Mounting (thickness 30 mm or more)** / **Metal Sheet Mounting**



RoHS	CAD	Item Code	Item Name	Finish/Colour	Load Capacity N	Load Capacity kgf	Bracket for Sheet Metal	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-041-183	NF-K52-SCR	Pearl Chrome Plating	196	20	NF-50D	77	10	120
G	3D	110-041-184	NF-K52-CR	Chrome Plating					10	120
G	3D	110-041-185	NF-K52-BL	Baked Enamel Finish/Matte Black					10	120
G	3D	110-041-186	NF-K64-SCR	Pearl Chrome Plating			NF-50	95	10	120
G	3D	110-041-187	NF-K64-CR	Chrome Plating					10	120
G	3D	110-041-188	NF-K64-BL	Baked Enamel Finish/Matte Black					10	120
G	3D	110-041-189	NF-K77-SCR	Pearl Chrome Plating			NF-50D	145	10	80
G	3D	110-041-190	NF-K77-CR	Chrome Plating					10	80
G	3D	110-041-191	NF-K77-BL	Baked Enamel Finish/Matte Black					10	80

BRACKET FOR SHEET METAL NF-45DB

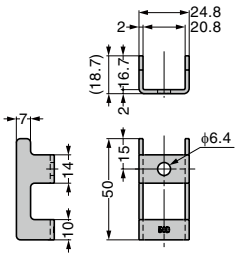


- Allows for mount on metal sheet of the NF-45D hook.
- Can be mounted from both front and back sides of sheet metal.
- Has flanges for double-sided tapes. This allows for temporary fixing before screwing. (Recommended thickness of tape: 0.8 - 1.0 mm)

[Parts Included]
- For front mount: cross-recessed countersunk screw M4 × 25
- For back mount: cross-recessed pan head screw (washer assembled)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	110-044-075	NF-45DB	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	40	40

BRACKET FOR SHEET METAL NF-50D



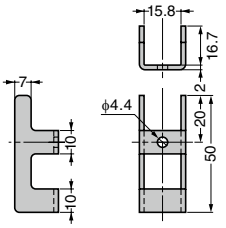
- Bracket for sheet metal applications of NF-60D 1 and NF-R52/77 2 and NF-K52/77 3.

[Parts Included]
- Pan head screw M6×20 (SUS) for NF-60.
- Pan head screw M4×13 (SUS) for NF-R52/NF-K52.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-024-599	NF-50D	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	25	30	360

Refer to 1 : P.710, 2 : P.712, 3 : P.713

BRACKET FOR SHEET METAL NF-50



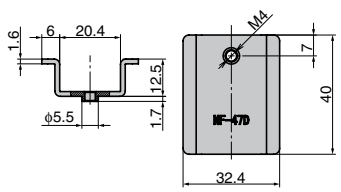
- Bracket for sheet metal applications of NF-60 1 and NF-R64 2 and NF-K64 3.

[Parts Included]
- Pan head screw M4×20 (SUS) for NF-60
- Pan head screw M4×14 (SUS) for NF-R64/NF-K64.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-021	NF-50	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	22	20	400

Refer to 1 : P.710, 2 : P.712, 3 : P.713

BRACKET FOR RECESSED FOLDING HOOK NF-47DB



- A bracket for attaching the NF-47D recessed hook to a metal sheet.

[Parts Included]
- Size M4 x 16 cross-recessed flat head screws

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)
G	3D	110-042-079	NF-47DB	Steel (SPCC)	Coloured Chromate Finish (Trivalent)	25

COUNTER HOOK HK-CH35

TEST METHOD 1 TEST METHOD 4

Colour shown on the picture might differ slightly from the actual products.

- Recessed mount on the back of top board provides clean appearance.
- Hook can be seen at the edge when unused.
- Hook will not protrude top board when used.
- Hook closes and retracts into body when hooked items removed.
- Hook slowly closes thank to damper mechanism.
- Applicable board thickness: Min.26mm.For board thickness below 26mm, please use optional spacer and adjust the hook installation position.

[Applications]
- Shop, facility, housing, etc.

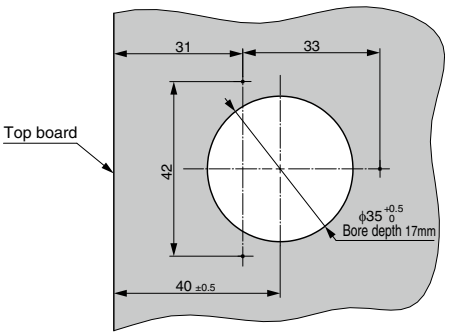
[Remarks]
- Install to top board with adequate strength.

[Parts Included]
- Countersunk head tapping screw 4×20

[Sold Separately]
- Spacer

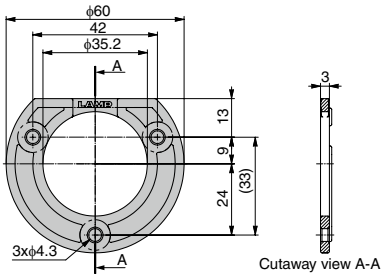
Video Link

[Cut Out Dimensions]

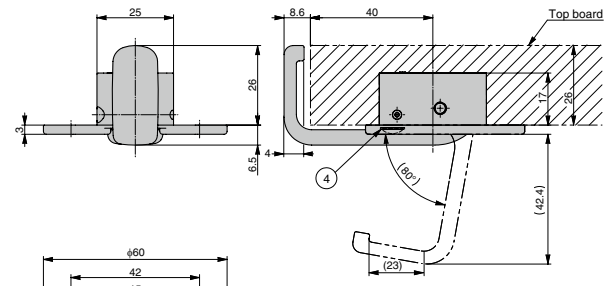


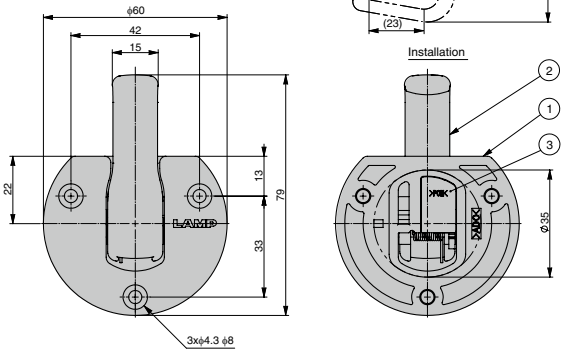
Board Thickness	Qty of Spacers	Bore Depth
Min. 26mm	None	17mm
23~26mm	1 pcs	14mm
20~23mm	2 pcs	11mm
17~20mm	3 pcs	8mm

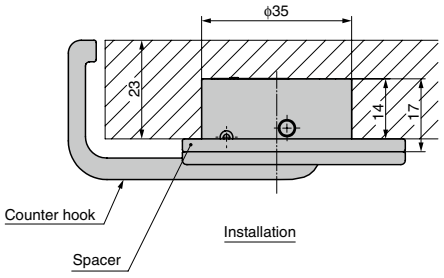
[Spacer]



[Hook]







No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Enamel Finish/Black, Silver, Brown
②	Arm	Aluminium Alloy (ADC)	Enamel Finish/Black, Silver, Brown
③	Cover	POM	–
④	Bumper	PUR	Clear
⑤	Spacer	PA	Black

[Hook]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-828	HK-CH35-BL	Black	98	10	47.1	10	200
G	3D	110-037-829	HK-CH35-BR	Brown				10	200
G	3D	110-037-830	HK-CH35-SL	Silver				10	200

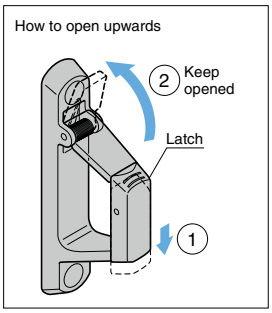
[Spacer]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-831	HK-CH35-DP3	5.1	100	1000

LATCH HOOK EN-E107

TEST METHOD 4 SUS316

When opened upwards

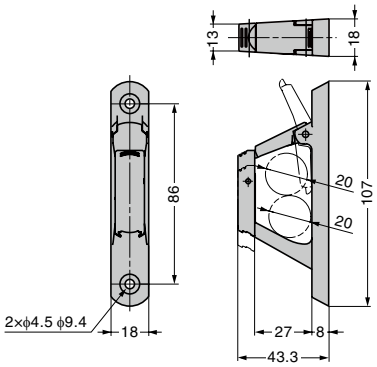


When closed

When opened downwards

- One push release for wide opening.
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Up to two chains or ropes (up to ϕ20 in diameter) can be hung.
- Suitable for exterior use. (e.g. marine, housing, shops and leashes for pets).
- Slim design allows installing to door or window frame.

[Parts Included]
- Countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-028-722	EN-E107	Stainless Steel (SCS14)	Polished	ϕ20×2	392	40	131	10	60

※SCS14 is equivalent to SUS316.

LATCH HOOK EN-K

NSF TEST METHOD 4 SUS316

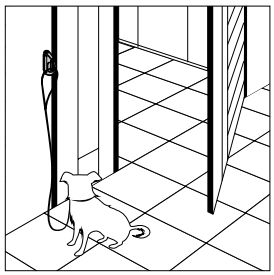
When closed

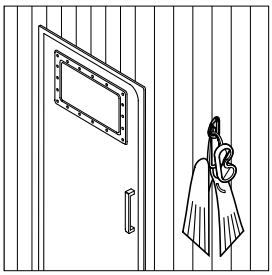
When opened

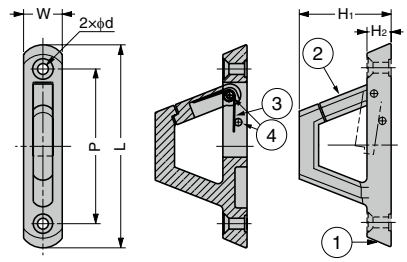
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Chain or rope up to ϕ10 (for EN-K84) or ϕ20 (for EN-K120) can be hung.
- Suitable for exterior use. (e.g. marine, housing, shops and leashes for pets)
- Slim design allows installing to door or window frame.

[Parts Included]
- EN-K84: Countersunk head tapping screw 4×25
- EN-K120: Countersunk head tapping screw 5×30

[Application Example]







No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Spring	Stainless Steel (SUS316)	Plain
④	Shaft		

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	L	P	H_1	H_2	W	d	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-026	EN-K84	84	64	38	10	16	ϕ4.5 ϕ8.5	Max. ϕ10	196	20	92	10	120
G	3D	110-010-109	EN-K120	120	96	54	12	22	ϕ5.4 ϕ10.5	Max. ϕ20	588	60	280	10	60

LATCH HOOK EN-R80

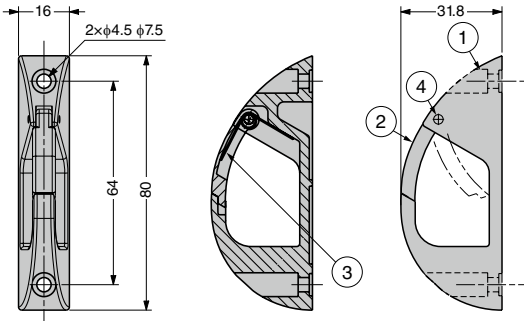
NSF TEST METHOD 4 SUS316

When closed

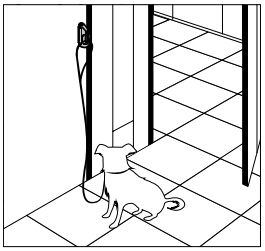
When opened

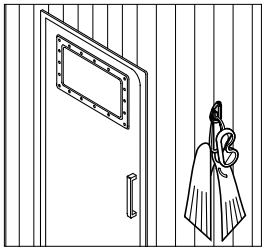
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Suitable for exterior use. (e.g. marine and leashes for pets).
- Slim design allows installing to door or window frame.
- Chain or rope up to ϕ10 in diameter can be hung.

[Parts Included]
- Pan head tapping screw 4×25



[Application Example]





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Spring	Stainless Steel (SUS316)	Plain
④	Shaft		

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-025	EN-R80	Max. ϕ10	196	20	85	10	120

LATCH HOOK EN-R80-K Suitable for Padlock

TEST METHOD 4 SUS316

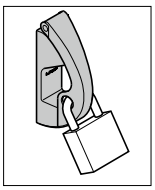
When closed

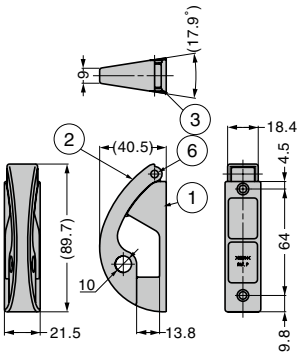
When opened

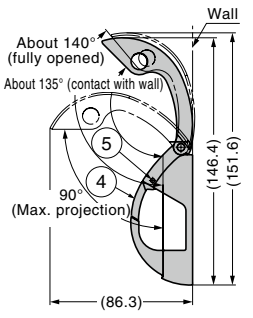
- Latch type tip prevents hooked items from falling off.
- With a hole for optional padlock 1.
- Chain or rope up to ϕ12 in diameter can be hung.
- Slim design allows installing to door or window frame.

[Others]
- Recommended padlock PWL-30, PWL-30L 1

[Parts Included]
- Pan head tapping screw 4×25 (SUS)







No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Cover	Stainless Steel (SUS316)	
③	O-Ring	Ethylene Propylene Rubber (EPDM)	Black
④	Lever	Stainless Steel (SCS14)	Polished
⑤	Shaft	Stainless Steel (SUS316)	Plain
⑥	Cover Shaft		

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Padlock Hole Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-022-201	EN-R80-K	Max. ϕ12	10	196	20	180	10	60

Refer to 1 : P.873

LATCH HOOK EN-R100F With Friction

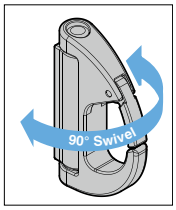
SUS316

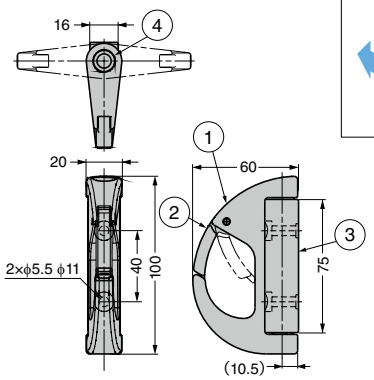
When closed

When opened

- Hook is spring loaded to retract, preventing hooked items from falling off.
- Swivels 90°. Can be folded when not in use.
- Friction function prevents swinging around.
- Suitable for exterior use. (e.g. marine).
- Chain or rope up to ϕ16 in diameter can be hung.

[Parts Included]
- Binding head tapping screw 5×30 (SUS)





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Base		
④	Shaft	Stainless Steel (SUS316)	Plain

※SCS14 is equivalent to SUS316.

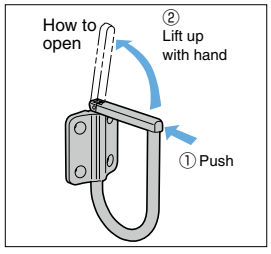
RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-018-675	EN-R100F	Max. ϕ16	588	60	350	10	50

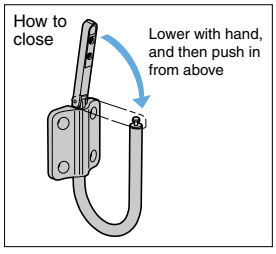
LARGE LATCH HOOK JN-T100 With Friction

SUS

When closed

When opened

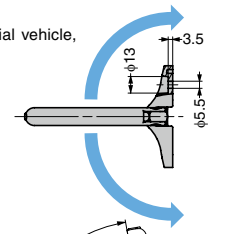


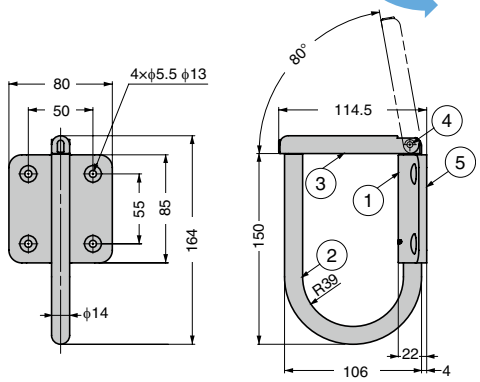


- Swivels 180° and prevents unexpected swinging by friction.
- Closed arm prevents hooked items from falling off.
- Suitable for hanging cables, ropes and pipes, etc.

[Applications]
- Medical equipment, medical stand, special vehicle, garage, ship, etc.

[Parts Included]
- Binding head tapping screw 5×30 (SUS)





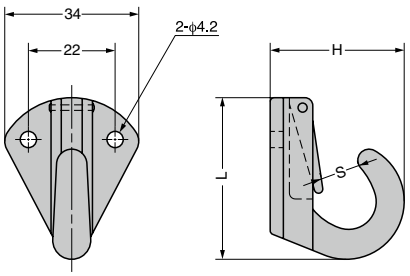
No.	Part Name	Material	Finish
①	Strike	Stainless Steel (SCS13)	Polished
②	Hook	Stainless Steel (SUS303)	
③	Arm	Stainless Steel (SCS13)	
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Back Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-022-111	JN-T100	392	40	772	5	20

LATCH HOOK WH

NSF SUS

●Keep items hooked, ideal for vibration or shock applications.

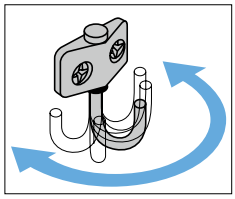


RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	S	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	–	110-029-158	WH-1	Stainless Steel	Polished	38	25	7	147	15	40	20	200
G	–	110-029-122	WH-2			41	34	10			55	20	200

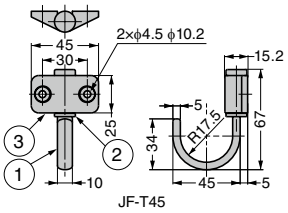
SWING HOOK JF-T With Friction

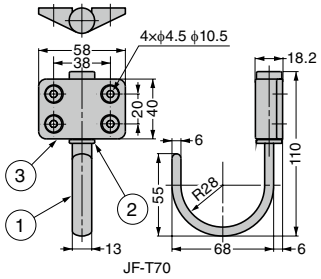
NSF TEST METHOD 4 SUS

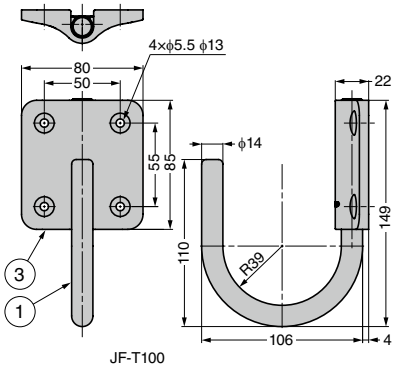
●Large type JF-T100 with load capacity of 392N (40kgf) is newly launched.
●Swivels 180 ° and prevents swinging by friction.



[Parts Included]
●JF-T45, JF-T70: Truss head tapping screw 4×20 (SUS)
●JF-T100: Binding Head Tapping Screw 5×30 (SUS)







RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-083	JF-T45	170	17	90	10	120
G	3D	110-020-084	JF-T70			225	10	60
G	3D	110-032-414	JF-T100	392	40	638	5	20

No.	Part Name	Material	Finish / Colour
①	Hook	Stainless Steel (SUS304), Stainless Steel (SUS303): JF-T100 Only	Polished
②	Bracket	POM	Black
③	Strike	Stainless Steel (SCS13)	Polished

※SCS13 is equivalent to SUS304.

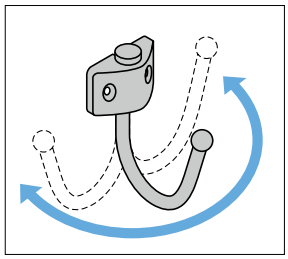
STAINLESS STEEL FRICTION TYPE LARGE HOOK WITH SPHERICAL TIP HK-TS

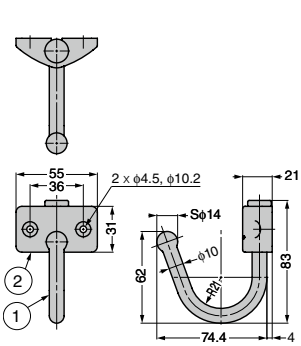
TEST METHOD 19 SUS

- Hook swivels 180° .
- Friction prevents unintended swivelling caused by vibrations.
- Ball end prevents injury.
- Double-hook type (HK-TT) is also available.

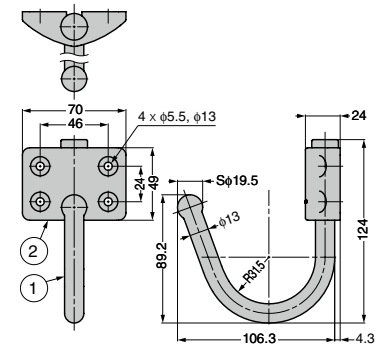
[Parts Included]

- HK-TS70: Size 4 x 25 cross-recessed truss head tapping screws (stainless steel)
- HK-TS100: Size 5 x 35 cross-recessed truss head tapping screws (stainless steel)





HK-TS70



HK-TS100

No.	Part Name	Material	Finish
①	Hook	Stainless Steel (SUS304)	Polished
②	Strike	Stainless Steel (SCS13)	

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-041-226	HK-TS70	100	10.2	230
G	3D	110-041-227	HK-TS100	260	26.5	550

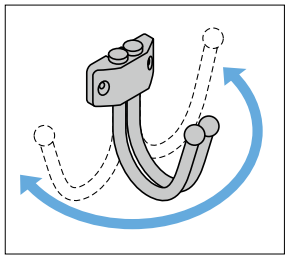
STAINLESS STEEL FRICTION TYPE LARGE HOOK WITH SPHERICAL TIP HK-TT

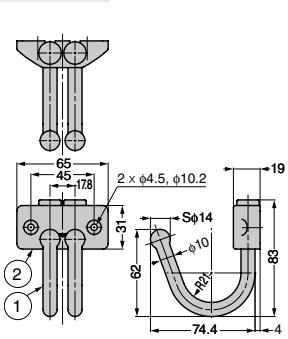
TEST METHOD 19 SUS

- Hook swivels 180° .
- Friction prevents unintended swivelling caused by vibrations.
- Ball end prevents injury.
- Single-hook type (HK-TS) is also available.

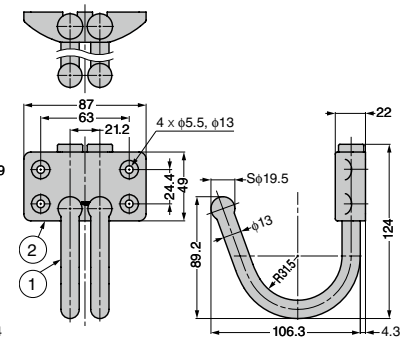
[Parts Included]

- HK-TT70: Size 4 x 25 cross-recessed truss head tapping screws (stainless steel)
- HK-TT100: Size 5 x 35 cross-recessed truss head tapping screws (stainless steel)





HK-TT70



HK-TT100

No.	Part Name	Material	Finish
①	Hook	Stainless Steel (SUS304)	Polished
②	Strike	Stainless Steel (SCS13)	

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-041-228	HK-TT70	100	10.2	260
G	3D	110-041-229	HK-TT100	260	26.5	600

* Load capacity values are for one side only.

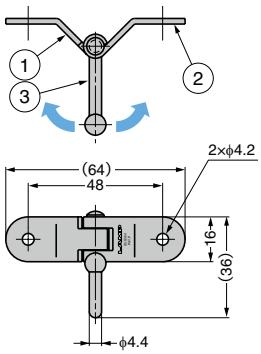
BUTTERFLY HOOK TZ-360

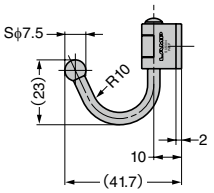
TEST METHOD 4 SUS

- Can be installed on flat surface, corner and edge, etc.
- Can be used in various applications.
- The rounded tip provides safety.

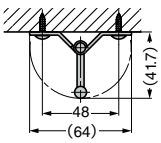
[Parts Included]

- Truss head tapping screw 4×12 (SUS)

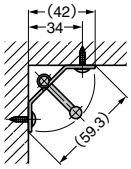




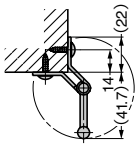
[Installation]



Flat surface mount (180˚)



Corner mount (270˚)



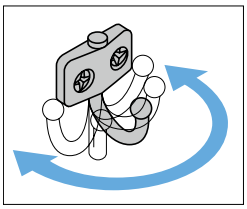
Edge mount (90˚)

No.	Part Name	Material	Finish
①	Leaf (L)	Stainless Steel (SUS304)	Barrel Polished
②	Leaf (R)		
③	Hook		Polished

RoHS	CAD	Item Code	Item Name	Load Capacity						Weight (g)	Box (pcs)	Carton (pcs)
				Flat Surface Mount N	Flat Surface Mount kgf	Corner Mount N	Corner Mount kgf	Edge Mount N	Edge Mount kgf			
G	3D	110-020-009	TZ-360	59	6	55	5.6	29	3	27	50	500

SWING HOOK TK, TKF

TEST METHOD 4 SUS

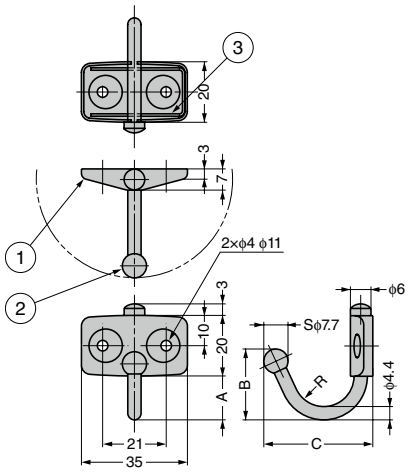


KIDS DESIGN AWARD 2024

- Swivels 180˚ and prevents unexpected swinging by friction.
- The rounded tip provides safety.

[Parts Included]

- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Mounting Plate	Stainless Steel (SUS304)	Polished
②	Hook		
③	Spring		Plain

RoHS	CAD	Item Code	Item Name	Type	A	B	C	R	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-250	TK-30	Without Friction	14.5	23.4	36	10	118	12	17	100	1000
G	3D	110-020-254	TK-45		19.4	28.4	44.3	15	90	9	20	100	1000
G	3D	110-020-018	TK-30F	With Friction	14.5	23.4	36	10	118	12	17	100	1000
G	3D	110-020-019	TK-45F		19.5	28.4	44.3	15	90	9	20	100	1000

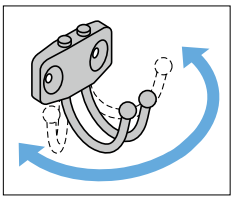
STAINLESS STEEL ROTATING BALL HOOK (W/FRICTION) TK-W-45F

TEST METHOD 4 SUS

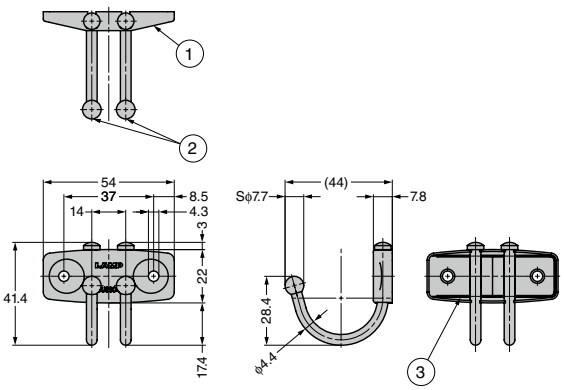
- Friction prevents unintended swivelling caused by vibrations.
- Ball end prevents injury.

[Parts Included]

- Size 4 x 20 cross-recessed round flat head tapping screws (stainless steel)



KIDS DESIGN AWARD 2024



No.	Part Name	Material	Finish
①	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
②	Hook Arm		
③	Wire Spring		Plain

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-040-999	TK-W-45F	Stainless Steel (SUS304)	Barrel Polished	80	8.2	34	50	300

* Load capacity values are for one side only.

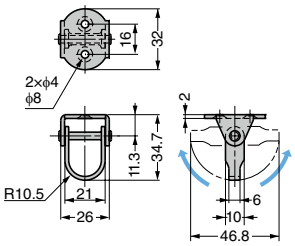
SWING HOOK RF-D35

SUS

- Can be installed on ceiling and wall.

[Parts Included]

- Raised countersunk head wood screw 3.5×16



[Ceiling mount]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity				Weight (g)	Box (pcs)	Carton (pcs)
						Flat Surface Horizontal Mount N	Flat Surface Horizontal Mount kgf	Ceiling Mount N	Ceiling Mount kgf			
G	3D	110-020-249	RF-D35	Stainless Steel (SUS304)	Barrel Polished/Satin	52	5.3	104	10.6	27	50	400

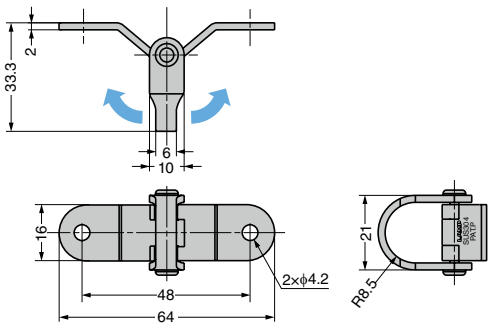
BUTTERFLY HOOK DZ-270

SUS

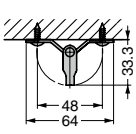
- Can be installed on flat surface, corner and edge.
- Both vertical and horizontal use possible.

[Parts Included]

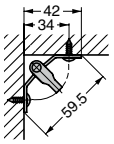
- Truss head tapping screw 4×12



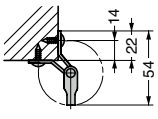
[Installation]



Flat surface mount (180˚)



Corner mount (270˚)



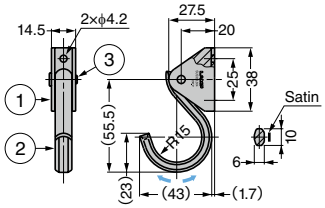
Edge mount (90˚)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity										Weight (g)	Box (pcs)	Carton (pcs)
						Flat Surface Horizontal Mount		Flat Surface Vertical Mount		Edge Horizontal Mount		Edge Vertical Mount		Corner Horizontal Mount		Corner Vertical Mount				
						N	kgf	N	kgf	N	kgf	N	kgf	N	kgf	N	kgf			
G	3D	110-020-248	DZ-270	Stainless Steel (SUS304)	Polished	59	6	100	10	29	3	78	8	55	5.6	59	6	29	50	500

SWING HOOK XL-JSF40TT High Load Capacity

TEST METHOD 4 SUS

Ceiling mount



- High load capacity up to 490N (50kgf).
- Swings forward and backward.Possible to install in various places like ceiling and wall.
- Finish: Combination of polished and satin.

[Parts Included]

- Binding head tapping screw 4×20 (SUS)

No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished
②	Hook	Stainless Steel (SUS303)	Polished/Satin
③	Shaft	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-011	XL-JSF40TT	490	50	70	20	120

SWING HOOK UC

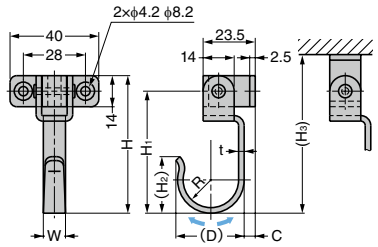
TEST METHOD 4 SUS

Ceiling mount

- Swings forward and backward. Possible to install in various places like ceiling and wall.

[Parts Included]

- Raised countersunk head tapping screw 4×16 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	W	D	H	H1	H2	H3	C	R	t	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-003	UC-048	Stainless Steel (SUS304)	Polished	9	24.9	55	48	21.4	64.5	6.5	10	2	55	5.6	37	40	400
G	3D	110-020-002	UC-055			10	30.8	62	55	25.5	71.5	5	12.5	2.5	66	6.7	45	25	250

ROTATING SWING HOOK UJ

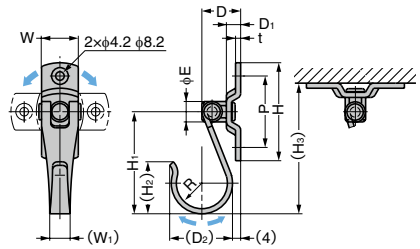
NSF TEST METHOD 4 SUS

Ceiling mount

- Rotates 360˚ and swings 180˚.
- Possible to install in various places like ceiling and wall.

[Parts Included]

- Raised countersunk head tapping screw 4×16 (SUS)



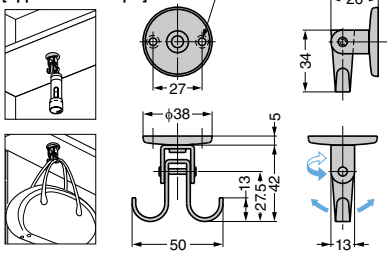
RoHS	CAD	Item Code	Item Name	Material	Finish	W	W1	D	D1	D2	H	H1	H2	H3	P	E	R	t	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-001	UJ-040	Stainless Steel (SUS304)	Polished	16	9	16.5	5.5	24.9	42	40	21.4	52.5	30	9	10	2	66	7	27	50	500
G	3D	110-020-000	UJ-050			18	10	19	7	30.8	48	50	25.5	64	35	10	12.5	2.5	87	9	45	30	300

ROTATING SWING HOOK RF-U50

TEST METHOD 4 SUS

Ceiling mount

[Application Example]



- Rotates 360˚ and swings 180˚.
- Possible to install in various places like ceiling and wall.

[Parts Included]

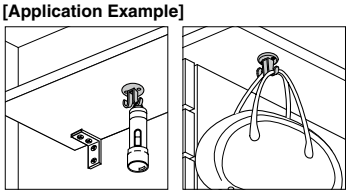
- Raised countersunk head tapping screw 3×25 (SUS)

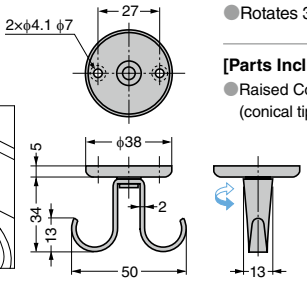
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/hook	Load Capacity kgf/hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-007	RF-U50	Stainless Steel (SUS304)	Satin	60	6	40	25	250

ROTATING HOOK RF-50S

TEST METHOD 4 SUS

[Application Example]





- Rotates 360˚.

[Parts Included]

- Raised Countersunk head tapping screw (conical tip) 3×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/hook	Load Capacity kgf/hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-082	RF-50S	Stainless Steel (SUS304)	Satin	40	4	33	25	500

HEAVY DUTY FOLDING PAD EYE EY-R

TEST METHOD 2 SUS316

- Arm can be folded for safety.
- Friction function prevents the arm from sounding caused by vibration.
- Arm is made of special stainless steel with high strength. (Corrosion resistance is equivalent to SUS 304)
- Buffering effect of body protects the mounting surface from scratches.

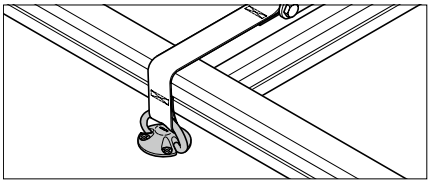
[Applications]

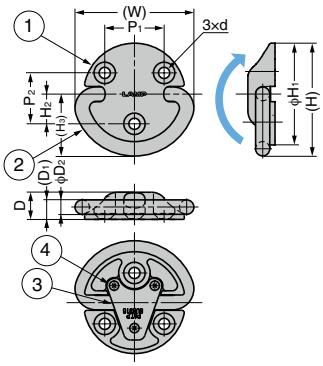
- Marine furniture or offshore facilities, etc.

[Parts Included]

- EY-R50: Hexagon socket countersunk head screw M5×16 (SUS)
- EY-R60: Hexagon socket countersunk head screw M6×16 (SUS)
- EY-R80: Hexagon socket countersunk head screw M8×16 (SUS)

[Application Example]





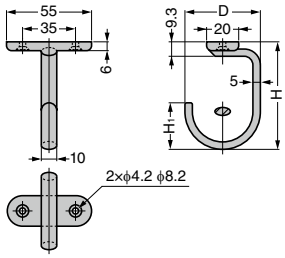
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Barrel
②	Arm	Stainless Steel	Polished
③	Back Plate	Stainless Steel (SUS304-CSP)	Plain
④	Pan Head Tapping Screw M3×5	Stainless Steel (SUS316)	–

※SCS14 is equivalent to SUS316.

RoHS	CAD	Item Code	Item Name	W	H	H_1	H_2	H_3	D	D_1	D_2	P_1	P_2	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-012-542	EY-R50	61.4	56.5	48	13	32.5	14.5	10.5	7.9	28	24	ϕ5.5ϕ10.4	4900	500	116	10	120
G	3D	110-012-543	EY-R60	75.5	69.5	60	17.5	39.5	16	11.5	8.9	35	30	ϕ6.6ϕ12.6	7840	800	202	10	60
G	3D	110-012-544	EY-R80	101.3	92.5	80	23	52.5	19	14	11.4	45	40	ϕ9ϕ17.3	11760	1200	431	5	30

HOOK DS-H

TEST METHOD 4 SUS



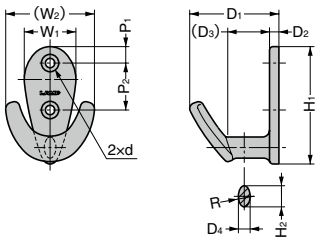
- Can be installed on ceilings.

[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-205	DS-H-50	Stainless Steel (SUS303)	Polished	50	70	30	98	10	88	5	50
G	3D	110-020-206	DS-H-60			60	100	40			105	5	50

HOOK EU

NSF TEST METHOD 19 SUS316



- Can hang 3 items at same time.
- Two-tip shape provides stable hanging.

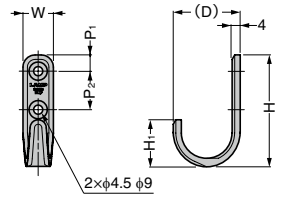
[Parts Included]
- EU50: Raised countersunk head wood screw 3.5×20 (SUS) (2 pcs)
- EU72: Raised countersunk head wood screw 4.1×20 (SUS) (2 pcs)

RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	W1	W2	D1	D2	D3	D4	P1	P2	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-270	EU-50	Stainless Steel (SCS14)	Polished	50	9	22	38	38	4	17.8	5	7	20	ϕ4 ϕ7.4	196	20	42	20	120
G	3D	110-020-271	EU-72			72	14	32	56	52	6	23	8	10	34	ϕ4.6 ϕ8.6	294	30	118	10	60

※SCS14 is equivalent to SUS316.

HOOK XL-HJT

TEST METHOD 4 SUS



- Chamfered HJT 1.

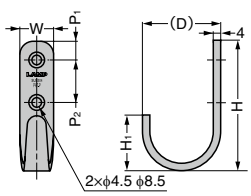
[Parts Included]
- Raised countersunk head wood screw 4.1×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	H	H1	P1	P2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-935	XL-HJT55M	Stainless Steel (SUS304)	Polished	33	15.5	55	23	8	19	200	20	34	30	300
G	3D	110-020-936	XL-HJT55TT		Polished and Satin Combination										30	300
G	3D	110-020-937	XL-HJT70M		Polished	43	18.5	70	30	10	23	150	15	53	20	200
G	3D	110-020-938	XL-HJT70TT		Polished and Satin Combination										20	200

Refer to 1 : P.726

HOOK HJT

NSF TEST METHOD 4 SUS



- Black colour (matte) is newly launched.
- Pressing type of EL 1. (Plate thickness 4mm)

[Remarks]
- Noted that scratch is conspicuous on black surface.

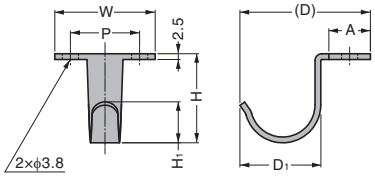
[Parts Included]
- Raised countersunk head wood screw 4.1×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	D	W	H	H1	P1	P2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-028	HJT-55S	Stainless Steel (SUS304)	Satin	33	15	55	23	8	19	200	20	34	30	300
G	3D	110-028-966	HJT-55SBL		Paint/Black										30	300
G	3D	110-020-027	HJT-70S		Satin	43	18	70	30	10	23	150	15	53	20	200
G	3D	110-028-967	HJT-70SBL		Paint/Black										20	200

Refer to 1 : P.729

HOOK HJU

SUS



- Wide Hook allows for easy hanging.
- Can be installed from above or below.

[Parts Included]
- Truss head tapping screw 3.5×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	W	P	H	H1	A	D	D1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-017-524	HJU-30S	Stainless Steel (SUS304)	Satin	32.5	20	25	13	13	41.8	25.5	98	10	15	30	600
G	3D	110-017-525	HJU-50S			43	30	38	18	18	59	37.5			30	40	800

HOOK HJ

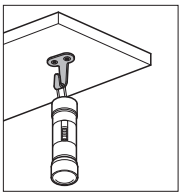
NSF TEST METHOD 4 SUS

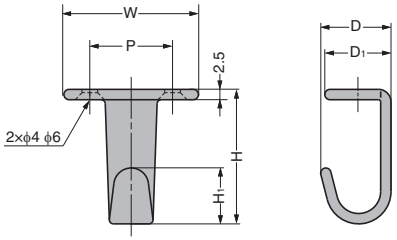
- Black colour (matte) is newly launched.

[Remarks]
- Noted that scratch is conspicuous on black surface.

[Parts Included]
- HJ-20S: Raised countersunk head wood head screw 3.1×16 (SUS)
- HJ-30S, HJ50S: Raised countersunk head wood head screw 3.5×16 (SUS)

[Application Example]

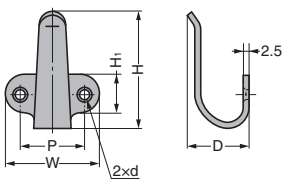




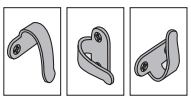
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	W	P	H	H1	D	D1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-029	HJ-20S	Stainless Steel (SUS304)	Satin	28	18	27	11	17	13	140	14	11	120	1200
G	3D	110-028-963	HJ-20SBL		Paint/Black										60	600
G	3D	110-020-078	HJ-30S		Satin	32.5	20	33	13.5		16			15	30	600
G	3D	110-028-964	HJ-30SBL		Paint/Black										30	360
G	3D	110-020-079	HJ-50S		Satin	43	30	47	19.6	22	21			30	40	800
G	3D	110-028-965	HJ-50SBL		Paint/Black										40	400

HOOK 2H

NSF TEST METHOD 4 SUS



[Application Example]

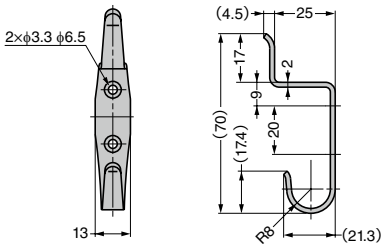


[Parts Included]
- 2H-20S: Raised countersunk head wood head screw 3.1×16 (SUS)
- 2H-30S, SH-40S, 2H50S: Raised countersunk head wood head screw 3.5 ×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	W	P	H	H1	D	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-010-142	2H-20S	Stainless Steel (SUS304)	Satin	28	18	30	10	18	ϕ4ϕ6.2	98	10	13	120	1200
G	3D	110-010-143	2H-30S			32.5	20	39	13					18	100	1000
G	3D	110-010-144	2H-40S			35	21.5	44	16	23	ϕ4ϕ7	60	6	23	80	800
G	3D	110-010-145	2H-50S			43	30	56	18	26				34	50	500

DOUBLE HOOK RI-074

TEST METHOD 4 SUS



- Unique two-in-one hook.

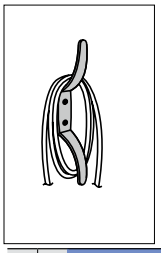
[Parts Included]
- Raised countersunk head tapping screw 3×16 (SUS)

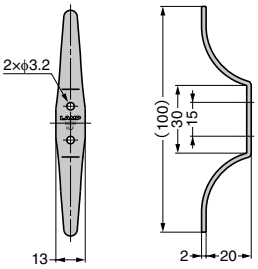
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N		Load Capacity kgf		Weight (g)	Box (pcs)	Carton (pcs)
						Top	Bottom	Top	Bottom			
G	3D	110-020-006	RI-074	Stainless Steel (SUS304)	Satin	50	60	5	6	16	40	400

DOUBLE HOOK RB-102

TEST METHOD 4 SUS

[Application Example]





- Ideal for winding up ropes or using as a hook.

[Parts Included]
- Truss head tapping screw 3×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-004	RB-102	Stainless Steel (SUS304)	Satin	130	13	16	40	400

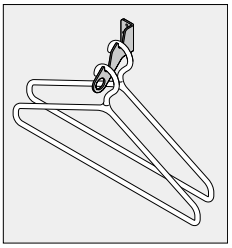
HANGER BRACKET CK

TEST METHOD 4 SUS

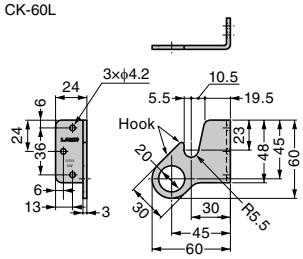
- Polished corners for protecting hands.
- Smart satin finish without curved trace.
- Ideal for hanging hangers.
- Large hook suitable for thick hangers.

[Parts Included]
- Truss tapping screw 4×20 (SUS)

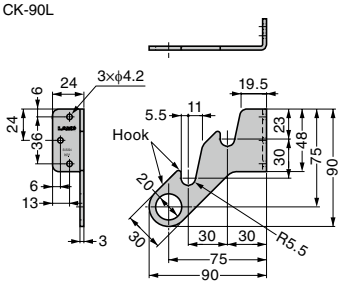
[Application Example]



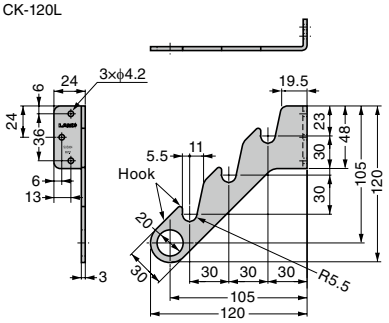
CK-60L



CK-90L



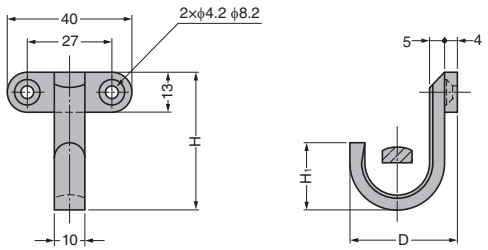
CK-120L



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/position	Load Capacity kgf/position	Hooks	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-260	CK-60L	Stainless Steel (SUS304)	Satin	14.7	1.5	2	66	15	150
G	3D	110-020-261	CK-90L					3	90	15	150
G	3D	110-020-262	CK-120L					4	113	10	100

HOOK KB-H

TEST METHOD 4 SUS

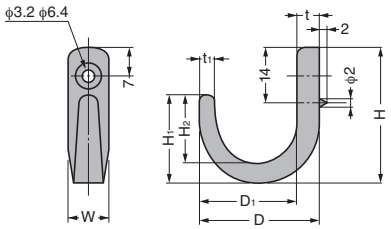


[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-029-076	KB-H-35	Stainless Steel (SUS303)	Polished	35	45	22	340	35	49	10	–
G	3D	110-029-077	KB-H-40			40	50	25	280	29	48	10	–

HOOK TA3

TEST METHOD 4 SUS



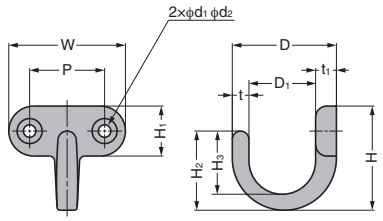
[Parts Included]
- TA3S : Raised countersunk head wood screw 3.1×16 (SUS)
- TA3L : Raised countersunk head wood screw 3.1×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	D1	W	H	H1	H2	t	t1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-008	TA3S	Stainless Steel (SUS13)	Polished	22	15	9	29	16	12.2	4	3	180	18	10	30	600
G	3D	110-026-009	TA3L			30	20.5	10	34	22	17	5.5	4			19	20	400

※SCS13 is equivalent to SUS304.

HOOK EP

NSF TEST METHOD 4 SUS



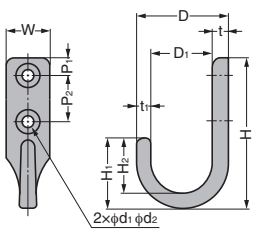
[Parts Included]
- EP-25: Raised countersunk head wood screw 2.7×16 (SUS)
- EP-40: Raised countersunk head wood screw 3.8×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	D1	W	H	H1	H2	H3	t1	t	P	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-000	EP-25	Stainless Steel (SUS13)	Polished	25	16	28	25	12	19	14.5	5	4	18	3	6	240	24	16	30	300
G	3D	110-026-001	EP-40			32	21	36	33	16	25	19.5	6	5	23	4	8			31	20	200

※SCS13 is equivalent to SUS304.

HOOK EL

NSF TEST METHOD 4 SUS



[Parts Included]
- EL-25: Raised countersunk head wood screw 2.7×16 (SUS)
- EL-30: Raised countersunk head wood screw 3.8×20 (SUS)

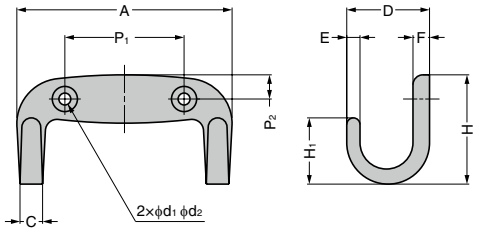
RoHS	CAD	Item Code	Item Name	Material	Finish	D	D1	W	H	H1	H2	t	t1	P1	P2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-004	EL-25	Stainless Steel (SUS13)	Polished	26	16.5	12	40	19	14.5	5.5	4	5	12	3	6	240	24	19	30	300
G	3D	110-026-005	EL-30			32	21	15	54.5	25	19.5	6	5	6	16	4	8			32	20	200

※SCS13 is equivalent to SUS304.

HOOK EW

NSF TEST METHOD 4 SUS

[Parts Included]
- EW-65E: Raised countersunk head wood screw 3.1×16 (SUS)
- EW-80E: Raised countersunk head wood screw 3.8×20 (SUS)

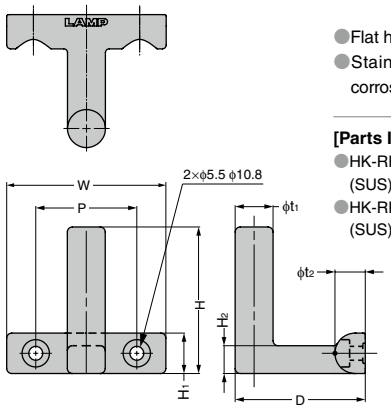


RoHS	CAD	Item Code	Item Name	Material	Finish	A	P1	C	D	E	F	P2	H	H1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-002	EW-65E	Stainless Steel (SCS13)	Polished	65	36	6.5	25	4	5	7.3	33	20	3.6	7.6	200	20	52	10	100
G	3D	110-026-003	EW-80E			80	44	8	32	5	6	9	42	25	4.2	8.8			93	10	100

※SCS13 is equivalent to SUS304.

HOOK HK-RH

TEST METHOD 4 SUS



- Flat hook bottom.
- Stainless steel construction suitable for corrosive environments.

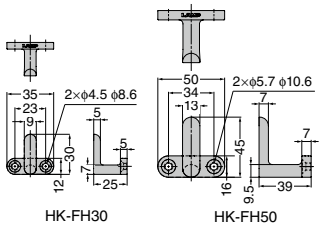
[Parts Included]
- HK-RH40 : Binding head tapping screw 4×20 (SUS)
- HK-RH60 : Binding head tapping screw 5×30 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	d1	d2	H	H1	H2	P	t1	t2	W	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-670	HK-RH40	Stainless Steel (SCS13)	Polished	35	4.5	8.8	39	12	8	28	10	9	42	196	20	57	–	–
G	3D	110-037-671	HK-RH60			51.5	5.5	10.8	58	16	11	40	15	12	63	245	25	175	–	–

※SCS13 is equivalent to SUS304.

HOOK HK-FH

TEST METHOD 4



- Supplied screws are of the same finish as the body.
- Flat hook bottom.

[Parts Included]
- HK-FH30 : Countersunk head tapping screw 4×20 (steel)
- HK-FH50 : Countersunk head tapping screw 5×30 (steel)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-662	HK-FH30-CR	Zinc Alloy (ZDC)	Chrome	98	10	23	25	250
G	3D	110-037-665	HK-FH30-BL		Black			23	25	250
G	3D	110-037-663	HK-FH30-DB		Copper			23	25	250
G	3D	110-037-664	HK-FH30-PB		Brass			23	25	250
G	3D	110-037-666	HK-FH50-CR		Chrome	147	15	68	15	150
G	3D	110-037-669	HK-FH50-BL		Black			68	15	150
G	3D	110-037-667	HK-FH50-DB		Copper			68	15	150
G	3D	110-037-668	HK-FH50-PB		Brass			68	15	150

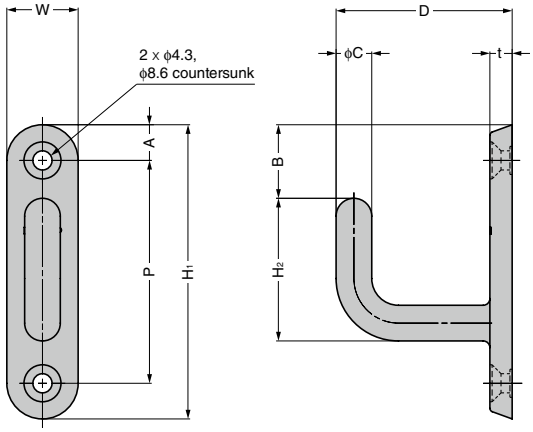
STAINLESS STEEL HOOK HK-LB

TEST METHOD 19 SUS316

- A stainless steel hook with a thick plate for a high-class look.
- Rounded hook tip ensures safe use.

[Parts Included]

- Size 4 x 32 cross-recessed round flat head tapping screws (stainless steel)



RoHS	CAD	Item Code	Item Name	Material	Finish	W	H1	H2	P	A	B	C	D	t	Load Capacity N	Load Capacity kgf	Weight (g)
–	3D	110-041-267	HK-LB50	Stainless Steel (SCS14)	Polished	16	65	32	50	8	16.5	8	39.5	5	150	15.3	46
GT	3D	110-041-268	HK-LB65			18	85	44.5	65	9	20	9	49	6.5			81

※SCS14 is a cast steel material similar to SUS316.

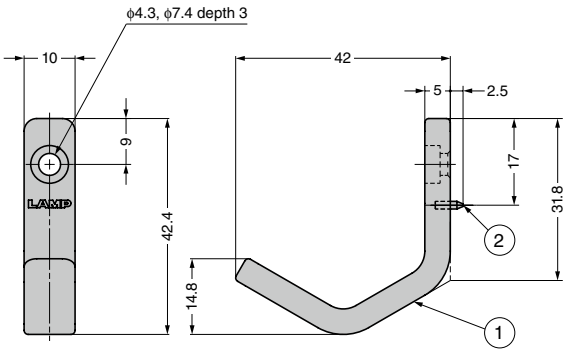
STAINLESS STEEL HOOK JF2B-40M

TEST METHOD 19 SUS

- A stainless steel hook that can be used in many places including modernist interiors.

[Parts Included]

- Size 4 x 32 cross-recessed pan head tapping screws (stainless steel)



No.	Part Name	Material	Finish/Colour
①	Hook Body	Stainless Steel (SUS304)	Polished
②	Sharp Pins		Plain

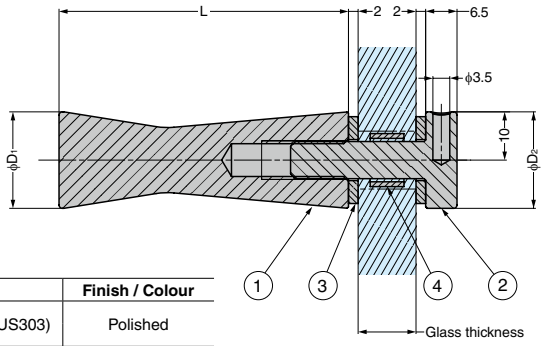
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	110-037-145	JF2B-40M	100	10.2	27.4	20	120

STAINLESS STEEL HOOK HK-DF-G

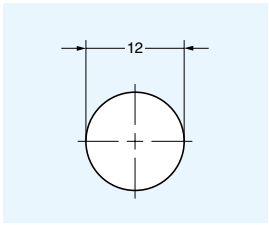
TEST METHOD 4 | TEMPERED GLASS | SUS

- For shower booth or glass partition, etc.
- Integrated design with HK-DF for wood (see below).
- Clean appearance without visible screws.
- Symmetrical design for easy installation.

[Parts Included]
- Gasket
- Tube



[Cut Out Dimensions for Glass]

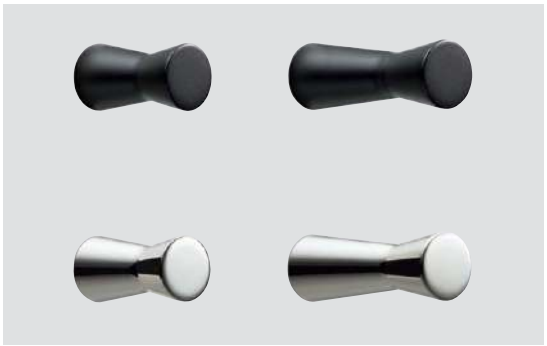


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS303)	Polished
②	Base		
③	Gasket	POM	Plain/Black
④	Tube	PVC	Plain/Clear

RoHS	CAD	Item Code	Item Name	D_1	D_2	L	Glass Thickness	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-033-706	HK-DF-18G	18	18	38	8, 10, 12	150	15.2	70	25	100
–	–	110-041-247	HK-DF-18G-BL								25	100
–	3D	110-033-707	HK-DF-20G	20	20	60				123	25	100
–	–	110-041-248	HK-DF-20G-BL								25	100

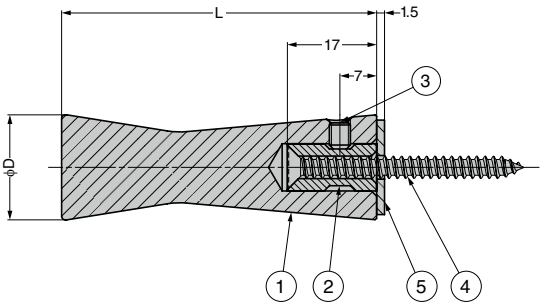
STAINLESS STEEL HOOK HK-DF

TEST METHOD 4 | SUS



- Integrated design with HK-DF-G for glass (see above).
- Symmetrical design for easy installation.

[Parts Included]
- Countersunk head tapping screw 4×50
- Washer



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS303)	Polished
②	Block		Plain
③	Hexagon Socket Set Screw M4×5	Stainless Steel	
④	Binding Head Tapping Screw	Steel	Coloured Zinc Chromate
⑤	Washer	Stainless Steel	Plain

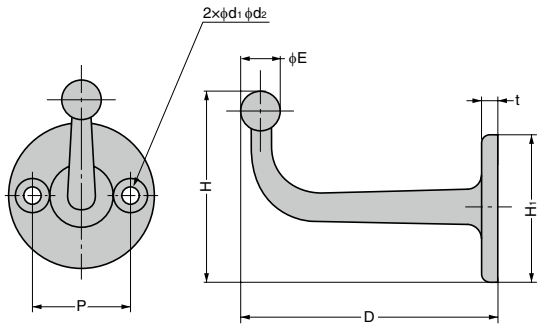
RoHS	CAD	Item Code	Item Name	D_1	L	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-033-704	HK-DF-18	18	38	150	15.2	50	25	100
–	–	110-041-245	HK-DF-18-BL						25	100
–	3D	110-033-705	HK-DF-20	20	60			100	25	100
–	–	110-041-246	HK-DF-20-BL						25	100

HOOK FC

NSF TEST METHOD 4 TITANIUM SUS

- The rounded tip provides safety.
- Titanium handle hardly causes metal allergy.

[Parts Included]
- FC-50: Raised countersunk head wood screw 3.1 × 16 (SUS)
- FC-65: Raised countersunk head wood screw 3.8 × 20 (SUS)

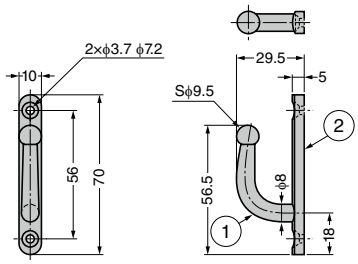


RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	t	P	d1	d2	E	Load Capacity N	Load Capacity kgf	Weight (g)	Screw	Box (pcs)	Carton (pcs)
–	3D	110-020-121	FC-50TI	Titanium	Shot	47	37	28	3	18.5	3.3	6.5	6.5	222	23	17	–	20	120
–	3D	110-020-120	FC-65TI		Blast	65	44	35	4	22.5	4.2	8	8	294	30	34		30	180
G	3D	110-026-006	FC-50	Stainless Steel (SCS13)	Polished	47	37	28	3	18.5	3.3	6.5	6.5	98	10	25	3.1×16	40	480
G	3D	110-026-007	FC-65			65	44	35	4	22.5	4.2	8	8	117.6	12	54.5	3.8×20	20	240

※SCS13 is equivalent to SUS304.

HOOK KB-F-70

SUS



- The rounded tip provides safety.

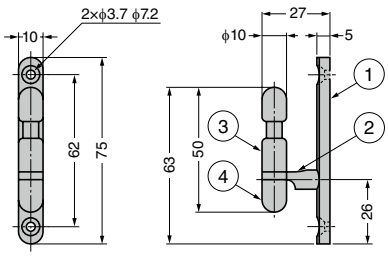
[Parts Included]
- Raised countersunk head tapping screw 3.5×20 (SUS)

No.	Part Name	Material	Finish
①	Hook	Stainless Steel (SUS304)	Polished
②	Counter Plate	Stainless Steel (SUS303)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-207	KB-F-70	47	5	100

HOOK KB-F-75

SUS



- The rounded tip provides safety.

[Parts Included]
- Raised countersunk head tapping screw 3.5×20 (SUS)

No.	Part Name	Material	Finish
①	Plate	Stainless Steel (SUS303)	Polished
②	Arm	Stainless Steel (SUS304)	
③	Upper Hook Part	Stainless Steel (SUS303)	
④	Lower Hook Part		

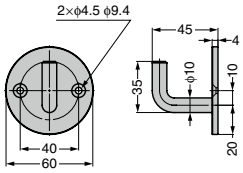
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-208	KB-F-75	55	5	100

STAINLESS STEEL HOOK DFHK-RWS60 Single Type

TEST METHOD 4 SUS

Satin

Paint/ Matte Black



- A stainless steel hook with a thick base and robust hook arm.
- The attached screws have the same finish as the body.

[Applications]
- Hook for both indoor and outdoor use, such as hanging cords for industrial equipment, etc.

[Parts Included]
- Cross-recessed flat head tapping screws 4.1×20 (for stainless steel)

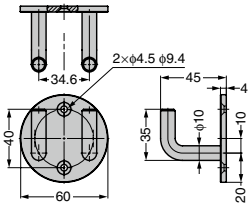
RoHS	CAD	Item Code	Item Name	Finish/Colour	Material	Load Capacity N	Load Capacity kgf	Box (pcs)	Carton (pcs)
G	3D	110-048-703	DFHK-RWS60-SS	Satin	Stainless Steel (SUS304)	250	25.5	6	60
G	3D	110-049-428	DFHK-RWS60-BL	Paint/Matte Black					

STAINLESS STEEL HOOK DFHK-RWD60 Twin Type

TEST METHOD 4 SUS

Satin

Paint/ Matte Black



- A stainless steel hook with a thick base and robust hook arm.
- The attached screws have the same finish as the body.

[Applications]
- Hook for both indoor and outdoor use, such as hanging cords for industrial equipment, etc.

[Parts Included]
- Cross-recessed flat head tapping screws 4.1×20 (for stainless steel)

RoHS	CAD	Item Code	Item Name	Finish/Colour	Material	Load Capacity N	Load Capacity kgf	Box (pcs)	Carton (pcs)
G	3D	110-048-704	DFHK-RWD60-SS	Satin	Stainless Steel (SUS304)	250	25.5	6	60
G	3D	110-049-429	DFHK-RWD60-BL	Paint/Matte Black					

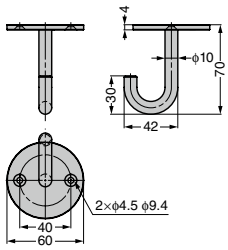
*Load capacity is the total for two hooks.

STAINLESS STEEL TOP MOUNT HOOK DFHK-RWT60

TEST METHOD 4 SUS

Satin

Paint/ Matte Black



- A stainless steel hook with a thick base and robust hook arm.
- The U-shaped hook makes hanging easy.
- The attached screws have the same finish as the body.

[Applications]
- Hook for both indoor and outdoor use, such as hanging cords for industrial equipment, etc.

[Parts Included]
- Cross-recessed flat head tapping screws 4.1×20 (for stainless steel)

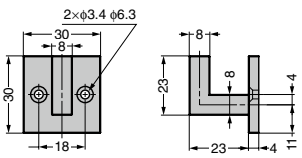
RoHS	CAD	Item Code	Item Name	Finish/Colour	Material	Load Capacity				Box (pcs)	Carton (pcs)
						Flat Horizontal Mounting N	Flat Horizontal Mounting kgf	Top Mounting N	Top Mounting kgf		
G	3D	110-048-705	DFHK-RWT60-SS	Satin	Stainless Steel (SUS304)	250	25.5	100	10.2	8	80
G	3D	110-049-430	DFHK-RWT60-BL	Paint/Matte Black							

STAINLESS STEEL HOOK DFHK-SQ30

TEST METHOD 4 SUS

Satin

Paint/ Matte Black



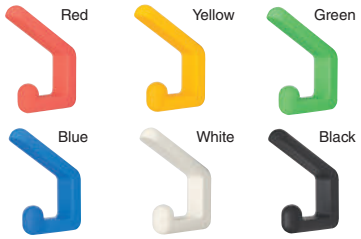
- A compact, simply designed hook with a thick base and precisely shaped hook arm.
- The attached screws have the same finish as the body.

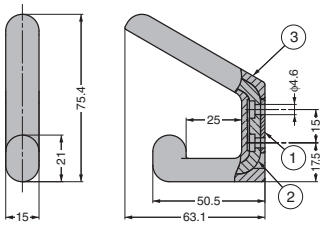
[Parts Included]
- Cross-recessed flat head tapping screws 3.1×20 (for stainless steel)

RoHS	CAD	Item Code	Item Name	Finish/Colour	Material	Load Capacity N	Load Capacity kgf	Box (pcs)	Carton (pcs)
G	3D	110-048-706	DFHK-SQ30-SS	Satin	Stainless Steel (SUS304)	100	10.2	25	250
G	3D	110-049-431	DFHK-SQ30-BL	Paint/Matte Black					

DOUBLE HOOK (RUBBER RANGER SERIES) PXB-GR05-211

TEST METHOD 19





- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Available in a wide range of colours.

[Parts Included]

- Pan head tapping screw 4×32

No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Base		
③	Cover	Silicone Rubber (Q)	–

[Set] Hook base + Cover

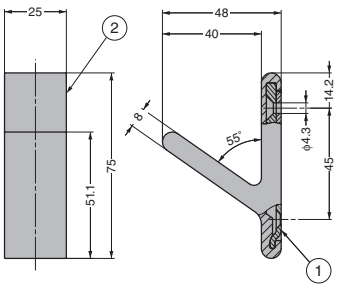
RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	110-033-287	PXB-GR05-211-RD	Red	100	10.2	78	10	100
G'	3D	110-033-288	PXB-GR05-211-YE	Yellow				10	100
G'	3D	110-033-289	PXB-GR05-211-GN	Green				10	100
G'	3D	110-033-290	PXB-GR05-211-BU	Blue				10	100
G'	3D	110-033-291	PXB-GR05-211-WT	White				10	100
G'	3D	110-041-366	PXB-GR05-211-BL	Black				10	100

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
G'	–	110-036-550	PXB-GR05-211G-RD	Red
G'	–	110-036-551	PXB-GR05-211G-YE	Yellow
G'	–	110-036-552	PXB-GR05-211G-GN	Green
G'	–	110-036-553	PXB-GR05-211G-BU	Blue
G'	–	110-036-554	PXB-GR05-211G-WT	White
G'	–	110-041-369	PXB-GR05-211G-BL	Black

HOOK (MINI NORDIC RUBBER SERIES) PXB-GN05-111

TEST METHOD 19



- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Designed to fit in all kinds of interior.

[Parts Included]

- Cross-recessed countersunk tapping screw 4×32 (stainless steel)

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Cover	Silicone Rubber (Q)	–

[Set] Hook base + Cover

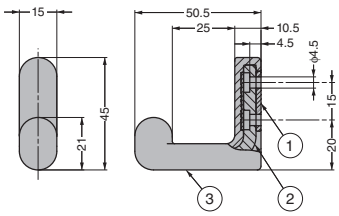
RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	110-033-277	PXB-GN05-111-BE	Beige	80	8.1	93	10	100
G'	3D	110-033-278	PXB-GN05-111-BR	Brown				10	100
G'	3D	110-033-279	PXB-GN05-111-DG	Dark Grey				10	100

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
–	–	110-036-542	PXB-GN05-111G-BE	Beige
–	–	110-036-543	PXB-GN05-111G-BR	Brown
G'	–	110-036-544	PXB-GN05-111G-DG	Dark Grey

HOOK (RUBBER RANGER SERIES) PXB-GR05-111

TEST METHOD 19



- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Available in a wide range of colours.

[Parts Included]

- Pan head tapping screw 4×32

No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Base		
③	Cover	Silicone Rubber (Q)	–

[Set] Hook base + Cover

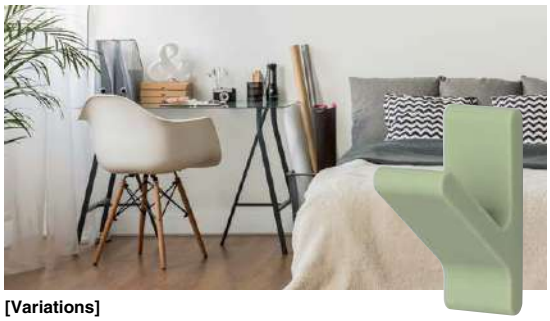
RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	110-033-282	PXB-GR05-111-LRD	Red	100	10.2	48	10	100
G'	3D	110-033-283	PXB-GR05-111-LYE	Yellow				10	100
G'	3D	110-033-284	PXB-GR05-111-LGN	Green				10	100
G'	3D	110-033-285	PXB-GR05-111-LBU	Blue				10	100
G'	3D	110-033-286	PXB-GR05-111-WT	White				10	100
G'	3D	110-037-152	PXB-GR05-111-BL	Black				10	100

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
G'	–	110-036-545	PXB-GR05-111G-LRD	Red
G'	–	110-036-546	PXB-GR05-111G-LYE	Yellow
G'	–	110-036-547	PXB-GR05-111G-LGN	Green
G'	–	110-036-548	PXB-GR05-111G-LBU	Blue
G'	–	110-036-549	PXB-GR05-111G-WT	White
G'	–	110-041-368	PXB-GR05-111G-BL	Black

HOOK (MINI NORDIC RUBBER SERIES) PXB-GN05-101

TEST METHOD 19 INSTRUCTION



A design reminiscent of young branches combined with mellow colours, this tasteful design is inspired by the natural spaces of Northern Europe.

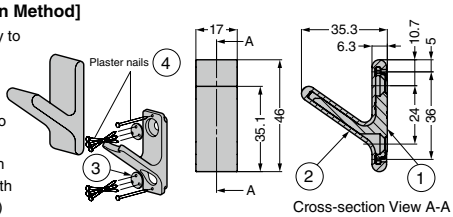
- Can be used on plaster board.
- Orders of over 300 pieces (1 lot) can be requested in special colours.

[Parts Included]

- Size 4 x 32 cross-recessed flat head tapping screws, plaster nails, plaster nail fixing parts

[Installation Method]

Mounts easily to plastic board with plaster nails.
Use screws to mount to surfaces such as wood. (Both are included.)



Cross-section View A-A

[Variations]

Greyish Pink | Greyish Yellow | Greyish Green | Greyish Blue | Greyish White | Brown | Black

No.	Part Name	Material	Finish
①	Base	Zinc Alloy (ZDC)	Nickel Plating
②	Cover	Silicone Rubber (Q)	Plain
③	Plaster Nail Fixing Parts	AES Resin	
④	Plaster nails	Stainless Steel	

[Set]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-034-492	PXB-GN05-101-GPK	Greyish Pink	40 (Screw mount)	4.1 (Screw mount)	39
G	3D	110-034-493	PXB-GN05-101-GYE	Greyish Yellow			
G	3D	110-034-494	PXB-GN05-101-GGN	Greyish Green			
G	3D	110-034-495	PXB-GN05-101-GBU	Greyish Blue	20 (Plaster board mount)	2 (Plaster board mount)	
G	3D	110-034-496	PXB-GN05-101-GWT	Greyish White			
G	3D	110-034-497	PXB-GN05-101-BR	Brown			
-	3D	110-034-498	PXB-GN05-101-BL	Black			

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
G	-	110-037-153	PXB-GN05-101G-GPK	Greyish Pink
G	-	110-037-154	PXB-GN05-101G-GYE	Greyish Yellow
G	-	110-037-155	PXB-GN05-101G-GGN	Greyish Green
G	-	110-037-156	PXB-GN05-101G-GBU	Greyish Blue
G	-	110-037-157	PXB-GN05-101G-GWT	Greyish White
-	-	110-037-158	PXB-GN05-101G-BR	Brown
-	-	110-037-159	PXB-GN05-101G-BL	Black

MAGNETIC HOOK (MINI NORDIC RUBBER SERIES) PXB-GN05M-101

INSTRUCTION

Easy to set and adjust magnet type hook. The Northern European inspired colours add vibrance and life to monotone, dull colored objects like refrigerators and cabinets.

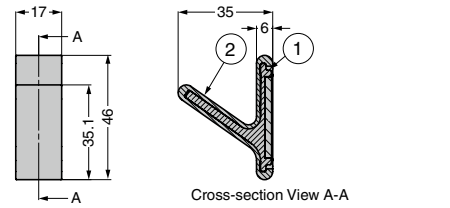
- Orders of over 300 pieces (1 lot) can be requested in special colours.

[Remarks]

- Do not slide the body while it is attached as this may damage the surface to which it is attached.
- The load capacity may differ depending on the steel surface to which the product is mounted. Please test the product under actual use conditions before placing items.

[Variations]

Orange | Green Yellow | Navy Blue | Greyish White | Grey



Cross-section View A-A

No.	Part Name	Material	Finish
①	Base	Zinc Alloy (ZDC), Neodymium	Nickel Plating
②	Cover	Silicone Rubber (Q)	Plain

[Set]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-036-555	PXB-GN05M-101-YR	Orange	10	1.1	32
G	3D	110-036-556	PXB-GN05M-101-GY	Green Yellow			
G	3D	110-036-557	PXB-GN05M-101-NB	Navy Blue			
G	3D	110-036-558	PXB-GN05M-101-GWT	Greyish White			
G	3D	110-036-559	PXB-GN05M-101-GR	Grey			

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
G	-	110-037-160	PXB-GN05M-101G-YR	Orange
G	-	110-037-161	PXB-GN05M-101G-GY	Green Yellow
G	-	110-037-162	PXB-GN05M-101G-NB	Navy Blue
G	-	110-037-163	PXB-GN05M-101G-GWT	Greyish White
G	-	110-037-164	PXB-GN05M-101G-GR	Grey

RUBBER HOOK TWIN TYPE PXB-GR05-212

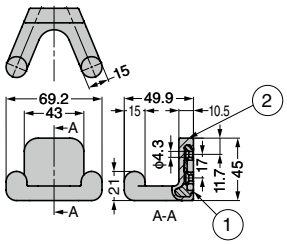
TEST METHOD 19 INSTRUCTION

Round-shaped and cute, this hook is covered by soft silicon rubber. It can be used everywhere thanks to its colours that enlight without being too bright.

- After the installation the silicon cover is difficult to remove thanks to it safety-focused internal shape.
- The good load capacity is guaranteed by the stainless steel base.
- MOQ order for custom made colours is only 300 pcs.

[Parts Included]

- Stainless steel countersunk tapping screw 4x32



[Variations]

Bright Red | Bright Yellow | Bright Green | Bright Blue | White | Black

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SCS13)	Plain
②	Cover	Silicon Rubber (Q)	

※SCS13 is the equivalent to SUS304.

[Set] Hook base + Cover

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-037-037	PXB-GR05-212-BRD	Bright Red	100	10.2	90.5
G	3D	110-037-038	PXB-GR05-212-BYE	Bright Yellow			
G	3D	110-037-039	PXB-GR05-212-BGN	Bright Green			
G	3D	110-037-040	PXB-GR05-212-BBU	Bright Blue			
G	3D	110-037-041	PXB-GR05-212-WT	White			
G	3D	110-041-367	PXB-GR05-212-BL	Black			

*The load capacity is intended for each arm.

[Cover Only] *Order this when replacing only the cover.

RoHS	CAD	Item Code	Item Name	Colour
G	-	110-037-140	PXB-GR05-212G-BRD	Bright Red
G	-	110-037-141	PXB-GR05-212G-BYE	Bright Yellow
G	-	110-037-142	PXB-GR05-212G-BGN	Bright Green
G	-	110-037-143	PXB-GR05-212G-BBU	Bright Blue
G	-	110-037-144	PXB-GR05-212G-WT	White
G	-	110-041-370	PXB-GR05-212G-BL	Black

PLASTIC HOOK HK-CM40

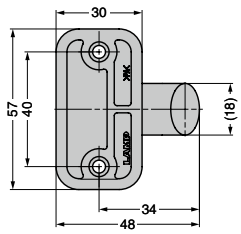
TEST METHOD 4

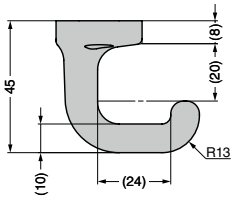
*The colours can be different from the picture, please check the product.

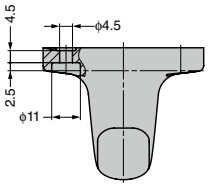
- Plastic hook with a wide colour variation.
- Can be both wall-mounted or ceiling-mounted.

[Parts Included]

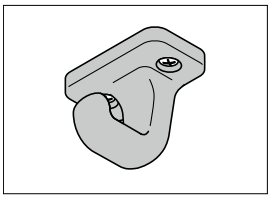
- Pan head tapping screw 4x20

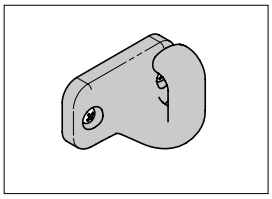






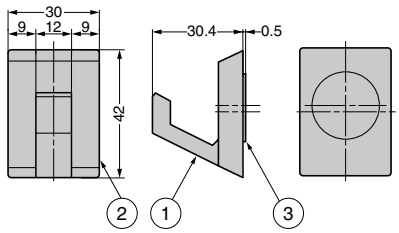
[Installation Examples]





RoHS	CAD	Item Code	Item Name	Colour	Material	Load Capacity				Weight (g)	Box (pcs)	Carton (pcs)
						Side Mount (N)	Side Mount (kgf)	Under/Ceiling Mount (N)	Under/Ceiling Mount (kgf)			
G	3D	110-036-818	HK-CM40-DG	Dark Grey	PA	78	8	78	8	24	12	120
G	3D	110-036-819	HK-CM40-BR	Brown								
G	3D	110-036-820	HK-CM40-WT	White								
G	3D	110-036-821	HK-CM40-BBU	Bright Blue								
G	3D	110-036-822	HK-CM40-BRD	Bright Red								

MAGNETIC HOOK MJ-30



- Hard-edged design.
- The magnet covered with silicone prevents from scratching the wall.
- Easy to remove by pulling down the hook tip toward you.

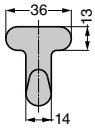
[Remarks]

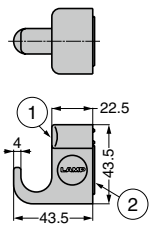
- Load capacity varies depending on the finished state of the steel sheet adsorbed. Please verify before use.

No.	Part Name	Material	Finish
①	Hook	Aluminium Alloy	Matter Anodised
②	Body	ABS	White
③	Magnet	Neodymium	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-421	MJ-30	9.8	1	28	20	400

MAGNETIC HOOK MJ-45





- Prevents from slipping down by arranging two magnets in a T shape.
- Three colours available for the body. Please select the colour according to the usage places such as desk, locker, refrigerator, car, etc.

[Remarks]

- Do not move the body in the adsorbed state to avoid scratching the adsorption surface.
- Load capacity varies depending on the finished state of the steel sheet adsorbed. Please verify before use.

No.	Part Name	Material	Colour
①	Body	ABS	Ivory/Orange/Brown
②	Yoke	Steel (SPCC)	–

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-051-070	MJ-45I	Ivory	19.6	2	58	20	240
G	3D	110-051-071	MJ-45RA	Orange				20	240
G	3D	110-051-073	MJ-45BR	Brown				20	240

LARGE UTILITY HOOK 4H

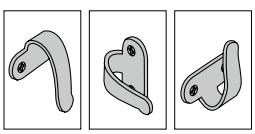
TEST METHOD 4 SUS

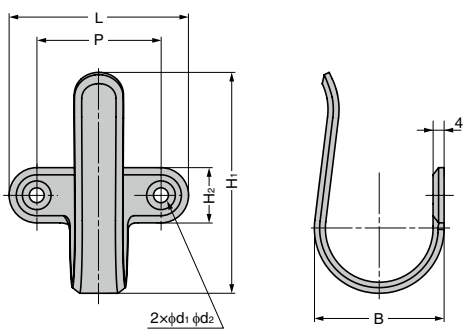
- Chamfered design.
- Can be used in various ways, such as pulls, wall hooks and cloth hangers, etc.
- Two types of finishes available.

[Parts Included]

- 4H-40, 4H-55 : Raised countersunk head wood screw 4.1×16 (SUS)
- 4H-65 : Raised countersunk head wood screw 5.1×20 (SUS)

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	B	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-028-559	4H-40M	Stainless Steel (SUS304)	Polished	40	27	47	13	30	4.4	8.4	290	30	43	20	200
G	3D	110-028-560	4H-40TT		Polished and Satin										44	20	200
G	3D	110-028-561	4H-55M		Polished	55	38	65	17	40			260	27	80	15	150
G	3D	110-028-562	4H-55TT		Polished and Satin										81	15	150
G	3D	110-028-563	4H-65M		Polished	65	45	80	20	48	5.4	10.4	170	17	119	10	100
G	3D	110-028-564	4H-65TT		Polished and Satin										120	10	100

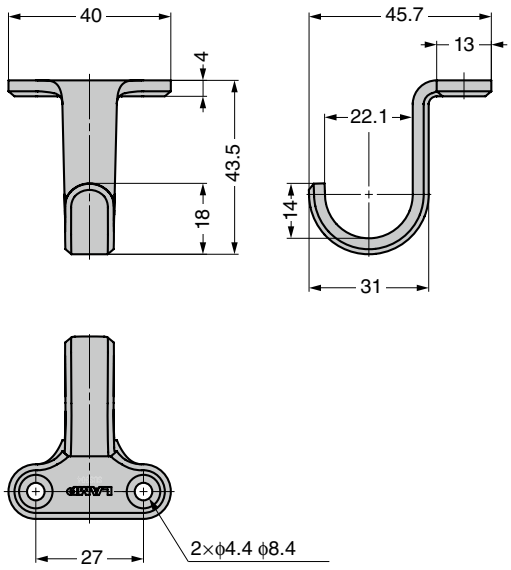
HOOK 4HJU-40M

TEST METHOD 4 SUS

●Chamfered edge provides safety and smart design.

[Parts Included]

●Raised countersunk head wood screw 4.1×16 (Stainless Steel)



RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N	Load Capacity kgf	Weight g	Box (pcs)	Carton (pcs)
G	3D	110-041-004	4HJU-40M	Stainless Steel (SUS304)	Mirror	150	15.3	42.5	20	200

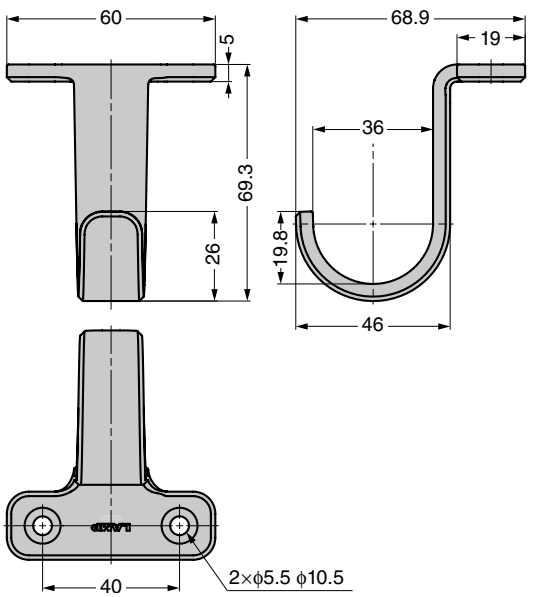
HOOK 5HJU-60M

TEST METHOD 4 SUS

●Chamfered edge provides safety and smart design.

[Parts Included]

●Raised countersunk head wood screw 5.1×25 (Stainless Steel)



RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N	Load Capacity kgf	Weight g	Box (pcs)	Carton (pcs)
G	3D	110-041-005	5HJU-60M	Stainless Steel (SUS304)	Mirror	200	20.4	130	20	200

LARGE UTILITY HOOK 5H

TEST METHOD 4 SUS

5H-85M

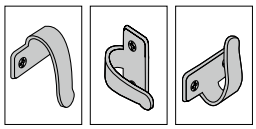
5H-85TT

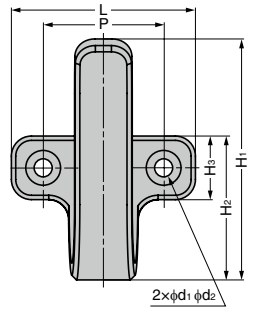
- Chamfered design.
- Can be used in various ways, such as pulls, wall hooks and cloth hangers, etc.
- Two types of finish available.

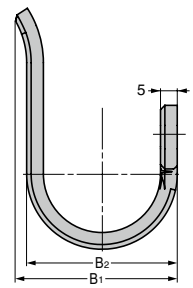
[Parts Included]

- 5H-45 : Raised countersunk head wood screw 4.1×20 (SUS)
- 5H-60 : Raised countersunk head wood screw 5.1×25 (SUS)
- 5H-85 : Raised countersunk head wood screw 5.8×25 (SUS)

[Application Example]







RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	H3	B1	B2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-028-553	5H-45M	Stainless Steel (SUS304)	Polished	45	30	56	34.5	15	37.9	32.5	4.5	9	370	38	74	20	160
G	3D	110-028-554	5H-45TT		Polished and Satin													20	160
G	3D	110-028-555	5H-60M		Polished	60	40	72.7	43.4	19	47.7	43.5	5.5	10.5	350	36	132	10	100
G	3D	110-028-556	5H-60TT		Polished and Satin													10	100
G	3D	110-028-557	5H-85M		Polished	85	60	94	60.6	25	66.7	58.2	6.5	12.4	330	34	237	5	50
G	3D	110-028-558	5H-85TT		Polished and Satin												238	5	50

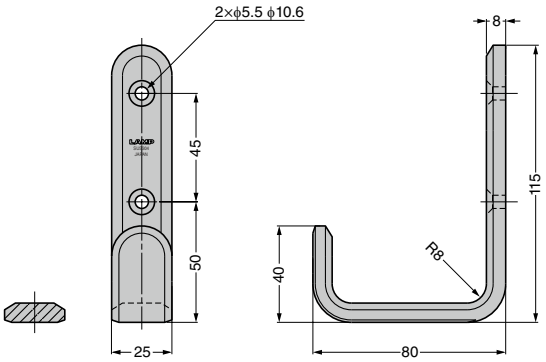
LARGE UTILITY HOOK XL-SF

TEST METHOD 4 SUS

- Chamfered design.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-142	XL-SF-115-S	Stainless Steel (SUS304)	Satin	360	39	280	4	24
G	3D	110-020-143	XL-SF-115-M		Polished				4	24

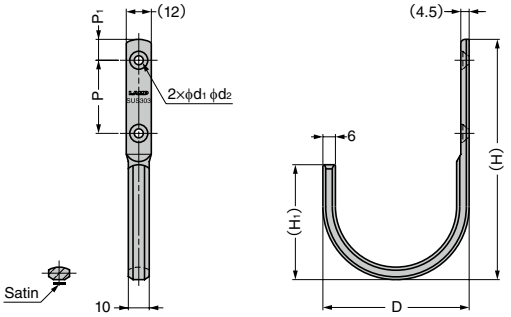
LARGE UTILITY HOOK XL-CUJ

TEST METHOD 4 SUS

- Finish: Combination of Polished and satin.
- Large hook XL-CUF 1 with the same combination finish also available.

[Parts Included]

- XL-CUJ45TT : Raised countersunk head tapping screw 3.5×20 (SUS)
- XL-CUJ70TT : Raised countersunk head tapping screw 4×20 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	P	P1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-012	XL-CUJ45TT	Stainless Steel (SUS303)	Polished/ Satin	46	75	36	20	8.5	3.8	7.2	200	20	54	20	120
G	3D	110-020-013	XL-CUJ70TT			72	112	56	35	10	4.3	8.6	138	14	84	10	60

Refer to 1 : P.741

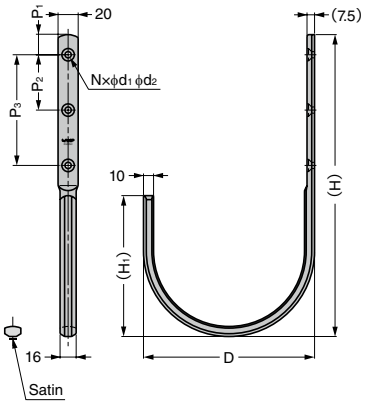
LARGE UTILITY HOOK XL-CUF

TEST METHOD 4 SUS

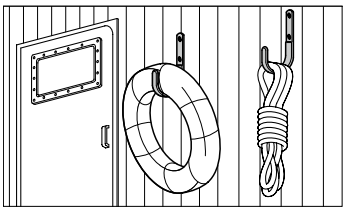
- Easy to hang big items.
- Finish: Combination of Polished and satin.
- Small hook XL-CUJ 1 with the same combination finish also available.

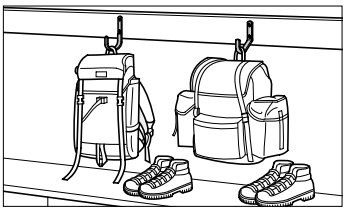
[Parts Included]

- XL-CUF110TT: Raised countersunk head tapping screw 5×30 (SUS)
- XL-CUF170TT: Raised countersunk head tapping screw 6×30 (SUS)



[Application Example]



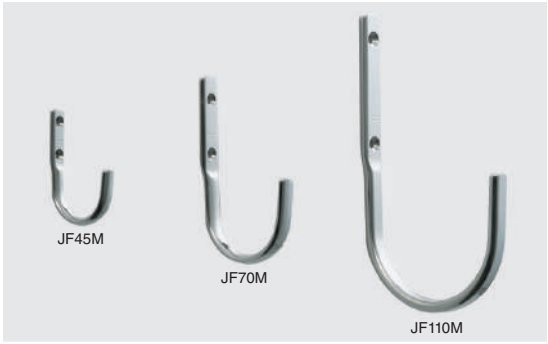


RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	P1	P2	P3	N	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-014	XL-CUF110TT	Stainless Steel (SUS303)	Polished/ Satin	112	198	91	17	–	70	2	5.2	10.5	314	32	362	5	30
G	3D	110-020-015	XL-CUF170TT			173	300	138.5	20	55	110	3	6.2	12.5	147	15	569	5	20

Refer to 1 : P.741

LARGE UTILITY HOOK JF45M, JF70M, JF110M

NSF TEST METHOD 4 SUS

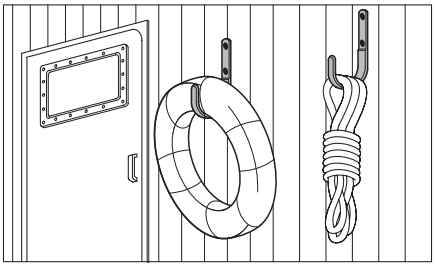


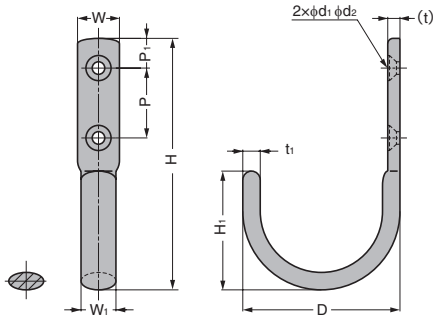
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JF45M : Raised countersunk head wood screw 3.5×16 (SUS)
- JF70M : Raised countersunk head wood screw 4.1×20 (SUS)
- JF110M : Raised countersunk head wood screw 5.1×32 (SUS)

[Application Example]

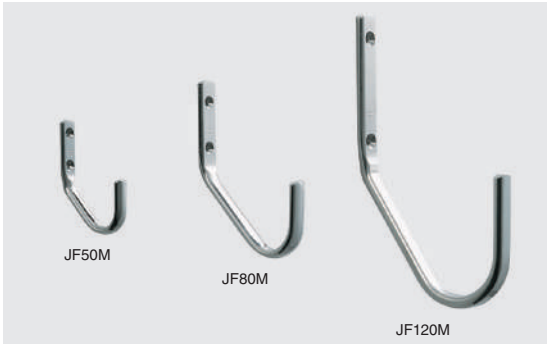




RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	W1	H	H1	P	P1	t	t1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-035-513	JF45M	Stainless Steel (SUS303)	Polished	45	12	10	72	34	20	8.5	3.5	5	3.8	7.2	98	10	40	20	120
G	3D	110-035-515	JF70M			68	16	13	120	55	35	15	4	6	4.3	8.6			95	6	36
G	3D	110-035-517	JF110M			110	18	14	200	90	70	17	5.5	8	5.3	10.6	150	15	270	5	30

LARGE UTILITY HOOK JF50M, JF80M, JF120M

NSF TEST METHOD 4 SUS

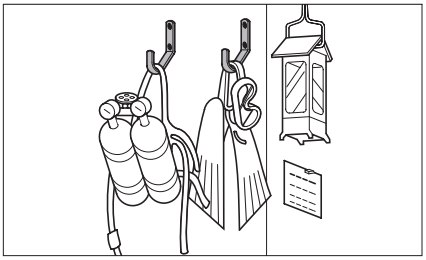


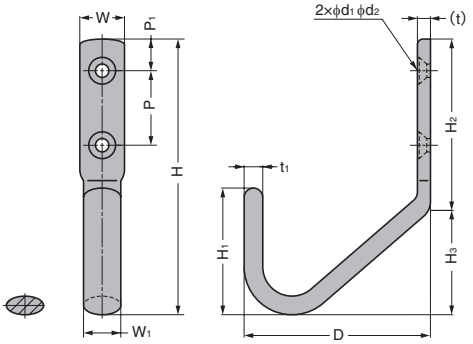
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JF50M : Raised countersunk head wood screw 3.5×16 (SUS)
- JF80M : Raised countersunk head wood screw 4.1×20 (SUS)
- JF120M : Raised countersunk head wood screw 5.1×32 (SUS)

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	W1	H	H1	H2	H3	P	P1	t	t1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-035-514	JF50M	Stainless Steel (SUS303)	Polished	50	12	10	74	34	46	28	20	8.5	3.5	5	3.8	7.2	150	15	40	20	120
G	3D	110-035-516	JF80M			80	16	13	115	50	65	50	30	15	4	6	4.3	8.6	196	20	95	6	36
G	3D	110-020-074	JF120M			120	18	14	200	90	112	88	70	17	5.5	8	5.3	10.6	216	22	260	5	30

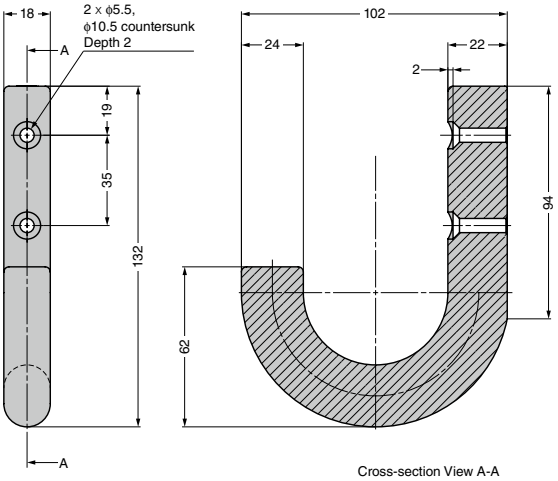
LARGE ALUMINIUM HOOK HK-AJ100

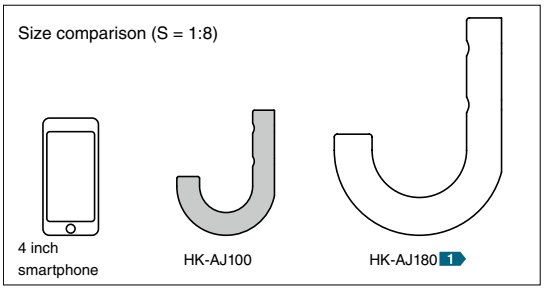
TEST METHOD 19

- A very large hook for hanging large items that would otherwise have been set on the floor.
- Thick aluminium piece which bends at its thickest end.

[Parts Included]

- Size 5 x 50 cross-recessed flat head tapping screws





RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)
G	3D	110-041-192	HK-AJ100-SL	Aluminium	Anodised/Matte Silver	200	20.4	202	1
G	3D	110-041-193	HK-AJ100-BL		Anodised/Matte Black				1

Refer to 1 : P.743

GIANT ALUMINIUM HOOK HK-AJ180

TEST METHOD 19

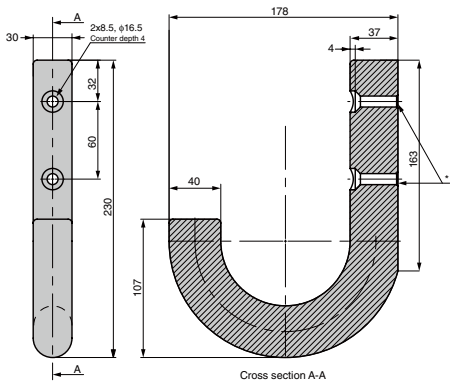
- Hook with a profile depth of almost 180 mm.
- Thick aluminium piece which bends on its thickest side.

[Remarks]

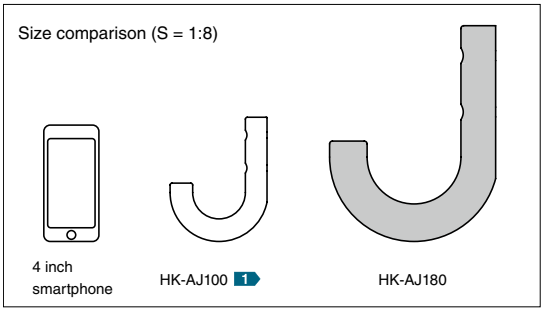
- The load capacity stands for strength of the hook itself. Actual load capacity also depends on wall materials and strength.
- Surface colour of installation side may discolour. This does not affect the performance.

[Parts Included]

- Cross-recessed countersunk tapping screw 8 x 90
- Lock plug (screw diameter: ϕ8 / drill diameter: ϕ10 / length: 50)



*The hole is not for a mounting screw.

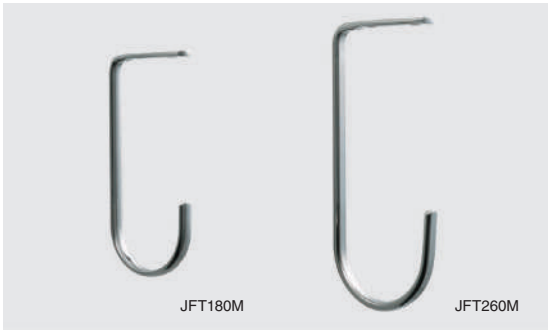


RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	110-044-096	HK-AJ180-SL	Aluminium Alloy	Anodized / Matte Silver	1000	102	954
G	3D	110-044-097	HK-AJ180-BL		Anodized / Matte Black			

Refer to 1 : P.743

LARGE UTILITY HOOK JFT180M, JFT260M For Ceiling Mount

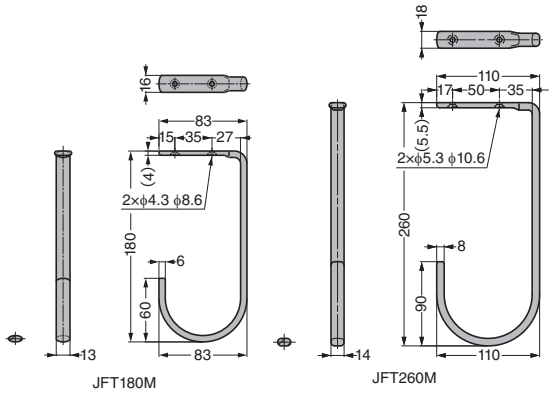
NSF TEST METHOD 4 SUS



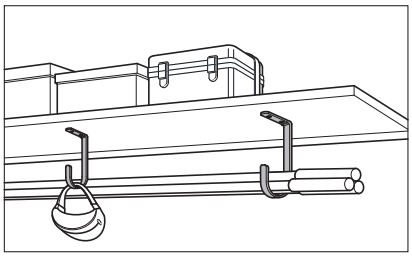
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JFT180M : Raised countersunk head wood screw 4.5×25 (SUS)
- JFT260M : Raised countersunk head wood screw 5.1×38 (SUS)



[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-080	JFT180M	Stainless Steel (SUS303)	Polished	98	10	180	5	30
G	3D	110-020-081	JFT260M			147	15	380	5	30

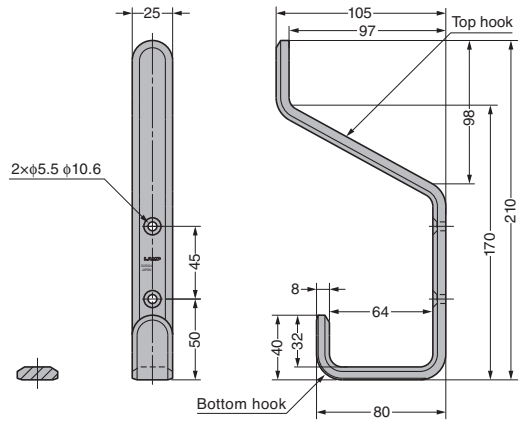
LARGE UTILITY HOOK XL-SB Large Hat Hook

TEST METHOD 19 SUS

- Chamfered design.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)

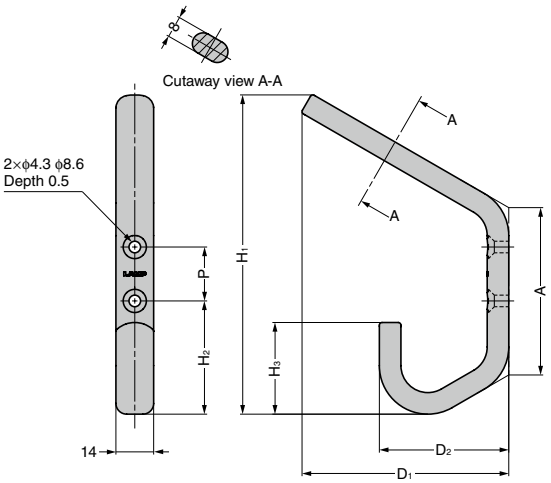


RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity				Weight (g)	Box (pcs)	Carton (pcs)
						Top Hook N	Top Hook kgf	Bottom Hook N	Bottom Hook kgf			
G	3D	110-020-144	XL-SB-210-S	Stainless Steel (SUS304)	Satin finish	200	20	380	39	500	2	12
G	3D	110-020-145	XL-SB-210-M		Polished						2	12

LARGE UTILITY HOOK JF1B

TEST METHOD 19 SUS

[Parts Included]
- Countersunk head tapping screw 4×32 (SUS)



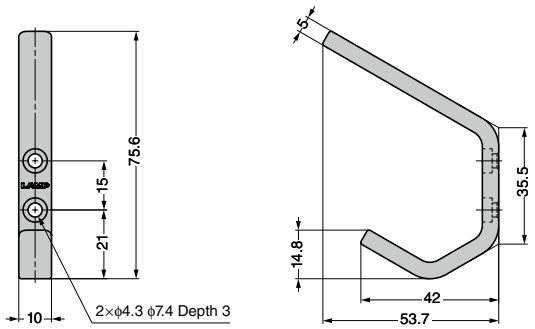
RoHS	CAD	Item Code	Item Name	Material	H_1	H_2	D_1	D_2	P	A	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-760	JF1B-80M	Stainless Steel	118.5	42	76.5	48	20	62	Mirror	100	10.2	155	5	40
G	3D	110-033-761	JF1B-90M	(SUS303)	138.5	46	87.6	56	26	71.5				180	5	40

LARGE UTILITY HOOK JF2B-55M

TEST METHOD 19 SUS

- Suitable for modern style space.
- Large size hook made of stainless steel
- Allows big items such as marine hose to be hung outdoors.

[Parts Included]
- Pan head tapping screw 4x32 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-274	JF2B-55M	Stainless Steel (SUS304)	Polished	100	10.2	50	20	120

STAINLESS STEEL BIG HOOK DFHK-BJ

TEST METHOD 4 SUS

DFHK-BJ90-SH

DFHK-BJ135-SH

DFHK-BJ165-BL

●The simple shape made of robust stainless steel harmonizes with a variety of spaces.

[Applications]

●Hook for both indoor and outdoor use, such as hanging cords for industrial equipment, etc.

[Remarks]

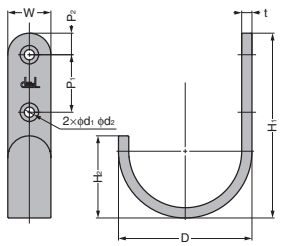
●The load capacity value indicates the strength of the hook itself and may vary according to the installation wall surface or housing material. Install in a location with sufficient strength or reinforcement.

[Parts Included]

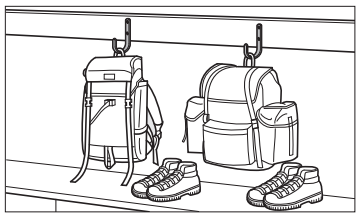
●DFHK-BJ90: Cross-recessed flat head tapping screws 4×30 (for stainless steel)

●DFHK-BJ135, DFHK-BJ165: Cross-recessed flat head tapping screws 5×30 (for stainless steel)

●The screw heads have the same finish as the hook.



[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	D	W	H1	H2	P1	P2	t	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-051-085	DFHK-BJ90-SH	Stainless Steel (SUS304)	Satin	65	21	90	40	28	10.5	5	5	9	200	20.4	126	8	80
G	3D	110-051-086	DFHK-BJ90-BL		Paint/Matte Black													8	80
G	3D	110-051-087	DFHK-BJ135-SH		Satin	100	23	135	60	38	15	6	6	11			256	4	40
G	3D	110-051-088	DFHK-BJ135-BL		Paint/Matte Black													4	40
G	3D	110-051-089	DFHK-BJ165-SH		Satin	125	25	165	75	55					150	15.3	349	4	32
G	3D	110-051-090	DFHK-BJ165-BL		Paint/Matte Black													4	32

STAINLESS STEEL BIG HOOK DFHK-BJL Long Type

TEST METHOD 4 SUS

DFHK-BJL200-SH

DFHK-BJL275-SH

DFHK-BJL335-BL

●The simple shape made of robust stainless steel harmonizes with a variety of spaces.

[Applications]

●Hook for both indoor and outdoor use, such as hanging cords for industrial equipment, hanging in high places such as beams, etc.

[Remarks]

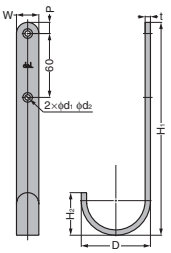
●The load capacity value indicates the strength of the hook itself and may vary according to the installation wall surface or housing material. Install in a location with sufficient strength or reinforcement.

[Parts Included]

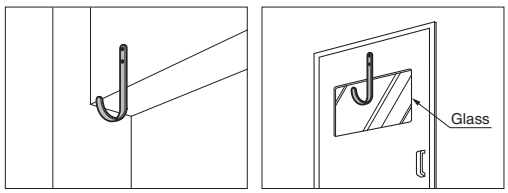
●DFHK-BJL200: Cross-recessed flat head tapping screws 4×30 (for stainless steel)

●DFHK-BJL275, DFHK-BJL335: Cross-recessed flat head tapping screws 5×30 (for stainless steel)

●The screw heads have the same finish as the hook.

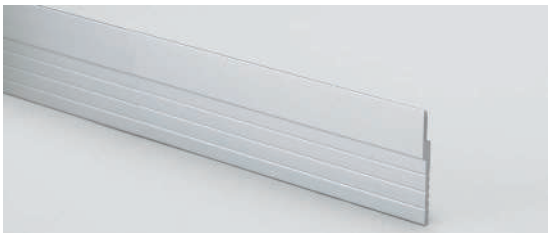


[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	W	H1	H2	P	t	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-051-091	DFHK-BJL200-SH	Stainless Steel (SUS304)	Satin	65	21	200	40	10.5	5	5	9	200	20.4	219	4	32
G	3D	110-051-092	DFHK-BJL200-BL		Paint/Matte Black												4	32
G	3D	110-051-093	DFHK-BJL275-SH		Satin	100	23	275	60	15	6	6	11			412	4	32
G	3D	110-051-094	DFHK-BJL275-BL		Paint/Matte Black												4	32
G	3D	110-051-095	DFHK-BJL335-SH		Satin	125	25	335	75					150	15.3	544	4	16
G	3D	110-051-096	DFHK-BJL335-BL		Paint/Matte Black												4	16

PANEL HANGER AUH



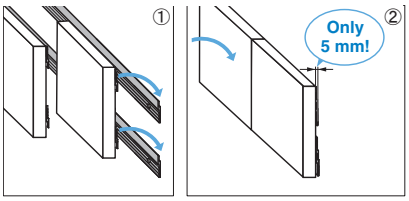
- Panel can be easily attached/detached without tools.
- Distance to wall is only 5 mm.
- Continuous panels can also be installed easily.
- Can prevent warping of large size panels.
- Mounting holes can be set in the groove of screw guide (see drawing).

[Applications]
- Exhibition panels, paintings, furniture.

[Remarks]
- Be sure to install panel to wall made from strong materials.
- Actual load capacity varies depending on use conditions.
  The load capacity in the catalog is based on the conditions below.
  - Numbers of AUH: 2 pcs
  - Length : 700mm
  - Distance between 2 AUH : 780mm
  - Panel Height : 900mm
  - Panel Length : 700mm
  - Panel Thickness : 25mm

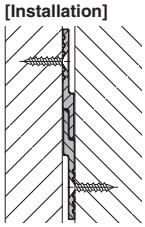
[Recommended Screws]
- Countersunk head tapping screw 4

[Panel Installation]

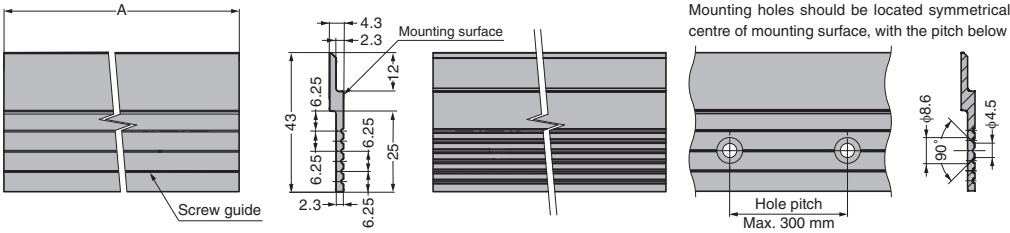


[Example]

[Installation]



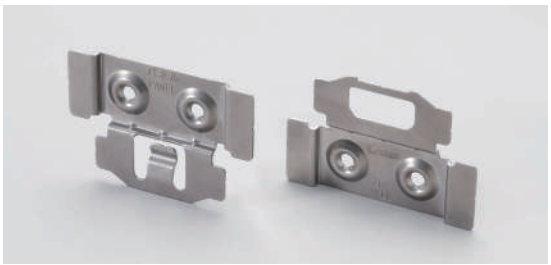
[Cut Out Dimensions]
Mounting holes should be located symmetrically to the centre of mounting surface, with the pitch below 300mm.



RoHS	CAD	Item Code	Item Name	A	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-021-888	AUH-900	900	Aluminium Alloy	Anodised Silver	294.2	30	35	10	—
G	3D	110-023-958	AUH-2700	2700					700	10	—

PANEL CATCH AUH-C70 For Panel Hanger "AUH"

SUS



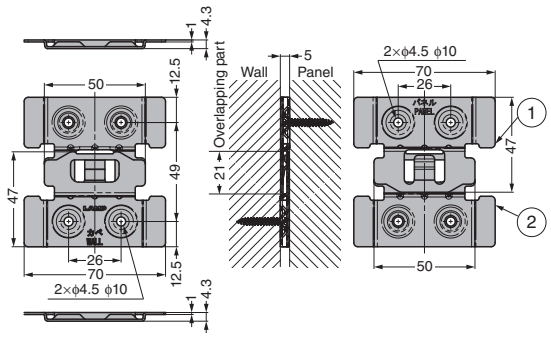
- Holds panels hanged with the AUH in place.
  This catching function prevents panels from moving or falling even when bumped.
- Specially designed for use with the AUH panel hanger.
- The correct mounting position can be found by simply aligning with the AUH.

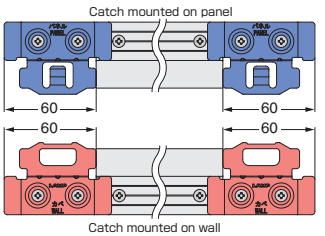
[Remarks]
- Please make sure that the panel is not subject to a pulling force when using the AUH-C70 without the AUH.
- Recommended quantity per panel: two
- The retaining force may vary. Please confirm with actual products before use.
- When used together with the AUH, make space for mounting/dismounting that is larger than the overlapping part.

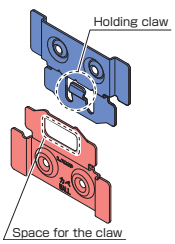
[Recommended Screw]
- Cross-recessed countersunk head tapping screw 4

Video Link

[Drawing] when using two AUH-C70 and AUH







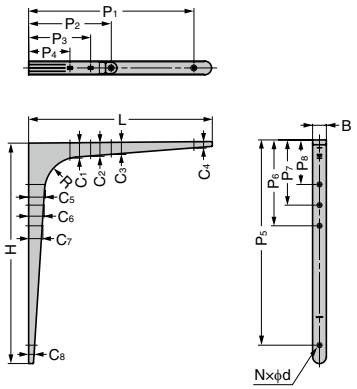
No.	Part Name	Material	Finish/Colour
①	Catch mounted on panel	Stainless Steel (SUS304)	Barrel Polished
②	Catch mounted on wall		

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Load Capacity N*	Load Capacity kgf*	Weight (g)
G	3D	110-044-905	AUH-C70	50	5.1	100	10.2	41

* The load capacity is a value when using the AUH-C70 alone. When using with the AUH, please see the load capacity of the AUH.

BRACKET BT, BTK

NSF TEST METHOD 6 SUS



- Strong and safe structure.
- Can be used as reinforcement or connecter in the corner as well.
- BT is made of stainless steel, suitable for corrosive environments.
- BTK is made of steel, with three colours available: White, black and umber.

[Remarks]

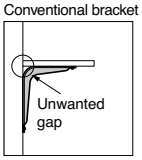
- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

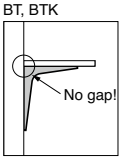
- Raised countersunk head wood screw

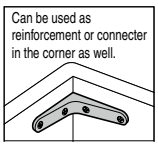
	Material	Finish / Colour	Screw
BT (Satin)	Stainless Steel (SUS304)	Satin	Stainless Steel
BTK (White)	Steel (SECC)	White Powder Coating	White Enamel Finish
BTK (Black)		Black Powder Coating	Black Enamel Finish
BTK (Umber)		Umber Enamel Finish	Umber Enamel Finish

Conventional bracket



BT, BTK



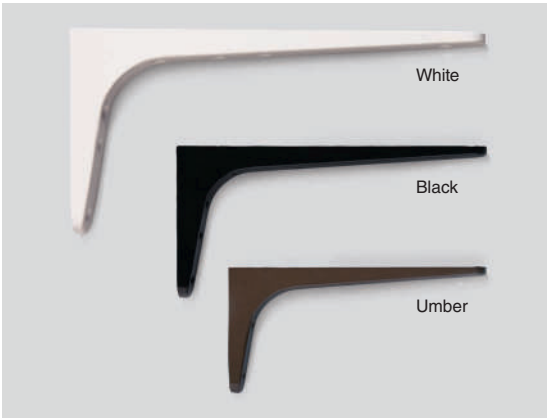


RoHS	CAD	Item Code	Item Name	Finish / Colour	H	L	B	P1	P2	P3	P4	P5	P6	P7	P8	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-078	BT-85	Satin	86	69	15	58	27	–	–	75	26	–	–	147	15	45	20	240
G	3D	120-030-093	BTK-85W	White														46	20	240
G	3D	120-030-172	BTK-85B	Black														46	20	240
–	3D	120-030-189	BTK-85UM	Umber														46	20	240
G	3D	120-030-079	BT-120	Satin	120	100		85	43			106	42			196	20	64.4	20	100
G	3D	120-030-094	BTK-120W	White														63	20	100
G	3D	120-030-173	BTK-120B	Black														68.3	20	100
G	3D	120-030-190	BTK-120UM	Umber														62	20	100
G	3D	120-030-080	BT-180	Satin	180.5	148.5		131	71	50	–	162.5	72.5	51.5	–	245	25	123	20	–
G	3D	120-030-095	BTK-180W	White														124	20	–
G	3D	120-030-174	BTK-180B	Black														127	20	–
G	3D	120-030-191	BTK-180UM	Umber														122	20	–
G	3D	120-030-081	BT-240	Satin	240	199	18	176	91	59		217	92	60		274.4	28	221	10	–
G	3D	120-030-096	BTK-240W	White														237	10	–
G	3D	120-030-175	BTK-240B	Black														234	10	–
G	3D	120-030-192	BTK-240UM	Umber														232	10	–
G	3D	120-030-082	BT-300	Satin	301	238.5	20	206.5	92.5	60.5		269	95	63		343	35	307	10	–
G	3D	120-030-097	BTK-300W	White														323	10	–
G	3D	120-030-176	BTK-300B	Black														323	10	–
–	3D	120-030-193	BTK-300UM	Umber														323	10	–
G	3D	120-030-083	BT-380	Satin	378	318	23	285	145	110	75	345	145	110	75	637	65	519	10	40
G	3D	120-030-085	BTK-380W	White														519	10	–
G	3D	120-030-177	BTK-380B	Black														519	10	–
–	3D	120-030-194	BTK-380UM	Umber														519	10	–
G	3D	120-030-155	BT-480	Satin	480	400	30	360	180	135	90	440	180	135	90	808.5	82.5	1200	6	–
G	3D	120-030-156	BTK-480W	White														1230	6	–
G	3D	120-030-178	BTK-480B	Black														1220	6	–
–	3D	120-030-195	BTK-480UM	Umber														1329	6	–

Item Name	d	Holes N	Weight	C1	C2	C3	C4	C5	C6	C7	C8	R	Screw (Countersunk Head Wood Screw)
BT-85	4	4	40	–	–	(9)	(5)	–	–	(12)	(5)	(25)	3.5×16 (3 pcs), 3.5×25 (1 pc)
BTK-85													
BT-120			60			(10)				(13)			
BTK-120													
BT-180		6	110		(14)	(12)			(15)			(30)	3.5×16 (2 pcs), 3.5×20 (1 pc), 3.5×25 (1 pc), 3.8×32 (2 pcs)
BTK-180													
BT-240			200		(16)	(13)	(8)		(16)	(14)	(7.5)	(35)	
BTK-240													
BT-300			310		(19.5)	(17)			(19)	(17.5)	(9)		3.5×16 (1 pc), 3.5×25 (2 pcs), 3.8×32 (1 pc), 3.8×38 (2 pcs)
BTK-300													
BT-380	5	8	470	(22.5)	(20)	(18)	(8.5)	(25)	(20)	(18)	(10)	(50)	3.5×20 (1 pc), 3.8×32 (3 pcs), 4.5×25 (1 pc), 4.5×38 (2 pcs), 4.5×45 (1 pc)
BTK-380													
BT-480	5.5		1100	(35)	(30)	(27)	(14)	(37)	(33)	(30)	(13)	(70)	5×30 (2 pcs), 5×40 (2 pcs), 5×50 (3 pcs), 5×60 (1 pc)
BTK-480													

BRACKET BTK-UB Compact Type

TEST METHOD 6



- Height is less than half of that of bracket BTK 1. Compact design with short wall mount surface.
- Maximises space under the top board.
- Strong and safe design.
- With reinforcement rubber to prevent from sinking into the wall of plasterboard.
- Perfectly fits at the corner.

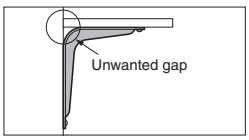
[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.
- Make sure that the screws are tightened into the core of the plasterboard material.

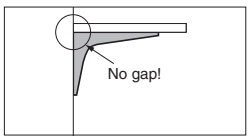
[Parts Included]

- Raised countersunk head wood screw

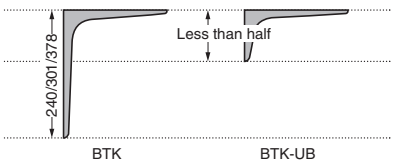
Conventional bracket



BTK-UB

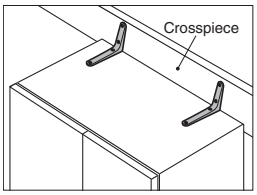


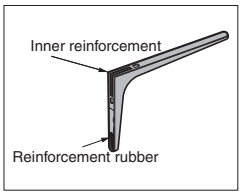
Small height less than half of that of BTK with clean appearance.

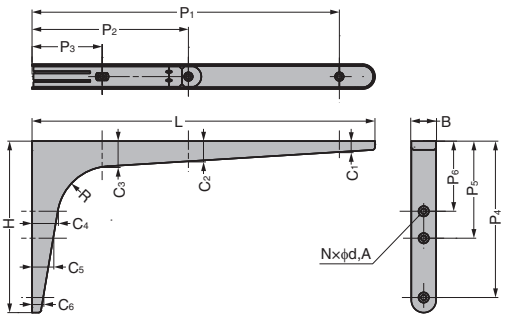


Height comparison of BTK and BTK-UB.
·BTK-240 : BTK-UB100
·BTK-300 : BTK-UB120
·BTK-380 : BTK-UB160

[For Fall Prevention]







Part Name	Material	Finish / Colour	Countersunk Head Wood Screw (Head Only)
BTK-UB (White)	Steel	White Powder Coating	White Enamel Finish
BTK-UB (Black)		Black Powder Coating	Black Enamel Finish
BTK-UB (Umber)		Umber Enamel Finish	
Reinforcement Rubber	Rubber (EPM)	–	

[Body]

RoHS	CAD	Item Code	Item Name	Colour	H	L	B	P1	P2	P3	P4	P5	P6	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-033-596	BTK-UB100W	White	99.5	199	18	176	91	45	85	45	–	117.6	12	171	10	–
G	3D	120-033-597	BTK-UB100B	Black													10	–
G	3D	120-033-598	BTK-UB100UM	Umber													10	–
–	3D	120-033-599	BTK-UB120W	White	119.5	238.5	20	206.5	92.5		105.5	71.5	45	196	20	232	10	–
–	3D	120-033-600	BTK-UB120B	Black													10	–
–	3D	120-033-601	BTK-UB120UM	Umber													10	–
–	3D	120-033-602	BTK-UB160W	White	159	318	23	285	145	65	145	91	65	245	25	382	10	–
G	3D	120-033-603	BTK-UB160B	Black													10	–
–	3D	120-033-604	BTK-UB160UM	Umber													10	–

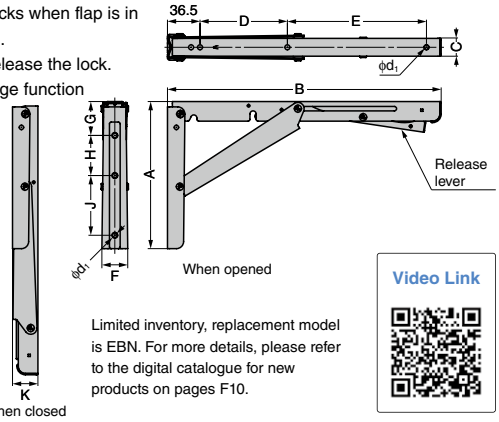
Item Name	d	Holes N	Weight (g)	A	C1	C2	C3	C4	C5	C6	R	Screw (Countersunk Head Wood Screw)
BTK-UB100	4	5	170	8	(7)	(14)	(19)	(12)	–	(10)	(35)	3.5×16 (1 pc) 3.5×25 (1 pc) 3.8×32 (2 pcs) 3.8×38 (1 pc)
BTK-UB120		6	230		(8)	(16)	(21)	(21.5)	(18)			3.5×16 (1 pc) 3.5×25 (1 pc) 3.5×32 (2 pcs) 3.5×38 (1 pc) 3.5×45 (1 pc)
BTK-UB160	5		380	10	(9)	(19.5)	(24.5)	(25)	(22)		(52)	3.5×20 (1 pc) 3.8×32 (1 pc) 3.8×38 (1 pc) 4.5×25 (1 pc) 4.5×45 (2 pcs)

Refer to 1 : P.748

FOLDING BRACKET EB

LOAD CAPACITY 150~200 kgf NSF SUS

- Automatically locks when flap is in opened position.
- Press lever to release the lock.
- Bracket with hinge function in one unit.



Item Name	A	B	C	D	E	F	G	H	J	K	d1
EB-200	116	201	20	155	–	29	21	80	–	28.5	5.6
EB-303	165	307		98	156		38	45	67		
EB-317	171	318.5	24			36				30	6

Limited inventory, replacement model is EBN. For more details, please refer to the digital catalogue for new products on pages F10.

Video Link

RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)
G	3D	120-039-843	★ EB-200	EB-200/EP	Stainless Steel (SUS304)	Mirror	1716	175	332	20
G	3D	120-048-895	★ EB-200-BL	–		Black				20
G	3D	120-039-844	☆ EB-303	EB-303/EP		Mirror	1471	150	500	20
G	3D	120-048-896	☆ EB-303-BL	–		Black				20
G	3D	120-039-845	★ EB-317	EB-317/EP		Mirror	1961	200	750	20
G	3D	120-048-897	☆ EB-317-BL	–		Black				20

*The item names have been changed. The new version will come with a end cap and back plate.

★Discontinued ☆Limited inventory , replacement model is EBN. For more details, please refer to the digital catalogue for new products on pages F10.

DAMPER FOR EB FOLDING BRACKET EBD

Lapcon INSTRUCTION

- Designed for EB folding bracket.
- Lapcon mechanism prevents shelf from sudden drop.
- Installation position can be easily determined with the supplied template.

[Remarks]
- Make sure to have sufficient mounting surface strength.
- Please completely close shelf board with hands.
- Shelf board must be assembled to the arm with release lever.

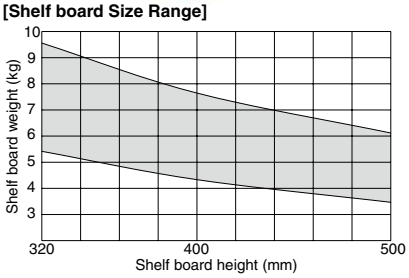
[Parts Included]
- Binding head tapping screw 4×16
- Template

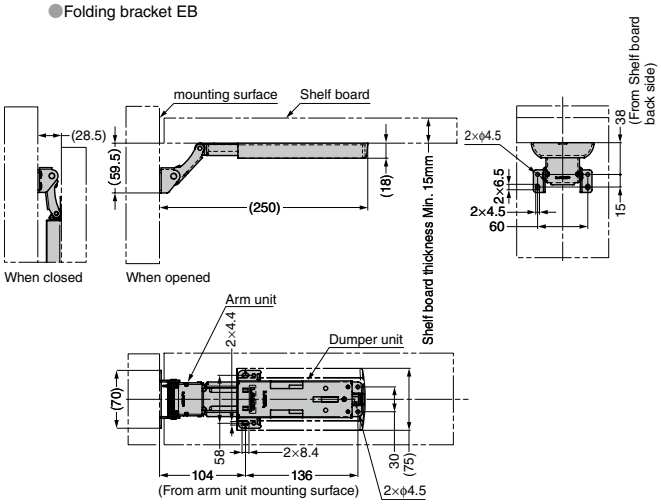
[Sold Separately]
- Folding bracket EB

Video Link

[Application Example]

[Shelf board Size Range]





RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m	Maximum Door Moment kgf·cm	Flap thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-034-867	EBD	ABS/POM/Steel	Off-White/Zinc/Chrome	8.5~15	86.7~153.0	Min. 15	400	1	20

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FOLDING BRACKET EB-DA Built-in Damper

Soft-close

- Can be folded when not in use, allowing full use of space.
- The built-in damper allows for soft-close motion.
- Automatically locks when flap is in opened position. The lock can be easily released by pushing the lever.
- Keeps in folded position and has click sound when fully closed.
- Can also be used with the EB-303 (without damper type). 1
- No hinges are needed.

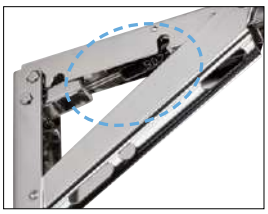
[Application]
- Shelves and tables (garages, recreational vehicles, commercial facilities, factories)

[Parts Included]
- Cross-recessed truss tapping screw ST4.8 x 38, Cross-recessed truss tapping screw ST4.8 x 16 (3 each)

[Optional Parts]
- Folding Bracket EB 1

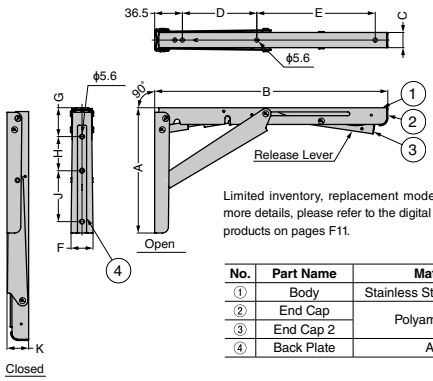
[Remarks]
- Used in pairs. (Shelf width: Max. 1300 mm)
- Be careful not to get fingers caught in the bracket.
- Use a long screwdriver for installation.
- Make sure the release lever is attached to bottom of the shelf for correct installation

[Built-in Damper]



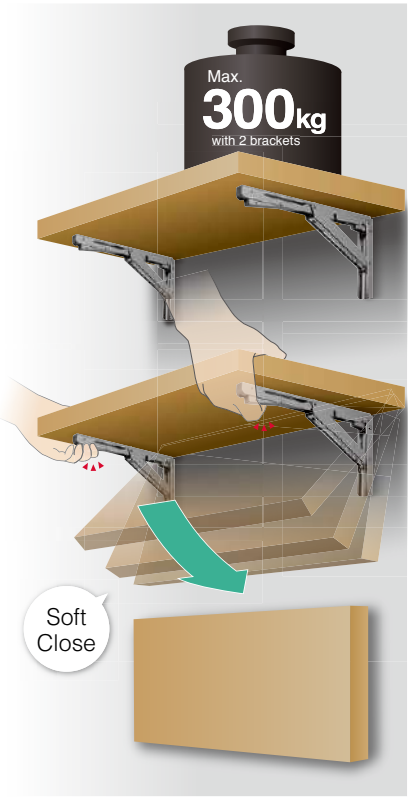
[End Cap]

Comes with end caps for safe use.

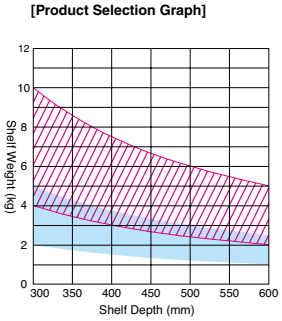


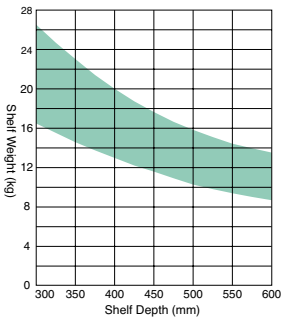
Limited inventory, replacement model is EBN-DA. For more details, please refer to the digital catalogue for new products on pages F11.

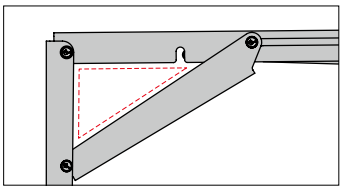
No.	Part Name	Material
①	Body	Stainless Steel (SUS304)
②	End Cap	Polyamide (PA)
③	End Cap 2	
④	Back Plate	ABS



[Product Selection Graph]







Be careful not to get fingers caught in this space when folding.

RoHS	CAD	Item Code	Item Name	Finish/Colour	A	B	C	D	E	F	G	H	J	K	Holes	Load Capacity N /1pc	Load Capacity kgf /1pc	Weight (g)	Box (pcs)
●	●	120-048-775	☆EB-303-DA	Mirror Polished	165	307	20	98	156	29	38	45	67	28.5	6	1471	150	525	20
●	●	120-049-237	☆EB-303-DA-BL	Black															20
●	●	120-049-238	☆EB-317-DA	Mirror Polished	171	318.5	24			36				30		1961	200	775	20
●	●	120-049-239	★EB-317-DA-BL	Black															20

Refer to 1 : No400 P.750

★Discontinued ☆Limited inventory , replacement model is EBN-DA. For more details, please refer to the digital catalogue for new products on pages F11.

FOLDING BRACKET EB-F Multi Angle Locking

SUS

- Can be folded when not in use, allowing full use of space.
- Holds at 4 angles: 60°, 70°, 80°, 90° (multi angle locking). This makes it perfect for wall display shelves.
- The multi angle locking function prevents the brackets from fully collapsing if the lever is accidentally pulled up.
- No hinge is required.

Holds at 60/70/80/90 degrees, and folds to 0 degrees.

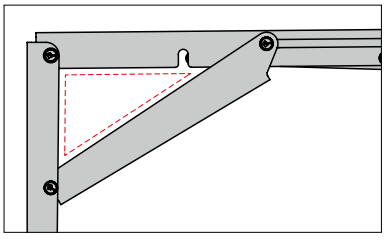
Video Link

[Application]
- Shelves in garages, commercial facilities, factories, camping vehicles, or workbenches.

[Parts Included]
- Cross-recessed truss head tapping screw ST4.8 x 35
- Cross-recessed truss head tapping screw ST4.8 x 16

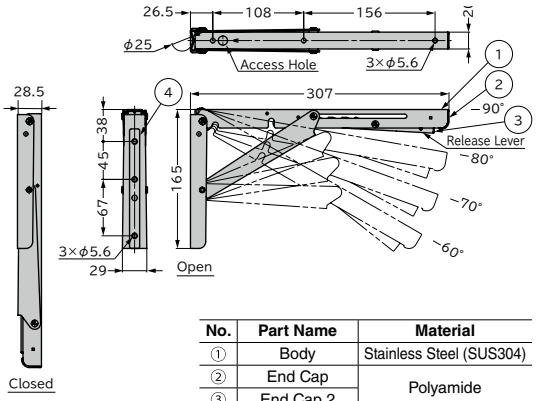
[Remarks]
- When folding/unfolding the brackets, please hold both the shelf and brackets with your hands.
- Use in pairs and install within reach for manual release.
- Be careful not to get fingers caught in the bracket.
- Please use a long screwdriver for easy installation.
- Please make sure the unlocking lever is installed on leading edge side of the shelf.
- Cannot be combined with EB or EB-DA.
- Please make sure the wall can sustain the load.

[Application Example]

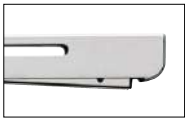


Be careful not to get fingers caught in this section when folding.

An access hole has been added.



No.	Part Name	Material
①	Body	Stainless Steel (SUS304)
②	End Cap	Polyamide
③	End Cap 2	
④	Back Plate	ABS



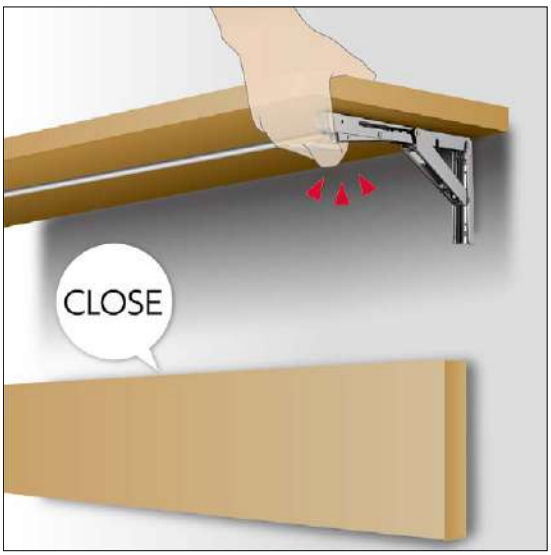
Reduced protrusion of the Release Lever

RoHS	CAD	Item Code	Item Name	Material	Finish	Number of Holes	Load Capacity N/1pc	Load Capacity kgf/1pc	Weight (g)	Box (pcs)
G	3D	120-046-398	EB-303-F	Stainless Steel (SUS304)	Mirror Polished	6	495	50	511	20

Refer to 1 : P.753

INTERLOCK LEVER EB-90 For EB-DA Wide Shelf

INSTRUCTION



Used with the folding brackets.

- Multiple levers allow for one-handed operation.
- Can be used with the EB-DA 1 (folding brackets).
- Ideal for use on wide shelves.
- The rod can be cut to desired length.

[Remarks]

- If the rod is used with a length of 700 mm or more, please install the included additional mounting plate on the middle of the rod to prevent warping.
- When folding/unfolding the brackets, please hold both the shelf and brackets with your hands.

[Components]

- For 3 brackets

Lever : 3 pcs
Mounting plate: 6 pcs

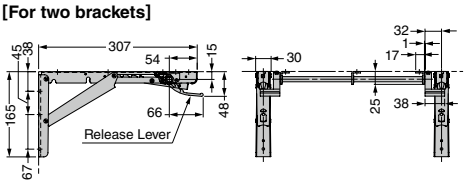
- For 2 brackets

Lever : 2 pcs
Mounting plate: 3 pcs

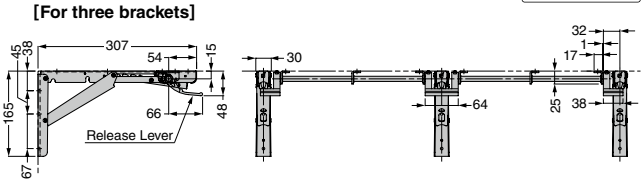
- Rod

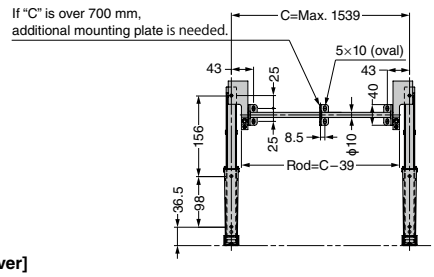
Video Link

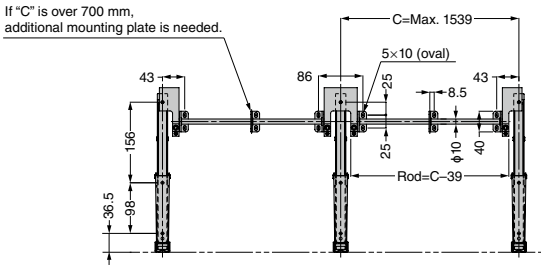
[For two brackets]



[For three brackets]







[Lever]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (set)
G	3D	120-046-395	EB-907560	For 2 brackets	Aluminium Alloy	Anodized	114	34
G	3D	120-046-396	EB-907561	For 3 brackets			218	34

Limited inventory, replacement model isEBN-90. For more details, please refer to the digital catalogue for new products on pages F13.

[Rod]

RoHS	CAD	Item Code	Item Name	Length	Material	Finish	Weight (g)	Box (pcs)
G	3D	120-046-397	EB-907572	1500	Aluminium Alloy	Anodized	98	25

Refer to 1: P.751

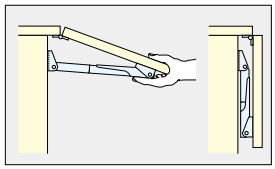
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

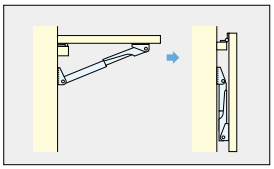
FOLDING BRACKET 388

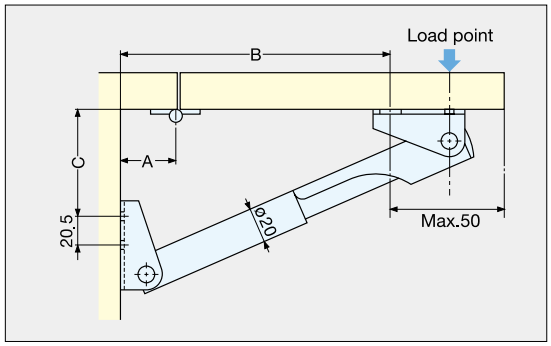
TEST METHOD 6 | LOAD CAPACITY 25~36 kgf

- Automatically locks when flap is in opened position.
- Press lever to release the lock.
- For panel thickness 15~35mm
- Required Quantity:
  - Width up to 600mm···1pc
  - Width 600~1300mm···2pcs

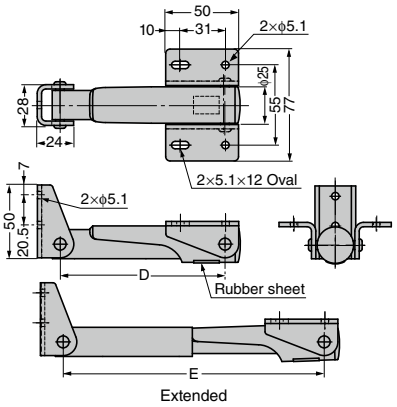
[Parts Included]
- Cross-recessed truss head tapping screw ST 4.8 × 35 (2 pcs)
- Cross-recessed truss head tapping screw ST 4.8 × 16 (4 pcs)







Installation example for 38820-25



RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-105-060	38820-25	Aluminium Alloy	Anodised	28~30	161	15	114	180	250	25	149	5	50
G	3D	120-105-061	38830-25			28~39	252	45	168	275.9	309	31	187	5	50
G	3D	120-105-062	38845-25			28~50	402	87	258.5	430.8	330	33	266	5	30
G	3D	120-105-063	38860-25			28~40	549	137	368.5	585.8	360	36	342	5	30
G	3D	120-041-202	38820-25-BL		Black Anodised	28~30	161	15	114	180	250	25	149	5	50
G	3D	120-041-203	38830-25-BL			28~39	252	45	168	275.9	309	31	187	5	50
G	3D	120-041-204	38845-25-BL			28~50	402	87	258.5	430.8	330	33	266	5	30
G	3D	120-041-205	38860-25-BL			28~40	549	137	368.5	585.8	360	36	342	5	30

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FOLDING HINGE 388H For Bracket 388

388H001

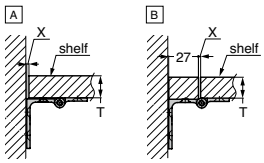
388H000

- For use with the folding brackets 388-D 1 and 388 2.
- Easy to find the right position for the hinges.

[Parts Included]
- Cross-recessed countersunk tapping screw 4.8 x 35 (3 pcs)
- Cross-recessed countersunk tapping screw 4.8 x 16 (4 pcs)

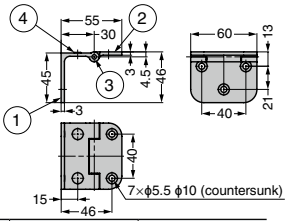
* Finish: anodised / black anodised

[Installation Example]



Thickness T and Clearance X

T	X
< 20	1
20 - 40	2



Video Link

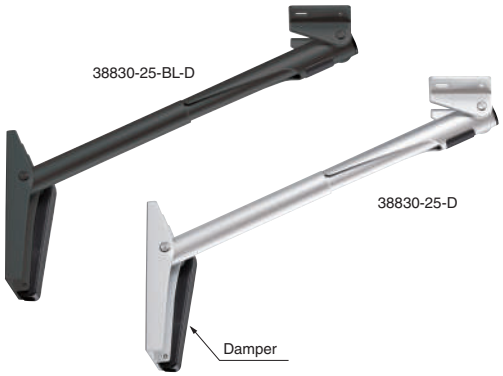
No.	Part Name	Material
①	Base	Aluminium Alloy
②	Bracket	
③	Shaft	Stainless Steel
④	Cap	Elastomer (TPE)

RoHS	CAD	Item Code	Item Name	Finish / Colour	Weight (g)	Box (pcs)
G	3D	120-048-776	388H000	Silver Anodised	53	128
G	3D	120-048-777	388H001	Black Anodised		128

Refer to 1: P.755, 2: P.754 Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FOLDING BRACKET 388-D Built-in Damper

TEST METHOD 6



- Can be folded for saving space when not in use.
- The built-in damper allows for soft closing which prevents accidental shutting.
- Made of aluminium alloy for a lighter body.
- Can also be used together with the 388 bracket. (without damper model) 1

[Recommended Number of Bracket]
- Shelf width is under 600 mm : 1 pc
- Shelf width is 600-1300 mm : 2 pcs

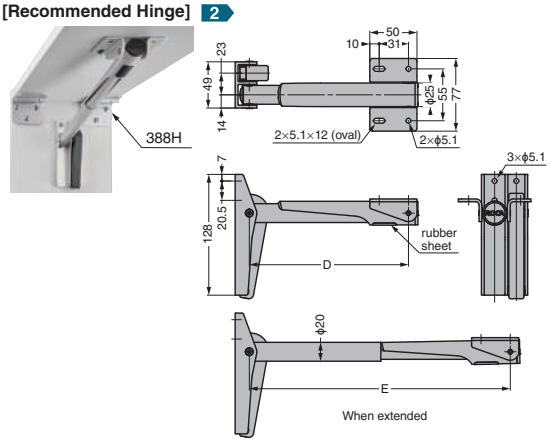
*See also the [Selection Guide].

[Parts Included]
- Cross-recessed truss head tapping screw ST4.8 x 35
- Cross-recessed truss head tapping screw ST4.8 x 16

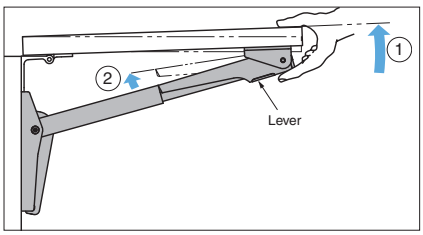
[Optional Part]
- Folding hinge 388H
- Folding bracket 388

[Remarks]
- When folding/unfolding the brackets, please hold both the shelf and brackets with hands.
- Make enough space for the shelf to lift up. See the [How to Use].
- Recommended shelf thickness: 15 -35 mm
- The load capacity was measured at the position demonstrated in the [Dimensions] drawing below.

[Recommended Hinge] 2

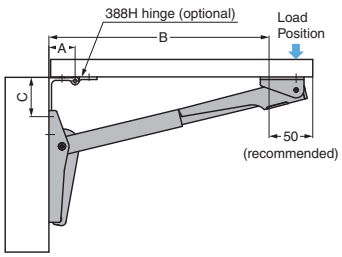


[How to Use]

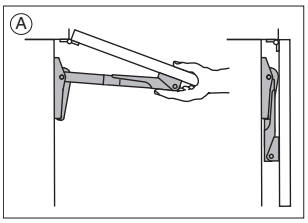


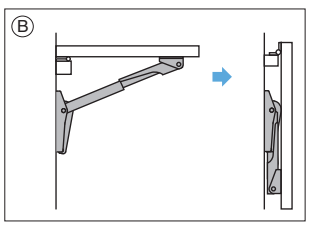
Note: ① Do not lift up the shelf forcibly. It may result in breakage.

[Dimensions]



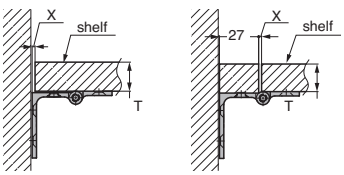
[Installation Example]





*Installation B: the 388H hinge can not be used.

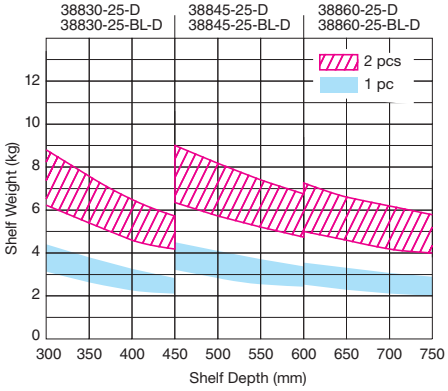
[Installation with the 388H Hinges] 2



Thickness T and Clearance X

T	X
< 20	1
20 - 40	2

[Selection Guide] Number of Brackets and Shelf Spec



*If 388-D (1pc) is used together with 388 (1pc), please refer to 1 pc of graph above.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	A	B	C	D	E	Load Capacity/pc N	Load Capacity/pc kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-048-966	38830-25-D	Aluminium Alloy	Anodised	28-39	252	45	168	275.9	309	31	341	5	40
G	3D	120-048-967	38845-25-D			28-50	402	87	258.5	430.8	330	33	411	5	30
G	3D	120-048-968	38860-25-D			28-40	549	137	368.5	585.8	360	36	491	5	25
G	3D	120-048-969	38830-25-BL-D		Black Anodised	28-39	252	45	168	275.9	309	31	341	5	40
G	3D	120-048-970	38845-25-BL-D			28-50	402	87	258.5	430.8	330	33	411	5	30
G	3D	120-048-971	38860-25-BL-D			28-40	549	137	368.5	585.8	360	36	491	5	25

Refer to 1 2 : P.754

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

FOLDING BRACKET BOS-180, BOS-240

TEST METHOD 6 SUS

●With locking lever to prevent unexpected folding.

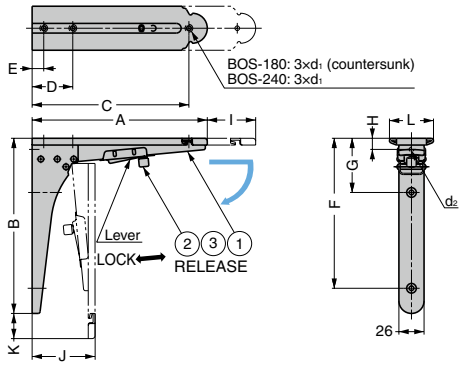
[Remarks]

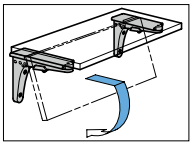
●Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.

[Parts Included]

●BOS-180
Countersunk head tapping screw 4×20 (SUS)
Pan head tapping screw 4.5×25 (SUS)
Raised countersunk head tapping screw 4.5×25 (SUS)
Raised countersunk head tapping screw 4.5×50 (SUS)

●BOS-240
Countersunk head tapping screw 4×20 (SUS)
Pan head tapping screw 5×30 (SUS)
Raised countersunk head tapping screw 5×30 (SUS)
Raised countersunk head tapping screw 5×70 (SUS)





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Lever	Brass	Nickel
③	Cover	EPDM	Black

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	H	I	J	K	L	d₁	d₂	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-111	BOS-180	181	181	162	42	12	155	56	11.5	50	65	26	45.5	4.8	4.8	392	40	476	1	20
–	3D	120-030-090	BOS-240	240	250	215	80	25	220	70	15	64	81	29	49	5	5.5	325	33	770	1	20

FOLDING BRACKET BTO

SUS

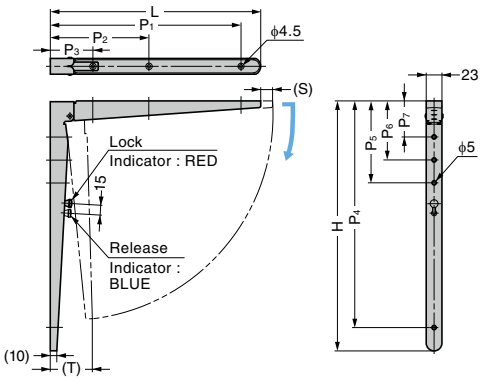
●Folding type of bracket BT and BTK 1.
●With locking lever to prevent unexpected folding.

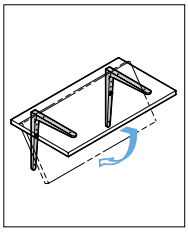
[Remarks]

●When using as a bracket, be sure to lock the lever.
●Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.

[Parts Included]

●Raised countersunk head wood screw (see the table below for size and qty)





Item Name	Shelf Board		Wall	
	Size	Qty	Size	Qty
BTO-300	3.5×20	1 pc	4.5×25	1 pc
	3.8×38		4.5×45	2 pcs
BTO-380	3.5×25		4.5×32	1 pc
	3.8×38		4.5×50	3 pcs
	3.8×45		–	–

Stainless steel (Plain) for BTO-300S, BTO-380S
Steel (White Enamel Finish) for BTO-300W, BTO-380W.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	H	L	P₁	P₂	P₃	P₄	P₅	P₆	P₇	S	T	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-937	BTO-300S	Stainless Steel (SUS304)	Satin	300	241	211	–	61	270	80	50	–	15	57	200	20.4	510	2	20
–	3D	120-030-091	BTO-300W	Steel	White Powder Coating															2	20
–	3D	–	☆BTO-380S	Stainless Steel (SUS304)	Satin	380	320	290	150	65	345	125	90	55	18	64	–	–	–	–	–
–	3D	–	☆BTO-380W	Steel	White Powder Coating															–	–

Refer to 1 : P.748

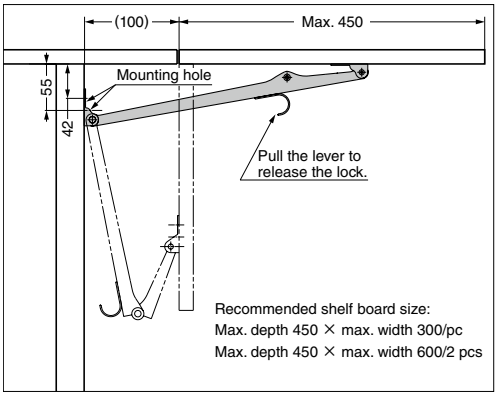
☆Made to order with a minimum order of 2,000 pcs.

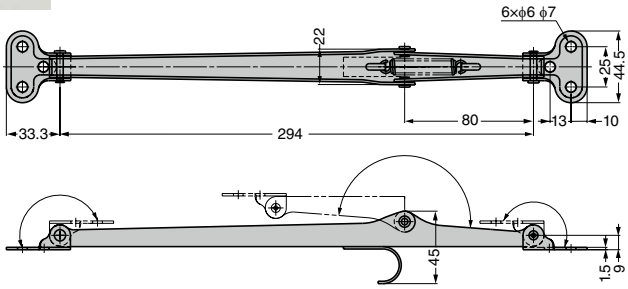
SPRING LOADED FOLDING BRACKET GTS-300

SUS

[Remarks]

- Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.
- Shelf board depth : Max. 450 mm.
- Horizontal use only.





RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Load Capacity N/ 2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-109-116	GTS-300	Stainless Steel (SUS304)	Polished	29.4	3	58.8	6	190	12	96

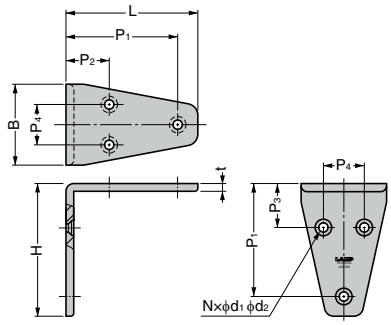
ANGLE BRACKET SV

NSF TEST METHOD 6 SUS

- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as bathroom, kitchen, marine, and medical field, etc.

[Parts Included]

- Raised countersunk head wood screw (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P1	P2	P3	P4	B	t	d1	d2	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	120-030-060	SV-40S	Stainless Steel (SUS304)	Satin	40	40	34	17	17	–	25	3	3.3	6.5	4	78.4	8	29	3.1× 20	40	640
G	3D	120-030-056	SV-40M		Polished																40	640
G	3D	120-030-061	SV-55S		Satin	55	55	47	18	18	17	36.5		3.8	7.5	6			58	3.5× 20	20	320
G	3D	120-030-057	SV-55M		Polished																20	320
G	3D	120-030-062	SV-80S		Satin	80	80	71	24	24	27	52	4	4.3	8.5		137.2	14	162	3.8× 20	10	120
G	3D	120-030-058	SV-80M		Polished																10	120

ANGLE BRACKET XL-SA01

TEST METHOD 6 SUS

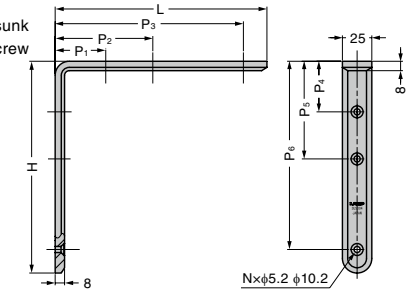
- Chamfered profile provides excellent safety and design.
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.

[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P1	P2	P3	P4	P5	P6	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-303	XL-SA01-120S	Stainless Steel (SUS304)	Satin	120	120	38	–	100	38	–	100	4	226	23	312	8	40
G	3D	120-030-307	XL-SA01-120M		Polished													8	40
G	3D	120-030-304	XL-SA01-150S		Satin	150	150	43		130	43		130		177	18	400	6	30
G	3D	120-030-308	XL-SA01-150M		Polished													6	30
G	3D	120-030-305	XL-SA01-180S		Satin	180	180		83	160		83	160	6	137	14	483	6	30
G	3D	120-030-309	XL-SA01-180M		Polished													6	30
G	3D	120-030-306	XL-SA01-240S		Satin	240	240			220			220		118	12	660	4	20
G	3D	120-030-310	XL-SA01-240M		Polished													4	20

ANGLE BRACKET SU-A

NSF TEST METHOD 6 SUS

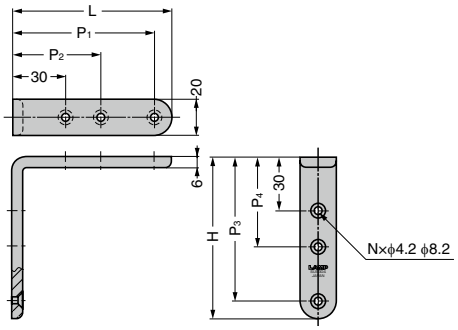
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.
- Please contact us for satin finish.

[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	L	P1	P2	P3	P4	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-180	SU-A70M	Stainless Steel (SUS304)	Polished	70	70	–	60	–	60	4	235	24	107	10	100
G	3D	120-030-181	SU-A90M			90	90	80	50	80	50	6	167	17	140	10	100
G	3D	120-030-182	SU-A120M			120	120	110		110			127	13	194	8	80
G	3D	120-030-183	SU-A150M			150	150	140	60	140	60		98	10	248	6	60
G	3D	120-030-179	SU-A180M			180	180	170		170			88	9	302	6	30

ANGLE BRACKET SU-B

TEST METHOD 6 SUS

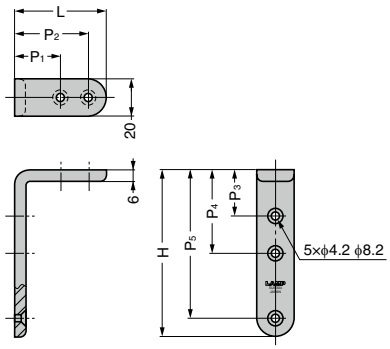
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.
- Please contact us for satin finish.

[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	L	P1	P2	P3	P4	P5	Load Capacity N/pc		Load Capacity kgf/pc		Weight (g)	Box (pcs)	Carton (pcs)
													Transverse	Longitudinal	Transverse	Longitudinal			
G	3D	120-030-184	SU-B50M	Stainless Steel (SUS304)	Polished	90	50	25	40	25	45	80	235	127	24	13	106	10	100
G	3D	120-030-185	SU-B65M			120	65	30	55	30	60	110					145	10	100
G	3D	120-030-186	SU-B80M			150	80		70			140	177	98	18	10	186	8	80

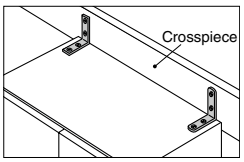
ANGLE BRACKET SU

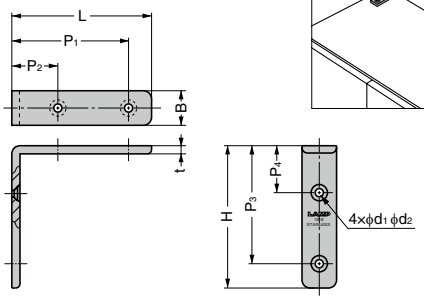
NSF TEST METHOD 6 SUS

- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.

[Parts Included]
- Raised countersunk head wood screw (SUS)

[For Fall Prevention]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	B	H	P_1	P_2	P_3	P_4	t	d_1	d_2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	120-030-070	SU-30S	Stainless Steel (SUS304)	Satin	30	12	30	24	11	24	11	2.5	3.5	6.5	59	6	11	3.1×20	60	960
G	3D	120-030-065	SU-30M		Polished															60	960
G	3D	120-030-071	SU-45S		Satin	45	13	45	37	17	37	17	3			49	5	23		50	800
G	3D	120-030-066	SU-45M		Polished															50	800
G	3D	120-030-072	SU-60S		Satin	60	15	60	50	20	50	20		4	7.5	39	4	36	3.5×20	40	640
G	3D	120-030-067	SU-60M		Polished															40	640

ANGLE BRACKET SSA

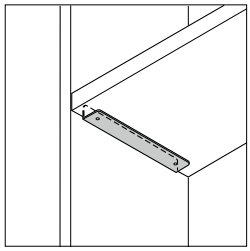
TEST METHOD 9 SUS

- L-shaped bracket with wide and stable support part.
- Shelf board hides the installation part for clean appearance.
- An oval hole at the middle allows to adjust the position vertically in 2 mm.

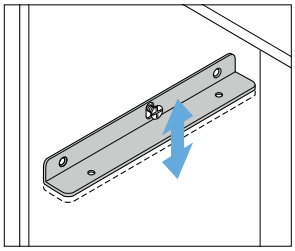
[Remarks]
- Please install to side board.If installed to back board, it may fall off due to the inability to withstand the load.
- Please firmly install in a place with adequate strength.
- When installing to a plasterboard, please screw in the core material.
- Load capacity of below table is the value when using 2 angle brackets for 1 shelf board.

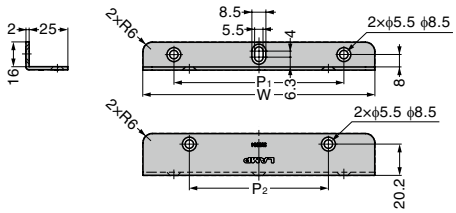
[Parts Included]
- countersunk head tapping screw 3.5×16 (SUS)
- countersunk head tapping screw 3.5×12 (SUS)

[Installation]



[Adjustable in a Vertical Direction]





RoHS	CAD	Item Code	Item Name	Material	Finish	W	P_1	P_2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-027-253	SSA-100H	Stainless Steel (SUS304)	Satin	100	60	40	1470	150	64.6	30	240
G	3D	120-027-254	SSA-150H			150	110	90			96.8	20	160
G	3D	120-027-255	SSA-200H			200	160	130			129.6	15	120

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- Download installation instructions

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SHELF STANDARD AND SHELF SUPPORT LIST

For the products listed below, numerous patents and design rights have been applied or registered.

Load capacity is the value for 1 shelf board (using 4 shelf supports).

Choose Shelf Standard

Load Capacity kgf	45			60	80	
Feature	12 mm **AP-DH Mortise Mount** AL ▸P.775 Can be easily cut on site! Press-fit type without using screws. Clean appearance!	12 mm **AP-DM Surface Mount** AL ▸P.775 Recommended Can be easily cut on site! With the thickness of only 3mm, surface mount is recommended!	15 mm **SP, SPS** SUS ▸P.771 With the largest number of applicable shelf supports!	15 mm **SM** SUS ▸P.774 With blind to cover the inside of mounting hole for shelf support!	15 mm **SP, SPS** SUS ▸P.771 With the largest number of applicable shelf supports!	15 mm **SPW-1820** SUS ▸P.768 Excellent design with shelf support mounting hole invisible. Mounting screws can also be hidden with cover installed.
Thickness	1 mm (Mortise part excluded)	3 mm	5 mm	5 mm	5 mm	5 mm
Total Length	1820 mm 2600 mm	1820 mm 2600 mm	455 mm ~ 2600 mm	1820 mm 2600 mm	455 mm ~ 2600 mm	1820 mm
End Cap	–	**AP-EC20** ▸P.776	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770

Choose Shelf Support and Accessories

AP-FB20 ▸P.776

Thin and space-saving!
Also suitable for glass shelf with cap installed.
Shelf Support Cap & Cover: Not Included
AP-FC20 ▸P.776

Other Accessories
- Shelf Holder With Angle Adjusting Function AP-FK20 ▸P.780
- Shelf Support Hook AP-FK20D ▸P.779
- Dowel AP-FK20C ▸P.780
- Shelf Holder AP-FA20 ▸P.779

New arrivals!
- **Shelf Holder AP-FB120** ▸P.781
  AP-DM (FOR AP-DM)

SPB-20 ▸P.772

Not apt to come off in case of vibration
Shelf Support Cap & Cover: Not Used

Other Accessories
- Hook For Shelf Standard SP-35 ▸P.771
- Shelf Holder SPB-200 ▸P.773

SPM-20B ▸P.774

Thin and space-saving!
Shelf Support Cap & Cover: Not Used

SPF-20LC ▸P.773

Not apt to slide with a cover! Suitable for glass shelf Height is adjustable by +2mm
Shelf Support Cap & Cover: Included

SPF-20 ▸P.772

Thin and space-saving!
Shelf Support Cap & Cover: Not Used

Other Accessories
- Hook For Shelf Standard SP-35 ▸P.771
- Shelf Holder SPB-200 ▸P.773
- Shelf Holder SPF-20A ▸P.773

SPW-20 ▸P.768

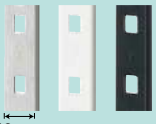
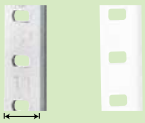
With cover of the same colour as the shelf standard cover.
Shelf Support Cap & Cover: Included

SUS Made of stainless steel.
AL Made of aluminium alloy.

SHELF STANDARD AND SHELF SUPPORT LIST

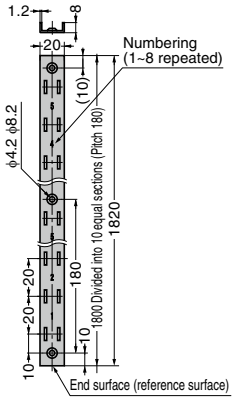
For the products listed below, numerous patents and design rights have been applied or registered.

Load capacity is the value for 1 shelf board (using 4 shelf supports).

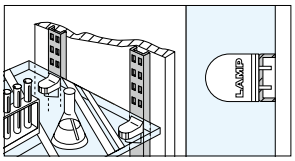
80	80	90	100	130	150
8 mm	 12 mm	15 mm	 15 mm	15 mm	20 mm
SPN-1820 SUS ▸P.767	**SPE** SUS ▸P.766 Recommended	**SM** SUS ▸P.774	**SP, SPS** SUS ▸P.771 Recommended	**SPH** SUS ▸P.769	**SPHL-1820** SUS ▸P.764
8mm wide ultra slim body!	Thin type of 3mm thickness! Surface mount is recommended!	With blind to cover the inside of mounting hole for shelf support!	With the largest number of applicable shelf supports!	Not apt to deform due to load!	Door thickness 1.2mm! Not apt to deform due to load!
5 mm	3 mm	5 mm	5 mm	5 mm	8 mm
1820 mm	1820 mm 2620 mm	1820 mm 2600 mm	455 mm ~ 2600 mm	1820 mm 2524 mm	1820 mm
SPN-17EC ▸P.767	**AP-EC20** ▸P.776	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPW-EC20** ▸P.768 **SP-18E** ▸P.770	**SPHL-23E** ▸P.764
SPN-15 ▸P.767	**SPE-FB20S** ▸P.766	**SMB-15R** ▸P.774	**SPB-15R** ▸P.771	**SPH-5** ▸P.770	**SPHL-30** ▸P.764
Slim body matching with shelf standard! Holds more securely with cap installed. Shelf Support Cap & Cover: Not Included **SPN-15C** ▸P.767	Thin and space-saving! Also suitable for glass shelf with cover installed Shelf Support Cap & Cover: Not Included **SPE-FC20** ▸P.766 **Other Accessories** **Shelf Holder With Angle Adjusting Function AP-FK20** ▸P.780 **Shelf Support Hook AP-FK20D** ▸P.779 **Dowel AP-FK20C** ▸P.780 **Shelf Holder AP-FA20** ▸P.779	Not apt to slide with a cover! Shelf Support Cap & Cover: Included	Not apt to slide with a cover! Suitable for glass shelf Shelf Support Cap & Cover: Included **Other Accessories** **Hook for Shelf Standard SP-35** ▸P.771 **Shelf Holder SPB-200** ▸P.773	With cover and holder, suitable for glass shelf. Shelf Support Cap & Cover: Included **SPH-20** ▸P.769 Not apt to slide with a cover! Suitable for glass shelf Shelf Support Cap & Cover: Included **SPH-15** ▸P.770 Compact design with clean appearance. Shelf Support Cap & Cover: Not Used	Not apt to slide with a cover! Suitable for glass shelf Shelf Support Cap & Cover: Included **SPHL-25** ▸P.764 Compact design with clean appearance. Shelf Support Cap & Cover: Not Used

HEAVY DUTY SHELF STANDARD SPHL-1820 For Heavy Duty

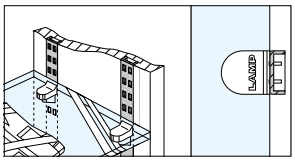
NSF SUS



[Surface Mount]



[Mortise Mount]



- Heavy duty shelf standard with 1.2 mm thickness.
- The shelf supports are adjustable every 20mm.
- Made of stainless steel (SUS304) with excellent durability.
- Use with shelf support SPHL-30 or SPHL-25 (sold separately).
- End cap SPHL-23E for shelf standard is sold separately.

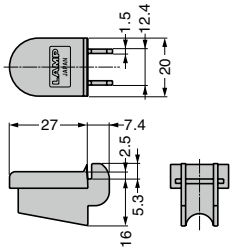
[Sold Separately]
- Shelf support SPHL-30 1
- Shelf support SPHL-25 2
- End cap SPHL-23E 3

RoHS	CAD	Item Code	Item Name	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
Gr	3D	120-030-912	SPHL-1820	Stainless Steel (SUS304)	Satin	11	500	30	–

Refer to 1 2 3 : P.764

SHELF SUPPORT SPHL-30 For SPHL-1820

NSF TEST METHOD 9 SUS



- For shelf standard SPHL-1820 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover (black) prevents glass shelf from sliding.
- Has resistance to vibration.

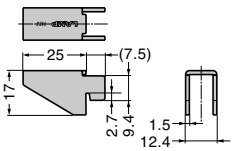
[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
Gr	3D	120-030-913	SPHL-30	Stainless Steel (SUS304)	Satin	1470	150	12	100	1000

Refer to 1 : P.764

SHELF SUPPORT SPHL-25 For SPHL-1820

NSF TEST METHOD 9 SUS



- For shelf standard SPHL-1820 1.
- Compact design does not affect cabinet appearance.

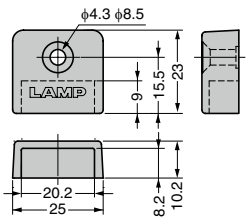
[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
Gr	3D	120-030-914	SPHL-25	Stainless Steel (SUS304)	Satin	1470	150	11	200	1200

Refer to 1 : P.764

END CAP SPHL-23E For SPHL-1820

[Application Example]



- For shelf standard SPHL-1820 1.
- Installed at the end of shelf standard for safe use.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
Gr	3D	120-018-660	SPHL-23E-WT	PP	White	2	400	4000
Gr	3D	120-018-661	SPHL-23E-BL		Black		400	4000

Refer to 1 : P.764

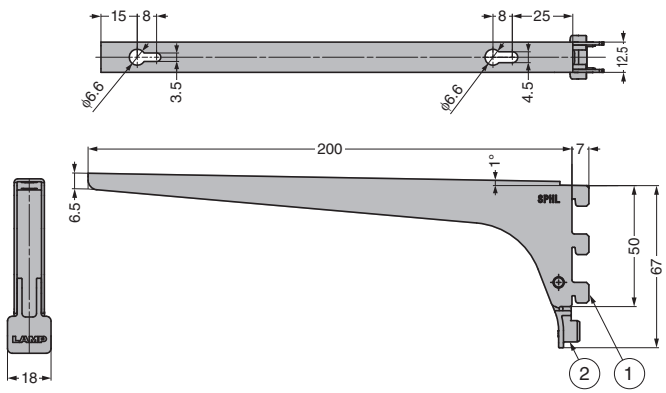
SHELF HOLDER SPHL-FB200 For SPHL-1820

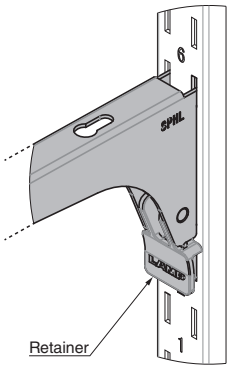
SUS

- For shelf standard SPHL-1820 1.
- 2 brackets required for 1 shelf.
- With retainer to prevent from coming off from shelf standard.

[Remarks]
- Max. shelf board width: 900mm.
- Load capacity varies depending on shelf board depth.(See table)
- Load capacity includes shelf board weight.
- When fixing shelf standard on wall, be sure to install it in the position with pillar or other solid substrates.

[Parts Included]
- Pan head tapping screw 3×12 (SUS)

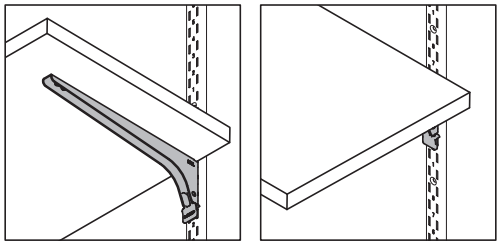




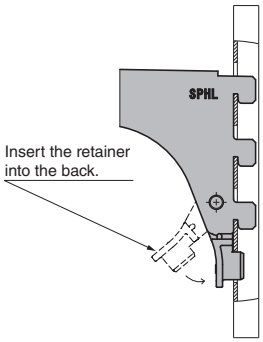
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Satin
②	Retainer	PP	White

The material of the retainer will change to polyamide (PA) when the current stock runs out.

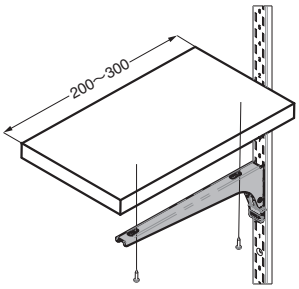
[Application Example]



●Shelf Standard Installation



●Shelf Board Installation



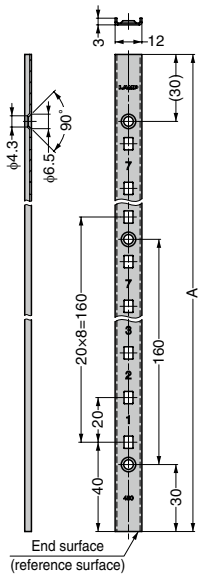
Install the shelf board with screws.

RoHS	CAD	Item Code	Item Name	Shelf Board Depth 200~250mm		Shelf Board Depth 250~300mm		Weight (g)	Box (pcs)	Carton (pcs)
				Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs			
—	3D	120-036-485	SPHL-FB200	196	20	137	14	75	20	200

Refer to 1 : P.764

SHELF STANDARD SPE

SUS



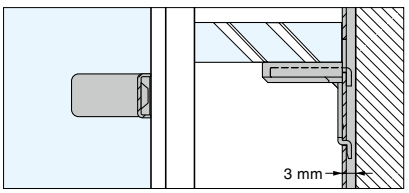
- 3 types of colours (Plain, White & Black) available.
- Ultra thin shelf standard of 3mm thickness.
- The shelf supports are adjustable every 20mm.
- Use with shelf support SPE-FB20S (sold separately).
- End cap AP-EC20 for shelf standard is sold separately.

[Remarks]
- Noted that scratch is conspicuous on black surface.

[Sold Separately]
- Shelf support SPE-FB20S 1
- End cap AP-EC20 2

[Recommended Screws]
- Countersunk head tapping screw 3 or Countersunk head wood screw 3.1

[Installation]
- Combination with shelf support SPE-FB20S 1

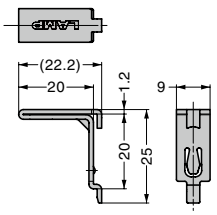


RoHS	CAD	Item Code	Item Name	Material	Finish	A	Screw Hole	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-019-532	SPE-1820	Stainless Steel (SUS430)	Plain	1820	12	156	100	–
G	3D	120-020-757	SPE-1820WT		White Enamel Finish				100	–
G	3D	120-025-833	SPE-1820BL		Black Enamel Finish				100	–
G	3D	120-021-423	SPE-2620		Plain	2620	17	224	60	–

Refer to 1 : P.766, 2 : P.776

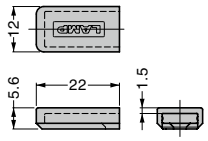
SHELF SUPPORT SPE-FB20S For SPE

TEST METHOD 9 SUS



Shelf support

With cover (sold separately)

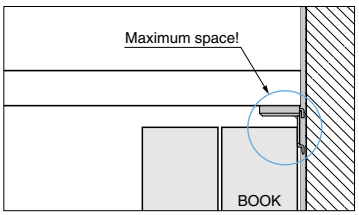


Shelf support cover

- 3 types of colours (Plain, White & Black) available.
- For shelf standard SPE 1.
- Can be attached/detached quickly and firmly.
- Shelf support cover (sold separately) prevents glass shelf from sliding.
- Designed to maximise the space under the shelf.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.
- Noted that scratch is conspicuous on black surface.

[Sold Separately]
- Shelf support cover SPE-FC20



[Shelf Support]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-020-903	SPE-FB20S	Stainless Steel (SUS430)	Barrel Polished	785	80	4.5	300	3000
–	3D	120-021-678	SPE-FB20SWT		White Enamel Finish				300	3000
–	3D	120-025-834	SPE-FB20SBL		Black Enamel Finish				300	3000

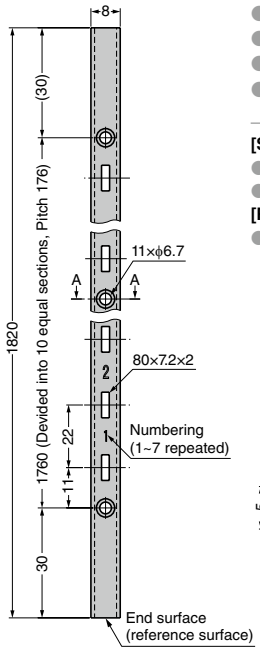
[Cover] Sold Seperately

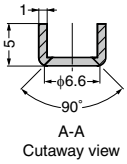
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-019-642	SPE-FC20	Elastomer (TPE)	Light Grey	0.8	300	3000
G	3D	120-028-504	SPE-FC20-BL		Black		300	3000

Refer to 1 : P.766

SHELF STANDARD SPN-1820

SUS





- Only 8 mm width with large load capacity.
- The shelf supports are adjustable every 22mm.
- With shelf support holes to securely hold the shelf support.
- Use with shelf support SPN-15 (sold separately).
- End cap SPN-17EC 1 for shelf standard is sold separately.

[Sold Separately]
- Shelf support SPN-15 2
- End cap SPN-17EC 1

[Recommended Screws]
- Countersunk head tapping screw 3 or Countersunk head wood screw 3.1

RoHS	CAD	Item Code	Item Name	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-129	SPN-1820	Stainless Steel (SUS430)	Satin	11	205	60	–

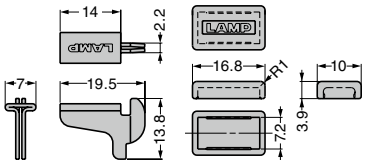
Refer to 1 2 : P.767

SHELF SUPPORT SPN-15 For SPN-1820

TEST METHOD 9 SUS

Picture above is the combination with cap (sold separately).

Refer to 1 : P.767



- For shelf standard SPN-1820 1.
- Holds more securely with optional cap (use without cap is also possible).

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Sold Separately]
- Shelf support cap SPN-15C

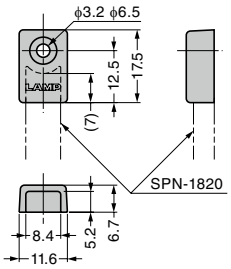
[Shelf Support]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4pcs	Load Capacity kgf/4pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-692	SPN-15	Stainless Steel (SUS304)	Barrel Polished	785	80	2	400	2000

[Shelf Support Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-693	SPN-15C	Elastomer (TPE)	White	0.5	400	4000

END CAP SPN-17EC For SPN-1820



- For shelf standard SPN-1820 1.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-017-694	SPN-17EC	PP	White	0.9	400	4000

Refer to 1 : P.767

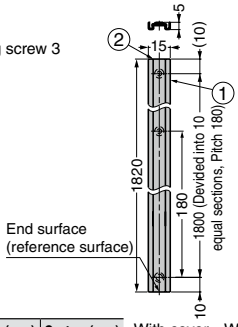
SHELF STANDARD SPW-1820

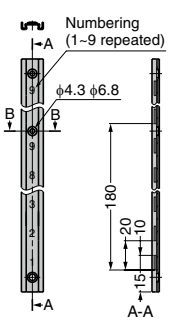
SUS

- Mounting holes for shelf support invisible from the front.
- Screw holes and slots are concealed when used with cover (sold separately). Two colours available for the cover.
- Mortise mount also available as shown in the "B-B Cutaway view" below.
- The shelf supports are adjustable every 20 mm.
- Use with shelf support SPW-20 (sold separately).
- End cap for shelf standard is sold separately. Besides SPW-EC20, SP-18E can also be used.

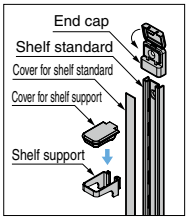
[Sold Separately]
- Cover
- Shelf support SPW-20 1
- End cap SPW-EC20 2
- End cap SP-18E 3

[Recommended Screws]
- Countersunk head tapping screw 3

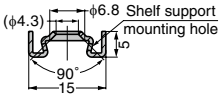




[Installation]



※Items except shelf standard are sold separately.



[Shelf Standard]

RoHS	CAD	Item Code	Item Name	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-699	SPW-1820	11	335	60	–

[Cover] Sold Separately

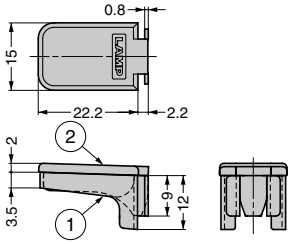
RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-017-817	SPW-CV1820-WT	White	8	1000	–
–	3D	120-017-816	SPW-CV1820-BR	Brown		1000	–

No.	Part Name	Material	Finish / Colour
①	Shelf Standard	Stainless Steel (SUS430)	Satin
②	Cover	Rigid Polyvinyl Chloride	White, Brown

Refer to 1 2 : P.768, 3 : P.770

SHELF SUPPORT SPW-20 For SPW-1820

TEST METHOD 9 SUS



- For shelf standard SPW-1820 1.
- With cover of the same colour as cover for shelf standard SPW-1820.
- Has resistance to vibration.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

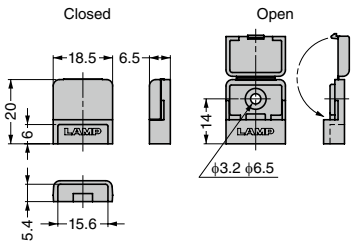
No.	Part Name	Material	Finish / Colour
①	Shelf Support	Stainless Steel (SUS304)	Barrel Polished
②	Cover	Elastomer (TPE)	White, Brown

RoHS	CAD	Item Code	Item Name	Cover Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-696	SPW-20-WT	White	785	80	4.5	200	2000
G	3D	120-017-695	SPW-20-BR	Brown				200	2000

Refer to 1 : P.768

END CAP SPW-EC20 For SPW-1820, SPH, SP, SPS, SM

[Installation]



- For shelf standard SPW-1820.
- The mounting screw is concealed with the integrated end cap closed.
- Also suitable for the following products besides SPW-1820 1.
  SPH 2
  SP, SPS 3
  SM 4

[Recommended Screws]
- Countersunk head tapping screw 3

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-698	SPW-EC20-WT	PP	White	2	400	2000
G	3D	120-017-697	SPW-EC20-BR		Brown		400	2000

Refer to 1 : P.768, 2 : P.769, 3 : P.771, 4 : P.774

HEAVY DUTY SHELF STANDARD SPH

SUS

Shelf support SPH-20 (sold separately)

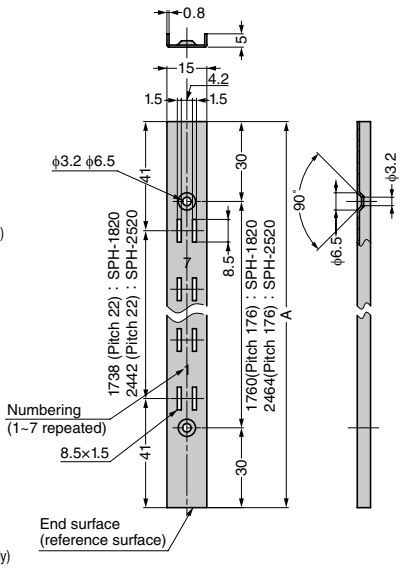
Shelf support SPH-5 (sold separately)

Shelf support SPH-15 (sold separately)

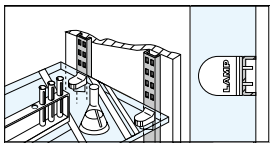
- The shelf supports are adjustable every 22mm.
- Made of stainless steel: Not apt to deform due to load.
- Ideal for shelf supports of laboratory chemical shelf (glass shelf), storage furniture, cosmetics, clothing, and food showcase, etc.
- Use with SPH-20, SPH-5, SPH-15 (sold separately).
- End cap for shelf standard is sold separately.Please select SP-18E or SPW-EC20.

[Sold Separately]

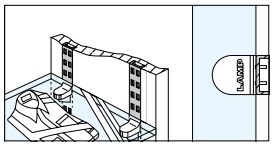
- Shelf support SPH-20 1
- Shelf support SPH-5 2
- Shelf support SPH-15 3
- End cap SP-18E 4
- End cap SPW-EC20 5



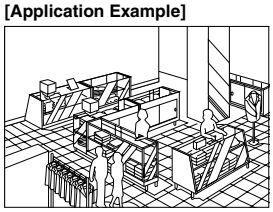
[Surface Mount]



[Mortise Mount]



[Application Example]

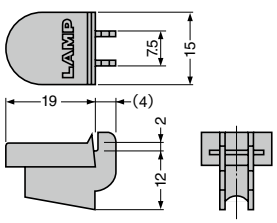


RoHS	CAD	Item Code	Item Name	Material	Finish	A	Holes	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-030-673	SPH-1820	Stainless Steel (SUS304)	Satin	1820	11	230	80	–
–	3D	120-030-682	SPH-2520			2524	15	330	30	–

Refer to 1 : P.769, 2 3 4 : P.770, 5 : P.768

SHELF SUPPORT SPH-20 For SPH

NSF TEST METHOD 9 SUS

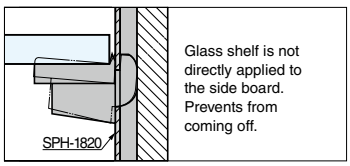


- For shelf standard SPH 1.
- Rubber cover (NBR/black) prevents glass shelf from sliding.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.

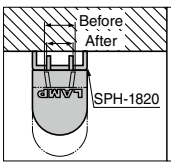
[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Key Points]

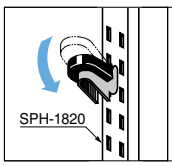


Glass shelf is not directly applied to the side board. Prevents from coming off.



Prevents from coming off with spring effect.

[Installation]



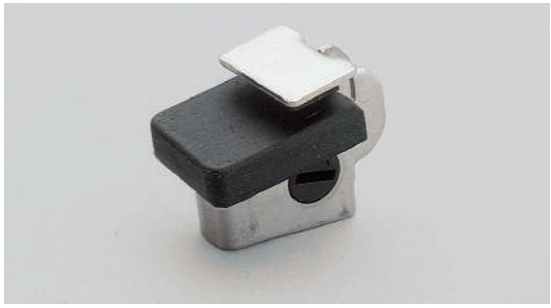
Turn in the direction of the arrow while pressing the side.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-041-375	SPH-20	Stainless Steel (SUS304)	Satin	1280	130	4.5	300	3000

Refer to 1 : P.769

SHELF SUPPORT (W/HOLDER) SPH-5 For SPH

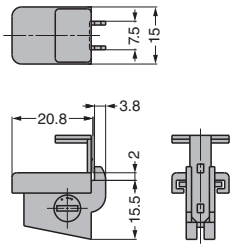
NSF TEST METHOD 9 SUS TEMPERED GLASS



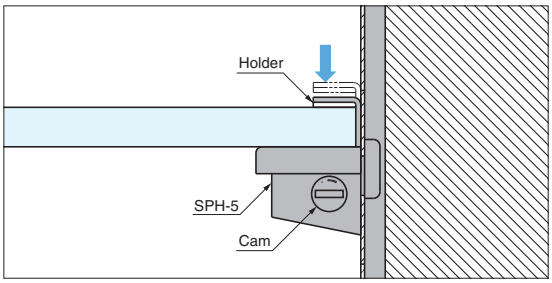
- For shelf standard SPH 1.
- Rubber cover (NBR/black) and holder prevent glass shelf from sliding.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.

[Applications]
- Suitable glass thickness: 4~8 mm

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 3 mm.
- This shelf support can only be used for preventing the glass shelf from shifting. Do not use it for corner bracket, or pull it up.



[Installation]



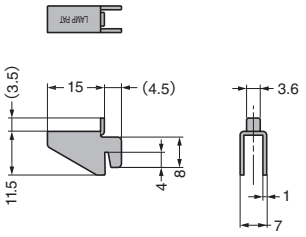
When glass shelf is placed, insert holder between shelf and shelf standard. Tighten cam on the side with a flat-head screwdriver to complete the installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-041-374	SPH-5	Stainless Steel (SUS304)	Satin	1280	130	8	100	1000

Refer to 1 : P.769

SHELF SUPPORT SPH-15 For SPH

NSF TEST METHOD 9 SUS



- For shelf standard SPH 1.
- Compact design does not affect cabinet appearance.

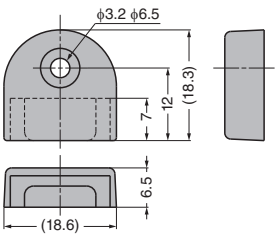
[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-665	SPH-15	Stainless Steel (SUS304)	Satin	1280	130	2.6	400	4000

Refer to 1 : P.769

END CAP SP-18E For SPH, SP, SPS, SM

NSF



- Rounded corner for safe use.
- Installed at the end of shelf standard.
- Can be used for the following shelf standards.

SPH 1
SP, SPS 2
SM 3

[Optional Parts]
- Countersunk head wood screw 3.1

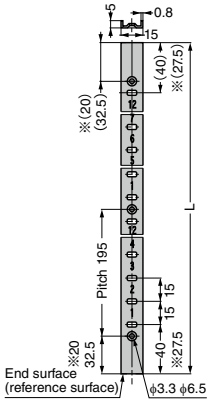
RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-030-214	SP-18E-BL	Black	ABS	1.0	500	5000
G	3D	120-030-215	SP-18E-WT	White		1.2	500	5000

Refer to 1 : P.769, 2 : P.771, 3 : P.774

SHELF STANDARD SP, SPS

SUS

Shelf support SPB-20 and Hook SP-35 are sold separately.



※ marked dimension from the edge are for SPS-1600 only.

- The shelf supports are adjustable every 15mm.
- Use with SPB-15R, SPB-20, SPF-20, SPF-20LC (sold separately). Hook SP-35 suitable for vertical or horizontal shelf standard and bracket SPB for simply holding shelf also available.
- End cap for shelf standard is sold separately.Please select SP-18E or SPW-EC20.
- Models without protection tape available.

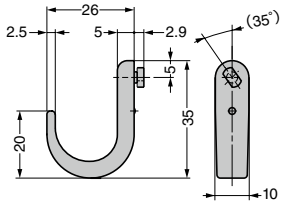
[Sold Separately]

- Hook for shelf standard SP-35 1
- Shelf support SPB-15R 2
- Shelf support SPB-20 3
- Shelf support SPF-20 4
- Levelling shelf support SPF-20LC 5
- Shelf holder SPF-20A 6
- Bracket for shelf standard SPB 7
- End cap SPW-EC20 8
- End cap SP-18E 9

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	L	Holes	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-030-685	SP-455	With Protection Tape	Stainless Steel (SUS304)	Satin	455	3	57	60	–
–	3D	120-030-686	SP-650				650	4	81	60	–
–	3D	120-030-687	SP-845				845	5	105	60	–
–	3D	120-030-688	SP-1040				1040	6	129	60	–
G	3D	120-030-827	SP-1820	Without Protection Tape			1820	10	222	60	–
–	3D	120-030-692	SP-1820WT	With Protection Tape	Stainless Steel (SUS430)	White Enamel Finish				60	–
–	3D	120-030-668	SP-2600		Stainless Steel (SUS304)	Satin	2600	14	317	30	–
–	3D	120-044-356	SPS-1600	Without Protection Tape	Stainless Steel (SUS430)		1600	9	195	60	–
–	3D	120-030-669	SPS-1820				1820	10	222	60	–
–	3D	120-030-667	SPS-2600	With Protection Tape			2600	14	317	30	–
–	3D	120-018-227	SPS-2600T	Without Protection Tape						30	–

Refer to 1 2 : P.771, 3 4 : P.772, 5 6 7 : P.773, 8 : P.768, 9 : P.770

HOOK FOR SHELF STANDARD SP-35 For SP, SPS



- For shelf standard SP, SPS 1.
- Can be used with a vertical or horizontal standard.

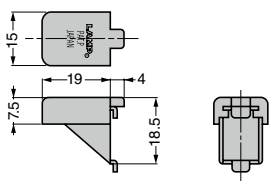
[Application Example]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-020-234	SP-35	Zinc Alloy (ZDC)	Nickel	49	5	15.5	150	600

Refer to 1 : P.771

SHELF SUPPORT SPB-15R For SP, SPS

NSF TEST METHOD 9 SUS

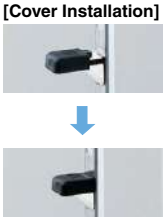


- 2 colours (Black & White) for cover available.
- For shelf standard SP, SPS 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover prevents glass shelf from sliding.

[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Cover Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-026	SPB-15R	Stainless Steel (SUS304)	Satin	Black	980	100	6	300	3000
G	3D	120-036-306	SPB-15R-WT			White				–	–

Refer to 1 : P.771

SHELF SUPPORT SPB-20 For SP, SPS

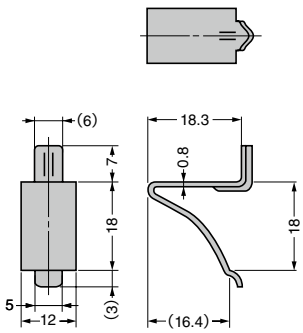
NSF TEST METHOD 9 SUS

SPB-20

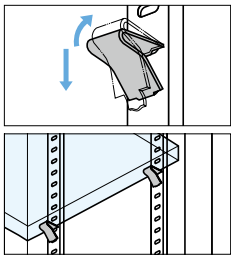
SPB-20WT

- For shelf standard SP, SPS 1.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.
- Satin finish with/without protection tape available.

[Remarks]
- By its structure, SPB-20 cannot be installed in the position to hide the mark "12" on shelf standard.
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.



[Installation]
Lift the lower side of the shelf support and insert.



RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-015	SPB-20	With Protection Tape	Stainless Steel (SUS304)	Satin	441	45	3.6	300	3000
G	3D	120-031-474	SPB-20T	Without Protection Tape						300	3000
G	3D	120-030-693	SPB-20WT			White Enamel Finish				300	3000

Refer to 1 : P.771

SHELF SUPPORT SPF-20 For SP, SPS

TEST METHOD 9 SUS

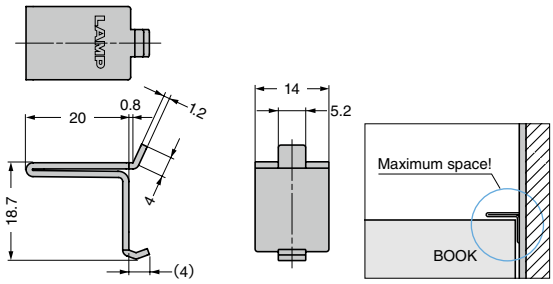
SPF-20

SPF-20WT

- For shelf standard SP, SPS 1.
- Can be firmly installed to shelf standard.
- Designed to maximise the space under the shelf.
- Satin finish with/without protection tape available.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Sold Separately]
- Shelf holder SPF-20A 2



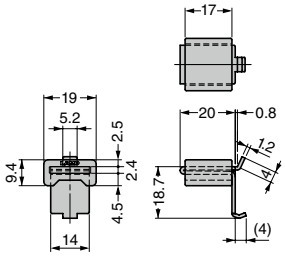
RoHS	CAD	Item Code	Item Name	Type	Material	Finish / Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-116	SPF-20	With Protection Tape	Stainless Steel (SUS304)	Satin	785	80	7	300	3000
G	3D	120-030-117	SPF-20T	Without Protection Tape						300	3000
G	3D	120-030-684	SPF-20WT			White Enamel Finish				300	3000

Refer to 1 : P.771, 2 : P.773

SHELF SUPPORT SPF-20LC For SP, SPS

NSF TEST METHOD 9 TEMPERED GLASS

SPF-20LC SPF-20LC-WT



- For shelf standard SP, SPS 1.
- Shelf level is adjustable by turning the silicone cap upside down.
- Silicone cap prevents glass shelf from sliding.

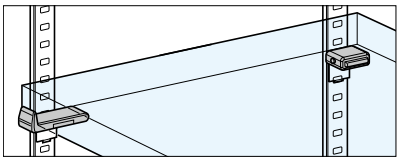
[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

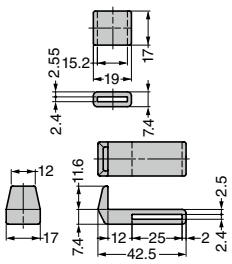
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-335	SPF-20LC	Stainless Steel (SUS304) / Silicone (Q)	Satin/Natural	785	80	9.5	200	2000
G	–	120-044-077	SPF-20LC-WT		White Enamel Finish				200	2000

Refer to 1 : P.771

SHELF HOLDER SPF-20A For SPF-20

[Installation]





- To be used together with SPF-20 1.
- Prevents shelf from coming off.

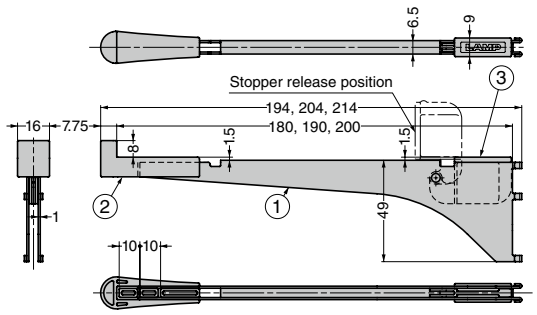
[Remarks]
- Distance from centre of the shelf standard to edge of the shelf board should be within 19mm to 30mm.
- One each of front and back holder as set.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-548	SPF-20A	PE	White	4	100	2500

Refer to 1 : P.772

SHELF HOLDER SPB-200 For SP, SPS

SUS TEMPERED GLASS

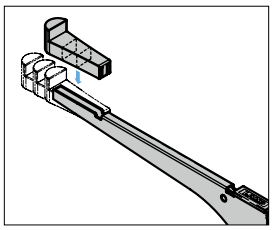


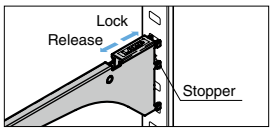
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Holder	PP	White
③	Stopper		

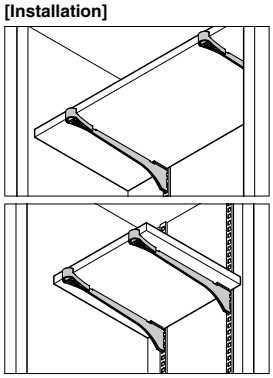
- For shelf standard SP, SPS 1.
- Use 2 or 3 pcs for installing 1 shelf.
- With holder to simply fix shelf.
- Able to adjust depth in 3 different positions.
- With drop off prevention function.
- Can be used for glass shelf.

[Remarks]
- Maximum size of shelf board is Width 900 × Depth 200.
- Load capacity (2 pcs/3 pcs) of below table is the value including the weight of shelf board.
- When fixing shelf standard on wall, please use nominal 3 screws with length above 20mm and install in a position with pillar or other solid substrates.

[Installation]





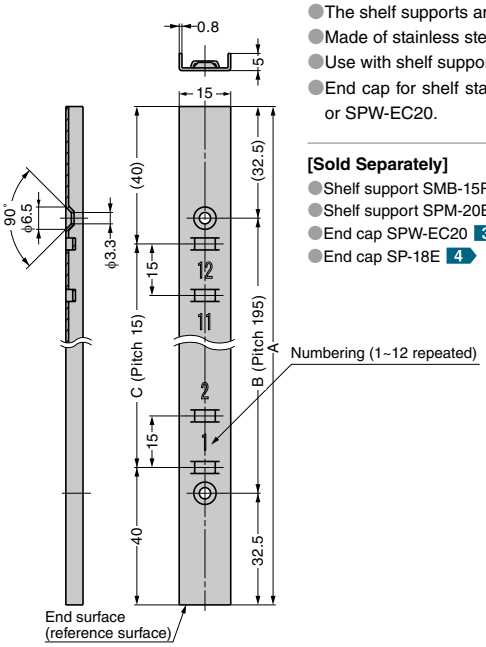


RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Load Capacity N/3 pcs	Load Capacity kgf/3 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-204	SPB-200	98	10	147	15	65	50	200

Refer to 1 : P.771

SHELF STANDARD SM With Blind

NSF SUS



- With blind to cover mounting hole for shelf support.
- The shelf supports are adjustable every 15mm.
- Made of stainless steel with excellent durability.
- Use with shelf support SMB-15R, SPM-20B (sold separately).
- End cap for shelf standard is sold separately. Please select SP-18E or SPW-EC20.

[Sold Separately]

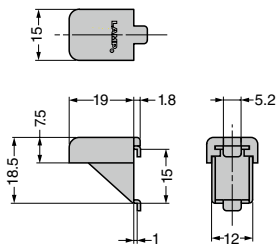
- Shelf support SMB-15R 1
- Shelf support SPM-20B 2
- End cap SPW-EC20 3
- End cap SP-18E 4

RoHS	CAD	Item Code	Item Name	A	B	C	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-030-675	SM-1820	1820	1755	1740	Stainless Steel (SUS304)	Satin	10	245	60	–
–	3D	120-030-846	SM-2600	2600	2535	2520			14	352	30	–

Refer to 1 2 : P.774, 3 : P.768, 4 : P.770

SHELF SUPPORT SMB-15R For SM

NSF TEST METHOD 9 SUS



- For shelf standard SM 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover (grey) prevents shelf from sliding.

[Remarks]

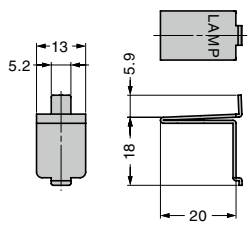
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-674	SMB-15R	Stainless Steel (SUS304)	Satin	883	90	6	300	3000

Refer to 1 : P.774

SHELF SUPPORT SPM-20B For SM

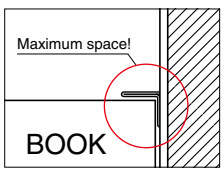
TEST METHOD 9 SUS



- For shelf standard SM 1.
- Designed to maximise the space under the shelf.

[Remarks]

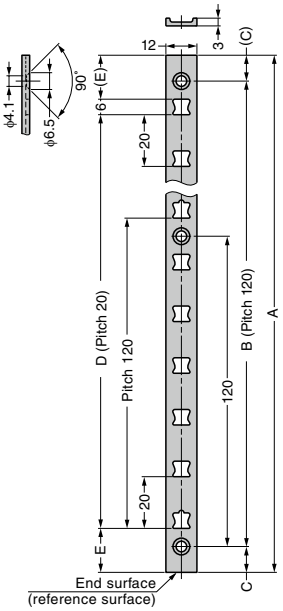
- By its structure, SPM-20B cannot be installed in the position to hide the mark "12" on shelf standard.
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.



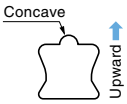
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-915	SPM-20B	Stainless Steel (SUS304)	Satin	588	60	5	300	3000

Refer to 1 : P.774

SHELF STANDARD AP-DM Surface Mount



- Easy to cut to desired length.
- Ultra thin shelf standard of 3mm thickness.
- New slot shape to prevent shelf support from falling off.



[Remarks]
- Please install with the concave of mounting hole (every 120mm) upward.
- Noted that scratch is conspicuous on black anodised surface.
- The colour of black anodised finish may vary. Please check with actual item.

[Sold Separately]
- Shelf support AP-FB20 1
- Shelf support cap AP-FC20 2
- End cap AP-EC20 3

[Sold Separately]
Black, Silver, white, and bronze colours are available.

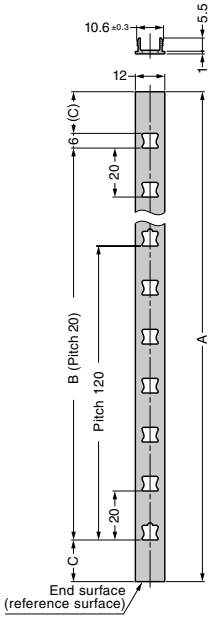
RoHS	CAD	Item Code	Item Name	Screw	Finish
G	–	120-030-336	AP-SC3-16	Countersunk Head Tapping Screw 3×16	Paint/Silver
G	–	120-016-608	AP-SC3-16WT	Countersunk Head Tapping Screw 3×16	Paint/White
–	–	120-014-663	AP-SC3-30	Countersunk Head Tapping Screw 3×30	Paint/Silver
G	–	120-016-606	AP-SC3-30WT	Countersunk Head Tapping Screw 3×30	Paint/White
G	3D	120-028-981	AP-SC3-16BL	Countersunk Head Tapping Screw 3×16	Paint/Black
–	–	120-028-982	AP-SC3-30BL	Countersunk Head Tapping Screw 3×30	Paint/Black
G	–	120-046-010	AP-SC3-16BZ	Countersunk Head Tapping Screw 3×16	Paint/Bronze
G	–	120-046-011	AP-SC3-30BZ	Countersunk Head Tapping Screw 3×30	Paint/Bronze

Material	Finish	Box(sets)
Steel	Body: Yellow Zinc Chromate Head: Paint/Silver, White, Black	100

RoHS	CAD	Item Code	Item Name	Type	A	B	C	D	E	Material	Finish	Holes	Carton (pcs)
G	3D	120-030-086	AP-DM1820	Surface Mount	1820	1800	10	1780	17	Aluminium Alloy	Anodised Silver	16	100
–	3D	120-016-209	AP-DM1820WT								White Enamel Finish		100
G	3D	120-025-260	AP-DM1820BL								Black Anodised		100
G	–	120-045-700	AP-DM1820BZ								Anodised Bronze		100
G	3D	120-030-087	AP-DM2600		2600	2520	40	2500	47		Anodised Silver	22	60

Refer to 1 2 3 : P.776

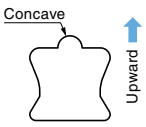
SHELF STANDARD AP-DH Mortise Mount



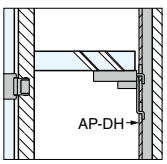
- Easy to cut to desired length.
- Press-fit type without using screws.
- New slot shape to prevent shelf support from falling off.
- Use with shelf support AP-FB20 (sold separately).
- End cap AP-EC20 for shelf standard is sold separately.

[Remarks]
- Please install with the concave of mounting hole (every 120mm) upward.
- Please groove for press-fit according to actual item.
- Noted that scratch is conspicuous on black anodised surface.
- The colour of black anodised finish may vary.Please check with actual item.

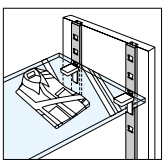
[Sold Separately]
- Shelf support AP-FB20 1
- Shelf support cap AP-FC20 2



[Installation]



[Application Example]



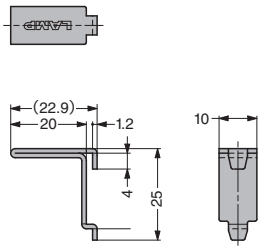
Press-fit mount without using screws for clean appearance.

RoHS	CAD	Item Code	Item Name	Type	A	B	C	Material	Finish	Carton (pcs)
G	3D	120-030-088	AP-DH1820	Mortise Mount	1820	1780	17	Aluminium Alloy	Anodised Silver	100
G	3D	120-036-269	AP-DH1820BL						Black Anodised	100
G	–	120-045-701	AP-DH1820BZ						Anodised Bronze	100
G	3D	120-030-089	AP-DH2600		2600	2500	47		Anodised Silver	60

Refer to 1 2 : P.776

SHELF SUPPORT AP-FB20 For AP-DM, AP-DH

TEST METHOD 9 SUS

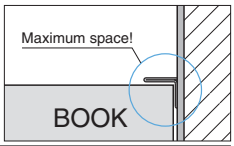


- 3 finishes (Barrel Polished, Black & White) available.
- For shelf standard AP-DM, AP-DH 1.
- Designed to maximise the space under the shelf.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.
- Noted that the black or white surface is easily scratched.

[Sold Separately]
- Shelf support cap AP-FC20 2
- Shelf holder AP-FA20 3
- Shelf holder AP-FK20 4
- Dowel AP-FK20C 5

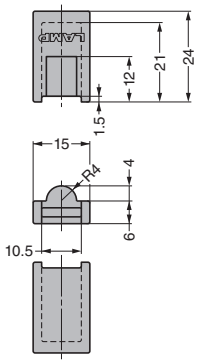
[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-158	AP-FB20	Stainless Steel (SUS430)	Barrel Polished	441	45	5.3	300	3000
G	3D	120-025-835	AP-FB20BL		Black Enamel Finish				300	3000
–	3D	120-036-305	AP-FB20WT		Whtie Paint				300	3000
–	3D	120-046-443	AP-FB20BZ		Bronze				300	3000

Refer to 1 : P.775, 2 : P.776, 3 : P.779, 4 5 : P.780

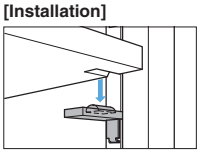
SHELF SUPPORT CAP AP-FC20 For AP-FB20



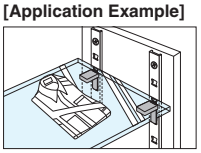
- Light Grey & Black colour available.
- For shelf support AP-FB20 1.
- Ideal for glass shelf.
- Insert the cap with half round shape facing up, and cutout the shelf to prevent from sliding.

[Remarks]
- Noted that the black surface is easily scratched.

[Installation]



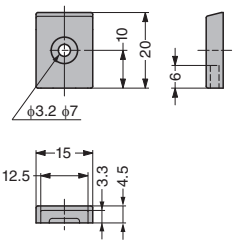
[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-159	AP-FC20-LGR	Elastomer (TPE)	Light Grey	1.6	400	4000
G	3D	120-028-502	AP-FC20-BL		Black	1.0	400	4000
G	3D	120-045-887	AP-FC20-BR		Brown	1.0	400	4000

Refer to 1 : P.776

END CAP AP-EC20 For SPE, AP-DM



- Light Grey & Black colour available.
- For shelf standard SPE 1, AP-DM 2.
- Installed at the end of shelf standard to protect the end surface.
- Stylish design with square shape.

[Remarks]
- Noted that black surface is easily scratched.

[Application Example]

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-157	AP-EC20-LGR	ABS	Light Grey	0.8	400	4000
G	3D	120-028-503	AP-EC20-BL		Black	1.0	400	4000
G	3D	120-045-888	AP-EC20-BR		Brown	1.0	400	4000

Refer to 1 : P.766, 2 : P.775

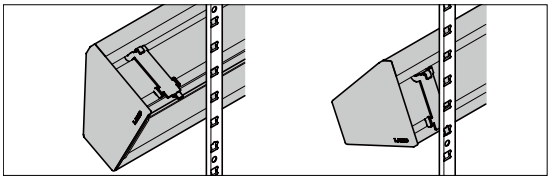
STORAGE TRAY FOR SHELF STANDARD AP-SB350-SL For AP-DM

INSTRUCTION

- Designed to install to the shelf standard for storing small articles.
- Can be used as a towel rack when bottom plate is removed.
- Recommended to install on the back side of the cabinet door using heavy duty concealed hinge J95.

[Application Example] With bottom plate removed

[How to Install]



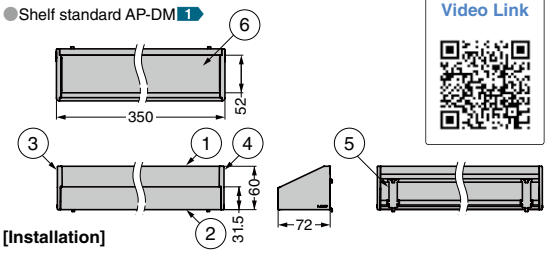
[Remarks]

- The spacing between shelf standards shall be within 320mm.
- Before attaching/detaching the product or removing the bottom plate, please read the label attached to the product or the installation instruction on our website.
- After installation, check if the upper end of the box and A part is as shown in the detail A. Covering of the holes in the shelf standard or bending of the box may cause falling. In this case, please remove and install it once again.

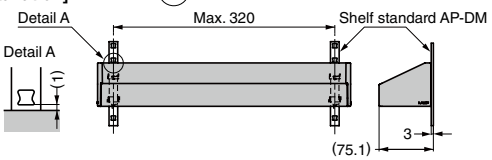
[Sold Separately]

- Shelf standard AP-DM 1

Video Link



[Installation]



No.	Part Name	Material	Finish / Colour
①	Base Plate A	Aluminium Alloy	Anodised Silver
②	Base Plate B		
③	End Cap L	ABS	White
④	End Cap R		
⑤	Bracket	Stainless Steel (SUS304)	Barrel Polished
⑥	Bottom Plate	Aluminium Alloy	Anodised Silver

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-232	AP-SB350-SL	49	5	540	1	20

Refer to 1 : P.775

PLATE FOR SHELF STANDARD AP-SP345-SL For AP-DM

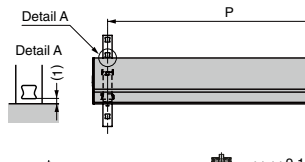
INSTRUCTION

- Designed to install to the shelf standard for hanging hooks.
- Installation method is the same as the box 1.

[Remarks]

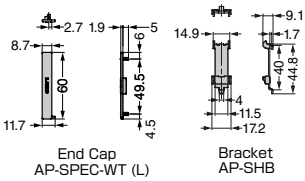
- The spacing between shelf standards shall be within 320mm.
- Before attaching/detaching the product or removing the bottom plate, please read the label attached to the product or the installation instruction on our website.
- After installation, check if the upper end of the plate and A part is as shown in the detail A.Covering of the holes in the shelf standard or bending of the plate may cause falling.In this case, please remove and install it once again.

[Installation]

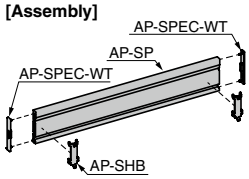


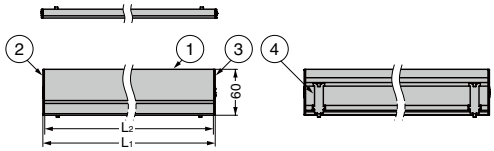
[Sold Separately]

- Bracket AP-SHB
- End Cap AP-SPEC-WT
- Shelf Standard AP-DM 2
- Hook for shelf standard AP-SH-WT 3
- Pipe socket (holder) for shelf standard AP-S32PS 4



[Assembly]





No.	Part Name	Material	Finish / Colour
①	Base Plate A	Aluminium Alloy	Anodised Silver
②	End Cap L	ABS	White
③	End Cap R		
④	Bracket	Stainless Steel (SUS304)	Polished

[Plate]

RoHS	CAD	Item Code	Item Name	L_1	L_2	P (Max.)	Plate Cutting	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-233	AP-SP345-SL	345	341.2	320	Not necessary	219	1	40
G	3D	120-041-355	AP-SP1480-SL	–	1480	–	Necessary	951	10	–

[Bracket] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Box (sets)	Carton (sets)
G	3D	120-041-479	AP-SHB	Stainless Steel (SUS304)	Barrel Polished	500	–

Refer to 1 : P.777, 2 : P.775, 3 4 : P.778

[End Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Box (sets)	Carton (sets)
G	3D	120-041-480	AP-SPEC-WT	ABS	White	500	–

※The AP-SP345-SL comes in a set with 2 end caps and 2 brackets.
※The AP-SP1480-SL comes without additional products. Please order additional products as many as you need.

HOOK FOR SHELF STANDARD AP-SH-WT For AP-DM

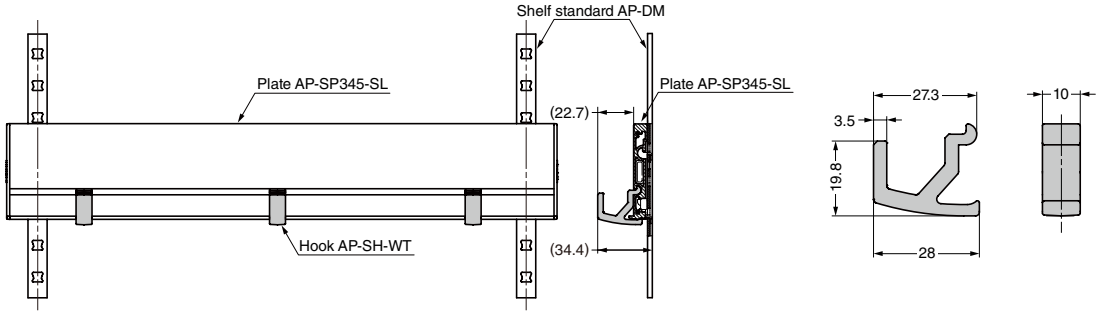
- Designed to install to the plate for shelf standard AP-SP345-SL 1.

[Remarks]
- Up to 5 hooks can be installed to 1 plate.

[Sold Separately]
- Shelf standard AP-DM 2
- Plate for shelf standard AP-SP345-SL 1

Video Link

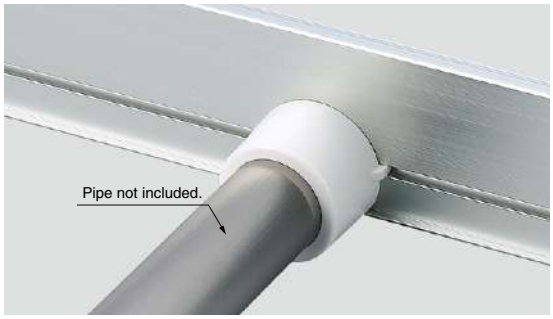
[Installation]



RoHS	CAD	Item Code	Item Name	Material	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-234	AP-SH-WT	ABS	White	9.8	1	2	60	600

Refer to 1 : P.777, 2 : P.775

PIPE SOCKET FOR SHELF STANDARD AP-S32PS For AP-DM



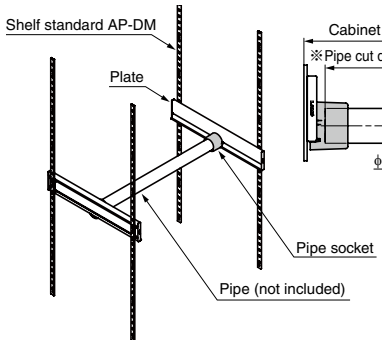
- Used for installing hanger pipe to the plate for shelf standard AP-SP345-SL 1.
- Sold in pairs.

[Remarks]
- 4 shelf standards and 2 plates are required for installing a hanger pipe with this product.
- Hanger pipe not included.
- For hanger pipe length, please contact local representatives.
- Up to 2 pcs of pipe sockets can be installed on 1 pair of plates.

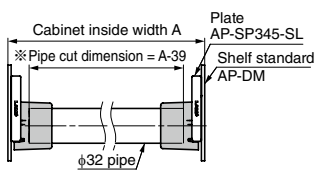
[Sold Separately]
- Shelf standard AP-DM 2
- Plate for shelf standard AP-SP345-SL 1

Video Link

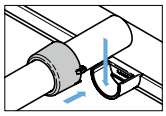
[Installation Example]

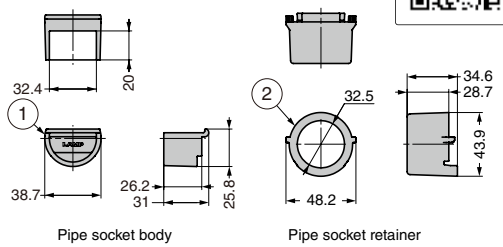


[Installation]



[How to Install]





Pipe socket body

Pipe socket retainer

No.	Part Name	Material	Finish / Colour
①	Pipe Socket Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Pipe Socket Retainer	ABS	White

RoHS	CAD	Item Code	Item Name	Pipe Dia.	Load Capacity N/set	Load Capacity kgf/set	Weight (g)	Box (sets)	Carton (sets)
G	3D	120-036-235	AP-S32PS	32	441	45	57	8	80

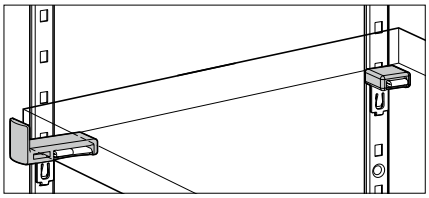
Refer to 1 : P.777, 2 : P.775

SHELF HOLDER AP-FA20 For SPE, AP-DM, AP-DH

- Use with SPE-FB20S 1, AP-FB20 2.
- Prevents shelf from coming off.

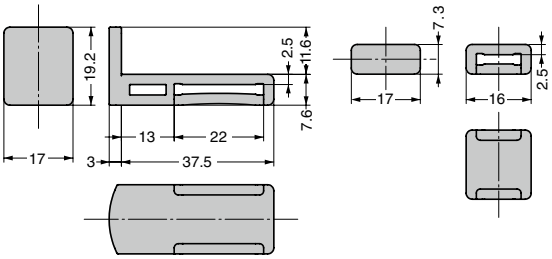
[Remarks]
- Sold in sets (2 parts). 2 sets are necessary for 1 shelf.

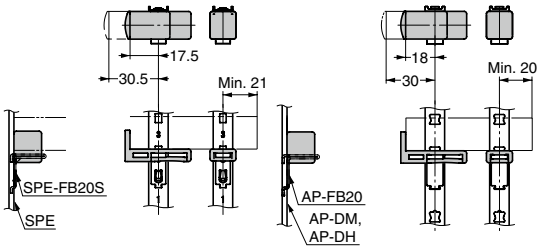
[Installation]



For shelf standard SPE 1

For shelf standard AP-DM, AP-DH 3





RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-024-539	AP-FA20-WT	White	PE	4.9	100	2500
G	3D	120-026-164	AP-FA20-BL	Black			100	2500

Refer to 1 : P.766, 2 : P.776, 3 : P.775

Shelf Support	Board Thickness	Distance (Centre of the shelf standard to edge of the shelf board)
AP-FB20	Min. 12	18 ~ 30
SPE-FB20S	Min. 12	17.5 ~ 30.5
SPE-FB20SWT	Min. 12	17.5 ~ 30.5

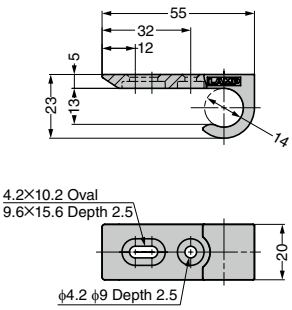
SHELF SUPPORT HOOK AP-FK20D For SPE, AP-DH, AP-DH

- Shelf support hook to be used with dowel AP-FK20C 1 and shelf support.
- Recommended angle: 0~60˚.
- Installed on the back side of shelf with screws.
- Temporary holding feature.

[Remarks]
- Used in pairs.
- Dowel AP-FK20C and shelf support are sold separately. 4 pcs are necessary for 1 shelf.
- The supplied screws are suitable for board thickness above 18mm. Please prepare screws separately depending on the board thickness used.

[Parts Included]
- Truss head tapping screw 4×16 (SUS) 2 pcs.

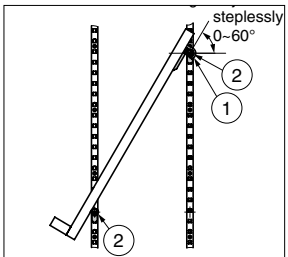
[Sold Separately]
- Dowel AP-FK20C 1



[Installation]

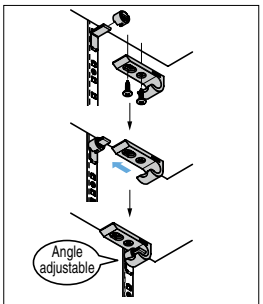
[Application Example]

[Application Example]



1 AP-FK20D Clip-on
2 AP-FK20C (sold separately)

[How to Install]



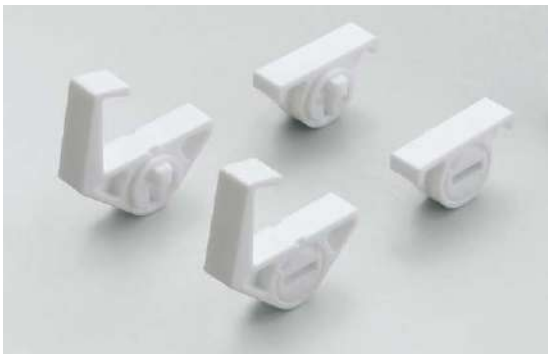
Fit the dowel into the hook part to prevent from coming off.

RoHS	CAD	Item Code	Item Name	Material	Colour	Board Thickness	Load Capacity N※	Load Capacity kgf※	Weight (g)	Box (pcs)	Carton (pcs)
—	3D	120-030-482	AP-FK20D	POM	White	Min. 18	294	30	11.2	40	400

Refer to 1 : P.780

※AP-FK20D × 2 pcs. / Angle: 60˚

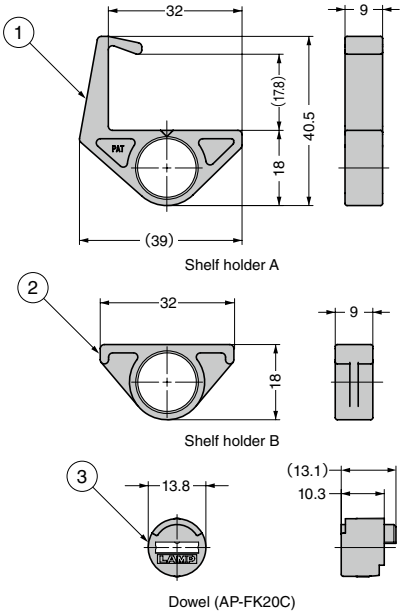
SHELF HOLDER WITH ANGLE ADJUSTING FUNCTION AP-FK20 For SPE, AP-DM, AP-DH



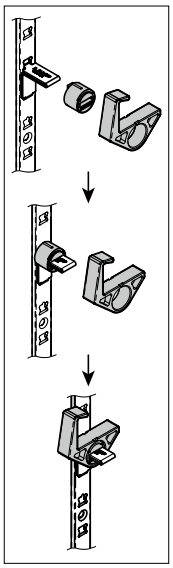
●Use with SPE-FB20S 1, AP-FB20 2.

[Remarks]
●Sold in sets (① 2 pcs, ② 2 pcs, ③ AP-FK20C 4 pcs).
●To prevent shelf from falling, please order 2 dowels (AP-FK20C) for 1 shelf separately 3.

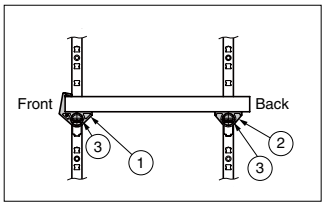
[Sold Separately]
●Dowel AP-FK20C 3.

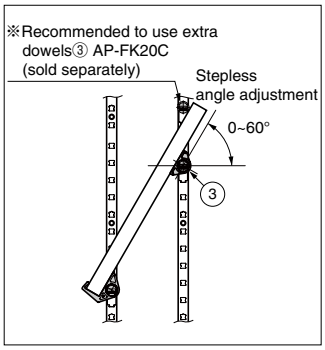


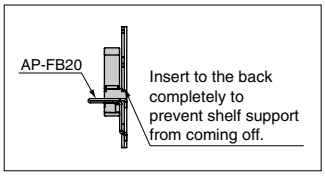
[How to Install]



[Application Example]







[Installation]

[Application Example]

No.	Part Name	Colour	Material
①	Shelf holder A	White	POM
②	Shelf holder B		
③	Dowel		PE

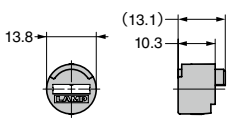
RoHS	CAD	Item Code	Item Name	Board Thickness	Load Capacity N/set	Load Capacity kgf/set	Weight (g)	Box (sets)	Carton (sets)
—	3D	120-024-536	AP-FK20	18~20	98	10	20	200	600

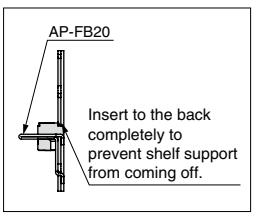
Refer to 1 : P.766, 2 : P.776, 3 : P.780 ※Angle: 60˚

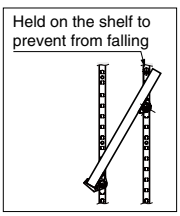
DOWEL AP-FK20C For SPE, AP-DM, AP-DH

[Installation]

●Use together with SPE-FB20S 1 or AP-FB20 2.







RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
—	3D	120-024-538	AP-FK20C	White	PE	1	1000	5000

Refer to 1 : P.766, 2 : P.776

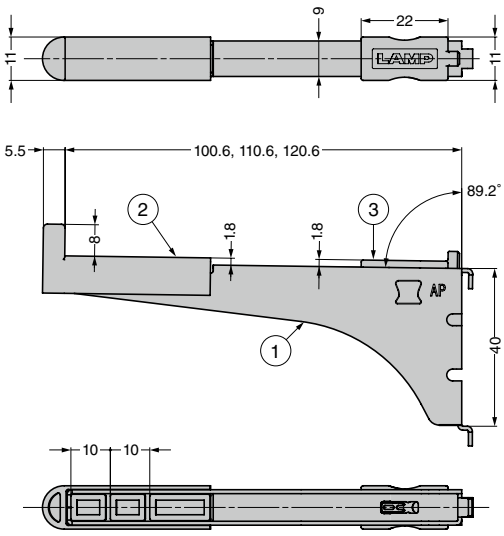
SHELF HOLDER AP-FB120 For AP-DM

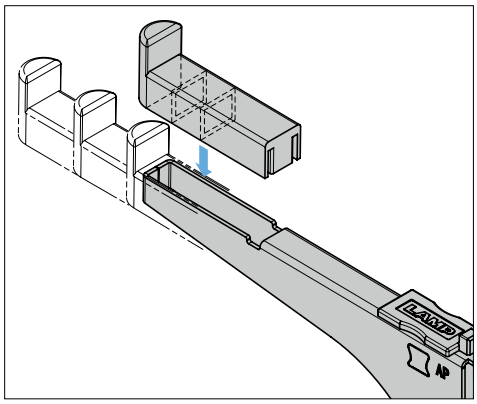
SUS TEMPERED GLASS

- For shelf standard AP-DM 1.
- Use 2 pcs for installing 1 shelf.
- With holder to simply fix shelf.
- Able to adjust depth in 3 different positions.
- With drop off prevention function.
- Can be used for glass shelf.

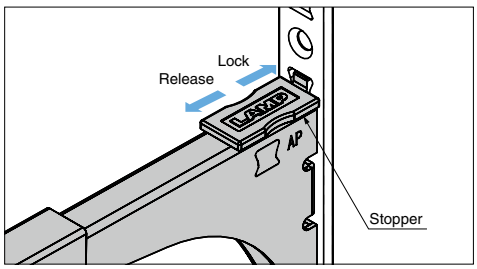
[Remarks]

- Maximum size of shelf board is Width 900 mm × Depth 120 mm.
- Load capacity of below table is the value including the weight of shelf board.
- When fixing shelf standard on wall, please use nominal 3 screws with length above 20mm and install in a position with pillar or other solid substrates.





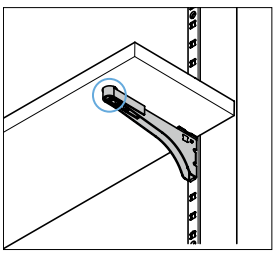
Depth is adjustable in 3 different positions.

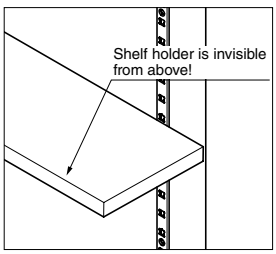


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS430)	Satin
②	Holder	PP	White
③	Stopper		

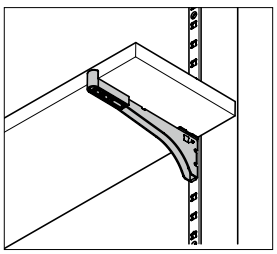
[Application Example]

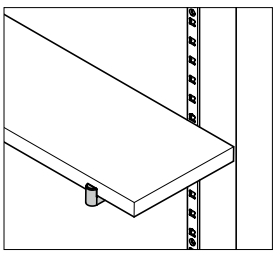
■With Dowel Hole





■Without Dowel Hole





RoHS	CAD	Item Code	Item Name	Shelf Depth	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-032-997	AP-FB120	Max. 120	49	5	33	20	200

Refer to 1 : P.775

Understandable! Selectable! Usable!

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- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

MONITOR MOUNTS

A monitor mount is a part used to adjust and retain monitor angles. We offer a wide range of highly convenient products: one type has a free-stop mechanism for angle adjustment requiring no screw adjustment, while another enables diverse design and installation through arm combinations.

SUGATSUNE

June 2022

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MONITOR BRACKETS

MONITOR BRACKET KA-T100S50 ..... P.786

Passed 20,000 private cycle test

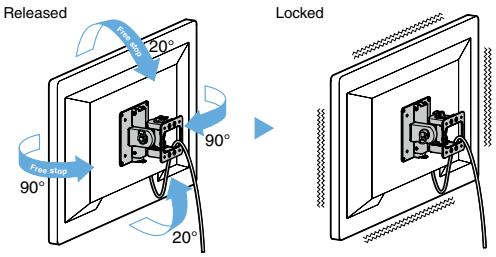
Free stop | VESA Standard Compliant 75× 75 mm 100×100 mm

- One-touch installation and removal
- Applicable monitor size
  12 ~ 23" (up to approx. 10.0 kg)

KA-T100S50

KA-T100S50-WT

[How to Adjust Angle]



ROTATION BRACKET KA-T100S50-PMT P.790

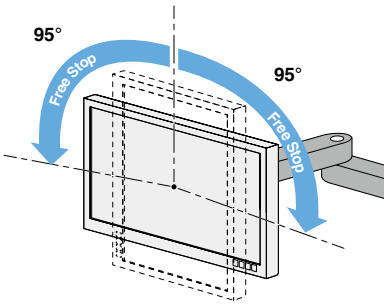
Free stop | VESA Standard Compliant 75× 75 mm 100×100 mm

- Allows monitors to rotate and hold in position.
- Applicable monitor size
  12 ~ 23" (up to approx. 8 kg)

KA-T100S50-PMT-BL

KA-T100S50-PMT-WT

[Free-stop Rotation]



RATCHET HEIGHT ADJUSTER VA-RCT P.791

VA-RCT-200 (bottom step)

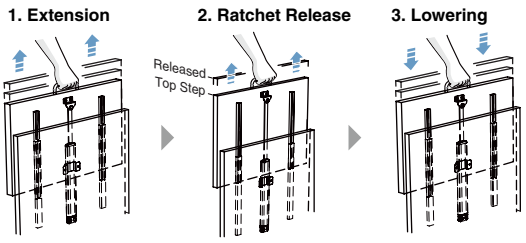
VA-RCT-100 (bottom step)

VA-RCT-100 (top step)

* The VA-RCT-200 of the picture is attached with the body and housing brackets.

- The height adjustment is available in increments of 4 mm.

[Ratchet Operation]



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MONITOR ARMS

MONITOR ARM KA-T100S50-W/P P.788

Passed 20,000 private cycle test

KA-T100S50-W3-BL

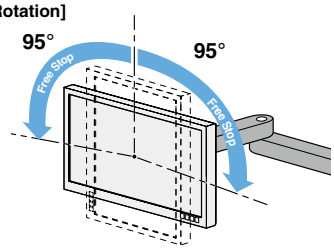
KA-T100S50-P2-WT

Free stop VESA Standard Compliant 75× 75 mm 100×100 mm

- The robust structure securely holds monitors in position.
- Applicable monitor size
  12 ~ 23" (up to approx. 10 kg)
- Installation dimensions

Wall Mount	Wall Mount Pole Type	Desk Mount
○	○	–

[Free-stop Rotation]



MONITOR ARM KA-TLG P.792

Passed 3,000 private cycle test (height adjustment)

Dual axis type　　Single axis type

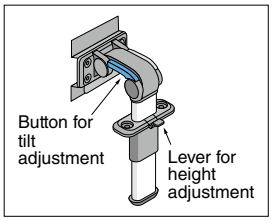
VESA Standard Compliant 75× 75 mm 100×100 mm

- The tilt angle can be adjusted in 10° increments while the button is pressed.
- Applicable monitor size
  12 ~ 23" (up to approx. 10 kg)
- Installation dimensions

Wall Mount	Wall Mount Pole Type	Desk Mount
–	–	○

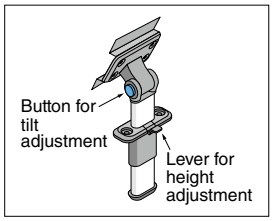
[Tilt and Height Adjustments]

- KA-TLG2-100 (Dual axis)



The tilt adjustment of both axes unlocks while the button is pushed.

- KA-TLG1-100 (Single axis)



The tilt adjustmnet unlocks while the button is pushed.

MONITOR BRACKET KA-150 ..... P.793

KA-150

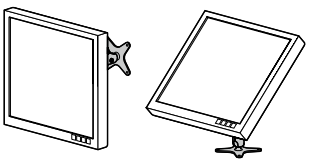
Made to order

VESA Standard Compliant 75×75 mm

- Total length can be changed by adjusting the pole length.
- Load capacity
  Max. 4.4 N·m (0.45 kgf·m)
- Installation dimensions

Wall Mount	Wall Mount Pole Type	Desk Mount
○	–	○

[Application Example]



*Caution: Durability varies by operating environment and frequency. Confirm in advance that the product is compliant with the purpose of use.
For details of durability testing, etc., please contact your local agent or your nearest Sugatsune subsidiary.

MONITOR BRACKET KA-T100S50 With Torque & Auxiliary Lock

INSTRUCTION

Free stop

Passed 20,000 open/close private cycle test

KA-T100S50

KA-T100S50-WT

- Can be quickly installed and removed.
- Free stops in a range of 180˚ (swivel) and 40˚ (tilt).
- Auxiliary lock prevents monitor from sagging due to minute vibration.Also suitable for touch screen.
- Auxiliary lock temporarily releases if a heavy load is applied when locked.
- Bracket holes based on VESA standard (75×75mm, 100×100mm).
- Applicable monitor size: 12~23 inch (Up to about 10.0kg)
- A white version is now available.

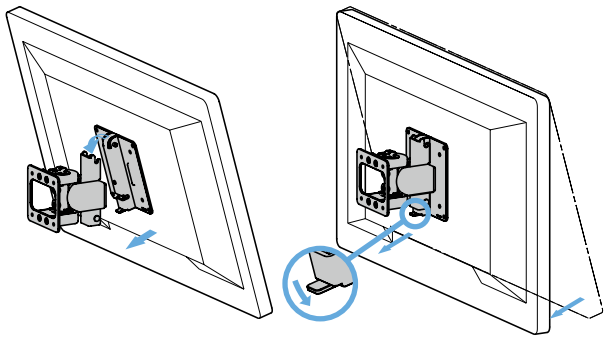
[Applications]

- Liquid crystal monitors for machine tools, OA equipment and medical equipment, etc.

[Remarks]

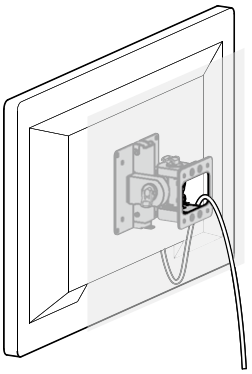
- Do not forcibly move the monitor after applying the auxiliary lock.
- After installing the monitor, make sure that the release lever is locked.
- Do not operate continuously (repeatedly in a short time).

[How to Install and Remove Monitor]



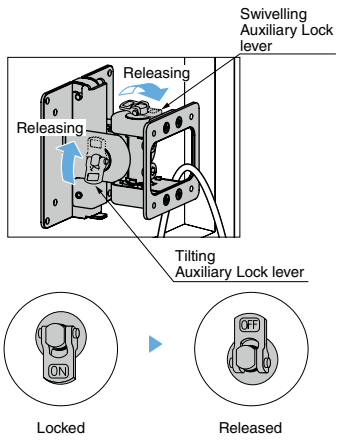
Monitor may be installed with one touch.

Push down the release lever and tilt the monitor, then the monitor can be removed.



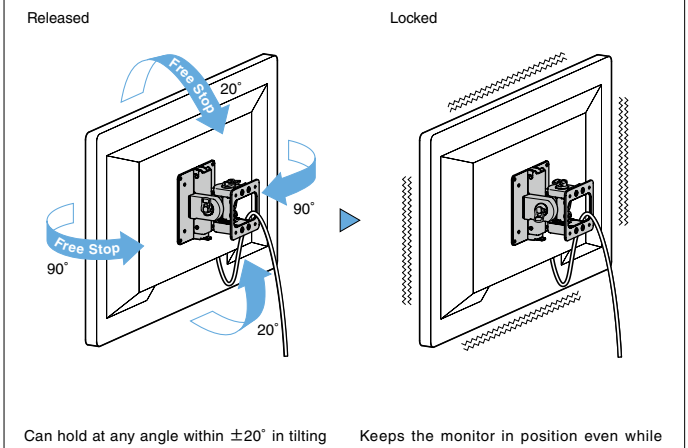
Wire hole allows you to put power cable and monitor cable out of the mounting surface.

[Auxiliary Lock Operation]



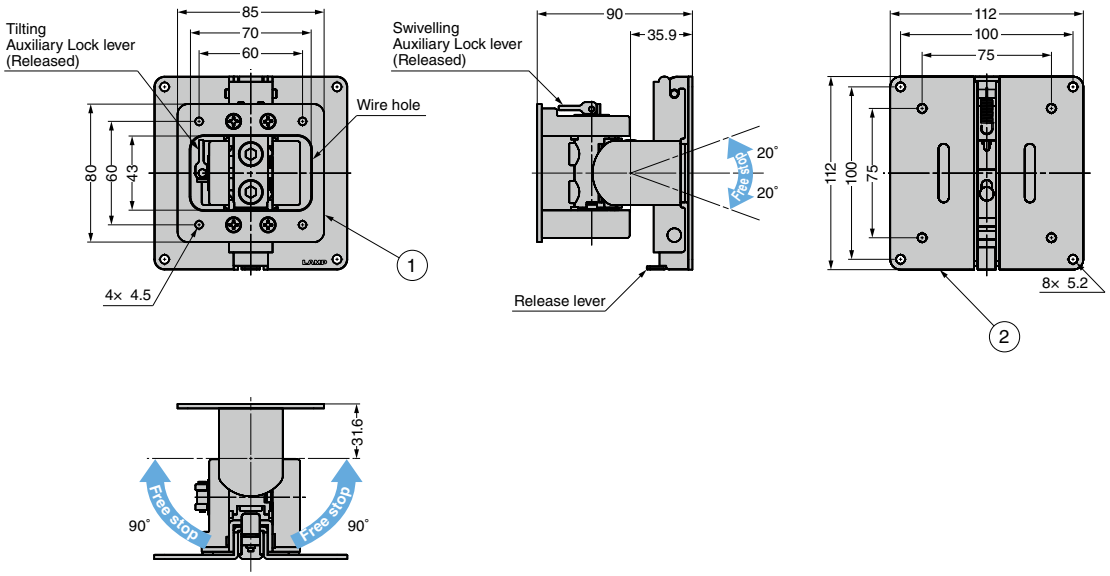
Releases with auxiliary lock lever.

[How to Adjust Angle]



Can hold at any angle within ±20˚ in tilting and ±90˚ in swivelling.

Keeps the monitor in position even while subject.



No.	Part Name	Material	Finish / Colour
①	Body (Wall Side)	Steel (SPCC)/ ABS	Black
②	Base (Monitor Side)		

RoHS	CAD	Item Code	Item Name	Colour	Mounting	Torque (Tilting) N·m/pc	Torque (Tilting) kgf·cm/pc	Torque (Swivelling) N·m/pc	Torque (Swivelling) kgf·cm/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	210-033-587	KA-T100S50	Black	Wall Mount	10.0±20%	102.0±20%	5.0±20%	51.0±20%	1	1	–
G	3D	210-050-289	KA-T100S50-WT	White							1	–

MONITOR ARM KA-T100S50-W/P Free Stop and Lock / For Touch Screens

INSTRUCTION

Free stop

Passed 20,000 open/close private cycle test

KA-T100S50-W3-BL

KA-T100S50-P2-WT

- The robust structure securely holds monitors in position. It prevents touch screens from shaking or causing unintentional inputs.
- Allows for free-stop motion in tilt and swivel directions.
- Comes with auxiliary lock mechanism which prevents sagging.
- The auxiliary lock has a safety function. The lock temporarily releases to avoid breakage if an unintentional heavy load is applied on it.
- One- touch installation and removal.

[Specification]
- Compliant with the VESA standard. (75x75mm,100x100mm)
- Applicable moitor size: 12 - 23 inches (Weight: Max. 10 kg)

[Application]
- Liquid crystal monitors for machine tools, OA equipment and medical equipment

[Remarks]
- Do not forcibly move the monitor after auxiliary lock is activated.
- After installing the monitor, make sure that the release lever is locked.
- Do not operate continuously (repeatedly in a short time).
- Avoid water, oil, and lubricant from getting on the product.

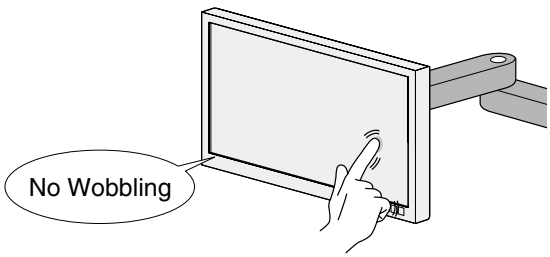
[Parts Included]
- Cable tie

[Optional Parts]
- Rotation Bracket KA-T100S50-PMT 1

Video Link

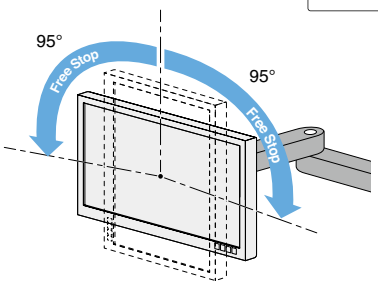
Video Link

[Stable Operation]



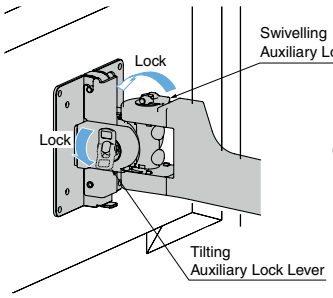
Prevents touch screens from shaking or causing unintentional inputs.

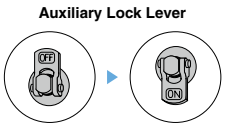
[Rotational Motion]



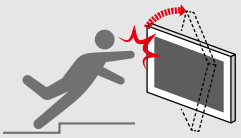
The optional rotation bracket allows for free stop in the rotation direction.
(Free-stop range: 95° on each side)

[Auxiliary Lock Operation]





The auxiliary lock temporarily releases to avoid breakage if unintentional heavy load is applied to it.

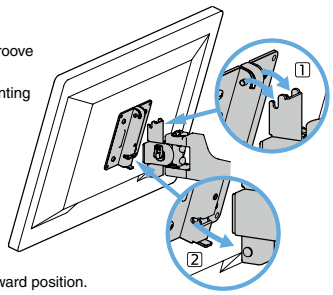


*Do not forcibly move monitors when locked.

[Installation and Removal]

Installation

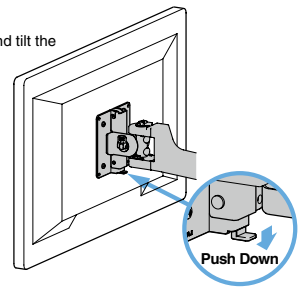
1. Fit the protrusion into the groove of the bracket.
2. Push the lower part of mounting plate.



*Make sure UP mark is in upward position.

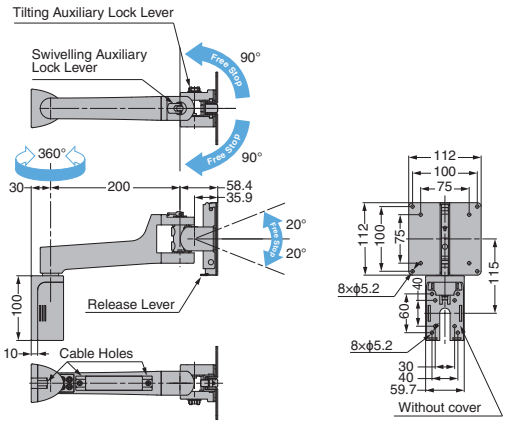
Removal

Push down the release lever and tilt the monitor, then the monitor can be removed.

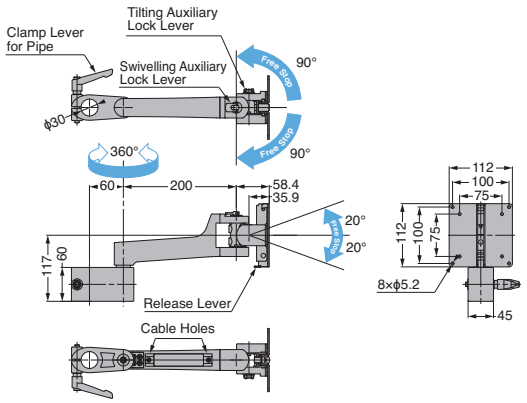


Refer to 1 : P.790

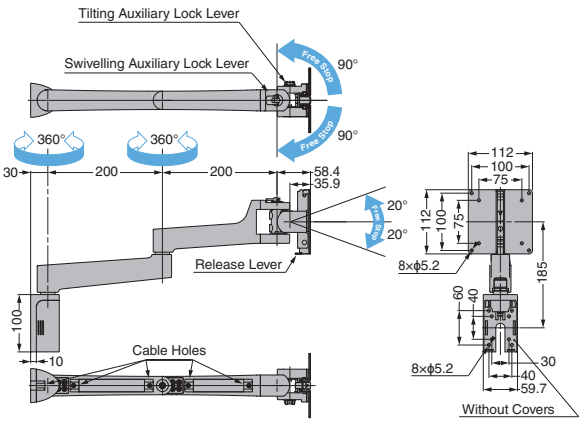
[KA-T100S50-W2] Wall Mount / Single Arm



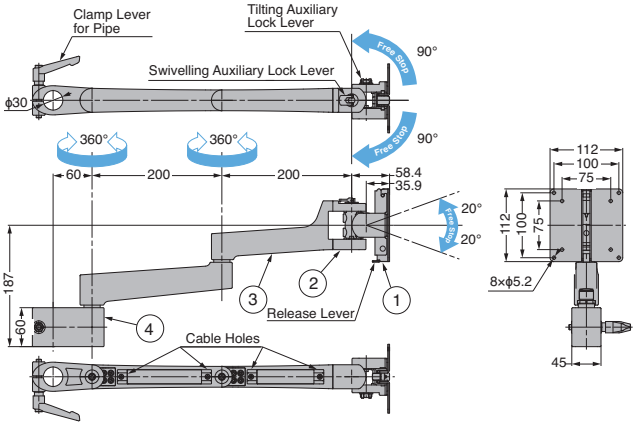
[KA-T100S50-P2] Pipe Mount (ϕ30) / Single Arm



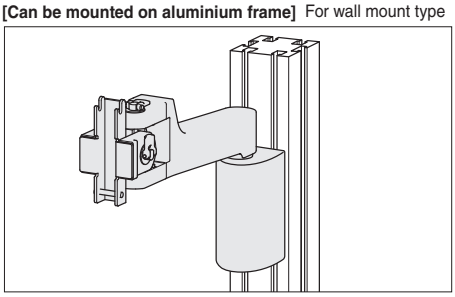
[KA-T100S50-W3] Wall Mount / Double Arms



[KA-T100S50-P3] Pipe Mount (ϕ30) / Double Arms

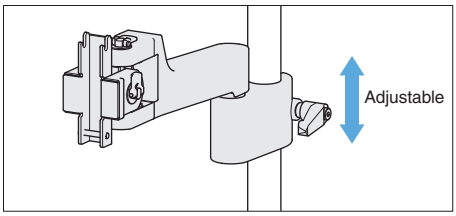


[Can be mounted on aluminium frame] For wall mount type

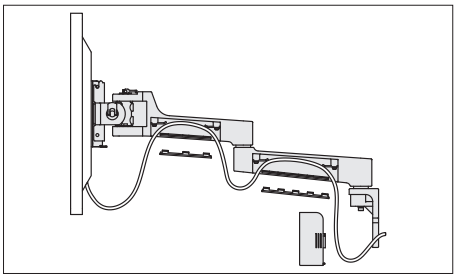


Available Aluminium Frame: 30 x 60 mm or 40 x 80 mm/ 2 slots

[Height Adjustment] For pipe mount type



[Wiring Cables]



Comes with covers for cables.

No.	Part Name	Material	Finish
①	Mounting Plate	Steel (SPCC)	Electrodeposition/Black
②	Body	Steel (SPCC) / ABS	Baked paint/White
③	Arm	Aluminium Alloy (ADC) / ABS	Matte Anodized
④	Base	Aluminium Alloy (ADC)	

RoHS	CAD	Item Code	Item Name	Type	Colour	Torque N·m (Tilt)	Torque N·m (Rotation)		
							Monitor Part	Center Part	Mounting Part
G	3D	210-048-353	KA-T100S50-W2-BL	Wall Mount / Single Arm	Black	10 ±20%	5.0 ±20%	–	8.0 ±20%
G	3D	210-048-354	KA-T100S50-W2-WT		White				
G	3D	210-048-349	KA-T100S50-P2-BL	Pipe Mount (ϕ30) / Single Arm	Black				
G	3D	210-048-350	KA-T100S50-P2-WT		White				
G	3D	210-048-355	KA-T100S50-W3-BL	Wall Mount / Double Arms	Black			4.0 ±20%	
G	3D	210-048-356	KA-T100S50-W3-WT		White				
G	3D	210-048-351	KA-T100S50-P3-BL	Pipe Mount (ϕ30) / Double Arms	Black				
G	3D	210-048-352	KA-T100S50-P3-WT		White				

ROTATION BRACKET KA-T100S50-PMT Free Stop

Free stop

KA-T100S50-PMT-BL

KA-T100S50-PMT-WT

- Allows monitors to rotate and hold in position.
- Replace the original mounting plate with this bracket.

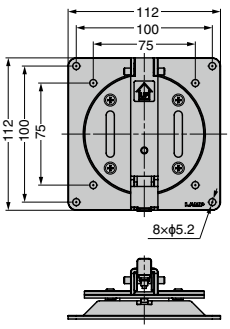
[Specification]

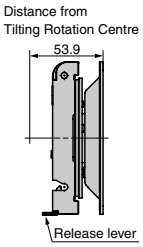
- Compliant with the VESA standard. (Hole interval: 75 x 75 mm / 100 x 100 mm)
- Applicable monitor size: 12 - 23 inches (Weight: Max. 8 kg)

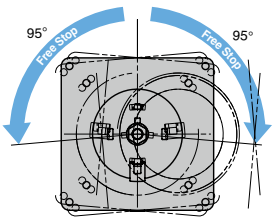
[Compatible Product]

- Monitor Bracket KA-T100S50 1
- Monitor Arm KA-T100S50-W/P 2

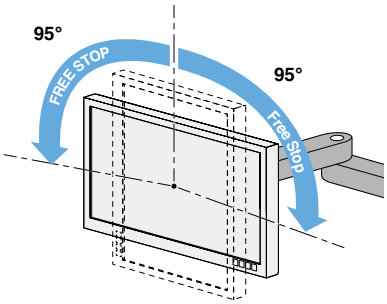
Video Link







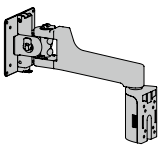
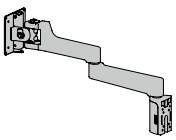
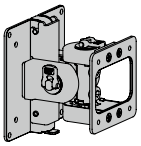
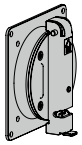
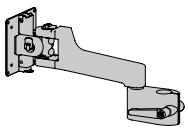
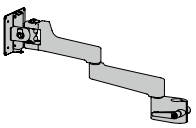
[Free-stop Rotation]



RoHS	CAD	Item Code	Item Name	Colour	Torque N·m (Rotate)	Weight (g)
G	3D	210-048-357	KA-T100S50-PMT-BL	Black	4.0 ±20%	641
G	3D	210-048-358	KA-T100S50-PMT-WT	White		

Refer to 1 : P.786, 2 : P.788

Monitor Mount Series KA-T100S50

	Single Arm 1	Double Arms 1	Armless 2	Option 3
• Wall Mount • Aluminium Frame Mount	 KA-T100S50-W2-BL KA-T100S50-W2-WT	 KA-T100S50-W3-BL KA-T100S50-W3-WT	 KA-T100S50	 KA-T100S50-PMT-BL KA-T100S50-PMT-WT
• Pipe Mount	 KA-T100S50-P2-BL KA-T100S50-P2-WT	 KA-T100S50-P3-BL KA-T100S50-P3-WT		

Refer to 1 : P.788, 2 : P.786, 3 : P.790

RATCHET HEIGHT ADJUSTER VA-RCT

VA-RCT-200 (bottom step) VA-RCT-100 (bottom step) VA-RCT-100 (top step)

* The VA-RCT-200 of the picture is attached with the body and housing brackets.

- The height adjustment is available in increments of 4 mm.
- The ratchet unlocks when the height exceeds the top step.
- Can extend again from the middle position once the ratchet is released.

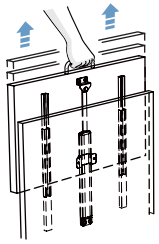
[Remarks]
- Cannot be used in either horizontal or inclined directions.
- Use of multiple products in one device may cause malfunctions.
- Support device by hand when lowering height.
- To prevent unbalanced load, recommended to use in combination with linear guide rails.

[Parts Included]
- Body Bracket

[Optional Parts]
- Housing Bracket LOM-A-6
- Housing Bracket LOM-B-6

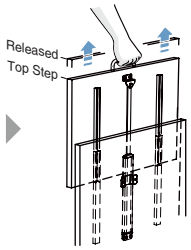
[Ratchet Operation]

1. Extension



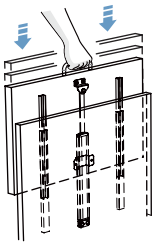
Lift up the fitting slowly. The ratchet provides click sounds for each step. (Ratchet interval: 4 mm)

2. Ratchet Release

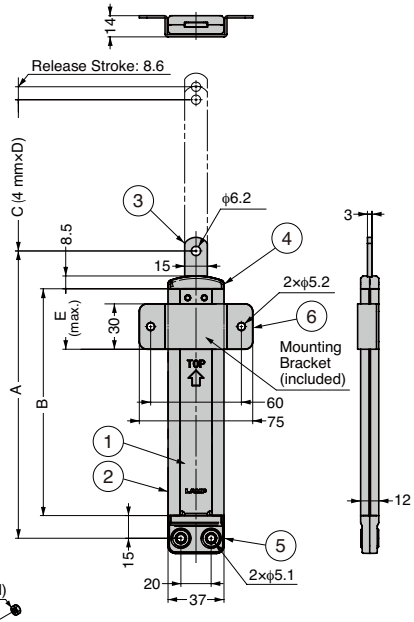


The ratchet lock will be released when it exceeds the top step.

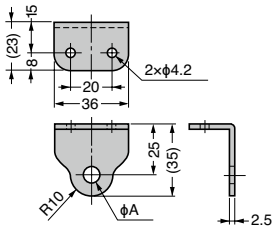
3. Lowering



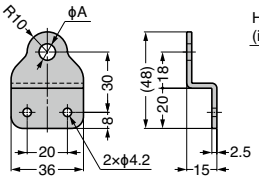
It can extend again in the middle position. (Not required to lower to the bottom step.)



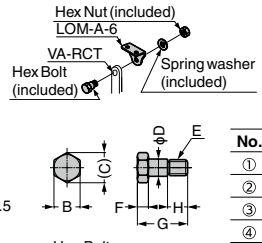
[Bracket]



[LOM-A-6]



[LOM-B-6]



Hex Bolt (included with bracket)

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Plain
②	Side Cover	ABS	-
③	Slider	Stainless Steel (SUS304)	Plain
④	Upper Cap	Polyacetal (POM)	-
⑤	Bottom Cap		-
⑥	Bracket	Stainless Steel (SUS304)	Barrel Polished

[Body]

RoHS	CAD	Item Code	Item Name	Min. Height A	Stroke C	B	Ratchet Interval	Ratchet Steps D	E	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-045-683	VA-RCT-100	190	100	150	4	25	50	294	30	280	5	20
G	3D	180-045-684	VA-RCT-200	290	200	250		50	80			450	5	20

[Housing Bracket] Optional

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	F	G	H
G	3D	180-109-302	LOM-A-6	Stainless Steel (SUS304)	Barrel Polished	5.2	10	11.5	5.6	M5	4	19	9
G	3D	180-109-303	LOM-B-6										

MONITOR ARM KA-TLG Tilt Angle Adjustment with Button

Passed 3,000 private cycle test (height adjustment)

Dual axis type　　Single axis type

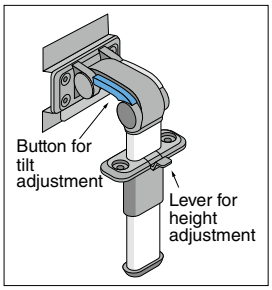
- The tilt angle can be adjusted in 10˚ increments while the button is pressed.
- The back lever allows for height adjustment in 25 mm increments. It has a friction mechanism which prevents against accidental release.
- The monitor-mounting holes are compliant with the VESA standard. (75 x 75 mm, 100 x 100mm)
- Applicable monitor size: 12 - 23 inches (Weight: Max. 10 kg)

[Remarks]

- Please support the monitor with a hand when adjusting the angle and height.

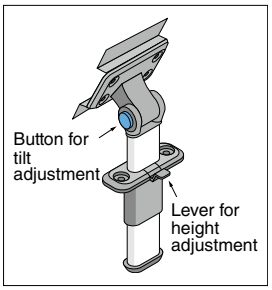
[Tilt and Height Adjustments]

- KA-TLG2-100 (Dual axis)

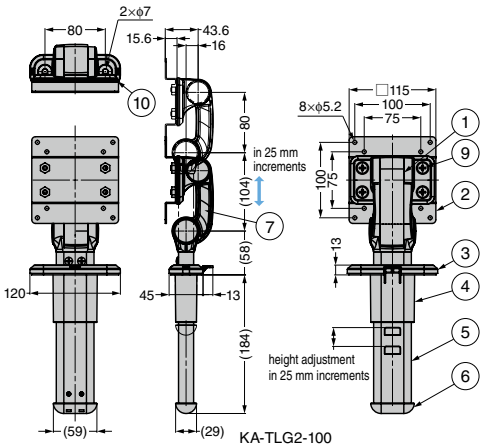


The tilt adjustment of both axes unlocks while the button is pushed.

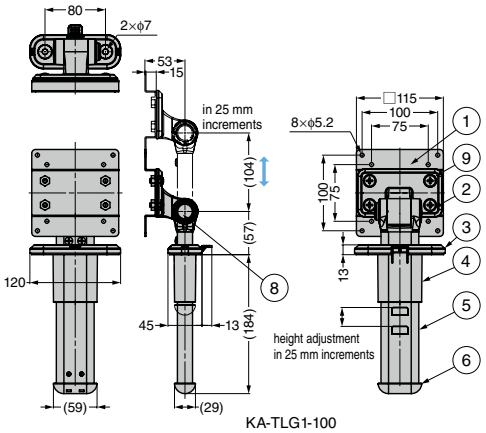
- KA-TLG1-100 (Single axis)



The tilt adjustmnet unlocks while the button is pushed.

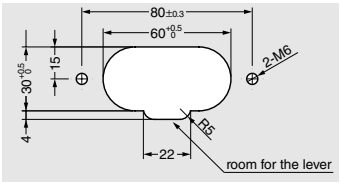


KA-TLG2-100

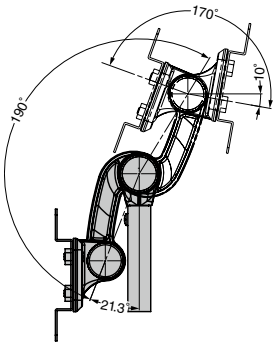


KA-TLG1-100

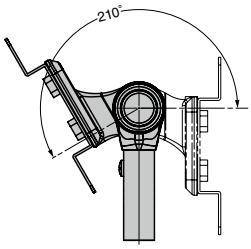
[Cut Out Dimensions]



Video Link



KA-TLG2-100
(Dual axis)



KA-TLG1-100
(Single axis)

No.	Part Name	Material	Finish/Colour
①	Bracket	Polyamide (PA)	Black
②	Mounting Plate	Steel (SPHC)	
③	Cover	Polycarbonate	
④	Outer Pipe	ABS	
⑤	Aluminium Pipe	Aluminium Alloy	Anodized
⑥	End Cap	ABS	Black
⑦	Button	Polyamide (PA)	Grey
⑧	Button	ABS	
⑨	Cross-recessed trus head screw	Steel	Balck Chromate
⑩	Packing	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	Axis	Vertical Load Capacity		Allowable Moment		Weight (g)	Box (pc)
					N	kgf	N.m	kgf.cm		
G	3D	210-044-071	KA-TLG2-100	Dual	100	10.2	15	153	705	1
G	3D	210-044-070	KA-TLG1-100	Single					545	1

MONITOR BRACKET KA-150

HEX KEY

KA-150

Made to order

- Total length can be changed by adjusting the pole length. Pole length can be adjusted as order basis. For further details, please contact local representatives.
- Ball-shaped holding part allows adjusting to any angle (loosen the screw and adjust).
- Mounting hole pitch (75×75mm) on the monitor mounting side conforming to the VESA standard.

[Remarks]

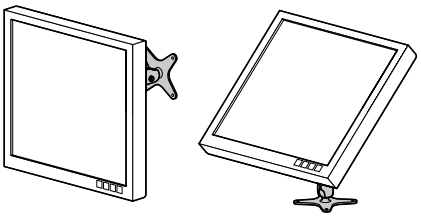
- Monitor mount is used for moving and adjusting monitor position. Do not apply load on display when using.
- Durability varies depending on operating environment and frequency. Confirm the adaptability for the purpose of use in advance. For details on durability test, please contact local representative.

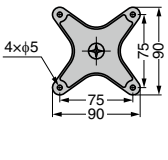
[Parts Included]

- Hex key (for fixing the mounting base)

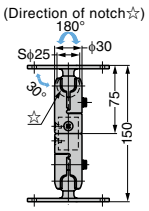
[Recommended Screws]

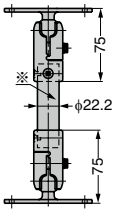
- Tapping screw 4.5 or M4 screw





Mounting plate





※Pole length can be adjusted as order basis.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N·m/pc	Load Capacity kgf·m/pc	Weight (g)	Box (unit)	Carton (unit)
–	3D	210-030-578	KA-150	Aluminium Alloy	Silver Enamel Finish	4.4	0.45	383	1	40

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- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE Search

LAMP®

CABINET DOOR HARDWARE & SHUTTER DOORS

Cabinet door hardware & shutter doors are more complex parts than hinges used for opening and closing doors or lids.
We offer many Sugatsune unique “opening modes” superior to conventional swing doors and sliding doors with small door projection and no interference with the passage.

SUGATSUNE

June 2022

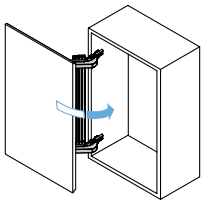
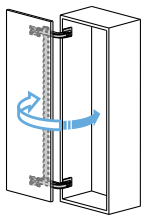
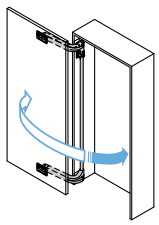
INDEX

Flush / Lateral Opening Door Systems

P.799~P.815

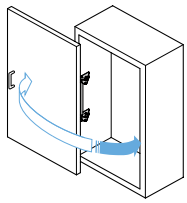
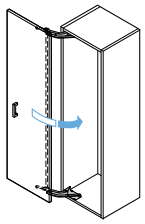
MonoFlat LIN-X Hinge

P.799, P.804~

Installation Image	Product Name	Size Per One Door				Page
		Door Weight	Door Width	Door Height	Door Thickness	
	MonoFlat LIN-X hinge. MonoFlat LIN-X Hinge LIN-X450, LIN-X600	LIN-X450 Max. 17 kg LIN-X600 Max. 24 kg	LIN-X450 400~500 mm LIN-X600 550~650 mm	600~2400 mm	15~24 mm	P.804
	MonoFlat LIN-X hinge. MonoFlat LIN-X Hinge LIN-X800	Max. 40 kg	750~850 mm	LIN-X800 1600~2400 mm LIN-X800H 1600~2980 mm	24~40 mm	P.812
	MonoFlat LIN-X hinge. MonoFlat LIN-X Hinge LIN-X1000 For Heavy Duty Door	Max. 90 kg	750~1100 mm	2400~2980 mm	24~40 mm	P.814

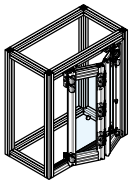
MonoFlat FAD

P.800~

Installation Image	Product Name	Size Per One Door				Page
		Door Weight	Door Width	Door Height	Door Thickness	
	MonoFlat FAD. MonoFlat FAD-5 For Small Size Cabinet	Max. 5 kg	270~350 mm	260~650 mm	15~20 mm	P.800
	MonoFlat FAD. MonoFlat FAD-20 For Medium Size Cabinet	Max. 20 kg	Cabinet Inside Width 500~550 mm	Cabinet Inside Height Max. 2420 mm	Max. 35 mm	P.802

Folding Door Systems

P.816~

Installation Image	Product Name	Size Per One Door				Aluminium Frame	Page
		Door Weight	Door Width	Door Height	Door Thickness		
	Folding Door System KF111-MH	Max. 10 kg	Max. 450 mm	Max. 2400 mm	30 mm	Size: Door 30×60 mm, Frame : 30×60 mm, 40×40 mm Groove Width: Door 8 mm, Frame 10 mm	P.816
	Slidable Folding Door System KF111-R	Max. 10 kg	Max. 450 mm	Max. 2400 mm	18~34 mm	Size: Door 30×60 mm, Frame 40×40 mm, Groove Width: 6 mm	P.820

Shutter Door Systems

P.824~

Installation Image	Product Name	Open/Close Direction	Cabinet Size			Cabinet Material		Page
			Inside Width	Inside Height	Inside Depth	Metal	Wood	
	Design Shutter DIS-M Surface Mount Type	Vertical Open/Close	300~1200 mm	300~900 mm	Min. 330mm	Yes	Yes	P.824
		Horizontal Open/Close	300~900 mm For Double Door 600~1800 mm	100~1200 mm				
	Design Shutter DIS-H Recessed Mount Type	Vertical Open/Close	300~900 mm	300~900 mm	200~600 mm	Yes	Yes	P.830
		Horizontal Open/Close	300~900 mm For Double Door 600~1800 mm	100~1188 mm				
	AS High Rigidity Cabinet Shutter	Vertical Open/Close	Aluminium Frame Inside Width Max. 840 mm	Aluminium Frame Inside Height Max. 640 mm	Aluminium Frame Inside Depth Max. 900 mm	Yes	Yes	P.836

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

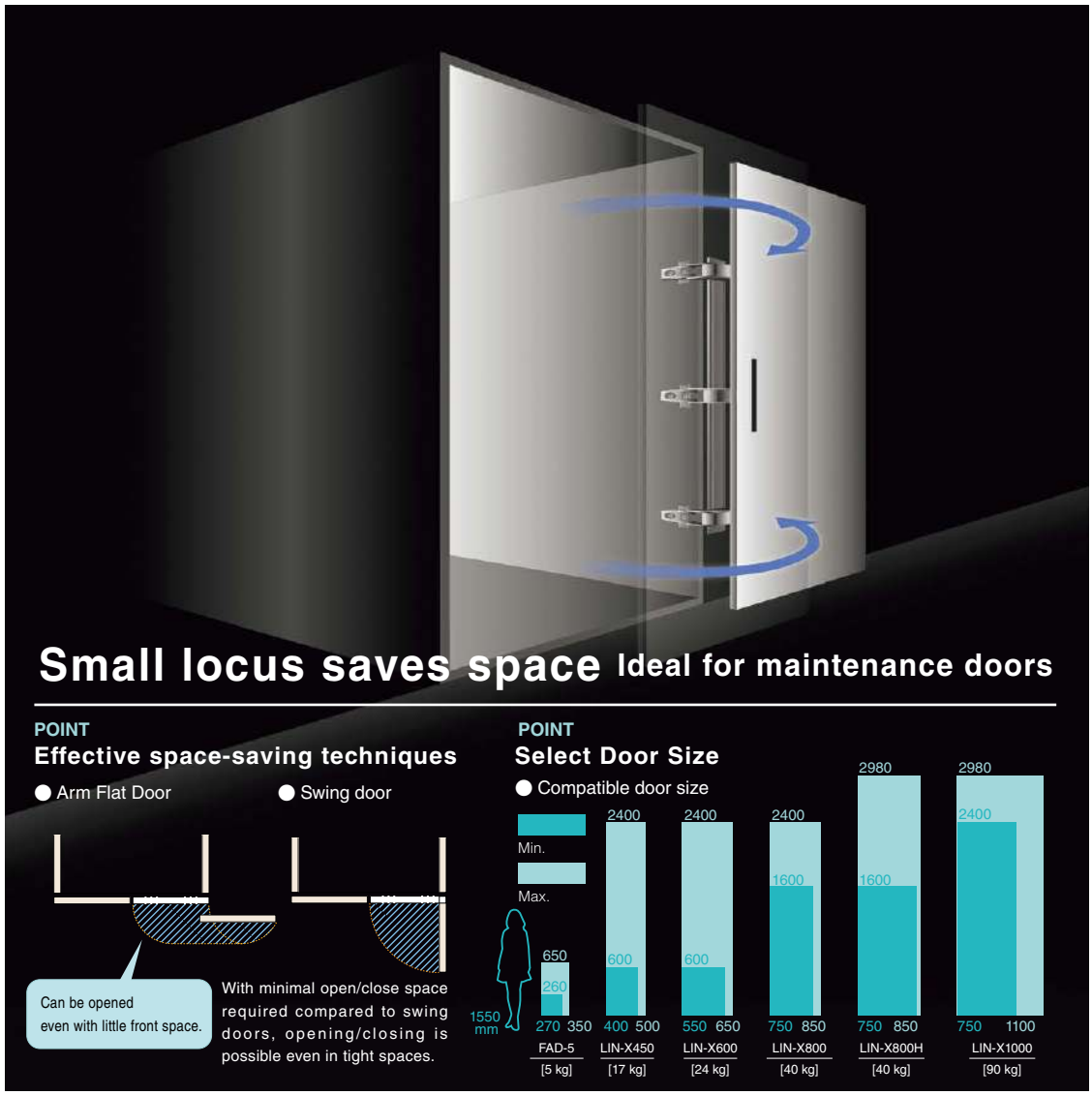
- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

MONOFLAT ARM FLAT DOOR HARDWARE

MonoFlat LIN-X hinge®

Door opening radius saves space compared to swing doors.
An innovative swing door enabling effective use of space.



Small locus saves space Ideal for maintenance doors

POINT
Effective space-saving techniques

● Arm Flat Door ● Swing door

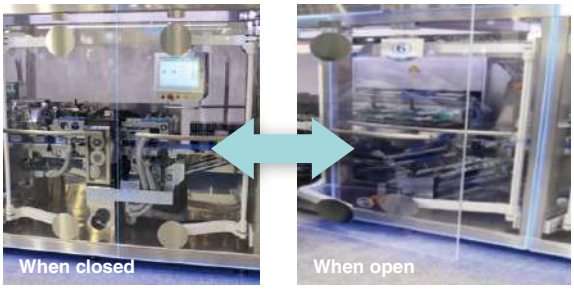
Can be opened even with little front space.

With minimal open/close space required compared to swing doors, opening/closing is possible even in tight spaces.

POINT
Select Door Size

● Compatible door size

Application Example



Use in food processing machinery door

Use in large kitchen door

MONOFLAT FAD-5 For Small Size Cabinet

INSTRUCTION

MonoFlat FAD®

Door Width	270~350 mm
Door Height	260~650 mm
Door Thickness	15~20 mm
Door Weight	Max. 5 kg/Door
Specification	☐ Single Door (Overlay)

Door does not get in the way when opened with small projection than swing door, suitable for small cabinets.

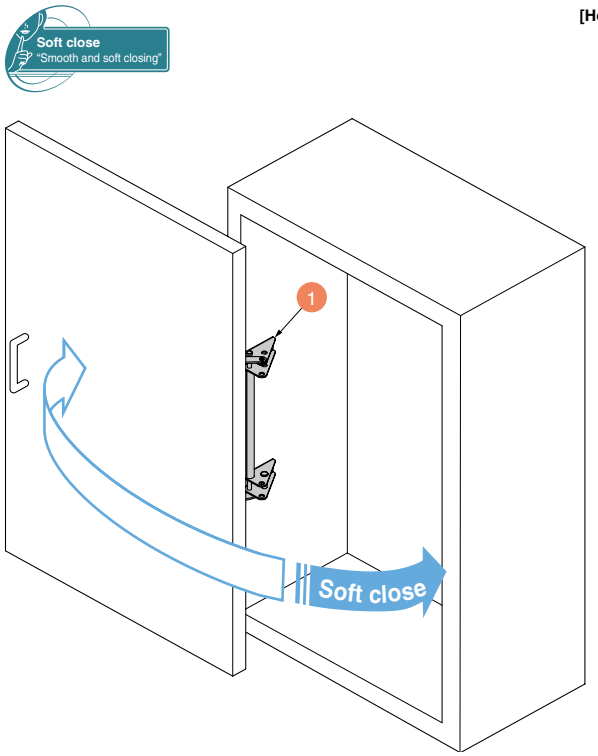
- Allows to swing out laterally in small radius, ideal for tight front space application.
- Possible to combine various opening modes such as single door and double door.
- Possible to stop door at any position as shown below. And can close door slowly and quietly.
- Door adjustable in vertical (±3mm), horizontal (±2.5mm) and parallel (approx. 5°) directions.
- Passed 40,000 open/close cycle test.
- Other "MonoFlat Series" are available.

・MonoFlat Unison Neo for door weight up to 70 kg
・MonoFlat FAD-20 for door weight up to 20 kg 1
・MonoFlat LIN-X hinge for door weight up to 90 kg 2

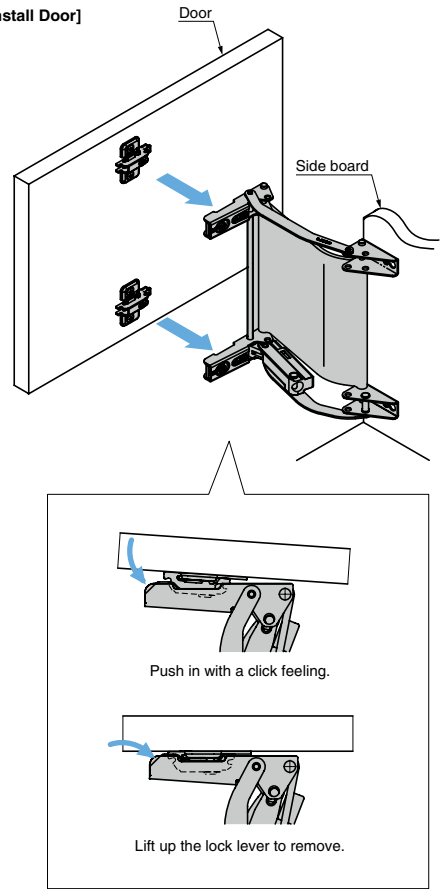
[Applications]
- Cupboards in toilet and kitchen, storage furniture like shoe boxes.

[Remarks]
- Door operation feeling varies depending on installation position. Please confirm by actual installation.
- For details when used for continuous door, please contact local representatives.

The circled numbers are part numbers.
Please check with the part list 3.



[How to Install Door]



Refer to 1 : P.802, 2 : P.814, 3 : P.801

When Ordering MonoFlat FAD-5

●Necessary Parts ..... Parts Set (Per Door)

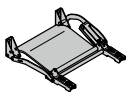
The circled numbers are part numbers. Please check with the drawings 1 .

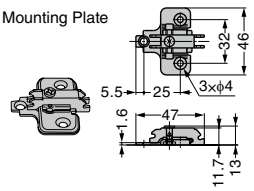
Parts Set (Per Door)

Necessary Parts.

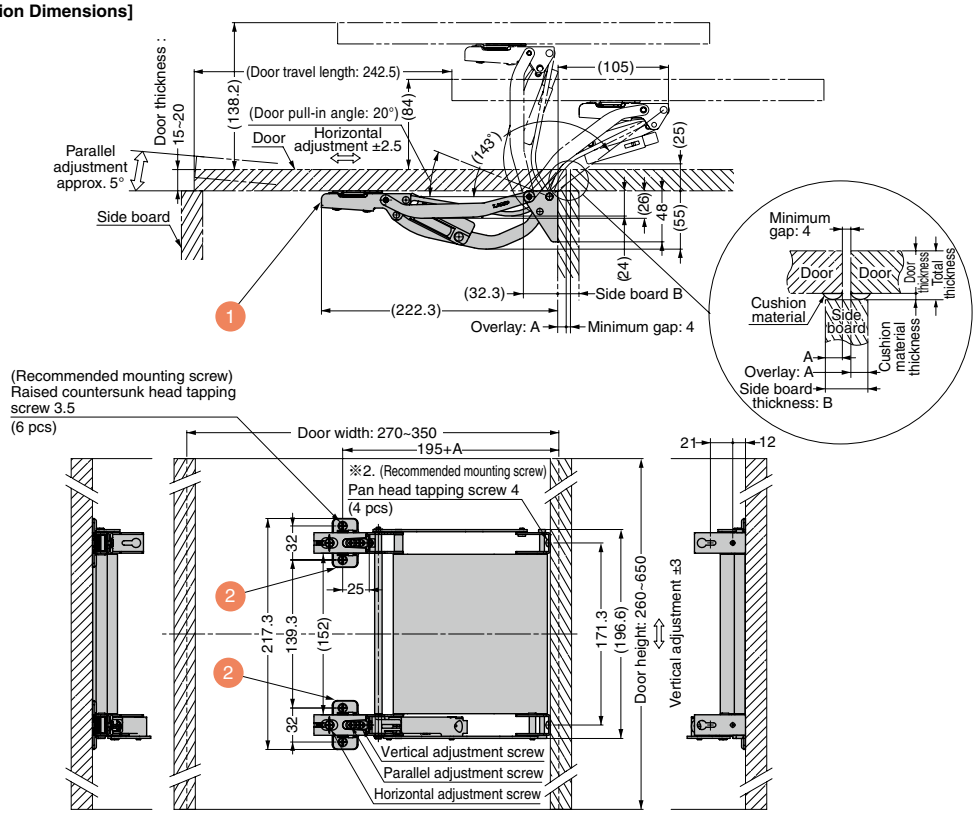
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
Parts Set	G	3D	250-016-605	FAD-5	781	1	15

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Hinge Body  Refer to the [Installation Dimensions] for details.	●Material Aluminium Alloy/POM/ Steel ●Finish Anodised Silver/Grey/ Nickel

No.	Qty	Dimensions	Description
2	2 pcs	Mounting Plate 	Item Code : 160-070-041 Item Name : 230-P4W-32T Weight (g) : 26 Box (pcs) : 400 ●Material Steel ●Finish Nickel

[Installation Dimensions]



※1 Pay attention to the thickness of cushion material (bumper etc.) when used for continuous door.
Hinge body may conflict with door depending on installation conditions. Confirm with drawings or actual item.
Design cabinet by reference to the installation conditions given in the table on the right.

Example: For side board thickness 20mm and 8mm overlay, the total thickness of door and cushion material is up to 23mm.
In this case, if the door thickness is 20mm, the thickness of cushion material will be:
・Available cushion material thickness = Total thickness – Door thickness
= 23 − 20 = 3
So the cushion material thickness shall be below 3mm.

※2 When installing this product on double door, pay attention to interference between mounting screws.

[Total thickness (Door+Cushion Material)]

Side board thickness B (mm)	Overlay A (mm)				
	5	6	7	8	Min. 8.5
15	21.5	–	–	–	–
16	22.5	21.5	–	–	–
17	23	22.5	–	–	–
18	23		22.5	–	–
19	23			–	–
20	23				–
Min. 21	23				

※For side board thickness above 21mm, set arbitrary overlay with minimum gap 4mm.

Refer to 1 : P.800~P.801

MONOFLAT FAD-20 For Medium Size Cabinet

INSTRUCTION

MonoFlat FAD®

Cabinet Inside Width	500~550 mm
Cabinet Inside Height	Max. 2420 mm
Door Thickness	Max. 35 mm
Door Weight	Max. 20 kg/Door
Specification	☐ Single Door (Overlay)

Door does not get in the way when opened with smaller projection than a swing door.

- Door will be flush with surrounding walls when closed.
- Smaller locus maximises space in front of door.
- Possible to combine various opening modes such as single door and double door.
- Door can be operated smoothly and held in fully opened and closed position.
- Passed 40,000 open/close cycle test
- Other "MonoFlat Series" are available. Refer to the following for details.
  - MonoFlat Unison Neo for door weight up to 70 kg
  - MonoFlat FAD-5 for door weight up to 5 kg 1
  - MonoFlat LIN-X hinge for door weight up to 90 kg 2

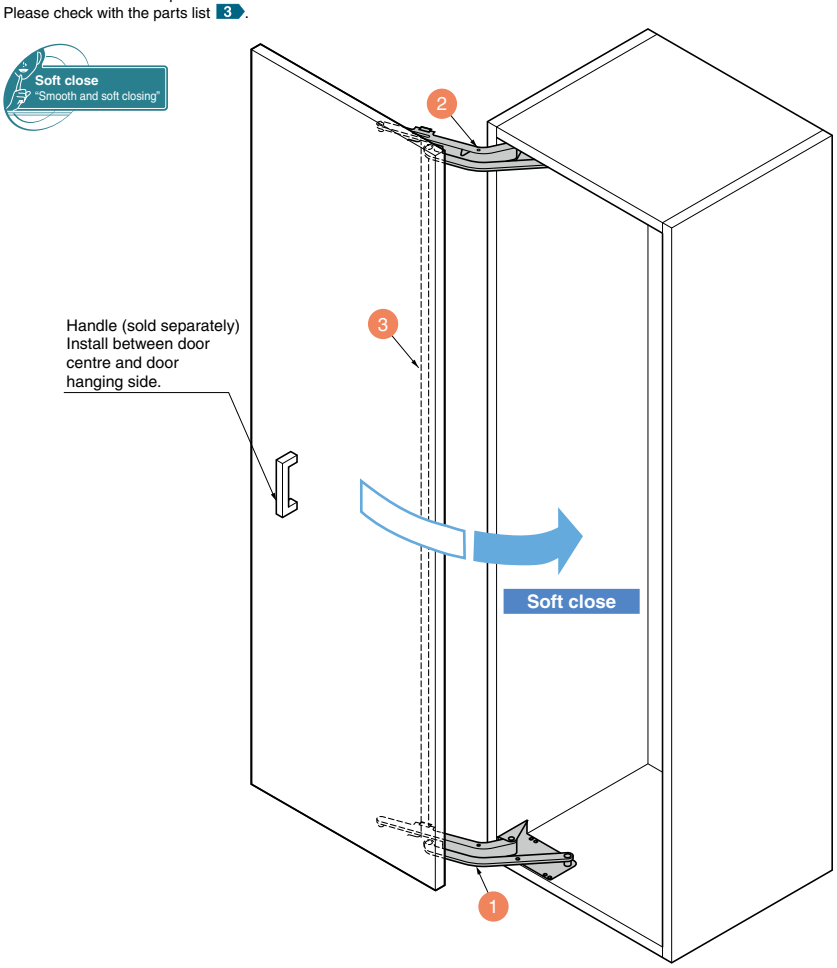
[Remarks]

- Door opening and closing speed varies depending on products.

[Parts Included]

- Binding head tapping screw 4.5×20.....22 pcs
- Binding head screw M5×8..... 4 pcs
- Hexagon socket head cap screw M4×8 ..... 4 pcs
- Countersunk head tapping screw 4.5×20 ..... 2 pcs

The circled numbers are part numbers.
Please check with the parts list 3.



Video Link

Refer to 1 : P.800, 2 : P.814, 3 : P.803

When Ordering MonoFlat FAD-20

● Necessary Parts ..... Parts Set (Per Door)

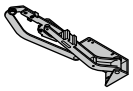
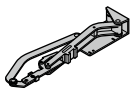
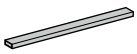
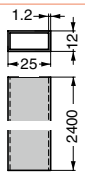
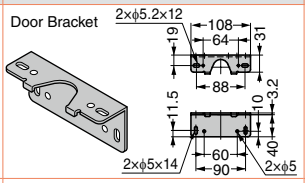
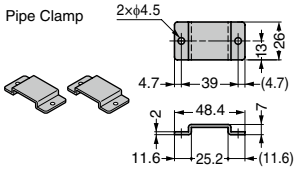
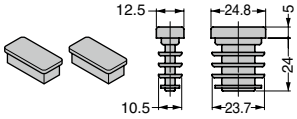
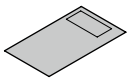
The circled numbers are part numbers. Please check with the drawings 1 .

Parts Set (Per Door)

Necessary Parts.

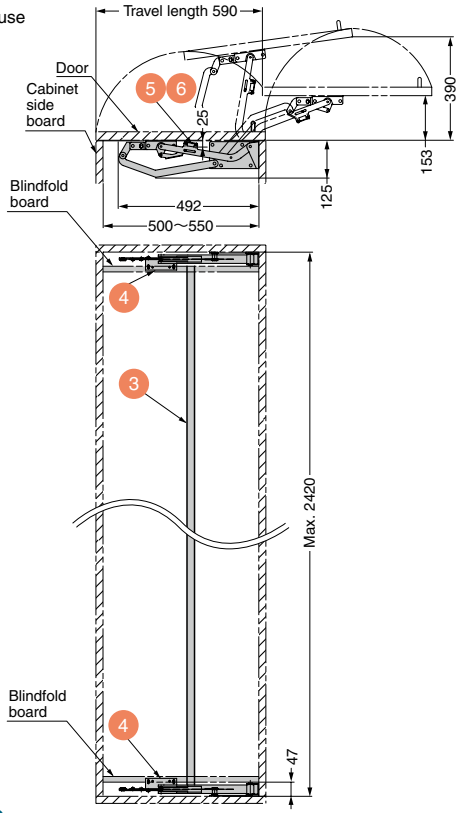
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Carton (sets)
Parts Set	–	3D	250-180-908	FAD-20	7500	1

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Arm A  See below	●Material Aluminium Alloy / Steel ●Finish / Colour Paint / Silver
2	1 pc	Arm B  See below	●Material Aluminium Alloy / Steel ●Finish / Colour Paint / Silver
3	1 pc	Connecting Pipe  	●Material Steel ●Finish / Colour Paint / Silver
4	2 pcs	Door Bracket 	●Material Steel ●Finish / Colour Paint / Silver
5	2 pcs	Pipe Clamp 	●Material Steel ●Finish / Colour Paint / Silver
6	2 pcs	Cap 	●Material PE ●Colour Black
7	1 pc	Sticker 	–

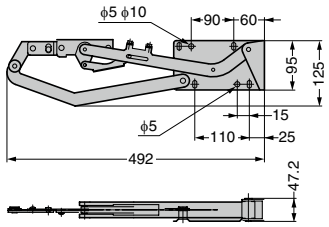
[Installation Example]

Left hand use



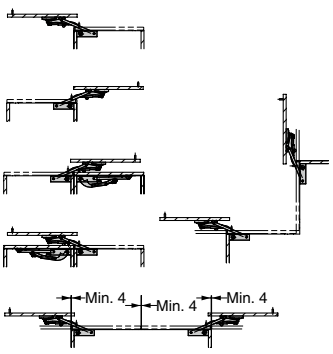
Refer to 1 : P.802~P.803

[Arm 1 2 Dimensions]



Shown is arm A 1. Arm B 2 is upside-down.

[Opening Variations]



MONOFLAT LIN-X HINGE LIN-X450, LIN-X600

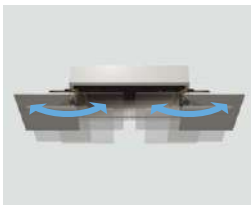
INSTRUCTION

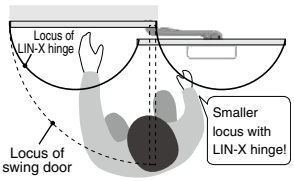
MonoFlat LIN-X hinge®

Door does not get in the way even when fully opened

- Door will be flush with left and right doors when closed.
  - ・Door does not get in the way during and after being opened.
    Swings out laterally in small radius, ideal for tight front space application.
  - ・Easy access to cabinet interior.
  - ・Smooth operation
    Door can be opened and closed smoothly from any position.
  - ・Soft close
    Door closes smoothly and softly with damper.
  - ・Easy installation
    Arms are clipped or base.
  - ・4-way adjustable
    Adjustable in vertical, horizontal, depth and parallel directions.
  - ・Various applications
    Allows to combine single door and double door, suitable for various cabinets. L-shaped corner use also possible.

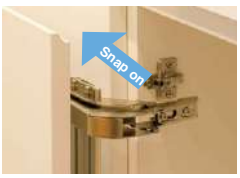
	LIN-X450 1	LIN-X600 2
Door Width	400~500 mm	550~650 mm
Door Height	600~2400 mm	
Door Thickness	15~24 mm	
Door Weight	Max. 17 kg/Door	Max. 24 kg/Door
Overlay	19 mm	
Specification	☐ Single Door (Overlay)	



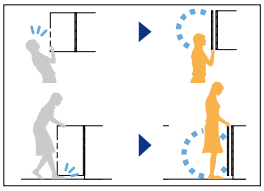


- Allows to swing out laterally in small radius, ideal for tight front space application.

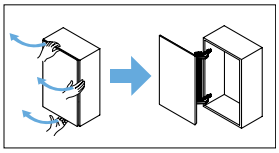
- Installed to side board, not interfering with taking in/out of articles. Suitable for hanging doors and floor cabinets.



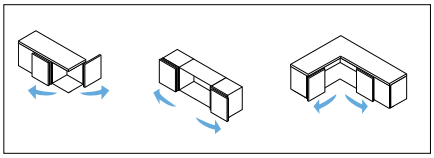
- Easy installation and removal.



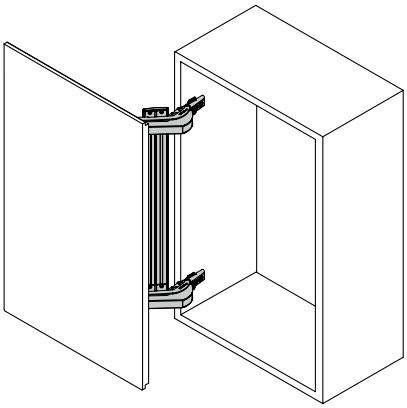
- Door does not get in the way when opening and closing.



- Door can be opened and closed smoothly from any position.



- Suitable for various cabinets.



2 hinges per door shown.

Video Link

Video Link

Video Link

Refer to 1 : P.805, 2 : P.808

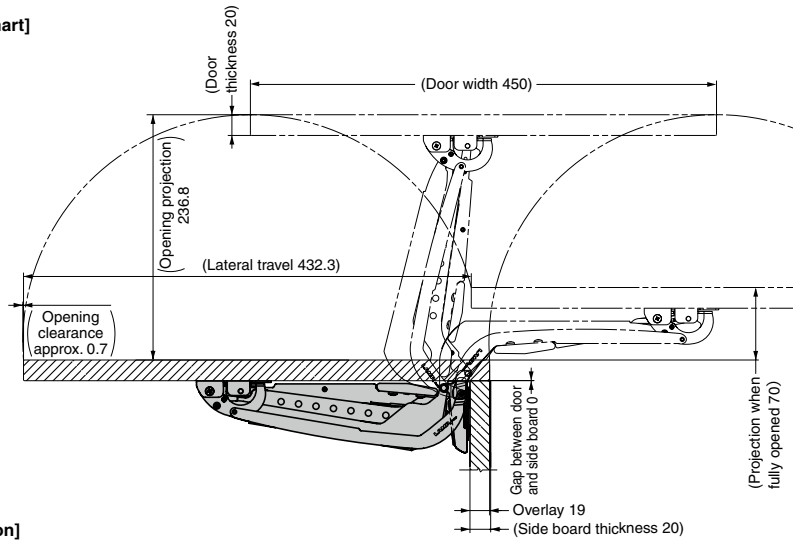
■LIN-X450 Installation Example

INSTRUCTION

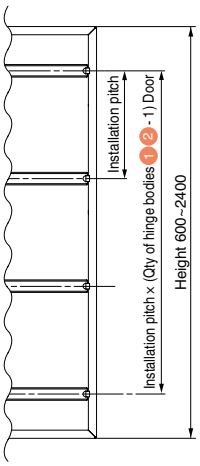
Door specifications [Width: 400~500mm] [Thickness: 15~24mm] [Height: 600~2400mm] [Weight: Max. 17kg/door] [Overlay: 19mm for standard type]

The circled numbers are part numbers. Please check with the parts list ①. For LIN-X600, refer to ②.

[Locus Chart]

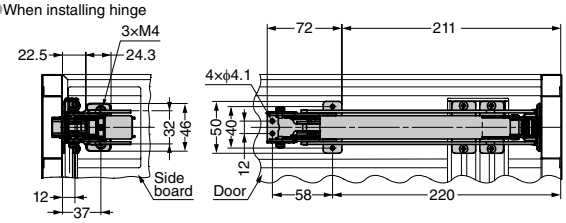


[Installation Pitch]

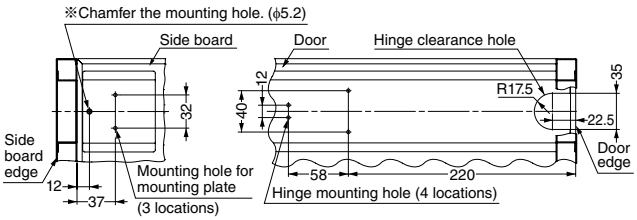


[Installation]

●When installing hinge



●Before installing hinge

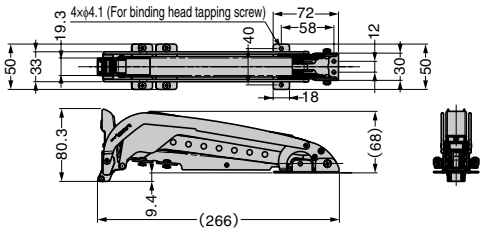


Qty of Hinge Bodies (① + ②)	Item Name Suffix of Parts Set					
	09XX	12XX	15XX	18XX	21XX	24XX
	Connecting Bar ③ Length L					
	540	840	1140	1440	1740	2040
2 Hinges per Door	490	790	1090	–	–	–
3 Hinges per Door	245	395	545	695	845	–
4 Hinges per Door	–	263	363	463	563	663
5 Hinges per Door	–	–	272.5	347.5	422.5	497.5

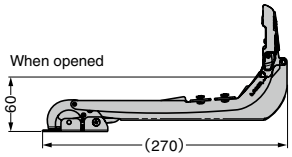
[Parts Drawings]

●Hinge body

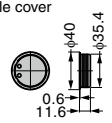
When closed



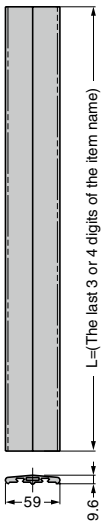
When opened



●Hole cover



●Connecting bar



●End cap for connecting bar

Refer to ① : P.806~P.807, ② : P.810

When Ordering MonoFlat LIN-X Hinge LIN-X450

●Necessary Parts..... Parts Set (Per Door) + Mounting Plate

●Standard kit 1 including mounting plates also available, suitable for door height 600~900mm and door weight 7kg or less.

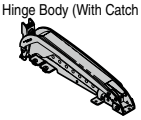
Parts Set (Per Door)

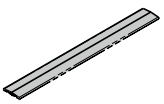
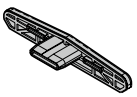
Necessary Parts
Choose based on applicable door height and door weight.
(Refer to 2 for details on dimensions and descriptions of parts included in the set.)

RoHS	CAD	Item Code	Item Name	Door Height mm	Door Weight kg	Parts Included (For LIN-X450)					Weight (g)
						① Hinge Set (With Catch & Damper)	② Hinge Set (Without Catch & Damper)	③ Connecting Bar		④ End Cap For Connecting Bar	
						Qty/set	Qty/set	Connecting Bar Item Name	Qty/pc	Qty/pc	
G	3D	250-016-701	LIN-X450S-0907	600~900	Max. 7	2	–	LIN-X45-L540	1	2	4046
G	3D	250-016-702	LIN-X450S-0910		7.1~10.5	3					4812
G	3D	250-016-703	LIN-X450S-1207	901~1200	Max. 7	2		LIN-X45-L840			4193
G	3D	250-016-704	LIN-X450S-1210		7.1~10.5	3					4959
G	3D	250-016-705	※1 LIN-X450S-1214		10.6~14		1				5661
G	3D	250-016-706	LIN-X450S-1507	1201~1500	Max. 7	2	–	LIN-X45-L1140			4416
G	3D	250-016-707	LIN-X450S-1510		7.1~10.5	3					5182
G	3D	250-016-708	※1 LIN-X450S-1514		10.6~14		1				5884
G	3D	250-016-709	※2 LIN-X450S-1517		14.1~17		2				6586
G	3D	250-016-710	LIN-X450S-1807	1501~1800	Max. 7		–	LIN-X45-L1440			5512
G	3D	250-016-711	LIN-X450S-1810		7.1~10.5						5512
G	3D	250-016-712	※1 LIN-X450S-1814		10.6~14		1				6214
G	3D	250-016-713	※2 LIN-X450S-1817		14.1~17		2				6916
G	3D	250-016-715	LIN-X450S-2107	1801~2100	Max. 7		–	LIN-X45-L1740			5648
G	3D	250-016-716	LIN-X450S-2110		7.1~10.5						5648
G	3D	250-016-717	※1 LIN-X450S-2114		10.6~14		1				6350
G	3D	250-016-718	※2 LIN-X450S-2117		14.1~17		2				7052
G	3D	250-016-721	※1 LIN-X450S-2407	2101~2400	Max. 7		1	LIN-X45-L2040			6669
G	3D	250-016-722	※1 LIN-X450S-2410		7.1~10.5						6669
G	3D	250-016-723	※1 LIN-X450S-2414		10.6~14						6669
G	3D	250-016-724	※2 LIN-X450S-2417		14.1~17		2				–

※1: 4 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second one from the bottom.
※2: 5 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second and third ones from the bottom.

[Parts Set Details] Refer to page 2 for the dimensions.

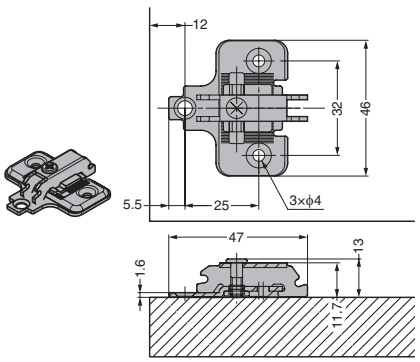
No.	Part Name	Description
1	**Hinge Set (With Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper) ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	G 3D Item Code : 250-016-240 Item Name : LIN-X450ACD Weight (g) : 766 ●Material Steel ●Finish Nickel
2	**Hinge Set (Without Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper)  ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	G 3D Item Code : 250-016-242 Item Name : LIN-X450A Weight (g) : 702 ●Material Steel ●Finish Nickel

No.	Part Name	Description
3	**Connecting Bar** 	G 3D Item Code : 250-016-250 Item Name : LIN-X45-L540 Weight (g) : 481 G 3D Item Code : 250-016-252 Item Name : LIN-X45-L840 Weight (g) : 647 G 3D Item Code : 250-016-254 Item Name : LIN-X45-L1140 Weight (g) : 870 G 3D Item Code : 250-016-255 Item Name : LIN-X45-L1440 Weight (g) : 1200 G 3D Item Code : 250-016-256 Item Name : LIN-X45-L1740 Weight (g) : 1336 G 3D Item Code : 250-016-259 Item Name : LIN-X45-L2040 Weight (g) : 1655 ●Material Aluminium Alloy ●Finish Anodised
4	**End Cap for Connecting Bar** 	G – Item Code : 250-016-260 Item Name : LIN-X45C Weight (g) : 2 ●Material POM ●Colour Grey

Refer to 1 : P.807, 2 : P.805

[Parts Set Details] Refer to page 2 **for the dimensions.**

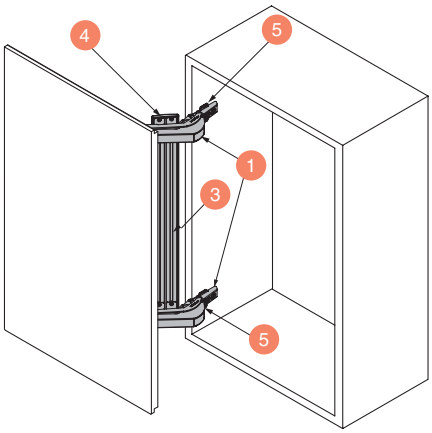
No.	RoHS	CAD	Item Code	Dimensions
5	G	3D	160-070-041	Mounting Plate Item Name : 230-P4W-32T Weight (g) : 26 ●Material Steel ●Finish Nickel



No.	RoHS	CAD	Item Code	Dimensions
6	G	–	160-070-030	Raised Countersunk Head Tapping Screw 3.5×15 Item Name : TAP3515NI Weight (g) : 1 ●Material Steel ●Finish Nickel

For Mounting Plate

The circled numbers are part numbers. Please check with the parts list 1. For LIN-X600, refer to 2.



Refer to 1 : P.806~P.807, 2 : P.810

STANDARD KIT With Mounting Plate

Kit for LIN-X450

●Includes parts set and mounting plates.
●Suitable for door size (width 400~500mm, height 600~900mm, thickness 15~24mm) and door weight 7kg or less.

[Parts Included]

Hinge body ..... 2 pcs
Mounting plate ..... 2 pcs
Connecting bar ..... 1 pc
End cap for connecting bar ..... 2 pcs
Hole cover ..... 2 pcs
Raised countersunk head tapping screw 3.5×15 ..... 6 pcs
Binding head tapping screw 3.5×15 ..... 8 pcs

RoHS	CAD	Item Code	Item Name	Overlay mm	Door Height mm	Door Weight kg	Mounting Plate (Included)	Weight (g)	Box (sets)	Carton (sets)
G	3D	250-014-240	LIN-X450	19	600~900	Max. 7	230-P4W-32T	2162	1	6
G	3D	250-014-553	LIN-X450 + 5	14			230-P4W-32T+5	2200	1	6

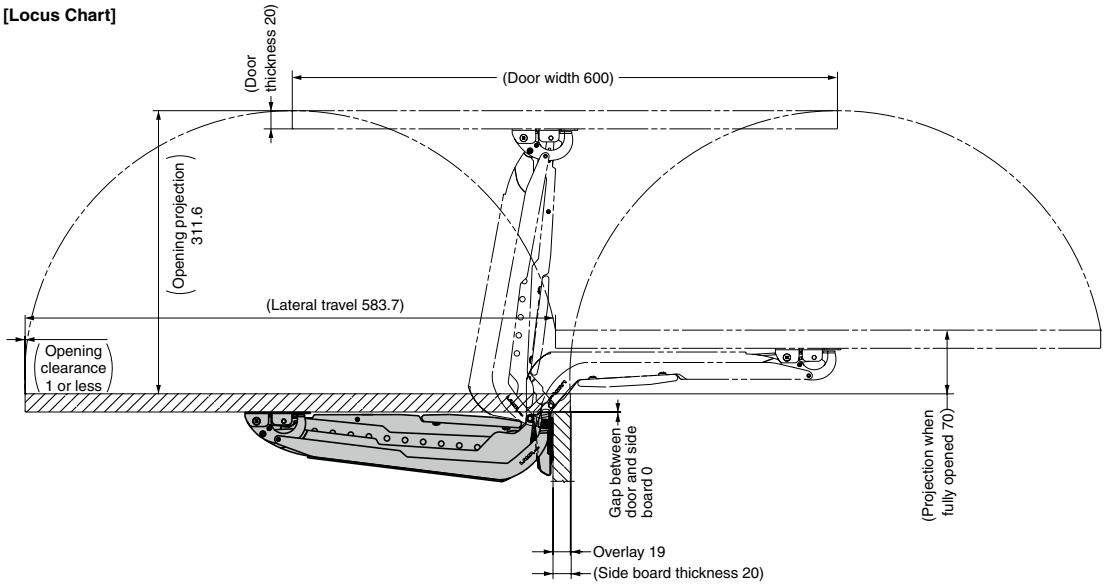
■LIN-X600 Installation Example

INSTRUCTION

Door specifications [Width: 550~650 mm] [Thickness: 15~24 mm] [Height: 600~2400 mm] [Weight: Max. 24 kg/door] [Overlay: 19 mm for standard type]

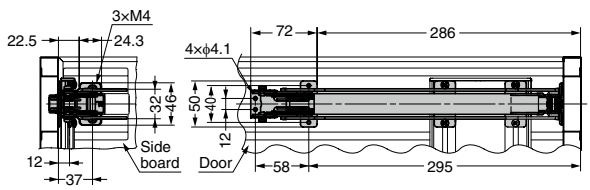
The circled numbers are part numbers. Please check with the parts list ①. For LIN-X450, refer to ②.

[Locus Chart]

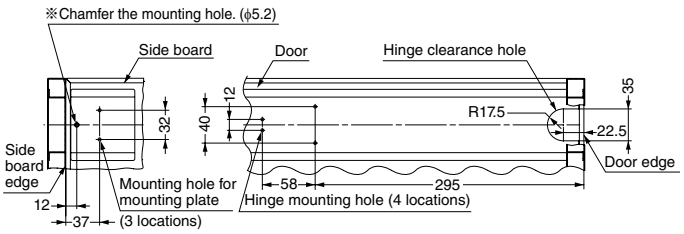


[Installation]

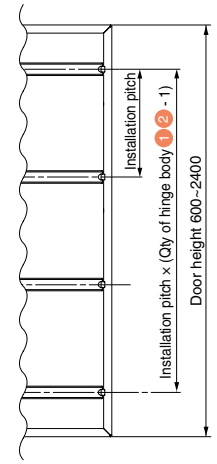
●When installing hinge



●Before installing hinge



[Installation Pitch]



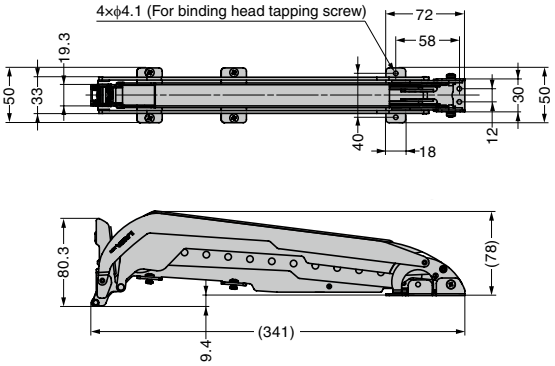
Qty of hinge bodies (①+②)	Item Name Suffix of Parts Set					
	09XX	12XX	15XX	18XX	21XX	24XX
	Connecting Bar ③ Length L					
	540	840	1140	1440	1740	2040
2 Hinges per Door	490	790	–	–	–	–
3 Hinges per Door	245	395	545	695	845	–
4 Hinges per Door	–	–	363	463	563	663
5 Hinges per Door	–	–	–	347.5	422.5	497.5

Refer to ① : P.810, ② : P.806

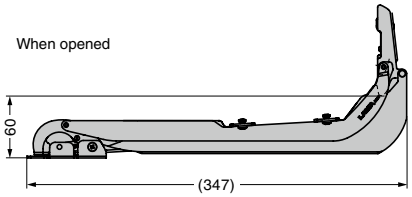
[Parts Drawings]

●Hinge body

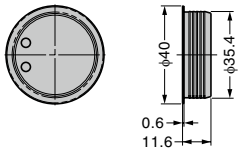
When closed



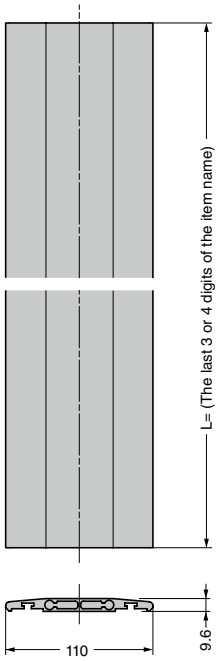
When opened



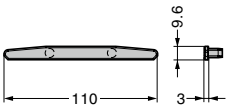
●Hole cover



●Connecting bar



●End cap for connecting bar



When Ordering MonoFlat LIN-X Hinge LIN-X600

●Necessary Parts..... Parts Set (Per Door) + Mounting Plate

●Standard kit 1 including mounting plates also available, suitable for door height 600~900mm and door weight 9kg or less.

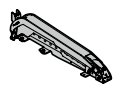
Parts Set (Per Door)

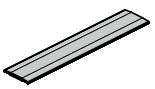
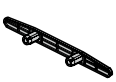
Necessary Parts.
Choose based on applicable door height and door weight.
(Refer to 2 for details on dimensions and descriptions of parts included in the set.

RoHS	CAD	Item Code	Item Name	Door Height mm	Door Weight kg	Parts Included (For LIN-X600) ① Hinge Set (With Catch & Damper) Qty/set	② Hinge Set (Without Catch & Damper) Qty/set	③ Connecting Bar Qty/pc	④ End Cap For Connecting Bar Qty/pc	Weight (g)
G	3D	250-017-492	LIN-X600S-0909	600~	Max. 9	2	–	1	2	4913
G	3D	250-017-067	LIN-X600S-0912	900	9.1~12	3				5930
G	3D	250-017-068	LIN-X600S-1212	901~	Max. 12	2				5232
G	3D	250-017-069	LIN-X600S-1216	1200	12.1~16	3				6270
G	3D	250-017-070	LIN-X600S-1512	1201~	Max. 12					6752
G	3D	250-017-071	LIN-X600S-1516	1500	12.1~16					6752
G	3D	250-017-072	※1 LIN-X600S-1520		16.1~20		1			7748
G	3D	250-017-073	LIN-X600S-1812	1501~	Max. 12		–			7070
G	3D	250-017-074	LIN-X600S-1816	1800	12.1~16					7070
G	3D	250-017-075	※1 LIN-X600S-1820		16.1~20		1			8066
G	3D	250-017-493	※2 LIN-X600S-1824		20.1~24		2			9062
G	3D	250-017-076	LIN-X600S-2112	1801~	Max. 12		–			7608
G	3D	250-017-077	LIN-X600S-2116	2100	12.1~16					7608
G	3D	250-017-078	※1 LIN-X600S-2120		16.1~20		1			8604
G	3D	250-017-079	※2 LIN-X600S-2124		20.1~24		2			9600
G	3D	250-017-080	※1 LIN-X600S-2412	2101~	Max. 12		1			9066
G	3D	250-017-081	※1 LIN-X600S-2416	2400	12.1~16					9066
G	3D	250-017-082	※1 LIN-X600S-2420		16.1~20					9066
G	3D	250-017-083	※2 LIN-X600S-2424		20.1~24		2			10062

※1: 4 hinges per door. If installing hinge set (without catch & damper) ②, please use it as the second one from the bottom.
※2: 5 hinges per door. If installing hinge set (without catch & damper) ②, please use it as the second and third ones from the bottom.

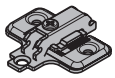
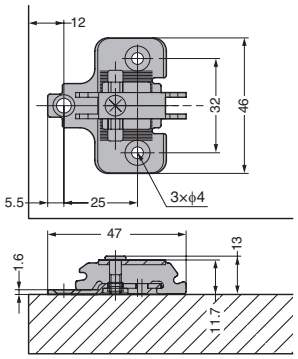
[Parts Set Details] Refer to page 2 for the dimensions.

No.	Part Name	Description
①	**Hinge Set (With Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper) ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	G 3D Item Code : 250-016-962 Item Name : LIN-X600ACD Weight (g) : 1017 ●Material Steel ●Finish Nickel
②	**Hinge Set (Without Catch & Damper)** Parts Included in 1 Set Hinge Body (Without Catch & Damper)  ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	G 3D Item Code : 250-016-963 Item Name : LIN-X600A Weight (g) : 996 ●Material Steel ●Finish Nickel

No.	Part Name	Description
③	**Connecting Bar** 	G 3D Item Code : 250-016-964 Item Name : LIN-X60-L540 Weight (g) : 860 G 3D Item Code : 250-016-965 Item Name : LIN-X60-L840 Weight (g) : 1200 G 3D Item Code : 250-016-966 Item Name : LIN-X60-L1140 Weight (g) : 1682 G 3D Item Code : 250-016-967 Item Name : LIN-X60-L1440 Weight (g) : 2000 G 3D Item Code : 250-016-968 Item Name : LIN-X60-L1740 Weight (g) : 2538 G 3D Item Code : 250-016-969 Item Name : LIN-X60-L2040 Weight (g) : 3000 ●Material Aluminium Alloy ●Finish Anodised
④	**End Cap for Connecting Bar** 	G – Item Code : 250-016-970 Item Name : LIN-X60C Weight (g) : 4 ●Material POM ●Colour Grey

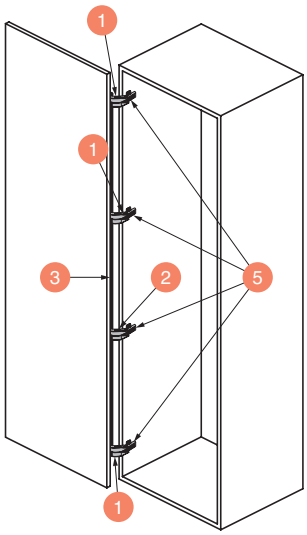
Refer to 1 : P.811, 2 : P.808~P.809

[Parts Set Details] Refer to page 2 for the dimensions.

No.	RoHS	CAD	Item Code	Dimensions
5	G	3D	160-070-041	Mounting Plate  
			Item Name : 230-P4W-32T Weight (g) : 26	
			●Material Steel ●Finish Nickel	

No.	RoHS	CAD	Item Code	Dimensions
6	G	–	160-070-030	Raised Countersunk Head Tapping Screw 3.5×15 For Mounting Plate
			Item Name : TAP3515NI Weight (g) : 1	
			●Material Steel ●Finish Nickel	

The circled numbers are part numbers. Please check with the parts list 1. For LIN-X450, refer to 2.



4 hinges per door shown.

Refer to 1 : P.810~P.811, 2 : P.806

STANDARD KIT With Mounting Plate

[Parts Included]

Hinge body ..... 2 pcs
Mounting plate ..... 2 pcs
Connecting bar ..... 1 pc
End cap for connecting bar ..... 2 pcs
Hole cover ..... 2 pcs
Raised countersunk head tapping screw 3.5×15 ..... 6 pcs
Binding head tapping screw 3.5×15 ..... 8 pcs

- Includes parts set and mounting plates.
- Suitable for door size (width 550~650mm, height 600~900mm, thickness 15~24mm) and door weight 9kg or less.

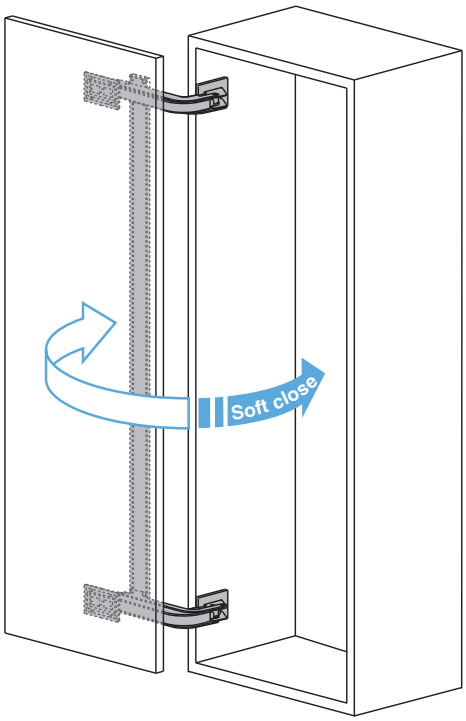
RoHS	CAD	Item Code	Item Name	Overlay mm	Door Height mm	Door Weight kg	Mounting Plate (Included)	Weight (g)	Box (sets)	Carton (sets)
G	–	250-017-590	LIN-X600	19	600~900	Max. 9	230-P4W-32T	3210	1	4

MONOFLAT LIN-X HINGE LIN-X800

Lapcon L=R INSTRUCTION

Soft close
"Smooth and soft closing"

Passed 100,000 open/close private cycle test



MonoFlat LIN-X hinge®

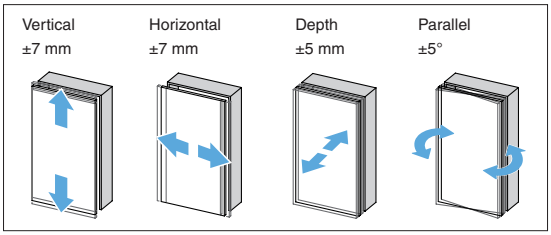
	LIN-X800	LIN-X800H
Door Width	750 - 850 mm	
Door Height	1600※ - 2400 mm	1600※ - 2980 mm
Door Thickness	24 - 40 mm	
Door Weight	Max. 40 kg per door	
Usage	1 per door (Overlay)	

※ Please use by cutting the connecting rod.
For details, refer to the formula in the detailed drawing on P.813.

- Innovative movement keeps doors discretely out of the way.
  Door closes flush with surrounding walls for a sleek and clean design.
  No need to do special processing on any wall for grooves or rails.
  Can be used on aluminium frames (if the frame has a thickness over 120 mm).
- Whether open or closed, door stays out of the way
  Compared to regular swing doors, has a small radius allowing the space in front of the door to be used effectively.
- Full access to cabinet interior.
  Door will not get in the way when fully opened.
- Built-in soft close mechanism
  When the door closes, the internal damper will cause the door to close softly, preventing slamming.
- 4 Way adjustment post installation
  Can be adjusted vertically, horizontally, depth or paralel.
- Wide amount of applicable cabinets
  Can be used on dual opening, single opening cabinets. Can also be used on L shaped corner spaces.

[Parts Included]
- OTruss head tapping screw 6*25
- Truss head screw M5 × 10
- M5 Square Nut
- One end mouth wrench

Damper causes doors to close softly.

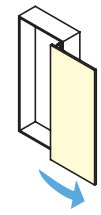


•Vertical, Horizontal, Depth and Parallel adjustment possible post-installation.

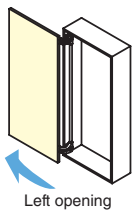
[Colour Variation]

Black

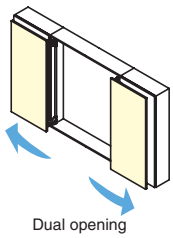
White



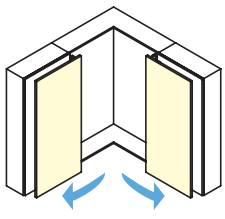
Right opening



Left opening



Dual opening



L Shaped corner space

Video Link

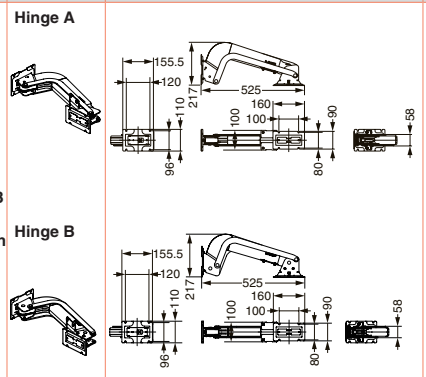
MONO FLAT LIN-X HINGE
If ordering LIN-X800

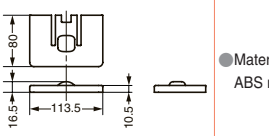
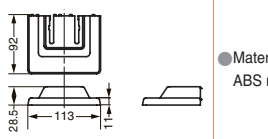
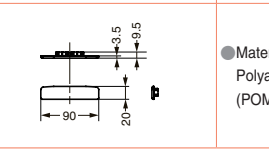
• Be sure to order..... **Part Set (per door)**

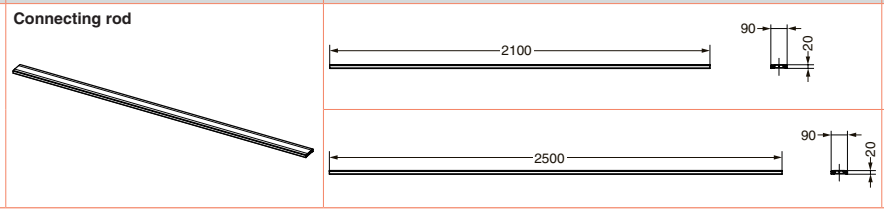
Part Set (per door) This set must be ordered. Select a suitable set according to the door height.

RoHS	CAD	Item Code	Item Name	Door Height	Colour	Set Content (for LIN-X800)			
						①Hinge + ②③Washer Cover + ④Rod Cover		⑤Connecting Rod	
						Item Code	Item Name	Item Code	Item Name
G	3D	250-043-897	LIN-X800-BL-S	2400 mm or Less	Black	250-043-834	LIN-X800-BL	250-043-842	LIN-X80-L2100-BL
G	3D	250-043-898	LIN-X800-WT-S		White	250-043-835	LIN-X800-WT	250-043-843	LIN-X80-L2100-SL
G	3D	250-043-899	LIN-X800H-BL-S	2980 mm or Less	Black	250-043-834	LIN-X800-BL	250-043-844	LIN-X80-L2500-BL
G	3D	250-043-900	LIN-X800H-WT-S		White	250-043-835	LIN-X800-WT	250-043-845	LIN-X80-L2500-SL

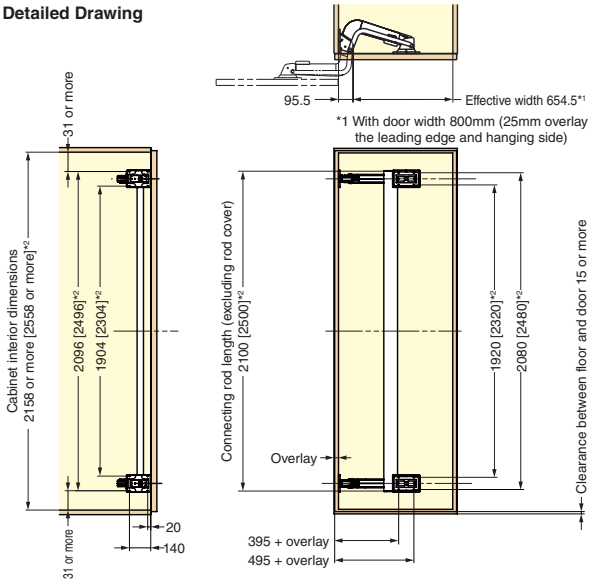
Part Set Contents

No.	Quantity	Parts in Set	Dimensions	Specifications
①	A· B 1 each	Hinge A Hinge B		●Material Steel (SPCC)/ Polyacetal (POM) ●Finish Nickel Plating Baked enamel finish

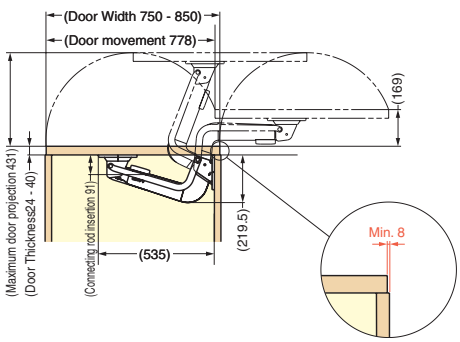
No.	Quantity	Parts in Set	Dimensions	Specifications
②	4 pcs	Washer cover (hanging side)		●Material ABS resin
③	4 pcs	Washer cover (leading edge)		●Material ABS resin
④	2 pcs	Rod cover		●Material Polyacetal (POM)

No.	Quantity	Parts in Set	Dimensions	Specifications
⑤	Either part	Connecting rod		●Material: Aluminium alloy ●Finish: Anodised: Black/silver ●Material: Aluminium alloy ●Finish: Anodised: Black/silver

Detailed Drawing



Range of Motion



*2 The dimensions in [ ] indicate LIN-X800H specifications.

*2 For cabinet interior dimensions smaller than the minimum value, reduce the other dimensions marked with *2 by an equivalent amount. The connecting rod must be cut by the customer. Max length of connecting rod = Cabinet inner height - 58mm.

MONOFLAT LIN-X HINGE LIN-X1000 For Heavy Duty Door

INSTRUCTION

MonoFlat LIN-X hinge®

	LIN-X1000 For Heavy Duty
Door Width	750~1100 mm
Door Height	2400※1~2980 mm
Door Thickness	24~40 mm
Door Weight	Max. 90 kg/Door ※2
Overlay	19 mm
Specification	☐ Single Door (Overlay)

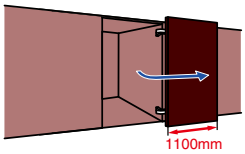
※1 Height may be 2400mm or less if cutting the connecting bar. For further details, please contact local representatives.
※2 Set the clearance between floor and door according to door weight. For details, refer to the drawings on P.815.

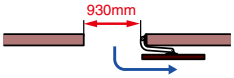
Video Link Video Link Video Link

POINT 1

Max. door width 1100mm (effective opening width 930 mm)

Installed to side wall, not interfering with taking in/out of articles.





Wide access possible

POINT 2

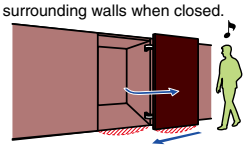
Max. door weight 90kg

Recommended for storage doors and walk-in closets.

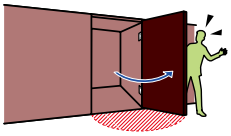
POINT 3

Door does not get in the way when opening and closing.

Opening projection is about half of swing door. Door will be flush with surrounding walls when closed.



In case of LIN-X1000

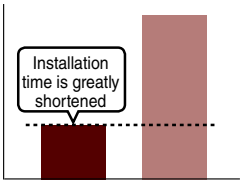


In case of swing door

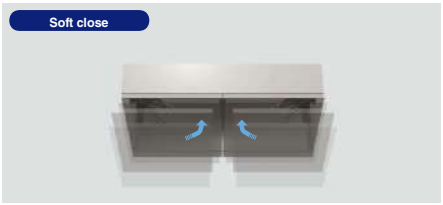
POINT 4

Greatly shortened installation time

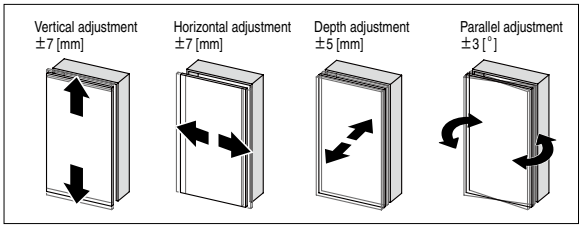
Sub-arm is unnecessary at the upper/lower part of door, remarkably shortening installation time.



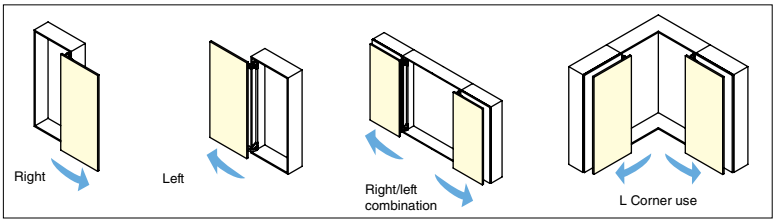
Other Features



Door closes smoothly and softly with damper.
(Damping force 5-step adjustable)



●Adjustable in vertical, horizontal, depth and parallel directions.



●Suitable for various cabinets.

●Available in white and black colours.

When ordering MonoFlat LIN-X Hinge LIN-X1000 For Heavy Duty Door

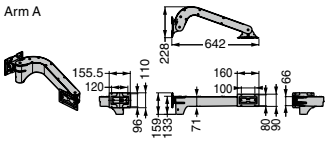
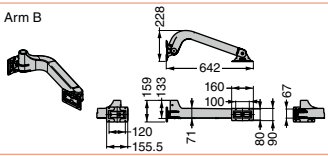
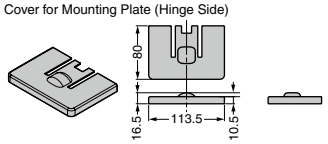
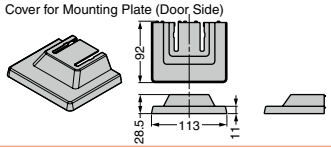
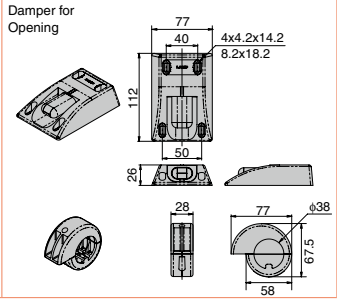
●Necessary Parts..... Parts Set (Per Door) + Connecting Bar

The circled numbers are part numbers. Please check with the drawings on the bottom.

Parts Set (Per Door) — Necessary Parts.

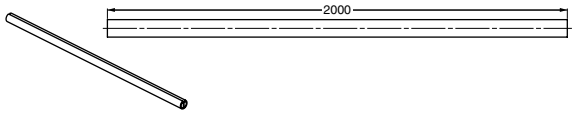
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)
Parts Set	G	3D	250-034-706	LIN-X1000-WT	12000
	G	3D	250-042-288	LIN-X1000-BL	12000

Parts Included

No.	Qty	Dimensions	Description
①	1 pc	Arm A 	●Material Aluminium Alloy Die-casting ●Finish Powder Coating/ White/Black
②	1 pc	Arm B 	●Material Aluminium Alloy Die-casting ●Finish Powder Coating/ White/Black
③	4 pcs	Cover for Mounting Plate (Hinge Side) 	●Material ABS ●Colour White/Black
④	4 pcs	Cover for Mounting Plate (Door Side) 	●Material ABS ●Colour White/Black
⑤	1 pc	Damper for Opening 	●Material PBT ●Colour White/Black

Connecting Bar

Necessary Parts1 pc is necessary for 1 door.

No.	Qty	RoHS	CAD	Item Code	Dimensions	Description
⑥	1 pc	G	3D	250-034-707		●Material:Aluminium Alloy ●Finish:White Anodised
				●Item Name:LIN-X100-L2000-WT ●Weight (g) : 3300		
		G	3D	250-042-289		●Material:Aluminium Alloy ●Finish:Black Anodised
				●Item Name:LIN-X100-L2000-BL ●Weight (g) : 3300		

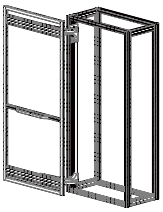
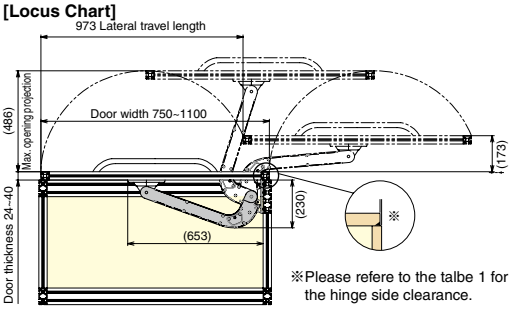


Table 1: Handle position area

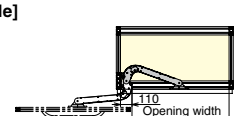
Door width \ Hinge side clearance	10mm	15mm	20mm
750mm~ 900mm	Max. 300mm	Max. 350mm	Max. 500mm
900mm~1000mm	Max. 200mm	Max. 250mm	Max. 400mm
1000mm~1100mm	Max. 100mm	Max. 150mm	Max. 300mm

[Locus Chart]

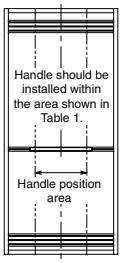


※Please refere to the talbe 1 for the hinge side clearance.

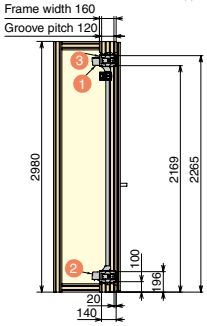
[Installation Example]

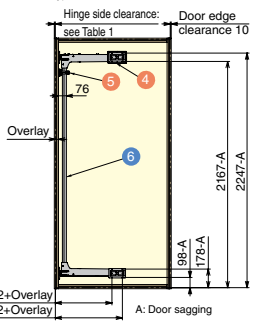


※1 In case of door width 1100mm (30 mm overlay)



※Handle position area is centred on the door width.





Please set door sagging A based on the following table so that the door will not contact the floor.

Door weight	A: Door sagging
20kg	2mm
30kg	3.5mm
40kg	5mm
50kg	6.5mm
60kg	8mm
70kg	9.5mm
80kg	11mm
90kg	12.5mm

・For carpeted floor, add the carpet thickness to the "door sagging" shown above.
・This product is vertically adjustable by ±7mm after installation. For adjustment method, please refer to the installation instruction.

FOLDING DOOR SYSTEM KF111-MH

Door opened

Folding door system with catch function.

- Holding rollers at the top and bottom achieve smooth opening and closing.
- For aluminium frame support system only.
- Centre hinge has catch function to hold the door at closed position.

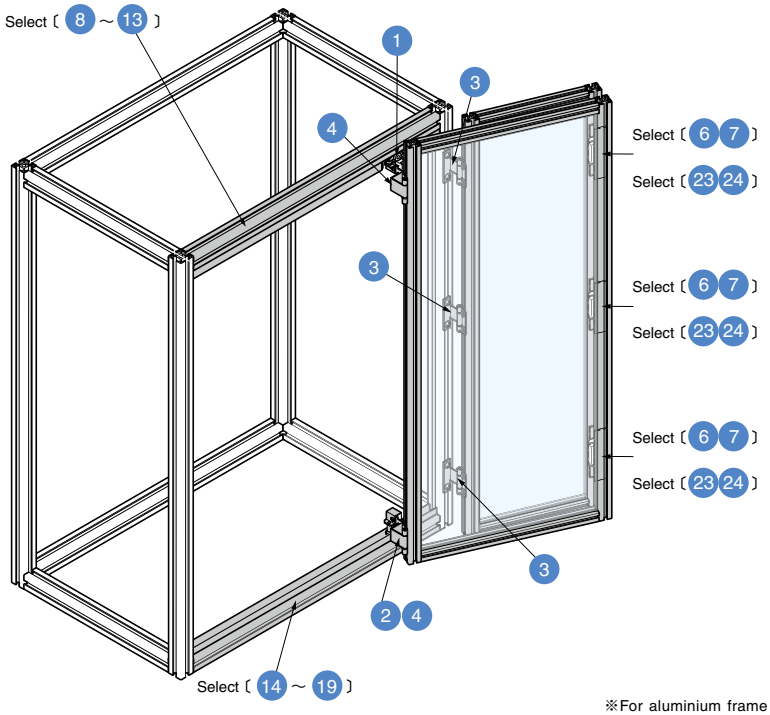
[Remarks]

- Opening and closing of overweight doors may become heavy. Do not exceed 10kg for large doors.
- Aluminium frame not included.

Door Width	Max. 450 mm
Door Height	Max. 2400 mm
Door Thickness	30 mm
Door Weight	Max. 10 kg/Door
Max. Overlay	24 mm
Aluminium Frame	Size: Door 30×60 mm, Frame 30×60 mm, 40×40 mm Groove Width: Door 8 mm, Frame 10 mm

※Please make or prepare door and aluminium frame within the range above.

The circled numbers are part numbers.
Please check with the part list 1.



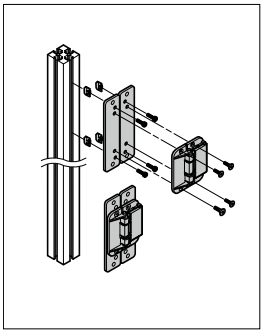
※For aluminium frame support system only. Figure above is for installing to existing aluminium frame.

Refer to 1 : P.818~P.819

[Installation Example]

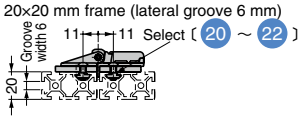
The circled numbers are part numbers. Please check with the part list 1 .

[Centre Hinge Installation]

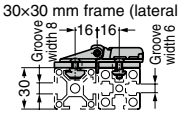


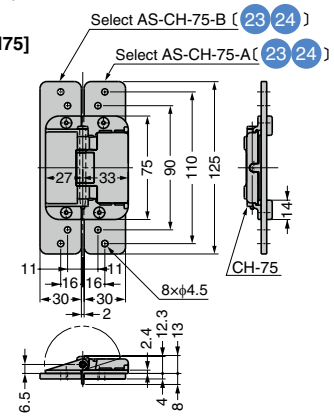
[Installation Dimensions of Centre Hinge CH75]

20×20 mm frame (lateral groove 6 mm)

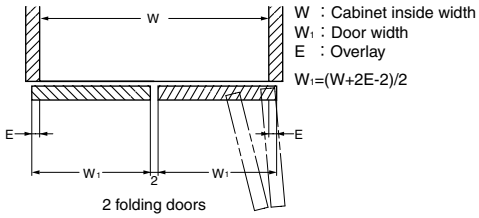


30×30 mm frame (lateral groove 6, 8 mm)





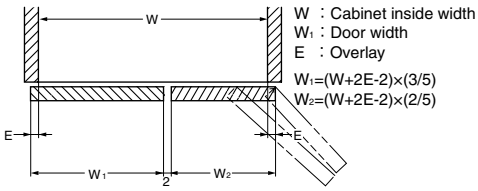
[Door Width Ratio1: 1]



2 folding doors

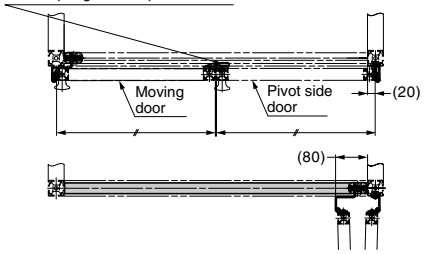
[Door Width Ratio 3: 2]

Minimum door projection when fully opened.

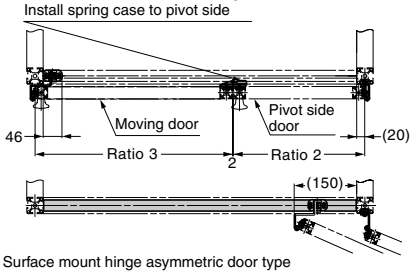


2 folding doors

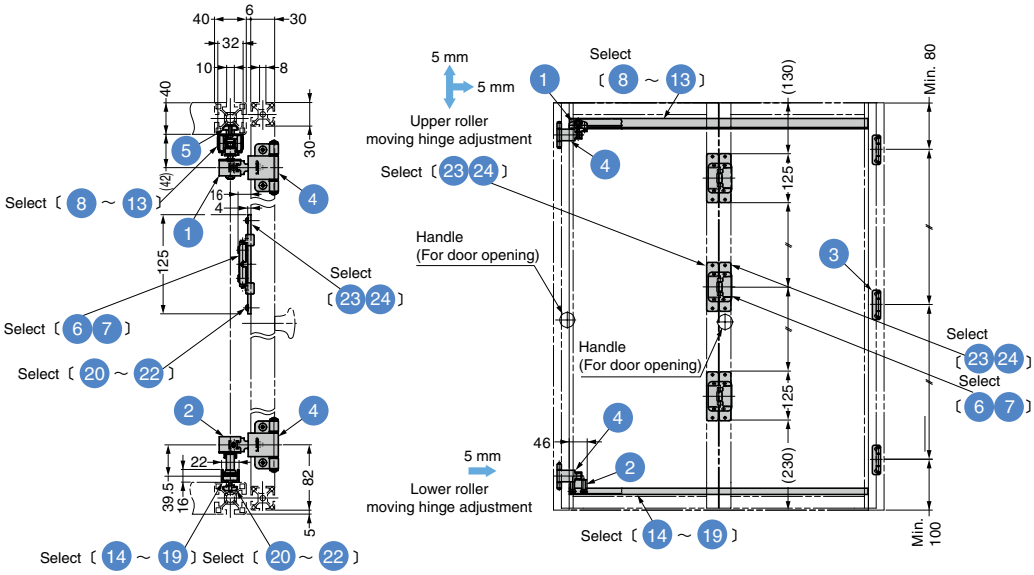
Installation of CH-75 centre hinge
Install spring case to pivot side



Installation of CH-75 centre hinge
Install spring case to pivot side



Surface mount hinge asymmetric door type



Surface mount hinge type

Refer to 1 : P.818~P.819

※ For aluminium frame support system only. Figure above is for installing to existing aluminium frame.

When Ordering Folding Door System KF111-MH

●Necessary Parts… Roller, Hinge + AS Nut for Upper Track Installation + Centre Hinge, Upper Track + Bottom Guide Track + AS Nut + Centre Hinge Bracket

The circled numbers are part numbers. Please check with the drawings 1 .

Roller, Hinge

Necessary Parts.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	250-120-021	Upper Roller Item Name : FD111-TRH Weight (g) : 154 ●Material Roller : POM Roller Guide : POM Roller Support : Steel Hinge Bracket : Steel Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Steel Parts : Coloured Zinc Chromate Hinge : Nickel [Qty for 2 Doors] 1 set
2	–	3D	250-120-028	Lower Roller L Item Name : FD111-BRLH Weight (g) : 159 ●Material Roller : POM (With Synthetic Rubber Ring) Hinge Bracket: Steel Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Steel Parts: Coloured Zinc Chromate Hinge: Nickel [Qty for 2 Doors] 1 set

No.	RoHS	CAD	Item Code	Dimensions
3	G	3D	170-090-689	Hanging Side Hinge Item Name : AS-OHT-68 Weight (g) : 99 ●Material Stainless Steel ●Finish Barrel Polished [Qty for 2 Doors] Door Height 900 mm or Less: 2 pcs Door Height 1600 mm or Less: 3 pcs Door Height 2000 mm or Less: 4 pcs Door Height 2400 mm or Less: 5 pcs
4	G	3D	170-090-688	Door End Side Hinge Item Name : AS-OHS-68 Weight (g) : 110 ●Material Stainless Steel ●Finish Barrel Polished [Qty for 2 Doors] Door Height 2400 mm or Less:2 pcs

AS Nut for Upper Track Installation

Necessary Parts. M4 screws not included.

No.	RoHS	CAD	Item Code	Part Name
5	G	3D	120-040-678	AS Nut (For Groove Width 10 mm) Item Name : AS-10M4 Weight (g) : 7 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished [Necessary Qty] FD111-910 Upper Track: 5 pcs FD111-1220 Upper Track: 6 pcs FD111-1820 Upper Track: 7 pcs FD2216-910 Bottom Guide Track: 4 pcs FD2216-1220 Bottom Guide Track: 5 pcs FD2216-1820 Bottom Guide Track: 7 pcs

Centre Hinge, Upper Track

Necessary Parts.
Please order necessary qty of centre hinges based on door size and qty.
Please order necessary qty of upper tracks based on track length.

No.	Type	RoHS	CAD	Item Code	Dimensions
6	Nickel	–	3D	250-129-208	Centre Hinge Item Name : CH-75NI Weight (g) : 101
7	Bronze	–	3D	250-120-031	Item Name : CH-75GB Weight (g) : 99
					●Material Zinc Alloy (ZDC) / POM [Qty for 2 Doors] Door Height 1600 mm or Less:3 pcs Door Height 2400 mm or Less:4 pcs

No.	Type	RoHS	CAD	Item Code	Dimensions
8	Silver Length 910 mm	G	3D	250-120-006	Upper Track Item Name : FD111-910-SIL Weight (g) : 335
9	Silver Length 1220 mm	G	3D	250-120-004	Item Name : FD111-1220-SIL Weight (g) : 409
10	Silver Length 1820 mm	G	3D	250-120-002	Item Name : FD111-1820-SIL Weight (g) : 600
11	Bronze Length 910 mm	G	3D	250-120-005	Item Name : FD111-910-GB Weight (g) : 307
12	Bronze Length 1220 mm	G	3D	250-120-003	Item Name : FD111-1220-GB Weight (g) : 387
13	Bronze Length 1820 mm	G	3D	250-120-001	Item Name : FD111-1820-GB Weight (g) : 600
					●Material Aluminium Alloy ●Finish Anodised ※Convex R-shaped travel surface is effective for dust removing . Pitch End 15 mm

Refer to 1 : P.816~P.817

The circled numbers are part numbers. Please check with the drawings 1 .

Bottom Guide Track

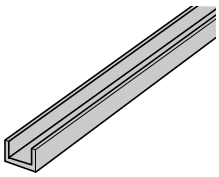
Necessary Parts. Please order necessary qty based on track length.

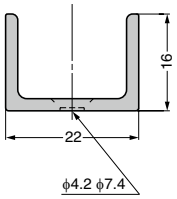
No.	Type	RoHS	CAD	Item Code
14	Silver Length 910 mm	G	3D	250-120-015
		Item Name : FD2216-910-SIL Weight (g) : 240		
15	Silver Length 1220 mm	G	3D	250-120-013
		Item Name : FD2216-1220-SIL Weight (g) : 325		
16	Silver Length 1820 mm	G	3D	250-120-011
		Item Name : FD2216-1820-SIL Weight (g) : 500		
17	Bronze Length 910 mm	G	3D	250-120-014
		Item Name : FD2216-910-GB Weight (g) : 238		
18	Bronze Length 1220 mm	G	3D	250-120-012
		Item Name : FD2216-1220-GB Weight (g) : 324		
19	Bronze Length 1820 mm	G	3D	250-120-010
		Item Name : FD2216-1820-GB Weight (g) : 400		

●Material Aluminium Alloy
●Finish Anodised Clear

Dimensions

Bottom Guide Track





Pitch End 15 mm

AS Nut

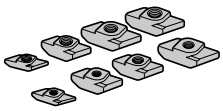
Necessary Parts. M4, M5 screws not included.

No.	Type	RoHS	CAD	Item Code
20	Aluminium Frame Groove Width 8 mm M4	G	3D	120-040-685
		Item Name : AS-8M4 Weight (g) : 4		
21	Aluminium Frame Groove Width 8 mm M5	G	3D	120-040-686
		Item Name : AS-8M5 Weight (g) : 4		
22	Aluminium Frame Groove Width 10 mm M5	G	3D	120-040-687
		Item Name : AS-10M5 Weight (g) : 7		

●Material Stainless Steel (SUS316)
●Finish Barrel Polished

Part Name

AS Nut



[Qty for 2 Doors]	AS-8M4	AS-8M5	AS-10M5
Door Height 900 mm or Less:	12 pcs,	8 pcs,	4 pcs
Door Height 1600 mm or Less:	12 pcs,	12 pcs,	6 pcs
Door Height 2000 mm or Less:	16 pcs,	16 pcs,	8 pcs
Door Height 2400 mm or Less:	16 pcs,	20 pcs,	10 pcs

Centre Hinge Bracket

Necessary Parts.

No.	RoHS	CAD	Item Code
23	G	3D	170-090-694
	Item Name : AS-CH-75-A Weight (g) : 110		
24	G	3D	170-090-695
	Item Name : AS-CH-75-B Weight (g) : 109		

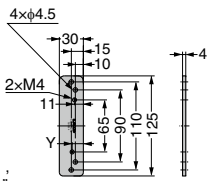
●Material Stainless Steel (SUS430)
●Finish Barrel Polished

Dimensions

Bracket for Centre Hinge

[Qty for 2 Doors]
Door Height 1600 mm or Less:
㉓ 3 pcs, ㉔ 3 pcs
Door Height 2400 mm or Less:
㉓ 4 pcs, ㉔ 4 pcs

Y = 14 (AS-CH-75-A)
Y = 11 (AS-CH-75-B)
※AS-CH-75-A is marked with “R” , and AS-CH-75-B marked with “L” .



Refer to 1 : P.816~P.817

SLIDABLE FOLDING DOOR SYSTEM KF111-R

AS INSTRUCTION

Can slide left and right when folded

Folded doors can slide for easy access.

- Can fold door to the left or right side and then slide it.
- Ball bearing used in upper roller achieves smooth opening and closing.
- Centre hinge has catch to hold the door at closed position.

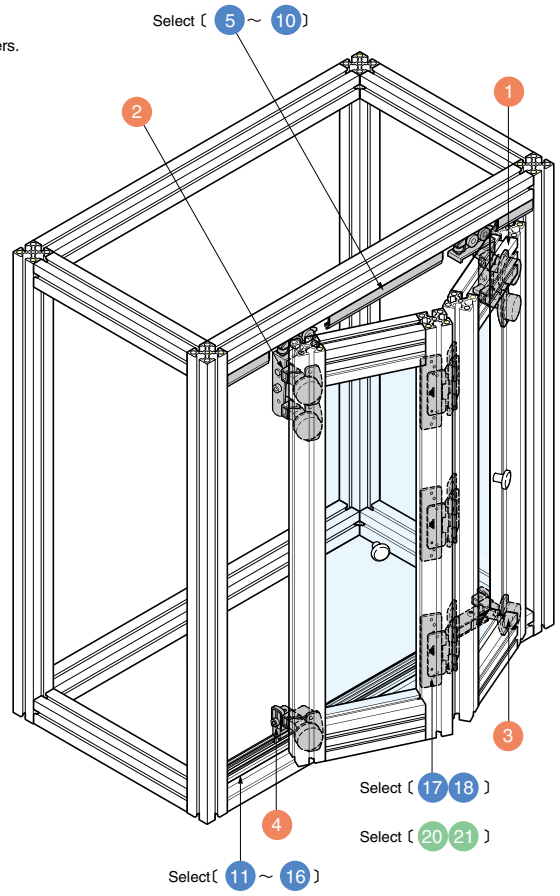
[Remarks]

- Opening and closing of overweight doors may become heavy. Do not exceed 10kg for large doors.
- Use AS nuts and centre hinge brackets when installing to aluminium frame.
- Aluminium frame not included.

Door Width	Max. 450 mm
Door Height	Max. 2400 mm
Door Thickness	18~34 mm
Door Weight	Max. 10 kg/Door
Max. Overlay	23 mm
Aluminium Frame	Size : Door 30×60 mm, Frame 40×40 mm, Groove Width : 6 mm

※Please make or prepare door and aluminium frame within the range above.

The circled numbers are part numbers.
Please check with the part list 1.

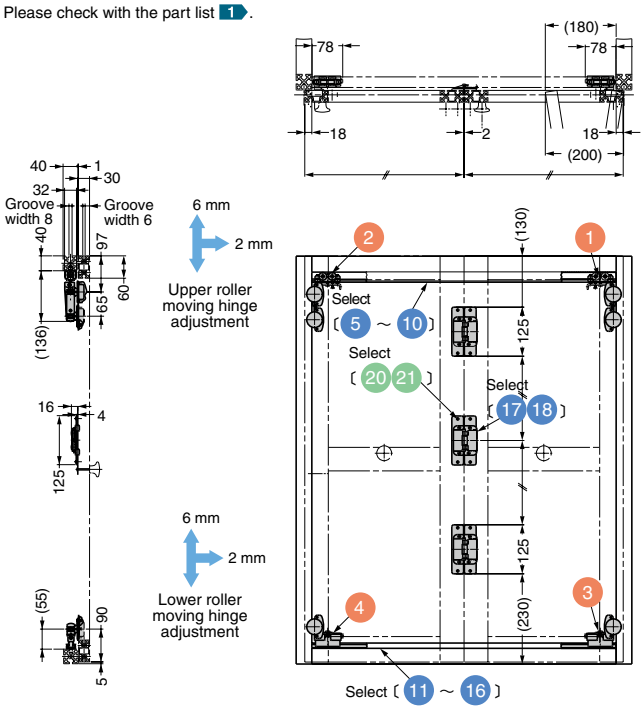


※Dimensions when installed to existing aluminium frame shown. When installed to sheet metal, please contact local representatives.

Refer to 1 : P.822~P.823

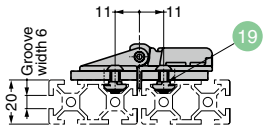
[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1.

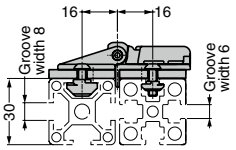


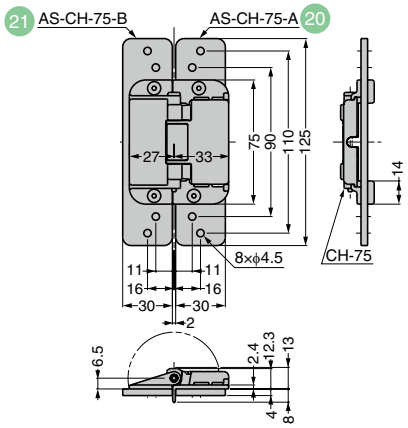
[Installation Dimensions of Centre Hinge CH75]

20×20 mm frame (lateral groove 6 mm)

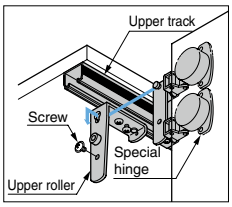


30×30 mm frame (lateral groove 6, 8 mm)



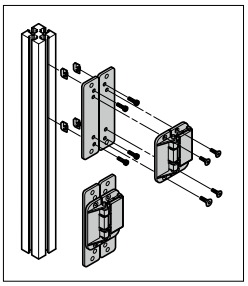


[Door installation]

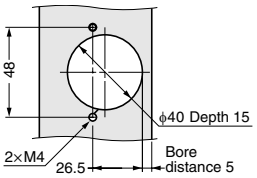


- Fold the door connected with centre hinges in half. As shown above, hook the hinge base shafts to the key holders of left and right upper rollers, and then temporarily fix with supplied mounting screws.

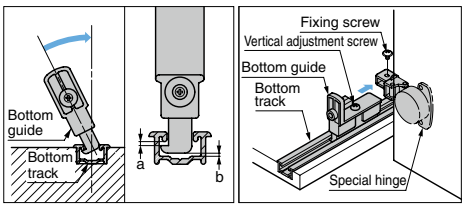
[Centre Hinge Installation]



[Cut Out Dimensions]



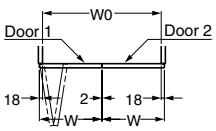
[Installation of Bottom Guide]



- Insert the bottom guide into the bottom track as shown above.
- Next, insert the special hinge into the bottom guide and temporarily fasten with the fixing screws.
- As shown above, adjust with the vertical adjustment screw, so that the upper and lower clearances a and b of the plastic part of bottom guide with respect to the bottom guide track are nearly equal.
- Temporarily tighten all screws, and adjust the door to ensure smooth movement. Finally tighten all screws securely.

[Door Opening Size] For 18 mm overlay

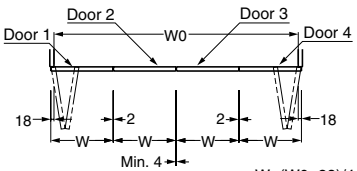
2 folding doors



W0 : Cabinet inside width
W : Door width

W=(W0+34)/2

4 folding doors



W=(W0+28)/4

※ Dimensions when installed to existing aluminium frame shown. When installed to sheet metal, please contact local representatives.

Refer to 1 : P.822~P.823

When Ordering Slidable Folding Door System KF111-R

●Necessary Parts… Parts Set + Track + Centre Hinge

●Please order according to application … Optional Parts

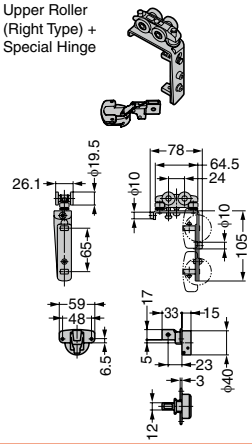
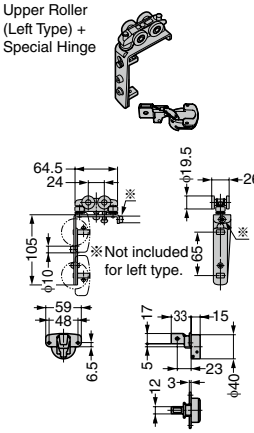
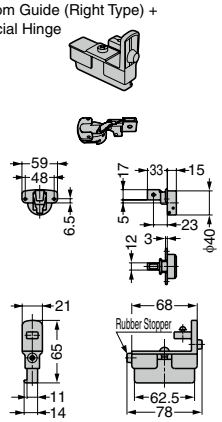
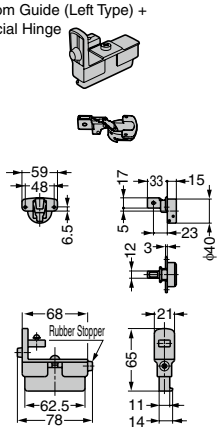
The circled numbers are part numbers. Please check with the drawings 1 .

Parts Set (Per Door)

Necessary Parts.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)
Parts Set	–	3D	250-122-119	KF111RP	1044

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Upper Roller (Right Type) + Special Hinge 	Item Code : 250-120-086 Item Name : R111-T-R Weight (g) : 359 ●Material Roller: POM (With Bearing) Bracket: Steel Hinge Base: Zinc Alloy (ZDC) Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Bracket: Nickel Hinge Base: Nickel Hinge: Nickel
2	1 pc	Upper Roller (Left Type) + Special Hinge 	Item Code : 250-120-087 Item Name : R111-T-L Weight (g) : 347 ●Material Roller: POM (With Bearing) Bracket: Steel Hinge Base: Zinc Alloy (ZDC) Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Bracket: Nickel Hinge Base: Nickel Hinge: Nickel
3	1 pc	Bottom Guide (Right Type) + Special Hinge 	Item Code : 250-120-088 Item Name : R111-S-R Weight (g) : 169 ●Material Body: Zinc Alloy (ZDC) Guide: POM Hinge: Zinc Alloy (ZDC) ●Finish Body: Nickel Guide: Natural Hinge: Nickel
4	1 pc	Bottom Guide (Left Type) + Special Hinge 	Item Code : 250-120-089 Item Name : R111-S-L Weight (g) : 169 ●Material Body: Zinc Alloy (ZDC) Guide: POM Hinge: Zinc Alloy (ZDC) ●Finish Body: Nickel Guide: Natural Hinge: Nickel

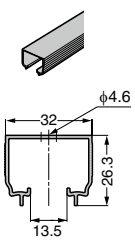
Tracks

Necessary Parts. Please specify necessary length, qty and finish of 5 ~ 10 based on cabinet width.

No.	Type	RoHS	CAD	Item Code	Dimensions
5	Silver Length 910 mm	G	3D	250-120-006	Item Name : FD111-910-SIL Weight (g) : 335
6	Silver Length 1220 mm	G	3D	250-120-004	Item Name : FD111-1220-SIL Weight (g) : 409

●Material Aluminium Alloy
●Finish Anodised
※Convex R-shaped travel surface is effective for dust removing.

Upper Track

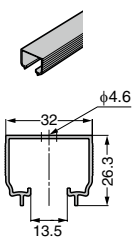


Pitch End 15 mm

No.	Type	RoHS	CAD	Item Code	Dimensions
7	Silver Length 1820 mm	G	3D	250-120-002	Item Name : FD111-1820-SIL Weight (g) : 600
8	Bronze Length 910 mm	G	3D	250-120-005	Item Name : FD111-910-GB Weight (g) : 307

●Material Aluminium Alloy
●Finish Anodised
※Convex R-shaped travel surface is effective for dust removing.

Upper Track



Pitch End 15 mm

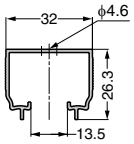
Refer to 1 : P.820~P.821

The circled numbers are part numbers. Please check with the drawings 1 .

No.	Type	RoHS	CAD	Item Code	Dimensions
9	Bronze Length 1220 mm	G	3D	250-120-003	Item Name : FD111-1220-GB Weight (g) : 387
10	Bronze Length 1820 mm	G	3D	250-120-001	Item Name : FD111-1820-GB Weight (g) : 600

●Material Aluminium Alloy
●Finish Anodised
※Convex R-shaped travel surface is effective for dust removing.

Upper Track

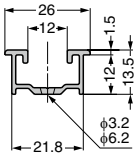


Pitch End 15 mm

No.	Type	RoHS	CAD	Item Code	Dimensions
11	Silver Length 910 mm	G	3D	250-120-090	Item Name : FD2612-910-SIL Weight (g) : 232
12	Silver Length 1820 mm	G	3D	250-120-092	Item Name : FD2612-1820-SIL Weight (g) : 1000

●Material Aluminium Alloy
●Finish Anodised

Bottom Track

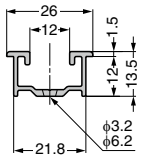


Pitch End 25 mm

No.	Type	RoHS	CAD	Item Code	Dimensions
13	Silver Length 2730 mm	G	3D	250-120-094	Item Name : FD2612-2730-SIL Weight (g) : 600
14	Bronze Length 910 mm	G	3D	250-120-091	Item Name : FD2612-910-GB Weight (g) : 212
15	Bronze Length 1820 mm	G	3D	250-120-093	Item Name : FD2612-1820-GB Weight (g) : 400
16	Bronze Length 2730 mm	G	3D	250-120-095	Item Name : FD2612-2730-GB Weight (g) : 600

●Material Aluminium Alloy
●Finish Anodised

Bottom Track



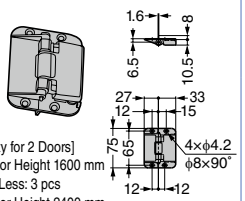
Pitch End 25 mm

Centre Hinge

Necessary Parts. Please specify necessary finish and qty of 17 18 based on door size and qty.

No.	Type	RoHS	CAD	Item Code	Dimensions
17	Nickel	–	3D	250-129-208	Item Name : CH-75NI Weight (g) : 101 ●Material Zinc Alloy (ZDC) / POM

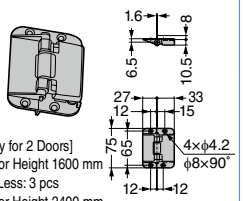
Centre Hinge



[Qty for 2 Doors]
Door Height 1600 mm or Less: 3 pcs
Door Height 2400 mm or Less: 4 pcs

No.	Type	RoHS	CAD	Item Code	Dimensions
18	Bronze	–	3D	250-120-031	Item Name : CH-75GB Weight (g) : 99 ●Material Zinc Alloy (ZDC) / POM

Centre Hinge



[Qty for 2 Doors]
Door Height 1600 mm or Less: 3 pcs
Door Height 2400 mm or Less: 4 pcs

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
19	G	3D	120-040-684	Item Name : AS-6M4 Weight (g) : 1 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished [Application] For installing track to existing aluminium frame. AS nuts and M4 screws for rail mounting holes are required.

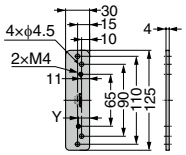
AS Nut (For Groove Width 6 mm)

[Necessary Qty]
Door Height 1600 mm or Less: 12 pcs
Door Height 2400 mm or Less: 16 pcs

No.	RoHS	CAD	Item Code	Dimensions
20	G	3D	170-090-694	Item Name : AS-CH-75-A Weight (g) : 110
21	G	3D	170-090-695	Item Name : AS-CH-75-B Weight (g) : 109

●Material
Stainless Steel (SUS430)
●Finish Barrel Polished
[Application]
For installing centre hinge to existing aluminium frame.

Centre Hinge Bracket



[Qty for 2 Doors]
Door Height 1600 mm or Less: 20 3 pcs, 21 3 pcs
Door Height 2400 mm or Less: 20 4 pcs, 21 4 pcs

Y=14 (AS-CH-75-A)
Y=11 (AS-CH-75-B)
※AS-CH-75-A is marked with "R", and AS-CH-75-B marked with "L".

Refer to 1 : P.820~P.821

DESIGN SHUTTER DIS-M Surface Mount Type

Refer to 1 for quotation request.

INSTRUCTION

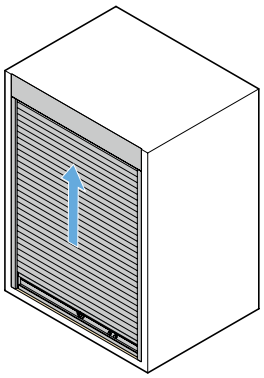
- Guide rail is installed inside the cabinet, without cabinet processing.
- Slats with only R20 for clean appearance.
- Can be used for both vertical and horizontal types.

[Remarks]

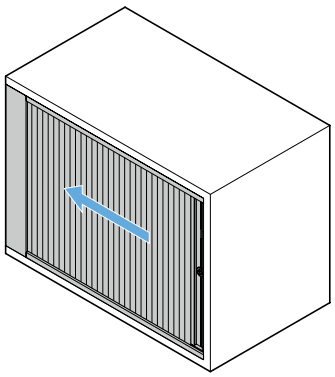
- Do not lean against or apply body weight to the shutter. Damage, personal injury or accident may occur.

	Vertical Type	Horizontal Type	Horizontal Type (Double Door)
Cabinet Inside Width	300~1200 mm	300~900 mm	600~1800 mm
Cabinet Inside Height	300~900 mm	100~1200 mm	100~1200 mm
Cabinet Inside Depth	Min. 330 mm	Min. 330 mm	Min. 330 mm

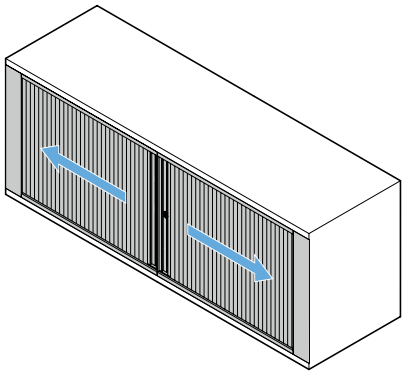
[Example for Vertical Type]



[Example for Horizontal Type, Left-opening]



[Example for Horizontal Type, Double Door]

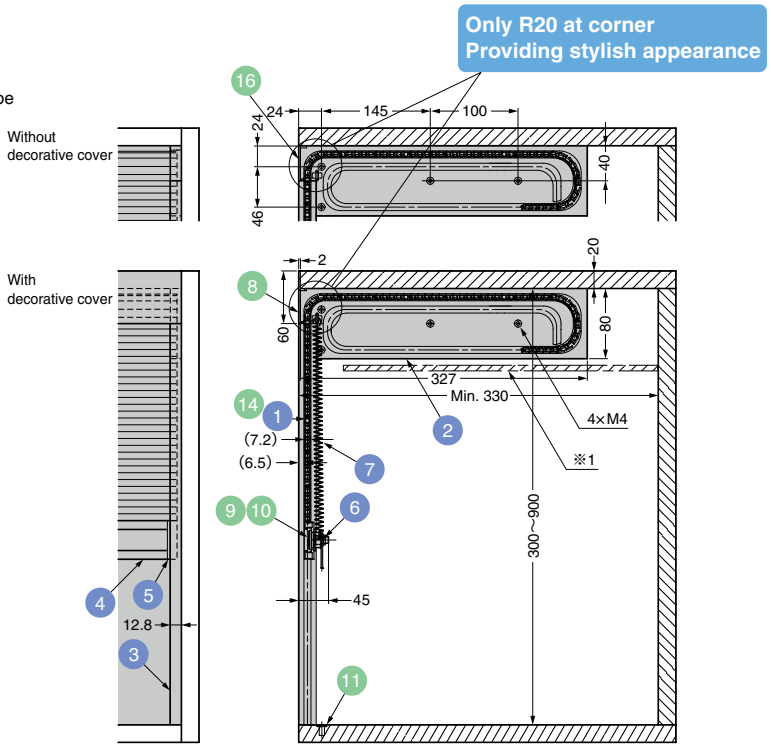


Refer to 1 : P.843

[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1.

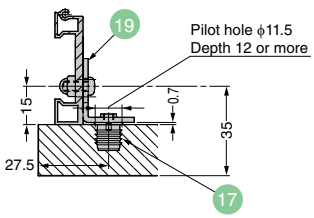
In case of vertical type



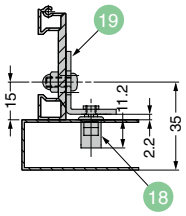
※1 When storing objects apt to fall in horizontal type, the wrapped shutter may contact the stored objects.
If necessary, install a mullion next to the surface mount parking.
Please use detachable mullion for easy installation and maintenance.

[Installation of Magnetic Catch and Middle Bracket]

(For vertical type and cabinet inside width 600mm or less.)

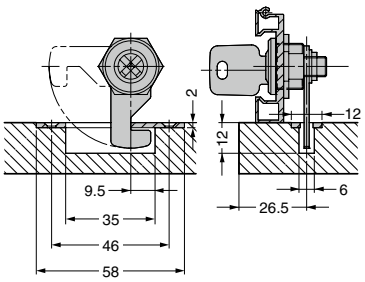


In case of wooden cabinet



In case of metal cabinet

[Installation of Cylinder Lock and Cam]



Refer to 1 : P.826~P.827

■Design Shutter DIS-M (Surface Mount Type) Parts List

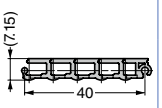
Refer to 1 for quotation request.

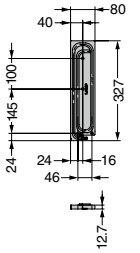
The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

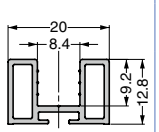
Necessary Parts. Please specify necessary qty.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	180-018-588	Slat (1200 mm) Item Name : DIS-001-1200 Weight (g) : 263 ●Material PVC ●Colour Grey
2	G	3D	180-018-592	Surface Mount Parking Item Name : DIS-004-R Weight (g) : 112 Right Type ●Materia POM ●Colour Grey
	G	3D	180-018-591	Item Name : DIS-004-L Weight (g) : 112 Left Type ●Material POM ●Colour Grey
3	G	3D	180-018-593	Surface Mount Guide Rail (860 mm) Item Name : DIS-005-860 Weight (g) : 64 ●Material PP ●Colour Grey With Double-sided Tape

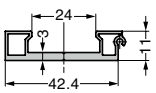


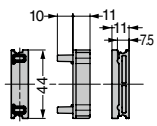


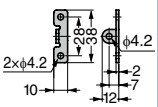
Left type shown.



No.	RoHS	CAD	Item Code	Dimensions
4	G	3D	180-018-595	End Slat (Large) (1200 mm) Item Name : DIS-007-1200 Weight (g) : 500 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
5	G	3D	180-018-597	End Slider Item Name : DIS-009 Weight (g) : 4 ●Material POM ●Colour Grey
6	–	3D	180-018-600	Balance Holder (For Vertical Type Only) Item Name : DIS-012 Weight (g) : 55 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
7	–	–	–	Balance Spring (For Vertical Type Only) Made to Order ●Material Steel Designed to customer's specifications.







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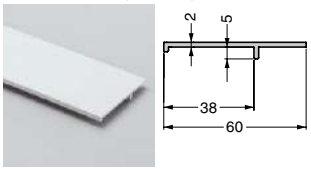
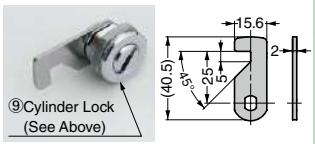
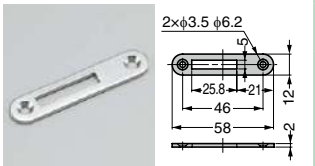
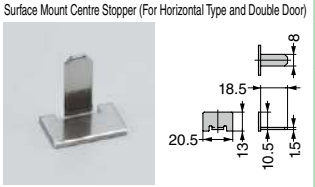
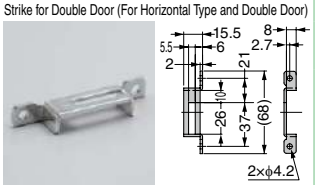
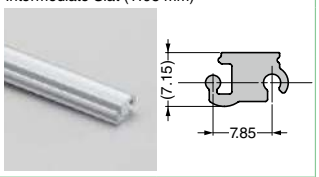
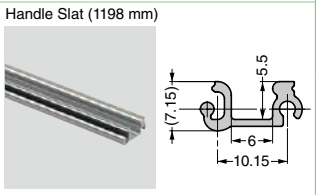
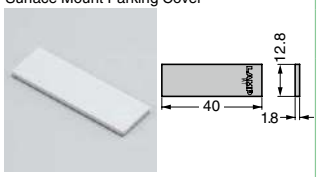
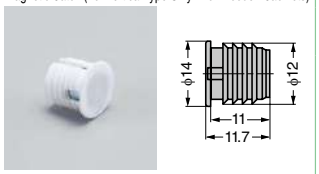
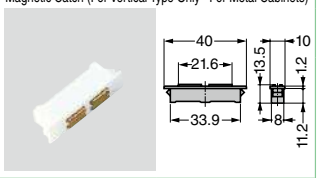
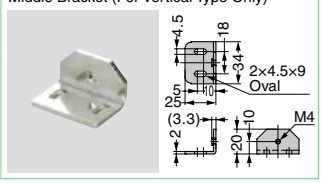
Refer to 1 : P.843, 2 : P.825

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
⑧	–	3D	180-018-594	Decorative Cover (1200 mm)
			Item Name : DIS-006-1200 Weight (g) : 248 ●Material PVC ●Colour Grey With Double-sided Tape	
⑨	G	3D	150-001-374	Cylinder Lock
			Item Name : DIS-022R-D Weight (g) : 50 ●Material Brass ●Finish Chrome/Coloured Zinc Chromate (Trivalent)/ Nickel	
⑩	–	3D	180-018-598	Cam
			Item Name : DIS-010 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished	
⑪	–	3D	180-018-599	Strike
			Item Name : DIS-011 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished	
⑫	–	3D	180-018-602	Surface Mount Centre Stopper (For Horizontal Type and Double Door)
			Item Name : DIS-017 Weight (g) : 4 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished	
⑬	–	3D	180-018-605	Strike for Double Door (For Horizontal Type and Double Door)
			Item Name : DIS-021 Weight (g) : 15 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished	

No.	RoHS	CAD	Item Code	Dimensions
⑭	G	3D	180-018-604	Intermediate Slat (1198 mm)
			Item Name : DIS-019 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver	
⑮	G	3D	180-018-942	Handle Slat (1198 mm)
			Item Name : DIS-023 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver	
⑯	G	3D	180-018-943	Surface Mount Parking Cover
			Item Name : DIS-024 Weight (g) : 1 ●Material ABS ●Colour Grey With Double-sided Tape	
⑰	G	3D	140-050-189	Magnetic Catch (For Vertical Type Only For Wooden Cabinets)
			Item Name : IND10-WT Weight (g) : 4 ●Material PP ●Colour White	
⑱	G	3D	140-050-086	Magnetic Catch (For Vertical Type Only For Metal Cabinets)
			Item Name : MC-FP5W Weight (g) : 9 ●Material ABS ●Colour White	
⑲	G	3D	210-010-541	Middle Bracket (For Vertical Type Only)
			Item Name : AS-PTB Weight (g) : 20 ●Material Stainless Steel (SUS430) ●Finish Barrel Polished	

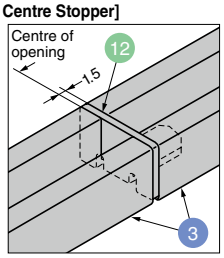
●Optional parts Purpose

⑧ Decorative cover … For shutter winding portion.
⑨ Cylinder lock, ⑩ Cam … For shutter locking.
⑪ Strike … Strike plate of ⑩.
⑫ Surface mount centre stopper … Stops shutter at the centre of opening in case of double door.
⑬ Strike for double door … Strike plate for cylinder lock installed to ④ in case of double door.
⑭ Intermediate slat … Reinforcing slat for vertical type above W600 (horizontal type above H600).
⑮ Handle slat … Slat integrated to handle.
⑯ Surface mount parking cover … Used without ⑧.
⑰⑱ Magnetic catch … For vertical type below W600.
⑲ Middle bracket…Bracket of ⑰ and ⑱.

●Recommended Screws

Pan head screw 4×10 (for ⑥⑬⑲)
Binding head tapping screw 4×20 (for ②) M4 cap nut (for ⑲)

[Installation Position of Surface Mount Centre Stopper]

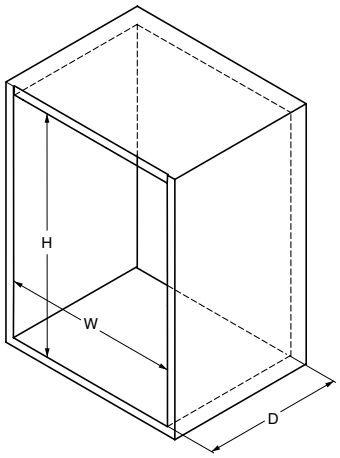


Refer to 1 : P.825

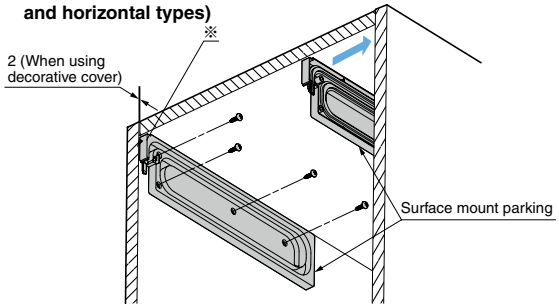
■Design Shutter DIS-M (Surface Mount Type) Installation Outline

[Parts Requiring to be Processed]

Part Name	Vertical Type W=300~1200 H=300~900 D=330 or More		Horizontal Type (Single Door) W=300~900 H=100~1200 D=330 or More		Horizontal Type (Double Door) W=600~1800 H=100~1200 D=330 or More	
	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size
Slat	Below W600 H/40 pcs Above W600 H/48 pcs (Round Up)	W–10	Below W600 W/40 pcs Above W600 W/48 pcs (Round Up)	H–10	Below W600 {(W/2)/40×2 (Round Up)} ×2 pcs Below W600 {(W/2)/48×2 (Round Up)} ×2 pcs	H–10
Surface Mount Guide Rail	2 pcs	H–40	2 pcs	W–40	2 pcs 2 pcs	(W/2)–40 (W/2)–41.5
End Slat (Large)	1 pc	W–30	1 pc	H–30	2 pcs	H–30
Decorative Cover (Optional)	1 pc For Below W600	W	1 pc For Below H600	H	2 pcs For Below H600	H
Intermediate Slat (Optional)	H/48 pc (Round Up) For Above W600	W–12	W/48 pc (Round Up) For Above H600	H–12	{(W/2)/48 (Round Up)} ×2 pcs For Below H600	H–12
Handle Slat (Optional)	1 pc	W–12	1 pc	H–12	1 pc	H–12

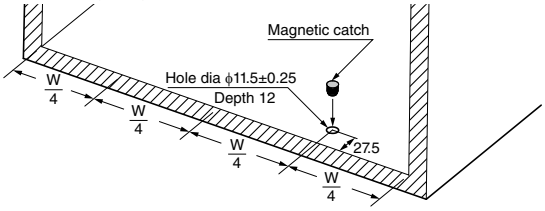


1. Assembling surface mount parking (common to vertical and horizontal types)

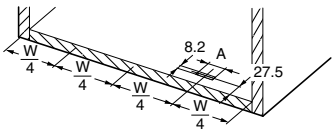


Fix the surface mount parking. Press it tightly against the back side of top board. When using decorative cover, recess the ※ surface by 2mm from left and right side boards, and fix there with screws. Noted that surface mount parking may be left-handed and right-handed.

2. Installing magnetic catch (vertical type only)



For vertical type below W600, please use magnetic catch and middle bracket. For wooden cabinet, drill a hole at the position of W/4 as shown above.



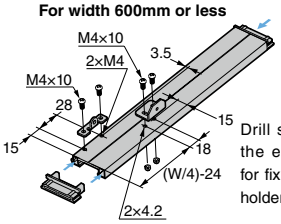
Thickness	A*1
0.8	34.1
1.0	34.1
1.2	34.5
1.4	34.5
1.6	35
1.8	35.5
2.0	36.5

For metal cabinet, drill a hole at the position of W/4 as shown above.

3. Processing and assembling end slat (common to vertical and horizontal types)

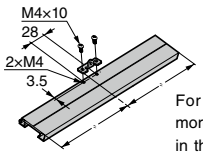
●In case of vertical type

For width 600mm or less



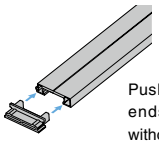
Drill screw holes on the end slat (large) for fixing the balance holder.

For width 600mm or more



For width 600mm or more, drill screw holes in the middle for fixing the balance holder.

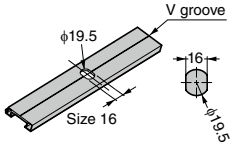
●In case of horizontal type



Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.

●When using cylinder lock (optional)

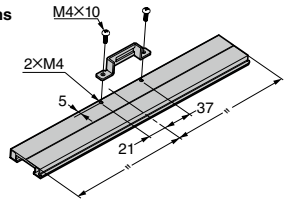
(Common to vertical and horizontal types)



When using cylinder lock, drill additional hole in the longitudinal centre part as shown left. The V groove is at the centre position of width.

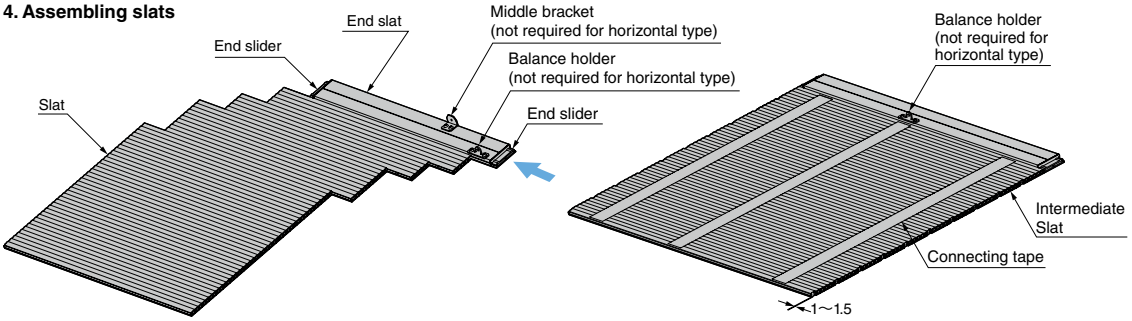
●Bracket side in case of horizontal type and double door

The specifications and processing methods of end slat at the key side and the bracket side are different.



Also drill screw holes with reference to the longitudinal centre part as shown. Install the strike for double door. Note the direction and position of the end slat (large).

4. Assembling slats

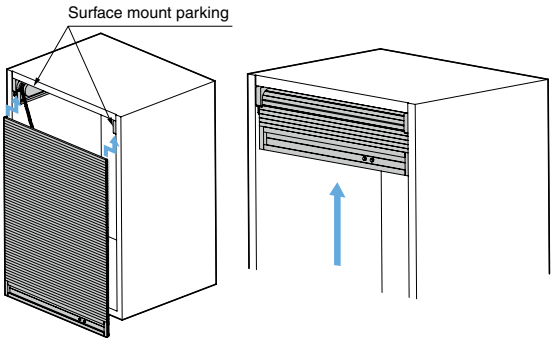


Connect the required number of slats by using multi-purpose elastic adhesive or connecting tape.
Use multi-purpose elastic adhesive for vertical type below W600 (horizontal type below H600).
Use multi-purpose elastic adhesive or connecting tape for vertical type above W600 (horizontal type above H600).Adhesive is used for preventing dislocation. Please use a very small amount at a pitch of 100mm ~150mm.
Proceed to the next step after the adhesive is completely solid.

For easy opening and closing, install handle slat (optional) if necessary.
In this case, be sure to install handle slat between main slats. Do not connect handle slat with intermediate slats. Like intermediate slat, cut its width 2~3mm shorter than that of main slats, so that both ends retract 1~1.5mm after fixing.

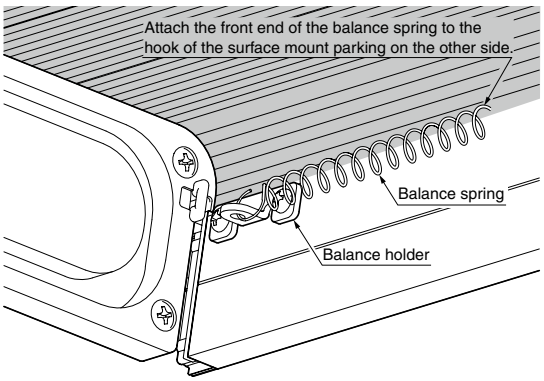
In case of vertical type above W600 (horizontal type above H600), insert the intermediate slats between the main slats. As liquid adhesive for PVC pipes can not be bonded to aluminium alloy, please fix with multi-purpose elastic adhesive. Or attach the connecting tape to the back side (cabinet inside) of slats and fix them so that no dislocation occur.
For intermediate slat, cut its width 2~3mm shorter than that of main slats, so that both ends retract 1~1.5mm after fixing.

5. Incorporating in a cabinet



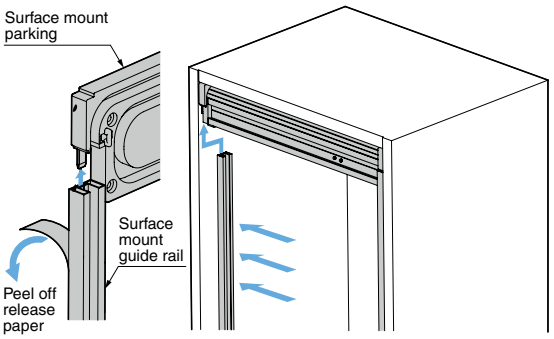
Slowly incorporate the assembled slats into the surface mount parking.
Then wind them up to the top.

6. Installing balance spring (vertical type only)



Hook the balance spring on the balance holder.
Hook 1 spring on the balance holder below W600, while 2 springs above W600.
※Balance springs with optimum strength based on shutter size are available.

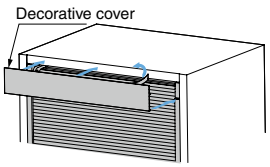
7. Installing surface mount guide rail



Peel off the release paper of the double-sided tape affixed to the surface mount guide rail, stick it to the cabinet inside while inserting the surface mount parking.
For double door type, cut surface mount guide rails by a length equal to the stopper thickness, i.e., 1.5mm at one side.

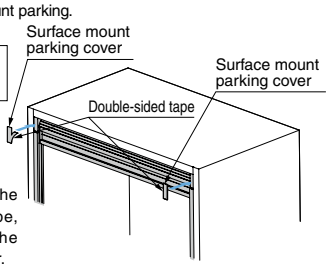
8. Installing decorative cover and surface mount parking cover (optional)

For vertical type below W600
(For vertical type below H600)



Peel off the release paper of the double-sided tape affixed to the decorative cover, stick it to the edge of cabinet top board while paying attention to claws to be fitted with the surface mount parking.

For vertical type above W600
(For vertical type above H600)



As shown right, peel off the supplied double-sided tape, and attach 2 pieces to the surface mount parking cover.

DESIGN SHUTTER DIS-H Recessed Mount Type

Refer to 1 for quotation request.

INSTRUCTION

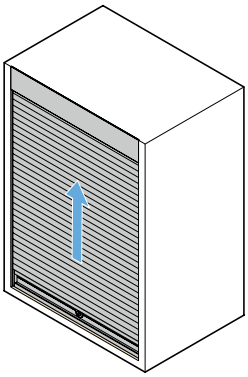
- Guide rail is recessed in cabinet inside.
- Slats with only R20 for clean appearance.
- Can be used for both vertical and horizontal types.

[Remarks]

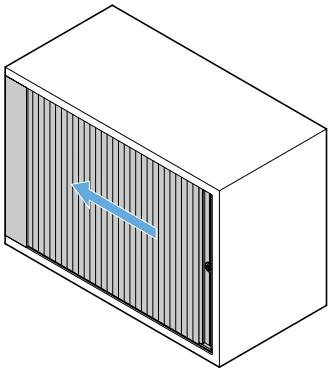
- Do not lean against or apply body weight to the shutter. Damage, personal injury or accident may occur.
- Recommended Screws
  Binding head tapping screw 4×20 (for ⑦)
  Pan head screw 4×10 (for ⑭)

	Vertical Type	Horizontal Type	Horizontal Type (Double Door)
Cabinet Inside Width	300~900 mm	300~ 900 mm	600~1800 mm
Cabinet Inside Height	300~900 mm	100~1188 mm	100~1188 mm
Cabinet Inside Depth	200~600 mm	200~ 600 mm	200~ 600 mm

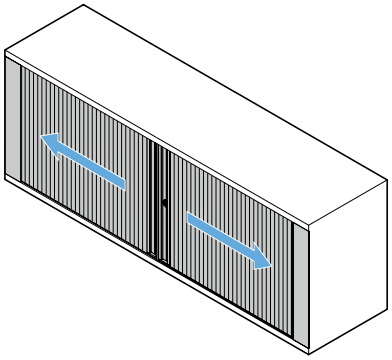
[Example for Vertical Type]



[Example for Horizontal Type, Left-opening]



[Example for Horizontal Type, Double Door]

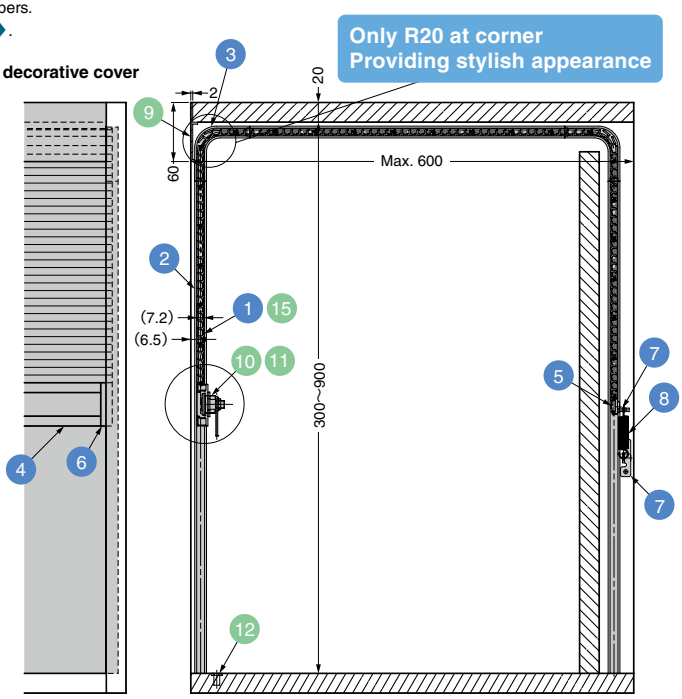


Refer to 1 : P.844

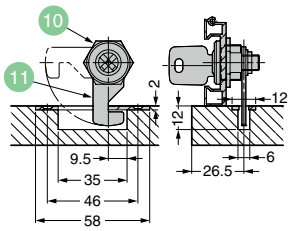
■Installation Example

The circled numbers are part numbers.
Please check with the part list 1.

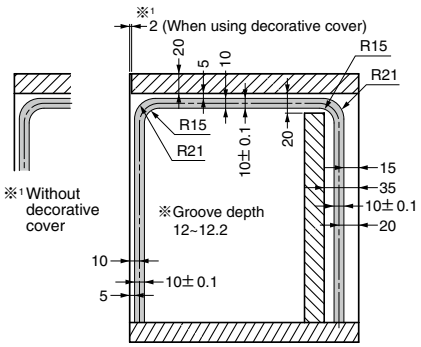
When using vertical type and decorative cover



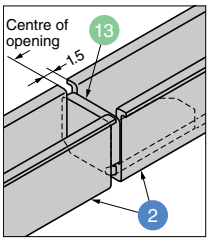
[Installation of Cylinder Lock and Cam]



[Cut Out Dimensions] Vertical Type



[Installation Position of Recessed Mount Centre Stopper]



Refer to 1 : P.832~P.833

■Design Shutter DIS-H (Recessed Mount Type) Parts List

Refer to 1 for quotation request.

The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

Necessary Parts. Please specify necessary qty.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	180-018-588	Slat (1200 mm) Item Name : DIS-001-1200 Weight (g) : 263 ●Material PVC ●Colour Grey
2	G	3D	180-018-589	Recessed mount guide rail (2000 mm) Item Name : DIS-002-2000 Weight (g) : 62 ●Material PP ●Colour Grey
3	G	3D	180-018-590	90 Guide rail Item Name : DIS-003-90 Weight (g) : 5 ●Material POM ●Colour Grey
4	G	3D	180-018-595	End Slat (Large) (1200 mm) Item Name : DIS-007-1200 Weight (g) : 500 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
5	G	3D	180-018-596	End Slat (Small) (1200 mm) Item Name : DIS-008-1200 Weight (g) : 200 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
6	G	3D	180-018-597	End Slider Item Name : DIS-009 Weight (g) : 4 ●Material POM ●Colour Grey
7	–	3D	180-018-600	Balance Holder (For Vertical Type Only) Item Name : DIS-012 Weight (g) : 55 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
8	–	–	–	Balance Spring (For Vertical Type Only) Made to order ●Material Steel Designed to customer's specifications. –

Refer to 1 : P.844, 2 : P.831

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

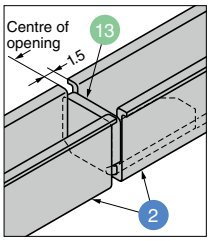
No.	RoHS	CAD	Item Code	Dimensions
9	–	3D	180-018-594	Decorative Cover (1200 mm) Item Name : DIS-006-1200 Weight (g) : 248 ●Material PVC ●Colour Grey With Double-sided Tape
10	G	3D	150-001-374	Cylinder Lock Item Name : DIS-022R-D Weight (g) : 50 ●Material Brass ●Finish Chrome / Zinc Chromate (Trivalent) / Nickel
11	–	3D	180-018-598	Cam Item Name : DIS-010 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
12	–	3D	180-018-599	Strike Item Name : DIS-011 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished

No.	RoHS	CAD	Item Code	Dimensions
13	–	3D	180-018-601	Recessed Mount Centre Stopper (For Horizontal Type and Double Door) Item Name : DIS-016 Weight (g) : 3 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
14	–	3D	180-018-605	Strike for Double Door (For Horizontal Type and Double Door) Item Name : DIS-021 Weight (g) : 15 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
15	G	3D	180-018-604	Intermediate Slat (1198 mm) Item Name : DIS-019 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
16	G	3D	180-018-942	Handle Slat (1198 mm) Item Name : DIS-023 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver

●Optional parts Purpose

⑨ Decorative cover … For shutter winding portion.
⑩ Cylinder lock, ⑪ Cam … For shutter locking.
⑫ Strike … Strike plate of ⑪.
⑬ Recessed mount centre stopper … Stops shutter at the centre of opening in case of double door.
⑭ Strike for double door … Strike plate for cylinder lock installed to ④ in case of double door.
⑮ Intermediate slat … Reinforcing slat for vertical type above W586 (horizontal type above H586).
⑯ Handle slat … Slat integrated to handle.

[Installation Position of Recessed Mount Centre Stopper]



●Recommended Screws

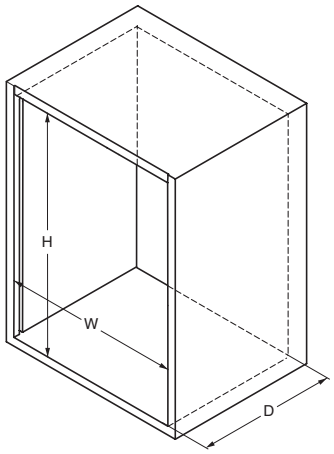
Binding head tapping screw 4×20 (for ⑦)
Pan head screw 4×10 (for ⑭)

Refer to 1 : P.831

■Design Shutter DIS-H (Recessed Mount Type) Installation Outline

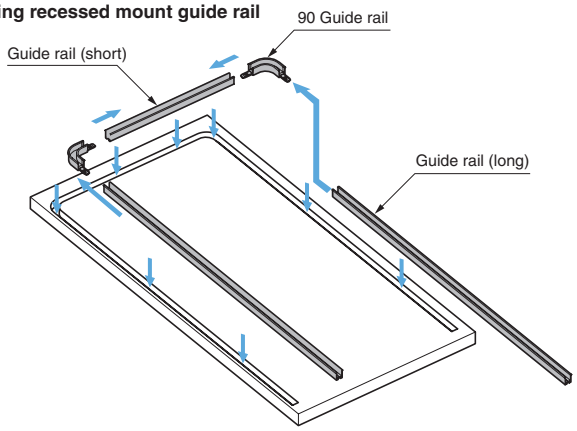
[Parts Requiring to be Processed]

Part Name	Vertical Type W=300~900 H=300~900 D = 200 or More		Horizontal Type (Single Door) W=300~900 H=100~1188 D = 200 or More		Horizontal Type (Double Door) W=600~1800 H=100~1188 D = 200 or More	
	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size
Slat	Below W586 (H+D–43)/40 pcs	W+12	Below W586 W/40 pcs	H+12	Below W586 {(W/2)/40×2 (Round Up)} × 2 pcs	H+12
	Above W586 (H+D–43)/48 pcs (Round Off)		Above W586 W/48 pcs (Round Up)		Above W586 {(W/2)/48×2 (Round Up)} × 2 pcs	
Guide Rail (Long)	4 pcs	H–60	4 pcs	W–60	2 pcs (Front Side) 2 pcs (Back Side) 2 pcs (Back Side)	(W/2)–60 (W/2)–61.5※1 W–120
Guide Rail (Short)	2 pcs	H–130	2 pcs	W–130	4 pcs	(W/2)–130
End Slat (Large)	1 pcs	W–10	1 pc	H–10	2 pcs	H–10
End Slat (Small)	1 pc	W+10	Not Used		Not Used	
Decorative Cover (Optional)	1 pc For Below W586	W	1 pc For Below H586	H	2 pcs For Below H586	H
Intermediate Slat (Optional)	(H+D–43)/48 pcs (Round Off) For Above W586	W+10	W/48 pcs (Round Up) For Above H586	H+10	{(W/2)/48 (Round Up)} × 2 pcs For Below H586	H+10
Handle Slat (Optional)	1 pc	W+10	1 pc	H+10	2 pcs	H+10



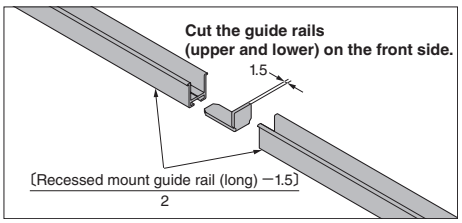
※1 For horizontal type (double door), cut guide rails (2/4 pcs) by 1.5mm at one side for installing recessed mount centre stopper on the front side.

1. Installing recessed mount guide rail



Connect recessed mount guide rails and 90 guide rails as shown, then drive them into the groove processed on the side board. Remove burrs and dust in the groove in advance to avoid poor slat movement.
Install them for left and right.

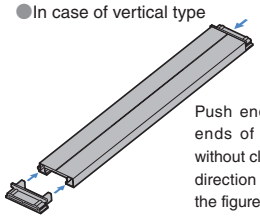
For horizontal type (double door), cut the guide rails (long) on the front side by 1.5mm and insert the recessed mount centre stopper at the end.



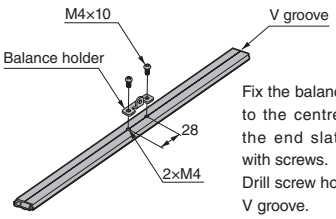
2. Processing end slat

[Processing and Assembling End Slat]

●In case of vertical type

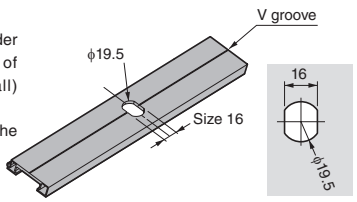


Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.



Fix the balance holder to the centre part of the end slat (small) with screws.
Drill screw hole on the V groove.

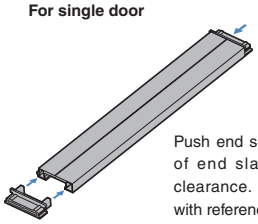
●When using cylinder lock
(Common to vertical and horizontal types)



When using cylinder lock, drill additional hole in the longitudinal centre part as shown above. The V groove is at the centre position of width.

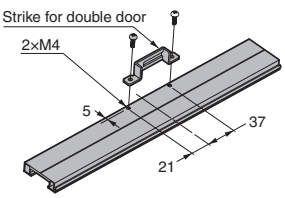
●In case of horizontal type

For single door



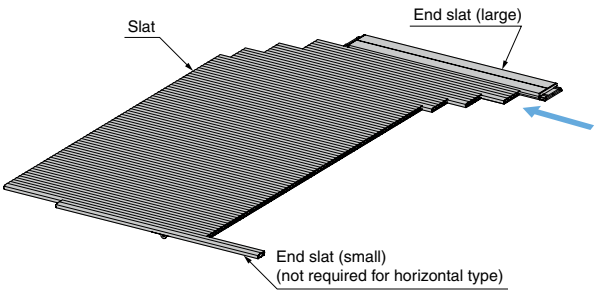
Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.

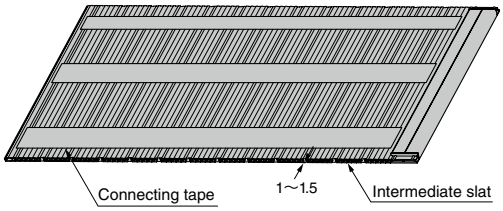
For double door



For double door type with a lock, as shown, drill screw holes with reference to the longitudinal centre part, and then install a strike for double door type. Note the direction and position of the end slat (large).

3. Assembling slats





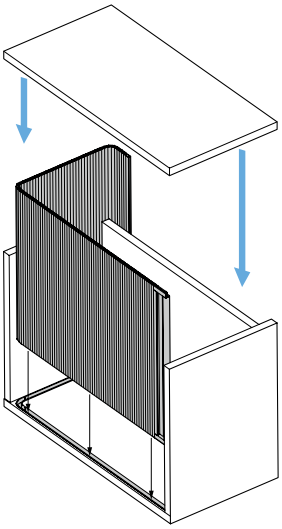
Connect the required number of slats by using multi-purpose elastic adhesive or connecting tape.
Adhesive is used for preventing dislocation. Please use a very small amount at a pitch of 100mm ~150mm.
Proceed to the next step after the adhesive is completely solid.

For easy opening and closing, install handle slat if necessary. In this case, be sure to install handle slat between main slats and be careful not to connect with intermediate slat. Like intermediate slat, its width should be 2 mm shorter than that of main slats. Ensure that both ends retract 1mm after fixing.

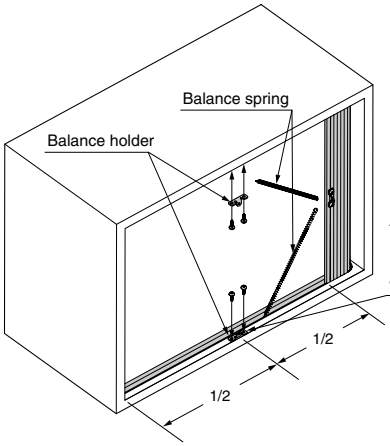
In case of vertical type above W586 (horizontal type above H586), insert the intermediate slats between the main slats alternately one by one. As liquid adhesive for PVC pipes can not be bonded to aluminium alloy, please fix with multi-purpose elastic adhesive. Or attach the connecting tape to the back side (cabinet inside) of slats and fix them so that no dislocation occur.(Use within 72 hours may not achieve adequate adhesion.

The intermediate slats are set 2mm shorter in width than the main slats. Ensure that both ends retract 1mm after fixing.

4. Incorporating in a cabinet



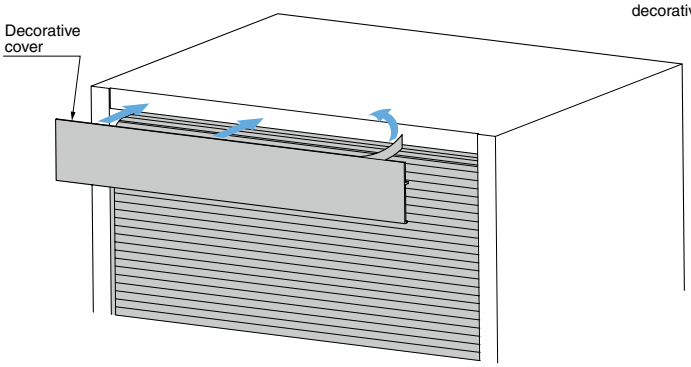
It is recommended to apply lubricant such as our “Teflodry” to groove inside recessed mount guide rails and 90 guide rails. Regular application may maintain smooth movement.
Also, applying Teflon grease can realise long-term smooth movement. Recommended for high frequency use.



For wooden cabinets, fix with wood screws (nominal 4).
For metal cabinets, fix with M4 screws.

Install balance holders when the shutter is fully opened. As shown above, seen from front of the cabinet, install to the position half the distance from the back slat end to the bottom board. After that, hook 2 balance springs in a V shape as shown.

5. Installing decorative cover (optional)



Peel off the release paper of the double-sided tape affixed to the decorative cover, stick it to the edge of cabinet top board.

If using the decorative cover for width or height above 600mm, warped slat or decorative cover may touch each other and be damaged.

AS HIGH RIGIDITY CABINET SHUTTER

Refer to 1 for quotation request.

INSTRUCTION

- Suitable for 30×30mm and 8mm groove width aluminium frame.
- High rigidity by connecting slat panel with aluminium slat frame.
- By replacing slat panel, suitable for various applications. For further details, please contact local representatives.
- Aluminium alloy material, light weight and excellent design.
- Shock absorbing damper keeps shutter from slamming shut
- Slat panel also available. For further details, please contact local representatives.
- Besides optional DL-150S 2, handle can also be selected from the handle item INDEX 3.

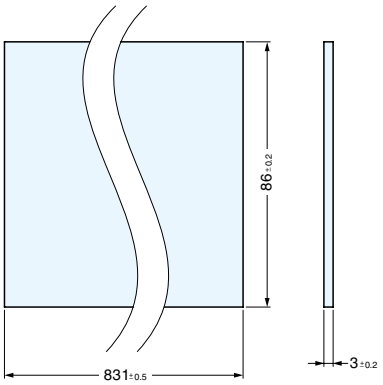
[Remarks]

- For vertical use only.
- Aluminium frame not included.
- When installing aluminium frame, confirm that frames are horizontal or vertical each other and free from distortion.

	Vertical Type (L-shaped type)
Aluminium Frame Inside Width	Max. 840 mm
Aluminium Frame Inside Height	Max. 640 mm
Aluminium Frame Inside Depth	Max. 900 mm

[Cut Out Dimensions of Slat Panel]

※Slat panel not included.
(Or supplied by us on request. For further details, please contact local representatives.)

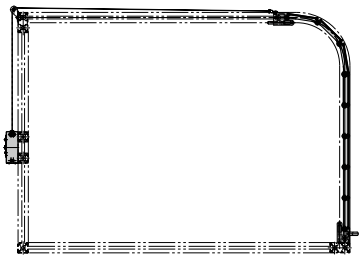


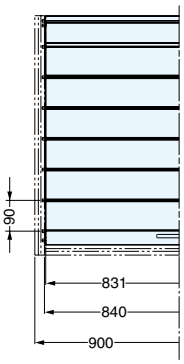
Refer to 1 : P.845, 2 : P.659, 3 : P.608

[Dimensions] For Width 900 mm, Height 700 mm, Depth 970 mm

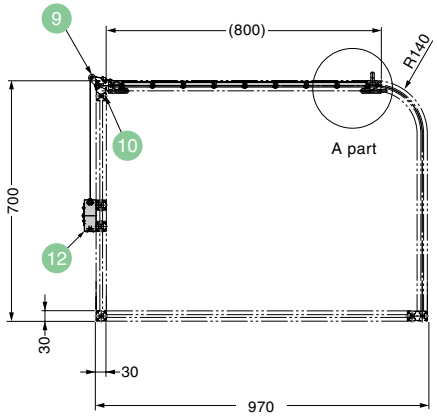
The circled numbers are part numbers. Please check with the part list 1.

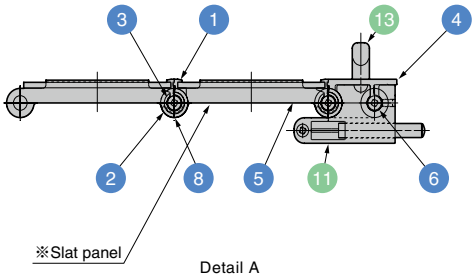
Shutter closed





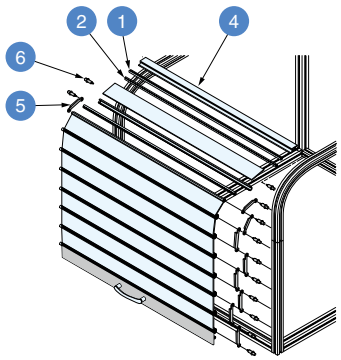
Shutter opened

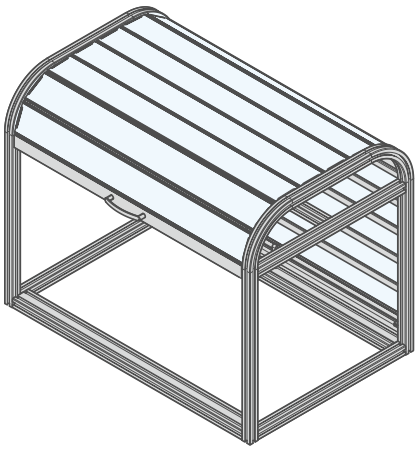


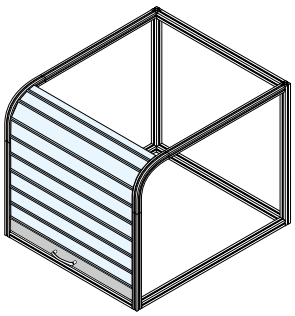


Detail A

※Slat panel not included.
(Or supplied by us on request. For further details, please contact local representatives.)







Can also be used for U-shaped aluminium frame.
For further details, please contact local representatives. (Made to order)

Refer to 1 : P.838~P.839

■AS High Rigidity Cabinet Shutter Parts List

Refer to 1 for quotation request.

The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

Necessary Parts. Please specify necessary qty.

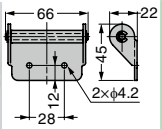
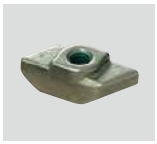
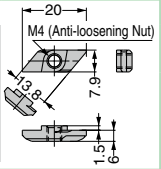
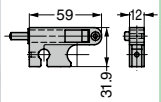
No.	RoHS	CAD	Item Code	Dimensions
1	G	3D	270-011-615	Horizontal Frame (Male) (831 mm) Item Name : AS-S900-FO Weight (g) : 174 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
2	G	3D	270-011-616	Horizontal Frame (Female) (831 mm) Item Name : AS-S900-FM Weight (g) : 186 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
3	G	3D	270-011-614	Horizontal Frame (Ring) (790 mm) Item Name : AS-S900-FR Weight (g) : 48 ●Material POM ●Colour Natural
4	G	3D	270-011-617	Horizontal Frame (End) (831 mm) Item Name : AS-S900-FS Weight (g) : 533 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
5	G	3D	270-014-985	Slat Joint Item Name : AS-S900-SJ Weight (g) : 10 ●Material Stainless Steel (SUS430) ●Finish Barrel Polished
6	G	3D	270-014-986	Guide Pin Item Name : AS-S900-GP-R Weight (g) : 2 Right Type ●Material POM ●Colour Natural
	G	3D	270-014-987	Item Name : AS-S900-GP-L Weight (g) : 2 Left Type ●Material POM ●Colour Natural
7	G	–	270-014-988	Double-sided Tape (For Fixing Slat Panel and Horizontal Frame) Item Name : AS-S900-RT Weight (g) : 3 1 Sheet : 48 pcs (Width 3 mm×50 mm) For Fixing 8 pcs of Slats
8	G	3D	270-014-989	Slider Washer Item Name : AS-S900-SW Weight (g) : 1 ●Material POM ●Colour Natural

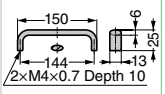
Refer to 1 : P.845, 2 : P.837

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
⑨	G	3D	270-010-644	Reaction Force Roller
			Item Name : AS-S900-HR Weight (g) : 58 ●Material Stainless Steel (SUS430)/ POM ●Finish Barrel Polished/Plain	
⑩	G	3D	120-040-685	AS Nut
			Item Name : AS-8M4 Weight (g) : 4 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished	 
⑪	G	–	270-011-989	Damper
			Item Name : AS-S900-DP Weight (g) : 28 ●Material Aluminium Alloy / ABS ●Finish / Colour Paint Silver	

No.	RoHS	CAD	Item Code	Dimensions
⑫	–	–	–	Flat Spiral Spring
			–	–
			–	
⑬	G	3D	100-011-110	Handle
			Item Name : DL-150S Weight (g) : 93 ●Material Stainless Steel (SUS303) ●Finish Satin	

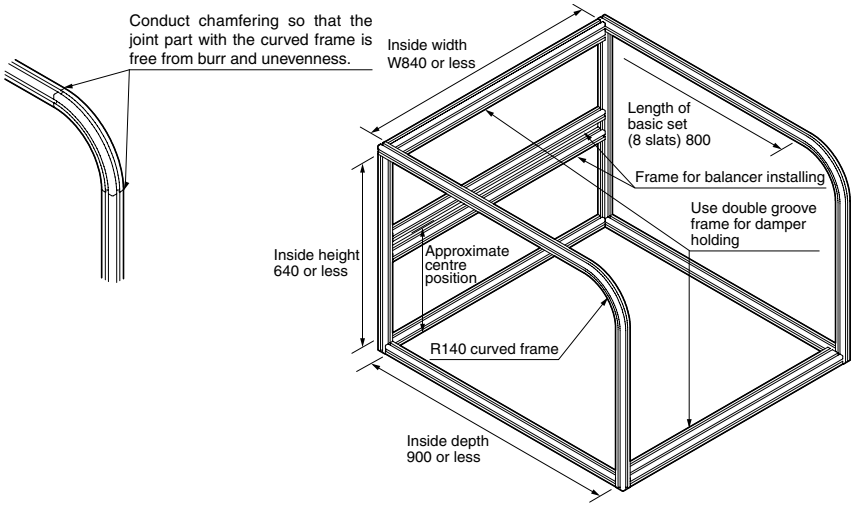
●Optional parts Purpose

⑨ Reaction force roller … For hooking ⑫ wire. For L-shaped type only.
⑩ AS nut … Used for installing ⑨ and ⑫.
⑪ Damper … For reducing the shock caused by contact with aluminium frame when closing shutter.
⑫ Flat spiral spring … For relieving the weight feeling during opening and closing of the shutter.
⑬ Handle … Installed to ④. (A handle other than ⑬ can also be selected.)

Refer to 1 : P.837

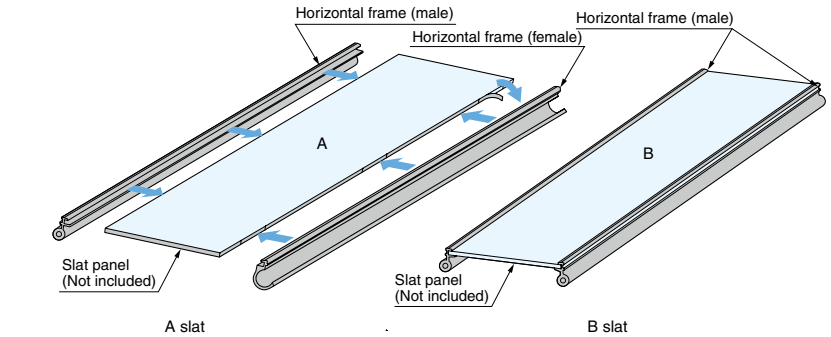
■AS High Rigidity Cabinet Shutter Installation Outline

1. Preparing the frame



Our PJ joint system 1 can reduce work time and provides clean appearance.

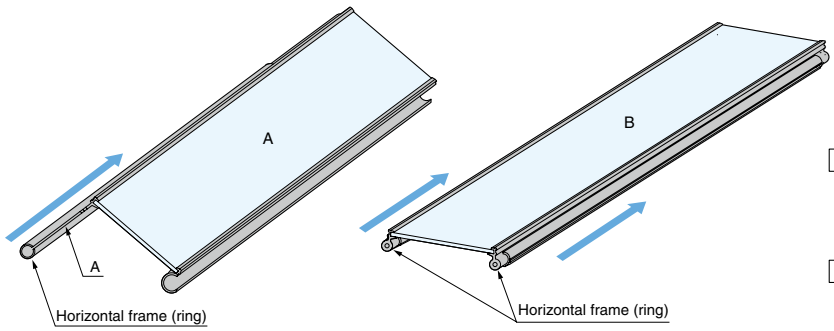
2. Assembling slats

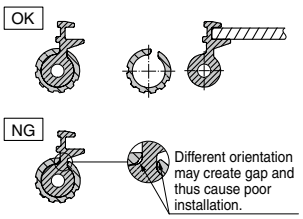


Prepare 7 pcs of A slats with slat panel (with double-sided tape adhesive at edge) affixed with horizontal frame (male) and horizontal frame (female) and 1 piece of B slat with only horizontal frame (male).
When assembling, press the slat panel firmly into the groove of the horizontal frame and pay attention to avoid longitudinal dislocation.

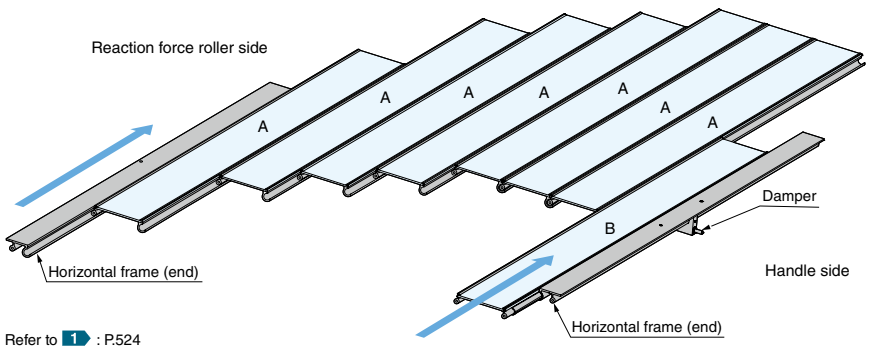
Install the horizontal frame (ring) to the horizontal frame (male). Use 1 pc for A slat and 2 pcs for B slat.

[Remarks]
Install the sectional shape of the horizontal frame (ring) and that of the horizontal frame (male) in the direction shown below.





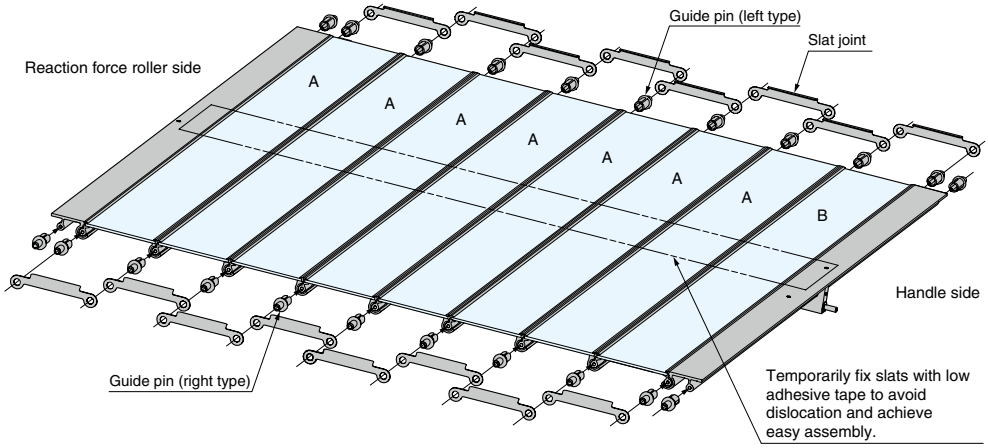
3. Connecting slats 1



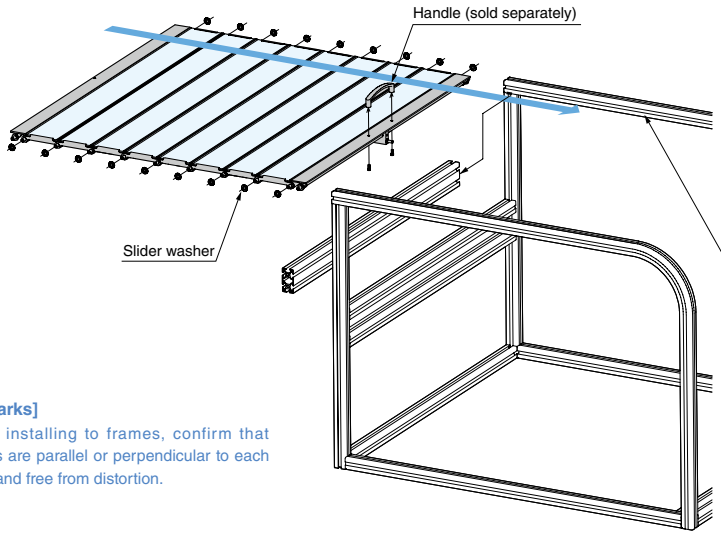
When assembling, slide each slat from the side as shown left.

Refer to 1 : P.524

4. Connecting slats 2

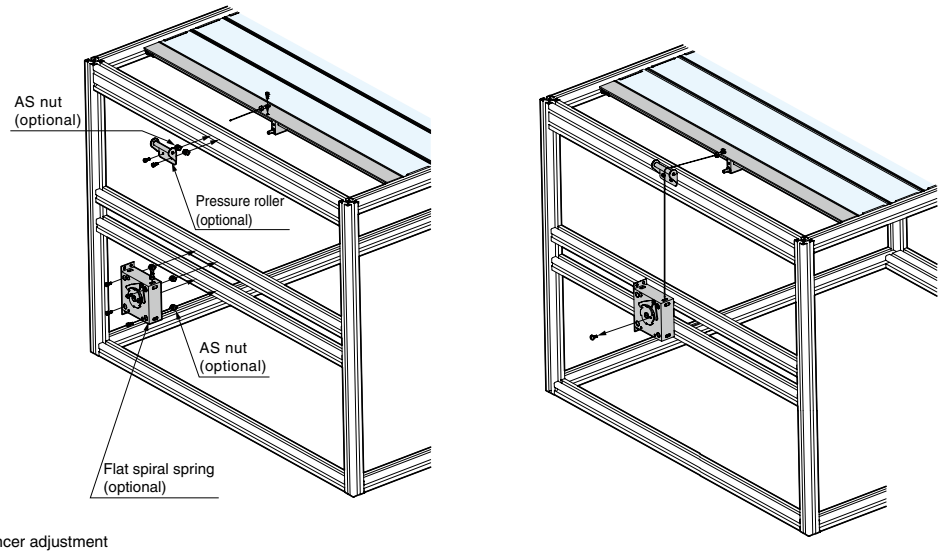


5. Installing to the frame



[Remarks]
When installing to frames, confirm that frames are parallel or perpendicular to each other and free from distortion.

6. Assembling in flat spiral spring



●Balancer adjustment
Remove the fixing screws, and adjust the wire pull-in force according to the balancer adjusting method.
As a guide, adjust to the extent that shutter fully closed can be lifted up with a force of 30N (3kgf) or less.

How to Use the Shutter Quotation Request Sheet (P.843~P.845)

Please copy the quotation request page where the relevant product is included, complete all necessary items and then send back by FAX or E-mail. We will give a reply according to the content of the quotation request.

■Example

Confirm the cabinet type

Fill in the shutter opening direction and cabinet dimensions

Select the optional parts as necessary

Fill in the necessary quantity and the desired delivery date

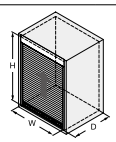
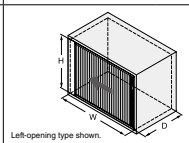
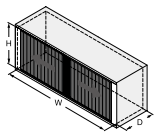
Fill in your contact information

Shutter Quotation Request

Design Shutter DIS-M (Surface Mount Type) P.824

Cabinet Type	☑ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type	☑ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)	☐ Horizontal Type (Double Door)
	 Left-opening type shown.	
Cabinet Inside Width W (300~1200mm) mm	Cabinet Inside Width W (300~900mm) 700 mm	Cabinet Inside Width W (600~1800mm) mm
Cabinet Inside Height H (300~900mm) mm	Cabinet Inside Height H (100~1200mm) 950 mm	Cabinet Inside Height H (100~1200mm) mm
Cabinet Inside Depth D (Min. 330mm) mm	Cabinet Inside Depth D (Min. 330mm) 500 mm	Cabinet Inside Depth D (Min. 330mm) mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☑	☐	Used when a key is necessary. Key Alike ☑ Key Different ☐
Decorative Cover (1200mm)	☑	☐	Used for shutter winding portion. Used for vertical type below W600 (horizontal type below H600).
Balance Spring	☑	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☑	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☑	Used for temporarily fixing slats and intermediate slats.
Surface Mount Parking Cover	☐	☑	Used for vertical type above W600 (horizontal type above H600).

Cutting of Parts	☑ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	3 unit(s)	Desired Delivery Date	Day / Month / Year: 15/12/2016

●Your Contact Information

Company	○○ Kogyo Co., Ltd.	Name	John Smith
Division	Purchasing Department	TEL	03-1234-xxxx
E-mail	xxxx.x@xxx.co.jp	FAX	03-5678-xxxx
Address	Postcode 1000000 (Number, Street): 5F KANAMONO Building, 1-2 No. 000, △△△ Street		
	(City, State/ Prefecture): Chiyoda-ku, Tokyo, Japan		

SUGATSUNE

To: Sugatsune Kogyo Co., Ltd.

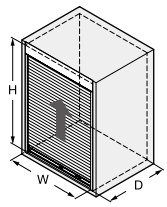
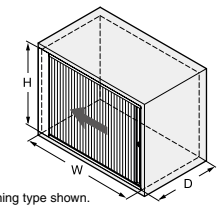
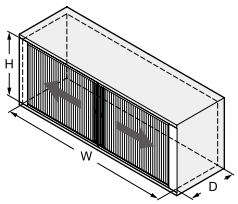
Shutter Quotation Request Sheet

Design Shutter DIS-M (Surface Mount Type)

P.824

Cabinet Type	☐ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type		☐ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)		☐ Horizontal Type (Double Door)	
		 Left-opening type shown.			
Cabinet Inside Width W (300~1200mm)	mm	Cabinet Inside Width W (300~900mm)	mm	Cabinet Inside Width W (600~1800mm)	mm
Cabinet Inside Height H (300~900mm)	mm	Cabinet Inside Height H (100~1200mm)	mm	Cabinet Inside Height H (100~1200mm)	mm
Cabinet Inside Depth D (Min. 330mm)	mm	Cabinet Inside Depth D (Min. 330mm)	mm	Cabinet Inside Depth D (Min. 330mm)	mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☐	☐	Used when a key is necessary. Key Alike ☐ Key Different ☐
Decorative Cover (1200mm)	☐	☐	Used for shutter winding portion. Used for vertical type below W600 (horizontal type below H600).
Balance Spring	☐	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☐	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☐	Used for temporarily fixing slats and intermediate slats.
Surface Mount Parking Cover	☐	☐	Used for vertical type above W600 (horizontal type above H600).

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

To: Sugatsune Kogyo Co., Ltd.

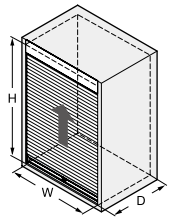
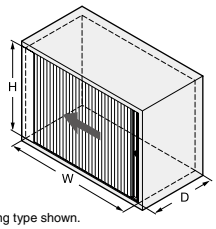
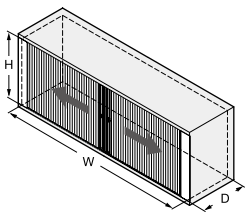
Shutter Quotation Request Sheet

Design Shutter DIS-H (Recessed Mount Type)

P.830

Cabinet Type	☐ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type	☐ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)	☐ Horizontal Type (Double Door)
	 Left-opening type shown.	
Cabinet Inside Width W (300~900mm) ☐ mm	Cabinet Inside Width W (300~900mm) ☐ mm	Cabinet Inside Width W (600~1800mm) ☐ mm
Cabinet Inside Height H (300~900mm) ☐ mm	Cabinet Inside Height H (100~1188mm) ☐ mm	Cabinet Inside Height H (100~1188mm) ☐ mm
Cabinet Inside Depth D (200~600mm) ☐ mm	Cabinet Inside Depth D (200~600mm) ☐ mm	Cabinet Inside Depth D (200~600mm) ☐ mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☐	☐	Used when a key is necessary. Key Alike ☐ Key Different ☐
Decorative Cover (1200mm)	☐	☐	Used for shutter winding portion. Used for vertical type below W586 (horizontal type below H586).
Balance Spring	☐	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☐	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☐	Used for temporarily fixing slats and intermediate slats.

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

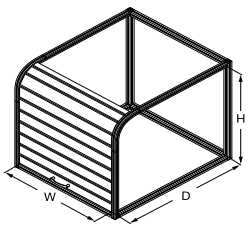
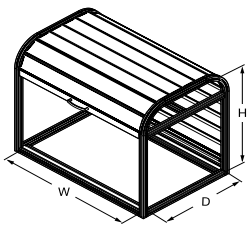
To: Sugatsune Kogyo Co., Ltd.

Shutter Quotation Request Sheet

AS High Rigidity Cabinet Shutter

P.836

Shutter Opening Direction

☐ L-shaped Type		☐ U-shaped Type	
			
Opening Inside Width W (Max. 840mm)	mm	Opening Inside Width W (Max. 840mm)	mm
Inside Height H (Max. 640mm)	mm	Opening Inside Height H	mm
Effective Inside Depth D (Max. 900mm)	mm	Effective Inside Depth D	mm

Slat Panel	☐ Prepared by yourself ☐ Prepared by us (For details, please contact our sales representative.)

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Reaction Force Roller	☐	☐	Used for L-shaped type only.
Damper	☐	☐	For reducing the shock caused by contact with aluminium frame when closing shutter.
Handle	☐	☐	Installed at the horizontal frame end.
Flat Spiral Spring	☐	☐	For relieving the weight feeling during opening and closing of the shutter. Used for L-shaped type only.
Balance Spring	☐	☐	Used for U-shaped type only. (Made to order)

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

Understandable! Selectable! Usable!

Sugatsune Website

https://global.sugatsune.com/

You can visit the website to

- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

LOCKS

Locks are fittings used to secure sensitive areas. Sugatsune offers a wide range of locks of various sizes, with different security levels as well as for various applications.

[Total lock system]
The total lock system allows you to have a unique key to open several types of locks within this series. Master key systems are also available.

[Cam locks]
A wide variety of cam locks, including stainless steel, are available for metal sheet, wood and glass applications. Some locks can also be modified in order to better suit your needs.

[Glass locks]
From tablet holders, to assembly lines, vending machines or gaming applications, the Sugatsune range of glass locks is truly extensive.

SUGATSUNE

June 2022

[Cautions]

- Do not apply excessive load on the cam and do not attempt to force the key to turn.
- Do not attempt to turn the key unless it is fully inserted in the lock.
- Removal of the key should only be done in the locked position. Some locks also allow removal in the open position as well.
- When tightening the cam hexagonal nut, insert the key in the lock and hold the cam, in order to avoid breaking the lock pin.
- Most locks parts and made of zinc alloy or brass. Their service life might therefore be reduced when exposed to corrosive environments such as spa or seaside locations.
- We recommend a regular lubrication of the locks, using specific lubricant such as Teflon or graphite based ones.
- Please consult Sugatsune for specific key numbers and combinations before making the final key plan.

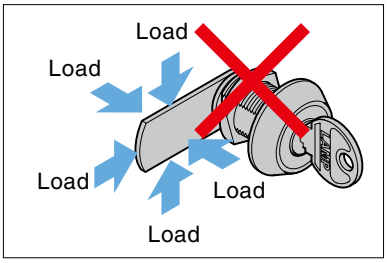


Fig.1

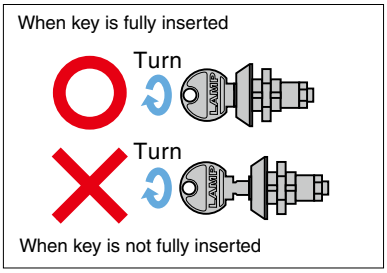


Fig.2

[Key Alike and Key Different]

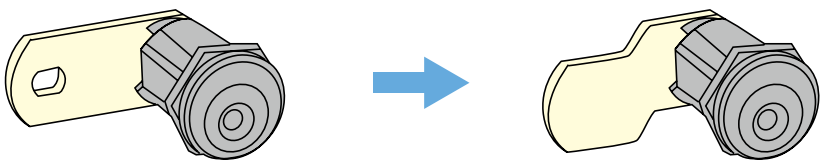
- Locks have two types: Key alike and key different. Key alike indicates identical key number of multiple locks. Key different indicate different key numbers of multiple locks.
- If ordering 3 locks for 3 different keys with the numbers of A, B and C, key alike will be A, A, A (or B, B, B or C, C, C), while key different will be A, B, C.
- Locks with key alike are suitable for places (like dustbins at the station) where the worker wants to unlock multiple locks with one key; While locks with key different cannot be unlocked with the same key, suitable for places (like lockers) where strict security management is required.
- For the locks herein, to differentiate the types with key alike from those with key different, the item name of a lock with key alike is suffixed with “-D”, while that of a lock with key different is suffixed with “-B”.
- For key numbers and their combination, please consult us before determining specifications.

[Exclusive Number]

- Exclusive key numbers not overlapping with other customers are available depending on the products. Please consult us for made to order.

Sugatsune Also Offers Made-to-order Products!

Example of Specification Change



Cam shape or length change, etc.

For OEM and ODM request form with required items at consultation, refer to ▸ P.1047~P.1049

INDEX by Series (Total Lock Series)

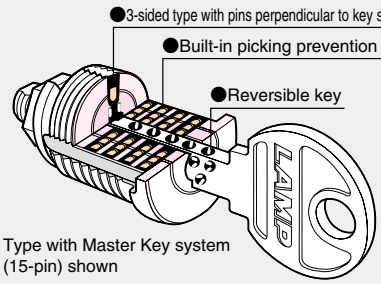
In the same series, locks for various cabinets can be managed collectively by one key.

Million Lock Series

All locks in this series can be opened with a single key. Moreover all keys are reversible dimple type, making them difficult to duplicate, or the locks difficult to pick. A maximum of 1 million key numbers are available (except for the 1300SK melamine door lock). Master key system is also available, with a maximum of 2,520 key numbers per master key.

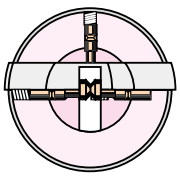
Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Cam Lock 900 P.853	Sheet Metal Swing Door	(ϕ19.1) Width Across Flats 15.9	0.8~8
	Glass Door Cam Lock 1310GL P.859	Glass Single Swing Door	(ϕ20)	5~8
	Glass Door Cam Lock 1300GL P.859	Glass Single Swing Door	(ϕ20)	5~8

Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Push Lock 2300M P.864	Sheet Metal/ Wooden Double Sliding Door	ϕ16 (ϕ24)	30
	Cabinet Lock 7810W P.868	Double Swing Door	ϕ22	22~24 28~30 34~36
	Cam Lock 1300SK P.872	Melamine Swing Door	(ϕ20)	13

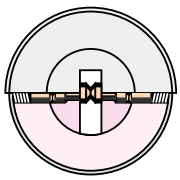


Type with Master Key system (15-pin) shown

- Types with master key system and types with grand master key system by made to order also available.
- Noted that the structure is different from interchangeable cylinder lock series and they are not compatible.



With master key system (15-pin)



Without master key system (10-pin)

2100 Lock Series

Keys can be shared with the same series.12 key changes available.

Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Glass Door Cam Lock 2100GL P.860	Glass Single Swing Door	(ϕ19)	4~6
	Glass Door Cam Lock 2100GLK P.860	Glass Single Sliding Door	ϕ20 (ϕ19)	4~6
	Glass Door Lock MKL-2100-D P.861	Glass Single Swing Door	ϕ18.6	5~8
	Push Lock 2100B P.862	Sheet Metal Double Sliding Door	ϕ18.6	20

Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Push Lock 2110B P.862	Sheet Metal Double Sliding Door	ϕ18.6	20
	Push Lock 2110M P.864	Wooden Double Sliding Door	ϕ18.6	20
	Push Lock 2100M P.865	Wooden Double Sliding Door	ϕ18.6	20 25

INDEX by Type

Cam Locks
P.852~

Ideal for sheet metal swing doors of vending machine, ATM, game machine, coin locker, and mail box, etc

Security Cam Lock
NO990
(P.852)

Cam Lock
920BS
(P.853)

Cam Lock
NAL
(P.856)

Dial Locks
P.858

Dial lock without need of key.

Cabinet Lock With Dial
DIT-19
(P.858)

Glass Door Locks
P.859~

Types for single swing door, double swing door, single sliding door and double sliding door are available.

Glass Door Cam Lock
1310GL
(P.859)

Cabinet Door Locks
P.864~

Types for drawer, swing door and double sliding door are available.

Cabinet Lock with Indicator
2200QL
(P.867)

Other Locks
P.872~

Locks for storage boxes, padlocks are available.

High Security Padlock
PWL
(P.873)

Cam Locks
P.852~

Picture	Product Name	Key Changes
	Security Cam Lock NO990 Magnet Embedded Key Type P.852	40,000
	Cam Lock 920BS With Hole Shutter P.853	Max. 3,200
	Million Lock Cam Lock 900 P.853	Max. 1 million
	Stainless Steel Cam Lock 3800S P.854	300
	Cam Lock SN-711-8-D P.854	Max. 1,500
	Cam Lock CLI-31 Clip-on Installation P.855	108

Picture	Product Name	Key Changes
	Cam Lock DIS-022R-D P.855	1
	Cam Lock 910MS P.856	Max. 47,000
	Cam Lock NAL P.856	5,000
	Mini Cam Lock NAL-XS Ultra Compact P.857	10
	Mini Cam Lock NAL-S P.857	25

Dial Locks
P.858

Picture	Product Name	Key Changes
	Cabinet Lock With Dial DIT-19 Clip-on Installation P.858	4 Digits

Glass Door Locks

P.859~

Picture	Product Name	Key Changes
	Million Lock Glass Door Cam Lock 1310GL P.859	Max. 1 million
	Million Lock Glass Door Cam Lock 1300GL P.859	Max. 1 million
	Glass Door Cam Lock 2100GL 2100 Lock Series P.860	12
	Glass Door Cam Lock 2100GLK 2100 Lock Series P.860	12
	Glass Door Lock MKL-2100-D 2100 Lock Series P.861	1
	Push Lock 2100B 2100 Lock Series P.862	12
	Push Lock 2110B 2100 Lock Series P.862	12
	Push Lock 2150B, 2160B P.863	24
	Glass Door Lock 6300-D P.863	Max. 96
	Million Lock Push Lock 2300M P.864	Max. 1 million
	Push Lock 2400M P.865	Max. 47,000

Cabinet Door Locks

P.864~

Picture	Product Name	Key Changes
	Million Lock Push Lock 2300M P.864	Max. 1 million
	Push Lock 2110M 2100 Lock Series P.864	12
	Push Lock 2400M P.865	Max. 47,000
	Push Lock 2100M 2100 Lock Series P.865	12
	Stainless Steel Cabinet Lock 3810S P.866	12
	Cabinet Lock with Indicator 2200QL 2200 Lock Series P.867	300

Cabinet Door Locks

Picture	Product Name	Key Changes
	Million Lock Cabinet Lock 7810W For Double Swing Door / Drawer Interlocking Type P.868	Max. 1 million
	Cabinet Lock 8810 With Key Number Change System P.869	Max. 3 million
	Cabinet Lock 6830-30MK Interchangeable Cylinder Lock Series P.870	Max. 7,800
	Cabinet Lock 5830 P.871	3,120
	Million Lock Cam Lock 1300SK P.872	Max. 1 million

Other Locks

P.872~

Picture	Product Name	Key Changes
	Stainless Steel Door Chain CS P.872	–
	Box Latch with Lock BL-70Y P.873	5
	High Security Padlock PWL P.873	Max. 110

SECURITY CAM LOCK NO990 Magnet Embedded Key Type

Without ring (Made to order)

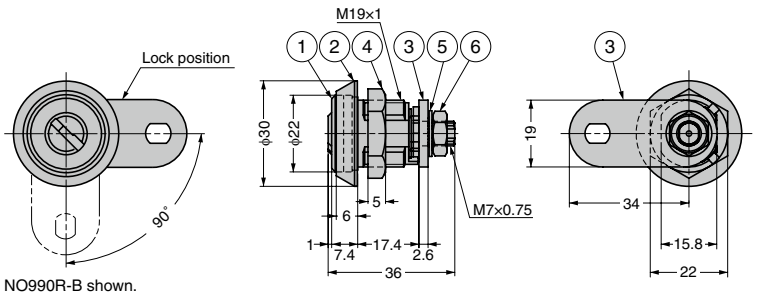
- Cam lock with pin cylinder using the repulsive force of the magnet.
- Specially designed key with magnet prevents from lock-picking and duplication of the key.
- Key can only be removed only when locked (90˚clockwise rotation), in order to ensure that the application is properly locked.
- With/without drill-protection cover available.
- Max. 40,000 key changes available.
- Lock without ring can be made to order.
- Compliant with Japan Vending Machine Manufactures Association Standard (JVMA1001).

[Applications]

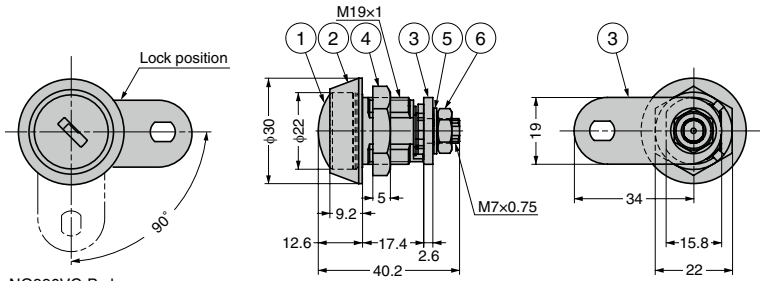
- Vending machine, ATM, automatic fare adjustment machine, etc.

[Remarks]

- Be sure to read the "Cautions" 1.
- Do not apply strong magnetic force to the lock body or key.
- Without Master Key.
- Use the recommended tightening torque for installation. Please use screw adhesive when tightening.
  Recommended tightening torque:
  Mounting nut ④ 294~343N・cm (30~35kgf・cm)
  Cam nut ⑥ 196~245N・cm (20~25kgf・cm)

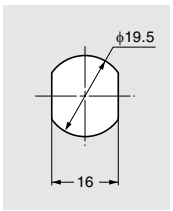


NO990R-B shown.

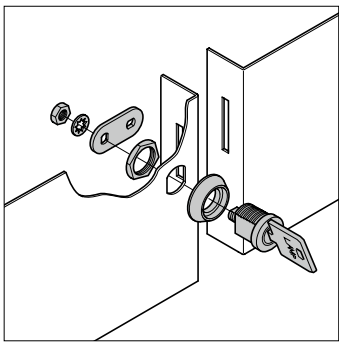


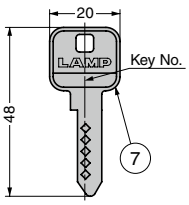
NO990VC-B shown.

[Cut Out Dimensions]



[Installation]





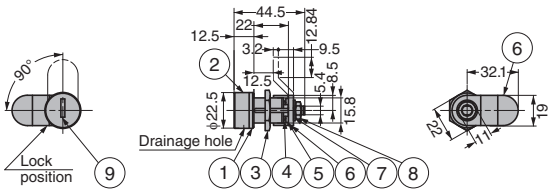
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring	NO990R-B : Brass NO990VC-B: Zinc Alloy (ZDC)	
③	Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	Nut M19×1	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
⑤	Washer for M7	Steel	Coloured Zinc Chromate (Trivalent)
⑥	Nut M7×0.75		
⑦	Key	Brass/Ferrite	Nickel

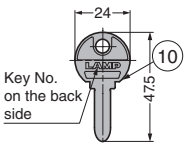
RoHS	CAD	Item Code	Item Name	Key Type	Drill-Protection Cover	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-013-020	★NO990R-B	Key Different	Without	0.8~8	103	25	100
G	3D	150-013-019	☆NO990VC-B		With		109	25	100

★Discontinued ☆Limited inventory, contact sales associate for details.

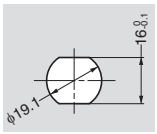
Refer to 1 : P.848

CAM LOCK 920BS With Hole Shutter



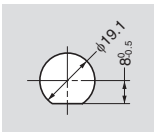


[Cut Out Dimensions]



Standard type

[Cut Out Dimensions]



Master Key system type
(Made to order)

- Cylinder lock with key hole shutter.
- Reversible key can be removed when locked (90˚ rotation). In order to ensure that the application is properly locked.
- 3,200 key changes available. Master Key system available at surcharge. (Max. 120 key changes/Master Key.)

[Applications]
- Mailbox, etc.

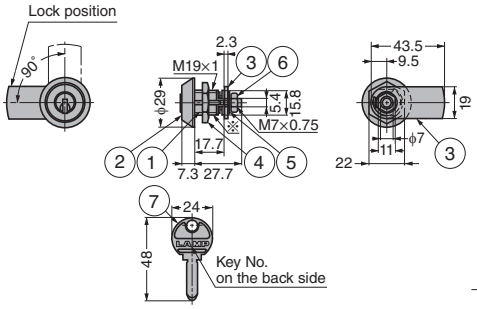
[Remarks]
- Be sure to read the “Cautions” 1.
- Place drainage hole in downward.
- Key number is stamped on the screw part of the body.

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cover		
③	M19 Hex Nut	Steel (SS)	Coloured Zinc Chromate (Trivalent)
④	Ring	Stainless Steel	–
⑤	Revolving Part	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑥	Cam		
⑦	Washer	Steel	
⑧	M7 Hex Nut	Steel (SS)	
⑨	Shutter	Stainless Steel	–
⑩	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-025-144	920BS-B	Key Different	0.8~12	97.4	12	60
–	3D	150-001-237	920BS-D	Key Alike			12	60

Refer to 1 : P.848

MILLION LOCK CAM LOCK 900



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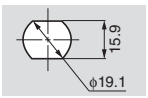
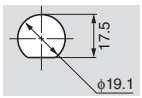


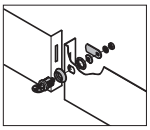
Standard type

[Cut Out Dimensions]



Master Key system type

[Installation]



- Suitable for vending machine, ATM and coin locker, etc.
- Reversible key can be removed when locked (90˚ rotation). In order to ensure that the application is properly locked.
- 1 million key changes available. Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Other shapes of cam can be made to order.
- Keys can be shared with Million Lock series 1.

[Remarks]
- Be sure to read the “Cautions” 2.
- Key number is stamped on the screw part (※ marked on left drawing) of the body .

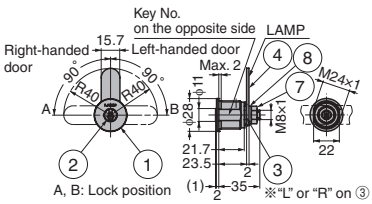
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring		
③	Cam	Steel (SPCC)	Coloured Zinc Chromate
④	Hex Nut	Steel (SS)	
⑤	Washer	Steel	Nickel
⑥	Hex Nut	Steel (SS)	Coloured Zinc Chromate
⑦	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-247	900-B	Key Different	0.8~8	120	12	60
–	3D	150-001-080	900-D	Key Alike			12	60

Refer to 1 : P.849, 2 : P.848

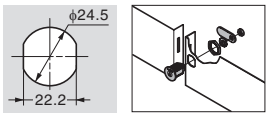
STAINLESS STEEL CAM LOCK 3800S 3810 Lock Series

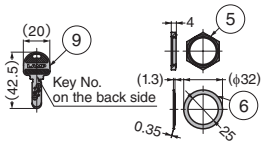
INSTRUCTION SUS



- Nickel silver key with excellent corrosion and abrasion resistance.Durability with thick cam.
- Non-handed.
- Reversible key can be removed when locked (90˚ rotation). In order to ensure that the application is properly locked.
- 300 key changes available.
- Master Key system (300 key changes) available at surcharge. (1 Master Key only.)
- Cabinet lock 3810S 1 of the same material also available.

[Cut Out Dimensions] **[Installation]**



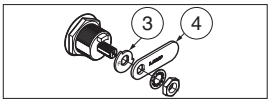


[Remarks]
- Be sure to read the "Cautions" 2.
- Not waterproof.

No.	Part Name	Material	Finish
①	Cylinder (Outer)	Stainless Steel (SUS303)	Satin
②	Cylinder (Inner)		2B Finish
③	Cylinder Cam	Stainless Steel (SUS304)	
④	Cam		
⑤	Nut (for Installing the Body)	Stainless Steel (SUS303)	Plain
⑥	Washer (for Body)	Stainless Steel (SUS304)	
⑦	Nut (for Installing the Cam)	Stainless Steel	
⑧	Washer	Stainless Steel (SUS304)	
⑨	Key	Nickel Silver	
–	Key Ring	Stainless Steel (SUS304)	

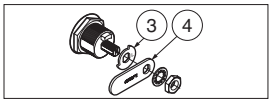
※Cylinder pin is made of brass.

[Installing to Right-handed Door]



After installation, ensure that the "R" mark on cylinder cam and the "LAMP" mark on cam are in normal direction (as seen from the back of lock).

[Installing to Left-handed Door]



After installation, ensure that the "L" mark on cylinder cam is in normal direction and the "LAMP" mark on cam is reversed (as seen from the back of lock).

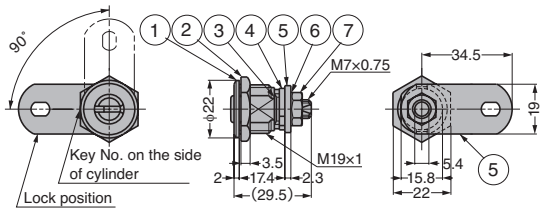
RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-921	3800S-B	Key Different	2~10	120	12	60
G	3D	150-001-368	3800S-D	Key Alike			12	60

Refer to 1 : P.866, 2 : P.848

CAM LOCK SN-711-8-D

- Ideal for vending machine, ATM and game machine, etc.
- Reversible key can be removed when locked (90˚ rotation). In order to ensure that the application is properly locked.
- 1 Key Alike available. For Key Different, Max. 1,500 key changes available by made to order.

[Remarks]
- Be sure to read the "Cautions" 1.



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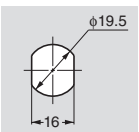
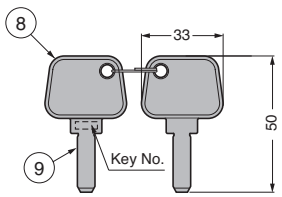




No.	Part Name	Material	Finish/Colour
①	Body	Brass	Chrome
②	Large Hex Nut	Steel	Bright Chromate(Trivalent)
③	Ring	Stainless Steel (SUS304)	Plain
④	Angle Restricting Cam	Steel	Bright Chromate(Trivalent)
⑤	Cam		
⑥	Washer		
⑦	Small Hex Nut		
⑧	Cover	ABS	Black
⑨	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-391	SN-711-8-D	Key Alike	0.1~9	77	100	400

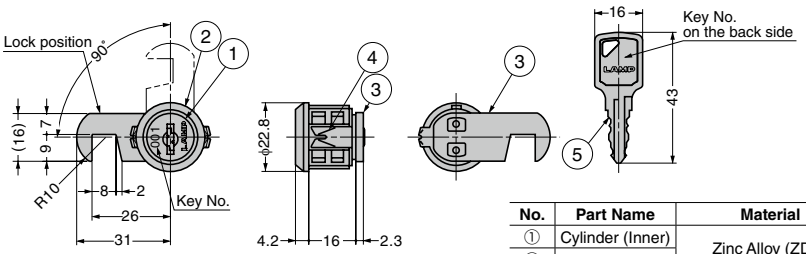
Refer to 1 : P.848

CAM LOCK CLI-31 Clip-on Installation

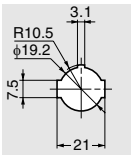
Discontinued
Limited stock available.
Please contact your vendor.

- Easy installation by one-touch.
- Key is removable in locked position only (90˚ rotation). In order to ensure that the application is properly locked.
- Types applicable for door thicknesses other than 0.8mm also available by made to order.
- 108 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.
- Cam caulked to the body cannot be removed.
- For sheet metal use.Please contact local representatives when installing to resin board.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Cylinder (Inner)	Zinc Alloy (ZDC)	Dull Chrome
②	Cylinder (Outer)		
③	Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	Clip	Stainless Steel (SUS304)	–
⑤	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	When Unlocked	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-014-155	CLI-31-B	Key Different	0.8	Key is not removal	58	27	216
G	3D	150-001-372	CLI-31-D	Key Alike				27	216

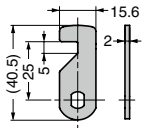
Refer to 1 : P.848

CAM LOCK DIS-022R-D

- Thin cylinder lock with dimple key.
- Reversible key can be removed when locked and unlocked (90˚ rotation).

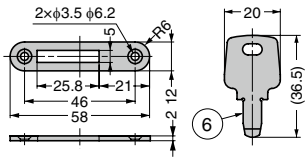
[Remarks]
- Be sure to read the "Cautions" 1.
- Cam and strike are sold separately.Please order them separately.

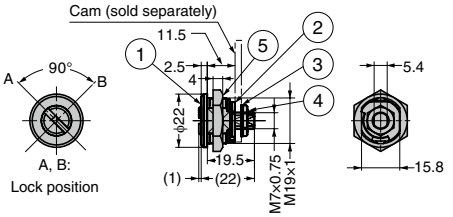
[Sold Separately]
- Stainless cam DIS-010
- Stainless strike DIS-011



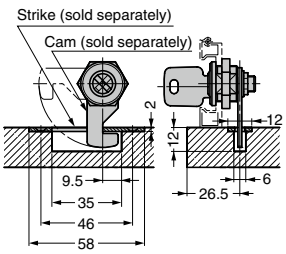
Cam (sold separately)

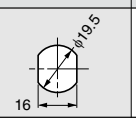
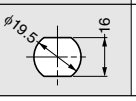
Strike (sold separately)





[Installation]



Cut Out Dimensions	Lock Position
	
	

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-374	DIS-022R-D	Key Alike	Max. 5	50	50	–

[Cam] Sold Seperately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-018-598	DIS-010	Stainless Steel (SUS304)	Barrel Polished	7	500	–

[Strike] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-018-599	DIS-011	Stainless Steel (SUS304)	Barrel Polished	7	–	1

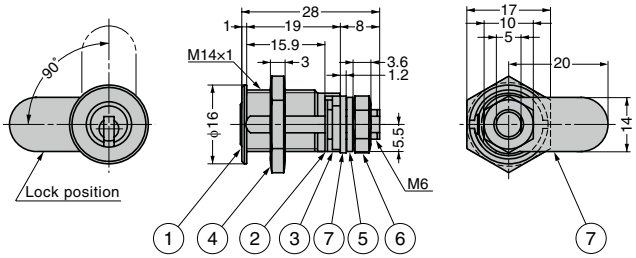
Refer to 1 : P.848

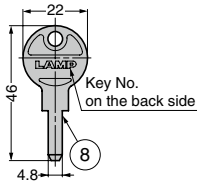
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Angle Restricting Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Washer	Steel	
④	M7 Hex Nut		
⑤	M19 Hex Nut	Zinc Alloy (ZDC)	
⑥	Key	Brass	Nickel

CAM LOCK 910MS 2400 Lock Series

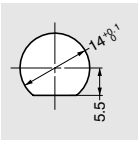
- Small cylinder lock with dimple key.
- Reversible key can be removed when locked (90˚ rotation). In order to ensure that the application is properly locked.
- 47,000 key changes available. Master Key system available at surcharge. (Max. 1,000 key changes/Master Key.)

[Remarks]
- Be sure to read the "Cautions" 1.
- Key number is stamped on the screw part (lower side) of the body.





[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring	Steel	Phosphated Treatment
③	Angle Restricting Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	M14 Hex Nut	Steel (S20C)	
⑤	Washer	Steel	
⑥	M6 Hex Nut	Steel (S20C)	
⑦	Cam	Steel (SPCC)	
⑧	Key	Brass	Nickel

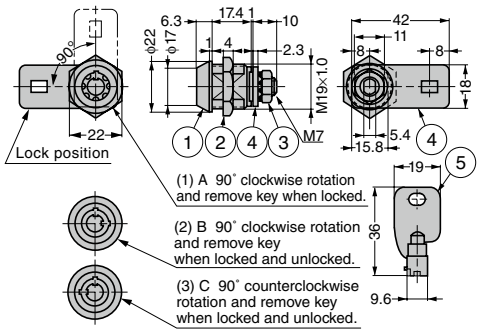
RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-025-141	910MS-B	Key Different	0.8~12	25.5	12	60
–	3D	150-001-238	910MS-D	Key Alike			12	60

Refer to 1 : P.848

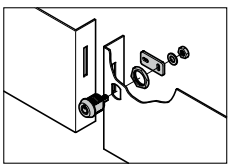
CAM LOCK NAL

- Suitable for vending machine, parking meter, game machine, and coin locker, etc.
- Key removing angle: (1) rotate clockwise by 90˚ and remove when locked (2) rotate clockwise by 90˚ and remove when locked and unlocked ※ (3) rotate counterclockwise by 90˚ and remove when locked and unlocked ※ (※ made to order)
- Key is removable only in locked position (90˚ rotation). In order to ensure that the application is properly locked.
- 5,000 key changes available.

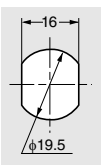
[Remarks]
- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.



[Installation]



[Cut Out Dimensions]

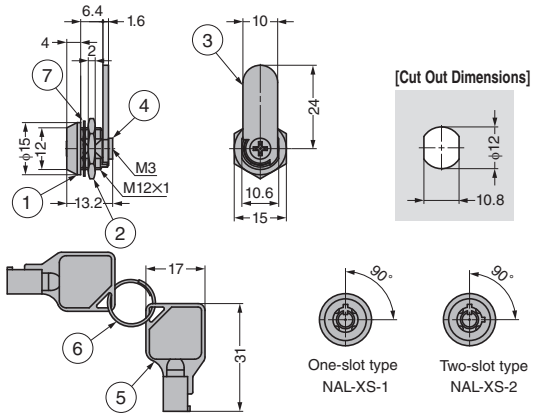


No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Hex Nut	Zinc Alloy (ZDC)	Coloured Zinc Chromate (Trivalent)
③		Steel (SWRCH)	
④	Cam	Steel (SPCC)	
⑤	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-061-067	NAL-B	Key Different	19 (width: 15.8)	Max. 10	55	100	300
–	3D	150-001-399	NAL-D	Key Alike				100	300

Refer to 1 : P.848

MINI CAM LOCK NAL-XS Ultra Compact



Refer to 1 : P.848

- Ultra compact body: 13.2mm thickness.
- Ideal for vending machines, ATMs, and game machines.
- NAL-XS-1: Key is removable in locked position only. (In order to ensure that the application is properly locked.)
  NAL-XS-2: Key is removable in both locked and unlocked positions.
- Cam is reversible (clockwise rotation at delivery).
- Available door thickness: Max 2.6 mm.

[Remarks]

- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.
- Do not use at places subject to frequent vibrations. Otherwise, the hexagonal nuts may loosen.

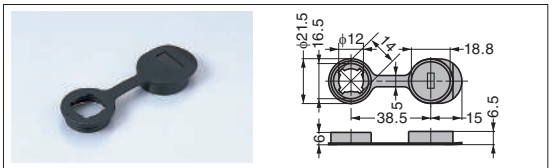
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Chrome
②	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)
③	Cam		Chrome
④	Screw (for Installing Cam)		Clear Zinc Chromate (Trivalent)
⑤	Key	Steel/Brass	Chrome / –
⑥	Key Ring	Stainless Steel (SUS304)	–
⑦	Washer	Steel	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Slots	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-270	NAL-XS-1-B	One Key	Key Different	21	100	500
G	3D	150-001-375	NAL-XS-1-D		Key Alike		100	500
G	3D	150-034-272	NAL-XS-2-B	Two Key	Key Different		100	500
G	3D	150-001-376	NAL-XS-2-D		Key Alike		100	500

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

MINI CAM LOCK NAL-S

[Cap] Sold Separately



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	–	150-039-050	NAL-SCAP	PE	Black	1.5	1	2000

No.	Part Name	Material	Finish
①	Body	Zinc Alloy	Chrome
②	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)
③	Cam		Chrome
④	Screw (for Installing Cam)		Clear Zinc Chromate (Trivalent)
⑤	Key		Chrome

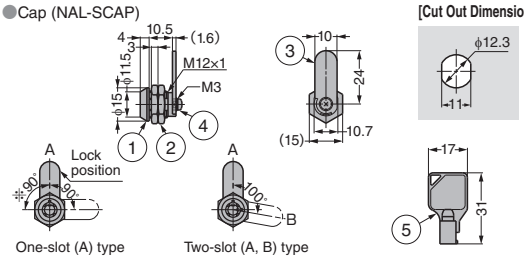
- Ideal for coin-operated devices such as vending machine, ATM, and game machine, etc.
- NAL-S-1: Key is removable in locked position only. (In order to ensure that the application is properly locked.)
  NAL-S-2: Key is removable in both locked and unlocked positions.
- Cam is reversible (clockwise rotation at delivery).
- 1 Key Alike available. Key different is also available (25key changes).

[Remarks]

- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.

[Sold Separately]

- Cap (NAL-SCAP)



Note) Install the body in the direction as shown.

RoHS	CAD	Item Code	Item Name	Slots	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-274	NAL-S-1-B	One Key	Key Different	Max. 2	25	100	500
G	3D	150-001-393	NAL-S-1-D		Key Alike			100	500
G	3D	150-034-275	NAL-S-2-B	Two Key	Key Different			100	500
G	3D	150-001-392	NAL-S-2-D		Key Alike			100	500

Refer to 1 : P.848

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABINET LOCK WITH DIAL DIT-19 Clip-on Installation

INSTRUCTION

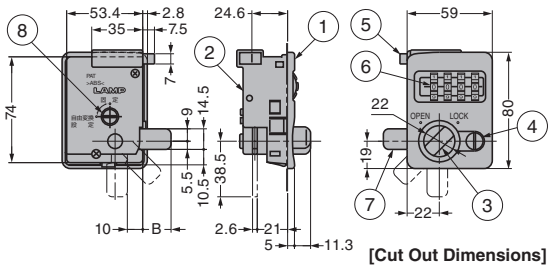
Search key DIT-SK (sold separately)

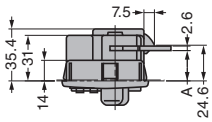
- Turn the dial to lock/unlock.
- Able to switch to Changing Mode or Fixing Mode:
  Changing Mode - Changing the key number according to users.
  Fixing Mode - Applied the same number as registered.
- One-touch installation.
- Possible to search the number to unlock with Search Key (sold separately).
- Case with latch.
- Possible to engrave any number on body above the dial.

[Applications]
- Lockers in public space, etc.

[Remarks]
- For setting work, turn the dial to the password being used and open the door.
- First dial number is "0000".
- For security, please turn all dials when locking.
- Adjust number along the centre line to avoid malfunction.
- For sheet metal use. Bracket (for door thickness 8~18mm) available by made to order when installing to wood board.

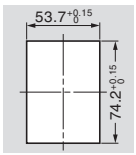
[Sold Separately]
- Search key DIT-SK



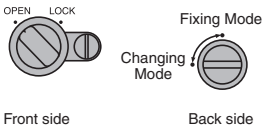


A	B
21	19.5

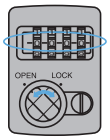
[Cut Out Dimensions]



[Changing Mode]

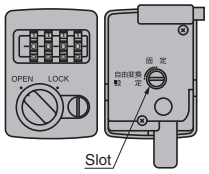


1. Turn the knob to "OPEN" on front side. Turn the slot to "Changing Mode" on back side.

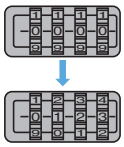


2. Set new number and turn the knob to "LOCK" on front side.

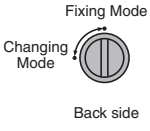
[Fixing Mode]



1. Turn the knob to "OPEN" on front side. Turn the slot to "Changing Mode" on back side.



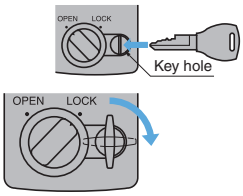
2. Set new number.



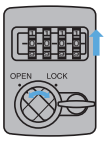
3. Turn the slot to "Fixing Mode" on back side.

※Before setting new number, please open the door.

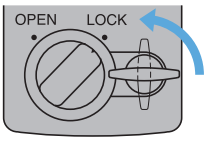
[How to Search Dial Number] Using Search Key



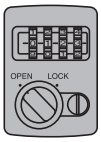
1. Insert Search Key and turn clockwise.



2. Turn each dials till click (the number clicked is your dial number).
※Do not turn the dial with excessive force.



3. Turn Search Key counterclockwise and remove.



4. Turn the knob to "OPEN" to unlock.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	White
②	Case		
③	Knob		
④	Cover		
⑤	Latch	POM	
⑥	Dial	PC	–
⑦	Cam	Steel (SPCC)	Coloured Zinc Chromate
⑧	Switching Shaft	PC	–

[Body]

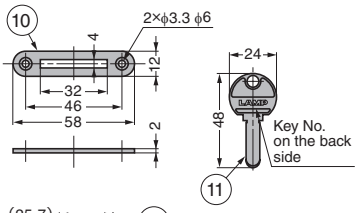
RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-014-156	DIT-19	0.8	162	1	80

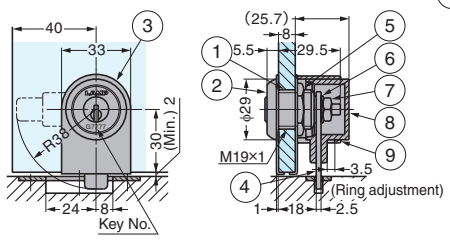
[Search Key] Sold Separately

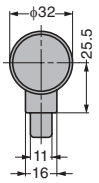
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-014-157	DIT-SK	11	1	–

MILLION LOCK GLASS DOOR CAM LOCK 1310GL

TEMPERED GLASS





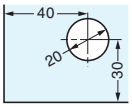


- For single door application.
- Black chrome finish is newly launched.
- Turn reversible key clockwise by 90° to unlock (cam also rotates by 90°).
  Key is removable in locked position only.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 1.
- Glass door hinges GH-450 and GH-450G matching with the finish of this product also available.
- Million lock series glass door cam lock 1310GLW of the same design also available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Cam direction is not changable.

[Parts Included]
- Countersunk head wood screw 2.7×13 (SUS)

[Cut Out Dimensions]



No.	Part Name	Material	Finish/Colour			
			SN	CR	GC	BL
①	Body	Brass	Satin Nickel	Chrome	24K	Black Chrome
②	Ring					
③	Plate	Stainless Steel (SUS304)	Satin	Polished		
④	Cam		Plain			
⑤	Hex Nut	Steel (SS400)	Special Anti-rust Painting/Silver			
⑥	Washer	Stainless Steel (SUS304)	Bright Chromate(Trivalent)			
⑦	Hex Nut	Steel (SS400)	Special Anti-rust Painting/Silver			
⑧	Cover	PP	Black			
⑨	Ring					
⑩	Strike	Stainless Steel (SUS304)	Polished		24K	Black Chrome
⑪	Key	Brass	Nickel			

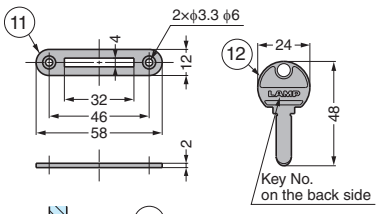
※③ includes one convex plate and one concave plate.

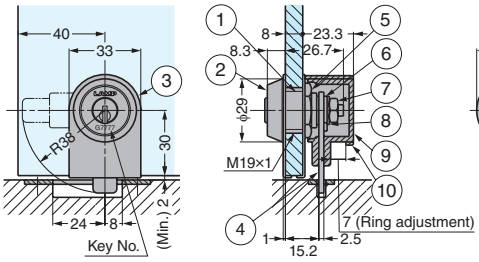
Refer to 1 : P.849, 2 : P.848

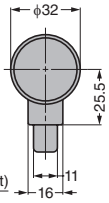
RoHS	CAD	Item Code	Item Name	Key Type	Finish	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-944	1310GL-SN-D	Key Alike	Satin Nickel	5~8	139	12	60
G	3D	150-060-947	1310GL-CR-B	Key Different	Chrome			12	60
G	3D	150-060-946	1310GL-CR-D	Key Alike				12	60
–	3D	150-060-949	1310GL-GC-B	Key Different	24K			12	60
–	3D	150-001-317	1310GL-GC-D	Key Alike				12	60
–	3D	150-028-535	1310GL-BL-B	Key Different	Black Chrome			12	60
–	3D	150-001-248	1310GL-BL-D	Key Alike				12	60

MILLION LOCK GLASS DOOR CAM LOCK 1300GL

TEMPERED GLASS







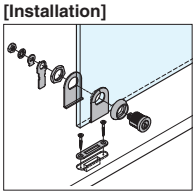
- For single door application.
- When turning reversible key clockwise by 360°, cam rotates by 90°.
- Key is removable in locked and unlocked positions. 1310GL 1 for which the key is not removable in unlocked position also available.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Cam direction is not changable.

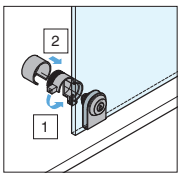
[Parts Included]
- Countersunk head wood screw 2.7×13 (SUS)

No.	Part Name	Material	Finish/Colour
①	Body	Brass	Satin Nickel
②	Ring		
③	Plate	Stainless Steel (SUS304)	Polished
④	Cam		Plain
⑤	Hex Nut	Steel (SS)	Special Anti-rust Painting/Silver
⑥	Cam	Brass	Nickel
⑦	Hex Nut	Steel (SS)	Special Anti-rust Painting/Silver
⑧	Washer	Steel	Bright Chromate(Trivalent)
⑨	Cover	PP	Black
⑩	Ring		
⑪	Strike	Stainless Steel (SUS304)	Polished
⑫	Key	Brass	Nickel

[Installation]



[How to Install ⑨ Cover & ⑩ Ring]



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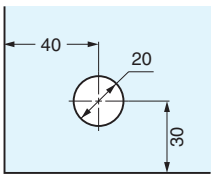


RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-219	1300GL-B	Key Different	5~8	140	12	60
–	3D	150-001-056	1300GL-D	Key Alike			12	60

Refer to 1 : P.859, 2 : P.849, 3 : P.848

GLASS DOOR CAM LOCK 2100GL 2100 Lock Series

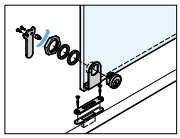
TEMPERED GLASS

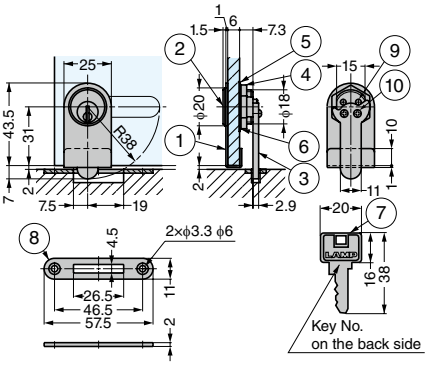
- For glass single swing doors. Ideal for application of audio rack and showcase, etc.
- Available for both right and left swing door.
- Key can be removed when locked.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 1.
- 2100 GLK 2 with clawed cam also available.

[Remarks]

- Be sure to read the "Cautions" 3.

[Installation]





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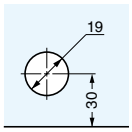


No.	Part Name	Material	Finish/Colour
①	Front Plate	Stainless Steel (SUS304)	Polished
②	Body	Brass	Satin Nickel
③	Cam	Steel	Nickel
④	Hex Nut	Brass	
⑤	Plastic Washer	PA	Natural
⑥	Washer	Steel	Chrome
⑦	Key	Brass	Nickel
⑧	Strike	Steel	Chrome
⑨	Screw (Stopper for the Cam)	Brass	Plain
⑩	Screw (for Installing Cam) (Pan Head Screw M2.5×8)	Steel	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-057	2100GL-B	Key Different	4~6	75	12	120
–	3D	150-001-058	2100GL-D	Key Alike			12	120

Refer to 1 : P.849, 2 : P.860, 3 : P.848

GLASS DOOR CAM LOCK 2100GLK 2100 Lock Series

INSTRUCTION TEMPERED GLASS

- For glass single sliding doors. Ideal for showcase application, etc.
- Available for both right and left swing door.
- Key is removable only when locked.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 1.

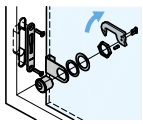
[Remarks]

- Be sure to read the "Cautions" 2.

[Recommended Screws]

- Countersunk head tapping screw 3.5

[Installation]



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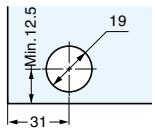
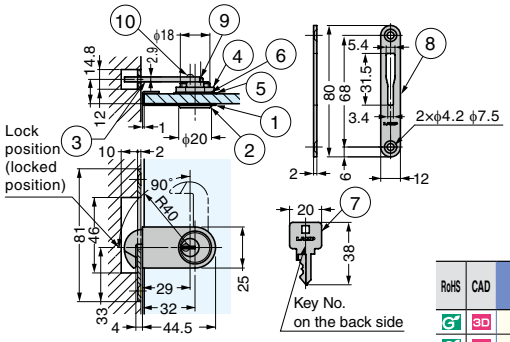




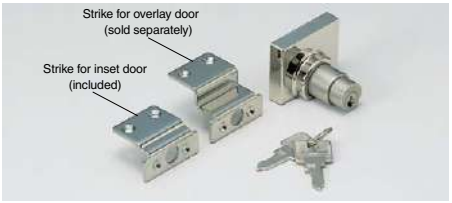
No.	Part Name	Material	Finish/Colour
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Body	Brass	Satin Nickel
③	Cam	Steel (SPHC)	Nickel
④	Hex Nut	Brass	
⑤	Plastic Washer	PA	Natural
⑥	Washer	Steel	Nickel
⑦	Key	Brass	
⑧	Strike	Steel (SPCC)	
⑨	Screw (Stopper for the Cam)	Brass	Plain
⑩	Screw (for Installing Cam) (Pan Head Screw M2.5×8)	Steel	Nickel

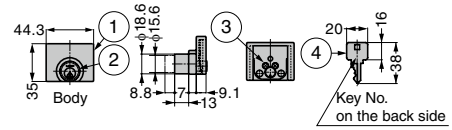
RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-020-475	2100GLK-B	Key Different	20	4~6	75	12	120
G	3D	150-001-147	2100GLK-D	Key Alike				12	120

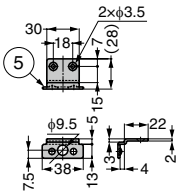
Refer to 1 : P.849, 2 : P.848

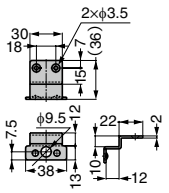
GLASS DOOR LOCK MKL-2100-D 2100 Lock Series

TEMPERED GLASS









MKL-B strike for overlay door
(sold separately)

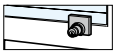
- Pre-drilling on glass not required.
- For inset door. MKL-B strike (sold separately) is available for overlay.
- 1 Key Alike available. Key different type possible as special order (12 key changes).
- Keys can be shared with 2100 Lock Series 1.

[Remarks]
- Be sure to read the "Cautions" 2.
- Please hold the cylinder part when removing.

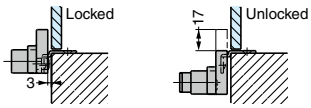
[Parts Included]
- Strike for inset door
- Countersunk head wood screw 3.1×16 (SUS)

[Sold Separately]
- MKL-B strike for overlay door

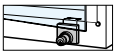
[Inset Door Locked]



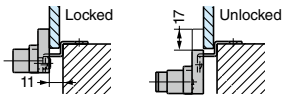
[Inset Door]



[Overlay Door Unlocked]



[Overlay Door]



No.	Part Name	Material	Finish
①	Mounting Plate	Zinc Alloy (ZDC)	Nickel
②	Push Lock 2100B		Satin Chrome
③	Countersunk Head Screw M3×5	Steel	Coloured Zinc Chromate (Trivalent)
④	Key	Brass	Nickel
⑤	Strike for Inset Door	Stainless Steel (SUS304)	Tumbling

Refer to 1 : P.849, 2 : P.848

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-411	MKL-2100-D	Key Alike	5~8	125	12	60

[Strike for Overlay Door] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-069-538	MKL-B	Stainless Steel (SUS304)	Barrel Polished	25	60	360

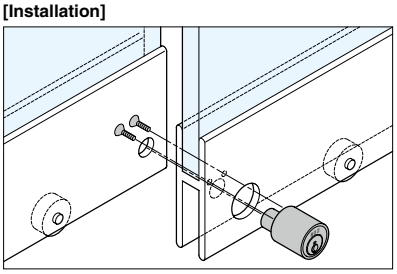
PUSH LOCK 2100B 2100 Lock Series

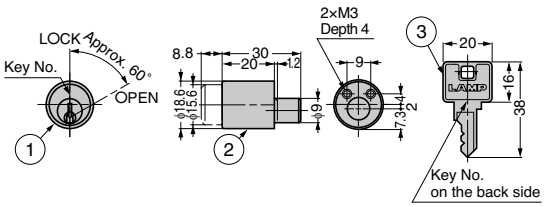
- For metal-framed glass doors or sheet metal double sliding doors.
- Push the cylinder to lock.2110B 1 of the same type with a key required for locking also available.
- Insert and turn key to unlock.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel
②	Pipe	Brass	
③	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-070	2100B-B	Key Different	18.6	20	50	40	400
G	3D	150-001-071	2100B-D	Key Alike				40	400

Refer to 1 : P.862, 2 : P.849, 3 : P.848

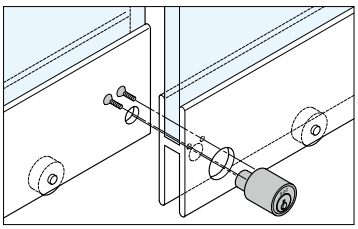
PUSH LOCK 2110B 2100 Lock Series

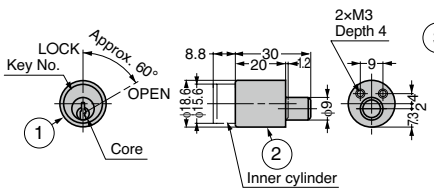
- For metal-framed glass doors or sheet metal double sliding doors.2100B 1 of the same type without need of key also available.
- To Lock: Insert key and turn 60˚ clockwise. Push-in the cylinder with key and turn 60˚ back.
- To Unlock: Insert key and turn 60˚ clockwise and lock will automatically disengage. Turn the key 60˚ back and remove.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





Video Link

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel (Core: Buffing Nickel Coating)
②	Pipe	Brass	Satin Nickel
③	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-072	2110B-B	Key Different	18.6	20	50	40	400
G	3D	150-001-073	2110B-D	Key Alike				40	400

Refer to 1 : P.862, 2 : P.849, 3 : P.848

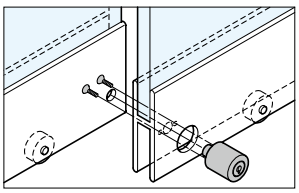
PUSH LOCK 2150B, 2160B 2150 Lock Series

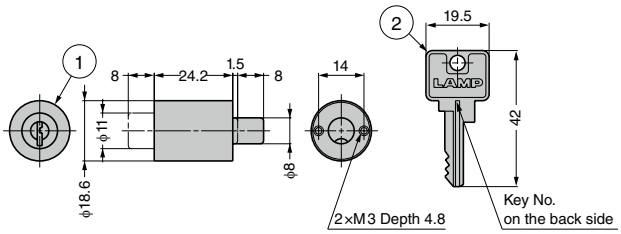
- For metal-framed glass doors or sheet metal double sliding doors. 2150M, 2160M of the same type for wood board also available.
- How to lock: 2150B - push cylinder to lock. 2160B - turn key to lock and unlock.
- Insert and turn key to unlock.
- 24 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	How to Lock	Cylinder Diameter	Frame Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-410	2150B-B	Key Different	Without Key	18.6	24	50	24	240
–	3D	150-001-388	2150B-D	Key Alike					24	240
–	3D	150-060-069	2160B-B	Key Different	With Key				24	240
–	3D	150-001-384	2160B-D	Key Alike					24	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Key	Brass	

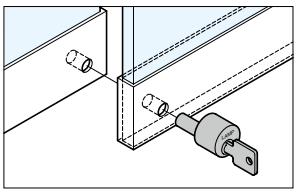
Refer to 1 : P.848

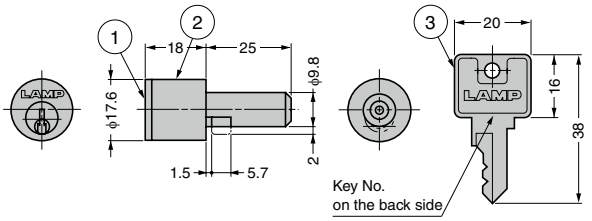
GLASS DOOR LOCK 6300-D

- For metal-framed glass doors or sheet metal double sliding doors.
- Easy installation. Just 10mm bore required on the door.
- When locking, insert cylinder along with key into the bore. Turn the key to lock and remove the key.
- Remove cylinder along with key to unlock.
- 96 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Frame Thickness	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-145	6300-D	Key Alike	9.8	19	1.2	50	24	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	White Bronze Plating
②	Cylinder Case	Brass	Nickel
③	Key		
–	Key Ring	Steel	

Refer to 1 : P.848

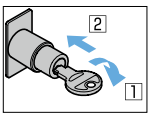
MILLION LOCK PUSH LOCK 2300M

- For wooden double sliding doors. Can also be used for metal-framed glass doors and sheet metal double sliding doors when mounting plate is removed.
- 1 million key changes available. Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock Series 1.

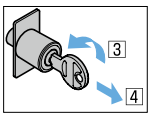
[Remarks]
- Be sure to read the "Cautions" 2.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)

[Lock]

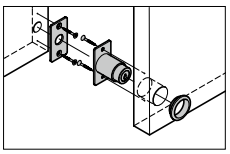


Turn key 90° to the right, push in.

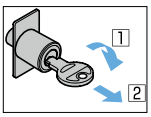


Turn key 90° to the left, and remove.

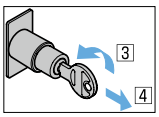
[Installation]



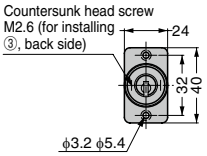
[Unlock]

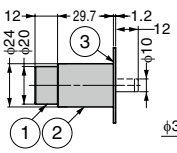


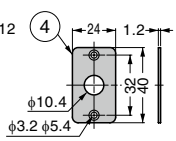
Turn key 90° to the right and lock will automatically disengage.

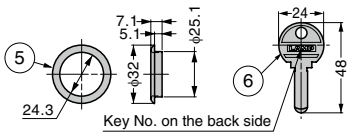


Turn the key 90° back and remove.









No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cylinder Case	Zinc Alloy (ZDC)	
③	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
④	Strike		
⑤	Ring	Brass	Chrome
⑥	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-022-924	2300M-B	Key Different	24	30	100	12	60
–	3D	150-001-232	2300M-D	Key Alike				12	60

Refer to 1 : P.849, 2 : P.848

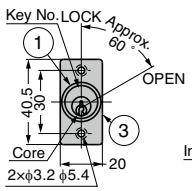
PUSH LOCK 2110M 2100 Lock Series

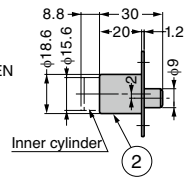
- Ideal for wooden double sliding doors. 2100M 1 of the same type without need of key also available.
- To Lock: Insert the key and turn 60°clockwise. Push-in the cylinder and turn the key 60°back.
- Key is removable in both locked and un-locked position.
- To Unlock: Insert the key and turn 60°clockwise. Push-out the cylinder and turn the key 60°back.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

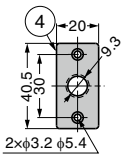
[Remarks]
- Be sure to read the "Cautions" 3.

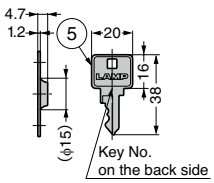
[Parts Included]
- Countersunk head wood screw 2.7×16

Video Link

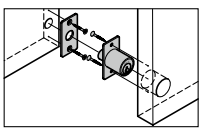








[Installation]



No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel (Core: Buffing Nickel Coating)
②	Pipe	Brass	Satin Nickel
③	Mounting Plate		Nickel
④	Strike		
⑤	Key		

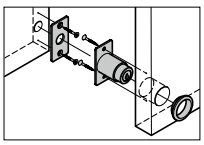
RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-889	2110M-B	Key Different	18.6	20	60	12	240
G	–	150-001-045	2110M-D	Key Alike				12	240

Refer to 1 : P.865, 2 : P.849, 3 : P.848

PUSH LOCK 2400M 2400 Lock Series

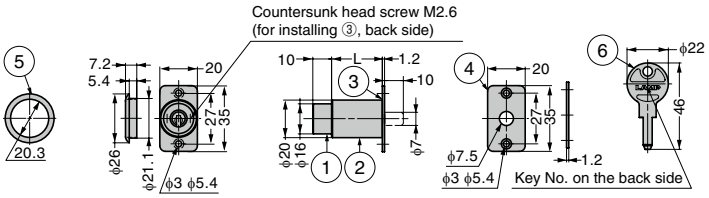
- Ideal for wooden double sliding doors. Can also be used for metal-framed glass doors and sheet metal double sliding doors when mounting plate is removed.
- Push the cylinder to lock without using the key.
- Turn key 45° to the right to unlock. Turn key 45° to the left to lock and remove the key.
- 47,000 key changes available. Master Key system available at surcharge. (Max. 1,000 key changes/Master Key.)

[Installation]



[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)



RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	L	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-022-926	2400M-20-B	Key Different	20	20	22	65	12	60
–	3D	150-001-230	2400M-20-D	Key Alike					12	60
–	3D	150-022-925	2400M-25-B	Key Different		25	27	70	12	60
–	3D	150-001-231	2400M-25-D	Key Alike					12	60

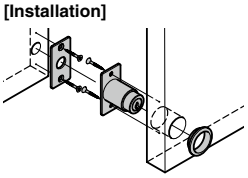
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cylinder Case	Zinc Alloy (ZDC)	
③	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
④	Strike		
⑤	Ring	Brass	Chrome
⑥	Key		Nickel

Refer to 1 : P.848

PUSH LOCK 2100M 2100 Lock Series

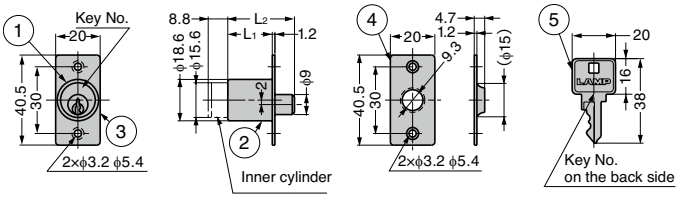
- Ideal for wooden double sliding doors.
- Push the cylinder to lock without using the key. 2110M 1 of the same type with a key required for locking also available.
- Insert and turn key to unlock.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Installation]



[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head wood screw 2.7×16



RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness L1	L2	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-812	2100M-B	Key Different	18.6	20	30	60	12	240
–	3D	150-001-044	2100M-D	Key Alike					12	240
–	3D	150-063-742	2100M-25-B	Key Different		25	35	70	12	240
–	3D	150-001-043	2100M-25-D	Key Alike					12	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel
②	Pipe	Brass	
③	Mounting Plate		Nickel
④	Strike		
⑤	Key		

Refer to 1 : P.864, 2 : P.849, 3 : P.848

STAINLESS STEEL CABINET LOCK 3810S 3810 Lock Series

SUS

- Nickel silver key with excellent corrosion and abrasion resistance. Durability with thick cam.
- Reversible key can be removed when locked and unlocked (360° rotation).
- For drawer and cabinet door application.
- Suitable for overlay doors.
- 12 key changes available. (Max. 300 key changes as special order)
- Master Key system (300 key changes) available at surcharge. (1 Master Key only.)
- Cam lock 3800S 1 of the same material also available.

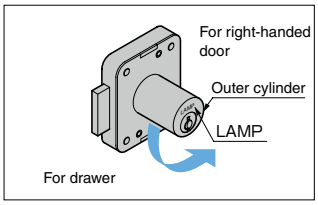
[Remarks]
- Be sure to read the "Cautions" 2
- Not waterproof.

[Parts Included]
- Countersunk head wood screw 3.1 × 20, 2.1 × 10 (SUS)

[Sold Separately]
- Spacer 6810-SP

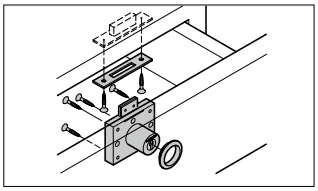
Spacer 6810-SP (sold separately)

[How to Switch: for Drawer/Right-handed Door Application]

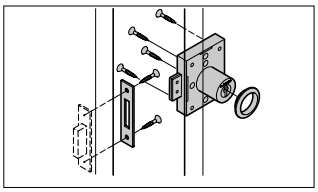


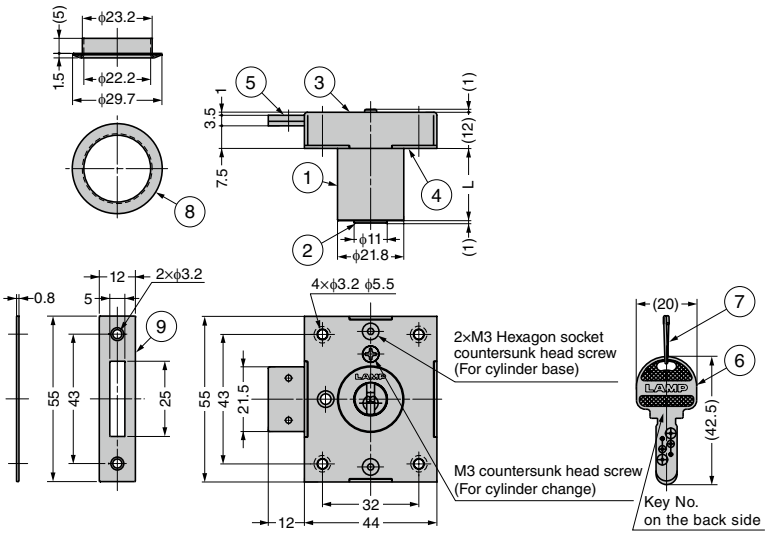
Turn the outer cylinder to the position for drawer or right-handed door and then fix with screws. The logo "LAMP" is to be forwarded upside.

[Installing to the drawer]



[Installing to the right-handed doors]





No.	Part Name	Material	Finish
①	Cylinder (Outer)	Stainless Steel (SUS303)	Satin
②	Cylinder (Inner)		Plain
③	Body	Stainless Steel (SUS304)	
④	Cylinder Base		
⑤	Dead Bolt		
⑥	Key	Nickel Silver	
⑦	Key Ring	Stainless Steel (SUS304)	
⑧	Surface Ring		
⑨	Strike		

※Cylinder pin is made of brass.

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4.5	150	1500

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	L	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-923	3810S-24-B	Key Different	21.8	24	24	180	12	60
G	3D	150-001-369	3810S-24-D	Key Alike					12	60
G	3D	150-012-925	3810S-30-B	Key Different		30	30	195	12	60
G	3D	150-001-370	3810S-30-D	Key Alike					12	60

Refer to 1 : P.854, 2 : P.848

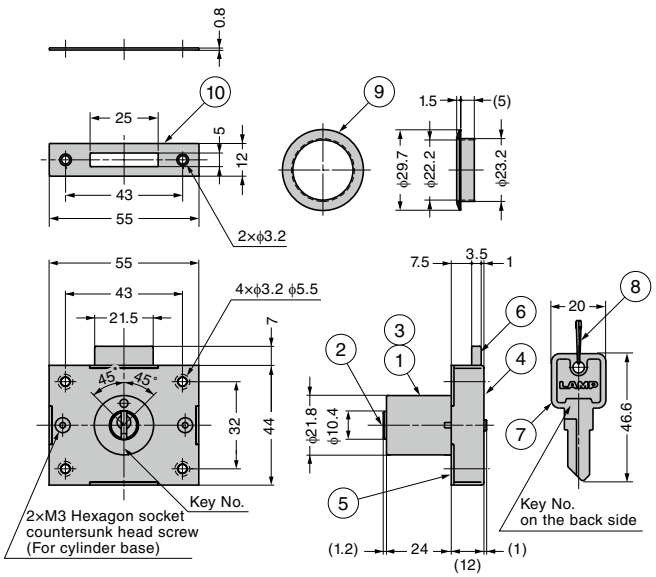
CABINET LOCK WITH INDICATOR 2200QL 2200 Lock Series

- Only 45° rotation is needed to unlock/lock the door. Key automatically returns to original position.
- With indicator: Unlocked - Blue, Locked - Red.
- For drawer application.
- Types for right-handed door also available by made to order.
- 300 key changes available.
- Master Key system available at surcharge. (Max. 170 key changes/ Master Key.)
- Keys can be shared with 2200 Lock Series.

[Remarks]
- Be sure to read the "Cautions" 1
- For locking or unlocking, please rotate the key until the indicator completely turns red or blue.

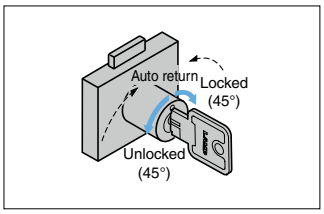
[Parts Included]
- Countersunk head wood screw 3.1 × 20, 2.1 × 10 (SUS)

[Sold Separately]
- Spacer 6810-SP



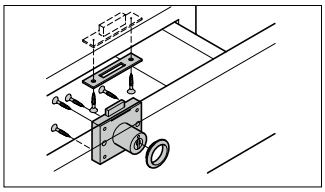
Spacer 6810-SP (sold separately)

[Lock/Unlock]

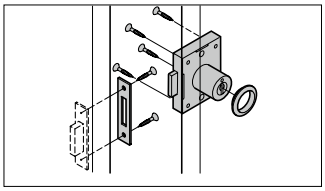


Key automatically returns to original position.

[Installation]



[Installing to Right-handed Door]



※Types for right-handed doors are made to order.

No.	Part Name	Material	Finish
①	Cylinder (Outer)	Zinc Alloy (ZDC)	Coloured Zinc Chromate (Trivalent)
②	Cylinder (Inner)		Satin Nickel
③	Body Pipe	Brass	
④	Body	Stainless Steel (SUS304)	Plain
⑤	Cylinder Base		
⑥	Dead Bolt	Zinc Alloy (ZDC)	Nickel
⑦	Key	Brass	
⑧	Key Ring	Stainless Steel (SUS304)	Plain
⑨	Surface Ring	Brass	Satin Nickel
⑩	Strike	Stainless Steel (SUS304)	Plain

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4.5	150	1500

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-927	2200QL-24-B	Key Different	21.8	24	200	12	60
G	3D	150-001-371	2200QL-24-D	Key Alike				12	60

Refer to 1 : P.848

MILLION LOCK CABINET LOCK 7810W For Double Swing Door / Drawer Interlocking Type

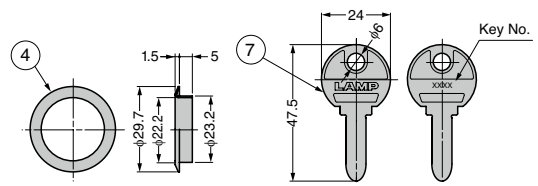
7810W-24NI　　7810W-24CR

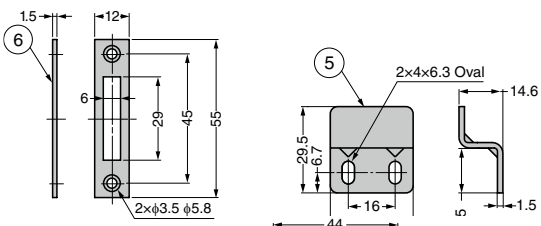
- With 2 dead bolts, suitable for double swing doors and drawers, etc.
- Can lock upper and lower drawers by using one lock.
- Reversible key. Turn the key 360° to lock or unlock.
- Body and dead bolt are made of stainless steel (SUS304) with excellent rust resistance.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/ Master Key.)
- Keys can be shared with other Million Lock Series 1.

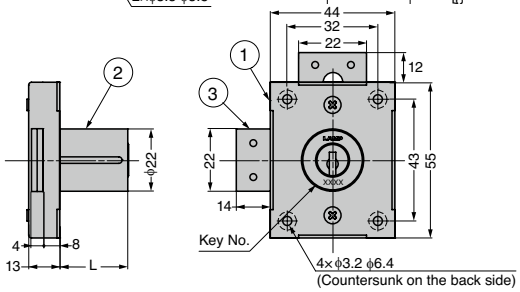
[Remarks]
- For key numbers and their combination, please consult our sales representative.
- Be sure to read the "Cautions" 2.

[Parts Included]
- Countersunk head wood screw 2.7 × 13, 3.1 × 25 (SUS)
- Truss Head Tapping Screw 3.5 × 12

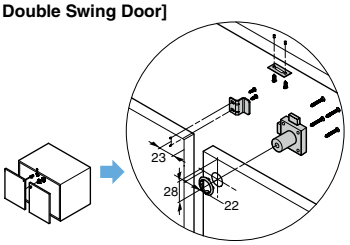
[Sold Separately]
- Spacer 6810-SP



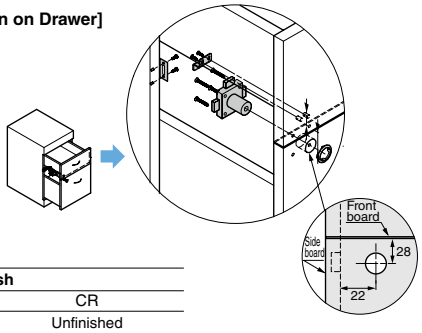




[Installation on Double Swing Door]



[Installation on Drawer]



No.	Part Name	Material	Finish	
			NI	CR
①	Body	Stainless Steel (SUS304)	Unfinished	Unfinished
②	Cylinder	Free-cutting Brass	Satin Nickel Plating	Chrome
③	Dead Bolt	Stainless Steel (SUS304)	Barrel Polished	Barrel Polished
④	Ring	Brass	Satin Nickel Plating	Chrome
⑤	Strike Z	Stainless Steel (SUS304)	Barrel Polished	Barrel Polished
⑥	Strike For Deadbolt		Unfinished	Unfinished
⑦	Key	Brass	Nickel	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Finish	L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-439	7810W-24NI-B	Key Different	22	22~24	Satin Nickel	24	170	12	60
G	3D	150-001-259	7810W-24NI-D	Key Alike						12	60
G	3D	150-034-441	7810W-24CR-B	Key Different			Chrome			12	60
G	3D	150-001-260	7810W-24CR-D	Key Alike						12	60
G	3D	150-034-443	7810W-30NI-B	Key Different		28~30	Satin Nickel	30	180	12	60
G	3D	150-001-261	7810W-30NI-D	Key Alike						12	60
G	3D	150-034-445	7810W-30CR-B	Key Different			Chrome			12	60
G	3D	150-001-262	7810W-30CR-D	Key Alike						12	60
G	3D	150-034-447	7810W-36NI-B	Key Different		34~36	Satin Nickel	36	195	12	60
G	3D	150-001-263	7810W-36NI-D	Key Alike						12	60
G	3D	150-034-449	7810W-36CR-B	Key Different			Chrome			12	60
G	3D	150-001-264	7810W-36CR-D	Key Alike						12	60

Refer to 1 : P.849, 2 : P.848

CABINET LOCK 8810

INSTRUCTION

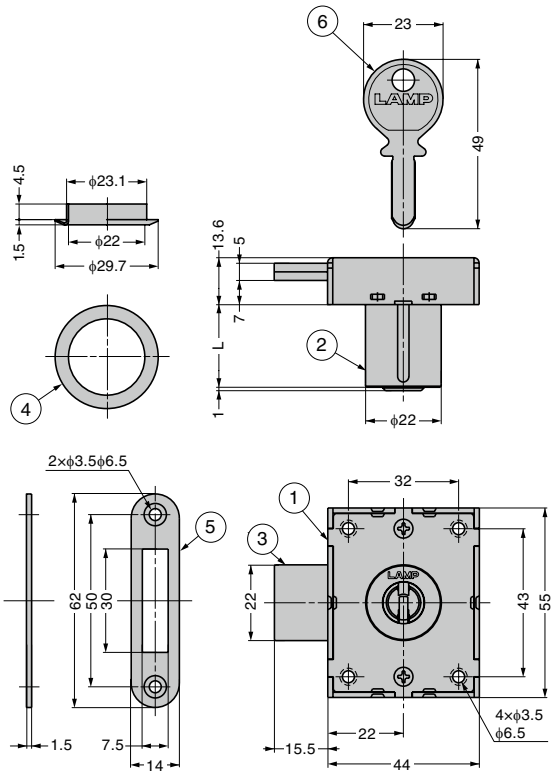
8810-24

- Brass cylinder lock with stainless steel body.
- Construction Key System - Key number is changeable without replacing cylinder. (Key number can be changed twice.)
- Reversible key can be removed when locked and unlocked. (360˚ rotation)
- Master Key (made to order) can be used for unified management.
- 3 million key changes available (Max. 300 key changes/Master Key).
- Types with key number unchanged also available by made to order (Max. 3,000 key changes/Master Key).
- Spacer 6810-SP (sold separately) can be used.

[Remarks]
- Be sure to read the "Cautions" 1.
- Previous key becomes invalid by using a new key.
- Previous key and key number cannot be used again after changing key number.
- Key number can be changed twice.

[Parts Included]
- Countersunk head wood screw 3.1 × 25 (for body)
- Countersunk head wood screw 3.1 × 13 (for strike)

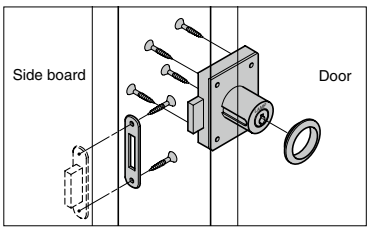
[Sold Separately]
- Master Key (made to order), 1st change key (made to order) and 2nd change key (made to order)
- Spacer 6810-SP



[How to Change Key]
- Each lock includes keys for the original key number only.
- There are three kinds of keys: Original key, 1st change key and 2nd change key.
- 1st and 2nd change keys are sold separately (made to order).
- For the first key number change, insert the 1st change key and rotate 360˚.
- For the second key number change, insert the 2nd change key and rotate 360˚.
- After using the 1st change key, the original key cannot open the lock. Likewise, when the 2nd change key is used, the 1st change key will be invalid.

[Combined Usage with Key and Master Key]
- There are also three kinds of Master Keys: Original Master Key, Master Keys for 1st change and 2nd change. They are available by made to order.
- Master Keys must also be changed after the lock's key number is changed.
- All key numbers will be changed by using new master key.
- In case only some of the locks' key numbers in Master Key system are changed, master keys for that portion should still be kept.

[Installation]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Cylinder	Brass	Nickel
③	Dead Bolt	Stainless Steel (SUS304)	–
④	Ring	Brass	Satin Nickel
⑤	Strike	Stainless Steel (SUS304)	Satin
⑥	Key	Nickel Silver	Barrel Polished

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	L	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-022-338	8810-24MK-B	Key Different, With Master Key System	22	22~24	24	190	12	60
–	3D	150-022-337	8810-24-B	Key Different, Without Master Key System					12	60
–	3D	150-001-221	8810-24-D	Key Alike					12	60
–	3D	150-029-317	8810-36MK-B	Key Different, With Master Key System		34~36	36	220	12	60
–	3D	150-029-316	8810-36-B	Key Different, Without Master Key System					12	60
–	3D	150-001-241	8810-36-D	Key Alike					12	60

Refer to 1 : P.848

CABINET LOCK 6830-30MK Million Lock Interchangeable Cylinder Series

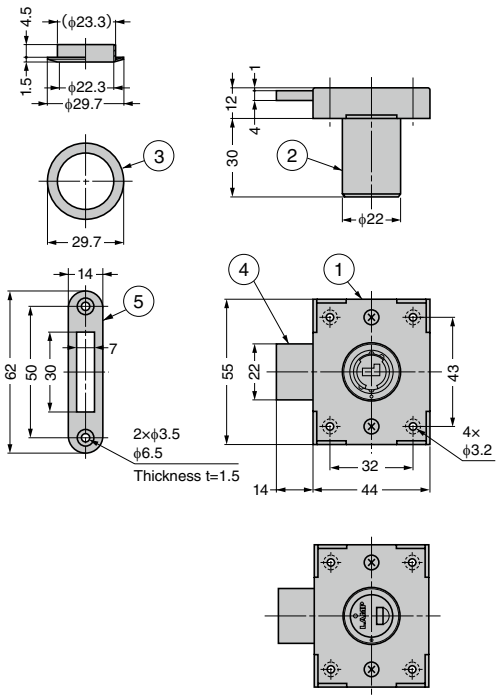
※Cylinder and key are sold separately.

- Interchangeable cylinder lock series with Master Key system.
- Easy to replace the cylinder by using the Change Key MD-K1.
- Reversible key can be removed when locked and unlocked. (180° rotation).
- 7,800 key changes available. (Max. 750 key changes/Master Key)
- Keys can be shared with interchangeable cylinder lock series. Besides, the Master Key (sold separately) can also be used for unified management.

[Remarks]
- Be sure to read the "Cautions" 1.
- To remove the cylinder MD-N1 (sold separately), Change Key MD-K1 (sold separately) is required. Change Key MD-K1 also serves as a master key system.

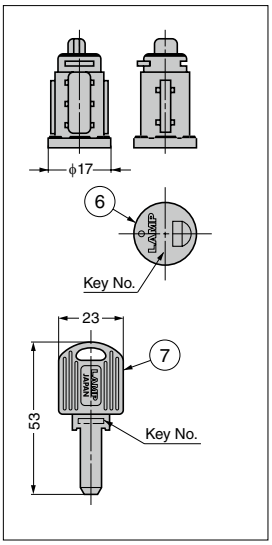
[Parts Included]
- Countersunk head wood screw 2.7 × 13, 3.1 × 22 mm (SUS)

[Sold Separately]
- Cylinder MD-N1
- Master Key MD-MK1, Change Key MD-K1
- Spacer 6810-SP



MD-N1 (sold separately) installed

[Cylinder] Sold Separately



Spacer 6810-SP (sold separately)

[Cylinder] Sold Separately

RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-003	MD-N1-B	Key Different	180	–	1
–	3D	150-001-126	MD-N1-D	Key Alike	180	–	1

[Master Key/Change Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-002	MD-MK1	Master Key	12	–	1
–	3D	150-001-001	MD-K1	Change Key	16	–	1

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4.5	150	1500

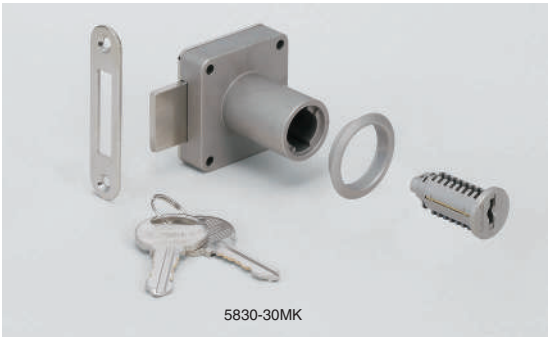
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Housing	Zinc Alloy (ZDC)	GA: Gold, Paint/Clear
③	Ring	Brass	DN: Satin Nickel
④	Dead Bolt	Stainless Steel	–
⑤	Strike	(SUS304)	Satin
⑥	Cylinder (Sold Separately)	Stainless Steel (SUS304)/ Zinc Alloy (ZDC)	Barrel Polished/ Coloured Zinc Chromate
⑦	Key (Sold Separately)	Brass/ABS	Nickel/Black

[Body]

RoHS	CAD	Item Code	Item Name	Finish	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-196	6830-30MKGA	Gold, Paint/Clear	22	30	180	12	60
G	3D	150-060-193	6830-30MKDN	Satin Nickel				12	60

Refer to 1 : P.848

CABINET LOCK 5830



5830-30MK

- Interchangeable cylinder lock with Master Key system.
- Easy to replace cylinder by using Change Key 5830-K1.
- Reversible key can be removed when locked and unlocked (180˚ rotation).
- Max. 3,120 key changes available. (Max. 780 key changes/Master Key)
- Longer dead bolt stroke.

[Remarks]

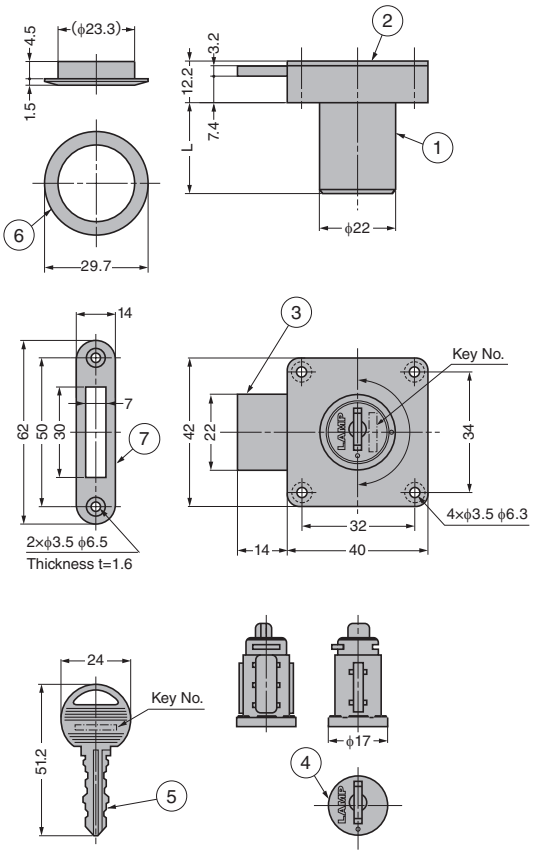
- Be sure to read the "Cautions" 1.
- To remove the cylinder, Change Key 5830-K1 (sold separately) is required.
- Replaceable cylinder is made to order.

[Parts Included]

- Countersunk head wood screw 3.1×13, 3.1×22 (SUS)

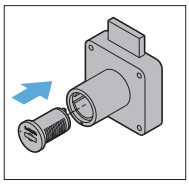
[Sold Separately]

- Master Key 5830-MK1
- Change Key 5830-K1
- Spacer 5830-SP

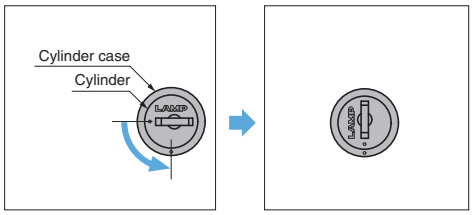


Spacer 5830-SP (sold separately)

[Installation]



[How to Remove]



Insert the Change Key and turn the cylinder 90˚ counter clockwise.

Place two dots in the same position and remove the cylinder.

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel
②	Case Cover	Steel (SPCC)	Nickel
③	Dead Bolt		
④	Cylinder (Inner)	Zinc Alloy (ZDC)	Satin Nickel
⑤	Key	Brass	Nickel
⑥	Ring		Satin Nickel
⑦	Strike	Steel (SPCC)	Nickel

[Master Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-009	5830-MK1	9	–	1

[Change Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	–	150-001-008	5830-K1	13	–	1

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-569	5830-SP	3	200	2000

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-006	5830-24MK-B	Key Different	22	24	155	12	60
–	3D	150-001-382	5830-24MK-D	Key Alike				12	60
–	3D	150-001-007	5830-30MK-B	Key Different		30	202	12	60
–	3D	150-001-381	5830-30MK-D	Key Alike				12	60

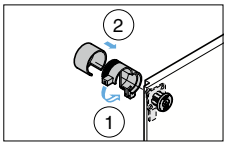
Refer to 1 : P.848

Update: 06.29.2023

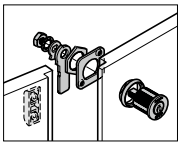
MILLION LOCK CAM LOCK 1300SK

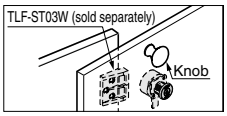
INSTRUCTION

[How to Install ④ Cover & ⑤ Ring]

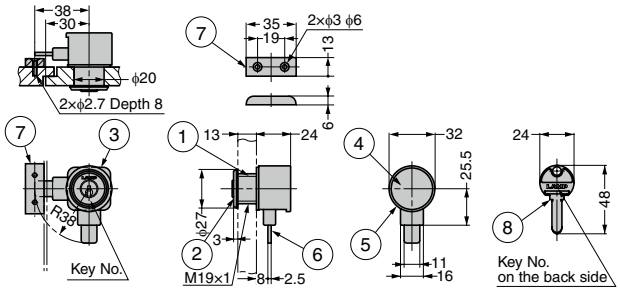


[Installation]





For overlay door, use counter plate TLF-ST03W (sold separately) as one side strike.



- Ideal for cabinet of public toilet booth, etc.
- Reversible key can be removed when locked and unlocked.
- When turning the key clockwise by 360˚, cam rotates by 90˚.
- 1 Key Alike available. Key different type possible as special order (1 million key changes). Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 1.

[Remarks]

- Be sure to read the "Cautions" 2
- Do not use in shower booth and other water surroundings.

[Parts Included]

- Countersunk head screw M3×12 (SUS)

[Sold Separately]

- Counter plate TLF-ST03W

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-395	1300SK-D	Key Alike	13	115	12	60

[Strike] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-235	TLF-ST03W	8	1	1000

Refer to 1 : P.849, 2 : P.848

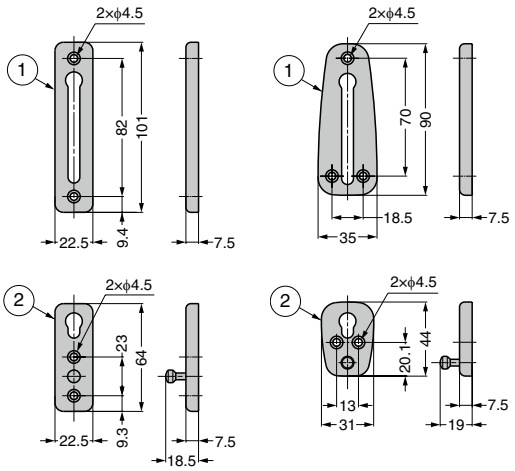
No.	Part Name	Material	Finish/Colour
①	Body	Brass	Satin Nickel
②	Ring		
③	Key Plate	Steel (SPCC)	Coloured Zinc Chromate
④	Cover	PP	Black
⑤	Ring		
⑥	Cam	Stainless Steel (SUS304)	Plain
⑦	Strike	ABS	Brown
⑧	Key	Brass	Nickel

STAINLESS STEEL DOOR CHAIN CS

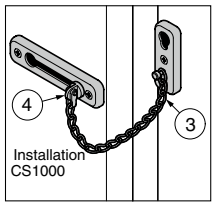
SUS

[Parts Included]

- Raised countersunk head wood screw 4×25 (SUS)



CS1000 CS2000



RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-051-060	CS1000	115	15	150
G	3D	270-051-061	CS2000	120	15	150

No.	Part Name	Material	Finish
①	Body (1)	Stainless Steel (SUS304)	Satin
②	Body (2)		
③	Chain (150 mm length)		Barrel Polished
④	Knob	Brass	Nickel

BOX LATCH WITH LOCK BL-70Y

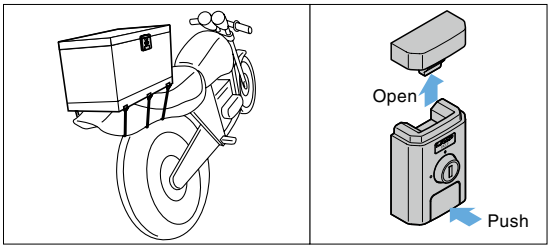
- Automatically latches the lid when closed.
- Push button to release.
- Locked with a key.
- 5 key changes available.

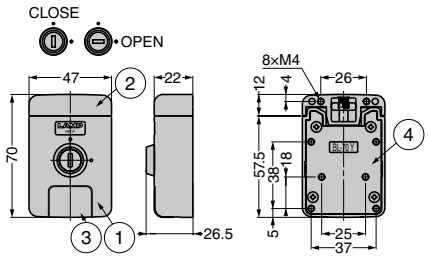
[Application]
- Storage box, especially for cars and transport, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Install body and striker on the same plane.Stepped mounting surface may cause malfunction or damage.

[Parts Included]
- Countersunk binding head screw M4×12 (SUS)
- Spring lock washer 4 (SUS)

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-077	BL-70Y-D	Key Alike	220	–	1

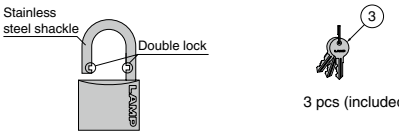
Refer to 1 : P.848

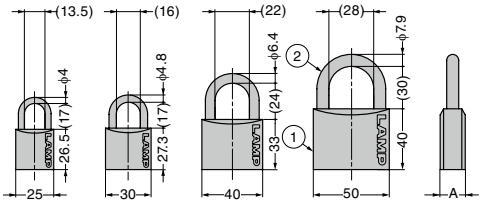
No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Paint/Silver
②	Striker		
③	Button	Polyacetal (POM)	Grey
④	Cover	Zinc Alloy (ZDC)	Paint/Silver

HIGH SECURITY PADLOCK PWL

- Provides high security with stainless steel shackle and double lock. Besides, no key number marked on the body prevents illegal use.
- 110 key changes available.
- Sealing tool series also available.

[Remarks]
- Be sure to read the "Cautions" 1.
- Cannot specify key number when ordering.



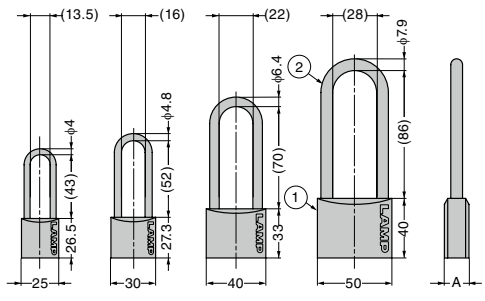


No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Shackle	Stainless Steel (SUS304)	–
③	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	A	Weight (g) ※	Box (pcs)	Carton (pcs)
–	3D	150-013-023	PWL-25	11.5	54	10	100
–	3D	150-013-024	PWL-30	12.8	78	10	100
–	3D	150-013-025	PWL-40	13.8	143	10	100
–	3D	150-013-026	PWL-50	16.5	254	5	50
–	3D	150-013-027	PWL-25L	11.5	63	10	100
–	3D	150-013-028	PWL-30L	12.8	91	10	100
–	3D	150-013-029	PWL-40L	13.8	168	10	100
–	3D	150-013-030	PWL-50L	16.5	297	5	50

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

Refer to 1 : P.848



※Weight may greatly vary depending on different lots. Please check with the actual item.

Understandable! Selectable! Usable!

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- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

CASTERS

Casters are a kind of hardware for moving carts or equipment smoothly by using wheels.
Sugatsune offers a characteristic series of casters with various load capacities and heights, and medical casters with excellent design and easy field operation, etc. You can select appropriate products by various factors such as the wheel material suitable for the floor surface, the shaft mechanism vital to smooth movement, as well as locking, braking and other additional functions.

SUGATSUNE

June 2022

Outline of Casters

Heavy Duty Casters
P.881

Single Wheel Casters
P.889

Twin Wheel Casters
P.893~

Casters With Levelling Glides
P.914~

Ball Casters
P.916

Sliding Door Rollers
P.917

A caster is used for easily moving or handling objects. It is attached to various conveyors and equipment and used by human force on indoor flat floor surface.
Please select the proper caster as per the application and use conditions, and install it correctly.

Cautions for selection

- Please select casters within the load capacity range that meet the required conditions. Overload may cause damage, cracks or deformation of the product. Load capacity is just an example of measurement values obtained in the test under our company's reliable data and specific conditions, not guaranteed value.
  For example, when using 4 casters, the total load shall be multiplied by safety factor (0.75).

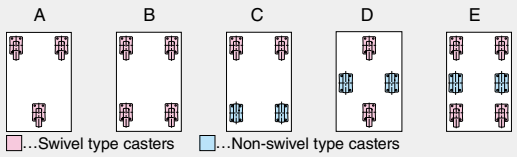
  Total load N (kgf) = Load capacity N (kgf) × 4 (pcs) × 0.75

  In addition, the safety factor (0.75) may vary depending on use conditions such as movement surface and movement speed. Before use, please select types suitable for your purpose.
- Do not use for power traction and mechanical parts. High speed rotation or continuous movement may cause damage, cracks and deformation of the products due to overload, impact, thermal accumulation, etc.
- Do not use in special environment. Use in environments such as low temperature, high temperature and high humidity or under the influence of acids, alkalis, salts, solvents, oils, etc. may significantly shorten the service life, or cause deterioration and breakage of the product.
- Since rubber wheels may contaminate the floor surface, please confirm with the actual item.

Cautions for use

- Please use it on a flat floor. Vibration due to uneven surfaces like asphalt or impact incurred by level difference may cause damage, cracks or deformation of the products.
- Do not apply excessive load to the caster.Overload, impact produced by putting down heavy objects or excessive force applied in a direction different from the rotation direction of the wheel may cause damage, cracks or deformation of the products.
- Do not apply excessive force to the stopper.Load on the stopper due to placing on an inclined surface, travelling with the stopper locked or using as a brake during movement, etc. may damage the product, cause injuries or damage the surrounding objects.

Effective characteristics can be obtained by combining swivel type and non-swivel type caster.



…Swivel type casters …Non-swivel type casters

A | Compared with B, using (2+1) swivel type casters is more economical, but the stability is poor.

B | Using 4 swivel type casters can realise effective movement even in a narrow place.

C | The combination of 2 swivel type casters and 2 non-swivel type casters is common. Installing the handle at the swivel type caster side may improve operability.

D | Compared with C, combining 2 swivel type casters and 2 non-swivel type casters in the centre is more effective in a narrow place. A central non-swivel type caster larger than the swivel type caster may bear most of the load and provides better operability.

E | Combining 4 swivel type casters and 2 non-swivel type casters arranged in the centre is suitable for cases with increased load.

High

Economy	Stability	Operability ※	Load Capacity
A	B / C	A / B	E
C / D	D / E	D / E	B / C / D
B	A	C	A

※ Operability indicates whether it is suitable for "use in a narrow place".

Outline of Casters

Heavy Duty Casters

P.881~P.888

Product Name	Load Capacity N (kgf)	Wheel: Single/Twin Wheel	Wheel: Dia. (ϕmm)	Wheel: Width (mm)	Wheel: Material	Installation Type: Plate Type	Installation Type: Threaded Bolt Type	Installation Type: Insert Bolt Type	Swivel: Swivel Type	Swivel: Non-Swivel Type	Lock/Brake Operation: Wheel Lock	Lock/Brake Operation: Wheel Brake	Lock/Brake Operation: Swivel Lock	Page
Low Profile Heavy Duty Caster UHG	4000 (408) ~ 8000 (816)	Single Wheel	50	38	Phenol Resin (PF) MC Reinforced (PA) Reinforced Polyamide Conductive MC Reinforced (PA)	●	–	–	●	–	–	–	–	P.881
			65	48		●	–	–	●	–	–	–	–	
			75			●	–	–	●	–	–	–	–	
			80		MC Polyamide	●	–	–	●	–	–	–	–	
			100			●	–	–	●	–	–	–	–	
Low Profile Heavy Duty Caster HG	1600 (163.2)	Single Wheel	50	28	Reinforced (PA)	●	–	–	●	–	–	–	–	P.881
	3000 (306)		65	38	Phenol Resin (PF)	●	–	–	●	–	–	–	–	
	3200 (326.4)		75			●	–	–	●	–	–	–	–	
Shock-Absorbing Caster TP	749.7 (76.5) ~ 6272 (640)	Single Wheel	151	45	PUR	●	–	–	●	●	–	–	–	P.882 ~ P.883
			202			●	–	–	●	●	–	–	–	
			203.2	70		●	–	–	●	●	–	–	–	
Dual Brake System Caster MX	1176 (120)	Single Wheel	125	36	PA / PUR	●	●	–	●	–	●	–	●	P.884 ~ P.885
Dual Brake System Caster EX-100	980 (100)	Single Wheel	100	32	PA / PUR	●	●	–	●	–	–	●	●	P.886 ~ P.887

Single Wheel Casters

P.889~P.892

Product Name	Load Capacity N (kgf)	Wheel: Single/Twin Wheel	Wheel: Dia. (ϕmm)	Wheel: Width (mm)	Wheel: Material	Installation Type: Plate Type	Installation Type: Threaded Bolt Type	Installation Type: Insert Bolt Type	Swivel: Swivel Type	Swivel: Non-Swivel Type	Lock/Brake Operation: Wheel Lock	Lock/Brake Operation: Wheel Brake	Lock/Brake Operation: Swivel Lock	Page
Stainless Steel Caster SUS-ET SUS	380 (38.8)	Single Wheel	50	21	Urethane Rubber (UR)	–	●	–	●	–	–	●	–	P.889
	400 (40.8)		65			–	●	–	●	–	–	●	–	
	450 (45.9)		75			–	●	–	●	–	–	●	–	
	600 (61.2)		100	28		–	●	–	●	–	–	●	–	
Stainless Steel Caster SUS-SJ SUS	490 (50) ~ 1568 (160)	Single Wheel	65 ~ 150	25 ~ 40	Rubber/Polyamide Urethane	●	–	–	●	–	–	●	–	P.890
Stainless Steel Caster SUS-SK SUS	588 (60) ~ 1568 (160)	Single Wheel	65 ~ 150	25 ~ 38	Rubber/Polyamide Urethane	●	–	–	–	●	–	–	–	P.891
PLN Design Caster	785 (80)	Single Wheel	50	14	PA	●	–	–	●	–	–	–	–	P.892
						–	●	–	●	–	–	–	–	

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

Twin Wheel Casters

P.893~P.913

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
											Wheel		Swivel	
	N (kgf)	Single/ Twin Wheel	Dia. (ϕmm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Lock	Brake	Lock	
Twin Wheel Caster GX	1960 (200)	Twin Wheel	50	64.5	POM	●	●	–	●	●	–	–	–	P.893 ~ P.895 , P.897
	980 (100)			(52.5)	PA	●	●	–	●	–	●	–	–	
	1470 (150)		60	44		●	●	–	●	–	●	–	–	
	1960 (200)		75	58		●	●	–	●	–	●	–	–	
Parts Separable Caster CNP SUS	588 (60)	Twin Wheel	50	70	PA	●	–	–	●	–	–	–	–	P.896
	1176 (120)		75	85		●	–	–	●	–	–	–	–	
Parts Separable Caster CNB SUS	588 (60)	Twin Wheel	50	70	PA	–	●	–	●	–	–	–	–	P.896
	1176 (120)		75	85		–	●	–	●	–	–	–	–	
Twin Wheel Caster T, TSD	784 (80)	Twin Wheel	76	61	PA, PUR	●	●	–	●	–	●	–	●	P.898 ~ P.899
	980 (100)		100	69		●	●	–	●	–	●	–	●	
Design Caster FS (Made to Order)	490 (50)	Twin Wheel	–	–	–	●	●	–	–	–	●	–	–	P.899
Twin Wheel Caster MFD	686 (70)	Twin Wheel	75	52	PA, PUR	●	●	–	●	–	●	–	●	P.900
	784 (80)		100	64		●	●	–	●	–	●	–	●	
	882 (90)		125	74		●	●	–	●	–	●	–	●	
Twin Wheel Caster DB, DS	490 (50)	Twin Wheel	40.5	39.5	PA	●	●	–	●	–	●	–	–	P.901
	784 (80)		50.5	46		●	●	–	●	–	●	–	–	
Twin Wheel Caster MUDR	784 (80)	Twin Wheel	100	64	PA, PUR	●	–	–	–	●	–	–	–	P.902
Twin Wheel Caster FAU55	686 (70)	Twin Wheel	53	(46)	PA + Elastomer (TPU)	●	●	●	●	–	●	–	–	P.904
Twin Wheel Caster FPU55	490 (50)	Twin Wheel	53	(46)	PA + Elastomer (TPU)	●	●	●	●	–	●	–	–	P.905
Twin Wheel Caster FA55	784 (80)	Twin Wheel	53	(46)	PA	●	●	–	●	–	●	–	–	P.906
Twin Wheel Caster FP55	490 (50)	Twin Wheel	53	(46)	PA	●	●	–	●	–	●	–	–	P.906 ~ P.907
Twin Wheel Caster FA45	490 (50)	Twin Wheel	47	43	PA	●	●	–	●	–	●	–	–	P.907
Twin Wheel Caster FP45	392 (40)	Twin Wheel	47	43	PA	●	●	–	●	–	●	–	–	P.908

Twin Wheel Casters

P.893~P.913

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
	N (kgf)	Single/ Twin Wheel	Dia. (ϕmm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Wheel Lock	Wheel Brake	Swivel Lock	
Twin Wheel Caster NB,NS	392 (40)	Twin Wheel	40	45.5	PA	●	●	–	●	–	●	–	–	P.909
						●	●	–	●	–	–	–	–	
	588 (60)		50	53		●	●	–	●	–	●	–	–	
						●	●	–	●	–	–	–	–	
Twin Wheel Caster JP	490 (50)	Twin Wheel	50	57	PA	●	●	–	●	–	●	–	–	P.910
	588 (60)		60	65		●	●	–	●	–	●	–	–	
Twin Wheel Caster BR	294 (30)	Twin Wheel	45	42	PA	●	●	●	●	–	●	–	–	P.911 ~ P.912
	392 (40)		53	48		●	●	●	●	–	●	–	–	
Twin Wheel Caster BU	392 (40)	Twin Wheel	53	48	PA / PUR	●	●	●	●	–	●	–	–	P.912 ~ P.913
Twin Wheel Caster PT-30	200 (20.4)	Twin Wheel	30	32	PA	●	–	–	●	–	–	–	–	P.913

With Levelling Glides

P.914~P.915

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
	N (kgf)	Single/ Twin Wheel	Dia. (ϕmm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Wheel Lock	Wheel Brake	Swivel Lock	
Caster With Levelling Glide AF	2499 (255)	Single Wheel	50	45	PA	●	–	–	●	–	–	–	–	P.914
			65			●	–	–	●	–	–	–	–	
Parts Separable Caster (w/Glide) CAP	588 (60)	Twin Wheel	50	70	PA/Elastomer (TPE)	●	–	–	●	–	–	–	–	P.915
	1176 (120)		75	85		●	–	–	●	–	–	–	–	
Parts Separable Caster (w/Glide) CAB	588 (60)	Twin Wheel	50	70	PA/Elastomer (TPE)	–	●	–	●	–	–	–	–	P.915
	1176 (120)		75	85		–	●	–	●	–	–	–	–	

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
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BALL CASTERS
SLIDING DOOR ROLLERS

Ball Casters

P.916

Product Name		Ball Dia. (ϕmm)	Installation Type: Front Screw Mount	Installation Type: Recessed Mount	Load Capacity N (kgf)	Page
Ball Caster (Surface Mount Type)	BM	11.9, 14.3, 17.5, 22.2, 25.4	●	–	98 (10), 118 (12), 147 (15), 245 (25), 392 (40)	P.916
Plastic Caster (Threaded Bolt Type)	NT	25	–	●	245 (25)	P.916
Plastic Caster (Surface Mount Type)	NS	25	●	–	245 (25)	P.916
Ball Caster (Recessed Mount Type)	BH	17.5, 22.2, 25.4	–	●	98 (10), 147 (15), 196 (20)	P.916
Mini Ball Caster (Recessed Mount Type)	BHB-12	12	–	●	78.4 (8)	P.916

Sliding Door Rollers

P.917~P.924

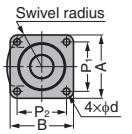
With Bracket Non-bracket

Wheel Shape		Product Name	Wheel Dia. (ϕmm)	Load Capacity N (kgf)	Page		Product Name	Wheel Dia. (ϕmm)	Page
L-shaped		SUS Stainless Steel Sliding Door Roller JS315	120, 150 200	14700 (1500) ~ 27440 (2800)	P.917		SUS Stainless Steel Sliding Door Roller JS325	120, 150 200	P.917
V-shaped		SUS Stainless Steel Sliding Door Roller JS300	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.918		SUS Stainless Steel Sliding Door Roller JS310	50, 60 75, 90 110, 150 200	P.918
U-shaped		SUS Stainless Steel Sliding Door Roller JS365	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.919		SUS Stainless Steel Sliding Door Roller JS380	50, 60 75, 90 110, 150 200	P.919
Flat		SUS Stainless Steel Sliding Door Roller JS375	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.920		SUS Stainless Steel Sliding Door Roller JS385	50, 60 75, 90 110, 150 200	P.920
V-shaped		Sliding Door Roller JC100	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.921		Sliding Door Roller JC110	50, 60 75, 90 105, 120 150, 200	P.921
U-shaped		Sliding Door Roller JC135	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.922		Sliding Door Roller JC145	50, 60 75, 90 105, 120 150, 200	P.922
Flat		Sliding Door Roller JC140	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.923		Sliding Door Roller JC150	50, 60 75, 90 105, 120 150, 200	P.923
L-shaped		Sliding Door Roller JC115	90, 120 150, 200	6370 (650) ~ 24500 (2500)	P.924		Sliding Door Roller JC120	90, 120 150, 200	P.924

LOW PROFILE HEAVY DUTY CASTER UHG Plate Type

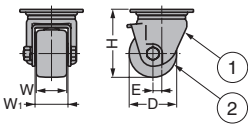
LOAD CAPACITY 4000~8000 N

- Small heavy duty type with low profile.
- High performance bearing reduces starting force.
- Carburised and quenched main metal parts provide outstanding durability and load capacity.



[Applications]

- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space-saving, long-term fixed heavy equipment, etc.



[Phenol Wheel] Item Name Suffix "PB"

High surface hardness and excellent resistance against oil, heat and compression.

[Reinforced Polyamide Wheel] Item name suffix "GFB"

Excellent load capacity and impact resistance compared with polyamide wheel.

[MC Polyamide Wheel] Item Name Suffix "MC" Wheel Diameter 50,65,75

Excellent load capacity, friction resistance, heat resistance and cold resistance and low starting resistance provide low probability of floor damage.

[MC Polyamide Wheel] Item Name Suffix "MC" Wheel Diameter 80,100

Excellent load capacity, friction resistance, heat resistance and cold resistance and low starting resistance provide low probability of floor damage.

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	Item Name Suffix "PB" : Phenol Resin (PF)	Black
		Item Name Suffix "MC" : MC (PA)	Blue, Dark Navy
		Item Name Suffix "MCE" : Conductive MC (PA)	Black
		Item Name Suffix "GFB" : Reinforced (PA)	

RoHS	CAD	Item Code	Item Name	Wheel Material	D	H	E	W	W1	A	B	P1	P2	d	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-130-840	UHG-50-PB	Phenol Resin (PF)	50	79	12	38	42	84	84	64	64	8.5	49	4000	408	814	20	–
G	3D	200-130-290	UHG-50-MC	MC Polyamide														810	20	–
G	–	200-130-841	UHG-65-PB	Phenol Resin (PF)	65	97	14	48	51.5	100	100	78	78	10.5	57	5000	510	1581	12	–
G	3D	200-130-292	UHG-65-GFB	Reinforced Polyamide												4000	408	1469	12	–
G	3D	200-130-293	UHG-65-MC	MC Polyamide												6000	612	1600	12	–
G	3D	200-130-842	UHG-75-PB	Phenol Resin (PF)	75	107												1677	12	–
G	3D	200-130-295	UHG-75-GFB	Reinforced Polyamide												5000	510	1521	12	–
G	–	200-130-296	UHG-75-MC	MC Polyamide												7000	714	1800	12	–
G	–	200-130-298	UHG-80-MC	MC Polyamide	80	120	20				85	80	60	9.0	62	8000	816	1695	12	–
G	–	200-139-432	UHG-100-MC		100	140				150	110	121	59	13.0	72			2145	8	–

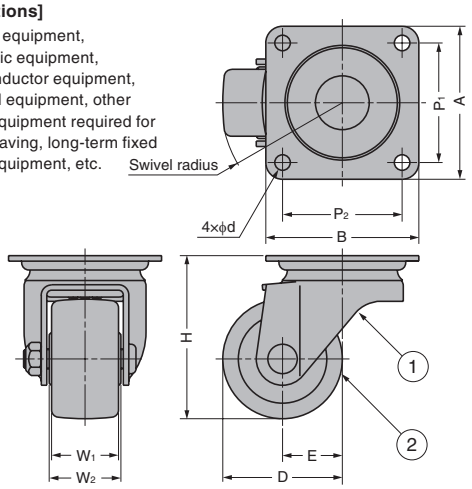
LOW PROFILE HEAVY DUTY CASTERS HG Plate Type

LOAD CAPACITY 1600~3200 N

- Small heavy duty type with low profile.
- High performance bearing reduces starting force (HG-50GNB excluded).
- Carburised and quenched main metal parts provide outstanding durability and load capacity.

[Applications]

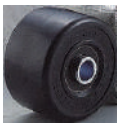
- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space-saving, long-term fixed heavy equipment, etc.



[Reinforced Polyamide Wheel] Item Name Suffix "GNB"

Excellent load capacity and impact resistance compared with polyamide wheel.

[Phenol Wheel] Item Name Suffix "PB"



High surface hardness and excellent resistance against oil, heat and compression.

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	Item Name Suffix "GNB" : Reinforced (PA)	Black
		Item Name Suffix "PB" : Phenol Resin (PF)	

RoHS	CAD	Item Code	Item Name	Wheel Material	D	H	E	W1	W2	A	B	P1	P2	d	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-399	HG-50GNB	Reinforced Polyamide	50	68	25	28	30	64	64	50	50	6.5	51	1600	163.2	320	36	–
G	3D	200-130-400	HG-65PB	Phenol Resin (PF)	65	92	22	38	42	90	90	71	71	10.5	57	3000	306	880	20	–
G	3D	200-130-401	HG-75PB		75	106									61	3200	326.4	970	20	–

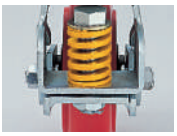
SHOCK-ABSORBING SWIVEL CASTER TP Plate Type

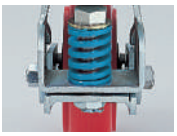
LOAD CAPACITY 749.7~6272 N

TP-150LF-A-RD shown.

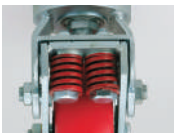
- Quiet movement: Elastic polyurethane wheel reduces noise during movement. (Refer to the moving noise comparison below).
- Stable movement: Excellent wheel side runout prevention, even travelling on a bad road.
- Long wheel life: Stable movement and small wheel wear ensure long service life of the wheel.
- Reduced starting force: Damping mechanism allows for easily moving a pallet carrying heavy load with a small force.

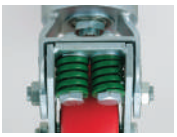
[Choose From Six Types of Springs According to Application]
(Refer to item name table for details.)

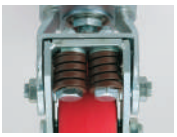

Yellow


Blue

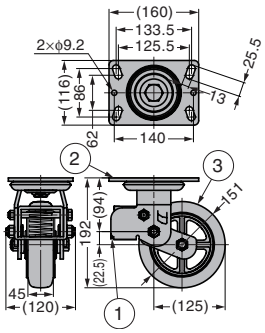
Red


Red

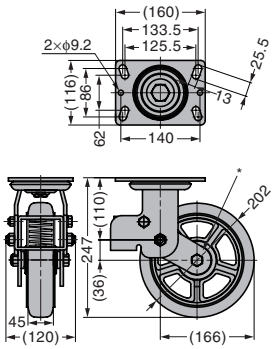

Green


Brown

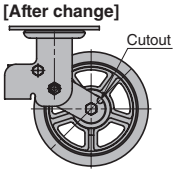
[TP-150LF]



[TP-200LF]

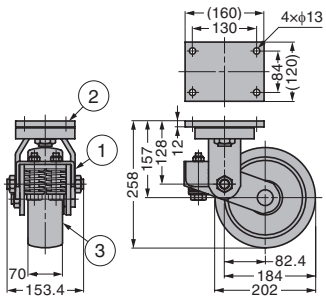


[After change]



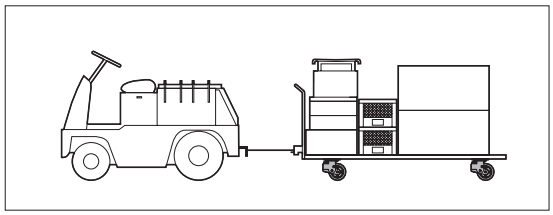
*There will be a cutout after current stock runs out.

[TPAH-200LF] Made to Order



Please also refer to [Application Example] 1.

- Swivel type and non-swivel type casters are used in combination. Refer to 2 for the arrangement.



[Moving Noise Comparison]

	Nomal Rubber Caster	Shock-Absorbing Caster (This Product)
Loaded	83dB	59dB
Unloaded	94dB	65dB

No.	Part Name	Material	Finish/Colour
①	Body	Steel	Clear Zinc Chromate
②	Plate		
③	Wheel	PUR	Red
④	Spring	Steel	Paint/See Below

The standard load of shock-absorbing caster represents the load at which the best impact absorption effect can be obtained.

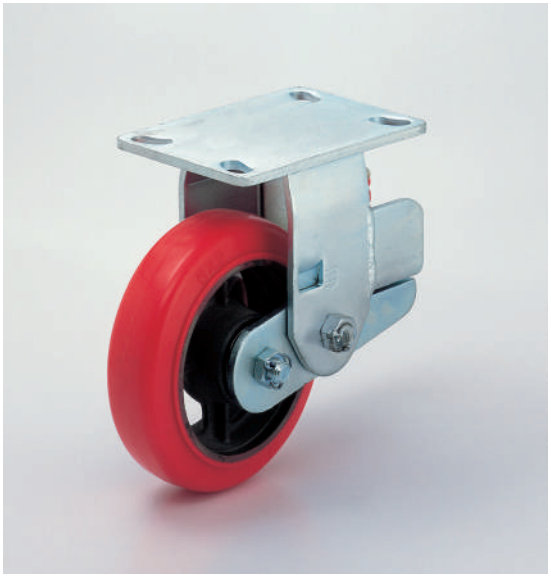
RoHS	CAD	Item Code	Item Name	Wheel Dia.	Spring Colour	Load Capacity N/pc	Load Capacity kgf/pc	Standard Load N/pc	Standard Load kgf/pc	Max. Spring Compressed Length	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-130-714	TP-150LF-A-YE	151	Yellow	980	100	749.7	76.5	20	5.1	4	–
–	3D	200-130-715	TP-150LF-A-BU		Blue	2116	216	1481.7	151.2			4	–
–	3D	200-130-716	TP-150LF-A-RD		Red	3136	320	2195.2	224	16		4	–
–	3D	200-130-717	TP-200LF-A-YE	202	Yellow	980	100	749.7	76.5	20	6.7	2	–
–	3D	200-130-718	TP-200LF-A-BU		Blue	2116	216	1481.7	151.2			2	–
–	3D	200-130-719	TP-200LF-A-RD		Red	3136	320	2195.2	224	16		2	–
–	3D	200-012-504	※TPAH-200LF-A-RD	203.2		4900	500	3724	380	14.4	15	2	–
–	3D	200-012-505	※TPAH-200LF-A-GN		Green	7056	720	5096	520	10.8		2	–
–	3D	200-012-506	※TPAH-200LF-A-BR		Brown	7840	800	6272	640	9		2	–

Refer to 1 : P.883, 2 : P.876

※Made to order.

SHOCK-ABSORBING NON-SWIVEL CASTER TP Plate Type

LOAD CAPACITY 749.7~6272 N

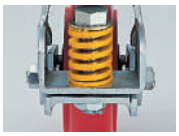


TP-150LC-A-RD shown.

- Quiet movement: Elastic polyurethane wheel reduces noise during movement. (Refer to the moving noise comparison below).
- Stable movement: Excellent wheel side runout prevention, even travelling on a bad road.
- Long wheel life: Stable movement and small wheel wear ensure long service life of the wheel.
- Reduced starting force: Damping mechanism allows for easily moving a pallet carrying heavy load with a small force.

[Choose From Six Types of Springs According to Application]

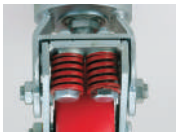
(Refer to item name table for details.)



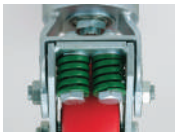
Yellow

Blue

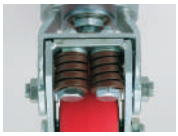
Red



Red

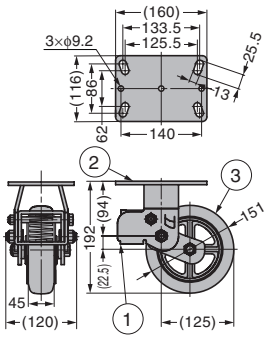


Green

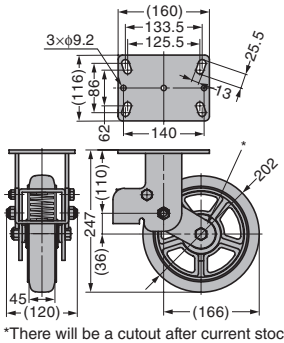


Brown

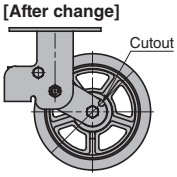
[TP-150LC]



[TP-200LC]

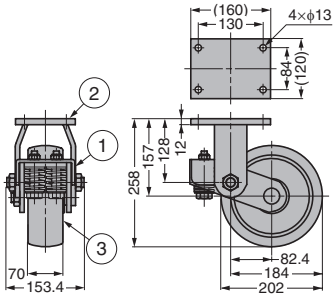


[After change]



*There will be a cutout after current stock runs out.

[TPAH-200LC] Made to Order



Please also refer to [Application Example] 1.

- Swivel type and non-swivel type casters are used in combination. Refer to 2 for the arrangement.

[Moving Noise Comparison]

	Nomal Rubber Caster	Shock-Absorbing Caster (This Product)
Loaded	83dB	59dB
Unloaded	94dB	65dB

No.	Part Name	Material	Finish/Colour
①	Body	Steel	Clear Zinc Chromate
②	Plate		
③	Wheel	PUR	Red
④	Spring	Steel	Paint/See Below

The standard load of shock-absorbing caster represents the load at which the best impact absorption effect can be obtained.

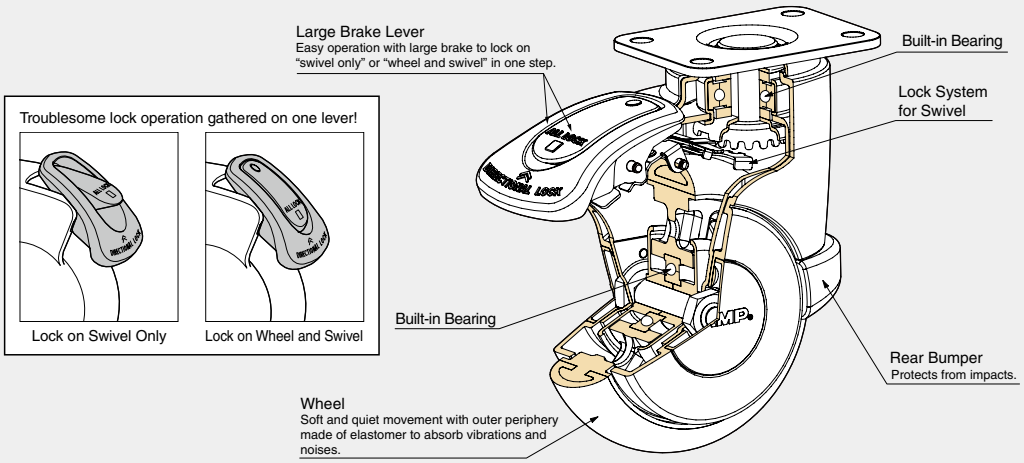
RoHS	CAD	Item Code	Item Name	Wheel Dia.	Spring Colour	Load Capacity N/pc	Load Capacity kgf/pc	Standard Load N/pc	Standard Load kgf/pc	Max. Spring Compressed Length	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-130-720	TP-150LC-A-YE	151	Yellow	980	100	749.7	76.5	20	5.1	4	–
–	3D	200-130-721	TP-150LC-A-BU		Blue	2116	216	1481.7	151.2			4	–
–	3D	200-130-722	TP-150LC-A-RD		Red	3136	320	2195.2	224	16		4	–
–	3D	200-130-723	TP-200LC-A-YE	202	Yellow	980	100	749.7	76.5	20	6.7	2	–
–	3D	200-130-724	TP-200LC-A-BU		Blue	2116	216	1481.7	151.2			2	–
–	3D	200-130-725	TP-200LC-A-RD		Red	3136	320	2195.2	224	16		2	–
–	3D	200-012-507	※TPAH-200LC-A-RD	203.2		4900	500	3724	380	14.4	13.5	2	–
–	3D	200-012-508	※TPAH-200LC-A-GN		Green	7056	720	5096	520	10.8		1	–
–	3D	200-012-509	※TPAH-200LC-A-BR		Brown	7840	800	6272	640	9		2	–

Refer to 1 : P.882, 2 : P.876

※Made to order.

DUAL BRAKE SYSTEM CASTER MX-125

Design with Excellent User-friendliness



DUAL BRAKE SYSTEM CASTER MX-125P Plate Type

LOAD CAPACITY 1176 N

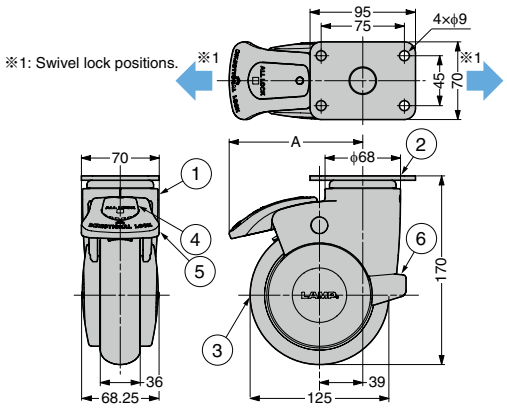
- Ideal for frequent use such as equipment in hospitals and laboratories.
- Easy switching between "swivel" lock and "wheel+swivel" lock with one lock lever.
- Large lock lever for easy operation.
- Works as non-swivel type when swivel is locked.
- Ball bearing equipped in both swivel and wheel to provide maximum smooth movement.

[Others]

- Colour of logo, cover and lock lever can be changed.

[Remarks]

- To align swivel lock positions (see ※1 in the drawing below) for caster with brake, fix the caster with the plate longitudinal direction consistent with the moving direction when installing to a cart.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Brake	PA	Dark Blue
⑤	Brake		Light Blue
⑥	Rear Bumper	PUR	Dark Grey

RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-053	MX-125PS	With Brake	120.5	1176	120	1444	2	8
G	3D	200-130-052	MX-125P	Without Brake	101.5			1357	2	8

DUAL BRAKE SYSTEM CASTER MX-125N Threaded Bolt Type

LOAD CAPACITY 1176 N

- Ideal for frequent use such as equipment in hospitals and laboratories.
- Easy switching between “swivel” lock and “wheel+swivel” lock with one lock lever.
- Large lock lever for easy operation.
- Works as non-swivel type when swivel is locked.
- Ball bearing equipped in both swivel and wheel to provide maximum smooth movement.

[Others]

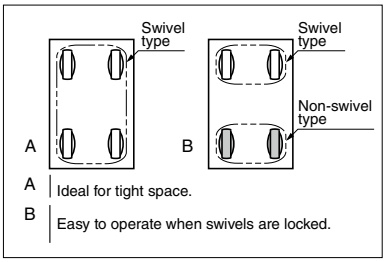
- Colour of logo, cover and lock lever can be changed.

[Remarks]

- To align swivel lock positions (see ※1 in the drawing below) for caster with brake, fix the caster with the slit direction consistent with the pushing direction when installing to a cart.

[Application Example]

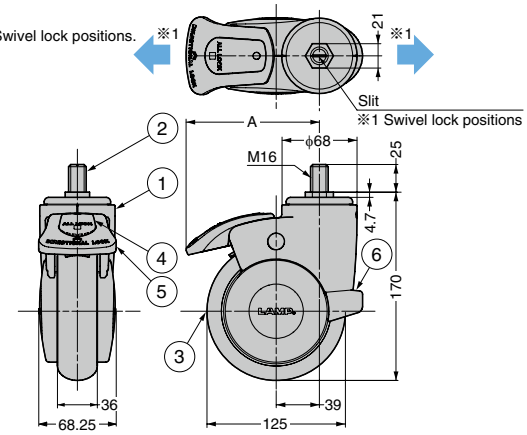
- w/ Brake type is easy to switch the types of carriage as below.



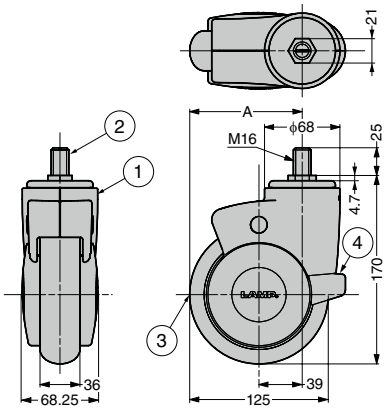
HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

- w/ Brake

※1 : Swivel lock positions.



- w/o Brake



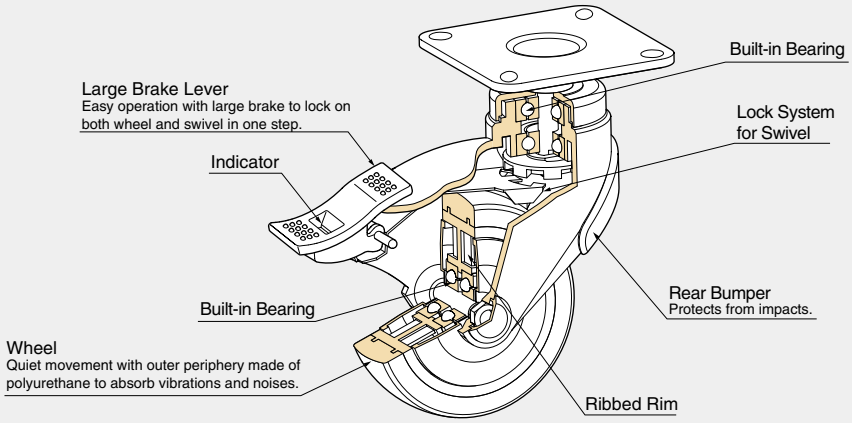
No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Threaded Bolt	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Brake	PA	Dark Blue
⑤	Brake		Light Blue
⑥	Rear Bumper	PUR	Dark Grey

No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Screw	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Rear Bumper	PUR	

RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	200-130-055	MX-125N16S	w/ Brake	120.5	1176	120	1301	2	8
GT	3D	200-130-054	MX-125N16	w/o Brake	101.5			1209	2	8

DUAL BRAKE SYSTEM CASTER EX-100

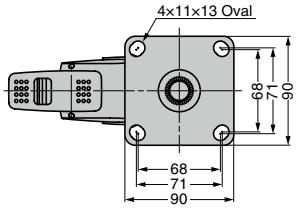
Functional Caster Designed for Easy Operation

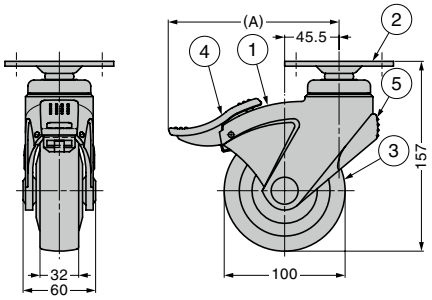


DUAL BRAKE SYSTEM CASTER EX-100P Plate Type

LOAD CAPACITY 980 N

- Brake indicator for easy recognition.
- Locks both wheel and swivel.
- Large brake lever for easy operation.
  Since the brake lever protrudes the wheel, operation is unaffected even if the installation position of the caster is slightly inward from the edge of upper cabinet.
- Ball bearing equipped in both swivel and wheel to provide smooth movement.
- Rear bumper protects from impacts.
- W/o brake type has also front rubber bumper to protect foot.





No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Plate	Steel (SPHC)	Clear Zinc Chromate
③	Wheel	※PA/PUR	Dark Grey
④	Brake	PA	
⑤	Rear Bumper	Elastomer (TPE)	

※The material will be changed to PP/TPE when the stock runs out.

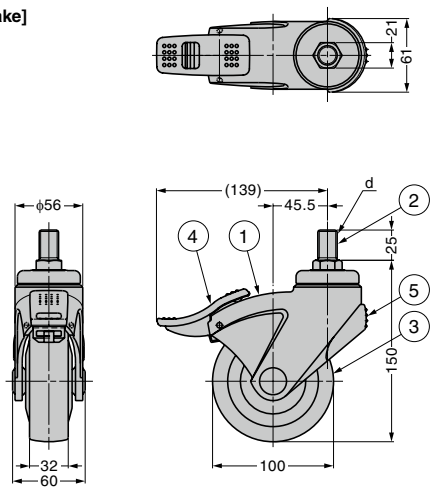
RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-132-735	EX-100PS	With Brake	139	980	100	888	20	–
–	3D	200-132-734	EX-100P	Without Brake	105			873	20	–

DUAL BRAKE SYSTEM CASTER EX-100N Threaded Bolt Type

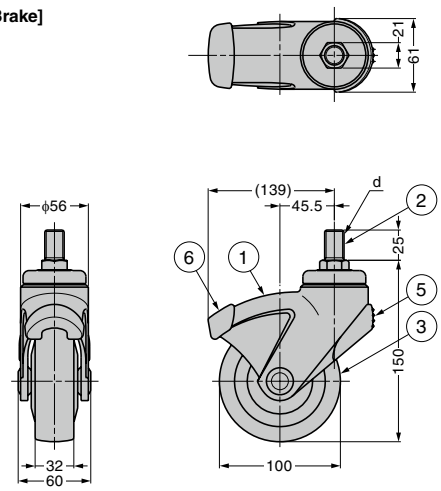
LOAD CAPACITY 980 N

- Brake indicator for easy recognition.
- Locks both wheel and swivel.
- Large brake lever for easy operation.
  Since the brake lever protrudes the wheel, operation is unaffected even if the installation position of the caster is slightly inward from the edge of upper cabinet.
- Ball bearing equipped in both swivel and wheel to provide smooth movement.
- Rear bumper protects from impacts.
- W/o brake type has also front rubber bumper to protect foot.

[w/ Brake]



[w/o Brake]



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Threaded Bolt	Steel (SWCH)	Clear Zinc Chromate
③	Wheel	※PA/PUR	Dark Grey
④	Brake	PA	
⑤	Rear Bumper	Elastomer (TPE)	
⑥	Front Bumper		

※The material will be changed to PP/TPE when the stock runs out.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-132-736	EX-100N12S	w/ Brake	M12	980	100	680	20	–
–	3D	200-132-730	EX-100N12	w/o Brake				641	20	–
–	3D	200-132-733	EX-100N16S	w/ Brake	M16			686	20	–
–	3D	200-132-732	EX-100N16	w/o Brake				661	20	–

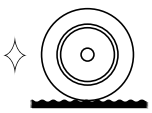
HIGH DURABILITY URETHANE ROLLER DIGEST

Made to Order

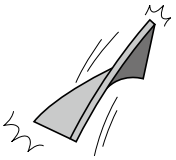
- High durability.
- Can be used for various purposes such as driving wheel, caster, and bearing roller, etc. Especially suitable for handling system and stacker for semiconductors and glass substrates and FA system, etc.
- Wheel diameters can be made to order. (Minimal order quantity 4 pcs~)
- Operating temperature: -10℃~ 80℃.

[Remarks]

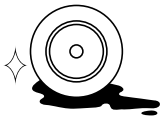
- Please use at a speed less than 10km/h.
- Wheel may discolour after long-term use, but the performance is not affected.



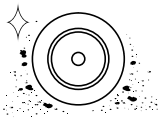
Wear resistant!



Break resistant!



Oil proof!



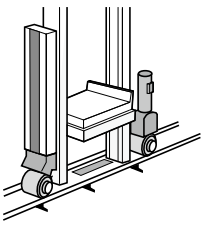
Prevents dust adhesion

(Anti-static urethane/electrical resistance: 10^6~10^9 Ω cm)

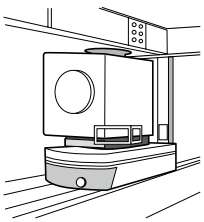
Physical Properties

Hardness	Shore A95
100% Tensile Modulus	12.5 MPa
300% Tensile Modulus	19.1 MPa
Tear Strength	151 KN/m
Tensile Strength	50 MPa
Elongation	560%
Rebound Resilience	**63%**
Compression Set	24%

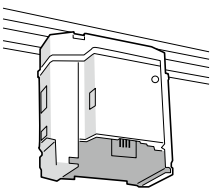
Stacker



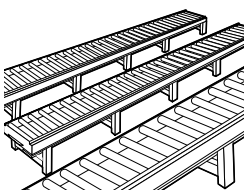
RGV(AGV)



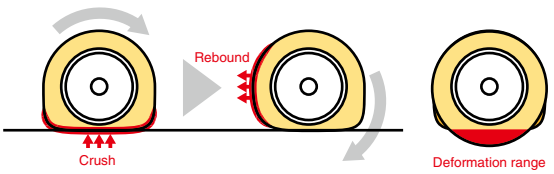
OHT



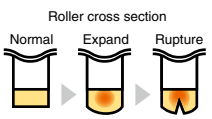
Conveyor

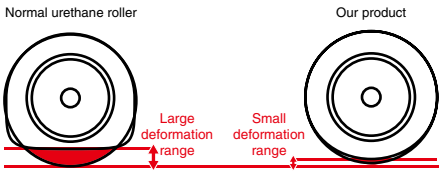


Excellent Rebound Resilience



Repeated process of deformation by compression and restoration may occur in the ground contact part as the roller rotates. The heat generated by such deformation may expand urethane and thus rupture it.





The product has excellent rebound resilience (capacity of restoring to the original shape) and small deformation range, which may suppress heat generation.Besides, the heat resistance of urethane itself is also high, making it less susceptible to deterioration.

STAINLESS STEEL CASTER SUS-ET Threaded Bolt Type

LOAD CAPACITY 380~600 N SUS

- Stainless steel (SUS304) body provides excellent corrosion resistance.
- Conductive rubber wheels also available.
- Anti-static urethane wheel with diameter ϕ100 also available.

[How to order] When installing caster to aluminium frame.

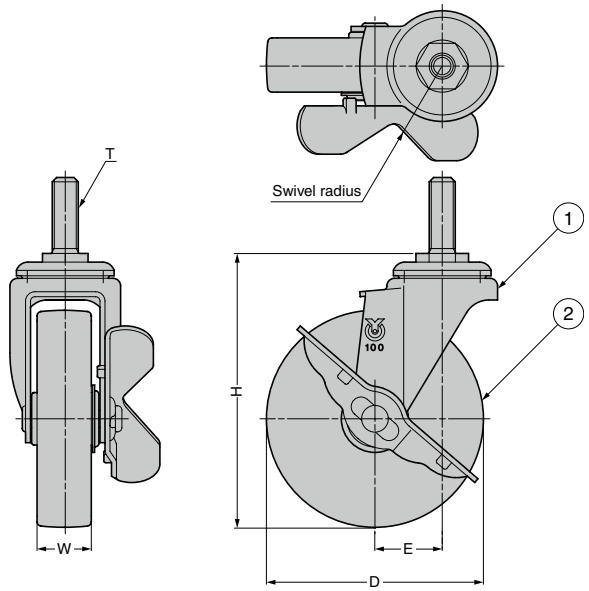
※Please select both caster (single item) and base installation parts set 1 and specify the item names of both.

※Refer to the relevant pages when ordering base 2 and AS nut 3 separately.

[Sold Separately]

- Base installation parts set

[Base Installation Parts Set] Sold Separately



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Wheel	Urethane Rubber (UR)	Brown + White

RoHS	CAD	Item Code	Item Name	Type	D	W	H	E	T	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-867	SUS-ET-50UR	Without Brake	50	21	68	22	M12	380	38.8	175	100	–
G	3D	200-130-883	SUS-ET-65URS	With Brake	65		85	23		400	40.8	220	60	–
G	3D	200-130-870	SUS-ET-65UR	Without Brake								195	70	–
G	3D	200-130-886	SUS-ET-75URS	With Brake	75		95	27		450	45.9	230	50	–
G	3D	200-130-873	SUS-ET-75UR	Without Brake								210	60	–
G	3D	200-130-890	SUS-ET-100URS	With Brake	100	28	126	31		600	61.2	470	20	–
G	3D	200-130-877	SUS-ET-100UR	Without Brake								405	24	–

Refer to 1 2 : P.954, 3 : P.526

STAINLESS STEEL CASTER SUS-SJ Plate Type

LOAD CAPACITY 686~1176 N SUS

Picture above is a urethane wheel with built-in bearing.

- Made of 304 stainless steel with excellent corrosion resistance. Ideal for humid environments, laboratories, and kitchens, etc.

[Remarks]

- When ordering, please confirm the type of wheel and the presence/absence of brake in the table below.

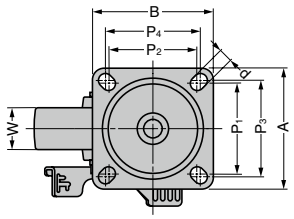
N: Polyamide wheel

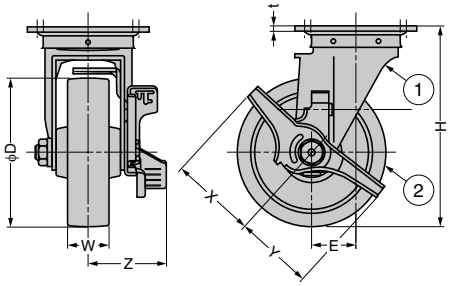
NWB: Polyamide wheel (w/ Bearing)

UWB: Polyurethane wheel (w/ Bearing)

R: Rubber wheel

R: Rubber wheel (w/ Bearing)





Drawing above shows the model with brake.

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Polished
②	Polyamide / Urethane	As below

w/ B: With Bearing

RoHS	CAD	Item Code	Item Name	Type	Wheel	Wheel Colour	D	W	H	E	A	B	P1	P2	P3	P4	d	t	X	Y	Z	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	–	200-134-216	SUS-SJ65-S-R	With Brake	Rubber	Black	65	25	85	29	70	58	55	42	–	–	8.8	2	38	37	45	490	50	380	40
G	3D	200-134-218	SUS-SJ65-S-N		Polyamide	White																686	70	320	40
G	3D	200-134-220	SUS-SJ65-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		340	40
G	–	200-134-215	SUS-SJ65-R	Without Brake	Rubber	Black													–	–	–	490	50	340	50
G	3D	200-134-217	SUS-SJ65-N		Polyamide	White																686	70	280	50
G	3D	200-134-219	SUS-SJ65-UWB		Urethane (w/ B)	Ivory/Dark Brown																		300	50
G	–	200-134-222	SUS-SJ75-S-R	With Brake	Rubber	Black	75		93	28									38	37	45	588	60	420	40
G	3D	200-134-224	SUS-SJ75-S-N		Polyamide	White																784	80	360	40
G	3D	200-134-226	SUS-SJ75-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		380	40
G	–	200-134-221	SUS-SJ75-R	Without Brake	Rubber	Black													–	–	–	588	60	370	50
G	3D	200-134-223	SUS-SJ75-N		Polyamide	White																784	80	310	50
G	3D	200-134-225	SUS-SJ75-UWB		Urethane (w/ B)	Ivory/Dark Brown																		320	50
G	–	200-134-228	SUS-SJ100-S-R	With Brake	Rubber	Grey	100	32	132	35	90	90	68	68	71	71	11	3	55	53	60	1176	120	1160	15
G	–	200-134-230	SUS-SJ100-S-RB		Rubber (w/ B)																			1200	15
G	3D	200-134-232	SUS-SJ100-S-N		Polyamide	White																		950	15
G	–	200-134-234	SUS-SJ100-S-NWB		Polyamide (w/ B)																			1030	15
G	3D	200-134-236	SUS-SJ100-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		1070	15
G	3D	200-134-231	SUS-SJ100-N	Without Brake	Polyamide	White													–	–	–			820	15
G	–	200-134-233	SUS-SJ100-NWB		Polyamide (w/ B)																			900	15
G	3D	200-134-235	SUS-SJ100-UWB		Urethane (w/ B)	Ivory/Dark Brown																		940	15
G	–	200-134-242	SUS-SJ125-S-NWB	With Brake	Polyamide (w/ B)	White	125	35	168	38	102	102	75	75	80	80	4		70	67	65	1470	150	1510	6
G	–	200-134-244	SUS-SJ125-S-UWB		Urethane (w/ B)	Ivory/Dark Brown													–	–	–			1590	6
G	–	200-134-243	SUS-SJ125-UWB	Without Brake																				1450	10
G	–	200-134-252	SUS-SJ150-S-UWB	With Brake			150	38	190	41									70	67	65	1568	160	1780	8
G	–	200-134-247	SUS-SJ150-RB	Without Brake	Rubber (w/ B)	Grey		40											–	–	–			1900	8
G	–	200-134-251	SUS-SJ150-UWB		Urethane (w/ B)	Ivory/Dark Brown		38																1650	8

STAINLESS STEEL CASTER SUS-SK Plate & Non-swivel Type

LOAD CAPACITY 686~1176 N SUS

Urethane wheel with bearing shown.

- Made of 304 stainless steel with excellent corrosion resistance. Ideal for humid environments, laboratories, and kitchens, etc.

[Remarks]

- The mounting hole shapes vary depending on the size of the caster.
- When ordering, please confirm the type of wheel in the table below.

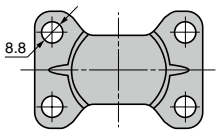
N: Polyamide wheel

NWB: Polyamide wheel (w/ Bearing)

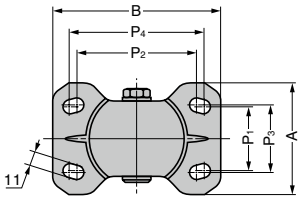
UWB: Polyurethane wheel (w/ Bearing)

R: Rubber wheel

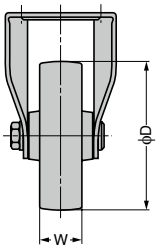
[Mounting Hole]

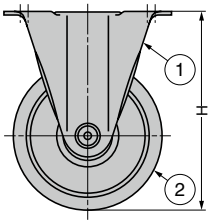


For ϕD65·75 mm



For ϕD100·125·150 mm



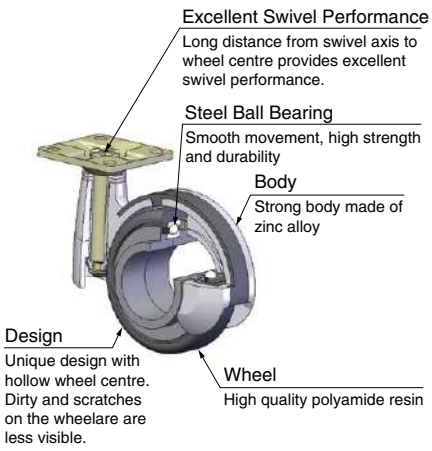


No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Polished
②	Polyamide	As below
	Urethane	

w/ B: With Bearing

RoHS	CAD	Item Code	Item Name	Wheel	Wheel Colour	D	W	H	A	B	P_1	P_2	P_3	P_4	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	3D	200-134-255	SUS-SK65-N	Polyamide	White	65	25	85	47	70	28	55	–	–	686	70	160	50
G	3D	200-134-257	SUS-SK65-UWB	Urethane (w/ B)	Ivory/Dark Brown												180	50
G	–	200-134-259	SUS-SK75-R	Rubber	Black	75		93							588	60	260	50
G	–	200-134-261	SUS-SK75-N	Polyamide	White										784	80	200	50
G	3D	200-134-263	SUS-SK75-UWB	Urethane (w/ B)	Ivory/Dark Brown												220	50
G	–	200-134-265	SUS-SK100-R	Rubber	Grey	100	32	132	78	110	45	80	50	90	1176	120	780	15
G	–	200-134-269	SUS-SK100-N	Polyamide	White												570	15
G	–	200-134-271	SUS-SK100-NWB	Polyamide (w/ B)													650	15
G	3D	200-134-273	SUS-SK100-UWB	Urethane (w/ B)	Ivory/Dark Brown												690	15
G	–	200-134-279	SUS-SK125-NWB	Polyamide (w/ B)	White	125	35	168	94	140	56	100	53	112	1470	150	1060	10
G	–	200-134-281	SUS-SK125-UWB	Urethane (w/ B)	Ivory/Dark Brown		38										1140	10
G	–	200-134-289	SUS-SK150-UWB			150		190							1568	160	1350	8

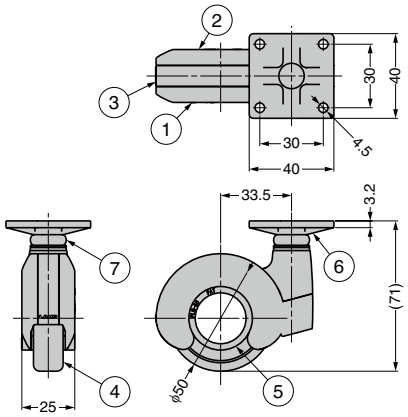
PLN DESIGN CASTER



- Improved PL caster provides higher load capacity and operability.
- Excellent design
  Unique design with hollow wheel centre. Combination of smooth curve and black or chrome plating.
- Improved load capacity and operability
  Steel ball bearing improves load capacity and rotation smoothness.
- Wide range of applications
  Medical equipment, audio products, beauty equipment, wagons, chairs, travel bags, and displays, etc.

DESIGN CASTER PLN50P Plate Type

LOAD CAPACITY 785 N



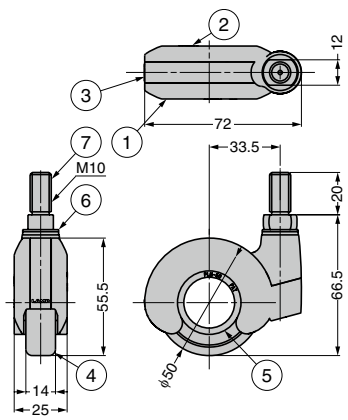
[Remarks]
- Do not use it on a nonsmooth surface. Deformation, damage or wheel detachment may occur.
- The load capacities in the table below are static load values.

No.	Part Name	Material	Finish/Colour
①	Body (Right)	Zinc Alloy (ZDC)	As below.
②	Body (Left)		
③	Cover	POM	Dark Grey
④	Wheel	PA	Black
⑤	Inner Ring		Dark Grey
⑥	Plate	Steel	Coloured Zinc Chromate
⑦	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Finish/Colour (Body)	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-022-220	PLN50PBL	Paint/Black	785	80	220	1	28
G	3D	200-022-221	PLN50PCR	Chrome				1	28

DESIGN CASTER PLN50N Threaded Bolt Type

LOAD CAPACITY 785 N



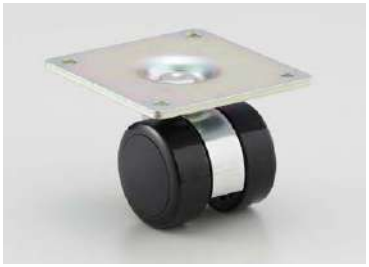
[Remarks]
- Do not use it on a nonsmooth surface. Deformation, damage or wheel detachment may occur.
- The load capacities in the table below are static load values.

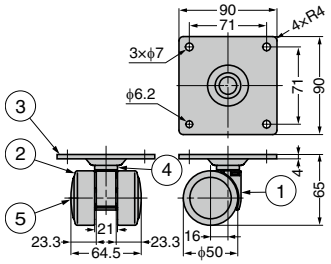
No.	Part Name	Material	Finish/Colour
①	Body (Right)	Zinc Alloy (ZDC)	As below.
②	Body (Left)		
③	Cover	POM	Dark Grey
④	Wheel	PA	Black
⑤	Inner Ring		Dark Grey
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Finish/Colour (Body)	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-022-218	PLN50N10BL	Paint/Black	785	80	203	1	40
G	3D	200-022-219	PLN50N10CR	Chrome				1	40

TWIN WHEEL CASTER GX-W50GP Plate Type

LOAD CAPACITY 1960 N





- Low profile and heavy duty. Ideal for OA equipment, etc.
- Stable twin wheel structure provides smooth movement and excellent durability.
- Use in combination with GX-W50K 1 for easy handling.

[Remarks]

- The load capacities in the table below indicate the loads when moving on a smooth surface.

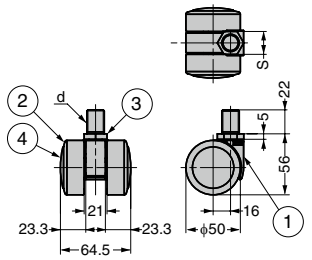
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Wheel	POM	Black
③	Plate	Steel (SPCC)	Coloured Zinc Chromate
④	Shaft	Steel (SWCH)	
⑤	Cover	PA	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-130-027	GX-W50GP	1960	200	420	2	40

Refer to 1 : P.893

TWIN WHEEL CASTER GX-W50GN Threaded Bolt Type

LOAD CAPACITY 1960 N



- Low profile and heavy duty. Ideal for OA equipment, etc.
- Stable twin wheel structure provides smooth movement and excellent durability.

[Remarks]

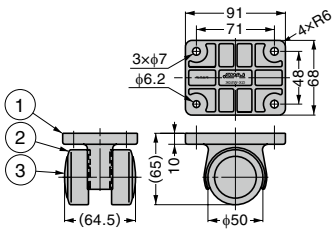
- The load capacities in the table below indicate the loads when moving on a smooth surface.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Wheel	POM	Black
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
④	Cover	PA	Black

RoHS	CAD	Item Code	Item Name	d	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-028	GX-W50GN12	M12	19	1960	200	208	4	80
G	3D	200-130-029	GX-W50GN16	M16	21			223	4	80

TWIN WHEEL CASTER GX-W50K Non-swivel Plate Type

LOAD CAPACITY 1960 N



- Stable twin wheel structure provides smooth movement and excellent durability.
- Use in combination with GX-W50GP 1 for easy handling.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Wheel	POM	Black
③	Cover	PA	

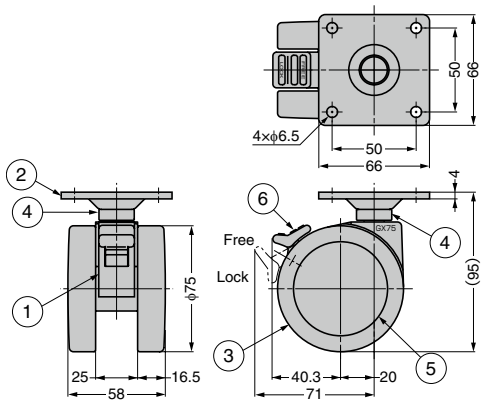
RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-032	GX-W50K	1960	200	300	2	48

Refer to 1 : P.893

TWIN WHEEL CASTER GX75P Plate Type

LOAD CAPACITY 1960 N

- Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

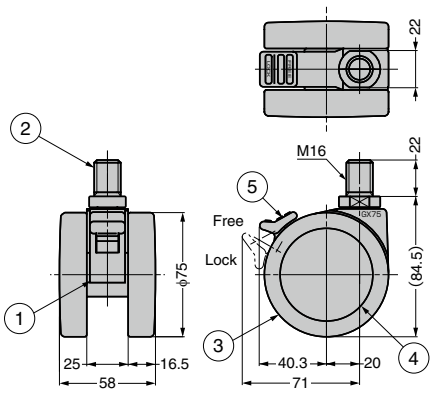
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Shaft	Steel (SWCH)	Coloured Zinc Chromate
⑤	Cover	PA	Black
⑥	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-218	GX75PS	With Brake	1960	200	445	2	24
G	3D	200-133-217	GX75P	Without Brake			430	2	24

TWIN WHEEL CASTER GX75N16 Threaded Bolt Type

LOAD CAPACITY 1960 N

- Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

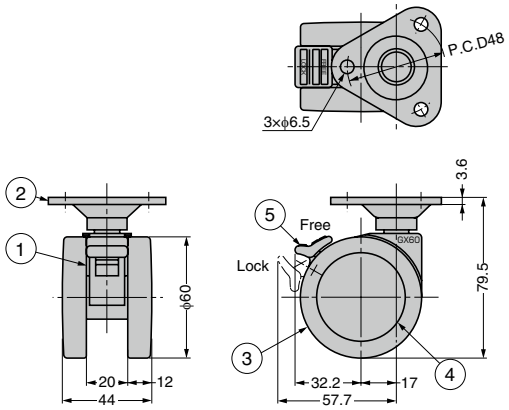
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-133-220	GX75N16S	With Brake	1960	200	350	2	24
G	–	200-133-219	GX75N16	Without Brake			340	2	24

TWIN WHEEL CASTER GX60P Plate Type

LOAD CAPACITY 1470 N

●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

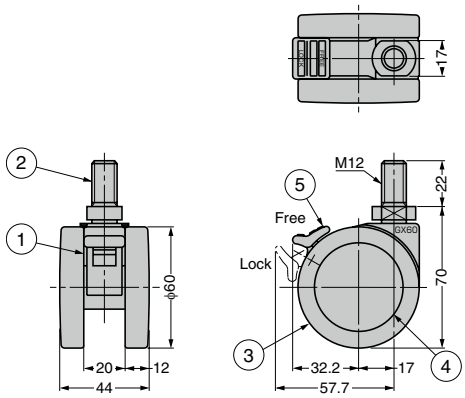
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Plate	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-181	GX60PS	With Brake	1470	150	225	4	60
G	3D	200-130-033	GX60P	Without Brake				4	60

TWIN WHEEL CASTER GX60N12 Threaded Bolt Type

LOAD CAPACITY 1470 N

●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-183	GX60N12S	With Brake	1470	150	185	4	60
G	3D	200-133-182	GX60N12	Without Brake			180	4	60

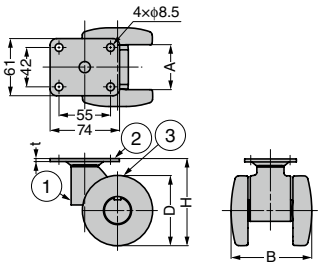
PARTS SEPARABLE CASTER CNP Plate Type

LOAD CAPACITY 588 N,1176 N SUS

Discontinued
Limited stock available.
Please contact your vendor.

Black

●Non-levelling glide type of caster CAP 1.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Plate	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Plain
③	Wheel	PA	Black (B)/White (W)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	A	B	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-242	CNPF50B	Steel, PA	Coloured Zinc Chromate, Black	50	63	40	70	3.2	588	60	270	40	–
G	3D	200-130-243	CNPF50W		Coloured Zinc Chromate, White									40	–
G	3D	200-130-244	CNPF75B		Coloured Zinc Chromate, Black	75	92	50	85		1176	120	390	20	–
G	3D	200-130-245	CNPF75W		Coloured Zinc Chromate, White									20	–
G	3D	200-130-252	CNPS50W	Stainless Steel, PA	Plain, White	50	63	40	70	3	588	60	270	40	–
G	3D	200-130-253	CNPS75W			75	92	50	85		1176	120	390	20	–

Refer to 1 : P.915

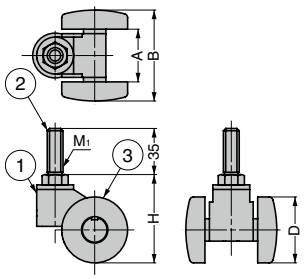
PARTS SEPARABLE CASTER CNB Threaded Bolt Type

LOAD CAPACITY 588 N,1176 N SUS

Discontinued
Limited stock available.
Please contact your vendor.

White

●Non-levelling glide type of caster 1.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Plain
③	Wheel	PA	Black (B)/White (W)

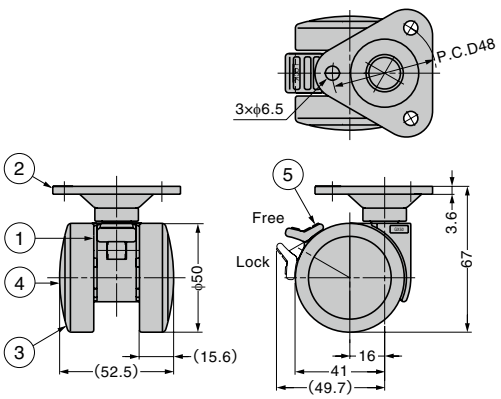
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	A	B	M_1	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-234	CNBF50B	Steel, PA	Coloured Zinc Chromate, Black	50	67	40	70	M12	588	60	230	40	–
G	3D	200-130-235	CNBF50W		Coloured Zinc Chromate, White									40	–
G	3D	200-130-236	CNBF75B		Coloured Zinc Chromate, Black	75	96	50	85	M16	1176	120	360	20	–
G	3D	200-130-237	CNBF75W		Coloured Zinc Chromate, White									20	–
G	3D	200-130-248	CNBS50W	Stainless Steel, PA	Plain, White	50	67	40	70	M12	588	60	230	40	–
G	3D	200-130-249	CNBS75W			75	96	50	85	M16	1176	120	360	20	–

Refer to 1 : P.915

TWIN WHEEL CASTER GX50P Plate Type

LOAD CAPACITY 980 N

●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

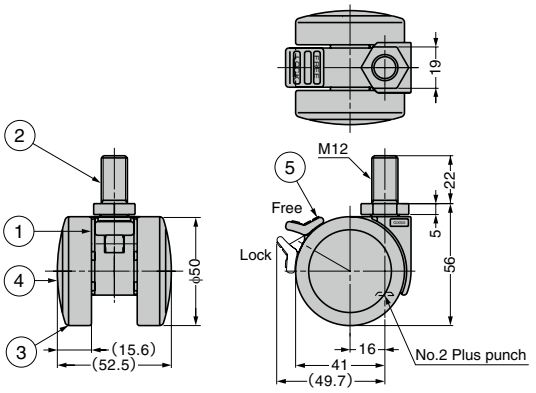
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-173	GX50PS	With Brake	980	100	235	4	72
G	3D	200-133-172	GX50P	Without Brake			230	4	72

TWIN WHEEL CASTER GX50N12 Threaded Bolt Type

LOAD CAPACITY 980 N

●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

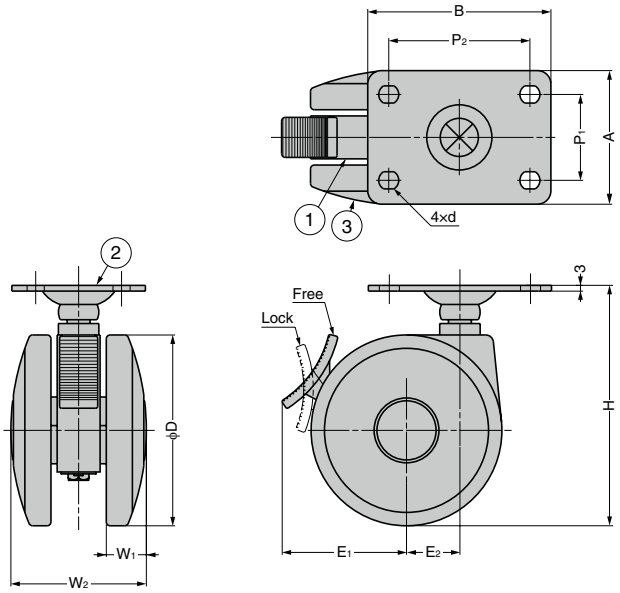
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-175	GX50N12S	With Brake	980	100	175	4	72
G	3D	200-133-174	GX50N12	Without Brake			170	4	72

TWIN WHEEL CASTER T, TSD Plate Type

LOAD CAPACITY 784 N,980 N

- Easy operation to lock on both wheel and swivel in one step.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



TSD-100P shown.

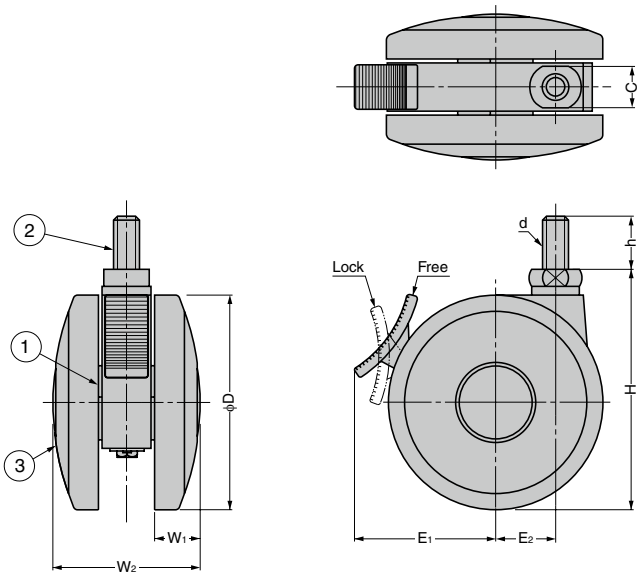
No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Plate	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA + PUR	Light Grey

RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	A	B	P1	P2	E1	E2	dφ	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-167	TSD-75P	With Brake	76	19	61	94	58	70	42	55	45	21	8.5	784	80	340	–	60
G	3D	200-130-166	T-75P	Without Brake														320	–	60
G	3D	200-130-431	TSD-100P	With Brake	100	20	69	126.5	70	96	45	74	64	28	9×10.5 Oval	980	100	710	–	20
G	3D	200-130-432	T-100P	Without Brake														700	–	20

TWIN WHEEL CASTER T, TSD Threaded Bolt Type

LOAD CAPACITY 784 N,980 N

- Easy operation to lock on both wheel and swivel in one step.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



TSD-100B shown.

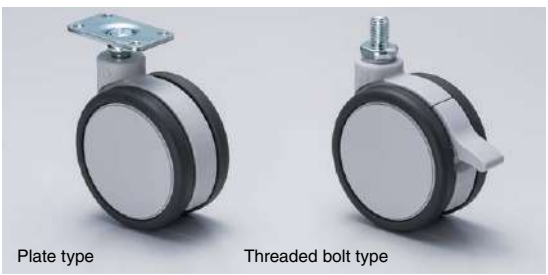
No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Threaded Bolt	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA + PUR	Light Grey

RoHS	CAD	Item Code	Item Name	Type	D	W_1	W_2	H	h	E_1	E_2	C	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-169	TSD-75B	With Brake	76	19	61	86	20	45	21	17	M10	784	80	260	60	–
G	3D	200-130-165	T-75B	Without Brake												240	60	–
G	3D	200-130-430	TSD-100B	With Brake	100	20	69	117.5	25	64	28	21	M12×1.25	980	100	565	20	–
G	3D	200-130-168	T-100B	Without Brake												555	20	–

DESIGN CASTER FS Plate Type/Threaded Bolt Type

Made to Order

LOAD CAPACITY 490 N



- 8 cover colours available.
- The cover is removable.
- With lock level to lock the wheel.
- Wheel diameter is ϕ75.
- Minimum order is 60 pcs.

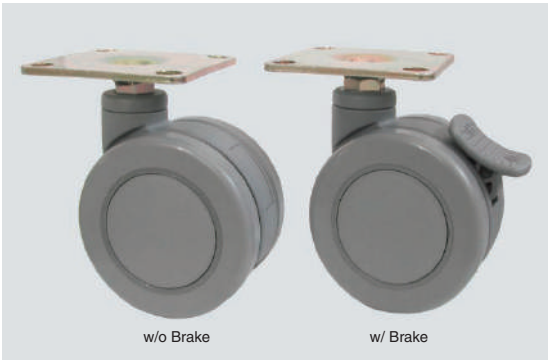
[Remarks]

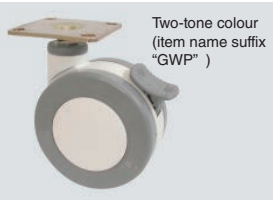
- Be careful not to scratch the cover when removing it.

[Colours]

TWIN WHEEL CASTER MFD Plate Type

LOAD CAPACITY 686~882 N

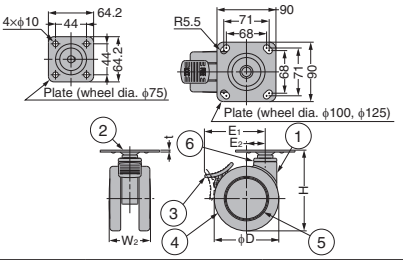




- The brake can lock the wheel rotation and mounting part swivel at the same time.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.

[Remarks]

- May have hydrolysis reaction depending on usage environment and aging.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey ※
②	Plate	Steel	Coloured Zinc Chromate
③	Stopper Pedal	PA	Light Grey
④	Wheel	PA, PUR	
⑤	Cover	PP	Light Grey ※
⑥	Shaft Cover	PA	Light Grey

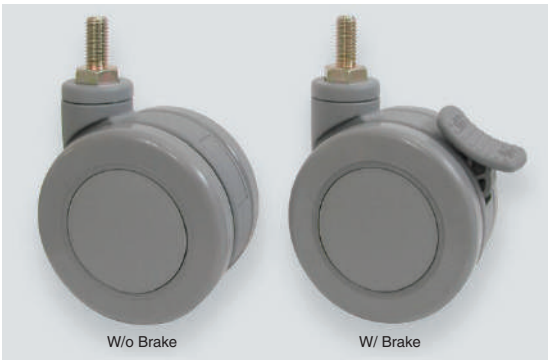
※Item name suffix “GWP” means white colour.

RoHS	CAD	Item Code	Item Name	Type	D	E1	E2	H	W2	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-359	MFDB-75GP	With Brake	75	71	21.5	104	52	3.2	686	70	408	50	–
G	3D	200-130-358	MFD-75GP	Without Brake		–							384	50	–
–	3D	200-130-363	MFDB-100GP	With Brake	100	94	29	132.5	64	4	784	80	831	24	–
–	3D	200-130-362	★MFD-100GP	Without Brake		–							793	24	–
–	3D	200-130-370	★MFDB-125GWP	With Brake	125	119	39	158.5	74		882	90	1112	24	–
–	3D	200-130-369	★MFD-125GWP	Without Brake		–							1066	24	–

★Discontinued

TWIN WHEEL CASTER MFD Threaded Bolt Type

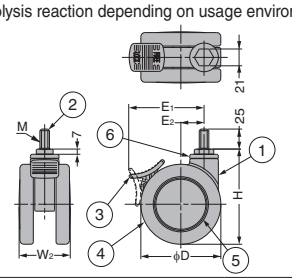
LOAD CAPACITY 686~882 N



- The brake can lock the wheel rotation and mounting part swivel at the same time.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.

[Remarks]

- May have hydrolysis reaction depending on usage environment and aging.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey ※
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Stopper Pedal	PA	Light Grey
④	Wheel	PA, PUR	
⑤	Cover	PP	Light Grey ※
⑥	Shaft Cover	PA	Light Grey

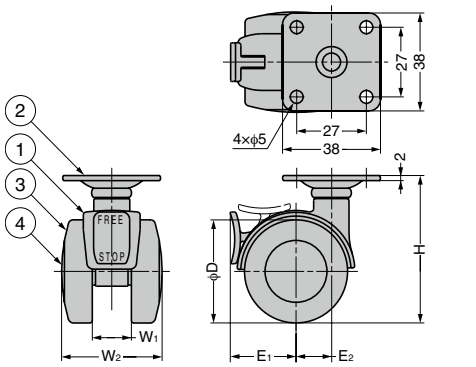
※Item name suffix “GWT” means white colour.

RoHS	CAD	Item Code	Item Name	Type	D	E1	E2	H	W2	M	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-361	MFDB-75GT	With Brake	75	71	21.5	95	52	M12	686	70	321	60	–
G	3D	200-130-360	MFD-75GT	Without Brake									295	60	–
G	3D	200-130-365	MFDB-100GT	With Brake	100	94	29	122.5	64		784	80	689	24	–
–	3D	200-130-364	★MFD-100GT	Without Brake									642	24	–
–	3D	200-130-368	★MFDB-125GWT	With Brake	125	119	39	149	74	M16	882	90	900	24	–
–	3D	200-130-367	★MFD-125GWT	Without Brake									841	24	–

★Discontinued

TWIN WHEEL CASTER DB, DS Plate Type

LOAD CAPACITY 490 N,784 N



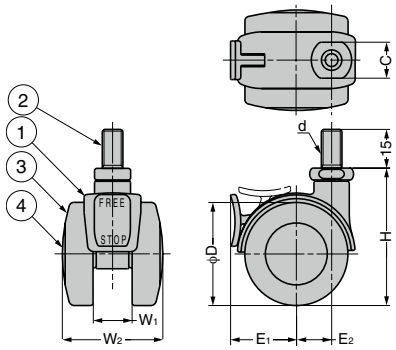
Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Plate	Steel	Clear Zinc Chromate
③	Wheel	PA	Black
④	Cover	Stainless Steel (SUS430)	–

RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	E1	E2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-506	DB-40P	With Brake	40.5	15	39.5	58.5	27	12.5	490	50	130	120	–
G	3D	200-132-505	DS-40P	Without Brake					23.5				117	120	–
G	3D	200-132-510	DB-50P	With Brake	50.5	18	46	71.5	33.5	17	784	80	210	100	–
G	3D	200-132-509	DS-50P	Without Brake					29				196	100	–

TWIN WHEEL CASTER DB, DS Threaded Bolt Type

LOAD CAPACITY 490 N,784 N



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Threaded Bolt	Steel	Metric Screw Thread: Clear Zinc Chromate Inch Screw Thread: Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	Stainless Steel (SUS430)	–

RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	C	d	E1	E2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-184	DB-40-3	With Brake	40.5	15	39.5	53.5	14	W3/8	27	12.5	490	50	120	120	–
G	3D	200-132-504	DS-40-3	Without Brake							23.5				107	120	–
G	3D	200-943-860	DB-40-8	With Brake						M8	27				120	120	–
G	3D	200-943-859	DS-40-8	Without Brake							23.5				107	120	–
G	3D	200-132-502	DB-40-10	With Brake						M10	27				120	120	–
G	3D	200-132-501	DS-40-10	Without Brake							23.5				107	120	–
G	3D	200-132-508	DB-50-3	With Brake	50.5	18	46	67.5	17	W3/8	33.5	17	784	80	204	100	–
G	3D	200-132-507	DS-50-3	Without Brake							29				190	100	–
G	3D	200-943-866	DB-50-8	With Brake						M8	33.5				204	100	–
G	3D	200-943-865	DS-50-8	Without Brake							29				190	100	–
G	3D	200-943-868	DB-50-10	With Brake						M10	33.5				204	100	–
G	3D	200-943-867	DS-50-10	Without Brake							29				190	100	–

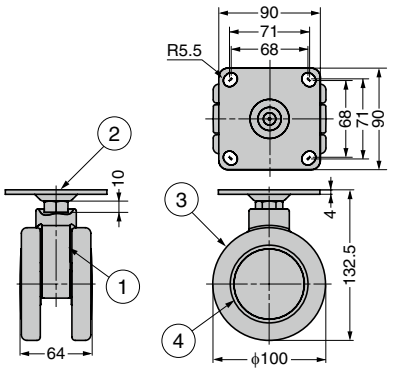
TWIN WHEEL CASTER MUDR-100GP Plate & Non-swivel Type

LOAD CAPACITY 784 N

- Non-swivel type of MFD caster. Use in combination with MFDB-100GP and MFD-100GP 1 for stable movement.Besides, swivel type and non-swivel type can be unified with the same design.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.

[Remarks]

- May have hydrolysis reaction depending on usage environment and aging.



No.	Part Name	Material	Finish/Colour
①	Body	Reinforced Polyamide	Light Grey
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA, PUR	Light Grey
④	Cover	PP	

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-366	MUDR-100GP	784	80	775	24	–

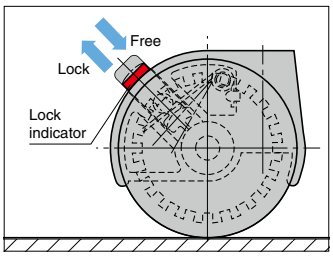
Refer to 1 : P.900

TWIN WHEEL CASTER F-SERIES

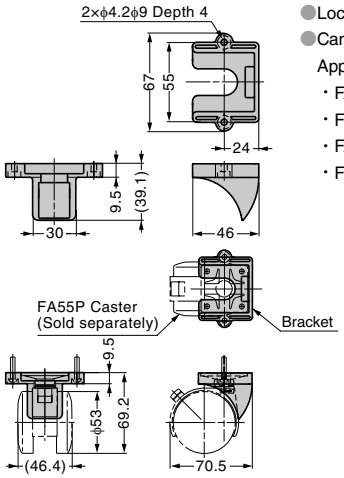
- Interior casters with smooth movement, excellent durability and smart design.
- Ideal for use on carpet etc.
- <Plate type>, <threaded bolt type> and <insert bolt type> available for different installation methods.
- All models are equipped with locking mechanism.
- Various types available for different purposes.

FAU55	Wheel dia. ϕ53 (Elastomer wheel)	Aluminium body
FPU55	Wheel dia. ϕ53 (Elastomer wheel)	Polyamide body
FA55	Wheel dia. ϕ53	Aluminium body
FP55	Wheel dia. ϕ53	Polyamide body
FA45	Wheel dia. ϕ47	Aluminium body
FP45	Wheel dia. ϕ47	Polyamide body

[Locking Mechanism]



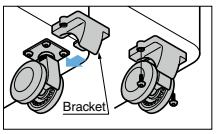
BRACKET FOR CASTER FA55-FIX For Caster FAU55P, FPU55P, FA55P, FP55P



- Locks swivelling.
- Can be installed on following plate type casters.
  Applicable casters :
  - FAU55P 1
  - FPU55P 2
  - FA55P 3
  - FP55P 4

[Application Example]

[Installation]



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-101	FA55-FIX	Reinforced Polyamide	Black	23	500	–

Refer to 1 : P.904, 2 : P.905, 3 4 : P.906

TWIN WHEEL CASTER FAU55P Plate Type

LOAD CAPACITY 686 N

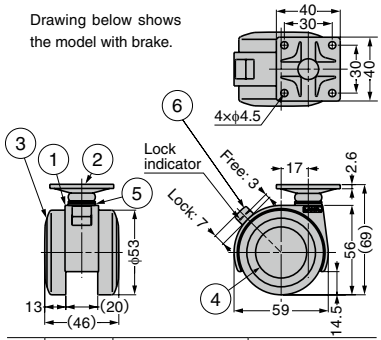
Caster bracket FA55-FIX 1 to lock swivel available.

- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

Drawing below shows the model with brake.



RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-278	FAU55PSR	With Brake	686	70	179	4	72
G	3D	200-133-283	FAU55PR	Without Brake			175	4	72

Refer to 1 : P.903

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red

TWIN WHEEL CASTER FAU55N Threaded Bolt Type

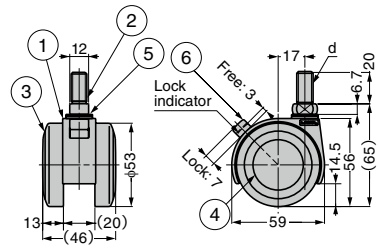
LOAD CAPACITY 686 N

- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.

Drawing below shows the model with brake.



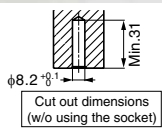
RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-279	☆FAU55N3SR	With Brake	W3/8	686	70	155	4	72
G	3D	200-133-284	☆FAU55N3R	Without Brake				151	4	72
G	3D	200-133-280	FAU55N10SR	With Brake	M10			155	4	72
G	3D	200-133-285	FAU55N10R	Without Brake				151	4	72
–	3D	200-133-281	☆FAU55N12SR	With Brake	M12			155	4	72
G	3D	200-133-286	☆FAU55N12R	Without Brake				151	4	72

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red

TWIN WHEEL CASTER FAU55S Insert Bolt Type

LOAD CAPACITY 686 N



- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

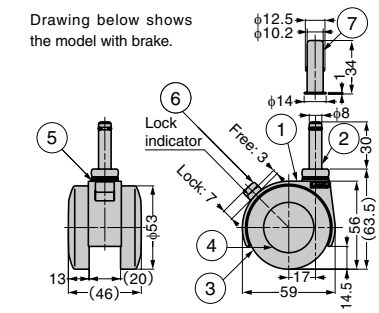
[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

[Parts Included]

- Socket

Drawing below shows the model with brake.



RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-909	FAU55SSR	With Brake	686	70	158	4	72
–	3D	200-130-910	FAU55SR	Without Brake			154	4	72

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red
⑦	Socket	Steel (STKM)	Coloured Zinc Chromate

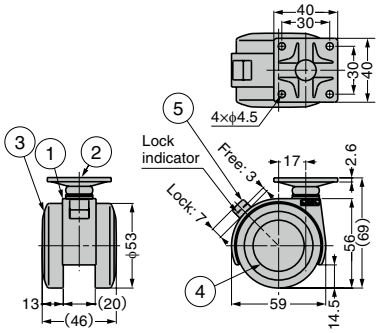
TWIN WHEEL CASTER FPU55P Plate Type

LOAD CAPACITY 490 N

- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

Caster bracket FA55-FIX 1 to lock swivel available.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-288	FPU55PSR	With Brake	490	50	151	4	72
G	3D	200-133-293	FPU55PR	Without Brake			146	4	72

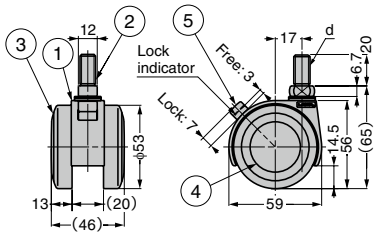
Refer to 1 : P.903

TWIN WHEEL CASTER FPU55N Threaded Bolt Type

LOAD CAPACITY 490 N

- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-289	☆FPU55N3SR	With Brake	W3/8	490	50	128	4	72
G	3D	200-133-294	☆FPU55N3R	Without Brake				123	4	72
G	3D	200-133-290	FPU55N10SR	With Brake	M10			128	4	72
G	3D	200-133-295	FPU55N10R	Without Brake				123	4	72
G	3D	200-133-291	☆FPU55N12SR	With Brake	M12			128	4	72
G	3D	200-133-296	☆FPU55N12R	Without Brake				123	4	72

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

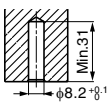
TWIN WHEEL CASTER FPU55S Insert Bolt Type

LOAD CAPACITY 490 N

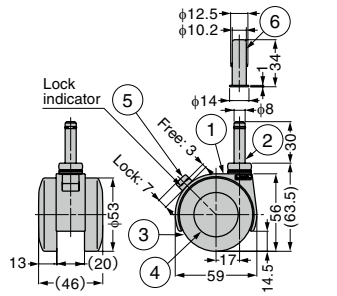
- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

[Parts Included]
- Socket



Cut out dimensions (w/o using the socket)



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Insert Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPU)	Black
④	Cover	PA	
⑤	Stopper		Black + Red
⑥	Socket	Steel (STKM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-911	FPU55SSR	With Brake	490	50	131	4	72
G	3D	200-130-912	FPU55SR	Without Brake			126	4	72

※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

TWIN WHEEL CASTER FA55P Plate Type

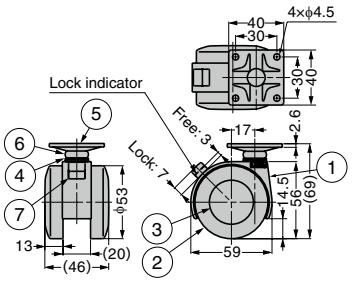
LOAD CAPACITY 784 N

Caster bracket FA55-FIX 1 to lock swivel available.

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Wheel	PA	Black
③	Cover		
④	Bush		
⑤	Plate	Steel (SPCC)	Coloured Zinc Chromate
⑥	Shaft	Steel (SWCH)	
⑦	Stopper	POM	Black, Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-258	FA55PSR	With Brake	784	80	176	4	72
G	3D	200-133-263	FA55PR	Without Brake			171	4	72

Refer to 1 : P.903

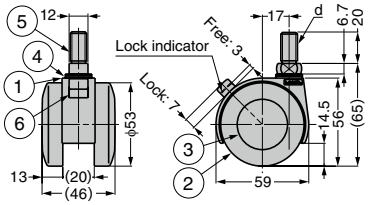
TWIN WHEEL CASTER FA55N Threaded Bolt Type

LOAD CAPACITY 784 N

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-259	FA55N3SR	With Brake	W3/8	784	80	152	4	72
G	3D	200-133-264	FA55N3R	Without Brake				147	4	72
G	3D	200-133-260	FA55N10SR	With Brake	M10			152	4	72
G	3D	200-133-265	FA55N10R	Without Brake				147	4	72
G	3D	200-133-261	FA55N12SR	With Brake	M12			152	4	72
G	3D	200-133-266	FA55N12R	Without Brake				147	4	72

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Wheel	PA	Black
③	Cover		
④	Bush		
⑤	Mounting Screw Axis	Steel (SWCH)	Coloured Zinc Chromate
⑥	Stopper	PA	Black, Red

TWIN WHEEL CASTER FP55P Plate Type

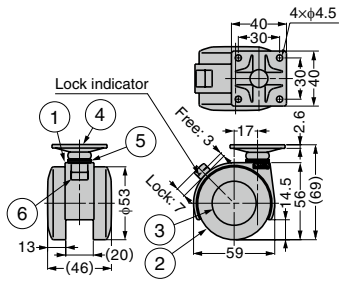
LOAD CAPACITY 490 N

Caster bracket FA55-FIX 1 to lock swivel available.

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Cover		
④	Plate	Steel (SPCC)	Coloured Zinc Chromate
⑤	Shaft	Steel (SWCH)	
⑥	Stopper	POM	Black, Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-268	FP55PSR	With Brake	490	50	148	4	72
G	3D	200-133-273	FP55PR	Without Brake			144	4	72

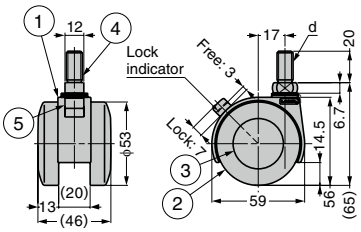
Refer to 1 : P.903

TWIN WHEEL CASTER FP55N Threaded Bolt Type

LOAD CAPACITY 490 N

- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-269	FP55N3SR	With Brake	W3/8	490	50	126	4	72
G	3D	200-133-274	FP55N3R	Without Brake				121	4	72
G	3D	200-133-270	FP55N10SR	With Brake	M10			126	4	72
G	3D	200-133-275	FP55N10R	Without Brake				121	4	72
G	3D	200-133-271	FP55N12SR	With Brake	M12			126	4	72
G	3D	200-133-276	FP55N12R	Without Brake				121	4	72

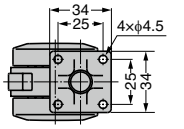
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Cover		
④	Mounting Screw	Steel (SWCH)	Coloured Zinc Chromate
⑤	Stopper	PA	Black, Red

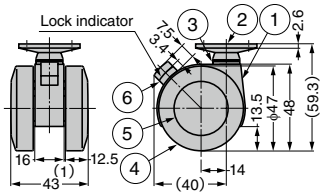
TWIN WHEEL CASTER FA45P Plate Type

LOAD CAPACITY 490 N

- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Shaft	Steel (SWCH)	
④	Wheel	PA	Black
⑤	Cover		
⑥	Stopper		Black, Red

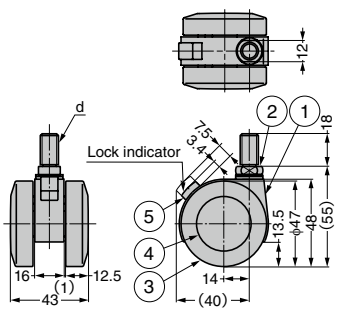
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-213	FA45PSR	With Brake	490	50	117	4	100
G	3D	200-133-212	FA45PR	Without Brake			113	4	100

TWIN WHEEL CASTER FA45N Threaded Bolt Type

LOAD CAPACITY 490 N

- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Stopper		Black, Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-133-211	FA45N3SR	With Brake	W3/8	490	50	100	4	100
G	3D	200-133-210	FA45N3R	Without Brake				97	4	100
G	3D	200-133-215	FA45N10SR	With Brake	M10			100	4	100
G	3D	200-133-209	FA45N10R	Without Brake				97	4	100

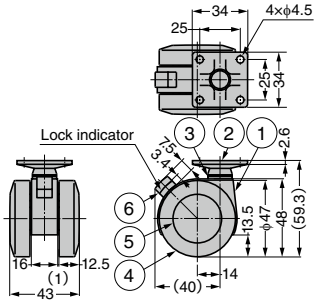
TWIN WHEEL CASTER FP45P Plate Type

LOAD CAPACITY 392 N

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Shaft	Steel (SWCH)	
④	Wheel	PA	Black
⑤	Cover		
⑥	Stopper		Black, Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-202	FP45PSR	With Brake	392	40	98	4	100
G	3D	200-133-201	FP45PR	Without Brake			94	4	100

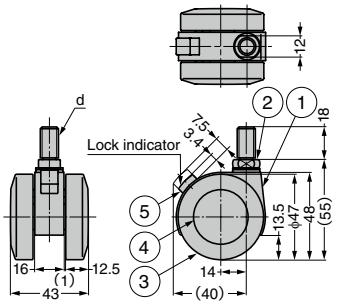
TWIN WHEEL CASTER FP45N Threaded Bolt Type

LOAD CAPACITY 392 N

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



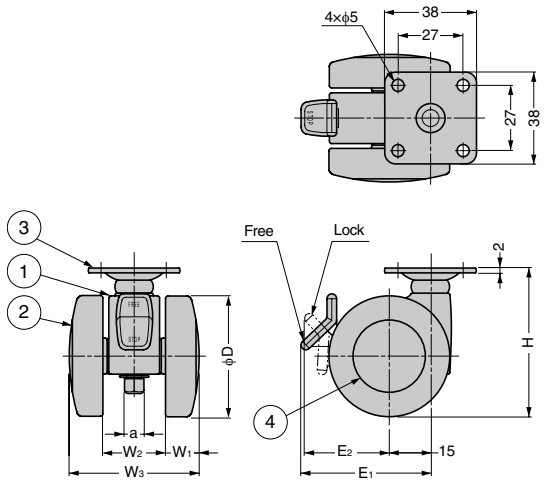
Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Stopper		Black, Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-204	FP45N3SR	With Brake	W3/8	392	40	84	4	100
G	3D	200-133-203	FP45N3R	Without Brake				79	4	100
G	3D	200-133-206	FP45N10SR	With Brake	M10			84	4	100
G	3D	200-133-205	FP45N10R	Without Brake				79	4	100

TWIN WHEEL CASTER NB, NS Plate Type

LOAD CAPACITY 392 N,588 N



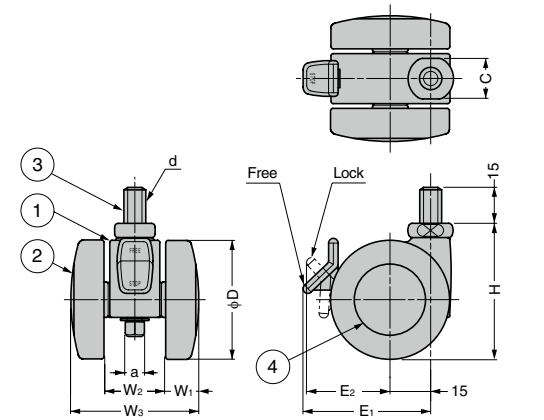
Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Plate	Steel	Clear Zinc Chromate
④	Cover	Stainless Steel (SUS430)	Plain

RoHS	CAD	Item Code	Item Name	Type	D	H	E1	E2	W1	W2	W3	a	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-148	NB-40P	With Brake	40	49	48	32	12	21	45.5	7	392	40	89	200	–
G	3D	200-132-500	NS-40P	Without Brake			–	–							88	200	–
G	3D	200-132-515	NB-50P	With Brake	50	61	52	36	14	25	53	8	588	60	132	120	–
G	3D	200-132-514	NS-50P	Without Brake			–	–							128	120	–

TWIN WHEEL CASTER NB, NS Threaded Bolt Type

LOAD CAPACITY 392 N,588 N



Drawing above shows the model with brake.

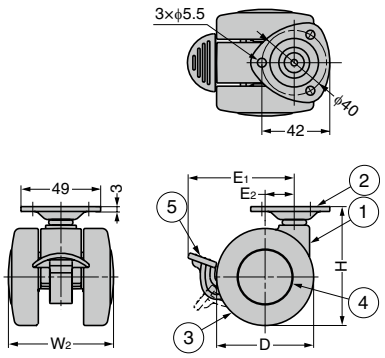
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Threaded Bolt	Steel	Metric Screw Thread: Clear Zinc Chromate Inch Screw Thread: Coloured Zinc Chromate
④	Cover	Stainless Steel (SUS430)	Plain

RoHS	CAD	Item Code	Item Name	Type	D	H	E1	E2	W1	W2	W3	C	d	a	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-517	NB-40-3	With Brake	40	45	48	32	12	21	45.5	14	W3/8	7	392	40	76	200	–
G	3D	200-132-511	NS-40-3	Without Brake			–	–									73	200	–
G	3D	200-943-844	NB-40-8	With Brake			48	32					M8				73	200	–
G	3D	200-943-843	NS-40-8	Without Brake			–	–									70	200	–
G	3D	200-132-516	NB-40-10	With Brake			48	32					M10				76	200	–
G	3D	200-132-503	NS-40-10	Without Brake			–	–									76	200	–
G	3D	200-132-513	NB-50-3	With Brake	50	58	52	36	14	25	53	17	W3/8	8	588	60	128	120	–
G	3D	200-132-512	NS-50-3	Without Brake			–	–									117	120	–
G	3D	200-943-850	NB-50-8	With Brake			52	36					M8				121	120	–
G	3D	200-943-849	NS-50-8	Without Brake			–	–									115	120	–
G	3D	200-943-852	NB-50-10	With Brake			52	36					M10				129	120	–
G	3D	200-943-851	NS-50-10	Without Brake			–	–									119	120	–

TWIN WHEEL CASTER JP Plate Type

LOAD CAPACITY 490 N,588 N

●Stable twin wheel structure provides smooth movement.



Drawing above shows the model with brake.

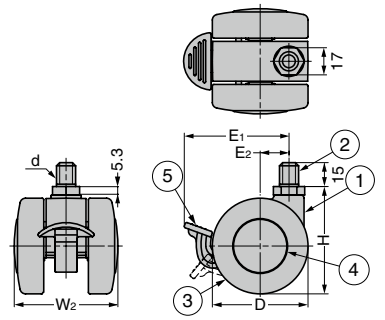
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	ABS	
⑤	Stopper Pedal	PA	

RoHS	CAD	Item Code	Item Name	Type	D	E_1	E_2	H	W_2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-374	JPB-50BKP	With Brake	50	55	15	62	57	490	50	157	100	–
–	3D	200-130-373	JP-50BKP	Without Brake								151	100	–
–	3D	200-130-378	JPB-60BKP	With Brake	60	66	18	73	65	588	60	204	100	–
–	3D	200-130-377	JP-60BKP	Without Brake								192	100	–

TWIN WHEEL CASTER JP Threaded Bolt Type

LOAD CAPACITY 490 N,588 N

●Stable twin wheel structure provides smooth movement.



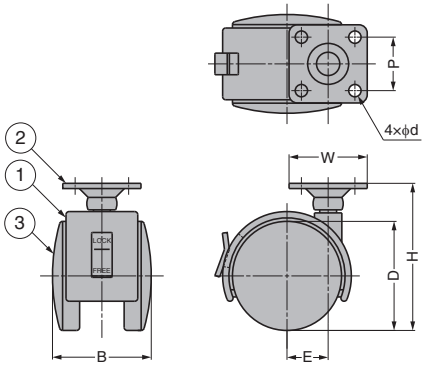
Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	ABS	
⑤	Stopper Pedal	PA	

RoHS	CAD	Item Code	Item Name	Type	D	E_1	E_2	H	W_2	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-372	JPB-50BKT	With Brake	50	55	15	56	57	M10	490	50	126	100	–
–	3D	200-130-371	JP-50BKT	Without Brake									121	100	–
–	3D	200-130-376	JPB-60BKT	With Brake	60	66	18	67	65	M12×1.25	588	60	175	100	–
–	3D	200-130-375	JP-60BKT	Without Brake									164	100	–

TWIN WHEEL CASTER BR Plate Type

LOAD CAPACITY 294 N,392 N



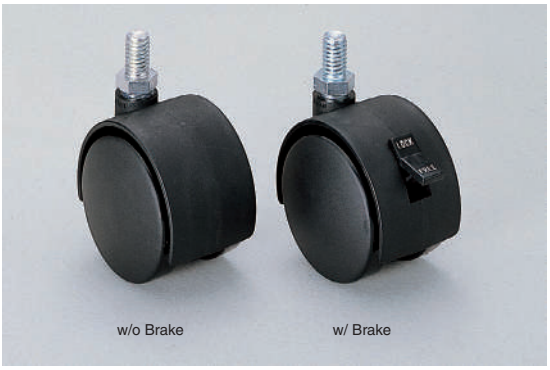
Drawing above shows the model with brake.

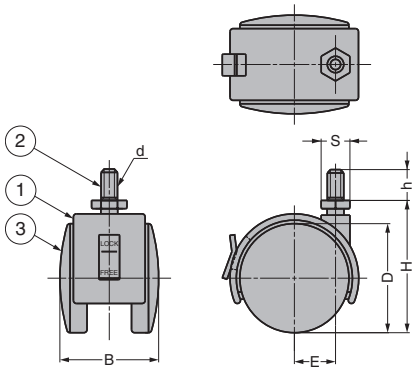
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	Type	D	H	B	W	P	E	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-028	BR-20PS	With Brake	45	61.5	42	38	26	16	6	294	30	104	200	–
G	3D	200-132-022	BR-20P	Without Brake										95	200	–
G	3D	200-132-038	BR-25PS	With Brake	53	71.5	48			20		392	40	149	120	–
G	3D	200-132-032	BR-25P	Without Brake										138	120	–

TWIN WHEEL CASTER BR Threaded Bolt Type

LOAD CAPACITY 294 N,392 N





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

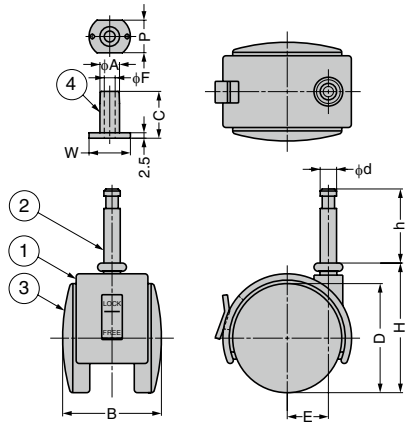
RoHS	CAD	Item Code	Item Name	Type	D	H	h	B	E	S	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-026	BR-20N8S	With Brake	45	54	15	42	16	14	M8	294	30	79	200	–
G	3D	200-132-020	BR-20N8	Without Brake										69	200	–
G	3D	200-132-036	BR-25N8S	With Brake	53	64		48	20			392	40	117	150	–
G	3D	200-132-030	BR-25N8	Without Brake										106	150	–
G	3D	200-132-037	BR-25N3S	With Brake							W3/8			119	150	–
G	3D	200-132-031	BR-25N3	Without Brake										108	150	–

TWIN WHEEL CASTER BR Insert Bolt Type

LOAD CAPACITY 294 N,392 N

[Parts Included]

●Socket



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Insert Bolt	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Socket	Polyethylene (PE)	–

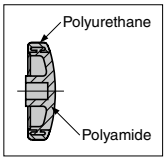
RoHS	CAD	Item Code	Item Name	Type	D	H	h	B	E	d	A	W	C	F	P	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-935-963	BR-20SS	With Brake	45	53	36	42	16	8	11.5	22	30	7	17	294	30	85	200	–
G	3D	200-132-025	BR-20S	Without Brake														75	200	–
G	3D	200-936-244	BR-25SS	With Brake	53	63		48	20							392	40	124	140	–
G	3D	200-132-035	BR-25S	Without Brake														113	140	–

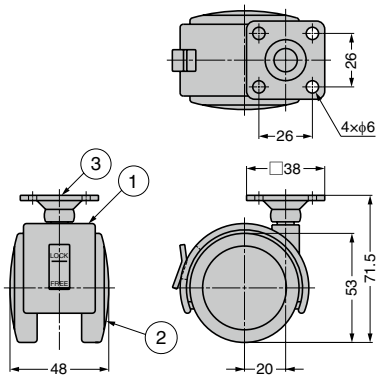
TWIN WHEEL CASTER BU-25P Plate Type

LOAD CAPACITY 392 N

●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Cross-section Drawing]





Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-047	BU-25PS	With Brake	392	40	157	120	–
G	3D	200-132-040	BU-25P	Without Brake			150	120	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Plate	Steel (SPHC)	Clear Zinc Chromate (Trivalent)

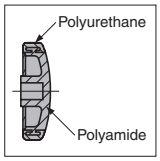
TWIN WHEEL CASTER BU-25N Threaded Bolt Type

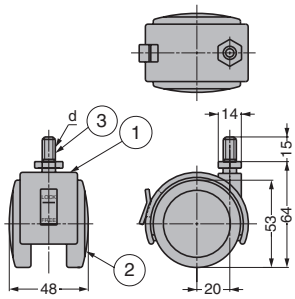
LOAD CAPACITY 392 N

w/o Brake　　w/ Brake

●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Cross-section Drawing]





Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-045	BU-25N8S	With Brake	M8	392	40	125	150	–
G	3D	200-132-042	BU-25N8	Without Brake				118	150	–
G	3D	200-132-046	BU-25N3S	With Brake	W3/8			126	150	–
G	3D	200-132-043	BU-25N3	Without Brake				119	150	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Threaded Bolt	Steel	Clear Zinc Chromate (Trivalent)

TWIN WHEEL CASTER BU-25S Insert Bolt Type

LOAD CAPACITY 392 N

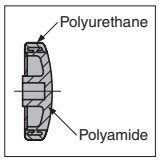
BU-25S　　BU-25SS

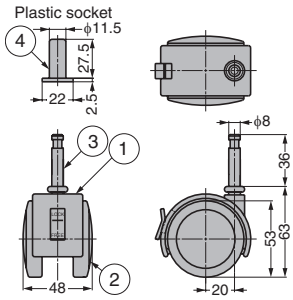
●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Parts Included]

●Socket

[Cross-section Drawing]





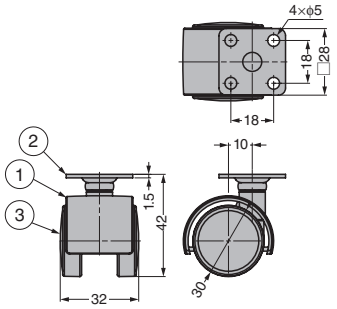
Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-048	BU-25SS	With Brake	392	40	132	140	–
G	3D	200-132-044	BU-25S	Without Brake			125	140	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Insert Bolt	Steel	Clear Zinc Chromate (Trivalent)
④	Socket	Polyethylene (PE)	–

TWIN WHEEL CASTER PT-30P Plate Type & Economical Version

LOAD CAPACITY 200 N



*The shape has been changed.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-009	PT-30P	200	20.4	34	1	400

CASTER WITH LEVELLING GLIDE AF Plate Type

LOAD CAPACITY 2499 N

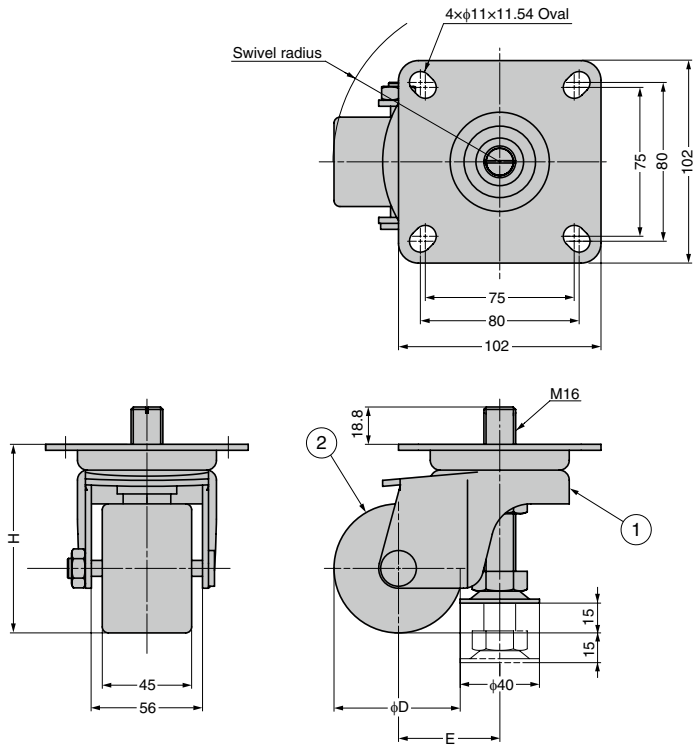
Using caster　　Using levelling glide

- With integrated levelling glide.
- Low profile and heavy duty
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Built-in bearing of wheel shaft provides excellent rotation and smooth movement.
- Can be installed at the four corners of cabinet.

[Applications]

- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space saving, heavy equipment fixed for a long time, etc.

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

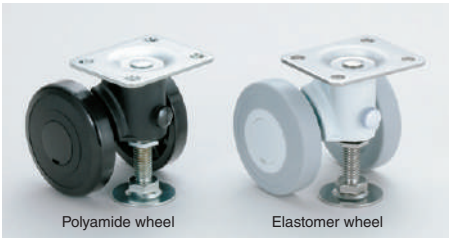


No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	D	H	E	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-130-390	AF-50	50	74	46	73	2499	255	1.19	18	–
G	3D	200-130-391	AF-65	65	95	51	84			1.32	12	–

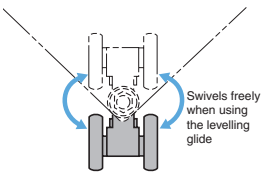
PARTS SEPARABLE CASTER (W/GLIDE) CAP Plate Type

LOAD CAPACITY 588~1176 N SUS



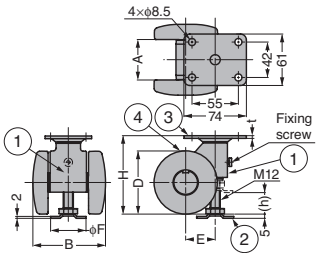
- Caster with built-in levelling glide.
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Two types of wheels available: Polyamide and elastomer.
- Model without levelling glide 1 and options such as shockproof plate, rubber seat used for levelling glide are also available.

[Remarks]
- Please loose the fixing screw when using as a caster.



After installing the levelling glide, caster direction can be changed. Caster will not interfere with operation when its direction is set to the inside of cabinet.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Levelling Glide	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Unfinished
③	Plate	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Unfinished
④	Wheel	PA/Elastomer (TPE)	Black (B)/White (W)



RoHS	CAD	Item Code	Item Name	Material	Colour	D	H	h	E	F	A	B	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-238	CAPF50B	Steel, PA	Black	50	63	10	30	34	40	70	3.2	588	60	306	40	–
G	3D	200-130-239	CAPF50W		White												40	–
G	3D	200-130-808	CAPF50UB	Steel, Elastomer (TPE)	Black											300	40	–
G	3D	200-130-809	CAPF50UW		White												40	–
G	3D	200-130-240	CAPF75B	Steel, PA	Black	75	92	24	35	42	50	85		1176	120	424	20	–
G	3D	200-130-241	CAPF75W		White												20	–
G	3D	200-130-810	CAPF75UB	Steel, Elastomer (TPE)	Black											460	20	–
G	3D	200-130-811	CAPF75UW		White												20	–
G	3D	200-130-250	CAPS50W	Stainless Steel, PA	White	50	63	10	30	34	40	70	3	588	60	300	40	–
G	3D	200-130-820	CAPS50UW	Stainless Steel, Elastomer (TPE)													40	–
G	3D	200-130-251	CAPS75W	Stainless Steel, PA		75	92	24	35	42	50	85		1176	120	420	20	–
G	3D	200-130-821	CAPS75UW	Stainless Steel, Elastomer (TPE)												460	20	–

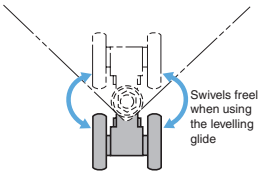
Refer to 1 : P.896

PARTS SEPARABLE CASTER (W/GLIDE) CAB Threaded Bolt Type

LOAD CAPACITY 588~1176 N SUS

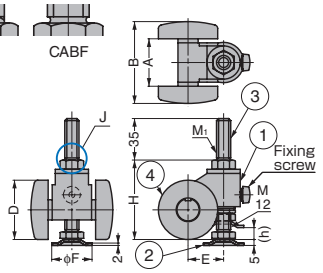
- Caster with built-in levelling glide.
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Two types of wheels available: Polyamide and elastomer.
- Model without levelling glide 1 and options such as shockproof plate, rubber seat used for levelling glide are also available.

[Remarks]
- Please loose the fixing screw when using as a caster.



After installing the levelling glide, caster direction can be changed. Caster will not interfere with operation when its direction is set to the inside of cabinet.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Levelling Glide	Steel (SS)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Unfinished
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Unfinished
④	Wheel	PA/Elastomer (TPE)	Black (B)/White (W)

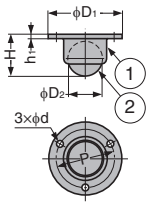


RoHS	CAD	Item Code	Item Name	Material	Colour	D	H	h	E	F	A	B	M1	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-230	CABF50B	Steel, PA	Black	50	67	10	30	34	40	70	M12	588	60	260	40	–
G	3D	200-130-231	CABF50W		White												40	–
G	3D	200-130-800	CABF50UB	Steel, Elastomer (TPE)	Black												40	–
G	3D	200-130-801	CABF50UW		White												40	–
G	3D	200-130-232	CABF75B	Steel, PA	Black	75	96	24	35	42	50	85	M16	1176	120	400	20	–
G	3D	200-130-233	CABF75W		White												20	–
G	3D	200-130-802	CABF75UB	Steel, Elastomer (TPE)	Black											430	20	–
G	3D	200-130-803	CABF75UW		White												20	–
G	3D	200-130-246	CABS50W	Stainless Steel, PA	White	50	67	10	30	34	40	70	M12	588	60	262	40	–
G	3D	200-130-816	CABS50UW	Stainless Steel, Elastomer (TPE)												230	40	–
G	3D	200-130-247	CABS75W	Stainless Steel, PA		75	96	24	35	42	50	85	M16	1176	120	402	20	–
G	3D	200-130-817	CABS75UW	Stainless Steel, Elastomer (TPE)												430	20	–

Refer to 1 : P.896

BALL CASTER (SURFACE MOUNT TYPE) BM

LOAD CAPACITY 98~392 N



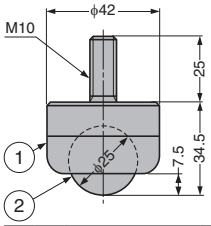
[Remarks]
- Do not use it on a vertical surface.
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Brass
②	Ball	Steel (SWCH), Steel (SUJ): BM12 Only	Polished

RoHS	CAD	Item Code	Item Name	D1	D2	H	P	h1	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-982	BM-12	28.9	11.9	15.2	21.8	1.7	2.5	98	10	17.5	100	800
G	3D	200-013-983	BM-15	33.7	14.3	19.3	26.6	2.1	2.8	118	12	31.5	8	400
G	3D	200-133-020	BM-20	37	17.5	23	29.5	3	2.7	147	15	52	8	400
G	3D	200-133-021	BM-25	44	22.2	27	36	3.2	2.8	245	25	93	4	200
G	3D	200-133-022	BM-32	57	25.4	32	47		4.7	392	40	150	4	200

PLASTIC CASTER (THREADED BOLT TYPE) NT

LOAD CAPACITY 245 N



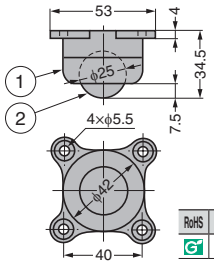
[Remarks]
- Inbuilt ball bearing is made of steel.
- The load capacity is static load value.
- Do not use it on a vertical surface. It may cause noise, deformation or damage.

No.	Part Name	Material	Colour
①	Body	PA	Brown
②	Ball	Melamine Resin (MF)	Ivory

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-010	NT-25	245	25	58	20	200

PLASTIC CASTER (SURFACE MOUNT TYPE) NS

LOAD CAPACITY 245 N



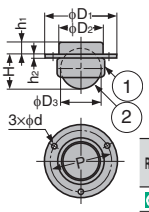
[Remarks]
- Inbuilt ball bearing is made of steel.
- The load capacity is static load value.
- Do not use it on a vertical surface. It may cause noise, deformation or damage.

No.	Part Name	Material	Colour
①	Body	PA	Brown
②	Ball	Melamine Resin (MF)	Ivory

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-422	NS-25	245	25	43	20	200

BALL CASTER (RECESSED MOUNT TYPE) BH

LOAD CAPACITY 98~196 N



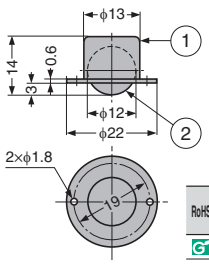
[Remarks]
- Do not use it on a vertical surface.
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

No.	Part Name	Material	Colour
①	Body	Steel (SPCC)	Brass
②	Ball	Steel (SWCH)	Polished

RoHS	CAD	Item Code	Item Name	D1	D2	D3	H	P	h1	h2	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-030	BH-20	30	18.3	17.5	16	24	5	1.6	2	98	10	35	8	400
G	3D	200-133-031	BH-25	41	24.7	22.2	19.5	36	6	2.3	2.6	147	15	73	4	200
G	3D	200-133-032	BH-32	48	29.3	25.4	24.5	41				196	20	113	4	200

MINI BALL CASTER (RECESSED MOUNT TYPE) BHB-12

LOAD CAPACITY 78.4 N



[Remarks]
- Do not use it on a vertical surface.
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Ball	Steel (SUJ)	Polished

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-040	BHB-12	78.4	8	11	100	2000

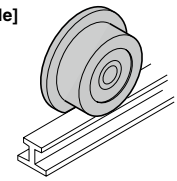
STAINLESS STEEL SLIDING DOOR ROLLER JS315 L Type w/ Bracket

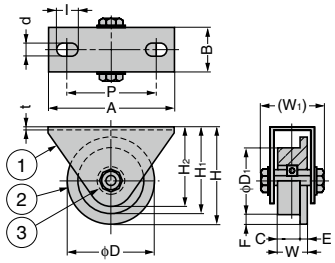
LOAD CAPACITY 14700~27440 N SUS

- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]
- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished ※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※ Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	D1	W	W1	A	B	C	E	F	H	H1	H2	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-778	JS315-100L	120	100	36	70	145	46	27	9	10	124	114	87	11	15	115	3	14700	1500	3	1	4
G	3D	200-024-779	JS315-150L	150	130	43	88	250	57	33	10		165	155	137	20	35	185	4	21560	2200	6.8	1	2
G	3D	200-024-780	JS315-200L	200	170	50	107	290	70	36.5	13.5	15	215	200	160			216	6	27440	2800	13.4	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS325 L Type w/o Bracket

SUS

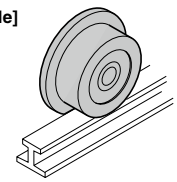
- Non-bracket type of JS315 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

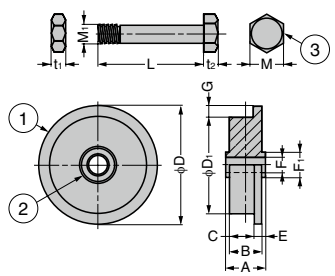
[Applications]
- Gates, etc.

[Remarks]
- The boss width A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]
- Bolt, nut, spring washer, spacer × 2

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	D1	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-781	JS325-100L	120	100	40	36	27	9	16	25	10	60	27	M16	10.5	10	0.7	1	4
G	3D	200-024-782	JS325-150L	150	130	49	43	33	10	20	40		75	30	M20	12	13	4.9	1	2
G	3D	200-024-783	JS325-200L	200	170	58	50	36.5	13.5	25		15	92		M24	14	15	9.4	1	1

Refer to 1 : P.917

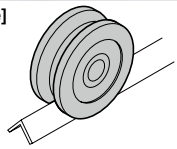
STAINLESS STEEL SLIDING DOOR ROLLER JS300 V Type w/ Bracket

LOAD CAPACITY 3920~27440 N SUS

- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

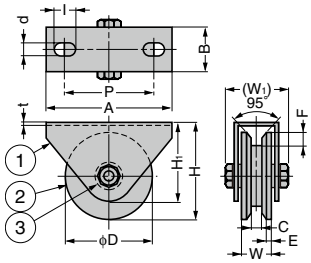
[Applications]
- Gates, etc.

[Application Example]



No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※Mirror polished for wheel diameter more than ϕ150.



RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-736	JS300-50V	50	20	47	100	30	7.5	3.5	7	62	57	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-737	JS300-60V	60								67						4900	500	0.6	1	20
G	3D	200-024-738	JS300-75V	75			120					87.5	76.5			85		6370	650	0.9	1	10
G	3D	200-024-739	JS300-90V	90								95				95		11760	1200	1.2	1	10
G	3D	200-024-740	JS300-110V	110	24	53	145	34	10.5	4.6	8	120	93.5			114		13720	1400	2	1	5
G	3D	200-024-741	JS300-150V	150	43	88	250	57	13	8	18	165	137	20	35	185	4	21560	2200	6.8	1	2
G	3D	200-024-742	JS300-200V	200	50	107	290	70	15	7	20	215	160			216	6	27440	2800	13	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS310 V Type w/o Bracket

SUS

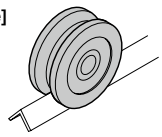
- Non-bracket type of JS300 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]
- Gates, etc.

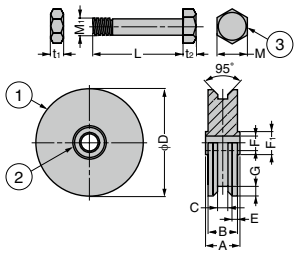
[Remarks]
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]
- Bolt, nut, spring washer, spacer × 2

[Application Example]



No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	



RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-743	JS310-50V	50	24	20	7.5	3.5	10	18	7	40	17	M10	6	7	0.2	1	20
G	3D	200-024-744	JS310-60V	60													0.3	1	20
G	3D	200-024-745	JS310-75V	75													0.6	1	20
G	3D	200-024-746	JS310-90V	90													0.8	1	20
G	3D	200-024-747	JS310-110V	110	28	24	10.5	4.6	12	20	8	45	19	M12	7	8	1.5	1	10
G	3D	200-024-748	JS310-150V	150	49	43	13	8	20	40	18	75	30	M20	12	13	4.9	1	2
G	3D	200-024-749	JS310-200V	200	58	50	15	7	25		20	92		M24	14	15	9	1	1

Refer to 1 : P.918

STAINLESS STEEL SLIDING DOOR ROLLER JS365 U Type w/ Bracket

LOAD CAPACITY 3920~27440 N

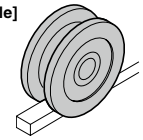
SUS

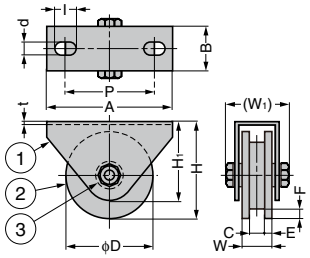
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]

- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※ Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-750	JS365-50H	50	20	47	100	30	7.5	6.3	7	62	57	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-751	JS365-60H	60								67						4900	500	0.6	1	20
G	3D	200-024-752	JS365-75H	75			120					87.5	76.5			85		6370	650	0.9	1	10
G	3D	200-024-753	JS365-90H	90					10.5	4.8		95				95		11760	1200	1.2	1	10
G	3D	200-024-754	JS365-110H	110	24	53	145	34	14	5	8	120	93.5			114		13720	1400	2	1	5
G	3D	200-024-755	JS365-150H	150	43	88	250	57	27	8	15	165	137	20	35	185	4	21560	2200	6.5	1	2
G	3D	200-024-756	JS365-200H	200	50	107	290	70		11.5	14	215	160			216	6	27440	2800	14	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS380 U Type w/o Bracket

SUS

- Non-bracket type of JS365 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]

- Gates, etc.

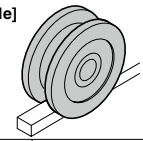
[Remarks]

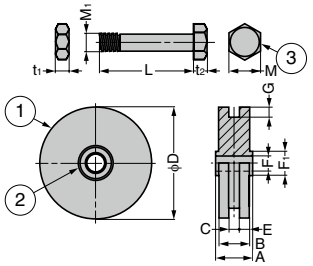
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]

- Bolt, nut, spring washer, spacer × 2

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-757	JS380-50H	50	24	20	7.5	6.3	10	18	7	40	17	M10	6	7	0.2	1	20
G	3D	200-024-758	JS380-60H	60													0.3	1	20
G	3D	200-024-759	JS380-75H	75													0.6	1	20
G	3D	200-024-760	JS380-90H	90			10.5	4.8									0.8	1	20
G	3D	200-024-761	JS380-110H	110	28	24	14	5	12	20	8	45	19	M12	7	8	1.5	1	10
G	3D	200-024-762	JS380-150H	150	49	43	27	8	20	40	15	75	30	M20	12	13	4.6	1	4
G	3D	200-024-763	JS380-200H	200	58	50		11.5	25		14	92		M24	14	15	10	1	1

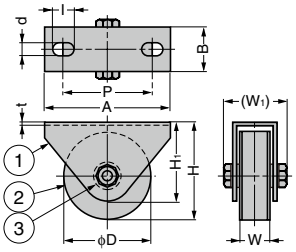
Refer to 1 : P.919

STAINLESS STEEL SLIDING DOOR ROLLER JS375 Flat Type w/ Bracket

LOAD CAPACITY 3920~27440 N SUS

- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]
- Gates, etc.



No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	W	W1	H	H1	A	B	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-764	JS375-50F	50	20	47	62	57	100	30	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-765	JS375-60F	60			67								4900	500	0.7	1	20
G	3D	200-024-766	JS375-75F	75			87.5	76.5	120				85		6370	650	1	1	10
G	3D	200-024-767	JS375-90F	90			95						95		11760	1200	1.3	1	10
G	3D	200-024-768	JS375-110F	110	24	53	120	93.5	145	34			114		13720	1400	2.3	1	5
G	3D	200-024-769	JS375-150F	150	43	88	165	137	250	57	20	35	185	4	21560	2200	7.8	1	2
G	3D	200-024-770	JS375-200F	200	50	107	215	160	290	70			216	6	27440	2800	15.7	1	1

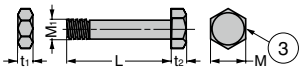
STAINLESS STEEL SLIDING DOOR ROLLER JS385 Flat Type w/o Bracket

SUS

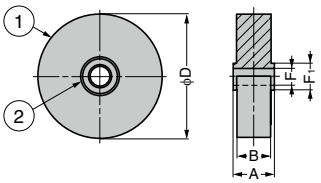
- Non-bracket type of JS375 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]
- Gates, etc.

[Remarks]
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.



[Parts Included]
- Bolt, nut, spring washer, spacer × 2



No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	A	B	F	F1	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-771	JS385-50F	50	24	20	10	18	40	17	M10	6	7	0.3	1	20
G	3D	200-024-772	JS385-60F	60										0.4	1	20
G	3D	200-024-773	JS385-75F	75										0.6	1	20
G	3D	200-024-774	JS385-90F	90										1	1	10
G	3D	200-024-775	JS385-110F	110	28	24	12	20	45	19	M12	7	8	1.8	1	10
G	3D	200-024-776	JS385-150F	150	49	43	20	40	75	30	M20	12	13	5.9	1	2
G	3D	200-024-777	JS385-200F	200	58	50	25		92		M24	14	15	11.7	1	1

Refer to 1 : P.920

SLIDING DOOR ROLLER JC100 V Type w/ Bracket

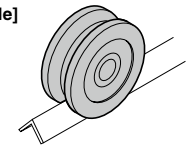
LOAD CAPACITY 3430~24500 N

- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

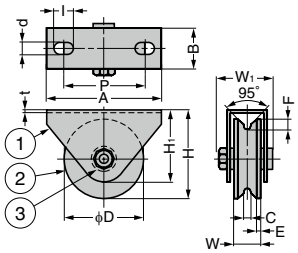
[Applications]

- Gates, etc.

[Application Example]



No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–



RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-785	JC100-50V	50	20	41	100	33	5	4.7	6	64	60	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-786	JC100-60V	60	26	46		38	7	5.7	8	67	58					4410	450	0.7	1	15
G	3D	200-024-787	JC100-75V	75			120	37		4.5	8.5	88	76.5		15	94		5880	600	1	1	10
G	3D	200-024-788	JC100-90V	90						4.6	9	95.5						6860	700	1.3	1	10
G	3D	200-024-789	JC100-100V	105	28	50	145	39.5		4.8	11	118	93.5			115		7840	800	1.7	1	10
G	3D	200-024-790	JC100-120V	120								125.5						9800	1000	2	1	8
G	3D	200-024-791	JC100-150V	150	43	91	250	60	13.5	7.7	18	165	137	20	35	185	6	19600	2000	6.4	1	2
G	3D	200-024-792	JC100-200V	200	50	107	290	70	15	7	20	215	160			216		24500	2500	11	1	1

SLIDING DOOR ROLLER JC110 V Type w/o Bracket

- Non-bracket type of JC100 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

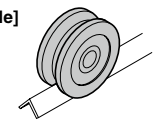
[Applications]

- Gates, etc.

[Remarks]

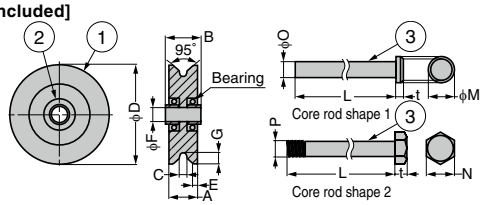
- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Application Example]



[Parts Included]

- Wheel
- shaft



No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-793	JC110-50V	50	20	25	5	4.7	13	6	75	19	–	12.9	–	4	0.2	1	1	40
–	3D	200-024-794	JC110-60V	60	26	30	7	5.7		8							0.4		1	20
G	3D	200-024-795	JC110-75V	75		29		4.5		8.5							0.5		1	20
G	3D	200-024-796	JC110-90V	90				4.6		9							0.8		1	20
G	3D	200-024-797	JC110-100V	105	28	31.5		4.8	16	11		24		15.9		5	1.1		1	10
G	3D	200-024-798	JC110-120V	120													1.3		1	10
–	3D	200-024-799	JC110-150V	150	43	48	13.5	7.7	20	18	100	–	30	–	M20	13	3.3	2	1	4
–	3D	200-024-800	JC110-200V	200	50	58	15	7	24	20	120		36		M24	15	7		1	2

Refer to 1 : P.921

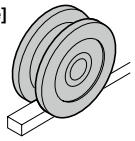
SLIDING DOOR ROLLER JC135 U Type w/ Bracket

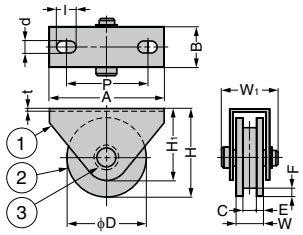
Made to Order | LOAD CAPACITY 3430~24500 N

- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]
- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	W	W1	C	E	F	H	H1	A	B	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-801	JC135-50H	50	20	41	7.5	6.3	5	64	60	100	33	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-802	JC135-60H	60	26	46		9.3	6	67	58		38					4410	450	0.7	1	30
G	3D	200-024-803	JC135-75H	75						88	76.5	120	37	11	15	94		5880	600	1	1	20
G	3D	200-024-804	JC135-90H	90			10.5	7.8	8	95.5								6860	700	1.3	1	20
G	3D	200-024-805	JC135-100H	105	28	50	14	7		118	93.5	145	39.5			115		7840	800	1.7	1	20
G	3D	200-024-806	JC135-120H	120						125.5								9800	1000	2	1	16
G	3D	200-024-807	JC135-150H	150	43	91	27	8	10	165	137	250	60	20	35	185	6	19600	2000	6	1	4
G	3D	200-024-808	JC135-200H	200	50	107		11.5	14	215	160	290	70			216		24500	2500	11	1	2

SLIDING DOOR ROLLER JC145 U Type w/o Bracket

Discontinued

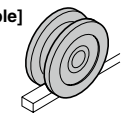
- Non-bracket type of JC135 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

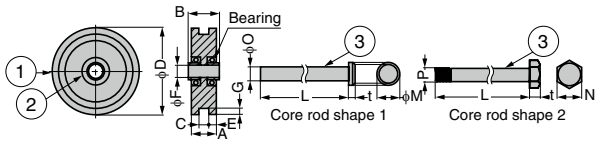
[Applications]
- Gates, etc.

[Remarks]
- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size.Please confirm with the figure below.

[Parts Included]
- Wheel shaft

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-809	JC145-50H	50	20	25	7.5	6.3	13	5	75	19	–	12.9	–	4	0.2	1	1	40
–	3D	200-024-810	JC145-60H	60	26	30		9.3		6							0.4		1	40
G	3D	200-024-811	JC145-75H	75		29											0.6		1	20
G	3D	200-024-812	JC145-90H	90			10.5	7.8		8							0.9		1	20
G	3D	200-024-813	JC145-100H	105	28	31.5	14	7	16			24		15.9		5	1.1		1	20
G	3D	200-024-814	JC145-120H	120													1.3		1	20
–	3D	200-024-815	JC145-150H	150	43	48	27	8	20	10	100	–	30	–	M20	13	3.4	2	1	4
–	3D	200-024-816	JC145-200H	200	50	58		11.5	24	14	120		36		M24	15	7		1	2

Refer to 1 : P.922

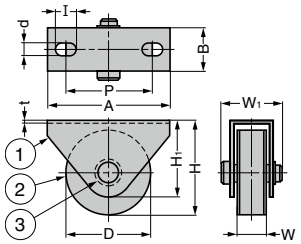
SLIDING DOOR ROLLER JC140 Flat Type w/ Bracket

Made to Order | LOAD CAPACITY 3430~24500 N

- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]

- Gates, etc.



No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	W	W1	H	H1	A	B	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-817	JC140-50F	50	20	41	64	60	100	33	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-818	JC140-60F	60	26	46	67	58		38					4410	450	0.7	1	30
G	3D	200-024-819	JC140-75F	75			88	76.5	120	37		15	94		5880	600	1.1	1	20
G	3D	200-024-820	JC140-90F	90			95.5								6860	700	1.4	1	20
G	3D	200-024-821	JC140-100F	105	28	50	118	93.5	145	39.5			115		7840	800	2	1	20
G	3D	200-024-822	JC140-120F	120			125.5								9800	1000	2.2	1	16
G	3D	200-024-823	JC140-150F	150	43	91	165	137	250	60	20	35	185	6	19600	2000	7	1	4
G	3D	200-024-824	JC140-200F	200	50	107	215	160	290	70			216		24500	2500	12.5	1	2

SLIDING DOOR ROLLER JC150 Flat Type w/o Bracket

Discontinued

- Non-bracket type of JC140 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

[Applications]

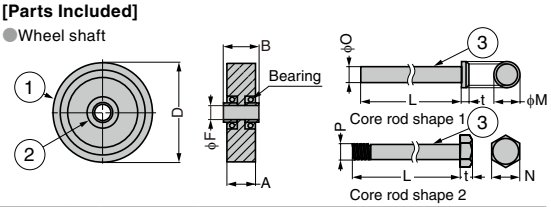
- Gates, etc.

[Remarks]

- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Parts Included]

- Wheel shaft



No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	F	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-825	JC150-50F	50	20	25	13	75	19	–	12.9	–	4	0.3	1	1	40
–	3D	200-024-826	JC150-60F	60	26	30								0.4		1	40
G	3D	200-024-827	JC150-75F	75		29								0.7		1	20
G	3D	200-024-828	JC150-90F	90										1		1	20
G	3D	200-024-829	JC150-100F	105	28	32	16		24		15.9		5	1.3		1	20
G	3D	200-024-830	JC150-120F	120										1.6		1	20
–	3D	200-024-831	JC150-150F	150	43	48	20	100	–	30	–	M20	13	4.2	2	1	4
–	3D	200-024-832	JC150-200F	200	50	58	24	120		36		M24	15	8.5		1	2

Refer to 1 : P.923

SLIDING DOOR ROLLER JC115 L Type w/ Bracket

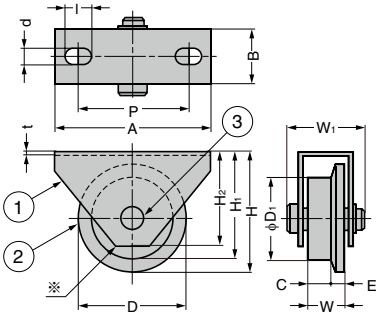
Made to Order | LOAD CAPACITY 6370~24500 N

JC115-100L

- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

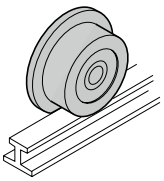
[Applications]

- Gates, etc.



※JC115-75L shown. Brackets other than above are of the same shape as the picture.

[Application Example]



No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	D1	W	W1	A	B	C	E	H	H1	H2	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-833	JC115-75L	90	75	32	52	120	42.5	24	8	95	87.5	67	11	15	94	3.2	6370	650	1.3	1	10
G	3D	200-024-834	JC115-100L	120	100	36	57	145	47	26	10	125	115	90			115		11760	1200	2.3	1	6
G	3D	200-024-835	JC115-150L	150	130	43	91	250	60	33		165	155	137	20	35	185	6	21580	2200	6	1	4
G	3D	200-024-836	JC115-200L	200	170	50	107	290	70	36.5	13.5	215	200	160			216		24500	2500	10.5	1	2

SLIDING DOOR ROLLER JC120 L Type w/o Bracket

Discontinued

- Non-bracket type of JC115 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel, providing smooth movement even for heavy doors.

[Applications]

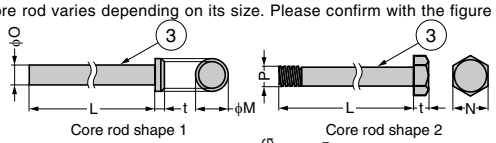
- Gates, etc.

[Remarks]

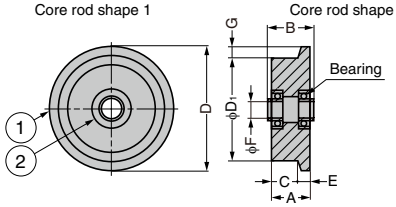
- Core rod for wheel diameter φ90~φ120 is not grooved for E-ring.
  Core rod for φ150~φ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Parts Included]

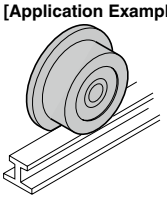
- Wheel shaft



Core rod shape 1 | Core rod shape 2



[Application Example]



No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	D1	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
G	3D	200-024-837	JC120-75L	90	75	32	36	24	8	13	7.5	75	19	–	12.9	–	4	0.9	1	1	20
G	3D	200-024-838	JC120-100L	120	100	36	40	26	10	16	10		24		15.9		5	1.7		1	20
G	3D	200-024-839	JC120-150L	150	130	43	48	33		20		100	–	30	–	M20	13	3.3	2	1	4
G	3D	200-024-840	JC120-200L	200	170	50	58	36.5	13.5	24	15	120		36		M24	15	6.5		1	2

Refer to 1 : P.924

LAMP®

LEVELLING GLIDES & BASE

Levelling glides are a kind of hardware used as device legs for height adjustment.
Sugatsune offers a wide range of sizes and base materials, from ultra heavy duty type with load capacity of 11,000 kgf to mini type which can be adjusted easily by hand. Besides, we can also provide plenty of additional functions, such as seismic isolation for avoiding shake due to earthquake and swivel function to compensate for uneven floors.

“Medical leg" is a five-pronged base from Sugatsune. It is stable and has smooth shape which makes it easy to clean, ideal for medical sites such as intravenous drip tables, mobile carts and stand type lighting.

SUGATSUNE

June 2022

SPECIAL LEVELLING GLIDE
HEAVY DUTY LEVELLING GLIDES
MEDIUM-SIZED LEVELLING GLIDES
SMALL LEVELLING GLIDES
BASE FOR LEVELLING GLIDES
CASE FEET
BASE

■INDEX

Special Levelling Glide — P.928~P.929

Protects server racks, precision instruments and medical equipment, etc. from severe shaking in case of earthquake.

Heavy Duty Levelling Glides — P.930

Ideal for heavy duty applications such as machine tools, conveyors and semiconductor manufacturing equipment, etc.

Medium-sized Levelling Glides — P.931~P.938

Typical levelling glide of medium size.

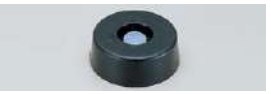
Small Levelling Glides — P.939~P.952

Typical levelling glide of small size.

Base for Levelling Glides — P.952~P.954

Can add screw hole for levelling glide on cabinet.

Case Feet — P.955~P.956



One-touch installation with washer.

Base — P.957~P.959

Suitable for medical applications such as intravenous drip tables and carts.

Product Specifications

[Special Levelling Glide]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size											
				M 8	W5/16	M 10	M 12	W3/8	W1/2	M 14	M 16	M 18	M 20	M 24	M 30
MDSF P.928	2000 (204) ~ 7500 (765)	Steel	—			●					●		●		

[Heavy Duty Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size										
				M 12	W3/8	W1/2	M 14	M 16	M 18	M 20	M 24	M 30	M 42	Tr 52	Tr 60
ADHS, ADHSK, ADH P.930	29400 (3000) ~ 44100 (4500)	SUS Steel	WITH NUT								●	●			
LB P.931	14700 (1500) ~ 39200 (4000)	Steel	WITH NUT	●				●		●	●				

[Medium-sized Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size												
				M 12	W3/8	W1/2	M 14	M 16	M 18	M 20	M 24	M 30	M 42	Tr 42	Tr 52	Tr 60
ADCR P.932	6664 (680) ~ 14112 (1440)	Steel	WITH NUT	●						●						
ADCS, ADC P.932	2940 (300) ~ 8624 (880)	SUS Steel	WITH NUT	●				●		●						

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size										
				M 6	M 8	W5/16	M 10	M 12	W3/8	W1/2	M 14	M 16	M 18	M 20	M 24
ADRS, ADR P.933	196 (20) ~ 1470 (150)	SUS Steel	WITH NUT		●		●	●				●		●※1	
ADPS, ADP P.934	2940 (300) ~ 8624 (880)	SUS Steel	WITH NUT		●		●	●				●		●※1	
ADWS, ADWHS P.935	3724 (380) ~ 17150 (1750)	SUS	WITH NUT		●		●	●				●		●※2	
ADW, ADWH P.936	3332 (340) ~ 16856 (1720)	Steel	WITH NUT		●		●	●				●		●	
MKPLS P.937	1960 (200) ~ 3332 (340)	SUS	SWIVEL				●	●				●			
MKRLS P.937	784 (80) ~ 980 (100)	SUS	SWIVEL				●	●				●			
MKRL P.938	588 (60) ~ 784 (80)	Steel	SWIVEL				●	●				●		●	

※1 Except models made of steel.
※2 Except models made of EPDM.

[Small Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M6	M8	W5/16	M10	M12	W3/8	W1/2	M14	M16	M18	M20	M24
KYW P.939	20000 (2039)	Steel	–									●			
PM P.939	1176 (120) ~ 2744 (280)	Steel	–				●								
AD-502-P P.940	2744 (280)	Steel	–		●										
AD-502 P.940	2744 (280)	Steel	–		●										
AD-501 P.941	980 (100) · 1372 (140)	Steel	–		●		●								
TN-S P.942	1372 (140)	Steel	–				●								
TN P.942	784 (80) · 980 (100)	Steel	–		●		●								
AD-503KB, AD-503 P.943	400 (41) · 3000 (306)	Steel	–				●								
TG P.943	343 (35) ~ 1764 (180)	Steel	–		●		●								
SG P.944	1176 (120) · 1568 (160)	Steel	SWIVEL		●										
MK8AD P.944	588 (60)	Steel	SWIVEL		●		●								
RP P.945	588 (60) ~ 6100 (622)	Steel	SWIVEL	●	●	●	●	●	●		●				
RPS P.945	588 (60) ~ 1568 (160)	SUS	SWIVEL	●	●		●								
EA P.946	490 (50) ~ 2646 (270)	Steel	SWIVEL	●	●		●	●							
MN P.946	1176 (120) · 1568 (160)	Steel	SWIVEL		●	●	●	●	●	●					
MKPS P.947	1960 (200) ~ 3920 (400)	SUS	SWIVEL				●	●	●						
MKRS P.947	392 (40) ~ 980 (100)	SUS	SWIVEL				●	●	●		●				
MKP P.948	1176 (120) · 1568 (160)	Steel	SWIVEL				●	●	●		●				
MKR P.948	392 (40) ~ 784 (80)	Steel	SWIVEL				●	●	●		●				
MKR-N P.949	588 (60) ~ 784 (80)	Steel	SWIVEL				●		●						
MKR-N32DG32 P.949	454 (46)	Steel	SWIVEL		●										
SAJ P.950	490 (50)	Steel	–	●	●	●	●		●						
SG-CGP40 P.951	588 (60)	Steel	SWIVEL		●										

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M6	M8	W5/16	M10	M12	W3/8	W1/2	M14	M16	M18	M20	M24
A800 P.952	588 (60)	Steel	–		●		●								

[Base for Levelling Glides] ▬ ···Applicable threaded bolt size

Glide Base ADZS, ADZ
M12 M16 M20 P.952

Cover For AD-501, AD-502 ADKW, ADKB
P.953

Snap-in Glide Base AD-438
M8 P.953

Glide Base AD-558
M8 P.953

Glide Base AD-561
M8 P.953

Stainless Steel Glide Base AP36
M8 M10 3/8-16UNC M12 P.954

Glide Base AD-559
M12 M14 1/2-20UNF P.954

Glide Base AS-AJ
M10 M12 M16 P.954

[Case Feet] ▬ ···Mounting hole diameter

Case Foot (A Type) FF
ϕ5 P.955

Case Foot (B Type) FF
ϕ4.1 P.955

Case Foot (Mini Type) FF
ϕ3.1 ϕ4.1 ϕ3.6 P.955

Rubber Foot K
ϕ2 ϕ3 ϕ4 ϕ5 ϕ6 ϕ7 P.956

Rubber Foot SK
ϕ3 ϕ4 ϕ5 P.956

[Base] ▬ ···Applicable pipe diameter. ( ): When using optional parts.

BASE HS-550
ϕ38.1 P.957

BASE HO500
ϕ50.8 P.958

BASE BJ610
ϕ50.8 P.959

SWAY-FOOT LEVELLING GLIDE MDSF

LOAD CAPACITY 2000~7500 N

INSTRUCTION

- Suitable for server racks, precision instruments, medical equipment, cabinets and furniture, etc.
- The base isolation structure absorbs vibrations and shocks.
- Reduces installation cost.
- Reduces the risk of falling furniture or equipment.
- Can be used on raised floor.
- Applied to server systems of major manufacturers.
- Sold in set of 4 pcs.
- Bolt lengths and screw diameters can be made to order.

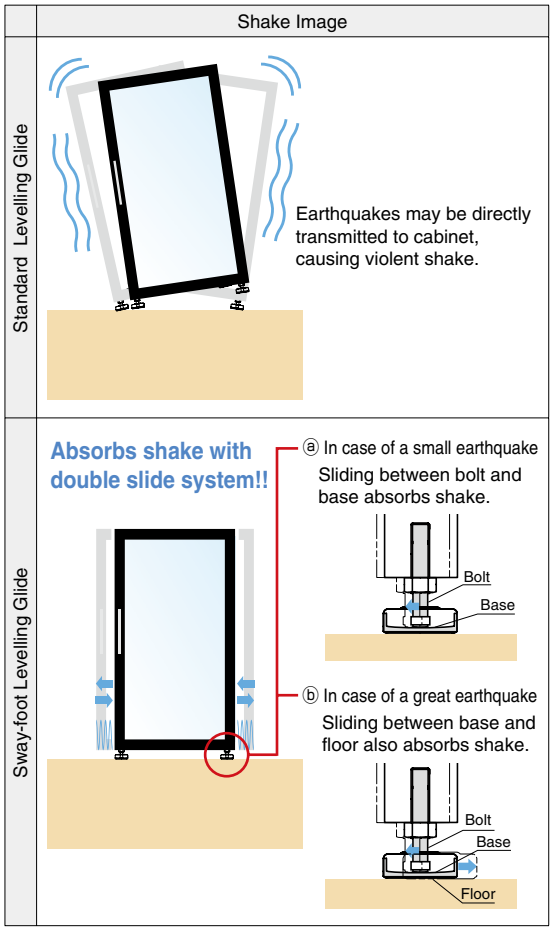
[Applications]

- Server racks, medical equipment, semiconductor manufacturing equipment, measuring instruments, fixtures for school facilities, kitchen appliances, furniture, fixtures for works of art, and other precision instruments, etc.

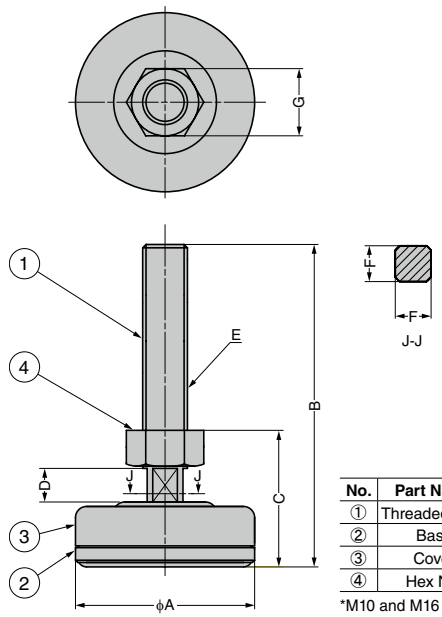
[Remarks]

- Keep 30cm or above away from structures and places with large flow of people.
- Use on a level floor.
- When installing the bolt to a cabinet, ensure that it is perpendicular to the base.
- The cabinet supported by this product may move during earthquake, depending on how the earthquake shakes.
- Do not touch the sliding surface as it is coated with lubricant.

[Comparison with Standard Levelling Glides]



[Parts Structure (For 1 pc)]



No.	Part Name	Material	Finish
①	Threaded Bolt*	Steel	Nickel
②	Base	Steel/Teflon	
③	Cover	Nitrile Rubber (NBR)	–
④	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)

*M10 and M16 types will not have a hole on the bolt tip when the current stock runs out.

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	Max. Size	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (sets)	Carton (sets)
G	3D	200-014-807	MDSF58-10-40	58	65.5	34.5	7.5	M10	8	17	W410×D630×H390	2000	204	180	1	–
G	3D	200-014-805	MDSF58-16-80		114	48	10.5	M16	13	24	W730×D730×H1460	5000	510	300	1	–
G	3D	200-014-806	MDSF80-20-100	80	144	61	15	M20	16	30	W1000×D1000×H2000	7500	765	580	1	–

4 pcs make a set.

EARTHQUAKE PROOF PRODUCTS DIGEST

Stainless Steel Lever Latch
LL-66S

1

Latch prevents door from opening unexpectedly.

Angle Bracket
XL-SA01

2

Can be used as falling prevention metal fittings for fixing cabinet or shelf to wall.

Spring Loaded Bar Latch BLL & BLT

Push Knob Latch TLP-S

Refer to 1 : P.487, 2 : P.758

HEAVY DUTY LEVELLING GLIDE ADHS, ADHSK, ADH

LOAD CAPACITY 29400~44100 N | TEST METHOD 14 | SUS

- Three types available: Steel ADH, stainless steel ADHS and ADHSK with anti-galling stainless steel bolt (See the following galling preventive treatment)
- ADHSK: Galling preventive treatment allows smoother vertical adjustment.
- Two types of M24 and M30 screw diameter. enables application to large machines and furniture.
- Recess for hex key at the screw head allows effective adjustment.

[Applications]

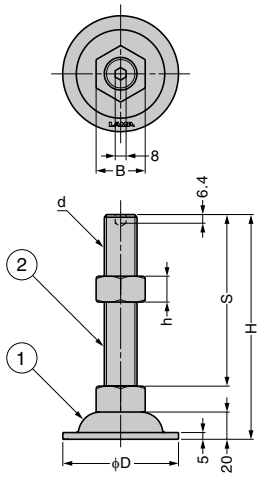
- Machine tools, conveyors, semiconductors, LCD production equipment.

[Galling Preventive Treatment]

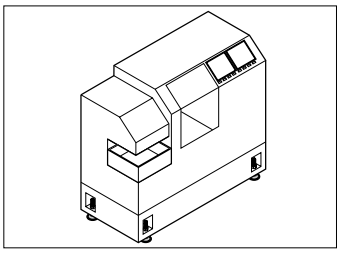
Stainless steel is a material with low thermal conductivity and high thermal expansion coefficient. For this reason, the threaded bolt may expand due to the frictional heat during tightening, and the male and female thread may be galled and the bolt may be locked. Even when using ADHS, galling preventive treatment is recommended.
In ADHSK, by applying a lubricating paint to the threaded bolt and going through the firing treatment to enhance the slipperiness and adhesiveness, thread galling is hard to occur.

[Remarks]

- To prevent looseness after use, it is recommended to tighten with a double nut.



[Application Example]



[ADHSK] Galling Preventive Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		Baking Finish

RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-538	ADHS-85-24-150K	83	M24	189	150	19	36	29400	3000	970	1	12
G	3D	200-012-539	ADHS-85-24-200K			239	200			34300	3500	1080	1	12
G	3D	200-012-540	ADHS-85-30-150K		M30	194	150	24	46	39200	4000	1500	1	12
G	3D	200-012-541	ADHS-85-30-200K			244	200			44100	4500	1680	1	12

[ADHS] Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-534	ADHS-85-24-150	83	M24	189	150	19	36	29400	3000	970	1	12
G	3D	200-012-535	ADHS-85-24-200			239	200			34300	3500	1080	1	12
G	3D	200-012-536	ADHS-85-30-150		M30	194	150	24	46	39200	4000	1500	1	12
G	3D	200-012-537	ADHS-85-30-200			244	200			44100	4500	1680	1	12

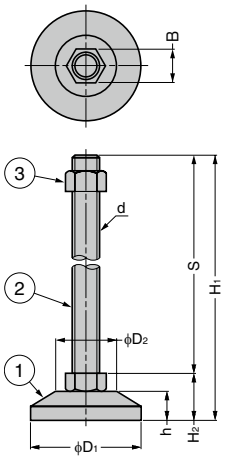
[ADH] Steel

No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-530	ADH-85-24-150	84	M24	189	150	19	36	29400	3000	970	1	12
G	3D	200-012-531	ADH-85-24-200			239	200			34300	3500	1090	1	12
–	3D	200-012-532	ADH-85-30-150		M30	194	150	24	46	39200	4000	1530	1	12
G	3D	200-012-533	ADH-85-30-200			244	200			44100	4500	1750	1	12

LONG BOLT LEVELLING GLIDE LB

LOAD CAPACITY 14700~39200 N

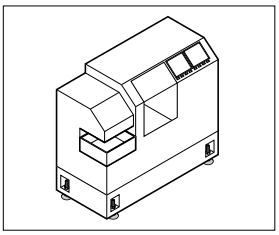


- Cross-recessed bottom allows easy installation with pneumatic screwdriver.
- Made-to-order specifications and stainless steel types also available.

[Applications]

- Machine tools, vending machines, etc.

[Application Example]



No.	Part Name	Material	Finish
①	Body	Steel (FC)	Coloured Zinc Chromate (Trivalent)
②	Threaded Bolt	Steel (SS)	
③	Hex Nut		

RoHS	CAD	Item Code	Item Name	D1	D2	H1	H2	h	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-140-740	LB12-200	60	40	225	25	17	200	19	M12	14700	1500	660	30	–
G	3D	200-140-234	LB16-250	80	45	282	32	22	250	24	M16	19600	2000	880	18	–
G	3D	200-140-235	LB16-300			332			300					940	18	–
G	3D	200-140-741	☆LB16-350			382			350					1010	16	–
G	3D	200-140-742	LB20-250			285	35		250	30	M20	39200	4000	1140	18	–
G	3D	200-140-233	LB20-300			335			300					1240	18	–
G	3D	200-140-743	☆LB20-350			385			350					1330	16	–
G	3D	200-140-744	☆LB20-400			435			400					1440	8	–
G	3D	200-140-232	LB24-280			317	37		280	36	M24			1520	18	–

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

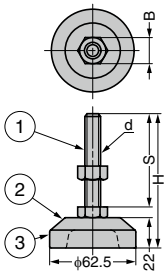
LEVELLING GLIDE ADCR

LOAD CAPACITY 6664 N,14112 N

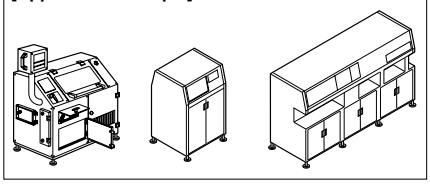
- Bottom cover made of nitrile rubber to prevent from skidding and scratching the floor.
- Cross-recessed bottom allows easy installation with pneumatic screwdriver.

[Others]
- For special size, please contact local representatives.

[Remarks]
- Do not move horizontally under load. Cover may come off or wear out.



[Application Example]



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWRCH)	Clear Zinc Chromate
②	Body	Steel (SS)	(Trivalent)
③	Cover	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Carton (pcs)
G	3D	200-140-508	ADCR60-12-50	80	50	19	M12	6664	680	332	35
G	3D	200-140-072	ADCR60-20-180	215	180	30	M20	14112	1440	768	15

LEVELLING GLIDE ADCS, ADC

LOAD CAPACITY 2940~8624 N **SUS**

- ADC (Steel): Cross-recessed bottom allows easy installation.

[Sold Separately]
- FIXING PLATE FOR LEVELING GLIDES 1

[ADCS] Stainless Steel

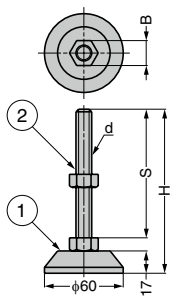
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Carton (pcs)
G	3D	200-141-220	ADCS60-12-120	145	120	19	M12	2940	300	365	35
G	3D	200-141-222	ADCS60-16-100	127	100					440	25
G	3D	200-141-223	ADCS60-16-130	157	130	24	M16	5488	560	480	25
G	3D	200-141-225	ADCS60-16-180	207	180					550	20
G	3D	200-141-226	ADCS60-20-100	130	100					590	20
G	3D	200-141-227	ADCS60-20-130	160	130	30	M20	8624	880	650	20
G	3D	200-141-229	ADCS60-20-180	210	180					750	15

[ADC] Steel

No.	Part Name	Material	Finish
①	Body	Steel (SS)	Clear Zinc Chromate (Trivalent)
②	Threaded Bolt	Steel (SWRCH)	

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Carton (pcs)
G	3D	200-141-533	ADC60-12-120	145	120	19	M12	2940	300	355	35
G	3D	200-141-535	ADC60-16-100	127	100					440	25
G	3D	200-141-536	ADC60-16-130	157	130	24	M16	5488	560	480	25
G	3D	200-141-538	ADC60-16-180	207	180					540	20
G	3D	200-141-540	ADC60-20-100	130	100					580	20
G	3D	200-141-541	ADC60-20-130	160	130	30	M20	8624	880	640	20
G	3D	200-141-542	ADC60-20-150	180	150					680	20
G	3D	200-140-071	ADC60-20-180	210	180					740	15



Refer to 1 : P.952

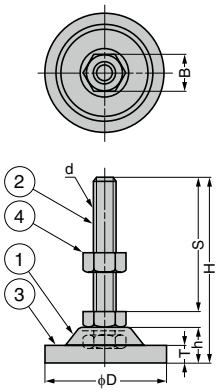
LEVELLING GLIDE ADRS, ADR

LOAD CAPACITY 196~1470 N SUS

- Bottom cover made of elastomer with excellent impact resistance.
- Hexagon nut at the bottom for easy installation.
- For special size, please contact local representatives.

[Remarks]

- Do not move horizontally under load. Cover may come off or wear out.



[ADRS] Stainless Steel

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		
③	Cover	Elastomer (TPE)	Black
④	Nut	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	D	d	H	h	T	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-147-034	ADRS37-8-60	41	M8	78	12.5	6	60	13	196	20	58	200	–
G	3D	200-147-035	ADRS37-10-50		M10	69.5			50	17			83	170	–
G	3D	200-147-036	ADRS55-12-100	62	M12	126.5	18.5	9	100	19	784	80	190	80	–
G	3D	200-147-037	ADRS55-12-120			146.5			120				200	70	–
G	3D	200-147-041	ADRS75-16-150	80	M16	182.5	22.5		150	24	1470	150	400	30	–
G	3D	200-147-045	ADRS75-20-150		M20	185.5				30			616	30	–

[ADR] Steel

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Threaded Bolt	Steel (SWRCH)	
③	Cover	Elastomer (TPE)	Black
④	Nut	Steel (SWRCH)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	D	d	H	h	T	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-003	ADR37-8-50	41	M8	68	12.5	6	50	13	196	20	55	200	–
G	3D	200-140-593	ADR37-10-50		M10	69.5				17			81	170	–
G	3D	200-140-506	ADR55-12-50	62	M12	76.5	18.5	9		19	784	80	145	70	–
G	3D	200-141-544	ADR55-12-100			126.5			100				181	80	–
G	3D	200-141-545	ADR55-12-120			146.5			120				196	70	–
G	3D	200-141-546	ADR55-12-150			176.5			150				220	60	–
G	3D	200-141-547	ADR75-16-100	80	M16	132.5	22.5		100	24	1470	150	329	40	–
G	3D	200-141-548	ADR75-16-130			162.5			130				369	35	–
G	3D	200-141-550	ADR75-16-180			212.5			180				436	25	–
G	3D	200-141-551	ADR75-16-200			232.5			200				463	20	–

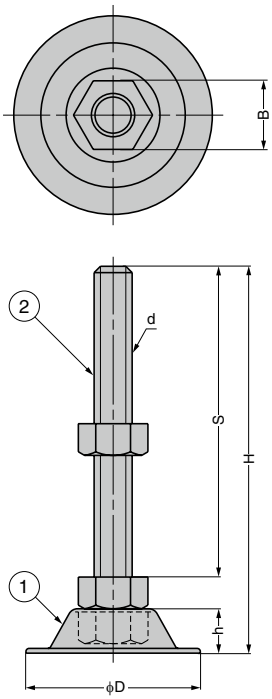
LEVELLING GLIDE ADPS, ADP

LOAD CAPACITY 2940~8624 N SUS

- Hexagon nut at the bottom for easy installation.
- Wide variety of size variations available.

[Sold Separately]

- Washer ADZS (Stainless steel 1)
- Washer ADZ (Steel 2)



[ADPS] Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-182	ADPS37-8-60	M8	37	76	10.5	60	13	2940	300	56	200	–
G	3D	200-141-183	ADPS37-10-50	M10		67.5		50	17			78	200	–
G	3D	200-141-184	ADPS55-12-100	M12	55	122	14	100	19			174	100	–
G	3D	200-141-185	ADPS55-12-120			142		120				184	80	–
G	3D	200-141-186	ADPS55-12-150			172		150				210	70	–
G	3D	200-141-187	ADPS75-16-100	M16	75	128	18	100	24	5488	560	318	50	–
G	3D	200-141-188	ADPS75-16-130			158		130				358	40	–
G	3D	200-141-189	ADPS75-16-150			178		150				382	30	–
G	3D	200-141-190	ADPS75-16-180			208		180				426	30	–
G	3D	200-141-191	ADPS75-20-100	M20		131		100	30	8624	880	490	40	–
G	3D	200-141-192	ADPS75-20-130			161		130				553	30	–
G	3D	200-141-194	ADPS75-20-180			211		180				655	25	–

[ADP] Steel

No.	Part Name	Material	Finish
①	Body	Steel	Clear Zinc Chromate
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-002	ADP37-8-50	M8	37	66	10.5	50	13	2940	300	55	200	–
G	3D	200-140-594	ADP37-10-50	M10		67.5			17			80	200	–
G	3D	200-140-505	ADP55-12-50	M12	55	72	14		19			135	100	–
G	3D	200-141-520	ADP55-12-100			122		100				165	100	–
G	3D	200-141-521	ADP55-12-120			142		120				180	80	–
G	3D	200-141-522	ADP55-12-150			172		150				200	70	–
G	3D	200-141-523	ADP75-16-100	M16	75	128	18	100	24	5488	560	310	50	–
G	3D	200-141-524	ADP75-16-130			158		130				350	40	–
G	3D	200-141-525	ADP75-16-150			178		150				375	30	–
G	3D	200-141-526	ADP75-16-180			208		180				410	30	–

Refer to 1 2 : P.952

STAINLESS STEEL LEVELLING GLIDE ADWS, ADWHS

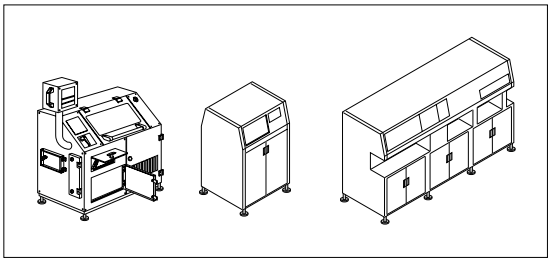
LOAD CAPACITY 3724~17150 N SUS

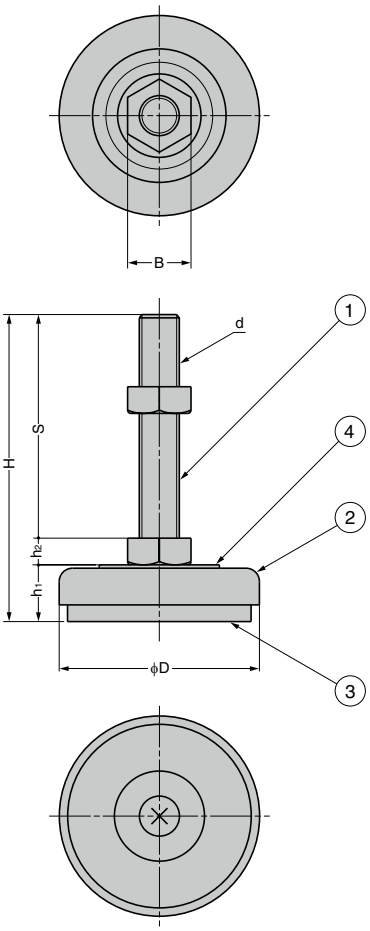
- Cross-recessed bottom allows easy installation with impact wrench.
- ADWS: Excellent weather resistance.
- ADWHS: Excellent heat / weather resistance with non-stain transfer base.

[Applications]

- Machine tools, vending machines, conveyors, computer racks, control boards, laboratory equipment, OA equipment, various furniture, etc.

[Application Example]





No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Stainless Steel (SUS304)	Polished
②	Cover		
③	Base	ADWS/CR	Black
		ADWHS/EPDM	White
④	Washer	PA	–

RoHS	CAD	Item Code	Item Name	Base Material	d	D	H	h1	h2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-605	ADWS40-8-60	CR	M8	40	78.5	13	5.5	60	13	3724	380	77	150	–
G	3D	200-140-606	ADWS40-10-50		M10		70		7	50	17	6272	640	97	120	–
G	3D	200-140-607	ADWS50-12-70		M12	50	93	15	8	70	19	8722	890	175	60	–
G	3D	200-140-609	ADWS50-12-120				143			120		7644	780	210	60	–
G	3D	200-140-611	ADWS60-16-70		M16	60	97	17	10	70	24	14308	1460	297	40	–
G	3D	200-140-612	ADWS60-16-100				127			100		14210	1450	339	35	–
G	3D	200-140-616	ADWS60-20-100		M20		130		13		30	17150	1750	486	25	–
G	3D	200-140-617	ADWS60-20-130				160			130		15876	1620	554	20	–
G	3D	200-140-620	ADWHS40-8-60	EPDM	M8	40	78.5	13	5.5	60	13	4214	430	78	150	–
G	3D	200-140-621	ADWHS40-10-50		M10		70		7	50	17	5978	610	97	120	–
G	3D	200-140-622	ADWHS50-12-70		M12	50	93	15	8	70	19	8330	850	170	60	–
G	3D	200-140-627	ADWHS60-16-100		M16	60	127	17	10	100	24	12348	1260	336	35	–
G	3D	200-140-628	ADWHS60-16-130				157			130		11760	1200	380	30	–

LEVELLING GLIDE ADW, ADWH

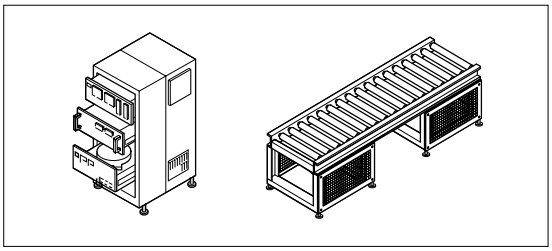
LOAD CAPACITY 3332~16856 N

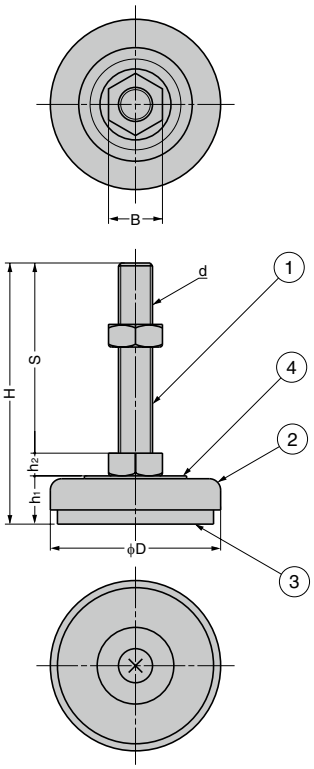
- Cross-recessed bottom of threaded bolt allows easy installation with impact wrench.
- ADW: Excellent weather resistance.
- ADWH: Excellent heat / weather resistance with non-stain transfer base.
- Wide variety of size variations available.

[Applications]

- Machine tools, vending machines, conveyors, computer racks, control boards, laboratory equipment, OA equipment, various furniture, etc.

[Application Example]



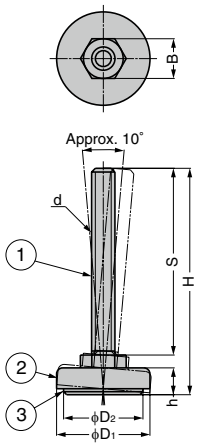


No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel	Black Chromate
②	Cover	Steel	
③	Base	ADW/CR	Black
		ADWH/EPDM	White
④	Washer	PA	–

RoHS	CAD	Item Code	Item Name	Base Material	d	D	H	h_1	h_2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-635	ADW40-8-60	CR	M8	40	78.5	13	5.5	60	13	3332	340	78	150	–
G	3D	200-140-636	ADW40-10-50		M10		70		7	50	17	5684	580	97	120	–
G	3D	200-140-637	ADW50-12-70		M12	50	93	15	8	70	19	8232	840	175	60	–
G	3D	200-140-638	ADW50-12-100				123			100		6762	690	195	60	–
G	3D	200-140-639	ADW50-12-120				143			120		6860	700	210	60	–
G	3D	200-140-641	ADW60-16-70		M16	60	97	17	10	70	24	12838	1310	294	40	–
G	3D	200-140-642	ADW60-16-100				127			100		12544	1280	337	35	–
G	3D	200-140-643	ADW60-16-130				157			130		11858	1210	378	30	–
G	3D	200-140-647	ADW60-20-100		M20		130		13	100	30	13034	1330	484	25	–
G	3D	200-140-648	ADW60-20-130				160			130		14406	1470	550	20	–
G	3D	200-140-652	ADWH40-8-60	EPDM	M8	40	78.5	13	5.5	60	13	3332	340	80	150	–
G	3D	200-140-653	ADWH40-10-50		M10		70		7	50	17	5684	580	98	120	–
G	3D	200-140-654	ADWH50-12-70		M12	50	93	15	8	70	19	8036	820	177	60	–
G	3D	200-140-655	ADWH50-12-100				123			100		7056	720	198	60	–
G	3D	200-140-656	ADWH50-12-120				143			120		6566	670	212	60	–
G	3D	200-140-657	ADWH50-12-150				173			150		6076	620	298	50	–
G	3D	200-140-658	ADWH60-16-70		M16	60	97	17	10	70	24	12054	1230	305	40	–
G	3D	200-140-659	ADWH60-16-100				127			100		10780	1100	338	35	–
G	3D	200-140-664	ADWH60-20-100		M20		130		13		30	15288	1560	490	25	–
G	3D	200-140-665	ADWH60-20-130				160			130		16856	1720	558	20	–

STAINLESS STEEL LEVELLING GLIDE MKPLS With Swivel Function

LOAD CAPACITY 1960~3332 N | TEST METHOD 14 | SUS



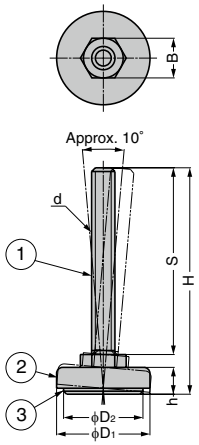
- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg. Height adjustment also possible with spanner.

No.	Part Name	Material	Finish
①	Body	Stainless Steel	Plain
②	Cover	Stainless Steel (SUS304)	Satin
③	Base		Plain

RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-347	MKPLS-32-10-80	M10	32	27	96	10.5	80	17	1960	200	79	30	240
G	3D	200-141-336	MKPLS-40-12-80	M12	40	34	97	11.5			2940	300	125	30	240
G	3D	200-141-337	MKPLS-50-12-80		50	44					3332	340	150	20	160
G	3D	200-141-338	MKPLS-50-16-78	M16			100		78.5	24	3136	320	220	15	120

STAINLESS STEEL LEVELLING GLIDE MKRLS With Swivel Function

LOAD CAPACITY 784 N,980 N | TEST METHOD 14 | SUS



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg. Height adjustment also possible with spanner.
- Levelling glide with elastomer base to prevent from skidding.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel	Plain
②	Cover	Stainless Steel (SUS304)	Satin
③	Base	Elastomer (TPO)	Black

RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-348	MKRLS-32-10-80	M10	32	27	96	11	80	17	784	80	76	30	240
–	3D	200-141-339	MKRLS-40-12-80	M12	40	34	97	11.5					120	30	240
–	3D	200-141-340	MKRLS-50-12-80		50	44					980	100	140	20	160
–	3D	200-141-341	MKRLS-50-16-78	M16			100		78.5	24	784	80	215	15	120

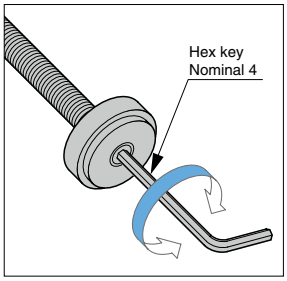
LEVELLING GLIDE MKRL With Swivel Function

LOAD CAPACITY 588~784 N | TEST METHOD 14

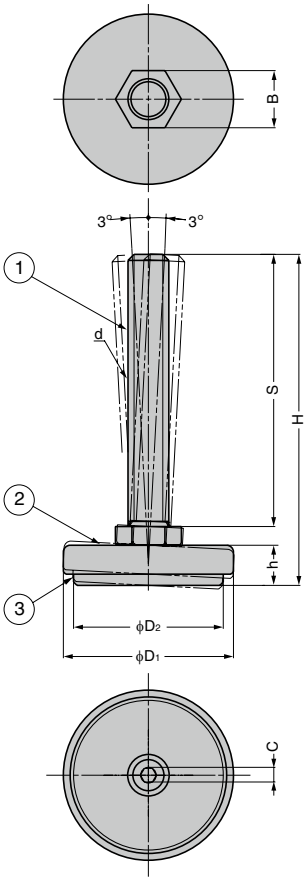
- Black chromate finish.
- Swivels approximately 6° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Hexagon socket at the bottom for easy installation.

[Others]

- For special size, please contact local representatives.



Can be easily turned with a hex key. (Hex key not included.)



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate (Trivalent)
②	Cover	Steel (SPCC)	
③	Base	As below	Black

RoHS	CAD	Item Code	Item Name	Base	d	D1	D2	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-141-159	MKRL-32-10-80B6	Elastomer (TPO)	M10	32	27	95.8	10.8	80	17	4	588	60	80	30	300
–	3D	200-147-014	MKRL-32-12-66B6		M12			81.8		66			735	75	85	30	300
–	3D	200-141-120	MKRL-32-12-80B6					95.8		80			588	60	93	30	300
–	3D	200-141-160	MKRL-40-10-80B6		M10	40	34	96.2	11.2						95	25	250
–	3D	200-141-115	MKRL-40-12-32B6		M12			48.2		32					79	30	300
–	3D	200-141-110	MKRL-40-12-43B6					59.2		43					85	25	250
–	3D	200-141-124	MKRL-40-12-55B6					71.2		55					94	25	250
–	3D	200-149-111	MKRL-40-12-80B6					96.2		80					111	25	250
–	3D	200-141-111	☆MKRL-40-12-120B6					136.2		120					143	15	150
–	3D	200-149-112	MKRL-50-12-80B6			50	44	96.8	11.8	80					136	20	200
–	3D	200-141-112	☆MKRL-50-12-120B6					136.8		120					169	10	100
–	3D	200-149-113	MKRL-50-16-78B6		M16			100.3		78.5	24		784	80	214	15	120
G	3D	200-141-113	MKRL-70-20-101B6	Nitrile Rubber (NBR)	M20	70	64	124.5	11.5	101	30				448	8	64

☆Limited inventory, contact sales associate for details.

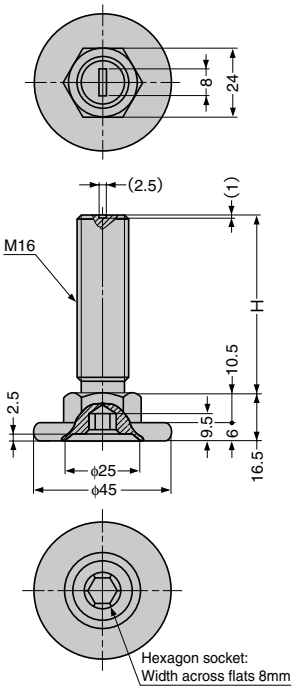
LEVELLING GLIDE KYW

LOAD CAPACITY 20000 N

- Hexagon socket at the bottom for easy installation and adjustment.

[Applications]

- Machine tools, vending machines, etc.



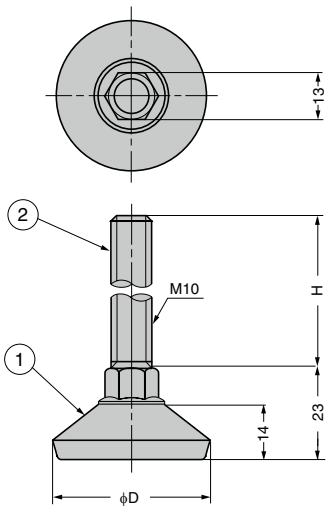
RoHS	CAD	Item Code	Item Name	Material	Finish	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-712	KYW16-75-6B	Steel (SWRM)	Black Chromate	75	195	100	–
–	3D	200-147-001	☆KYW16-80-6B			80	205	80	–
G	3D	200-140-710	KYW16-100-6B			100	235	90	–
G	3D	200-140-713	KYW16-120-6B			120	250	60	60

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

LEVELLING GLIDE PM

LOAD CAPACITY 1176~2744 N TEST METHOD 14

- Black appearance without compromising the device design.

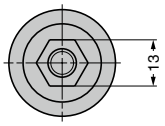


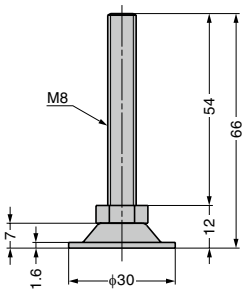
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Black Chromate

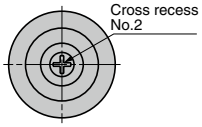
RoHS	CAD	Item Code	Item Name	D	H	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-145-030	PM-30	30	60	1176	120	48	40	400
–	3D	200-145-034	PM-40	38		2744	280	50	30	300
–	3D	200-149-032	PM-40-70		47			49	30	300
–	3D	200-149-161	PM-50	50	60	1960	200	55	20	200

LEVELLING GLIDE AD-502-P

LOAD CAPACITY 2744 N | TEST METHOD 14







- Cross-recessed bottom allows easy installation with electric screwdriver.
- Cover 1 installed at the bottom to prevent from scratching the floor available.

[Sold Separately]

- Wrench for AD-502: AD-502-SP

[Base]

[Wrench for AD-502: AD-502-SP] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-936-204	AD-502-SP	Steel	Coloured Zinc Chromate	14	250	1000

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-024-440	AD-502P	Steel	Coloured Zinc Chromate (Trivalent)	2744	280	30	100	400
G	3D	200-024-441	AD-502P-BZC		Black Chromate (Trivalent)				100	400

Refer to 1 : P.953

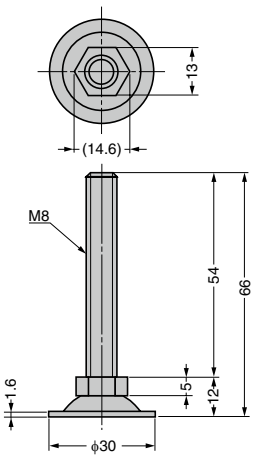
LEVELLING GLIDE AD-502

LOAD CAPACITY 2744 N | TEST METHOD 14

- Cover 1 installed at the bottom to prevent from scratching the floor available.

[Sold Separately]

- Wrench for AD-502: AD-502-SP



[Wrench for AD-502: AD-502-SP] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-936-204	AD-502-SP	Steel	Coloured Zinc Chromate	14	250	1000

[Body]

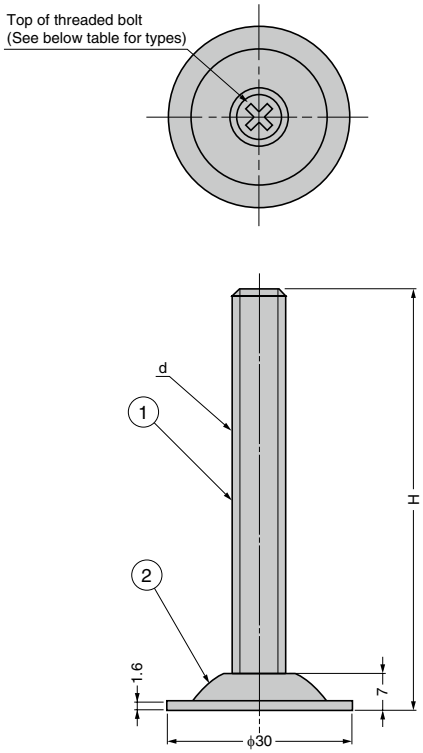
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-059	AD-502	Steel	Coloured Zinc Chromate (Trivalent)	2744	280	30	100	400
–	3D	200-149-237	AD-502BZC		Black Chromate				100	400

Refer to 1 : P.953

LEVELLING GLIDE AD-501

LOAD CAPACITY 980 N,1372 N | TEST METHOD 14

- Special surface finishes and dimensions also available by made to order.
- Height adjustable on cross-recessed (M8) or slotted (M10) top of threaded bolt with screwdriver.
- Cover 1 installed at the bottom to prevent from scratching the floor available.



No.	Part Name	Material	Finish
①	Shaft	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
②	Base	See Below	

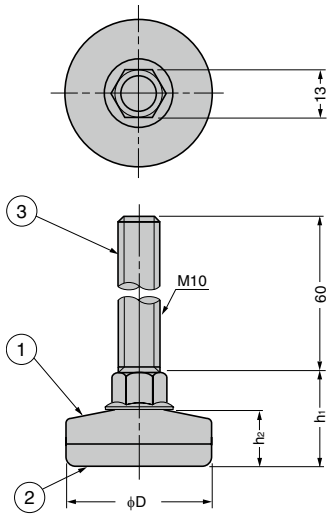
RoHS	CAD	Item Code	Item Name	Base/Material	d	Bolt Top/Type	H	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-060	AD-501-30E	Steel (SPCC)	M8	Cross Recess	30	980	100	17	100	400
G	3D	200-140-580	AD-501-50E	Steel (SPHC)			50			22	100	400
G	3D	200-140-057	AD-501-60E	Steel (SPCC)			60			25	100	400
G	3D	200-140-581	AD-501-70E	Steel (SPHC)			70			28	50	200
G	3D	200-140-582	AD-501-75E				75			30	50	200
G	3D	200-140-583	AD-501-80E				80			31	50	200
G	3D	200-140-056	AD-501-90E	Steel (SPCC)			90			35	50	200
G	3D	200-140-584	AD-501-105E	Steel (SPHC)			105			38	50	200
G	3D	200-140-585	AD-501-120E				120			43	50	200
G	3D	200-140-586	AD-501-130E				130			45	50	200
G	3D	200-140-061	AD-501-30G	Steel (SPHC)	M10	Slot	30	1372	140	20	100	400
G	3D	200-140-063	AD-501-60G				60			37	100	400
G	3D	200-140-590	AD-501-90G				90			50	50	200
G	3D	200-140-591	AD-501-120G				120			65	50	200

Refer to 1 : P.953

LEVELLING GLIDE TN-S

LOAD CAPACITY 1372 N | TEST METHOD 14

●Levelling glide with plastic base to prevent from scratching the floor.



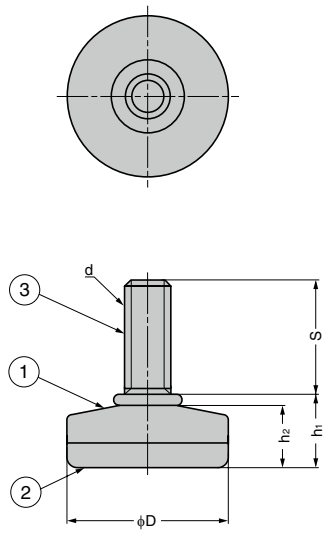
No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Chrome
②	Base	PP	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	D	h1	h2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-249	TN-25S	25	21	12	1372	140	50	50	500
G	3D	200-140-250	TN-35S	35	22.5	13.5			60	30	300
G	3D	200-140-251	TN-45S	43.5					70	20	200

LEVELLING GLIDE TN

LOAD CAPACITY 784 N,980 N | TEST METHOD 14

●Levelling glide with plastic base to prevent from scratching the floor.



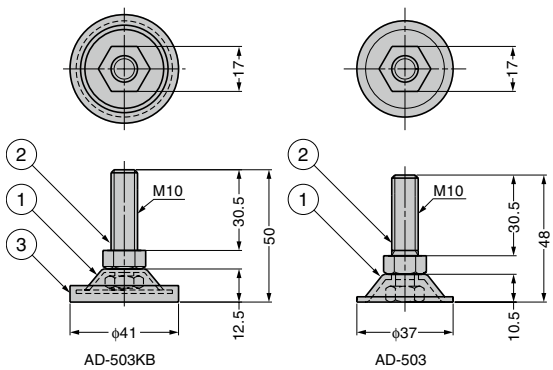
No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Chrome
②	Base	PP	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	d	D	h1	h2	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-246	TN-25	M8	25	15	12	25	784	80	20	100	1000
G	3D	200-140-247	TN-35	M10	35	16.5	13.5		980	100	30	50	500
G	3D	200-140-248	TN-45		43.5			32			40	40	400

LEVELLING GLIDE AD-503KB, AD-503

LOAD CAPACITY 400 N,3000 N

- Hexagon nut at the bottom allows easy installation with impact wrench.
- AD-503KB: With non-slip elastomer cover.



[AD-503KB] With Cover

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate
②	Threaded Bolt	Steel (SWRCH)	(Trivalent)
③	Cover	Elastomer (TPE)	Black

[AD-503] Without Cover

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate
②	Threaded Bolt	Steel (SWCH)	(Trivalent)

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-623	AD-503KB	With Cover	62	–	200
G	3D	200-013-624	☆ AD-503	Without Cover	59	–	200

☆Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

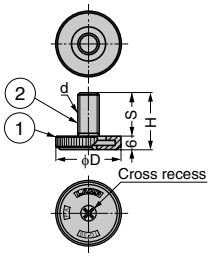
LEVELLING GLIDE TG

LOAD CAPACITY 343~1764 N TEST METHOD 14

- Models with a grippy ethylene vinyl acetate (EVA) base to prevent slipping are newly launched (with “GP” in the item name).
- Thin structure without compromising the cabinet design.
- Base with knurled outer periphery for easy installation.
- Cross-recessed bottom allows easy installation.

[Remarks]

- For products with “GP” in the item name, the base is made of non-slip material. To prevent scraping or peeling off, please do not forcibly drag.



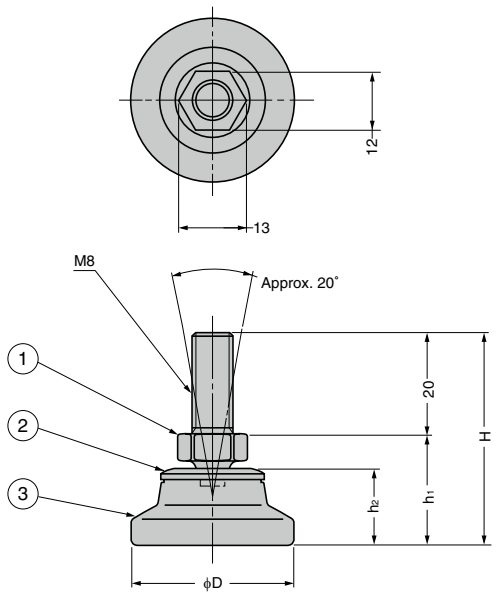
No.	Part Name	Material	Finish/Colour
①	Body	PA, EVA	Dark Grey, White, Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	d	D	H	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-240	TG-20	Dark Grey	M8	20	21	15	980	100	11	120	720
G	3D	200-936-848	TG-20WT	White								120	720
G	3D	200-035-374	TG-20GP-BL	Black					343	35		120	720
G	3D	200-035-375	TG-20GP-WT	White								120	720
G	3D	200-142-501	TG-30	Dark Grey	M10	30	26	20	1470	150	25	100	600
G	3D	200-936-849	TG-30WT	White								100	600
G	3D	200-035-376	TG-30GP-BL	Black					980	100		100	600
G	3D	200-035-377	TG-30GP-WT	White								100	600
G	3D	200-142-520	TG-40	Dark Grey		40			1764	180	36	60	360
G	3D	200-936-850	TG-40WT	White								60	360
G	3D	200-035-378	TG-40GP-BL	Black					687	70		60	360
G	3D	200-035-379	TG-40GP-WT	White								60	360

LEVELLING GLIDE SG With Swivel Function

LOAD CAPACITY 1176 N,1568 N | TEST METHOD 14

- Swivels approximately 20˚ to compensate for uneven floors.



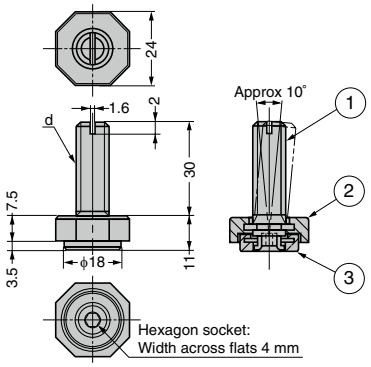
No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate
②	Cap	PA	Dark Grey
③	Base	POM	

RoHS	CAD	Item Code	Item Name	D	H	h1	h2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-142-506	SG-32M8	32	42	22	15.5	1176	120	25	60	480
G	3D	200-142-504	SG-40M8	40	42.5	22.5	16	1568	160	30	35	210

OCTAGONAL LEVELLING GLIDE MK8AD With Swivel Function

LOAD CAPACITY 588 N | TEST METHOD 14

- Swivels approximately 10˚ to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Slotted top of threaded bolt and hexagon socket at the bottom allows easy installation and adjustment.
- Octagonal base allows easy adjustment by hand or wrench (width across flats: 24 mm).
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate (Trivalent)
②	Cover	PA	Black
③	Base	Elastomer (TPO)	

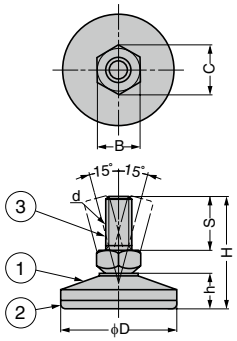
RoHS	CAD	Item Code	Item Name	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-018-798	MK8AD-M8	M8	588	60	18	80	480
G	3D	200-140-039	MK8AD-M10	M10			20	80	480

LEVELLING GLIDE RP With Swivel Function

LOAD CAPACITY 588~6100 N | TEST METHOD 14

- Swivels approximately 30° to compensate for uneven floors.
- Polyamide base.
- Wide variations of available bolts: M6~M14.
- RPS 1 with stainless steel threaded bolt also available.

[Remarks]
- Extended threaded bolt S available by made to order.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Base	PA	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-028	RP-25M6-G	M6	25	31	9.7	14	8	9.2	588	60	11	50	500
G	3D	200-140-029	RP-30M8-G	M8	30	37.5	11.2	19	10	11.5	1078	110	21	35	350
G	3D	200-140-023	RP-30N25	W5/16										35	350
G	3D	200-140-031	RP-40M10-G	M10	40	42.5	13.7	20	13	15	1568	160	38	25	250
G	3D	200-140-032	RP-40N3-G	W3/8										25	250
G	3D	200-140-033	RP-50M12-G	M12	50	51	16	25	17	19.6	3136	320	70	15	150
G	3D	200-140-027	RP-70M14-G	M14	70	66.5	24.7	30	19	22	6100	622	150	10	100

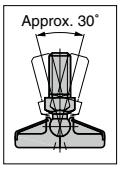
Refer to 1 : P.945

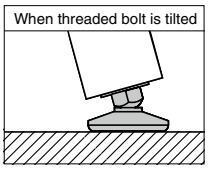
STAINLESS STEEL LEVELLING GLIDE RPS With Swivel Function

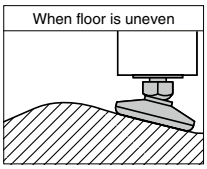
LOAD CAPACITY 588~1568 N | TEST METHOD 14 | SUS

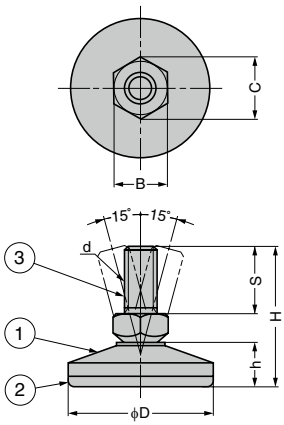
- Swivels approximately 30° to compensate for uneven floors.
- Polyamide base.
- RP 1 with steel threaded bolt also available.

[Remarks]
- Extended threaded bolt S available by made to order.









No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Base	PA	Natural
③	Threaded Bolt	Stainless Steel (SUS303)	Plain

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-026-994	RPS-25M6-G	M6	25	31	9.7	14	8	9.2	588	60	11	50	500
–	3D	200-026-995	RPS-30M8-G	M8	30	37.5	11.2	19	10	11.5	1078	110	21	35	350
–	3D	200-026-996	RPS-40M10-G	M10	40	42.5	13.7	20	13	15	1568	160	38	25	250

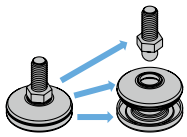
Refer to 1 : P.945

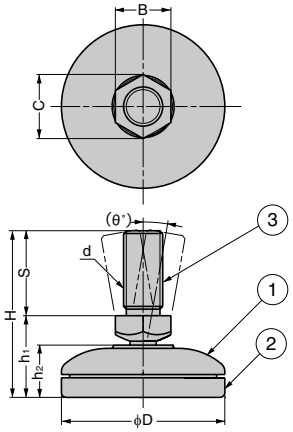
LEVELLING GLIDE EA With Swivel Function

LOAD CAPACITY 490~2646 N

- Parts can be easily separated for recycling purpose.
- Bolt swivels to compensate for uneven floors (see below table for swivel angle).

Parts can be easily separated for recycling purpose.





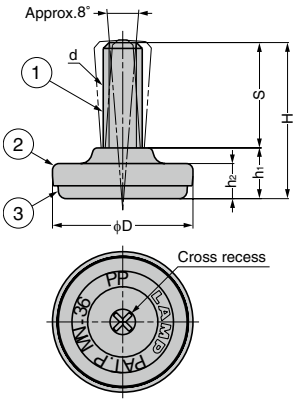
No.	Part Name	Material	Finish/Colour
①	Cover	ABS	Dark Grey
②	Base		
③	Threaded Bolt	Steel (SWRM)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	d	D	H	h1	h2	S	B	C	θ°	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-911	EA-25M6	M6	25	31	14	8.5	17	8	9.2	10	490	50	10	120	1200
G	3D	200-140-912	EA-30M8	M8	30	37.5	17	10.5	20.5	10	11.5	15	980	100	20	80	800
G	3D	200-140-913	EA-40M10	M10	40	42.5	20.5	13	22	13	15	12.5	1274	130	32	40	400
G	3D	200-140-910	EA-50M12	M12	50	51	25	16	26	17	19.6	10	2646	270	60	20	200

LEVELLING GLIDE MN With Swivel Function

LOAD CAPACITY 1176 N,1568 N NSF TEST METHOD 14

- Swivels approximately 8° to compensate for uneven floors.
- Levelling glide with plastic base to prevent from scratching the floor.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Chrome
②	Cover	Stainless Steel (SUS304)	–
③	Base	PP	Natural

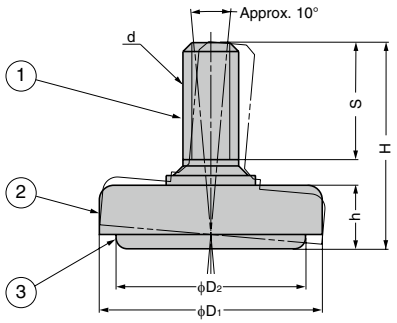
RoHS	CAD	Item Code	Item Name	d	D	H	h1	h2	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-401	MN-25M8	M8	25	40	13	9	27	1176	120	26	100	600
G	3D	200-140-400	MN-25N2.5	W5/16									100	600
G	3D	200-140-403	MN-32M10	M10	32					1568	160	34	80	480
G	3D	200-140-402	MN-32N3	W3/8									80	480
G	3D	200-140-405	MN-36M10	M10	36							39	60	360
G	3D	200-140-404	MN-36N3	W3/8									60	360
G	3D	200-140-407	MN-40M10	M10	40							42	50	300
G	3D	200-140-406	MN-40N3	W3/8									50	300
G	3D	200-140-409	MN-50M12	M12	50	50	16	11	34			77	20	120
G	3D	200-140-408	MN-50N4	W1/2									20	120

STAINLESS STEEL LEVELLING GLIDE MKPS With Swivel Function

LOAD CAPACITY 1960~3920 N | NSF | TEST METHOD 14 | SUS

- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]



No.	Part Name	Material	Finish
①	Body	Stainless Steel	Plain
②	Cover	Stainless Steel	Satin
③	Base	(SUS304)	Plain

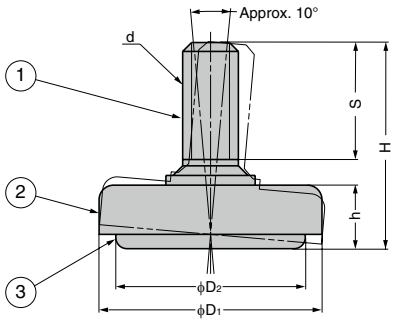
RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-320	MKPS-32M10	M10	32	27	36	11	21	1960	200	50	60	480
G	3D	200-141-321	MKPS-32N3	W3/8									60	480
G	3D	200-141-322	MKPS-40M10	M10	40	34	37	11.4		3136	320	70	40	320
G	3D	200-141-323	MKPS-40N3	W3/8									40	320
G	3D	200-141-324	MKPS-50M10	M10	50	44	37.5	11.5		3528	360	95	30	240
G	3D	200-141-325	MKPS-50N3	W3/8									30	240
–	3D	200-141-326	MKPS-60M12	M12	60	54	51.5		35	3920	400	140	15	120

STAINLESS STEEL LEVELLING GLIDE MKRS With Swivel Function

LOAD CAPACITY 392~980 N | TEST METHOD 14 | SUS

- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Base]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel	Plain
②	Cover	Stainless Steel (SUS304)	Satin
③	Base	As below	Black

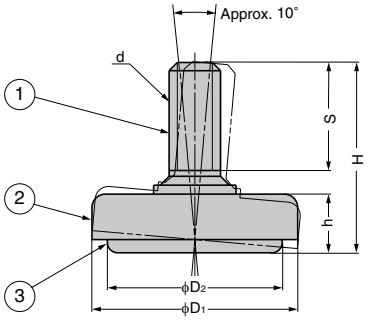
RoHS	CAD	Item Code	Item Name	Base	d	D1	D2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-141-328	MKRS-32M10	Elastomer (TPO)	M10	32	27	36	11	21	392	40	50	60	480
–	3D	200-141-329	MKRS-32N3		W3/8									60	480
–	3D	200-141-330	MKRS-40M10		M10	40	34	37	11.4		784	80	70	40	320
–	3D	200-141-331	MKRS-40N3		W3/8									40	320
–	3D	200-141-332	MKRS-50M10		M10	50	44	37.5	11.5		980	100	90	30	240
–	3D	200-141-333	MKRS-50N3		W3/8									30	240
–	3D	200-141-334	MKRS-60M12	Nitrile Rubber (NBR)	M12	60	54	51.5		35			150	15	120
–	3D	200-141-335	MKRS-70M14		M14	70	64						200	15	120

LEVELLING GLIDE MKP With Swivel Function

LOAD CAPACITY 1176 N,1568 N | TEST METHOD 14

- Swivels approximately 10˚ to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]



No.	Part Name	Material	Finish
①	Body	Steel (SWCH)	Chrome
②	Cover	Steel (SPCC)	
③	Base		

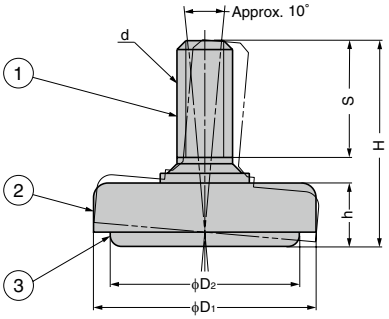
RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-503	MKP-32M10	M10	32	27	36	11	21	1568	160	44	80	480
G	3D	200-140-090	MKP-32N3	W3/8									80	480
G	3D	200-140-094	MKP-40M10	M10	40	34	37	11.4				65	50	300
G	3D	200-140-091	MKP-40N3	W3/8									50	300
G	3D	200-140-095	MKP-50M10	M10	50	44	37.5	11.5		1176	120	90	20	120
G	3D	200-140-092	MKP-50N3	W3/8									20	120
G	3D	200-141-100	MKP-60M12	M12	60	54	51.5		35	1568	160	155	15	120
G	3D	200-141-101	MKP-70M14	M14	70	64						195	15	120

LEVELLING GLIDE MKR With Swivel Function

LOAD CAPACITY 392~784 N | TEST METHOD 14

- Levelling glide with elastomer base to prevent from skidding and scratching the floor.
- Swivels approximately 10˚ to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SWCH)	Chrome
②	Cover	Steel (SPCC)	
③	Base	As below	Black

RoHS	CAD	Item Code	Item Name	Base	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-141-513	MKR-32M10	Elastomer (TPO)	M10	32	27	36	11	21	392	40	41	80	480
–	3D	200-140-096	MKR-32N3		W3/8									80	480
–	3D	200-141-514	MKR-40M10		M10	40	34	37	11.4		588	60	60	50	300
G	3D	200-140-097	MKR-40N3		W3/8									50	300
–	3D	200-141-515	MKR-50M10		M10	50	44	37.5	11.5				87	20	120
–	3D	200-140-098	MKR-50N3		W3/8									20	120
G	3D	200-141-103	MKR-60M12	Nitrile Rubber (NBR)	M12	60	54	51.5		35	784	80	150	15	120
–	3D	200-141-102	MKR-70M14		M14	70	64						215	15	120

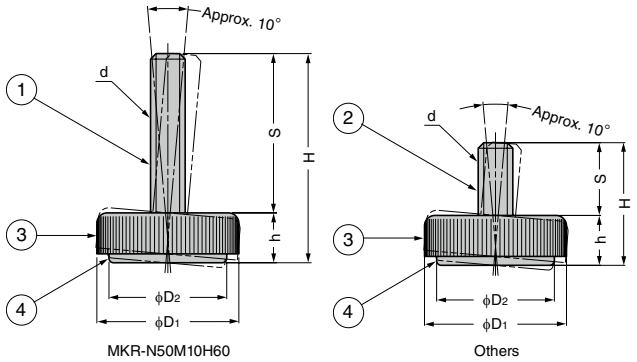
LEVELLING GLIDE MKR-N With Swivel Function

LOAD CAPACITY 588~784 N

- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Remarks]

- If the levelling glide can not be turned by hand, slightly lift it to adjust.



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
②			Chrome
③	Cover	PA	Black
④	Base	Elastomer (TPO)	

RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-141-300	MKR-N32M10	M10	33	27	36	14	22	588	60	35	80	480
G	3D	200-141-301	MKR-N32N3	W3/8									80	480
–	3D	200-141-302	MKR-N40M10	M10	41	34	37	15		686	70	45	50	300
–	3D	200-141-303	MKR-N40N3	W3/8								40	50	300
–	3D	200-141-304	MKR-N50M10	M10	51	44	37.5	15.5		784	80	60	20	120
–	3D	200-140-100	MKR-N50M10H60				60		44.5				20	120
–	3D	200-141-305	MKR-N50N3	W3/8			37.5		22			55	20	120

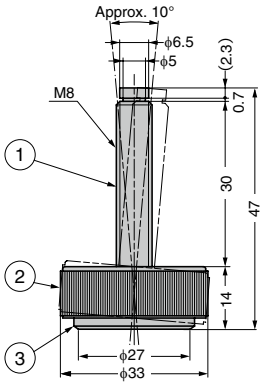
LEVELLING GLIDE MKR-N32DG32 With Swivel Function

LOAD CAPACITY 454 N

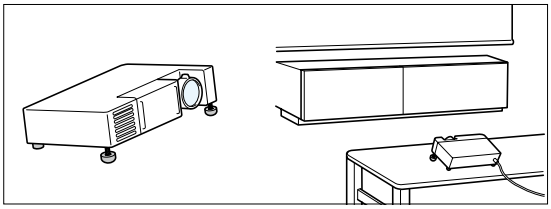
- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Base with knurled outer periphery for easy installation.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Remarks]

- If the levelling glide can not be turned by hand, slightly lift it to adjust.



[Application Example]



No.	Part Name	Material	Finish/Colour
①	Body	Steel	Chrome
②	Cover	PA	Dark Grey
③	Base	Elastomer (TPO)	Black

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-149-228	MKR-N32DG32	Dark Grey	454	46	31	50	300

SELF-LEVELLING GLIDE SAJ

LOAD CAPACITY 490 N

- Gel inside adjusts automatically to uneven floor.
- Easy to rearrange table, etc.
- Self adjustment up to 3mm or 6mm.
- Easy to replace existing levelling glides to SAJ.

[Specifications]

- Operating temperature: -20℃~75℃

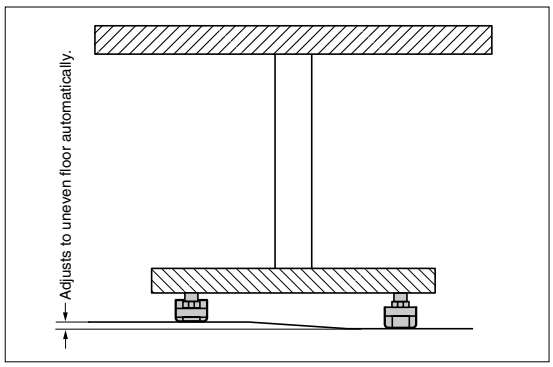
[Remarks]

- Special wrench (sold separately) is necessary for installation.
- Self-levelling glide is used for absorbing impact caused by the table rattle. It is not intended to keep the table horizontal. Slight sloping may occur depending on the inclined surface of the floor.

[Sold Separately]

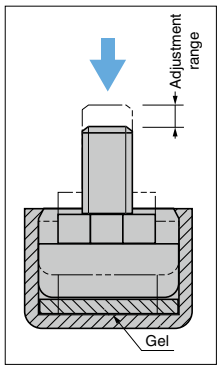
- Wrench SAJ

[Installation]

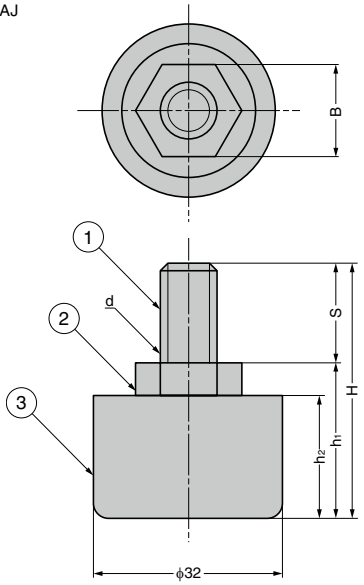


Rattle caused by uneven floor can be automatically eliminated.

[Self Adjustment]



[SAJ-Wrench] Sold Separately



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	※Coloured Zinc Chromate/SAJ30-10
②	Hex Nut		※Clear Zinc Chromate/SAJ30-12
③	Cover	PE	Black

※The finishes will be clear zinc chromate (trivalent) when the current stock runs out.

[Wrench] Sold Separately

RoHS	CAD	Item Code	Item Name	Nominal	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-390	SAJ10	10	1.6	18	100	–
G	3D	200-140-391	SAJ13	13	2.0	19	100	1000
G	3D	200-140-392	SAJ14	14		20	50	–
G	3D	200-140-393	SAJ17	17	2.2	21	80	800

[Body]

RoHS	CAD	Item Code	Item Name	Adjustment Range	d	H	h_1	h_2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Appropriate Table Weight kg 4 pcs	5 pcs	6 pcs	Wrench	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-149-309	SAJ30-10N2.5	3	W5/16	33	24	19	9	14	490	50	7~12	8~15	10~18	SAJ14	26	40	400
–	3D	200-149-308	SAJ30-10N3		W3/8	37	25		12	17						SAJ17	36	40	400
–	3D	200-149-307	SAJ30-10M6		M6	34	24		10	10						SAJ10	21	40	400
–	3D	200-149-306	SAJ30-10M8		M8	33			9	13						SAJ13	25	40	400
G	3D	200-149-305	SAJ30-10M10		M10	37	26		11	17						SAJ17	38	40	400
–	3D	200-149-304	SAJ30-12N2.5		W5/16	33	24		9	14			12~24	15~30	18~36	SAJ14	26	40	400
–	3D	200-149-303	SAJ30-12N3		W3/8	37	25		12	17						SAJ17	36	40	400
–	3D	200-149-302	SAJ30-12M6		M6	34	24		10	10						SAJ10	21	40	400
G	3D	200-149-301	SAJ30-12M8		M8	33			9	13						SAJ13	25	40	400
–	3D	200-149-300	SAJ30-12M10		M10	37	26		11	17						SAJ17	38	40	400
–	3D	200-140-105	SAJ30-12-6N2.5	6	W5/16	42	31	24		14						SAJ14	29	40	400
–	3D	200-140-104	SAJ30-12-6N3		W3/8					17						SAJ17	39	40	400
–	3D	200-140-103	SAJ30-12-6M6		M6	44	32		12	10						SAJ10	29	40	400
–	3D	200-140-102	SAJ30-12-6M8		M8	42			10	13						SAJ13	22	40	400
–	3D	200-140-101	SAJ30-12-6M10		M10	41	31			17						SAJ17	41	40	400

LEVELLING GLIDE SG-CGP40 With Swivel Function

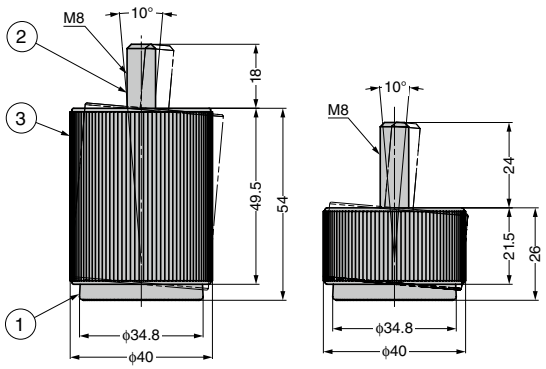
LOAD CAPACITY 588 N | TEST METHOD 14

SG-CGP40M8L54 SG-CGP40M8L26

- The body of the levelling glide can tilt up to approximately 10°, enabling it to hold level even on slanting floors.
- Separated body and base structure enables height to be adjusted by rotating the body even while a load is applied.
- The base is made from slip-resistant ethylene-vinyl acetate (EVA).

[Remarks]

- The base is made from slip-resistant material. Do not forcibly drag this product, as it may cause this material to wear off or peel.
- If the body cannot be rotated by hand, lift the mounted item slightly and try adjusting again.



SG-CGP40M8L54 SG-CGP40M8L26

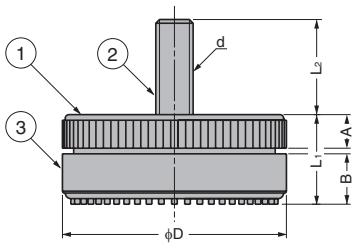
No.	Part Name	Material	Finish/Colour
①	Base	Ethylene-vinyl Acetate (EVA)	Blast Finish
②	Screw Part	Steel (SWCH)	Black Chromate Finish (Trivalent)
③	Cover	Polyamide (PA)	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)
G	3D	200-042-136	SG-CGP40M8L26	588	60	38
G	3D	200-042-137	SG-CGP40M8L54			60

LEVELLING GLIDE A800

LOAD CAPACITY 588 N

- Body and base can be rotated separately, making it possible to adjust after installation.
- Levelling glide with plastic base to prevent from scratching the floor.

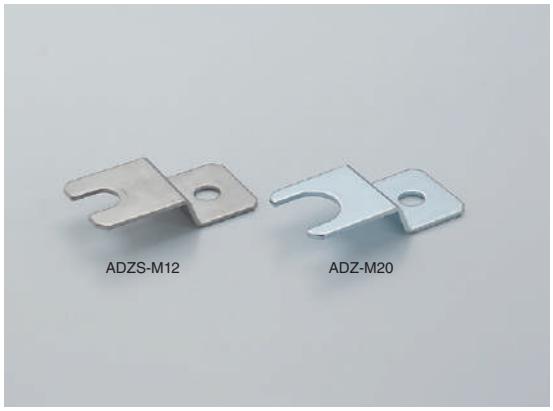


No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
③	Base	PUR	Black

RoHS	CAD	Item Code	Item Name	L_1	L_2	D	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-532	A800-40L	23	24	40	M8	588	60	35	200	–
G	3D	200-140-530	A800-40HL	54	32					71	120	–
G	3D	200-140-533	A800-50L	24	25.5	50	M10			58	160	–
G	3D	200-140-534	A800-50HL	54	34					113	60	–
G	3D	200-140-531	A800-60L	25	26	60				69	100	–

FIXING PLATE FOR LEVELING GLIDES ADZS, ADZ

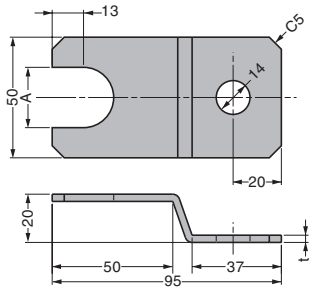
SUS



- 2 types of materials: Steel and stainless steel (SUS304) with excellent rust resistance.
- Easy installation by inserting on the hexagon nut (of the Levelling glide) and fixing to floor with an anchor bolt.
- For M12, M16, M20 levelling glide.

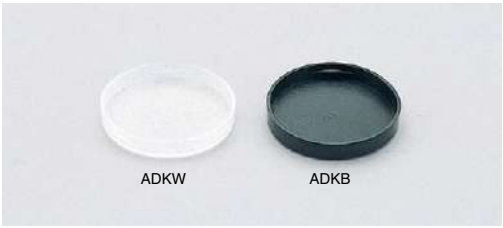
[Applications Example]

- Machine tools, conveyor belts, any equipment with vibration, etc.

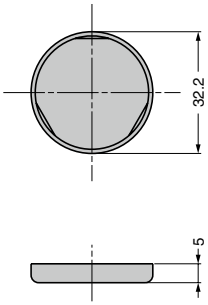


RoHS	CAD	Item Code	Item Name	A	t	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-243	ADZS-M12	19	3	Stainless Steel (SUS304)	Barrel Polished	104	50	100
G	3D	200-141-244	ADZS-M16	24.5				100	50	100
G	3D	200-141-245	ADZS-M20	30.5				96	50	100
–	3D	200-141-240	ADZ-M12	19	3.2	Steel (SPHC)	Trivalent Chromate (Coloured)	115	50	100
–	3D	200-141-241	ADZ-M16	24.5				110	50	100
–	3D	200-141-242	ADZ-M20	30.5				106	50	100

COVER FOR AD-501, AD-502 ADKW, ADKB



- Installed on the base of levelling glides AD-501 1, AD-502 2 and AD-502-P2 3 to prevent from scratching the floor.

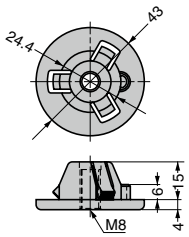


RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-088	ADKW	PE	Natural (Semi-transparent)	1	250	2500
G	3D	200-140-089	ADKB		Black		250	2500

Refer to 1 : P.941, 2 3 : P.940

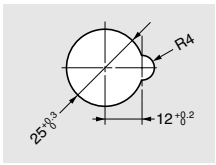
SNAP-IN GLIDE BASE AD-438 For M8

LOAD CAPACITY 490 N

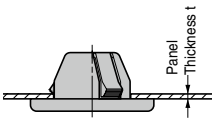


- For sheet metal.
- Easy installation simply by pushing into the mounting hole.

[Cut Out Dimensions]



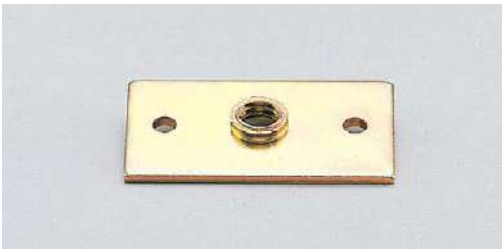
[Installation]

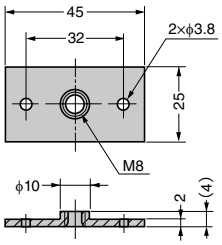


RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-014-819	AD-438	POM	Grey	0.8~1.6	490	50	11	1000	–

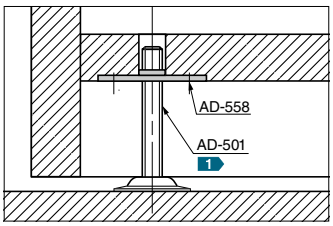
※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

GLIDE BASE AD-558 For M8





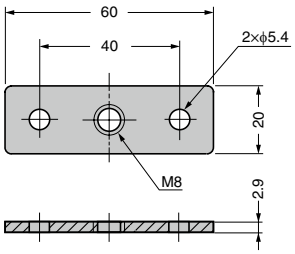
[Installation]



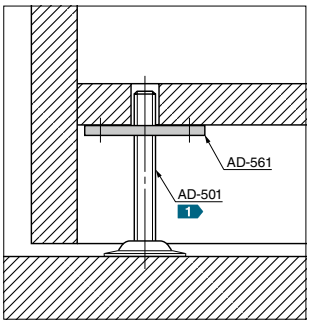
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-140-080	AD-558	Steel (SPCC)	Coloured Zinc Chromate	16	250	1000

Refer to 1 : P.941

GLIDE BASE AD-561 For M8



[Installation]

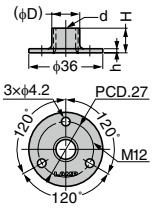


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	200-140-068	AD-561	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	30	500

Refer to 1 : P.941

STAINLESS STEEL GLIDE BASE AP36

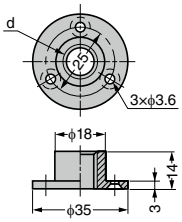
SUS



AP36-M12 shown.

RoHS	CAD	Item Code	Item Name	Material	Finish	d	D	h	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-501	AP36-M8	Stainless Steel (SUS304)	Barrel Polished	M8	9.6	1.5	12	13	100	1000
G	3D	200-140-502	AP36-M10			M10	11			13	100	1000
G	3D	200-140-503	AP36-N3			3/8-16UNC	10.9			12	100	1000
G	3D	200-140-504	AP36-M12			M12	13.9	2	11.5	19	80	800

GLIDE BASE AD-559

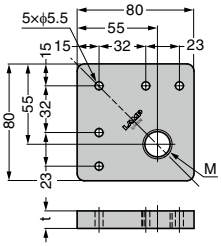


RoHS	CAD	Item Code	Item Name	Material	Finish	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-310	AD-559M12	Zinc Alloy (ZDC)	Clear Zinc Chromate	M12	26.5	100	400
G	3D	200-141-311	AD-559M14			M14	23.5	100	400
G	3D	200-140-073	AD-559U1/2			1/2-20UNF	24.6	100	400

GLIDE BASE AS-AJ

AS SUS

- Used for installing levelling glides and threaded bolt type casters to aluminium frame.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.



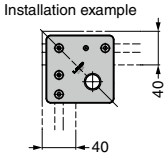
RoHS	CAD	Item Code	Item Name	M	t	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-455	AS-AJ-M10	M10	6	Stainless Steel (SUS430)	Barrel Polished	278	50	–
G	3D	200-140-456	AS-AJ-M12	M12				276	50	–
G	3D	200-140-457	AS-AJ-M16	M16	9			414	30	–

AS Parts Set for Installing to Aluminium Frame

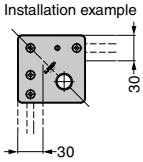
Please refer to the series introduction page 1 for details about AS series.

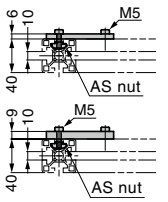
[Dimensions]

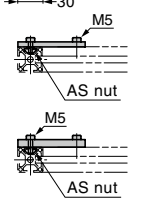
40×40 mm aluminium frame Installation example



30×30 mm aluminium frame Installation example

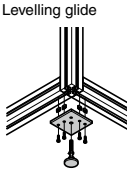




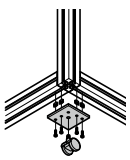


[Installation]

Levelling glide



Caster



Refer to 1 : P.20

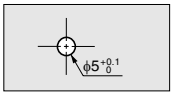
[AS Parts Set] Parts set of glide base, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	200-041-678	AS-AJ-M10-8	Groove Width 8 mm	Glide Base AS-AJ-M10 : 1 pc AS Nut AS-8M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-679	AS-AJ-M10-10	Groove Width 10 mm	Glide Base AS-AJ-M10 : 1 pc AS Nut AS-10M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-680	AS-AJ-M12-8	Groove Width 8 mm	Glide Base AS-AJ-M12 : 1 pc AS Nut AS-8M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-681	AS-AJ-M12-10	Groove Width 10 mm	Glide Base AS-AJ-M12 : 1 pc AS Nut AS-10M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-682	AS-AJ-M16-8	Groove Width 8 mm	Glide Base AS-AJ-M16 : 1 pc AS Nut AS-8M5 : 5 pcs M5×20 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-683	AS-AJ-M16-10	Groove Width 10 mm	Glide Base AS-AJ-M16 : 1 pc AS Nut AS-10M5 : 5 pcs M5×20 Hexagon Socket Head Cap Screw : 5 pcs	–

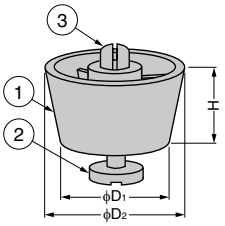
CASE FOOT (A TYPE) FF

- Easy installation simply by spreading out rivet with threaded pin.
- Detachable with flat-head screwdriver.

[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	Ethylene-vinyl acetate (EVA)	Black
②	Threaded Pin	POM	
③	Rivet	PA	



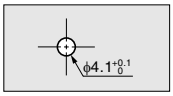
RoHS	CAD	Item Code	Item Name	D1	D2	H	Board Thickness	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	200-038-085	☆FF-001-P20	20	24	14	1~2.3	3.4	20	10	–
G	3D	200-038-087	★FF-004-P20	18	20	10		2.2	20	10	–

★Discontinued ☆Limited inventory, contact sales associate for details.

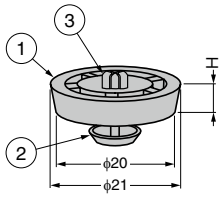
CASE FOOT (B TYPE) FF

- Easy installation simply by spreading out rivet with threaded pin.

[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	Ethylene-vinyl acetate (EVA)	Black
②	Pin	PA	
③	Rivet		



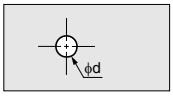
RoHS	CAD	Item Code	Item Name	H	Board Thickness※1	Weight (g)	Pack (pcs)	Box (pack)	Carton(pack)
G	3D	200-038-088	FF-005-P20	4.2	0.8~1.8	1.2	20	25	–
G	3D	200-038-090	FF-008-P20	6		1.5	20	10	–
G	3D	200-038-091	FF-009-P20	8	0.8~2	1.9	20	10	–

※1Models suitable for other thicknesses available by made to order.

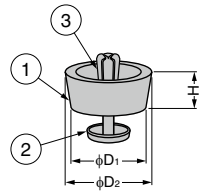
CASE FOOT (MINI TYPE) FF

- Easy installation simply by spreading out rivet with threaded pin.

[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	Ethylene-vinyl acetate (EVA)	Black
②	Pin	PA	
③	Rivet		

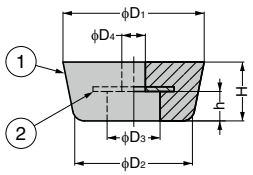


RoHS	CAD	Item Code	Item Name	D1	D2	H	d	Board Thickness※1	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	200-038-086	FF-003-P20	13.5	14.2	5.5	3.1 +0.1 0	0.8~1	0.7	20	25	–
G	3D	200-038-089	FF-006-P20	14	15	6	4.1 +0.1 0	1~2	0.9	20	25	–
G	3D	200-038-092	FF-010-P20			9			1.2	20	25	–
G	3D	200-038-093	FF-013-P20	10	10.8	4	3.6 +0.05 0	0.6~1	0.3	20	50	–

※1Models suitable for other thicknesses available by made to order.

RUBBER FOOT K

- With washer.
- Hardness: 65



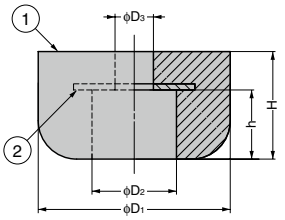
No.	Material	Colour
①	Styrene-Butadiene Rubber (SBR)	Black
②	Stainless Steel (SUS430)	–

RoHS	CAD	Item Code	Item Name	D1	D2	H	D3	D4	h	Weight (g)	Pack(pcs)	Box (pack)	Carton (pack)
G	3D	200-038-123	K-95-P100	9	7	5	4	2	3	0.5	100	1	5
G	3D	200-038-094	K-10-P100	10	9		5	3			100	1	5
G	3D	200-038-095	K-12-P100	12	8	9			4	1	100	1	5
G	3D	200-038-096	K-15-P100	15	14	8	6		5	1.5	100	1	5
G	3D	200-038-097	K-1510-P100		10	10	5				100	1	5
G	3D	200-038-098	K-16-P100	16	14		6			2.5	100	1	5
G	3D	200-038-099	K-18-P100	18	15	11	7	4	7	3	100	1	5
G	3D	200-038-103	K-209-P100	20	16	9	3	5			100	1	5
G	3D	200-038-101	K-2010-P100			10	8	4	3.5	100	1	5	
G	3D	200-038-100	K-20-P100			12	7	4	7	4	100	1	5
G	3D	200-038-102	K-2017-P100		15	17		3	8	5.5	100	1	5
G	3D	200-038-104	K-22-P100	22	18	24			11	10	100	1	5
G	3D	200-038-105	K-23-P100	23	19	14		4	5	6	100	1	5
G	3D	200-038-106	K-2320-P100		20	20	8		10	9.5	100	1	5
G	3D	200-038-107	K-24-P100	24		10			5	5.5	100	1	5
G	3D	200-038-108	K-259-P100	25	19	9	10	5		5	100	1	5
G	3D	200-038-109	K-26-P100	26	20	15	9	4	10	8	100	1	5
G	3D	200-038-110	K-28-P100	28	22	18	12		11	11	100	1	5
G	3D	200-038-111	K-29-P100	29	24	15	14		10	10	100	1	5
G	3D	200-038-112	K-30-P100	30		19				13.5	100	1	5
G	3D	200-038-113	K-3215-P100	32	28	15		5	5	14	100	1	5
G	3D	200-038-114	K-3220-P100		26	20	15		10	16.5	100	1	5
G	3D	200-038-115	K-3225-P100		28	25	14		9	22.5	100	1	5
G	3D	200-038-116	K-34-P100	34	27	18	17		10	16	100	1	5
G	3D	200-038-118	K-3617-P100	36	20	17		6	9	16.5	100	1	5
G	3D	200-038-117	K-36-P100		30	22	12	5	12	25	100	1	5
G	3D	200-038-119	K-38-P100	38	32	24			13	31	100	1	5
G	3D	200-038-120	K-40-P100	40	30	22	14		9	28	100	1	5
G	3D	200-038-121	K-45-P50	45	35	27	12		12	46	50	1	5
G	3D	200-038-122	K-63-P50	63	48	26	14	7	15	87.5	50	1	5

RUBBER FOOT SK

- With washer.
- Hardness: 65

No.	Material	Colour
①	Styrene-Butadiene Rubber (SBR)	Black
②	Stainless Steel (SUS430)	Plain



RoHS	CAD	Item Code	Item Name	D1	D2	D3	H	h	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	200-038-187	SK-13-P100	13	6	3	5	2	1	100	1	5
G	3D	200-038-188	SK-156-P100	15	7		6	3	1.5	100	1	5
G	3D	200-038-189	SK-1910-P100	19			10	5	3.5	100	1	5
G	3D	200-038-190	SK-1912-P100		9	4	12	7	4.5	100	1	5
G	3D	200-038-191	SK-2519-P100	25	11	5	14	9	7	100	1	5

BASE HS-550

Paint/White

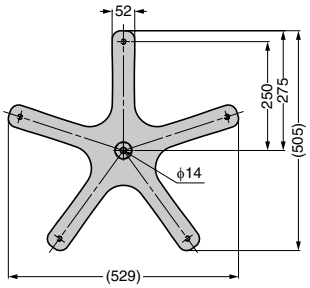
Polished

- Flat surface with stain resistance.
- 2 finishes (White & Polished) available.
- Recommended caster: M10 type of FA55N 1 for HS-550M10, EX-100N 2 for HS-550M12.
- For ϕ38.1 pipe.
- Use with optional weight for base HSW-2 to prevent falling. Up to 5 pcs can be installed.

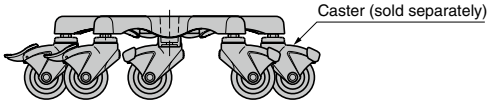
[Applications]
- Medical equipment, OA equipment, household appliances, beauty equipment, etc.

[Remarks]
- When using casters with swivel lock, please take anti-loosening measures before installing the casters.
- Do not use for chairs.

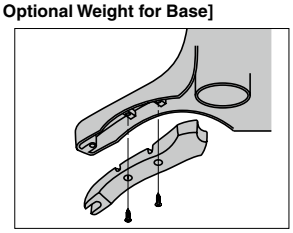
[Sold Separately]
- Caster
- Weight for base



[Use with Caster]

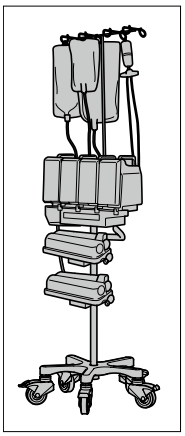


[Installation of Optional Weight for Base]



※Screws not included. Please prepare separately.
Recommended Screw: Hexagon socket head cap screw M5×15

[Application Example]



[Caster] Sold Separately

FA55N
Threaded bolt type 1

EX-100N
Threaded bolt type 2

[Weight for Base] Sold Separately

[Weight for Base] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-021-233	HSW-2	Cast Iron (FC)	Paint/White	Approx. 1.9	–	10

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	d	Weight (g)	Box (units)	Carton (pcs)
G	3D	200-013-966	HS-550M10W	Aluminium Alloy (ADC)	Paint/White	M10	1773	5	1
G	3D	200-012-545	HS-550M12W			M12	2200	5	1
G	3D	200-017-128	HS-550M10M		Polished	M10	2400	5	–
G	3D	200-014-984	HS-550M12M			M12	2200	5	–

Refer to 1 : P.906, 2 : P.887

BASE HO500

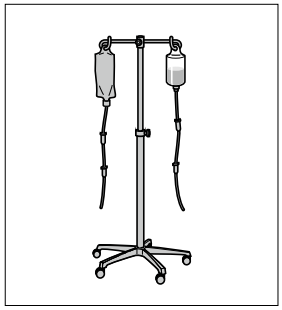
- Light and tough aluminium body.
- For ϕ50.8 pipe.
- Can be used for ϕ25, ϕ32, ϕ38 pipe with spacer (sold separately).

[Applications]
- Medical equipment, OA equipment, household appliances, etc.

[Remarks]
- Do not use for chairs with backrest.
- When using a spacer, fix it with fixing plate and screw from the bottom of the body. (Screw not included.)
- The form of spacer is tapered. Please use a hammer to press and fit the spacer as necessary.

[Sold Separately]
- Spacer HOS
- Fixing plate HOS-Z
- Caster

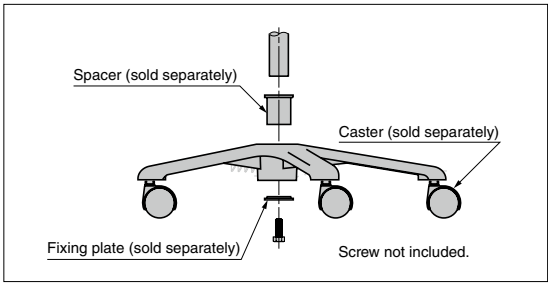
[Application Example]

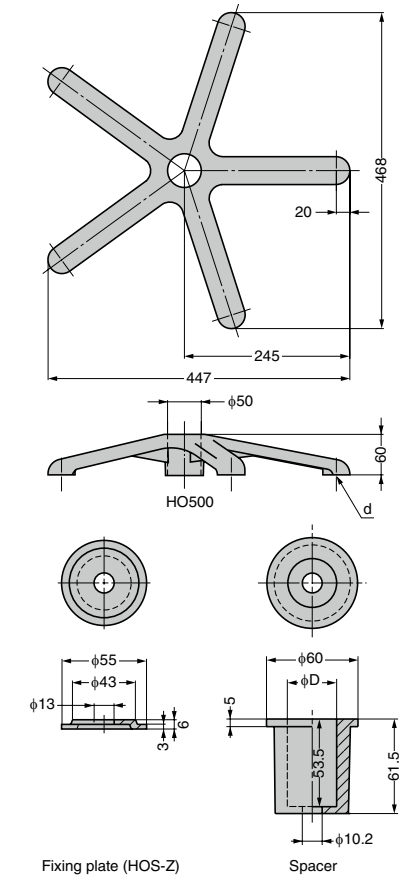


[Spacer] Sold Separately

Caster (sold separately)

[Installation]





Fixing plate (HOS-Z) Spacer

[Body] Caster, spacer and fixing plate are sold separately.

RoHS	CAD	Item Code	Item Name	d	Material	Finish	Custom Finish	Weight (g)	Box (units)	Carton (units)
G	3D	200-881-326	HO500N3	W3/8	Aluminium Alloy	Polished	Enamel	1297	5	–
G	3D	200-025-048	HO500M10	M10			Finish	1269	5	–

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-320	HOS-25	PA	Black	25.7	102	100	–
G	3D	200-881-321	HOS-32			32.5	85	100	–
G	3D	200-881-322	HOS-38			38.6	62	100	–

[Fixing Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-323	HOS-Z	Stainless Steel (SUS304)	Barrel Polished	50	500	–

BASE BJ610

Use with caster (sold separately) shown.

- Reinforced polyamide body with excellent durability and resistance against chemicals, weather and wear.
- For ϕ50.8 pipe.
- Can be used for ϕ25, ϕ32, ϕ38 pipe with spacer (sold separately).

[Applications]

- Medical equipment, OA equipment, household appliances, etc.

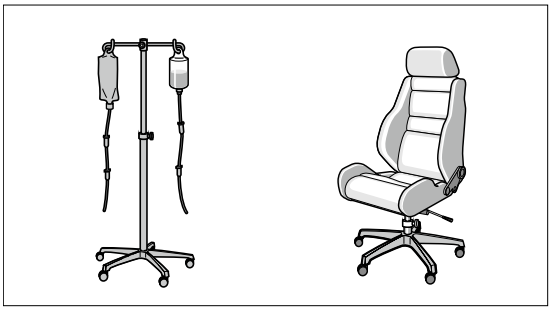
[Remarks]

- When using a spacer, fix it to the bottom of the pipe with fixing plate and screw.
- Screw not included.

[Sold Separately]

- Spacer HOS
- Fixing plate HOS-Z
- Caster CTW38

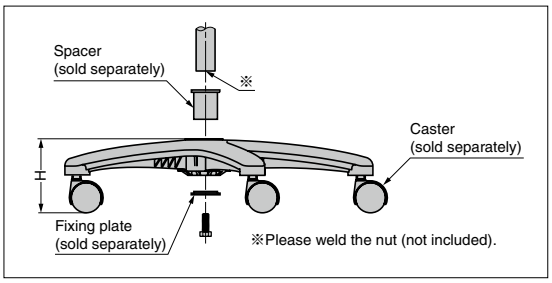
[Application Example]

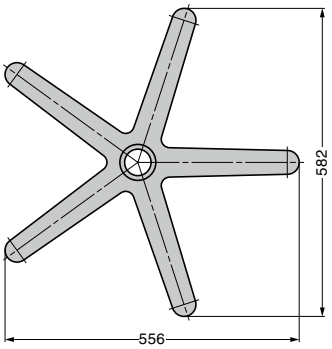


[Spacer] Sold Separately

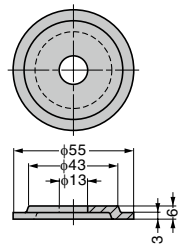
Caster (sold separately)

[Installation]

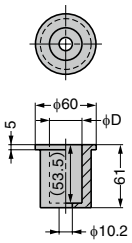




BJ610



Fixing plate (HOS-Z)



Spacer

[Body] Caster, spacer and fixing plate are sold separately.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (units)	Carton (units)
–	3D	200-881-319	BJ610	Reinforced Polyamide	Dark Grey	1770	10	–

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-320	HOS-25	PA	Black	25.7	102	100	–
G	3D	200-881-321	HOS-32			32.5	85	100	–
G	3D	200-881-322	HOS-38			38.6	62	100	–

[Fixing Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-323	HOS-Z	Stainless Steel (SUS304)	Barrel Polished	50	500	–

[Caster] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Wheel Dia.	H	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-881-324	CTW38	PA/Urethane	Black	50	126	119	100	–

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- View product introduction video
- Browse digital web catalogue Refer to Back Cover
- Use product selection tool Refer to Back Cover
- Download installation instructions

SUGATSUNE **Search**

LAMP®

MISCELLANEOUS

Sugatsune offers a variety of products from bearings, shelf standards and other general-purpose items to belt reel partition, glass point fix and multi-purpose lids, etc.

SUGATSUNE

June 2022

INDEX

AS Series Corner Caps

P.1003

- "AS series" is an innovative system used for installing various functional parts such as hinges, catchs and door hardware to aluminium frame.

- Parts for connecting aluminium frames also available.
  For details on aluminium frame support system AS series, refer to P.20.

Bearings

P.966~

- Numerous types are available, such as non-magnetic stainless steel bearings, anti-rust resin bearings, standard plastic bearings, ect.

Non-magnetic Stainless Steel Bearing
P.966

Medium Duty Anti-rust Resin Bearing KSUS
P.968

Anti-rust Resin Bearing CD, MCD, RCD
P.968~P.969

Steel Bearing
Heavy Duty Type
P.970

Medium Duty Bearing DT
Steel Insert Type
P.971

Medium Duty Bearing IDS
Steel Insert Type
P.972

Plastic Bearing
P.973~

Plastic Roller
P.978

Swivels

P.979

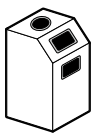
- Ideal for rotary workbench.

Multi-purpose Lids

P.980~

- Total 50 types. A wide variety of types are available, such as those with/without Door, and those with top mount / side mount / inclined mount, etc. All types are made of stainless steel with a sense of quality.
- There is also a product list by size (P.980)

Without Lid



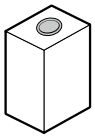
Ring Cover For Refuse Box
AN-DH
AN-LH
P.982

Square Cover For Refuse Box
AN-KH
P.983

Multi-Purpose Grommet
Slim Type
AN-SH026-HL
P.990

Square Cover For Refuse Box
AZ-ND
P.989

With Lid & Top Mount



Multi-purpose Lid (W/Damper)
AD-GD
Soft Close
P.981

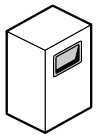
Multi-purpose Lid
AD-DH015-HL
P.981

Multi-purpose Lid (W/Damper)
AD-KH
Soft Close
P.983

Multi-purpose Lids

P.980~

With Lid & Side Mount



Touchless Multi-purpose Lid (W/Lid)
AZ-AT
Soft Close
P.984

Multi-purpose Lid (W/Damper) With Lid / key
AZ-GD230L-HL
Soft Close
P.985

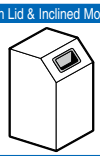
Multi-purpose Lid (W/Damper)
AZ-GD
Soft Close
P.986

Multi-purpose Lid (W/Damper) Back Mount Type
AZ-GD231-HL
Soft Close
P.987

Multi-purpose Lid (W/Handle)
AZ-HD
P.988

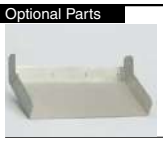
Multi-purpose Lid (Double Door)
AZ-DD310-HL
P.989

With Lid & Inclined Mount



Multi-purpose Lid (W/Damper) Inclined Mount Type
AZ-GD232-HL
Soft Close
P.987

Optional Parts



Guide for Multi-purpose Lid
AZ-SLP
P.988

Funnels

P.990~P.991

Stainless Steel Funnel
AE-DH
P.990

Hose for AE-DH
AE-DH4540-1
P.991

Strainer for AE-DH
AE-DH020K-45
P.991

●For throwing away leftovers like drinks.

Ventilators

P.992~

Oval Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	APD-KH66	610	66×28	62.5×24.6	P.992
	APD-KH170	1690	176×41	167.5×35	
	APD-KH260	3150	260×70	250×60	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	SA-D150	≒1880	150×40	143.5×34	P.996
	SA-D200	≒3800	200.5×50	194×44	

Round Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	SA-M37	≒ 290	ϕ36	ϕ31.5	P.996
	SA-M45	≒ 570	ϕ46	ϕ41.5	
	SA-M60	≒1000	ϕ60	ϕ53.5	
	SA-M85	≒2150	ϕ85	ϕ77.8	
	SA-M120	≒4480	ϕ120	ϕ110.5	
	ASM-37	≒ 65	ϕ36	ϕ30.5	P.997
	ASM-45	≒ 104	ϕ46	ϕ40.5	
	ASM-60	≒ 224	ϕ60	ϕ52.5	
	ASM-85	≒ 478	ϕ85	ϕ77	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	AST-45	≒ 65	ϕ45	–	P.997
	AST-55	≒ 104	ϕ55	–	
	AST-70	≒ 224	ϕ70	–	
	AST-100	≒ 478	ϕ100	–	
	481311	≒1835	ϕ102	ϕ77~80	P.999
	481312	≒2860	ϕ127	ϕ95~100	
	481440	≒ 750	ϕ102	ϕ77~80	P.999
	481430	≒1250	ϕ127	ϕ95~100	
	487220	≒3055	ϕ200	ϕ100	P.1000
	487200	≒5032	ϕ200	ϕ100	

Square Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	APK-K160A	859	160×36	150×30.5	P.993
	APK-K210A	1145	212×36	200×30.5	
	APK-K400A	3958	400×60	390×50	
	APK-K400AW	5938	400×80	390×70	
	APK-KHA152P	700	152×42	146×36	P.994
	APK-KHW226P	1343	226×42	220×36	
	APK-KHA226P	1050	226×42	220×36	
	APK-K70P	350	70×36	64×30	P.995
	APK-KH70P	643	70×36	64×30	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	48079	1276	85×85	ϕ76	P.998
	48176				
	48081	2136	125×125	ϕ101	P.998
	48282				
	48080	3700	200×100	–	P.998
	480970	1600	82×82	ϕ75	P.1000

Ventilators

P.992~

Square Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	G58-3020	55000	340×240	305×200	P.1001
	G57-1707AA	8300	210×106	173×73	P.1001
	G57-2208AA	12000	260×116	223×83	
	1-2222	7500	215×215	–	P.1001

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	1-1122	3700	105×215	–	P.1002
	1-2211	3700	215×105	–	P.1002
	1-1212	1900	115×115	–	P.1002

Multi-purpose Caps

P.1003~

●Used for blocking off unused holes, etc.

Multi-purpose Cap
KD
Mounting Hole Dia. 6.4~51
Total 19 Sizes
P.1003

Multi-purpose Cap
KD-772-65
Mounting Hole Dia.10
P.1004

Multi-purpose Cap
KD-771-6
Mounting Hole Dia.5
P.1004

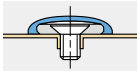
Multi-purpose Cap
KD-772-3
Mounting Hole Dia.10
P.1004

Multi-purpose Cap
KD-771-65
Mounting Hole Dia.8
P.1004

Multi-purpose Cap
KD-773W
Mounting Hole Dia.8.6
P.1004

Washers, Caps for Washer

P.1005



●Washer for using countersunk head screw without countersinking and cover for hiding the washer.

Stainless Steel Countersunk Washer SETUP
For M3, M4, M5, M6
P.1005

Cap for SETUP
CS-492
For M3, M4, M5, M6
P.1005

Cable Grommets

P.1009~

For Control Board

P.1010~P.1011

Wire Manager for Cable Grommet WSM-150

●Prevents oil mist intrusion, suitable for the control board of processing machine.
●Can pass through multiple cables of different sizes. Up to 3 pcs of cables with up to ϕ30 can be passed through.
P.1010

Cable Clamp for Cable Grommet WSD

●For simply preventing dust intrusion.
●Nitrile rubber gasket and pile improve sealability and can block gaps caused by size differences or multiple cables.
P.1011

Round Type

P.1012~P.1015

Picture	Item Name	Cut Out Dimensions	Page
	S70	ϕ60	P.1012
	S91	ϕ80	
	S445	ϕ39	P.1013
	S51	ϕ45	
	S60	ϕ49	
	S76	ϕ65	
	S89	ϕ77	
	ST70	ϕ60	P.1013
	ST88	ϕ80	

Picture	Item Name	Cut Out Dimensions	Page
(One-sided Type)	LS43S	ϕ35	P.1014
	LS50S	ϕ40	
	LSU60S/LS60S	ϕ48	
	LS76S	ϕ64	
(Double Sided Type)	LS43	ϕ35	P.1014
	LS50	ϕ40	
	LSU60/LS60	ϕ48	
	LS76	ϕ64	
(Sheet Metal / One-touch Installation)	LS50F	ϕ45	P.1015
	LS60F	ϕ55	

Oval Type

P.1016~P.1018

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	S165-76	166.5×75	156.5×65.5	P.1016
(One-sided Type)	LN72S	72×37	67×32	P.1017
(Double Sided Type)	LN72	72×37	67×32	P.1017

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	LN72SF	72×37	67×32	P.1018
	LN72P	72×37	67×32	P.1016

Cable Grommets

P.1009~

Square Type

P.1019~P.1022

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	ART973	108.2×56.4	97.8×46.5 (Mounting Hole on Sheet Metal)	P.1019
	S1015-51	104×52	97.5×45.5	P.1020
	S100-50	101.5×51	95.5×45	P.1020

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	LSU60KS	60×60	ϕ48	P.1021
	LS43KS	43×43	ϕ35	
	LS50KS	50×50	ϕ40	
	LS60KS	60×60	ϕ48	
	LS76KS	76×76	ϕ64	
	LSU60K	60×60	ϕ48	P.1022
	LS43K	43×43	ϕ35	
	LS50K	50×50	ϕ40	
	LS60K	60×60	ϕ48	
	LS76K	76×76	ϕ64	

Cautions for Cable Grommet Installation [Applicable Products] P.1012~P.1022

●Please install by pushing from above. ●When installing to sheet metal, please use glue.

Gaskets

P.1023~

Rubber Gaskets for Aluminium Frame

P.1023

Rubber Gasket
AS-PAA

●Can be easily installed to the groove of the aluminium frame without using glue.

P.1023

CR Gaskets

P.1024

CR Gaskets

●A variety of sizes and cross-sectional shapes are available for purpose of use.

P.1024

Silicone Trims

P.1025

P.1025

Belt Reel Partition

P.1026~

Wall Mount Belt Partition
AP-BR351
●Belt Colour: Red, Blue

SUS

P.1026

Wall Mount Belt Partition
AP-BR057
●Belt Colour: Red

SUS

P.1027

Belt Partition
AP-BR06
Mortise Mount Type
●Belt Colour: Red

SUS

P.1027

Glass Point Fix

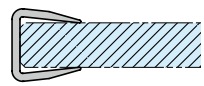
P.1028~

Point Fix

●Point fix is a part for fixing glass to structure or frame when using glass as a wall or panel.

P.1028~

Glass Edge Protectors



●Seal material for protecting the edge of glass.

P.1031

Others

P.1032~

Plastic Sockets

●Ideal for holding pipes (ϕ25) in wardrobes.

P.1032

Snap-on Windows

●One-touch installation.

P.1032

LED Lights

P.1033~

LED Tough Light
SL-TGH

P.1033

Angle Adjustable Mounting Bracket for Tough Light
SL-WPG-Z
for SL-TGH

P.1034

NON-MAGNETIC STAINLESS STEEL BEARING

SUS

- Excellent resistance against corrosion, rust and heat.
- Made of non-magnetic stainless steel: suitable for conveyance parts of medical equipment such as MRI and semiconductor manufacturing equipment, etc.
- Supplied with screw loosening prevention agent.
- Stainless steel rollers make it excellent in weather resistance and suitable for outdoor applications. (Depending on the environment of use, rust and dust adhesion may occur and affect the movemont of bearing.
- Made to order (grease designation, without grease, different size, etc.) is available.

[Applications]

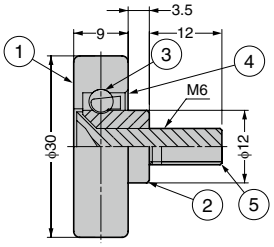
- Suitable for conveyance parts of commercial kitchen equipment, MRI, medical equipment and semiconductor manufacturing equipment, commercial refrigerator, water exposure environment (rather than purposes involving personal safety like passenger equipment)

[Use Conditions]

- Operating temperature: -40℃~+110℃
- Limit load and rotational speed: 392 N×1000 r.p.m
- Friction coefficient: 0.005
- Clearance: Radial clearance 0.1~0.3mm

NON-MAGNETIC STAINLESS STEEL BEARING FSUS309/S3.5 Flat Outer Periphery Type

SUS

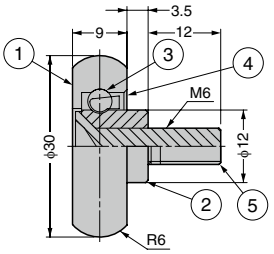


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Stainless Steel (SUS303)	Plain
②	Inner Ring		
③	Balls	Stainless Steel (SUS304)	
④	Retainer	PA	Black
⑤	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-850	FSUS309/S3.5	294	30	46.35	200	–

NON-MAGNETIC STAINLESS STEEL BEARING MSUS309/S3.5 Convex Outer Periphery Type

SUS

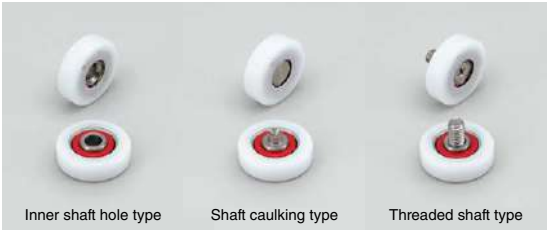


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Stainless Steel (SUS303)	Plain
②	Inner Ring		
③	Balls	Stainless Steel (SUS304)	
④	Retainer	PA	Black
⑤	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-849	MSUS309/S3.5	294	30	43.10	200	–

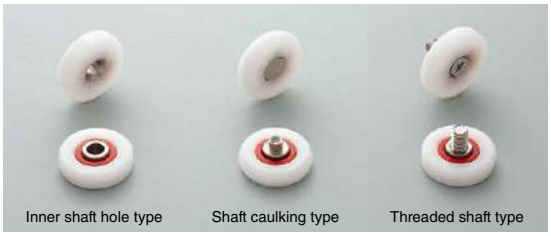
ANTI-RUST RESIN BEARING

[KSUS]



Inner shaft hole type　Shaft caulking type　Threaded shaft type

[CD, MCD, RCD]



Inner shaft hole type　Shaft caulking type　Threaded shaft type

- Stainless steel inner ring, ball and shaft with excellent rust resistance.
- Made of non-magnetic stainless steel: Suitable for conveyance parts of medical equipment such as MRI and semiconductor manufacturing equipment, etc.
- Customised versions (grease designation, without grease, different size, etc.) are available.

[Applications]

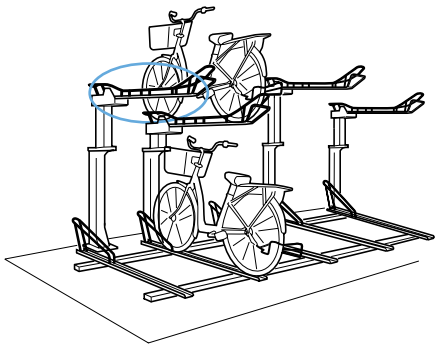
- Suitable for conveyance parts of commercial kitchen equipment, MRI, semiconductor manufacturing equipment, outdoors or water exposure environment, ect.

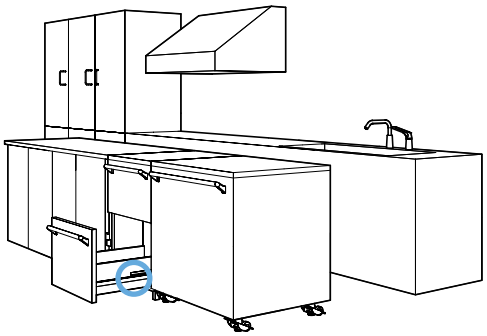
[Use Conditions]

- Operating temperature: 0℃~+60℃
- Limit load and rotational speed: 40 kg×1000 r.p.m for CD, MCD and RCD, 60 kg×1000 r.p.m for KSUS
- Friction coefficient: 0.005
- Clearance: Radial clearance 0.1~0.3mm

[Remarks]

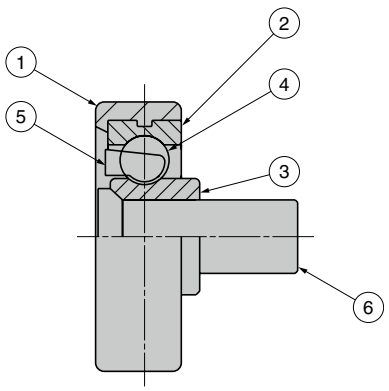
- Do not use for purposes involving personal safety like passenger equipment.





[KSUS] 1

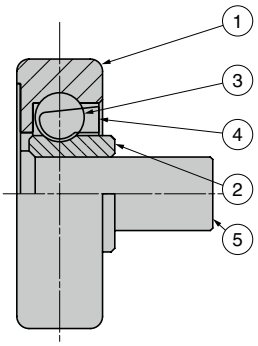
Compared with conventional CD, MCD and RCD 2, load capacity is improved by inserting stainless steel ring (② in the figure below) between the outer tyre and the inner ring.



No.	Part Name	Material	Finish / Colour
①	Outer Tyre	POM	Natural
②	Outer Ring	Stainless Steel (SUS304)	Plain
③	Inner Ring		
④	Balls		
⑤	Retainer	POM	Red
⑥	Shaft	※1	Plain

※1 Shaft caulking type: stainless steel (SUS304)
Threaded shaft type: stainless steel

[CD, MCD, RCD] 2



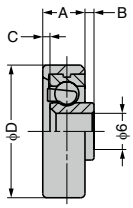
No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Inner Ring	Stainless Steel (SUS303)	Plain
③	Balls	Stainless Steel (SUS304)	
④	Retainer	POM	Red
⑤	Shaft	※2	Plain

※2 Shaft caulking type: stainless steel (SUS303)
Threaded shaft type: stainless steel

Refer to 1 : P.968, 2 : P.968~P.969

MEDIUM DUTY ANTI-RUST RESIN BEARING KSUS Flat Outer Periphery Type

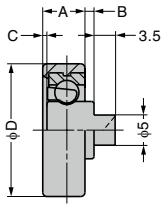
KSUS-268/68SUS



[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	ϕD	A	B	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-024-097	KSUS-227/68SUS	22	7	1.5	1.2	392	40	9.0	200	200
G	3D	210-024-098	KSUS-268/68SUS	26	8	0.5	1.2			11.1	200	200
G	3D	210-024-099	KSUS-309/68SUS	30	9	–	1.7			13.4	200	200

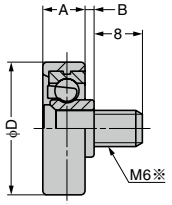
KSUS-268/P5SUS



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	ϕD	A	B	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-024-100	KSUS-227/P5SUS	22	7	1.5	0.7	392	40	11.5	200	200
G	3D	210-024-101	KSUS-268/P5SUS	26	8	0.5				13.6	200	200
G	3D	210-024-102	KSUS-309/P5SUS	30	9	–	1.2			15.9	200	200

KSUS-268/S1SUS

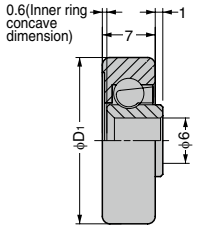


※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

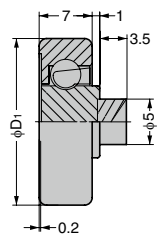
RoHS	CAD	Item Code	Item Name	ϕD	A	B	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-024-103	KSUS-227/S1SUS	22	7	1.5	392	40	11.8	200	200
G	3D	210-024-104	KSUS-268/S1SUS	26	8	0.5			13.9	200	200
G	3D	210-024-105	KSUS-309/S1SUS	30	9	–			16.2	200	200

ANTI-RUST RESIN BEARING CD Flat Outer Periphery Type



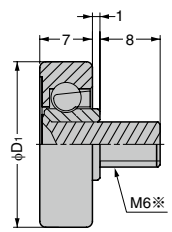
[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-801	CD-227/68SUS	22	196	20	5.75	200	200
G	3D	210-140-802	CD-247/68SUS	24			6.40	200	200
G	3D	210-140-803	CD-267/68SUS	26			7.15	200	200
G	3D	210-140-804	CD-287/68SUS	28			7.80	200	200
G	3D	210-140-805	CD-307/68SUS	30			8.60	200	200
G	3D	210-140-806	CD-357/68SUS	35			11.05	200	200



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-807	CD-227/P5SUS	22	196	20	8.20	200	200
G	3D	210-140-808	CD-247/P5SUS	24			8.85	200	200
G	3D	210-140-809	CD-267/P5SUS	26			9.60	200	200
G	3D	210-140-810	CD-287/P5SUS	28			10.30	200	200
G	3D	210-140-811	CD-307/P5SUS	30			11.05	200	200
G	3D	210-140-812	CD-357/P5SUS	35			13.50	200	200

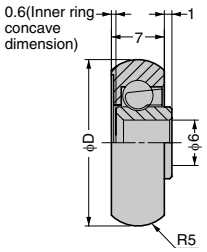


※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

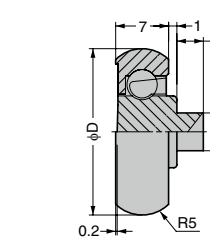
RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-813	CD-227/S-1SUS	22	196	20	8.55	200	200
G	3D	210-140-814	CD-247/S-1SUS	24			9.20	200	200
G	3D	210-140-815	CD-267/S-1SUS	26			9.95	200	200
G	3D	210-140-816	CD-287/S-1SUS	28			10.65	200	200
G	3D	210-140-817	CD-307/S-1SUS	30			11.45	200	200
G	3D	210-140-818	CD-357/S-1SUS	35			13.85	200	200

ANTI-RUST RESIN BEARING MCD Convex Outer Periphery Type



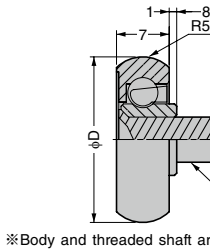
[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-819	MCD-227/68SUS	22	196	20	5.55	200	200
G	3D	210-140-820	MCD-247/68SUS	24			6.1	200	200
G	3D	210-140-821	MCD-267/68SUS	26			6.85	200	200
G	3D	210-140-822	MCD-287/68SUS	28			7.55	200	200
G	3D	210-140-823	MCD-307/68SUS	30			8.3	200	200
G	3D	210-140-824	MCD-357/68SUS	35			10.75	200	200



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-825	MCD-227/P5SUS	22	196	20	8	200	200
G	3D	210-140-826	MCD-247/P5SUS	24			8.6	200	200
G	3D	210-140-827	MCD-267/P5SUS	26			9.3	200	200
G	3D	210-140-828	MCD-287/P5SUS	28			10.05	200	200
G	3D	210-140-829	MCD-307/P5SUS	30			10.8	200	200
G	3D	210-140-830	MCD-357/P5SUS	35			13.2	200	200

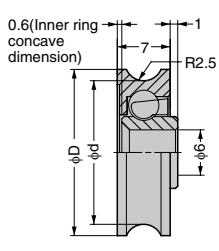


※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

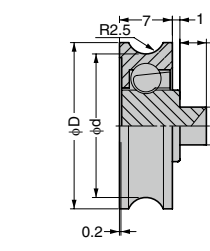
RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-831	MCD-227/S-1SUS	22	196	20	8.35	200	200
G	3D	210-140-832	MCD-247/S-1SUS	24			8.9	200	200
G	3D	210-140-833	MCD-267/S-1SUS	26			9.65	200	200
G	3D	210-140-834	MCD-287/S-1SUS	28			10.4	200	200
G	3D	210-140-835	MCD-307/S-1SUS	30			11.15	200	200
G	3D	210-140-836	MCD-357/S-1SUS	35			13.55	200	200

ANTI-RUST RESIN BEARING RCD Grooved Outer PeripheryType



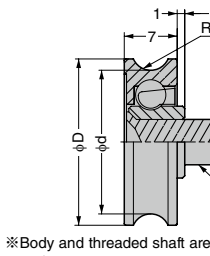
[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-837	RCD-227/68SUS	22	19	156.8	16	5.4	200	200
G	3D	210-140-838	RCD-247/68SUS	24	21			6	200	200
G	3D	210-140-839	RCD-267/68SUS	26	23			6.55	200	200
G	3D	210-140-840	RCD-287/68SUS	28	25			7.35	200	200
G	3D	210-140-841	RCD-307/68SUS	30	27			8.05	200	200
G	3D	210-140-842	RCD-247T/68SUS	24	20			5.65	200	200



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-851	RCD-227/P5SUS	22	19	156.8	16	7.85	200	200
G	3D	210-140-852	RCD-247/P5SUS	24	21			8.45	200	200
G	3D	210-140-853	RCD-267/P5SUS	26	23			9	200	200
G	3D	210-140-854	RCD-287/P5SUS	28	25			9.8	200	200
G	3D	210-140-855	RCD-307/P5SUS	30	27			10.5	200	200
G	3D	210-140-856	RCD-247T/P5SUS	24	20			8.1	200	200



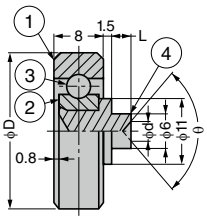
※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Bag (pcs)
G	3D	210-140-843	RCD-227/S-1SUS	22	19	156.8	16	8.2	200	200
G	3D	210-140-844	RCD-247/S-1SUS	24	21			8.8	200	200
G	3D	210-140-845	RCD-267/S-1SUS	26	23			9.35	200	200
G	3D	210-140-846	RCD-287/S-1SUS	28	25			10.15	200	200
G	3D	210-140-847	RCD-307/S-1SUS	30	27			10.85	200	200
G	3D	210-140-848	RCD-247T/S-1SUS	24	20			8.45	200	200

STEEL BEARING Heavy Duty & Flat Outer Periphery Type

●Made to order (different size, etc.) is available.

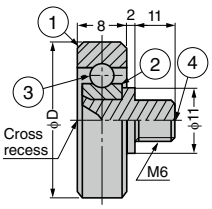


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Shaft		Clear Zinc Chromate (Trivalent)

[Shaft Caulking/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	D	(d×θ)	L	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-211	AS-22-A1.5-5.5	22	5×110°	5.5	686	70	19.7	1000	–
G	3D	210-140-214	AS-26-A1.5	26	5.5×90°	3.5			28.2	800	–

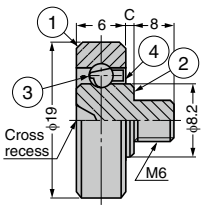


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Shaft		Clear Zinc Chromate (Trivalent)

[Threaded Shaft/Full Ball Type]

This type does not use a retainer.

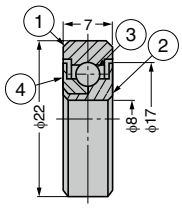
RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-212	AS-22-B2-11	22	686	70	20.9	1000	–
G	3D	210-140-215	AS-26-B2-11	26			29.7	500	–



No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Retainer	PP	Natural

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Remarks	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-209	A-19-B1	1	490	50	With Locking Ring	12.0	1000	–
G	3D	210-140-210	A-19-B2	2				12.1	1000	–



No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring A	Steel (SUM)	
③	Balls	Steel (SWCH)	Plain
④	Inner Ring B	Steel (SUM)	Alkaline Blackening

[Inner Shaft Hole/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-137-037	※AS-608ZZ-2	294	30	14.8	1000	–

※Made to order (production lead time: about 60 days). MOQ is 100 pieces.

MEDIUM DUTY BEARING Steel Insert Type

- Steel bearing part provides higher load capacity than plastic bearing 1.
- Customised versions (different size, etc.) are available.

[Applications]

- Transportation machinery (material handling equipment, conveyors, elevators, various doors)
- Industrial machinery (various labor-saving machines, various automatic machines)
- Medical and laboratory equipment (medical equipment, various measuring instrument, development processing equipment)
- Electrical equipment (stereos, vending machines, exhaust equipment)
- Construction (door rollers, rain shutter doors, shutters)
- Office equipment (electronic printers, desks, cabinets, registers, copying machines)
- Household and leisure equipment (fishing reels, toys, bicycles)

[Use Conditions]

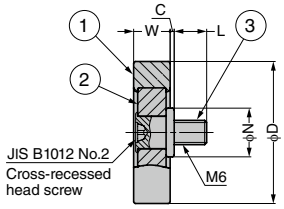
- Operating temperature: 0℃~40℃
- Rotational speed: 300 r.p.m

Refer to 1 : P.973

MEDIUM DUTY BEARING DT Steel Insert Type

- JIS-compliant steel bearing.
- With shield to prevent dust from invading compared with IDS 1.

DT-18-BH1-L1260ZZ



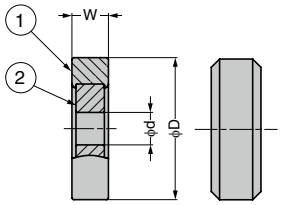
No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Inner Ring	Steel	Plain
③	Screw	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	W	C	L	N	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-419	DT-18-BH1-L1260ZZ	18	6	1	8	9	392	40	5.9	1	–
G	3D	210-034-420	DT-19-BH1-L1260ZZ	19							6.1	1	–
G	3D	210-034-421	DT-20-BH1-L1260ZZ	20							6.4	1	–
G	3D	210-034-422	DT-22-BH1-688ZZ	22	7			12	441	45	10.6	1	–
G	3D	210-034-423	DT-24-BH1-626ZZ	24	8			9	490	50	13.4	1	–
G	3D	210-034-424	DT-26-BH1-626ZZ	26							14.3	1	–
G	3D	210-034-425	DT-30-BH1-608ZZ	30	9			12	686	70	21.8	1	–
G	3D	210-034-426	DT-35-BH1-608ZZ-9	35					784	80	24.8	1	–
G	3D	210-034-427	DT-26-BH0.5-626ZZ	26	8	0.5		10	490	50	14.3	1	–
G	3D	210-034-428	DT-26-BH2-9.5-626ZZ			2	9.5				15.4	1	–
G	3D	210-034-429	DT-26-BH4-626ZZ			4	8				16.3	1	–
G	3D	210-034-430	DT-26-BH6-14-626ZZ			6	14				18.7	1	–

DT-17-604ZZ-CB

DT-18-L1260ZZ



DT-17-604ZZ-CB
※DT-17-604ZZ-CB has different outer ring shape.

No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural, Black (DT-17-604ZZ-CB)
②	Inner Ring	Steel	Plain

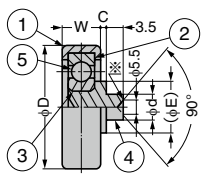
[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	d	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-410	DT-17-604ZZ-CB	17	4	6	98	10	3.1	1	–
G	3D	210-034-411	DT-18-L1260ZZ	18	6		392	40	2.9	1	–
G	3D	210-034-412	DT-19-L1260ZZ	19					3.1	1	–
G	3D	210-034-413	DT-20-L1260ZZ	20					3.4	1	–
G	3D	210-034-414	DT-22-688ZZ	22	8	7	441	45	5.7	1	–
G	3D	210-034-415	DT-24-H6-626ZZ	24	6	8	490	50	9.9	1	–
G	3D	210-034-416	DT-26-H6-626ZZ	26					10.8	1	–
G	3D	210-034-417	DT-30-608ZZ	30	8	9	686	70	16.1	1	–
G	3D	210-034-418	DT-35-608ZZ	35			784	80	19.1	1	–

Refer to 1 : P.972

MEDIUM DUTY BEARING IDS Steel Insert & Flat Outer Periphery Type

●Made to order (different size, etc.) is available.

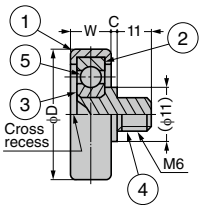


※marked hole is only for IDS-26 A1.5.

No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Shaft		
⑤	Balls		–

[Shaft Caulking Type]

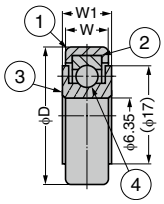
RoHS	CAD	Item Code	Item Name	D	E	d	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-216	IDS-22-A2.5	22	9	5	7	2.5	392	40	13.2	1000	–
G	3D	210-140-218	IDS-26-A1.5	26	11	6	8	1.5	588	60	18.1	800	–



No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Shaft		
⑤	Balls		–

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-217	IDS-22-B1.5-11	22	7	1.5	392	40	14.5	1000	–
G	3D	210-140-219	IDS-26-B2-11	26	8	2	588	60	20.0	500	–



No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Balls		–

[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	W	W_1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-220	IDS-26-H6.35W0.8	26	8	9.6	294	30	19.5	800	–
G	3D	210-140-221	IDS-35-H6.35W0.26	35	9	9.52			25.2	500	–

PLASTIC BEARING

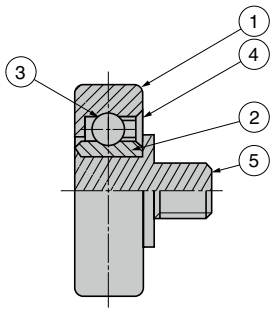
- Polyacetal bearing provides excellent wear resistance and low friction coefficient.
- Excellent resistance to corrosion and chemicals.
- Low cost thanks to injection moulding process.
- Customised versions (different size, etc.) are available.

[Applications]

- Office equipment (electronic printers, desks, cabinets, registers, copying machines)
- Transportation machinery (conveyors, elevators, various doors)
- Electrical equipment (stereos, vending machines, exhaust equipment)
- Industrial machinery (various labor-saving machines, various automatic machines)
- Medical and laboratory equipment (medical equipment, various measuring instrument, development processing equipment)
- Household and leisure equipment (fishing reels, toys, bicycles)
- Construction (door rollers, rain shutter doors, shutters)

[Use Conditions]

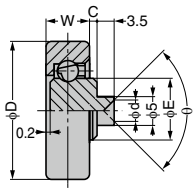
- Operating temperature: 0℃~+40℃
- Rotational speed: 300 r.p.m



[Plastic Bearing Parts Structure]

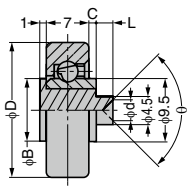
No.	Part Name	Material
①	Outer Ring	POM
②	Inner Ring	Steel
③	Balls	Steel
④	Retainer	PP
⑤	Shaft	Steel
–	Lubricant	Grease

PLASTIC BEARING Flat Outer Periphery Type



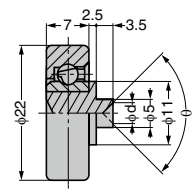
[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	E	(d×θ)	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-040	DR-19-A0.5	19	8.2	4×120°	6	0.5	29.4	3	5.0	2000	–
G	3D	210-140-041	DR-22-A1	22	9.5	4.4×90°	7	1	78.4	8	8.2	1000	–



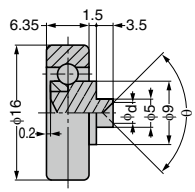
[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	(d×θ)	C	L	B	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-107	DR-22-AH(1)3.5-8019	22	–	0	3.5	10	196	20	8.2	1000	–
G	3D	210-140-108	DR-26-AH	26							9.5	1000	–
G	3D	210-140-133	DR-22-AH2.5-3.65	22	2.5×100°	2.5	3.65	9.5			9.4	1000	–



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	(d×θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-134	DR-22-AH2.5	4×110°	196	20	9.4	1000	–

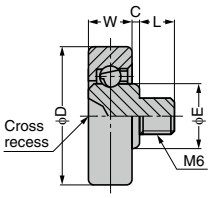


[Shaft Caulking/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	(d×θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-130	DRS-16-A1.5	4.5×90°	19.6	2	5.6	2500	–

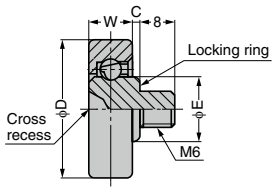
PLASTIC BEARING Flat Outer Periphery Type



[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	E	W	C	L	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-050	DR-19-B0.5	19	8.2	6	0.5	8	49	5	5.8	2000	–
G	3D	210-140-051	DR-22-B0.5	22	9.5	7			196	20	8.7	1000	–
G	3D	210-140-052	DR-24-B0.5	24							9.4	1000	–
G	3D	210-140-053	DR-26-B0.5	26							10.1	1000	–
G	3D	210-140-152	DR-22-B3-10.5	22			3	10.5			10.4	1000	–
G	3D	210-140-153	DR-26-B3-10.5	26							11.8	800	–
G	3D	210-140-156	※DR-26-B3.6-12.4				3.6	12.4			12.5	800	–

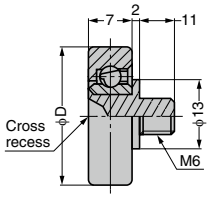
※Made to order (production lead time: about 60 days). MOQ is 100 pieces.



[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	E	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-135	DR-19-B1	19	8.2	6	1	49	5	6	2000	–
G	3D	210-140-587	DR-19-B2				2			6.4	2000	–
G	3D	210-140-137	DR-22-B2	22	9.5	7		196	20	9.6	1000	–
G	3D	210-931-985	DR-22-B3				3			10	1000	–
G	3D	210-140-139	DR-22-B4				4			10.7	1000	–
G	3D	210-140-140	DR-22-B5				5			11.2	1000	–
G	3D	210-140-141	DR-22-B6				6			11.7	1000	–
G	3D	210-140-142	DR-24-B2	24			2			10.2	1000	–
G	3D	210-140-143	※DR-24-B3				3			11.4	1000	–
G	3D	210-140-144	※DR-24-B4				4			11.7	1000	–
G	3D	210-140-106	※DR-24-B5				5			12.2	1000	–
G	3D	210-140-146	※DR-24-B6				6			12.7	1000	–
G	3D	210-140-147	DR-26-B2	26			2			11	800	–
G	3D	210-935-645	DR-26-B3				3			11.4	800	–
G	3D	210-140-149	DR-26-B4				4			12.1	800	–
G	3D	210-140-151	DR-26-B6				6			13.1	800	–
G	3D	210-140-157	DR-28-B2	28			2			11.8	500	–

※Made to order (production lead time: about 60 days). MOQ is 100 pieces.

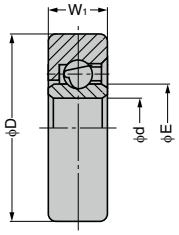


[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-154	※DR-22-BH2-11	22	196	20	10.9	1000	–
G	3D	210-140-155	※DR-26-BH2-11	26			12.3	800	–

※Made to order (production lead time: about 60 days). MOQ is 100 pieces.

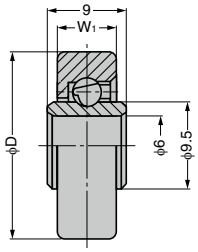
PLASTIC BEARING Flat Outer Periphery Type



[Inner Shaft Hole Type]

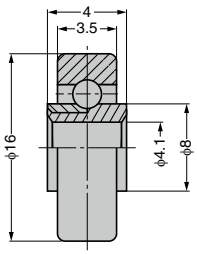
RoHS	CAD	Item Code	Item Name	D	d	E	W1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	JIS Equivalent Number	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-159	※DR-18-H6	18	6	8.2	6	49	5	–	2.9	2500	–
–	3D	–	※DR-18-H8		8	11	5				2.8	3000	–
G	3D	210-140-045	DR-19-H5	19	5	8.2	6			635	3.5	2500	–
G	3D	210-140-161	DR-20-H8	20	8	11		29.4	3	–	4	1500	–
G	3D	210-140-046	DR-22-H6	22	6	9.5	7	196	20	636	5.7	1500	–
G	3D	210-140-162	DR-24-H6	24						–	6.4	1000	–
G	3D	210-140-047	DR-26-H6	26							7.2	1000	–
G	3D	210-140-163	DR-28-H6	28							8.8	500	–
G	3D	210-140-164	※DR-22-H8	22	8	11		49	5	608	5	1500	–
–	3D	–	※DR-24-H10.5	24	10.5	13				–	5.8	–	–
G	3D	210-140-168	DR-30-H10-8	30	10	14.5	8	245	25		12	500	–
G	3D	210-140-171	DR-30-H10-9				9			6200	13.3	500	–
G	3D	210-140-172	DR-32-H12	32	12	17	10	294	30	6201	17.5	500	–
G	3D	210-140-173	DR-35-H15	35	15	21	11			6202	25	400	–
G	3D	210-140-174	DR-40-H17	40	17		12			6203	26.8	250	–
G	3D	210-140-175	DR-47-H20	47	20	27	14	343	35	6204	50.1	150	–

※Made to order (production lead time: about 60 days). MOQ is 100 pieces.



[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	W1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-165	DR-22-H6W1	22	7	196	20	6.4	1000	–
G	3D	210-140-166	DR-26-H6W1	26				7.7	1000	–
G	3D	210-140-169	DR-35-H6W1	35				10.1	500	–
G	3D	210-140-170	DR-40-H6W0.5	40	8			13.3	400	–

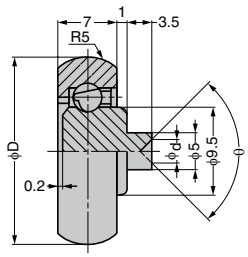


[Inner Shaft Hole/Full Ball Type]

This type does not use a retainer.

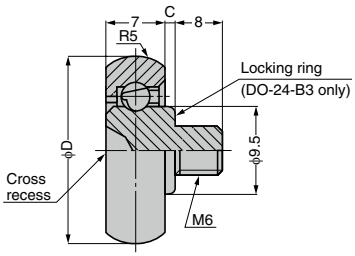
RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-158	DRS-16-H4.1-W0.25	49	5	2.1	5000	–

PLASTIC BEARING Convex Outer Periphery Type



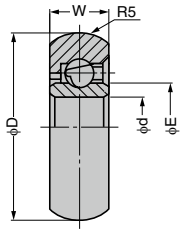
[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	(d×θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-183	DO-22-A1	22	4.4×90°	78.4	8	7.8	1000	–
G	3D	210-140-184	DO-24-A1	24				8.5	1000	–
G	3D	210-140-185	DO-26-A1	26				9.2	1000	–



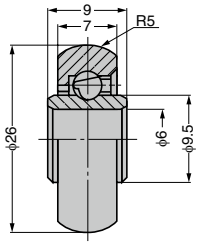
[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-177	DO-22-B0.5	22	0.5	196	20	8.6	1000	–
G	3D	210-140-178	DO-24-B0.5	24				9.3	1000	–
G	3D	210-140-179	DO-26-B0.5	26				9.8	1000	–
G	3D	210-140-186	DO-24-B3	24	3			10.4	1000	–



[Inner Shaft Hole Type]

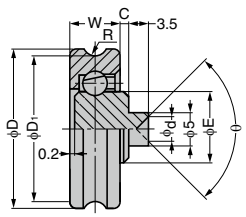
RoHS	CAD	Item Code	Item Name	D	E	d	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-176	DO-19-H5	19	8.2	5	6	49	5	3.3	2500	–
G	3D	210-140-180	DO-22-H6	22	9.5	6	7	196	20	5.3	1500	–
G	3D	210-140-181	DO-24-H6	24						6.1	1000	–
G	3D	210-140-182	DO-26-H6	26						6.7	1000	–



[Inner Shaft Hole Type]

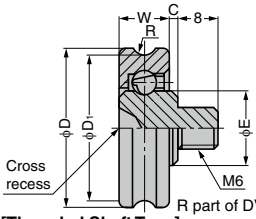
RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-188	DO-26-H6W1	196	20	7.4	1000	–

PLASTIC BEARING Grooved Outer Periphery Type



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	(d×θ)	W	C	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-189	DU-19-A0.5	19	17	8.2	4×120°	6	0.5	1.75	29.4	3	5.1	2000	–
G'	3D	210-140-190	DU-22-A1	22	19.2								7.7	1000	–
G'	3D	210-140-191	DU-24-A1	24	21.2	9.5	4.4×90°	7	1	2.5	58.8	6	8.4	1000	–
G'	3D	210-140-192	DU-26-A1	26	23.2								9	1000	–

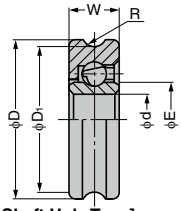


R part of DV is V-groove.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	W	C	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-193	DU-19-B0.5	19	17	8.2	6		1.75	39.2	4	6.2	2000	–
G'	3D	210-140-194	DU-22-B0.5	22	19.2							8.3	1000	–
G'	3D	210-140-195	DU-24-B0.5	24	21.2	9.5	7	0.5	2.5	156.8	16	8.9	1000	–
G'	3D	210-140-196	DU-26-B0.5	26	23.2							9.6	1000	–
G'	3D	210-140-202	※DV-32.5-B1.5-2R	32.5	20.5		9.5	1.5	2R×15°	–	–	10.4	400	–

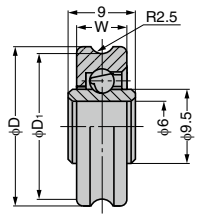
※Made to order (production lead time: about 60 days). MOQ is 100 pieces.



[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	d	W	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-197	DU-19-H5	19	17	8.2	5	6	1.75	39.2	4	3.2	2500	–
G'	3D	210-140-198	DU-22-H6	22	19.2							5.3	1500	–
G'	3D	210-140-199	DU-24-H6	24	21.2	9.5	6	7	2.5	156.8	16	5.9	1000	–
G'	3D	210-140-200	DU-26-H6	26	23.2							6.5	1000	–
G'	3D	210-140-201	※DU-30-H6-M	30	25.7							6.7	500	–

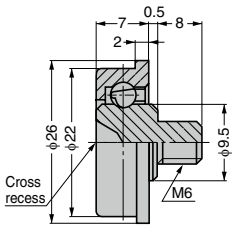
※Made to order (production lead time: about 60 days). MOQ is 100 pieces.



[Inner Shaft Hole Type]

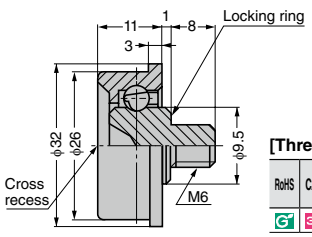
RoHS	CAD	Item Code	Item Name	D	D1	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-203	DU-35-H6W1	35	31	7	156.8	16	9.2	500	–
G'	3D	210-140-204	DU-40-H6W0.5	40	36	8			11.9	400	–

PLASTIC BEARING Flanged Outer PeripheryType



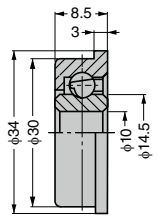
[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-206	DF-22-B0.5	196	20	9.2	1000	–



[Threaded Shaft Type]

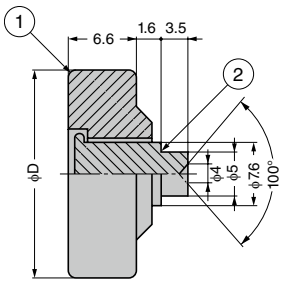
RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-207	DF-26-B1	196	20	13.4	400	–



[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	Outer Roller Load Capacity N/300 r.p.m	Outer Roller Load Capacity kgf/300 r.p.m	Inner Shaft Load Capacity N/300 r.p.m	Inner Shaft Load Capacity kgf/300 r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-208	DF-30-H10-3	245	25	58.8	6	13.4	500	–

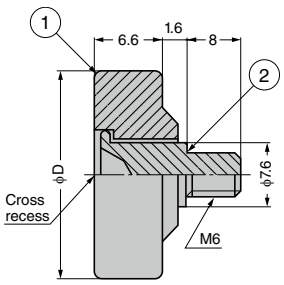
Plastic Roller Flat Outer Periphery Type



No.	Part Name	Material	Finish
①	Outer Ring	POM	Natural
②	Inner Ring	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-222	DL-19-A1.6	19	5.0	2000	–
G	3D	210-140-223	DL-22-A1.6	22	6.1	1000	–
G	3D	210-140-224	DL-26-A1.6	26	8.4	1000	–



No.	Part Name	Material	Finish
①	Outer Ring	POM	Natural
②	Inner Ring	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-225	DL-19-B1.6	19	5.9	1500	–
G	3D	210-140-226	DL-22-B1.6	22	6.8	1000	–
G	3D	210-140-227	DL-26-B1.6	26	8.0	1000	–

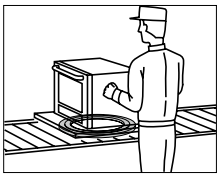
SWIVEL HF

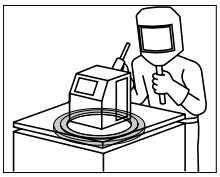
●Rubber stoppers prevent from slipping.

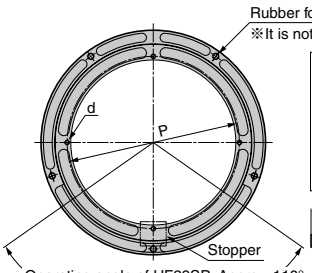
[Applications]
●Workbenches
●For TV monitors, etc.

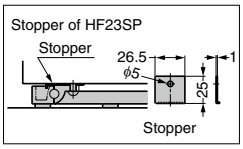
[Remarks]
●Picture on the left shows HF23SP, HF30, HF45 and HF60 from inside.
●Drawing below is HF23SP (with stopper). (No stopper for other sizes.)
●Mounting hole pitch may vary. Please check with the actual item.

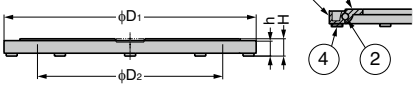
[Application Example]

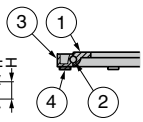












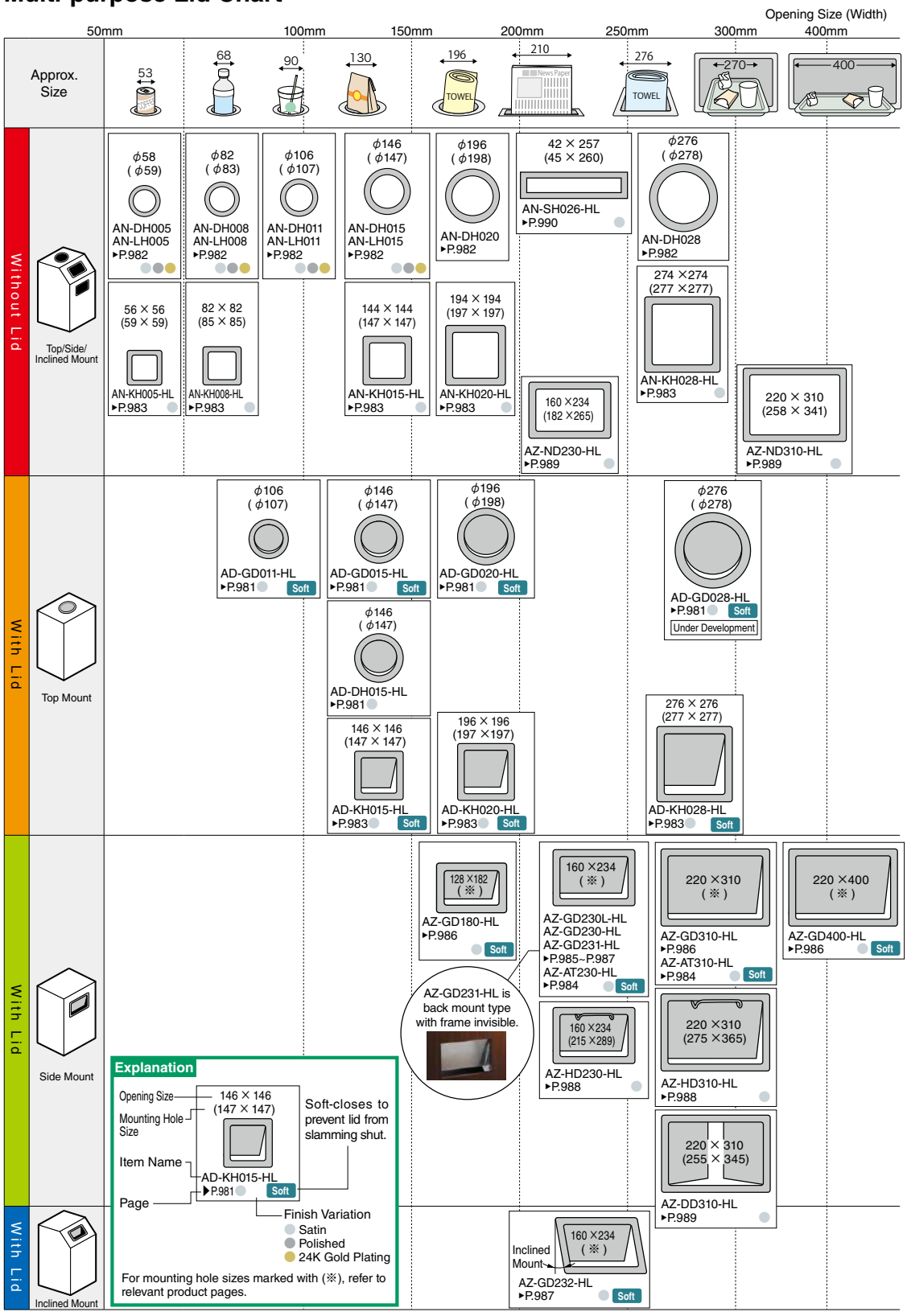
HF23SP (with stopper) shown.

No.	Part Name	Material	Finish / Colour
①	Top Plate	Aluminium Alloy	As below
②	Balls	Steel	–
③	Base plate	Aluminium Alloy	As below
④	Leg	Rubber	White

RoHS	CAD	Item Code	Item Name	Stopper	Finish / Colour	D1	D2	P	H	h	d	Holes	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-222	HF23SP	With	Barrel Polished	230	166	176	16	15	ϕ4.8	4	392	40	370	40	–
G	3D	210-035-220	HF30	Without		327	265	275.5				6	588	60	550	20	–
G	3D	210-035-221	☆HF45			441	380	392	22	16.5	ϕ4.8ϕ10		980	100	1600	10	100
G	3D	210-035-226	☆HF60		Silver Enamel Finish	600	520	538	24	18.5	ϕ4.8ϕ12	4	1960	200	3200	5	–

☆Limited inventory, contact sales associate for details.

Multi-purpose Lid Chart



Guide (P.988) and funnel (P.990, P.991) also available.

MULTI-PURPOSE LID AD-GD With Damper

SUS

[Installation]

- With damper to keep lid from slamming shut.
- Corrosion resistant.
- Small type AD-GD011-HL is newly launched.
- Wide opening.
- Balance weight restores lid to horizontal position.
- AD-GD011-HL is not for plastic bottles, suitable for separation.

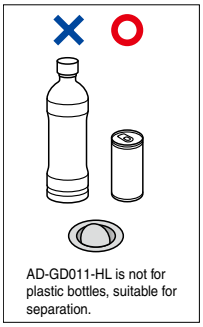
Video Link

[Specifications]

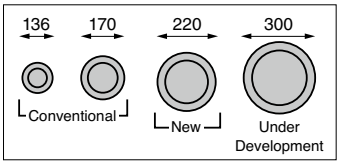
- Operating temperature: 0℃~40℃

[Remarks]

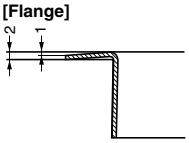
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0℃ for several hours before use.

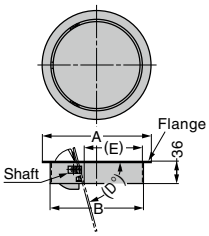


AD-GD011-HL is not for plastic bottles, suitable for separation.

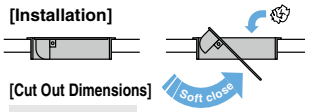


[Flange]





[Installation]



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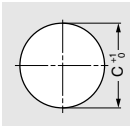


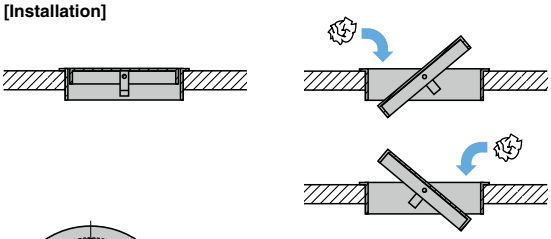
RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-029-219	AD-GD011-HL	Stainless Steel (SUS304)	Satin	136	106	107	87	62	460	1	10
G	3D	210-022-107	AD-GD015-HL			170	146	147	75	90	1000	1	10
G	3D	210-041-472	AD-GD020-HL			220	196	198	80	128	1060	1	6

MULTI-PURPOSE LID AD-DH015-HL

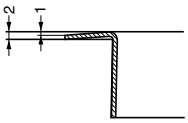
SUS

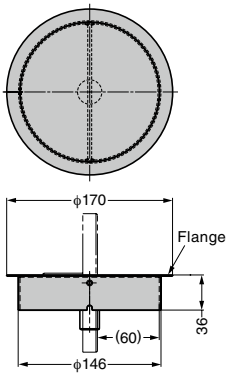
- 360˚ rotation.
- Corrosion resistant.
- Balance weight restores lid to horizontal position.

[Installation]



[Flange]





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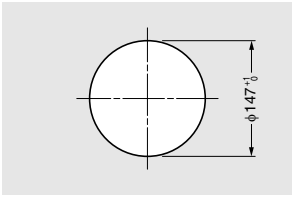
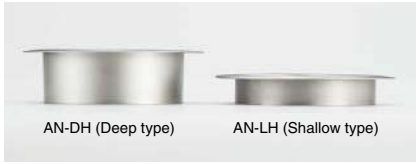


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-170-079	AD-DH015-HL	Stainless Steel (SUS304)	Satin	560	1	10

RING COVER FOR REFUSE BOX AN-DH, AN-LH

SUS

- Corrosion resistant.
- Wide variations (Size/Depth/Finish).
- AN-DH005 and AN-LH005 are not for plastic bottles, suitable for separation.



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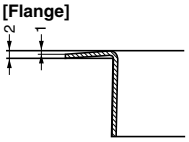
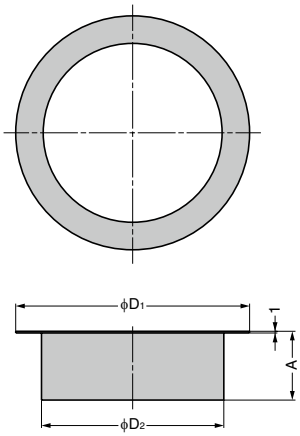
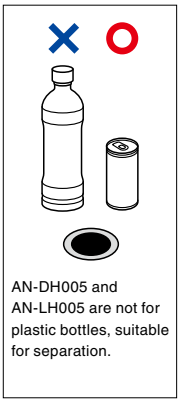
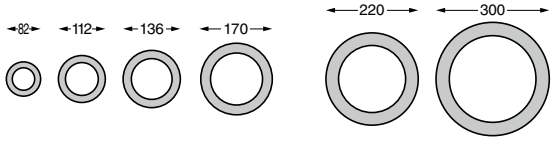






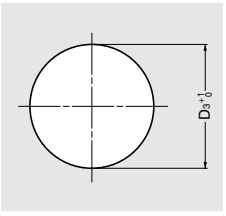
AN-DH005 and AN-LH005 are not for plastic bottles, suitable for separation.

[Size Variation]



[Installation]

[Cut Out Dimensions]



[AN-DH (Deep Type)]

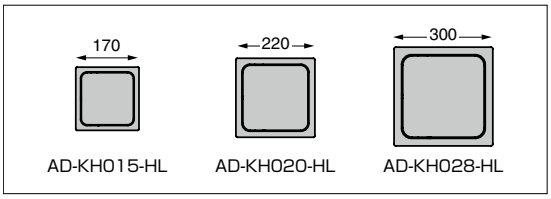
RoHS	CAD	Item Code	Item Name	A	D1	D2	D3	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-779	AN-DH005-GP	36	82	58	59	Stainless Steel (SUS304)	24K Gold Plating+Clear	66	1	50
G	3D	210-032-780	AN-DH005-MR						Polished		1	100
G	3D	210-032-781	AN-DH005-HL						Satin		1	100
G	3D	210-022-094	AN-DH008-GP		112	82	83		24K Gold Plating+Clear	107	1	10
G	3D	210-022-095	AN-DH008-MR						Polished		1	10
G	3D	210-022-096	AN-DH008-HL						Satin		1	10
G	3D	210-170-078	AN-DH011-GP	40	136	106	107		24K Gold Plating+Clear	137	1	10
G	3D	210-170-076	AN-DH011-MR						Polished		1	10
G	3D	210-170-077	AN-DH011-HL						Satin		1	10
G	3D	210-172-533	AN-DH015-GP	36	170	146	147		24K Gold Plating+Clear	182	1	10
G	3D	210-172-532	AN-DH015-MR						Polished		1	10
G	3D	210-172-531	AN-DH015-HL						Satin		1	10
G	3D	210-044-812	AN-DH020-HL		220	196	198			230	1	6
–	3D	210-044-813	AN-DH028-HL		300	276	278			290	1	4

[AN-LH (Shallow Type)]

RoHS	CAD	Item Code	Item Name	A	D1	D2	D3	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-782	AN-LH005-GP	22	82	58	59	Stainless Steel (SUS304)	24K Gold Plating+Clear	50	1	50
G	3D	210-032-783	AN-LH005-MR						Polished		1	100
G	3D	210-032-784	AN-LH005-HL						Satin		1	100
G	3D	210-022-097	AN-LH008-GP		112	82	83		24K Gold Plating+Clear	77	1	10
G	3D	210-022-098	AN-LH008-MR						Polished		1	10
G	3D	210-022-099	AN-LH008-HL						Satin		1	10
G	3D	210-022-100	AN-LH011-GP		136	106	107		24K Gold Plating+Clear	92	1	10
G	3D	210-022-101	AN-LH011-MR						Polished		1	10
G	3D	210-022-102	AN-LH011-HL						Satin		1	10
G	3D	210-022-103	AN-LH015-GP		170	146	147		24K Gold Plating+Clear	122	1	10
G	3D	210-022-104	AN-LH015-MR						Polished		1	10
G	3D	210-022-105	AN-LH015-HL						Satin		1	10

MULTI-PURPOSE LID (W/DAMPER) AD-KH With Lid

SUS



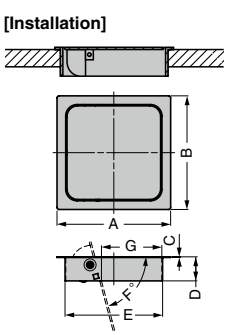
- With damper to keep lid from slamming shut.
- New types are now available. (AD-KH020-HL and AD-KH028-HL)
- Made of stainless steel for corrosion resistance. Available in areas exposed to water.
- Wide opening.
- Balance weight restores lid to horizontal position.

Video Link

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0℃ for several hours before use.

[Installation]



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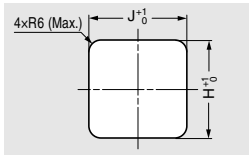
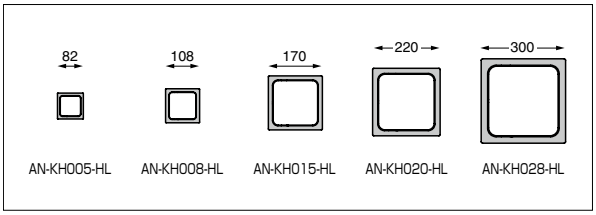


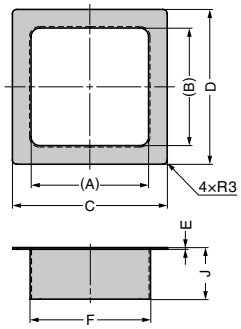
RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	F	G	H	J	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-022-108	AD-KH015-HL	Stainless Steel (SUS304)	Satin	170	170	1.2	36	146	80	93	147	147	970	1	10
G	3D	210-037-893	AD-KH020-HL			220	220		50	196	77	127	197	197	1400	1	6
G	3D	210-037-894	AD-KH028-HL			300	300		72	276	80	191	277	277	2700	1	4

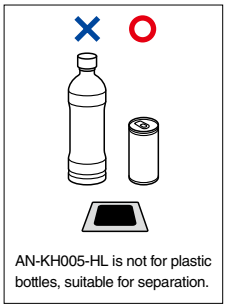
SQUARE COVER FOR REFUSE BOX AN-KH

SUS



- Corrosion resistant.
- Small type AN-KH005-HL and AN-KH008-HL are newly launched.
- AN-KH005-HL is not for plastic bottles, suitable for separation.





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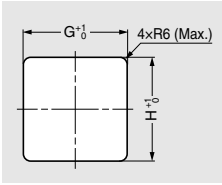


RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	F	G	H	J	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-785	AN-KH005-HL	Stainless Steel (SUS304)	Satin	56	56	82	82	1.2	58	59	59		87	1	150
G	3D	210-028-436	AN-KH008-HL			82	82	108	108		84	85	85	36	126	1	10
G	3D	210-022-109	AN-KH015-HL			144	144	170	170		146	147	147		217	1	10
G	3D	210-037-895	AN-KH020-HL			194	194	220	220		196	197	197	50	388	1	6
G	3D	210-037-896	AN-KH028-HL			274	274	300	300		276	277	277	72	733	1	6

TOUCHLESS MULTI-PURPOSE LID AZ-AT

INSTRUCTION SUS

Winner of the 2021 interzum High Product Quality Award.

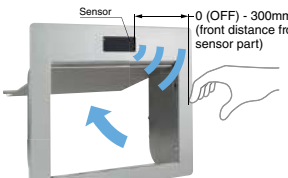
- The lid opens automatically when the sensor detects a hand. Touchless opening and closing is hygienic (green light in sensor part normally lit).
- Sensing distance can be adjusted up to 300mm with dial on back. Turn the sensor off to disable automatic opening/closing.
- With soft-closing function.
- Plates on both sides of the opening offer protection against hand pinching.
- Can be opened and closed manually in the case of a power failure.

[Specifications]
- Operating temperature: 0˚ C~40˚ C
- Passed 150,000 private cycle open/close tests.
- Compliant with European CE standards.

[Remarks]
- For vertical use only.
- Indoor use only.
- The closing speed varies depending on the operating temperature. For products stored below the freezing point, leave indoors above 0˚ C for several hours before use.
- Do not put anything in front of the sensor. Due to the characteristics of the sensor, the sensing distance varies depending on the object.
- Do not touch the lid while it is opening or closing.
- When using around water, protect the AC adapter on the back and the drive unit thoroughly to prevent them from getting wet.

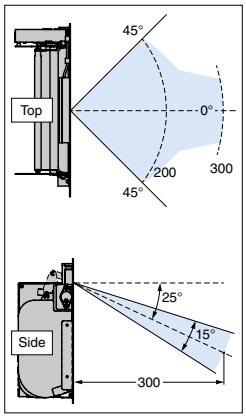
[Recommended AC Adaptor]
- Output DC15V 1.6A, Center positive

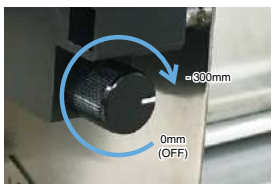
[Recommended Screws]
- Pan head tapping screw (nominal 3) or pan head machine screw M3



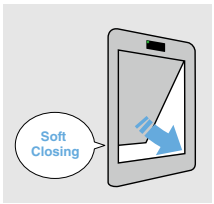
The lid opens automatically when the sensor detects a hand.

[Sensing Distance Image]



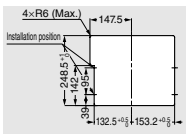


Sensing distance can be adjusted from 0 (OFF) to 300mm with dial on bottom back.

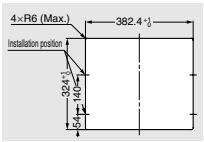


With soft-closing for safety.

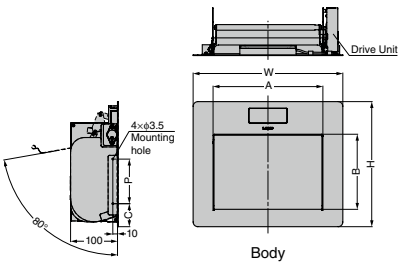
[Cut Out Dimensions]



AZ-AT230-HL



AZ-AT310-HL



Body

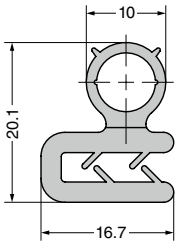
[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	C	P	Weight (g)
G	3D	210-048-695	AZ-AT230-HL	Stainless Steel (SUS304)	Satin	234	160	319	266.5	49	95	3000
G	3D	210-048-696	AZ-AT310-HL			310	220	395	340	64	140	4500

LID HOLDER AZ-ST

[Installation]

Two pieces are used in the photo.



Left/right installation is recommended; purchase two pieces.

RoHS	CAD	Item Code	Item Name	Material	Colour	Length	Weight (g)
G	3D	210-049-775	AZ-ST	Olefin-based Elastomer/ Polypropylene (PP)	Black	100	13.5

- Simple holder which keeps multi-purpose lids open.
- Retrofitting and removal are also easy, as adhesive is not required.
- Highly resistant to climate and chemicals.

[Specifications]
- Operating temperature: -60˚ C - 100˚ C

[Remarks]
- Do not apply excess force to the opening stay.

[Compatible Parts]
- Stainless Steel Multi-Purpose Lid with Damper AZ-GD232-HL 1
- Stainless Steel Multi-Purpose Lid with Damper AZ-GD 2
- Stainless Steel Multi-Purpose Lid with Damper AZ-GD231-HL 3
- Multi-Purpose Lid with Damper AZ-GD230L-HL 4

Refer to 1: P.987, 2: P.986, 3: P.987, 4: P.985

MULTI-PURPOSE LID (W/DAMPER) AZ-GD With Lid / Key

SUS

- Soft-closes to prevent lid from slamming shut. Reduces noise and impact when lid closes.
- Integrated anti-pinching plates.
- For vertical use.
- Corrosion resistant.
- Possible to prohibit the use of lid by using key. Also suitable for transportation vehicles, etc. (Rattling may occur depending on vibration conditions.
- With tamper-proof lock

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

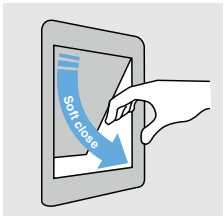
- Indoor use only.
- The closing speed varies depending on the operating temperature. For damper stored below the freezing point, leave it indoor above 0℃ for several hours before use.
- Please contact a local representative when ordering additional keys.

[Sold Separately]

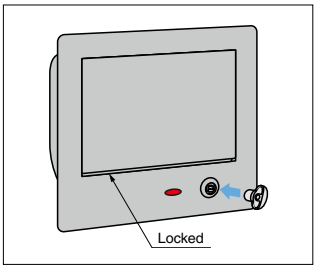
- Guide AZ-SLP 1

[Recommended Screws]

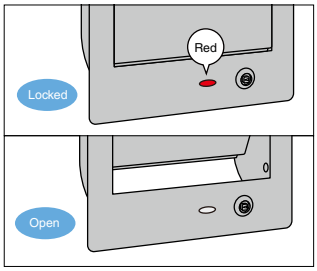
- Pan head tapping screw 3 x 4
- Pan head screw 3 x 4



Video Link



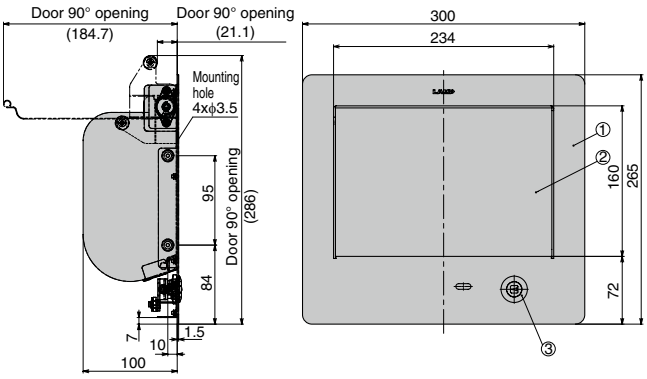
Can be locked which prevents flap from opening.

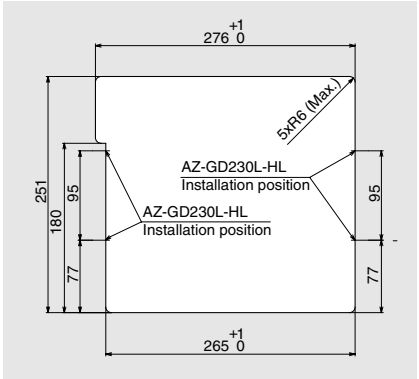


Indicator shows red when locked.

Recommended for use in public transportation like trains.

[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-037-892	AZ-GD230L-HL	Stainless Steel (SUS304)	Satin	1950	1	6

Refer to 1: P.988

MULTI-PURPOSE LID AZ-GD With Damper

INSTRUCTION SUS

AZ-GD180-HL (Slim Frame) AZ-GD230-HL AZ-GD310-HL AZ-GD400-HL (Slim Frame)

AZ-GD230-BL AZ-GD310-BL

Video Link

- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- For vertical use only.
- Corrosion resistant.
- Back mount type 1 and inclined mount type 2 of the same shape also available.
- Guide (sold separately) 3 for guiding rubbish into waste box inside also available.

[Specifications]

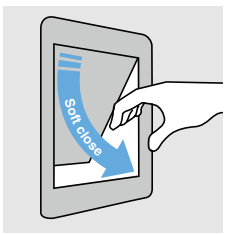
- Operating temperature: 0℃~40℃

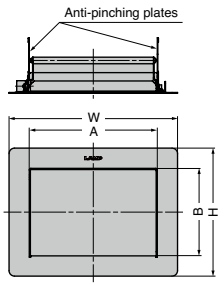
[Remarks]

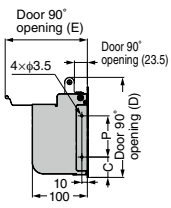
- Indoor use only.
- The closing speed varies depending on the operating temperature.For product stored below the freezing point, leave it indoor above 0℃ for several hours before use.
- Please avoid excessive impact or friction during the opening and closing process. Scratches or peeling of the paint may occur.

[Sold Separately]

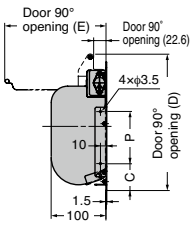
- Guide AZ-SLP 3



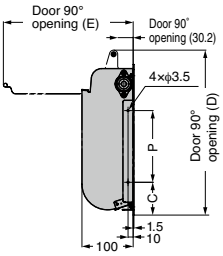




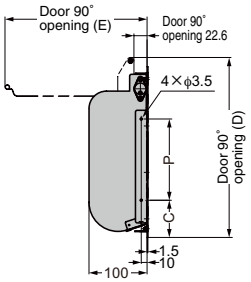
AZ-GD180-HL



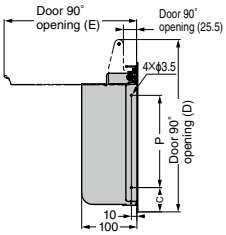
AZ-GD230-HL
AZ-GD230-BL



AZ-GD310-HL

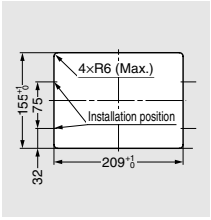


AZ-GD310-BL

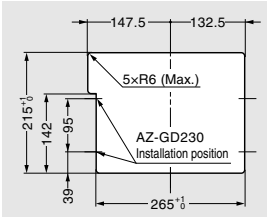


AZ-GD400-HL

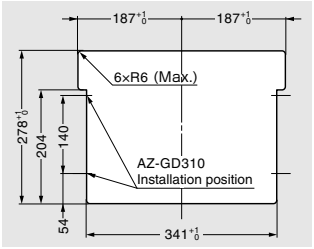
[Cut Out Dimensions]



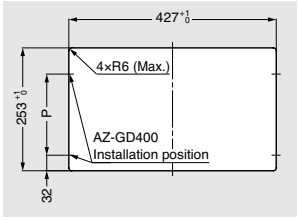
AZ-GD180-HL



AZ-GD230-HL
AZ-GD230-BL



AZ-GD310-HL
AZ-GD310-BL



AZ-GD400-HL

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	C	D	E	P	Weight (g)
G	3D	210-033-487	AZ-GD180-HL	Stainless Steel (SUS304)	Satin	182	128	218	164	37	182	149.5	75	1042
G	3D	210-017-089	AZ-GD230-HL			234	160	308	234	49	249	184.7	95	1486
G	3D	210-055-318	AZ-GD230-BL		Black									
–	3D	210-022-110	AZ-GD310-HL		Satin	310	220	384	294	64	322	253.4	140	2236
G	3D	210-055-319	AZ-GD310-BL		Black						310	244.7		
G	3D	210-041-314	AZ-GD400-HL		Satin	400		450	270	44	312	240.5	167	2236

Refer to 1 2 : P.987, 3 : P.988

MULTI-PURPOSE LID (W/DAMPER) AZ-GD231-HL With Lid Back Mount Type

INSTRUCTION SUS

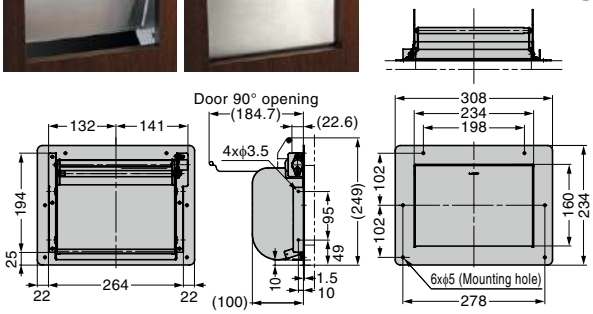
- Installed from inside the waste box for clean appearance.
- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- Corrosion resistant.
- Guide (sold separately) 1 for guiding rubbish into waste box inside also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Indoor use only.
- The closing speed varies depending on the operating temperature.For product stored below the freezing point, leave it indoor above 0℃ for several hours before use.

[Sold Separately]
- Guide AZ-SLP 1

[Application Example]



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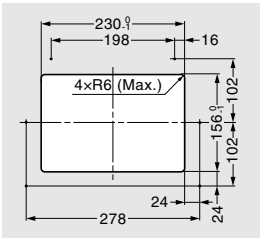


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-027-508	AZ-GD231-HL	Stainless Steel (SUS304)	Satin	1486	1	10

Refer to 1 : P.988

MULTI-PURPOSE LID (W/DAMPER) AZ-GD232-HL With Lid / Inclined Mount Type

INSTRUCTION SUS

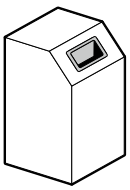
- Suitable for vertical surfaces to surfaces inclined up to 45 degrees.
- Inclined mount allows putting into rubbish easily.
- Easy to adjust angle just by changing weight position.
- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- Corrosion resistant.
- Guide (sold separately) 1 for guiding rubbish into waste box inside also available.

[Specifications]
- Operating temperature: 0℃~40℃

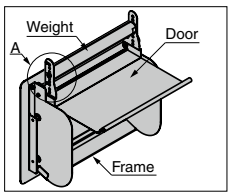
[Remarks]
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0℃ for several hours before use.

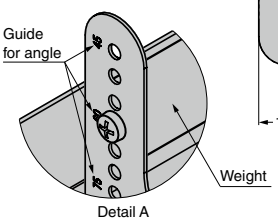
[Sold Separately]
- Guide AZ-SLP 1

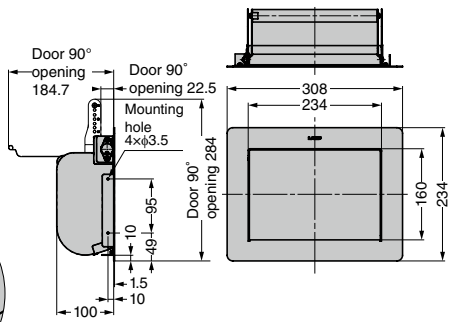
[Installation]



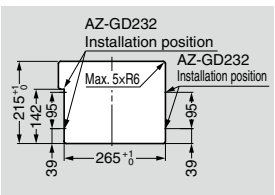
[How to Adjust Angle]







[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-975	AZ-GD232-HL	Stainless Steel (SUS304)	Satin	2200	1	10

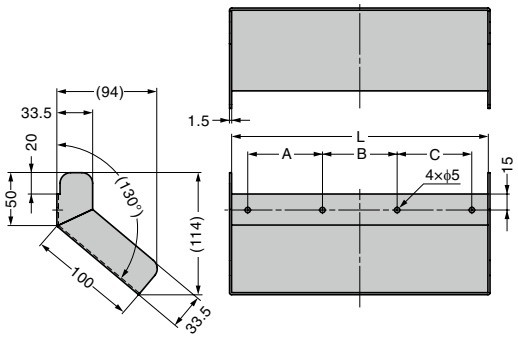
Refer to 1 : P.988

GUIDE FOR MULTI-PURPOSE LID AZ-SLP

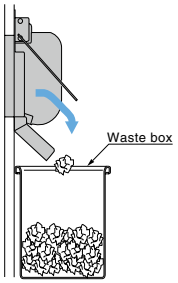
SUS

- Guides garbage into waste box inside.

[Application Example]



[Installation]

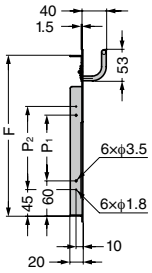


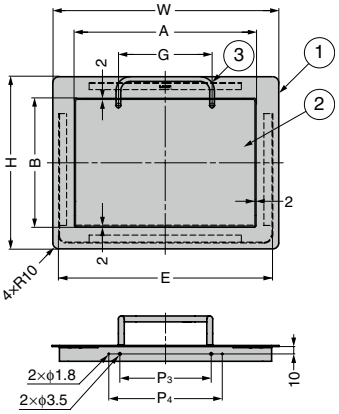
RoHS	CAD	Item Code	Item Name	Compatible Items	Material	Finish	L	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-026-554	AZ-SLP230	AZ-GD230, AZ-GD231, AZ-HD230, AZ-ND230	Stainless Steel (SUS304)	Plain	241	70	70	70	450	20	–
G	3D	210-026-555	AZ-SLP310	AZ-GD310, AZ-HD310, AZ-ND310			317	80	80	80	570	20	–

MULTI-PURPOSE LID (W/HANDLE) AZ-HD

INSTRUCTION SUS

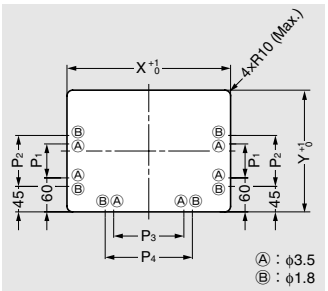
- Pushing down the handle to open.
- Corrosion resistant.





Easy to open/close with handle.

[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Door		
③	Handle		Satin

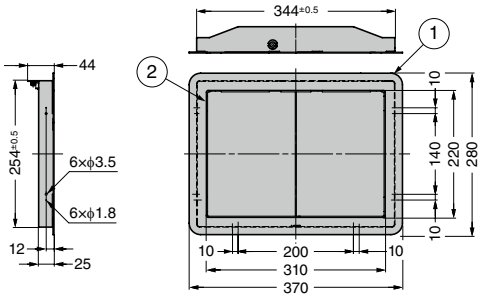
RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	E	F	G	P1	P2	P3	P4	X	Y	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-180-601	AZ-HD230-HL	Stainless Steel (SUS304)	Satin	234	160	308	234	288	214	120	60	90	124	154	289	215	540	1	10
–	3D	210-180-602	AZ-HD310-HL			310	220	384	294	364	274	160	112	142	200	230	365	275	2200	5	10

MULTI-PURPOSE LID (DOUBLE DOOR) AZ-DD310-HL

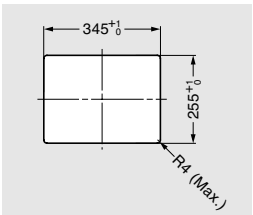
INSTRUCTION SUS

Synchronised doors.

- Synchronised doors allow easy opening.
- Doors open to the left and right, improving operability.
- Corrosion resistant.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Panel	Stainless Steel (SUS304)	Satin
②	Door		

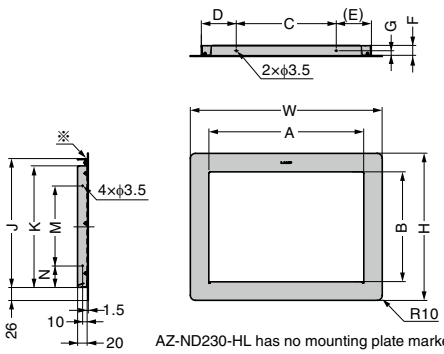
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-180-600	AZ-DD310-HL	Stainless Steel (SUS304)	Satin	2000	1	10

SQUARE COVER FOR REFUSE BOX AZ-ND

INSTRUCTION SUS

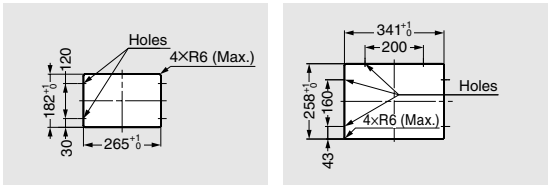
AZ-ND230-HL AZ-ND310-HL

- Corrosion resistant.
- Large type AZ-ND310-HL is newly launched.



AZ-ND230-HL has no mounting plate marked with ※.

[Cut Out Dimensions]



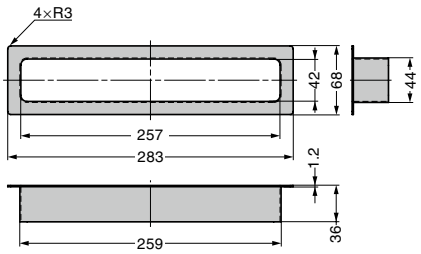
AZ-ND230-HL AZ-ND310-HL

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	C	D	E	F	G	J	K	M	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-017-986	AZ-ND230-HL	Stainless Steel (SUS304)	Satin	234	160	308	234	–	–	–	–	–	–	170	120	30	720	1	10
G	3D	210-026-553	AZ-ND310-HL			310	220	384	294	200	70	70	20	10	257	243	160	43	1050	1	10

MULTI-PURPOSE GROMMET AN-SH026-HL Slim Type

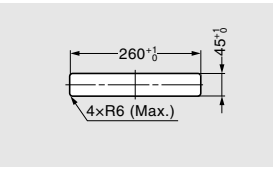
SUS

- Corrosion resistant.
- Ideal for magazine/newspaper waste box.



[Installation]

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-437	AN-SH026-HL	Stainless Steel (SUS304)	Satin	290	1	10

Refer to 1 : P.982, 2 : P.989

FUNNEL AE-DH

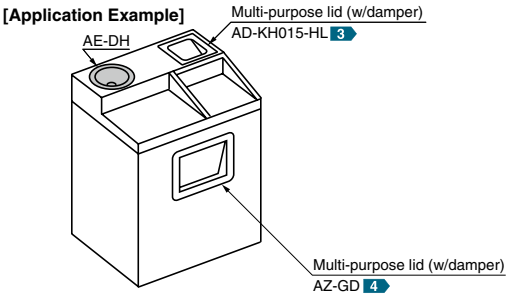
SUS

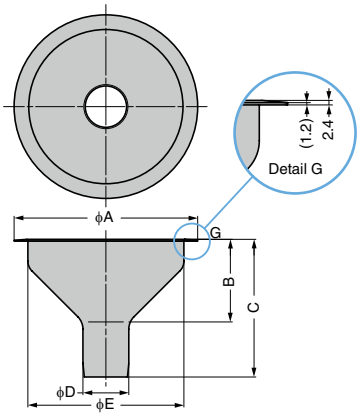
- For throwing away leftovers like drinks.
- Corrosion resistant.
- Small type AE-DH015 is newly launched.
- Hose 1, strainer 2 are sold separately.

[Sold Separately]

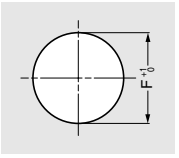
- Hose AE-DH4540-1 1
- Strainer AE-DH020K-45 2

[Application Example]

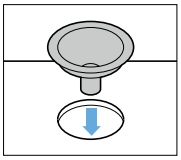




[Cut Out Dimensions]



[Easy Installation]



RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	Material	Finish	Hose Diameter	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-026-556	AE-DH015-MR	150	55	95	38	120	121	Stainless Steel (SUS304)	Polished	38	270	1	12
G	3D	210-026-557	AE-DH015-HL								Satin			1	12
G	3D	210-022-106	AE-DH020-MR	200	90	150	50	170	171		Polished	50	490	1	12
G	3D	210-023-509	AE-DH020-HL								Satin			1	12

Refer to 1 2 : P.991, 3 : P.983, 4 : P.985

HOSE FOR AE-DH AE-DH4540-1 For AE-DH

INSTRUCTION

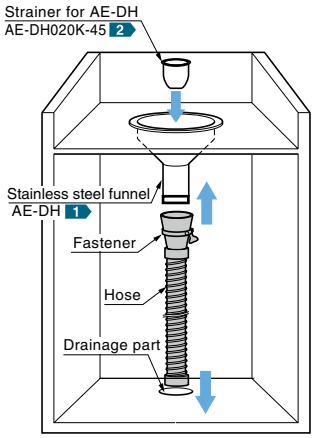
- For AE-DH 1.
- Fixed with fastener for preventing water leakage.

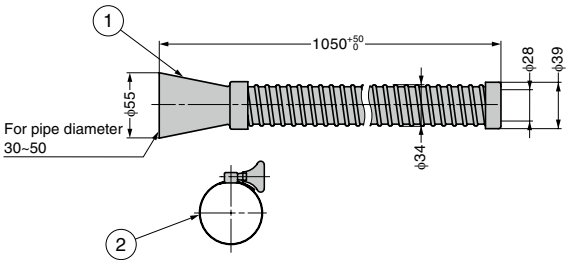
[Specifications]

- Operating temperature: 1℃~60℃

[Application Example]

[Application Example]





No.	Part Name	Material	Finish / Colour
①	Hose	PVC	Grey
②	Fastener	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-026-942	AE-DH4540-1	170	10	50

Refer to 1 : P.990, 2 : P.991

STRAINER FOR AE-DH AE-DH020K-45 For AE-DH020

SUS

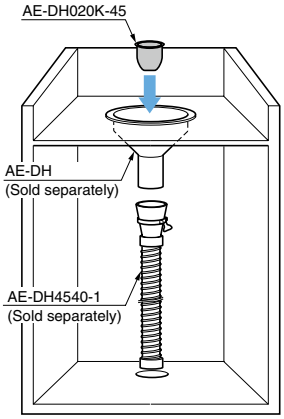
- Installed from the top of funnel to prevent solids from flowing into.
- Optional part for AE-DH020 1.

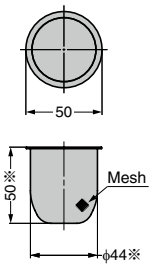
[Remarks]

- Sold per 2 pieces.
- For AE-DH020-MR, AE-DH020-HL 1.

[Application Example]

[Installation]





※Approx. dimension of mesh part.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-187	AE-DH020K-45	Stainless Steel (SUS304)	Barrel Polished	8	10	60

Refer to 1 : P.990

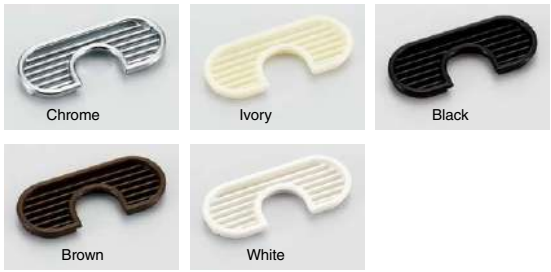
VENTILATOR APD-KH Oval Type with Cable Grommet

- Ventilator and cable grommet in one unit.
- 3 sizes (small, medium, large) and 5 colours available. (3 colours for APD-KH260.)

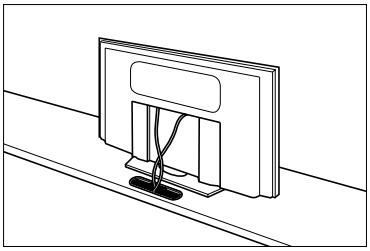
[Remarks]

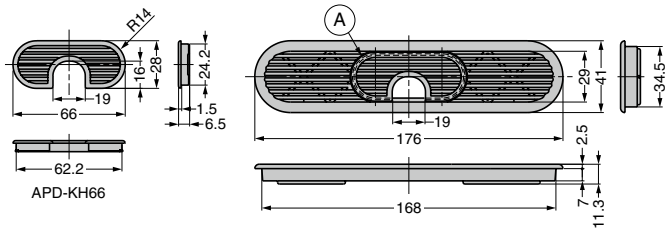
- For APD-KH170 and APD-KH260, please use glue for installation.
- Max. exhaust area of the lower cover is the value with no cable passing through.
- Please use glue when installing to sheet metal.

[Colour Variation]

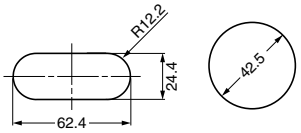


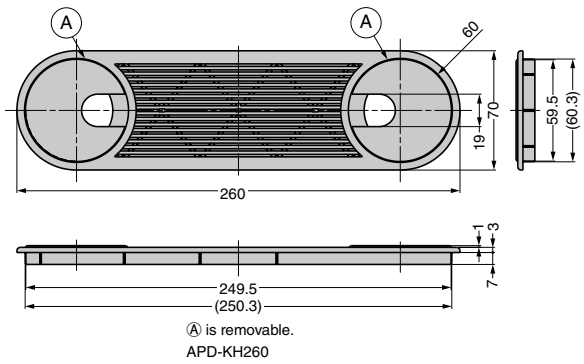
[Application Example]



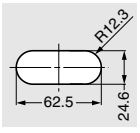


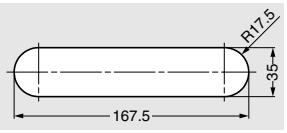
[Hole Size (With Ⓐ Removed)]

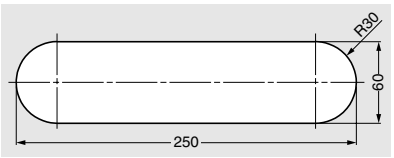




[Cut Out Dimensions]







RoHS	CAD	Item Code	Item Name	Finish / Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-020-910	APD-KH66-CR	Chrome	ABS	610	3.7	100	500
G	3D	210-020-912	APD-KH66-IV	Ivory			3	100	500
G	3D	210-020-914	APD-KH66-BL	Black				100	500
G	3D	210-020-911	APD-KH66-BR	Brown				100	500
G	3D	210-020-913	APD-KH66-WT	White				100	500
G	3D	210-020-564	APD-KH170-CR	Chrome		1690	24	40	320
G	3D	210-020-566	APD-KH170-IV	Ivory			20	40	320
G	3D	210-020-568	APD-KH170-BL	Black				40	320
G	3D	210-020-565	APD-KH170-BR	Brown				40	320
G	3D	210-020-567	APD-KH170-WT	White				40	320
G	3D	210-020-570	APD-KH260-IV	Ivory		3150	55	10	80
G	3D	210-020-571	APD-KH260-BL	Black				10	80
G	3D	210-020-569	APD-KH260-BR	Brown				10	80

ALUMINIUM VENTILATOR APK-K

Made of aluminium alloy.

- Smart and simple design.
- Small holes (ϕ1.5 mm) prevents insects from entering.
- APK-K160 and APK-K210: When used with optional frame 1, ventilator can be removed for cleaning.

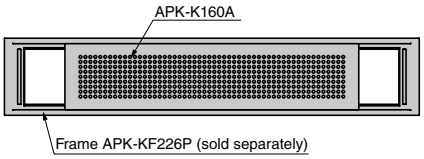
[Remarks]

- Please use glue for installation.

[Sold Separately]

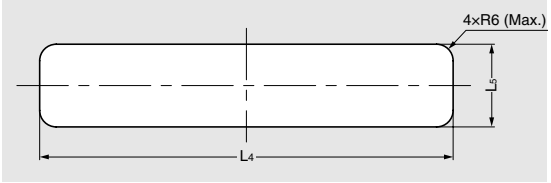
- Frame APK-KF226P 1

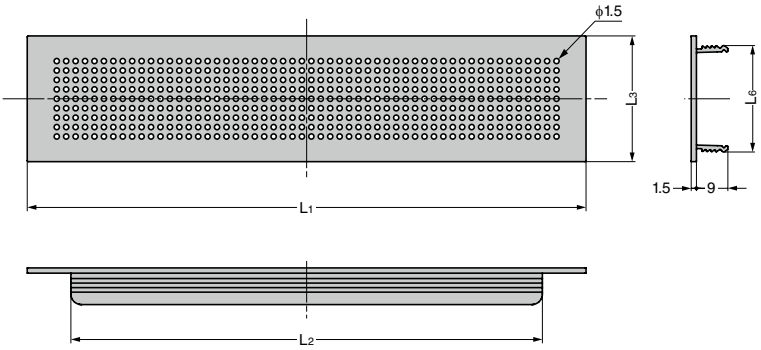
[Application Example]



Can be used as cable grommet by combining APK-K160A with frame APK-KF226P (sold separately).

[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	L1	L2	L3	L4	L5	L6	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-545	APK-K160A-SL	Anodised Silver	Aluminium Alloy	859	160	135	36	150	30.5	30.5	27	30	180
G	3D	210-032-544	APK-K160A-BL	Black Anodised										30	180
G	3D	210-032-547	APK-K210A-SL	Anodised Silver		1145	212	187		200			37	30	180
G	3D	210-032-546	APK-K210A-BL	Black Anodised										30	180
G	3D	210-034-399	APK-K400A-SL	Anodised Silver		3958	400	375	60	390	$50^{+0.5}_{0}$	50	95	20	80
G	3D	210-034-400	APK-K400A-BL	Black Anodised										20	80
G	3D	210-034-401	APK-K400A-DBR	Dark Brown Anodised										20	80
G	3D	210-034-402	APK-K400A-WT	White Electrodeposition										20	80
G	3D	210-034-403	APK-K400AW-SL	Anodised Silver		5938			80		$70^{+0.5}_{0}$	70	130	20	80
G	3D	210-034-404	APK-K400AW-BL	Black Anodised										20	80
G	3D	210-034-405	APK-K400AW-DBR	Dark Brown Anodised										20	80
G	3D	210-034-406	APK-K400AW-WT	White Electrodeposition										20	80

Refer to 1 : P.995

VENTILATOR APK-K With Cable Grommet

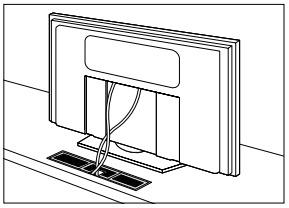
Picture above is a combination example of ventilator/cable grommet and frame.

- Combination of ventilator/cable grommet and frame can be customised.
- Small holes (ϕ1.5mm) prevents insects from entering.
- When used with frame, ventilator and cable grommet can be removed for cleaning.
- Sold in a set or separately (Frame, ventilator and cable grommet).

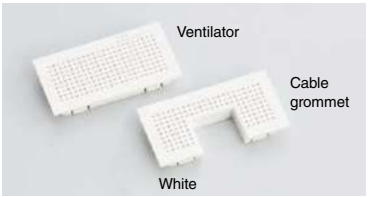
[Remarks]

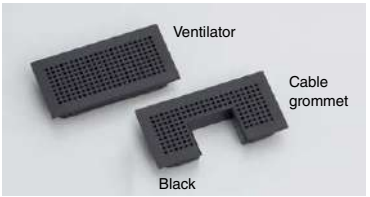
- Please use glue for installation.

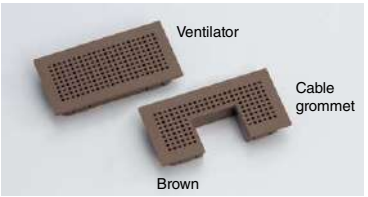
[Application Example]

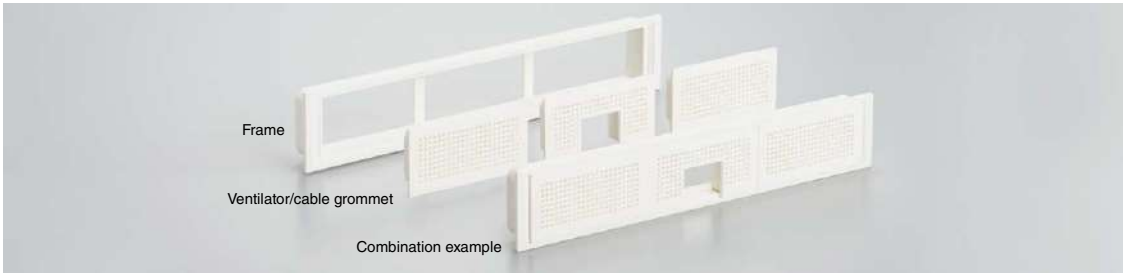


[Colour Variation]



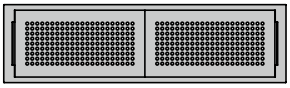




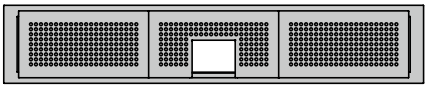


■Set Overview

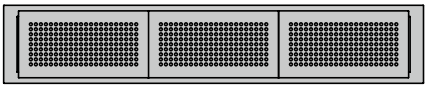
Below shows combinations of frame and ventilator/cable grommet. 3 combination patterns available.



Ⓐ APK-KHA152P



Ⓑ APK-KHW226P



Ⓒ APK-KHA226P

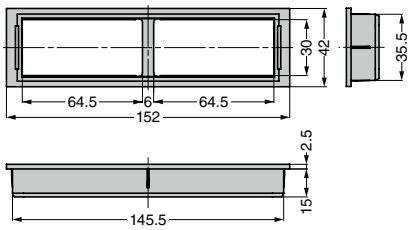
[Ventilator/Cable Grommet + Frame Set]

RoHS	CAD	Item Code	Item Name	No.	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Combination	Box (pcs)	Carton (pcs)
G	3D	210-033-477	APK-KHA152P-WT	Ⓐ	White	ABS	700	39	Cable Grommet Frame×1 Ventilator×2	20	200
G	3D	210-033-478	APK-KHA152P-BL		Black					20	200
G	3D	210-033-479	APK-KHA152P-BR		Brown					20	200
G	3D	210-032-578	APK-KHW226P-WT	Ⓑ	White		1343	46	Cable Grommet Frame×1 Ventilator with Cable Grommet×1 Ventilator×2	20	200
G	3D	210-032-579	APK-KHW226P-BL		Black					20	200
G	3D	210-032-580	APK-KHW226P-BR		Brown					20	200
G	3D	210-032-575	APK-KHA226P-WT	Ⓒ	White		1050		Cable Grommet Frame×1 Ventilator×3	20	200
G	3D	210-032-576	APK-KHA226P-BL		Black					20	200
G	3D	210-032-577	APK-KHA226P-BR		Brown					20	200

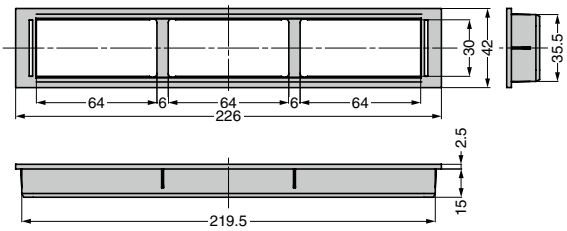
■Individual Parts

Frame and ventilator/cable grommet can be select freely for various applications.

[Frame]

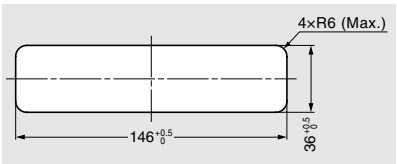


APK-KF152P

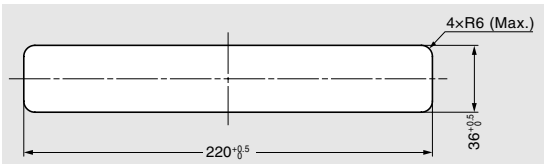


APK-KF226P

[Cut Out Dimensions]



APK-KF152P

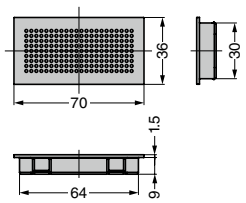


APK-KF226P

[Frame]

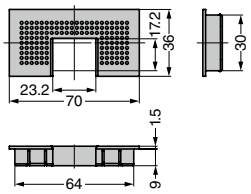
RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-807	APK-KF152P-WT	White	ABS	18	25	250
G	3D	210-032-808	APK-KF152P-BL	Black			25	250
G	3D	210-032-809	APK-KF152P-BR	Brown			25	250
G	3D	210-032-548	APK-KF226P-WT	White		25	25	250
G	3D	210-032-549	APK-KF226P-BL	Black			25	250
G	3D	210-032-550	APK-KF226P-BR	Brown			25	250

[Ventilator]



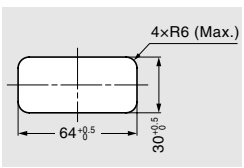
APK-K70P

[Cable Grommet]



APK-KH70P

[Cut Out Dimensions]



APK-K70P, APK-KH70P

[Ventilator] Can be used separately.

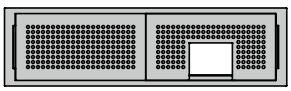
RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-538	APK-K70P-WT	White	ABS	350	7	50	500
G	3D	210-032-539	APK-K70P-BL	Black				50	500
G	3D	210-032-540	APK-K70P-BR	Brown				50	500

[Cable Grommet] Can be used separately.

RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-541	APK-KH70P-WT	White	ABS	643	7	50	500
G	3D	210-032-542	APK-KH70P-BL	Black				50	500
G	3D	210-032-543	APK-KH70P-BR	Brown				50	500

[Combination Example] Individual parts above can be combined as follows.

Frame APK-KF226P : 1 pc
Ventilator APK-K70P : 2 pcs

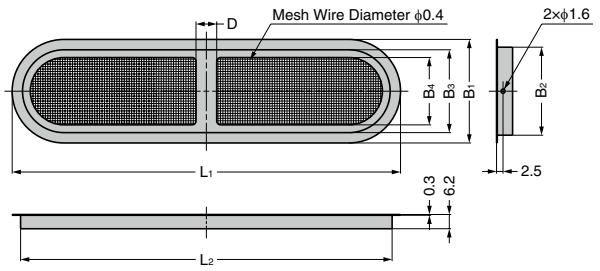


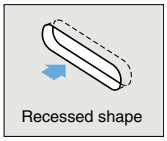
Frame APK-KF152P : 1 pc
Ventilator APK-K70P : 1 pc, Cable grommet APK-KH70P : 1 pc

STAINLESS STEEL VENTILATOR SAD Mesh Type

[Parts Included]

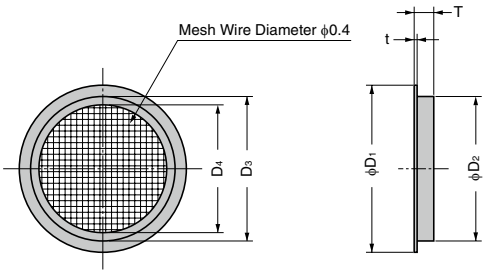
●Round head nail 1.2×10 (SUS)

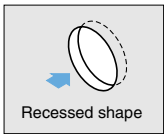




RoHS	CAD	Item Code	Item Name	Material	Finish	L_1	L_2	B_1	B_2	B_3	B_4	D	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-169	SA-D150	Stainless Steel (SUS304)	Satin	150	143.5	40	34	32	26	8	1880	18.5	30	600
G	3D	210-030-170	SA-D200			200	194	50	44	42	35	10	3800	30	30	300

STAINLESS STEEL VENTILATOR SAM Mesh Type





RoHS	CAD	Item Code	Item Name	Material	Finish	D_1	D_2	D_3	D_4	T	t	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-164	SA-M37	Stainless Steel (SUS304)	Satin	36	31.5	30	25	5.2	0.3	290	4.5	70	1400
G	3D	210-030-165	SA-M45			46	41.5	40	35			570	6	60	1200
G	3D	210-030-166	SA-M60			60	53.5	52	46	6.5		1000	9.5	50	1000
G	3D	210-030-167	SA-M85			85	77.8	76.5	68	7.0		2150	16.5	30	600
G	3D	210-030-168	SA-M120			120	110.5	108	99	7.2	0.5	4480	46.5	20	200

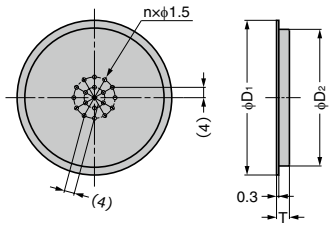
STAINLESS STEEL VENTILATOR ASM

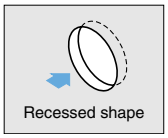
SUS

●Small holes (ϕ1.5mm) prevents insects from entering.

[Remarks]

●Finish in the table below is only for recessed part surface.





RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	T	n	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-010	ASM-37	Stainless Steel (SUS304)	Satin	36	30.5	4.5	37	65	3	100	3600
G	3D	210-030-011	ASM-45			46	40.5		59	104	5	100	3600
G	3D	210-030-012	ASM-60			60	52.5	5	127	224	8	100	2400
G	3D	210-030-013	ASM-85			85	77		271	478	13.5	50	1000

STAINLESS STEEL VENTILATOR AST Nailing Installation

SUS

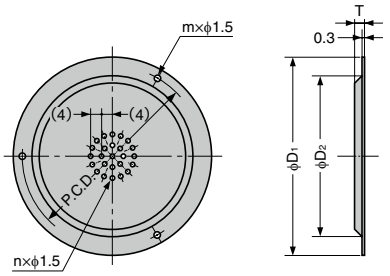
●Small holes (ϕ1.5mm) prevents insects from entering.

[Remarks]

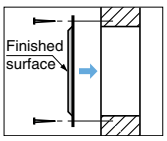
●In case of surface mount, use the convex surfce as the front.

[Parts Included]

●Round head nail 1.2×10 (SUS)



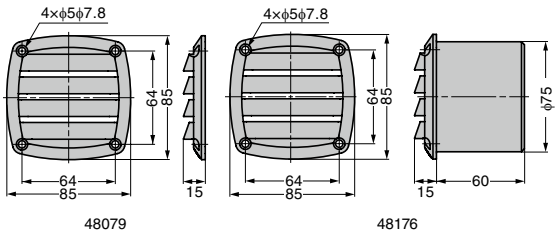
[Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	T	P.C.D.	m	n	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-044	AST-45	Stainless Steel (SUS304)	Satin	45	34	3	ϕ40	3	37	65	4	100	3600
G	3D	210-030-045	AST-55			55	44		ϕ50		59	104	5	100	3600
G	3D	210-030-046	AST-70			70	55		ϕ64		127	224	9	100	2400
G	3D	210-030-047	AST-100			100	81	4	ϕ91	4	271	478	19	50	500

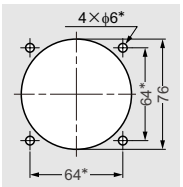
VENTILATOR 48079, 48176

- Standard type (surface mount) and flange type (recessed mount) are available.
- Suitable for various applications such as marine, etc.



[Cut Out Dimensions]

*For sheet metal

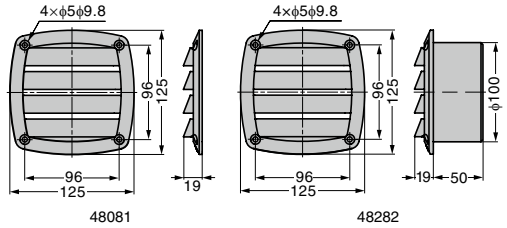


RoHS	CAD	Item Code	Item Name	Type	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-872	480794	Standard (Surface Mount)	PA	White	962	30	500	–
G	3D	210-028-871	480792			Black			500	–
G	3D	210-028-874	481764	Flange (Recessed Mount)		White	1109	85	100	–
G	3D	210-028-873	481762			Black			100	–

When current stock runs out, the Max. Exhaust Area will be 935 mm².

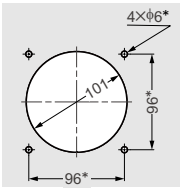
VENTILATOR 48081, 48282

- Standard type (surface mount) and flange type (recessed mount) are available.
- Suitable for various applications such as marine, etc.



[Cut Out Dimensions]

*For sheet metal

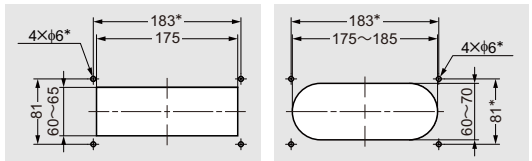


RoHS	CAD	Item Code	Item Name	Type	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-868	480814	Standard (Surface Mount)	PA	White	2210	68	200	–
G	3D	210-028-867	480812			Black			200	–
G	3D	210-028-870	482824	Flange (Recessed Mount)		White		128	100	–
G	3D	210-028-869	482822			Black			100	–

VENTILATOR 48080

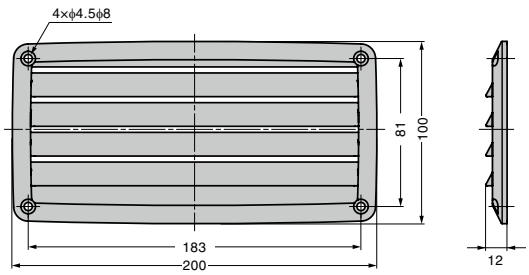
[Cut Out Dimensions]

*For sheet metal



Please process it into a rectangular shape or an oval shape.

- Surface mount type.
- Suitable for various applications such as marine, etc.

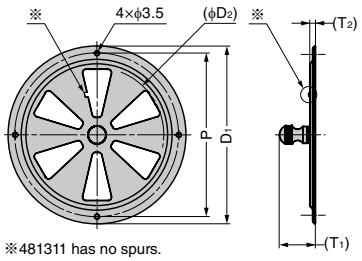


RoHS	CAD	Item Code	Item Name	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-876	480804	PA	White	5357	86	200	–
G	3D	210-028-875	480802		Black			200	–

STAINLESS STEEL ADJUSTABLE VENTILATOR 4813

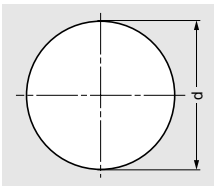
SUS

- Air flow is adjustable by turning the knob.
- The knob is tight for anti-vibration.
- Suitable for various applications such as marine and housing, etc.



※481311 has no spurs.

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	P	T1	T2	d	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-882	481311	Stainless Steel (SUS304)	Polished	102	77	92	24.4	2.7	77~80	1835	61	300	–
G	3D	210-028-881	481312			127	95	117	25.6	3.9	95~100	2860	86	200	–

☆ Limited inventory, contact sales associate for details.

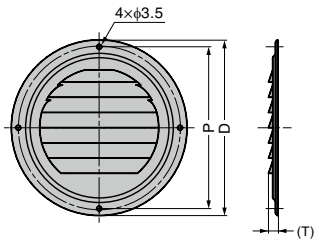
STAINLESS STEEL VENTILATOR 4814

SUS

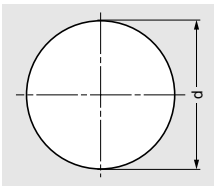
- Ventilator cover (sold separately) for preventing influx of rainwater.
- Suitable for various applications such as marine and housing, etc.

[Optional Parts]

- Stainless steel ventilator cover 4818 1



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	D	P	T	d	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-880	481440	Stainless Steel (SUS304)	Polished	102	92	5	77~80	750	38	500	–
G	3D	210-028-879	481430			127	117	7	95~100	1250	59	300	–

Refer to 1 : P.999

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

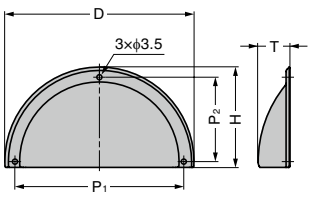
STAINLESS STEEL VENTILATOR COVER 4818 For 4814

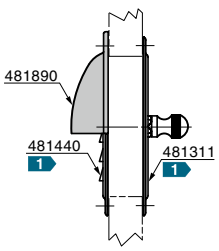
SUS

- For 4814 ventilator 1, prevents influx of rainwater.
- Suitable for various applications such as marine and housing, etc.

[Application Example]

For exterior use: Ventilator 4814 1 with cover 4818,
For interior use: Ventilator 4813 1.





RoHS	CAD	Item Code	Item Name	Use With	Material	Finish	D	H	P1	P2	T	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-884	481890	481440	Stainless Steel (SUS304)	Polished	107	57	92	46	20	40	300	–
G	3D	210-028-883	481850	481430			131	69	117	58.5	22	60	300	–

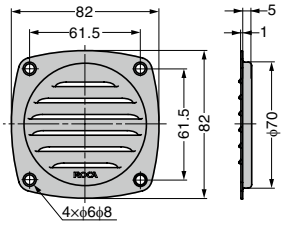
Refer to 1 : P.999

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

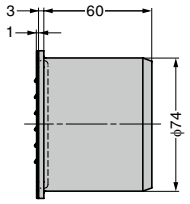
STAINLESS STEEL VENTILATOR 480970

SUS316

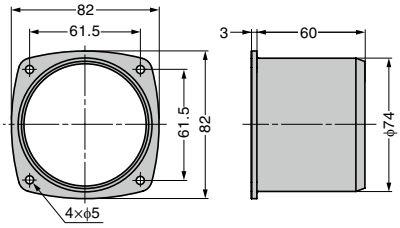
- Can be used with adaptor (sold separately).
- Suitable for various applications such as marine and housing, etc.



Ventilator body

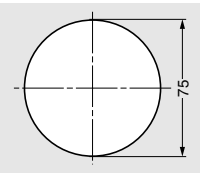


With adaptor (sold separately)



Adaptor (sold separately)

[Cut Out Dimensions]



[Ventilator Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	ab	210-028-877	480970	Stainless Steel (SUS316)	Polished	1600	49	300	–

☆ Limited inventory, contact sales associate for details.

[Adaptor] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	ab	210-028-878	480966	PA	White	51	100	–

☆ Limited inventory, contact sales associate for details.

VENTILATOR 4872 With Rainproof Function

When ventilating

Push the knob (※4 in the figure below).

When un-ventilating

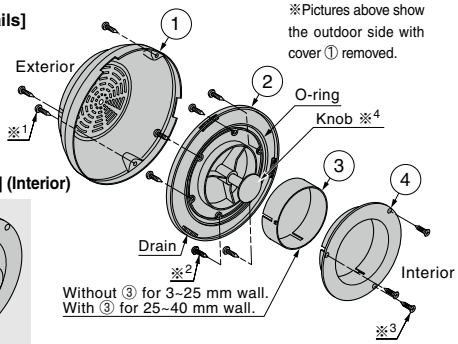
Pull the knob (※4 in the figure below).
※Pictures above show the outdoor side with cover ① removed.

- Can be used for the exterior due to the rainproof function.
- Can be used both for wooden wall and sheet metal wall. Please arrange the bolts and nuts when using with sheet metal.
- Suitable for specially-equipped vehicles like campers, etc.

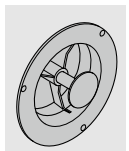
[Parts Included]

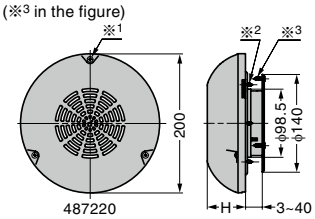
- Pan head tapping screw 4×12 (3 pcs) / for Cover ① on Base ② (※1 in the figure)
- Pan head tapping screw 4×18 (6 pcs) / for Base ② on the wall (※2 in the figure)
- Countersunk head tapping screw 4×16 (3 pcs) / for Flange ④ on the wall (※3 in the figure)

[Parts Details]

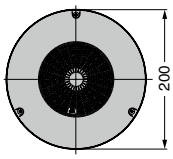


[Installation] (Interior)



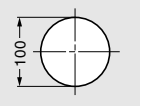


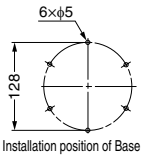
487220



487200

[Cut Out Dimensions]





Installation position of Base ②

RoHS	CAD	Item Code	Item Name	Cover Material	Cover Finish/ Colour	H	Wall Thickness	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	ab	210-028-886	487220	Stainless Steel (SUS304)	Polished	55	3~40	3055	394	1	30
G	ab	210-028-885	487200	PP	Off-white	62		5032	328	1	30

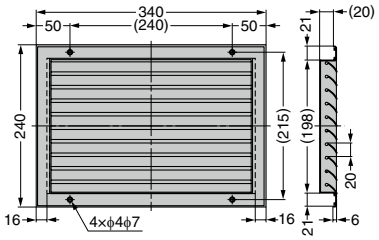
No.	Part Name	Material	Colour
①	Cover	See the left table	See the left table
②	Base	PP	Off-white
③	Adaptor		
④	Flange		

☆ Limited inventory, contact sales associate for details.

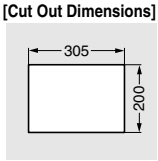
ALUMINIUM VENTILATOR G58-3020

[Remarks]
- Dimensions may vary. Please check with actual item.
- The edge-finishing may vary. Please be careful with the edge during installation.

[Parts Included]
- Raised countersunk head tapping screw 3.5×32
- Plug



[Cut Out Dimensions]



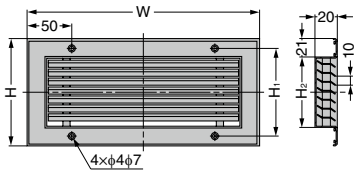
RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-031-730	G58-3020	Aluminium Alloy	Anodised Silver	55000	578	7	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

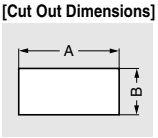
ALUMINIUM VENTILATOR G57

[Remarks]
- Dimensions may vary. Please check with actual item.
  Also, edge treatment may vary with each product.

[Parts Included]
- Raised countersunk head tapping screw 3.5×32
- Plug



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	W	H	H_1	H_2	A	B	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-031-731	G57-1707AA	Aluminium	Anodised	210	106	85	68	173	73	8300	208	6	–
–	3D	210-031-732	G57-2208AA	Alloy	Silver	260	116	95	78	223	83	12000	250	4	–

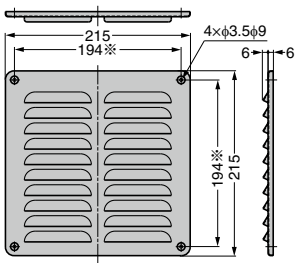
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

STAINLESS STEEL VENTILATOR 1-2222

SUS316

- Screw fixing type.

[Remarks]
- Mounting hole pitch※ may vary.Please check with actual item.
- Noted that the direction of satin finish is not uniform.
- Do not place your fingers in the exhaust part.Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-172-014	1-2222	Stainless Steel (SUS316)	Satin	7500	308	10	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

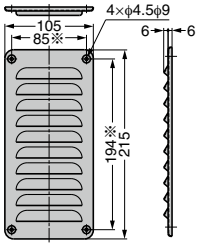
STAINLESS STEEL VENTILATOR 1-1122

SUS316

●Screw fixing type.

[Remarks]

●Mounting hole pitch※ may vary. Please check with actual item.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.
●Noted that the direction of satin finish is not uniform.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
—	3D	210-172-011	1-1122	Stainless Steel (SUS316)	Satin	3700	156	20	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

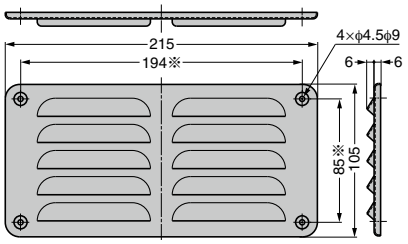
STAINLESS STEEL VENTILATOR 1-2211

SUS316

●Screw fixing type.

[Remarks]

●Mounting hole pitch※ may vary. Please check with actual item.
●Noted that the direction of satin finish is not uniform.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
—	3D	210-172-013	1-2211	Stainless Steel (SUS316)	Satin	3700	154	20	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

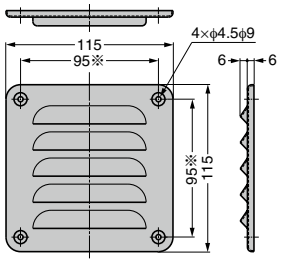
STAINLESS STEEL VENTILATOR 1-1212

SUS316

●Screw fixing type.

[Remarks]

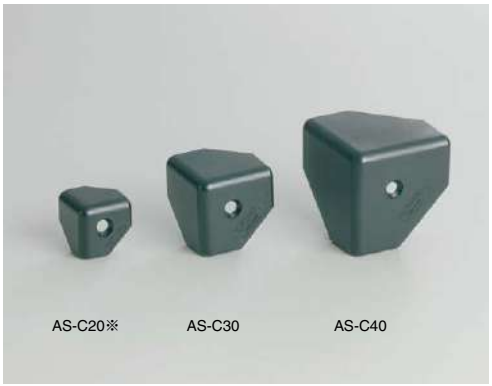
●Mounting hole pitch※ may vary. Please check with actual item.
●Noted that the direction of satin finish is not uniform.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
—	3D	210-172-012	1-1212	Stainless Steel (SUS316)	Satin	1900	89	20	–

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

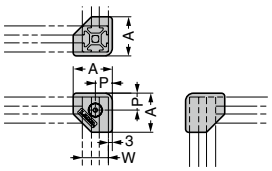
CORNER CAP AS-C For Single-groove



- Rounded plastic corner cap prevents from injurying or scratching and beautifies the corner of aluminium frame.
- Easy to install with only one position to be tightened with screw.
- Glue or double-sided tape can also be used for fixation.

[Remarks]
- Do not use on corners of a door.

[Application Example]

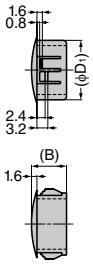


[Corner Cap AS-C]

RoHS	CAD	Item Code	Item Name	Aluminium Frame	A	P	W	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-680	AS-C20	20×20 Groove Width 6 mm	30	13	20	PA	Black	6	200	1600
G	3D	210-040-681	AS-C30	30×30 Groove Width 8 mm	43	18	30			14	50	400
G	3D	210-040-682	AS-C40	40×40 Groove Width 8 mm, 40×40 Groove Width 10 mm	58	23	40			29	25	200

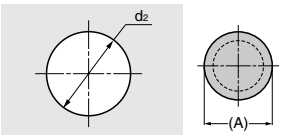
MULTI-PURPOSE CAP KD

- One-touch installation.
- Can be used on sheet metal and wooden board, ideal for cable grommet.
- KD-380-350B can also be used for holes of concealed hinge.



[Specifications]
- Uses flame retardant material rated UL94V-2.

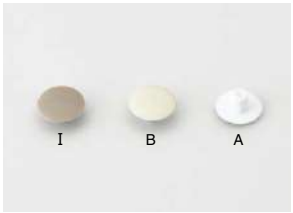
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Colour	A	B	D1	d2	Board Thickness	Pack(pcs)	Box (pack)	Carton (pcs)
G	3D	120-038-140	KD-80-64B-P20	PA	Black	8	8	6.1	6.4	1.6	20	5	–
G	3D	120-038-141	KD-95-80B-P20			9.5		7.7	8		20	5	–
G	3D	120-038-124	KD-120-95B-P20			12	10.3	9.3	9.5	0.8~3.2	20	5	–
G	3D	120-038-125	KD-135-110B-P20			13.5		10.9	11		20	5	–
G	3D	120-038-126	KD-146-127B-P20			14.6		12.5	12.7		20	5	–
G	3D	120-038-127	KD-167-143B-P20			16.7		14.1	14.3		20	5	–
G	3D	120-038-128	KD-182-159B-P20			18.2		15.8	15.9		20	5	–
G	3D	120-038-129	KD-200-175B-P20			20		17.3	17.5		20	5	–
G	3D	120-038-131	KD-232-190B-P20			23.2		18.9	19		20	5	–
G	3D	120-038-130	KD-226-206B-P20			22.6		20.4	20.6		20	5	–
G	3D	120-038-132	KD-258-222B-P20			25.8	11.5	22	22.2		20	5	–
G	3D	120-038-133	KD-305-255B-P20			30.5		25.3	25.5		20	5	–
G	3D	120-038-134	KD-310-280B-P20			31		27.6	28		20	5	–
G	3D	120-038-135	KD-333-301B-P20			33.3		30	30.1		20	5	–
G	3D	120-038-136	KD-349-320B-P20			34.9		31.8	32		20	5	–
G	3D	120-038-137	KD-380-350B-P20			38		34.9	35		20	5	–
G	3D	120-038-138	KD-427-380B-P20			42.7		37.9	38		20	5	–
G	3D	120-038-139	KD-484-450B-P20			48.4		44.6	45		20	5	–
G	3D	120-038-142	KD-550-510B-P20			55		50.6	51		20	5	–

MULTI-PURPOSE CAP KD-771, KD-772, KD-773W

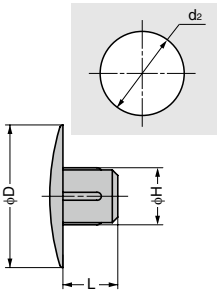
[KD-771-6] (Mounting hole: ϕ5)



[KD-771-65] (Mounting hole: ϕ8)

[KD-772-65] (Mounting hole: ϕ10)

[Cut Out Dimensions]



[Remarks]

●Please check with actual item for fitting with the mounting hole.

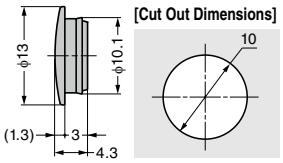
RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-050	KD-771-6W	A	PP	White	5.2	13	5	5	0.13	2500	25000
G	3D	120-041-054	KD-771-6I	B		Ivory						2500	25000
G	3D	120-049-037	KD-771-6SGR	I		Grey						2500	25000

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-060	KD-771-65W	A	PP	White	8.1	12	6.5	8	0.19	2000	20000
G	3D	120-041-065	KD-771-65I	B		Ivory						2000	20000
G	3D	120-041-066	KD-771-65GR	C		Grey						2000	20000
G	3D	120-041-063	KD-771-65RBR	E		Camel						2000	20000
G	3D	120-041-062	KD-771-65DBR	F		Dark Brown						2000	20000
G	3D	120-041-061	KD-771-65BR	G		Brown						2000	20000
G	3D	120-041-064	KD-771-65B	H		Black						2000	20000

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-070	KD-772-65W	A	PP	White	10.3	13	7	10	0.29	1500	15000
G	3D	120-041-075	KD-772-65I	B		Ivory						1500	15000
G	3D	120-049-216	KD-772-65GR	C		Grey						1500	15000
G	3D	120-049-257	KD-772-65MN	D		Maple						1500	15000
G	3D	120-041-073	KD-772-65RBR	E		Camel						1500	15000
G	3D	120-041-072	KD-772-65DBR	F		Dark Brown						1500	15000
G	3D	120-041-071	KD-772-65BR	G		Brown						1500	15000
G	3D	120-041-074	KD-772-65B	H		Black						1500	15000

[KD-772-3] (Mounting hole: ϕ10)

[Cut Out Dimensions]

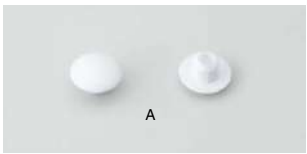


[Remarks]

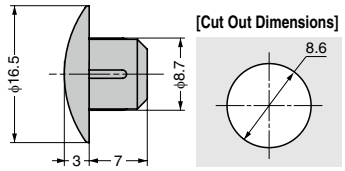
●Please check with actual item for fitting with the mounting hole.

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Hole Dia.	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-080	KD-772-3W	A	PP	White	10	0.22	2000	20000
G	3D	120-041-083	KD-772-3I	B		Ivory			2000	20000
G	3D	120-041-081	KD-772-3BR	G		Brown			2000	20000
G	3D	120-041-084	KD-772-3B	H		Black			2000	20000

[KD-773W] (Mounting hole: ϕ8.6)



[Cut Out Dimensions]



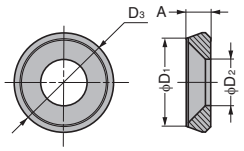
[Remarks]

●Please check with actual item for fitting with the mounting hole.

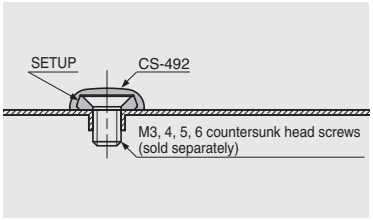
RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Hole Dia.	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-003	KD-773W	A	PE	White	8.6	0.5	1000	10000

STAINLESS STEEL COUNTERSUNK WASHER SETUP For M3, M4, M5, M6

- For surface mount of M3, M4, M5 and M6 countersunk head screw.
- Conceals screw head when used with cap CS-492.
- Washers for M3, M5 and M6 are newly launched.



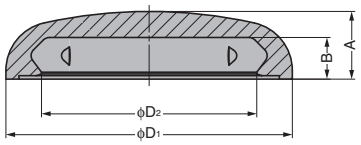
[Installation]



RoHS	CAD	Item Code	Item Name	Type	Material	Finish	A	D1	D2	D3	Weight(g/pack)	Pack(pcs)	Box(pack)
G	3D	120-038-172	SETUP-SUS-M3-P100	M3	Stainless Steel (SUS303)	Plain	1.9	6.5	4	9	60	100	10
G	3D	120-038-171	SETUP-M4-P100	M4	Brass			8	5	13	150	100	20
G	3D	120-038-173	SETUP-SUS-M4-P100		Stainless Steel (SUS303)							100	10
G	3D	120-038-174	SETUP-SUS-M5-P100	M5			3	10.6	6	14	202	100	5
G	3D	120-037-149	SETUP-SUS-M6-P100	M6			3.7	12.8	7	15	266	100	5

CAP FOR SETUP CS-492 For M3, M4, M5, M6

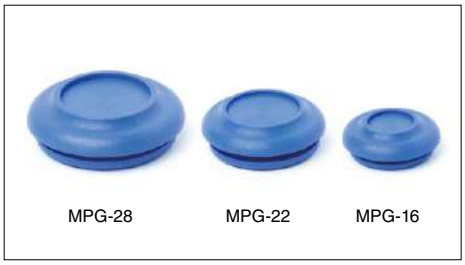
- Conceals screw head when used with countersunk washer SETUP for M3, M4, M5 and M6.
- Caps for M3, M5 and M6 are newly launched.



RoHS	CAD	Item Code	Item Name	Type	Material	Colour	A	B	D1	D2	Weight (g/pack)	Pack (pcs)	Box (packs)	Carton (packs)
G	3D	120-038-067	CS-492-M3-IV-P100	M3	PE	Ivory	3.4	2.1	12.5	9	16	100	20	200
G	3D	120-038-069	CS-492-M3-WT-P100			White						100	20	200
G	3D	120-038-068	CS-492-M3-LGR-P100			Light Grey						100	20	200
G	3D	120-038-066	CS-492-M3-DGR-P100			Dark Grey						100	20	200
G	3D	120-038-073	CS-492-M4-IV-P100	M4		Ivory	3.9	2.4	16.5	12.4	23	100	20	200
G	3D	120-038-076	CS-492-M4-WT-P100			White						100	20	200
G	3D	120-038-071	CS-492-M4-BR-P100			Brown						100	20	200
G	3D	120-038-070	CS-492-M4-BL-P100			Black						100	20	200
G	3D	120-038-075	CS-492-M4-SGR-P100			Grey						100	20	200
G	3D	120-038-074	CS-492-M4-LGR-P100			Light Grey						100	20	200
G	3D	120-038-072	CS-492-M4-DGR-P100			Dark Grey						100	20	200
G	3D	120-038-078	CS-492-M5-IV-P100	M5		Ivory	4.7	3.2	17.5	14	35	100	10	100
G	3D	120-038-080	CS-492-M5-WT-P100			White						100	10	100
G	3D	120-038-079	CS-492-M5-LGR-P100			Light Grey						100	10	100
G	3D	120-038-077	CS-492-M5-DGR-P100			Dark Grey						100	10	100
G	3D	120-038-082	CS-492-M6-IV-P100	M6		Ivory	5.7	3.9	18.5	15	47	100	5	50
G	3D	120-038-084	CS-492-M6-WT-P100			White						100	5	50
G	3D	120-038-083	CS-492-M6-LGR-P100			Light Grey						100	5	50
G	3D	120-038-081	CS-492-M6-DGR-P100			Dark Grey						100	5	50

The quantity of the M4 type will change to be as follows when the current stock runs out.
- 10 packs/box | 100 packs/carton

METAL-DETECTABLE GLOMMET MPG Food Sanitation Act Compliant Material



MPG-28 MPG-22 MPG-16

- Contains metal powder, allowing for detection by metal detectors.
- Coloured in blue for simple visual verification.
- Made of silicone rubber for better heat and cold resistance.
- Compliant with the Food Sanitation Act.

[Specifications]

- Operating temperature: -10˚C – 110˚C

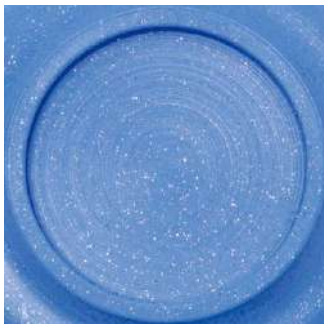
[Applications]

- Food machinery and food packaging machines

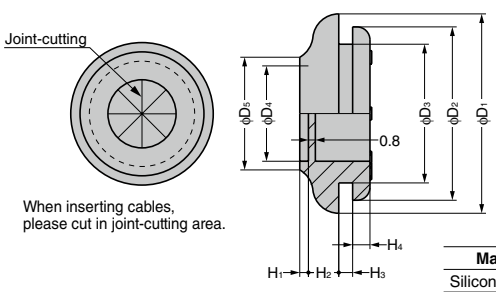
[Remarks]

- Detectable size of the contaminant depends on the settings and performance of the metal detector.

[Includes Metal Powder]



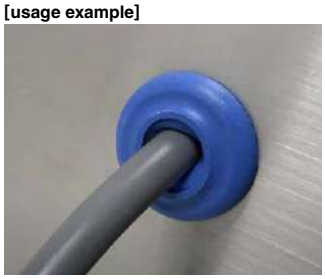
The silicone rubber itself contains metal powder.



When inserting cables, please cut in joint-cutting area.

Material	Hardness	Colour
Silicone Rubber	50˚ ±5˚	Blue

[usage example]

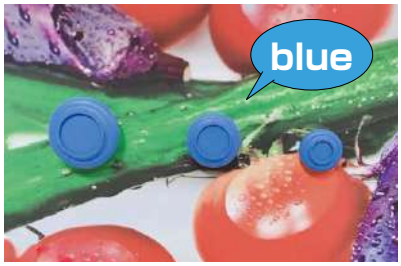


[Can be detected by metal detectors]

You can watch the video of the detection.

Video Link

[Easy visual detection]



The blue colour is a rarely occurring natural characteristic and therefore stands out if accidently mixed during food processing.

[Silicone rubber]

Safe

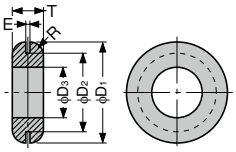
Material used is compliant with Food Sanitation Law.

Heat & Cold resistant

Operation Temperature 110 ℃ ~ -10 ℃

RoHS	CAD	Item Code	Item Name	D1	D2	D3	D4	D5	H1	H2	H3	H4	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-044-044	MPG-16	23	20	16	11	13	1	3.5	1.6	2	2	200	800
G	3D	210-044-045	MPG-22	29	26	22	17	19		4	2.3	2.5	3	120	480
G	3D	210-044-046	MPG-28	37	33	28	21	24	1.5	5		3	6	50	200

GROMMET BW

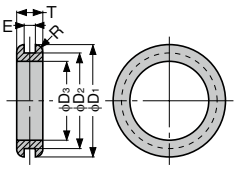


●Flam retardant material (UL94V-0) available by made to order.

Material	Hardness	Colour
EPDM	50°±5°	Black

RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Pack (pcs)	Box (packs)	Carton (pcs)
G	3D	210-038-040	BW-188-P100	18	12	6	1	7	3	2.5	100	1	5
G	3D	210-038-041	BW-189-P100				2	8			100	1	5
G	3D	210-038-042	BW-208-P100	20	14	8	1	7			100	1	5
G	3D	210-038-043	BW-209-P100				2	8			100	1	5
G	3D	210-038-044	BW-228-P100	22	16	10	1			3.5	100	1	5
G	3D	210-038-045	BW-229-P100				2	9			100	1	5
G	3D	210-038-046	BW-2610-P100	26	19	12	1	10	4	5	100	1	5
G	3D	210-038-047	BW-2611-P100				2	11		6	100	1	5
G	3D	210-038-048	BW-2910-P100	29	22	14	1	10			100	1	5
G	3D	210-038-049	BW-2911-P100				2	11		7	100	1	5
G	3D	210-038-050	BW-3210-P100	32	25	16	1	10		8	100	1	5
G	3D	210-038-051	BW-3211-P100				2	11		8.5	100	1	5
G	3D	210-038-052	BW-3512-P100	35	28	19	1	12	5	9.5	100	1	5
G	3D	210-038-053	BW-3513-P100				2	13		10	100	1	5
G	3D	210-038-054	BW-4012-P100	40	32	22	1	12		15	100	1	5
G	3D	210-038-055	BW-4013-P100				2	13			100	1	5
G	3D	210-038-056	BW-4414-P50	44	36	25	1	14	6	20	50	1	2
G	3D	210-038-057	BW-4415-P50				2	15			50	1	2
G	3D	210-038-058	BW-4814-P50	48	40	28	1	14		25	50	1	2
G	3D	210-038-059	BW-4815-P50				2	15			50	1	2
G	3D	210-038-060	BW-5218-P50	52	44	32	1	18	8	30	50	1	2
G	3D	210-038-061	BW-5219-P50				2	19			50	1	2
G	3D	210-038-062	BW-5618-P50	56	48	36	1	18		35	50	1	2
G	3D	210-038-063	BW-5619-P50				2	19			50	1	2

GROMMET NG

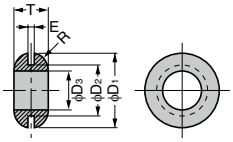


●Flam retardant material (UL94V-0) available by made to order.

Material	Hardness	Colour
EPDM	50°±5°	Black

RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	210-038-167	NG-937-P100	9	6	3.5	1.2	3.7	0.6	0.5	100	1	5
G	3D	210-038-149	NG-1145-P100	11	8	5	1.5	4.5			100	1	5
G	3D	210-038-150	NG-1160-P100				3	6		0.7	100	1	5
G	3D	210-038-151	NG-1345-P100	13	10	7	1.5	4.5		0.5	100	1	5
G	3D	210-038-152	NG-1360-P100				3	6		1	100	1	5
G	3D	210-038-153	NG-1545-P100	15	12	9	1.5	4.5			100	1	5
G	3D	210-038-154	NG-1560-P100				3	6			100	1	5
G	3D	210-038-155	NG-1955-P100	19	15	11	1.5	5.5	1	1.5	100	1	5
G	3D	210-038-156	NG-1970-P100				3	7			100	1	5
G	3D	210-038-157	NG-2155-P100	21	17	13	1.5	5.5		1.7	100	1	5
G	3D	210-038-158	NG-2170-P100				3	7		2	100	1	5
G	3D	210-038-159	NG-2355-P100	23	19	15	1.5	5.5		1.7	100	1	5
G	3D	210-038-160	NG-2370-P100				3	7		2.5	100	1	5
G	3D	210-038-161	NG-3065-P100	30	25	20	1.5	6.7	1.2	3	100	1	5
G	3D	210-038-162	NG-3080-P100				3	8		3.5	100	1	5
G	3D	210-038-163	NG-3565-P100	35	30	25	1.5	6.7		4	100	1	5
G	3D	210-038-164	NG-3580-P100				3	8		5	100	2	5
G	3D	210-038-165	NG-4275-P50	42	36	30	1.5	7.5		7	50	1	2
G	3D	210-038-166	NG-4290-P50				3	9		8	50	1	2

GROMMET KG



●Flam retardant material (UL94V-0) available by made to order.

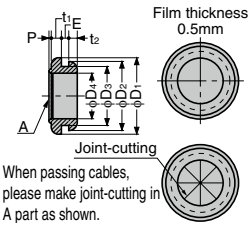
Material	Hardness	Colour
EPDM	50°±5°	Black

RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	210-038-147	KG-74-P100	7	5	3	1	4	1	0.5	100	1	5
G	3D	210-038-148	KG-95-P100	9	7		0.8	5.5	1.5		100	1	5
G	3D	210-038-143	KG-115-P100	11	8	5	1	5			100	1	5
G	3D	210-038-144	KG-135-P100	13		5.5				1	100	1	5
G	3D	210-038-145	KG-146-P100	14	10	8		6	3	0.7	100	1	5
G	3D	210-038-146	KG-178-P100	17	12	9	1.2	8	4	1.5	100	1	5

GROMMET SG

Material	Hardness	Colour
EPDM	50°±5°	Black

●Flam retardant material (UL94V-0) available by made to order.

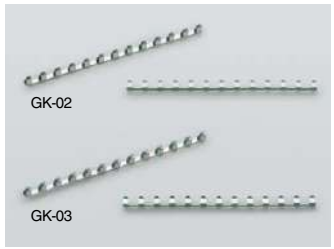


When passing cables, please make joint-cutting in A part as shown.

RoHS	CAD	Item Code	Item Name	D1	D2	D3	D4	t2	t1	E	P	Weight (g)	Pack (pcs)	Box (pack)	Carton (pack)
G	3D	210-038-175	SG-23-P100	23	20	15	11	2	3.5	1.6	1	2.5	100	1	5
G	3D	210-038-176	SG-25-P100	25	22	18	12			2.3		3	100	1	5
G	3D	210-038-177	SG-27-P100	27	24	20	15	2.5	4	1.6		3.5	100	1	5
G	3D	210-038-178	SG-29-P100	29	26	22	17			2.3		4.5	100	1	5
G	3D	210-038-179	SG-31-P100	31	28	24	19	3	5			5	100	1	5
G	3D	210-038-180	SG-35-P100	35	31	26				3.2			100	1	5
G	3D	210-038-181	SG-37-P100	37	33	28	21			2.3	1.5		100	1	5
G	3D	210-038-182	SG-39-P100	39	35	30	23			3.2		7.5	100	1	5
G	3D	210-038-183	SG-41-P100	41	37	32	25			2.3			100	1	5
G	3D	210-038-184	SG-43-P100	43	39	34	27			3.2		10	100	1	5
G	3D	210-038-185	SG-45-P50	45	42	36	28	4	6	2.3		12	50	1	2
G	3D	210-038-186	SG-46-P50	48	44	38	30			3.2		15	50	1	2

CENTIPEDE GROMMET GK

SUS

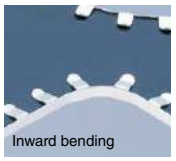


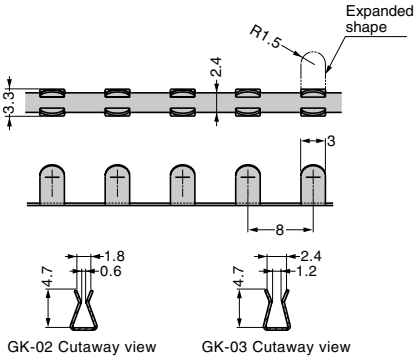
●Easy to install in a short time without using glue. Sorting and disposal is also easy.
●Made of all stainless steel with conductivity and excellent thermal durability.
●Can be post-installed or on-site handled for edge processing of finished equipment.
●Inward or outward bending available with bending radius more than 10mm.
●Can be easily cut with pliers.

[Remarks]

●Please cut at the edge of foot and do not leave the dorsal part. (Refer to the following figure: How to cut the grommet) .
●Please do not reuse. Otherwise, the catch force of the grommet weakens and may not be fixed securely.
●Please use a grommet suitable for board thickness. Do not use for applications other than adaptable board thickness, as it may not be securely fixed.

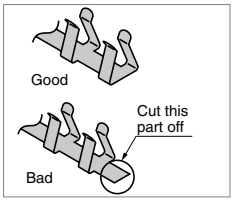
[Installation]

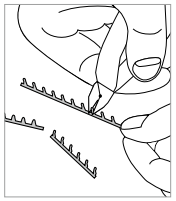




[How to Install]

[How to Cut the Grommet]





Can be easily cut with pliers.

RoHS	CAD	Item Code	Item Name	Board Thickness	Material	Finish	Length m/Roll	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-016	GK-02	0.8~1.2	Stainless Steel (SUS304)	Plain	10	15.5	10	100
G	3D	210-030-017	GK-03	1.5~2.0				16.5	10	100

※Sold in metric units (including the fee for one cutting). Cutting to lengths other than metric units or multiple cutting not available.
※Limited stock available. Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

WIRE MANAGER

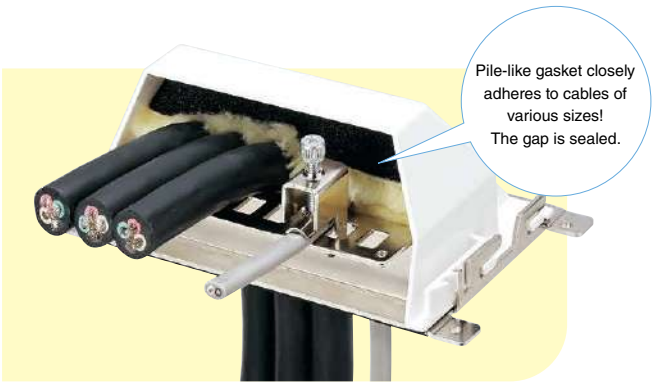
Wire Manager is compliant with IP54F.

Dust Proof Type
Although the intrusion of dust can be completely prevented, it does not interfere with the normal operation and safety of the electrical equipment.

Protects against splashing water
Splashing water from all directions will not have adverse effect.

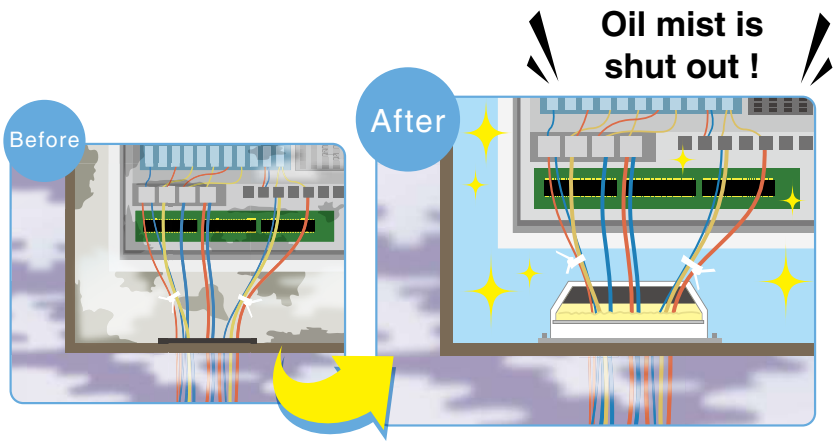
Oilproof Type
Oil drop or oil foam from all directions will not have adverse effect.

※When using in an environment beyond the protection range of IP54F, please check with actual item and make trial manufacture.

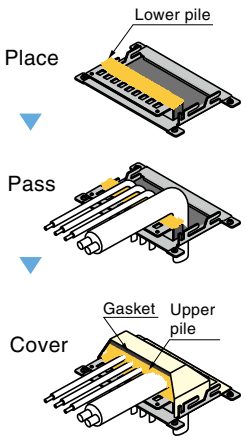


Cable installation example

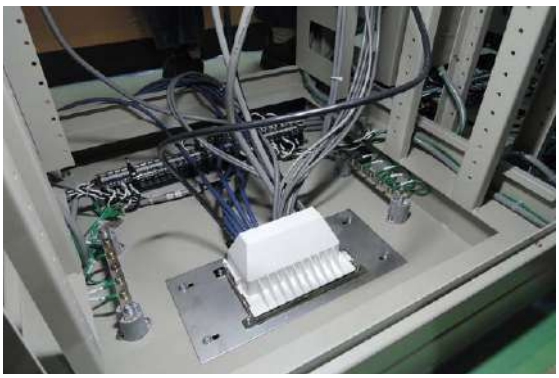
Oil mist may enter the control boards of processing machines and machine tools, causing troubles or failures of the electrical system.
Wire Manager can block the entry route (gap between the cables) of oil mist and dust, reducing unnecessary maintenance cost.



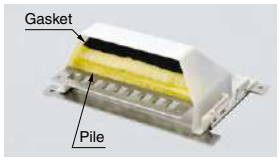
[How to Install]



[Application Example]



WIRE MANAGER WSM-150



- Prevents oil mist intrusion, suitable for the control board of processing machine.
- IP54F oilproof, waterproof (splashing water) and dustproof. Only for the case where the opening is downward as shown in the figure below.
- Can pass through multiple cables of different sizes. Up to 3 pcs of cables with up to ϕ30 can be passed through.
- Gasket tightening force is adjustable in two steps (see the gasket tightening force adjustment in the figure below).
- Cables can be easily replaced without using tools during maintenance.
- Grounding can be connected from the grommet body fixing screw.

[Applications]

- Processing machines, machine tools, etc.

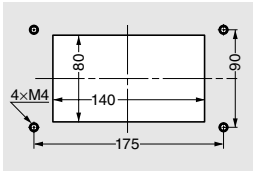
[Remarks]

- When using in an environment beyond the protection range of IP54F, please check with actual item and make trial manufacture and verification by customer.

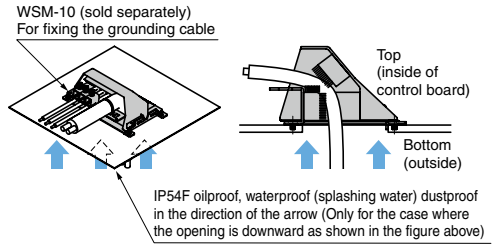
[Sold Separately]

- Wire bracket (for grounding) 1.

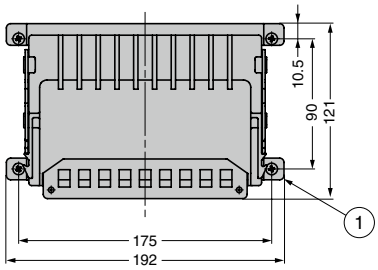
[Cut Out Dimensions]

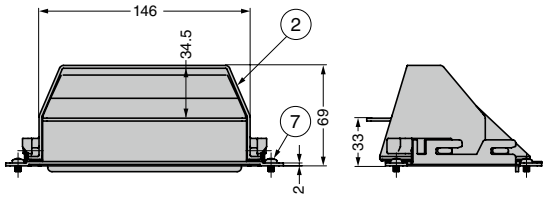


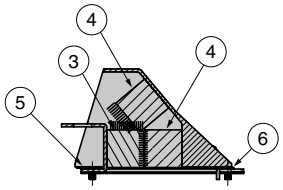
[Installation]



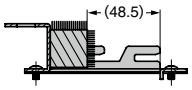
[Body]





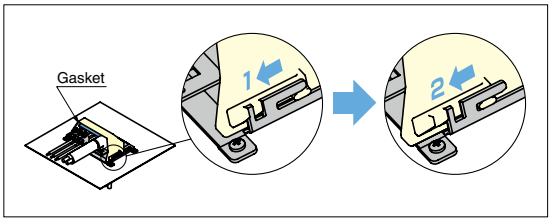


Cutaway view in sealed state



Cutaway view without cover

[Gasket Tightening Force Adjustment]



Adjustable in two steps, gasket firmly presses cables and prevents oil mist from entering.

No.	Part Name	Material	Finish / Colour
①	Body	Steel (SPCC)	Nickel
②	Cover	ABS	White
③	Gasket A	Nitrile Rubber (NBR), Pile	Black (Pile: Beige)
④	Gasket B		
⑤	Gasket C	Nitrile Rubber (NBR)	
⑥	Gasket D		
⑦	Pan Head Screw M4×6	Stainless Steel	Plain

[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-553	WSM-150	438	1	20

Refer to 1 : P.1012

WIRE MANAGER WSD Dustproof Type

- For simply preventing dust intrusion.
- Nitrile rubber gasket and pile improve sealability and can block gaps caused by size differences or multiple cables.
- Parts replacement or grommet addition can be performed without inserting and removing cables.
- Cables can be easily replaced without using tools during maintenance.
- Can pass through multiple cables of different sizes up to ϕ20. For ϕ20, up to 3 pcs (WSD-70), 6 pcs (WSD-140) and 12 pcs (WSD-280) can be passed through.
- Gasket tightening force is adjustable in two steps.
- Grounding can be connected from the grommet body fixing screw.

[Applications]

- Control boards, switch boards of processing machines and machine tools, etc.

[Remarks]

- This product is not waterproof and oilproof.

[Sold Separately]

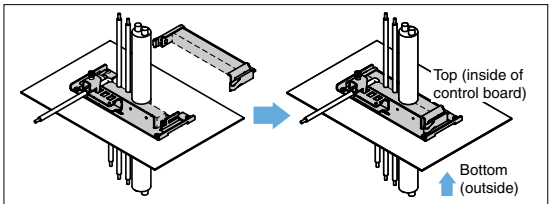
- Cable fastening bracket 1
  (WSD-70: 1 pc, WSD-140: up to 2 pcs, WSD-280: up to 4 pcs)
- Wire bracket (for grounding) 1

[Recommended Screws]

- Cross-recessed head screw M4

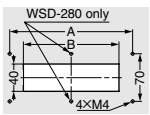
Video Link

[Post-Installation]

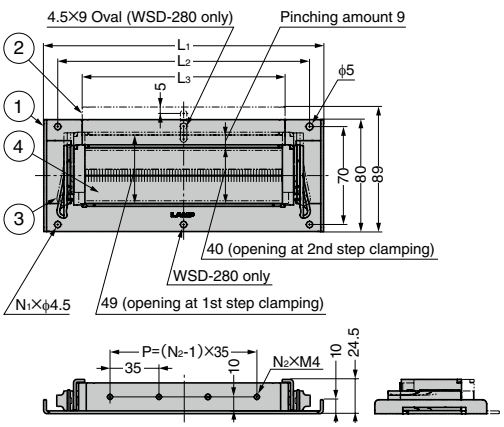


Body can be divided into two parts, unnecessary to insert and remove cables.

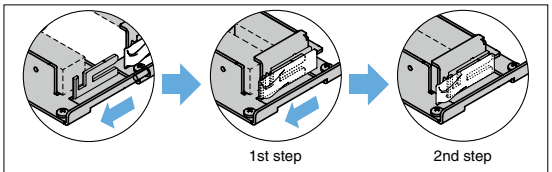
[Cut Out Dimensions]



[Body]



[Gasket Tightening Force Adjustment]



Adjustable in two steps, gasket firmly presses cables and prevents dust from entering.

No.	Part Name	Material	Finish / Colour
①	Base Plate	Steel (SPCC)	Nickel
②	Guide Plate		
③	Joint	POM	White
④	Gasket	Nitrile Rubber (NBR), Pile	Black

[Body]

RoHS	CAD	Item Code	Item Name	L_1	L_2	L_3	P	N_1	N_2	A	B	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-656	WSD-70	130	110	75	35	3	2	110	70	298	1	40
G	3D	210-034-657	WSD-140	200	180	145	105		4	180	140	433	1	30
G	3D	210-034-658	WSD-280	340	320	285	245	4	8	320	280	793	1	20

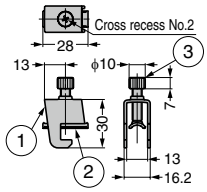
Refer to 1 : P.1012

BRACKET WSM-10, WSD-B-S, WSD-B For WSM-150, WSD

[Wire Bracket] For WSM-150 1 , WSD 2

WSM-10

※ For Max. ϕ12



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Nickel
②	Wire Presser		
③	Wire Clamping Bolt	Steel (SWRM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-554	WSM-10	23	50	500

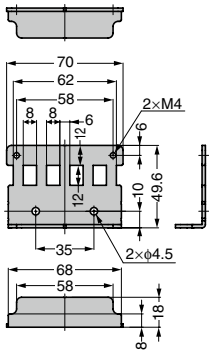
[Remarks]

- WSM-10 cannot be used with WSD-B-S.

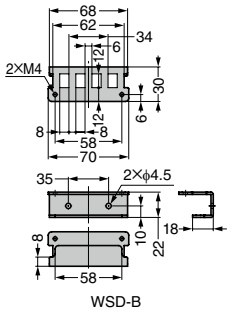
[Cable Fastening Bracket] For WSD 2

WSD-B-S
(Straight Type)

WSD-B
(90˚ Fastening)



WSD-B-S



WSD-B

Part Name	Material	Finish
Body	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-037-855	WSD-B-S	61	60	180
G	3D	210-034-659	WSD-B		60	180

[Remarks]

- WSD-70: 1 pc, WSD-140: up to 2 pcs, WSD-280: up to 4 pcs

[Parts Included]

- Pan head screw M4×4 (SUS) 2 pcs

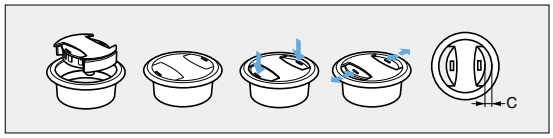
Refer to 1 : P.1010, 2 : P.1011

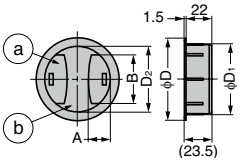
CABLE GROMMET S70, S91

- For thin cables, slide the part ⓐ.
- When taking out cables at both sides, slide part ⓐ on the left and right sides.
- Cap ⓑ is removable for wide opening.

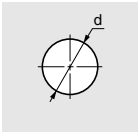
[Remarks]

- Be sure to read the “Cautions” 1.
- Since a spring is incorporated in the cap part, the parts may be disassembled. Please be careful when attaching/detaching the cap.





[Cut Out Dimensions]



[Application Example]

RoHS	CAD	Item Code	Item Name	Colour	Material	D	D₁	D₂	A	B	C	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-542	S70W	White	ABS	70.5	60	56	19	41.5	7	60	29	15	150
G	3D	210-028-543	S70CM	Ivory										15	150
G	3D	210-028-544	S70G	Grey										15	150
G	3D	210-028-545	S70BR	Brown										15	150
G	3D	210-028-546	S70B	Black										15	150
G	3D	210-028-547	S91W	White		91	80	76	25	55	10	80	39	10	90
G	3D	210-028-548	S91CM	Ivory										10	90
G	3D	210-028-549	S91G	Grey										10	90
G	3D	210-028-550	S91BR	Brown										10	90
G	3D	210-028-551	S91B	Black										10	90

Refer to 1 : P.965

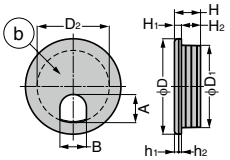
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABLE GROMMET S445, S51, S60, S76, S89

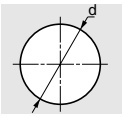
- Cap ⓑ is removable for wide opening.
- Uses flame retardant material rated UL94HB.

[Remarks]

- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]



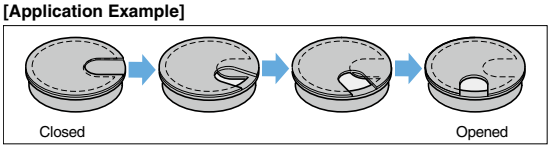
RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	H	H1	H2	h1	h2	A	B	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-830	S445CM	Ivory	ABS	45	38.8	34	19.7	3.3	16.4	2	1.3	16.7	12.5	39	9	50	450
G	3D	210-031-831	S445W	White													9	50	450
G	3D	210-031-829	S445G	Grey													9	50	450
G	3D	210-031-828	S445B	Black													9	50	450
G	3D	210-031-834	S51CM	Ivory		51	44.8	39.7	19.9	3.6	16.3		1.6	19	15.5	45	11	30	300
G	3D	210-031-835	S51W	White													11	30	300
G	3D	210-031-833	S51G	Grey													11	30	300
G	3D	210-031-832	S51B	Black													11	30	300
G	3D	210-031-838	S60CM	Ivory		60.5	48.8	44	19.8		16.2			20.8	19	49	14	25	250
G	3D	210-031-839	S60W	White													14	25	250
G	3D	210-031-837	S60G	Grey													14	25	250
G	3D	210-031-836	S60B	Black													14	25	250
G	3D	210-031-814	S76CM	Ivory		76.5	64.8	59	20.3	4.2	16.1	2.6		21.5	21.5	65	22	15	150
G	3D	210-031-815	S76W	White													22	15	150
G	3D	210-031-813	S76G	Grey													22	15	150
G	3D	210-031-812	S76B	Black													22	15	150
G	3D	210-031-818	S89CM	Ivory		89.4	76.8	71.4	20.6	4.1	16.5		1.5	25	22	77	30	10	90
G	3D	210-031-819	S89W	White													30	10	90
G	3D	210-031-817	S89G	Grey													30	10	90
G	3D	210-031-816	S89B	Black													30	10	90

Refer to 1 : P.965

Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABLE GROMMET ST70, ST88

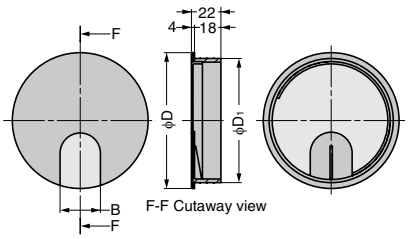
[Application Example]



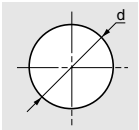
- Cover rotates for opening and closing.
- Cover can be closed when no cable passes through.

[Remarks]

- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]



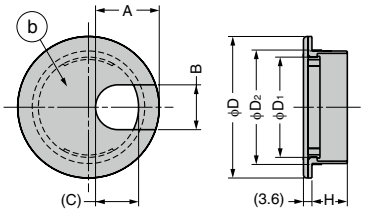
RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	B	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-802	ST70W	White	ABS	70	60	22	60	13.7	15	150
G	3D	210-031-803	ST70CM	Ivory							15	150
G	3D	210-031-804	ST70SL	Silver							15	150
G	3D	210-031-805	ST70G	Grey							15	150
G	3D	210-031-806	ST70B	Black							15	150
G	3D	210-031-807	ST88W	White		88	80	26	80	13.2	10	80
G	3D	210-031-808	ST88CM	Ivory							10	80
G	3D	210-031-809	ST88SL	Silver							10	80
G	3D	210-031-810	ST88G	Grey							10	80
G	3D	210-031-811	ST88B	Black							10	80

Refer to 1 : P.965

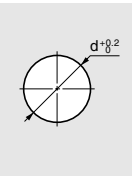
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABLE GROMMET LSU-S, LS-S Round / One-sided

- One-sided cable grommet.
- Cap ⓑ is removable for wide opening.



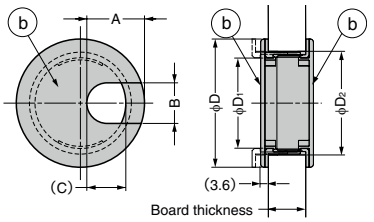
[Cut Out Dimensions]



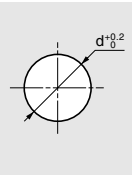
RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	H	A	B	C	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-938	LS43S-WT	White	ABS	43	29.5	35.5	15	-	14	14.5	35	5.5	20	160
G	3D	210-040-939	LS43S-BE	Beige											20	160
G	3D	210-040-940	LS43S-LBR	Light Brown											20	160
G	3D	210-040-941	LS43S-DBR	Dark Brown											20	160
G	3D	210-040-942	LS43S-BL	Black											20	160
G	3D	210-040-943	LS50S-WT	White		50	34.5	40.5			17	17	40	7.5	20	160
G	3D	210-040-944	LS50S-BE	Beige											20	160
G	3D	210-040-945	LS50S-LBR	Light Brown											20	160
G	3D	210-040-946	LS50S-DBR	Dark Brown											20	160
G	3D	210-040-947	LS50S-BL	Black											20	160
G	3D	210-029-540	LSU60S-WT	White		60	42.5	48.5	11.5	27	19	18	48	10	20	160
G	3D	210-029-541	LSU60S-BE	Beige											20	160
G	3D	210-029-542	LSU60S-LBR	Light Brown											20	160
G	3D	210-029-543	LSU60S-DBR	Dark Brown											20	160
G	3D	210-029-544	LSU60S-BL	Black											20	160
G	3D	210-029-545	LS60S-WT	White					15					11	20	160
G	3D	210-029-546	LS60S-BE	Beige											20	160
G	3D	210-029-547	LS60S-LBR	Light Brown											20	160
G	3D	210-029-548	LS60S-DBR	Dark Brown											20	160
G	3D	210-029-549	LS60S-BL	Black											20	160
G	3D	210-029-550	LS76S-WT	White		76	58.2	64.2	23.5	34	22	25.1	64	18	12	96
G	3D	210-029-551	LS76S-BE	Beige											12	96
G	3D	210-029-552	LS76S-LBR	Light Brown											12	96
G	3D	210-029-553	LS76S-DBR	Dark Brown											12	96
G	3D	210-029-554	LS76S-BL	Black											12	96

CABLE GROMMET LSU, LS Round / Double-sided

- Double sided cable grommet.
- Cap ⓑ on both sides is removable for wide opening.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	A	B	C	Board Thickness	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-948	LS43WT	White	ABS	43	29.5	35.5	-	14	14.5	16 - 26	35	10.3	20	160
G	3D	210-040-949	LS43BE	Beige											20	160
G	3D	210-040-950	LS43LBR	Light Brown											20	160
G	3D	210-040-951	LS43DBR	Dark Brown											20	160
G	3D	210-040-952	LS43BL	Black											20	160
G	3D	210-040-953	LS50WT	White		50	34.5	40.5		17	17		40	13.5	20	160
G	3D	210-040-954	LS50BE	Beige											20	160
G	3D	210-040-955	LS50LBR	Light Brown											20	160
G	3D	210-040-956	LS50DBR	Dark Brown											20	160
G	3D	210-040-957	LS50BL	Black											20	160
G	3D	210-017-353	LSU60WT	White		60	42.5	48.5	27	19	18	12 - 18	48	19	20	160
G	3D	210-029-534	LSU60BE	Beige											20	160
G	3D	210-029-533	LSU60LBR	Light Brown											20	160
G	3D	210-029-532	LSU60DBR	Dark Brown											20	160
G	3D	210-017-354	LSU60BL	Black											20	160
G	3D	210-035-071	LS60WT	White								18 - 24		20	20	160
G	3D	210-029-126	LS60BE	Beige											20	160
G	3D	210-029-535	LS60LBR	Light Brown											20	160
G	3D	210-029-536	LS60DBR	Dark Brown											20	160
G	3D	210-035-070	LS60BL	Black											20	160
G	3D	210-031-304	LS76WT	White		76	58.2	64.2	34	22	25.1	25 - 40	64	25	12	96
G	3D	210-029-537	LS76BE	Beige											12	96
G	3D	210-029-538	LS76LBR	Light Brown											12	96
G	3D	210-029-539	LS76DBR	Dark Brown											12	96
G	3D	210-031-305	LS76BL	Black											12	96

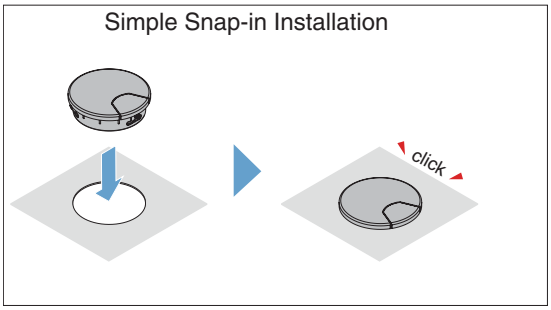
CABLE GROMMET LS50F, LS60F For Sheet Metal / Snap-in Installation

- Designed for snap-in installation into sheet metal.
- Folding flap can close the opening when not in use.
- Supports panel thicknesses of 0.8–2.0 mm.
- Uses flame retardant material rated UL94V-0.

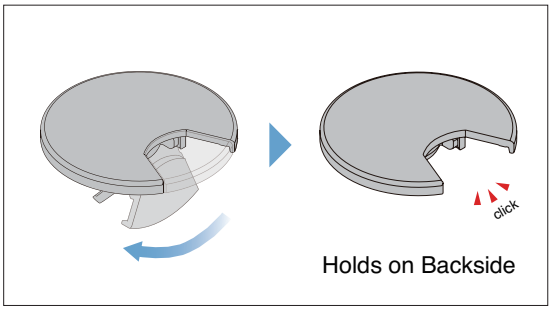
[Application]
- Operation consoles, steel cabinets , self-checkout

[Remarks]
- Cannot be installed on wood boards.

[Quick Installation to Sheet Metal]

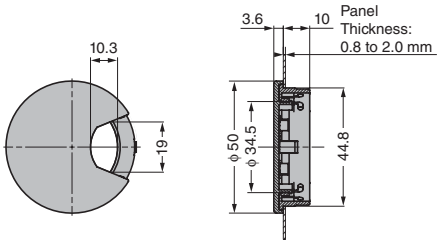


[Flap Cover]

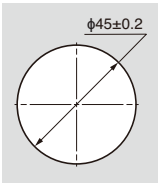


The cover can be folded and held on backside to prevent misplacement.
The whole cap is removable for a wider opening.

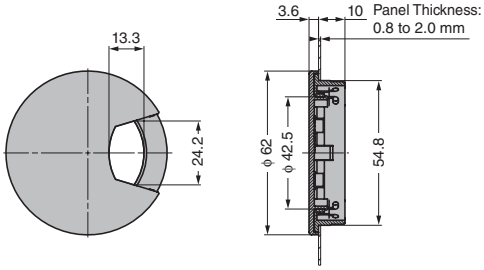
[LS50F]



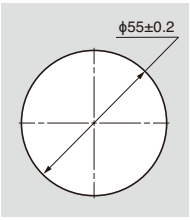
Cut Out Dimensions



[LS60F]



Cut Out Dimensions



Video Link

[LS50F] Hole diameter: 45 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	Available Thickness	Weight (g)
G	3D	210-045-891	LS50F-WT	White	ABS	0.8 to 2.0	9.8
G	3D	210-045-892	LS50F-GR	Grey			
G	3D	210-045-893	LS50F-BL	Black			

[LS60F] Hole diameter: 55 mm

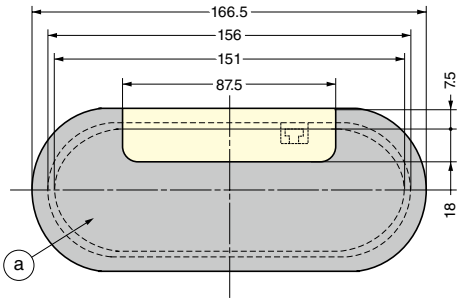
RoHS	CAD	Item Code	Item Name	Colour	Material	Available Thickness	Weight (g)
G	3D	210-045-894	LS60F-WT	White	ABS	0.8 to 2.0	15.3
G	3D	210-045-895	LS60F-GR	Grey			
G	3D	210-045-896	LS60F-BL	Black			

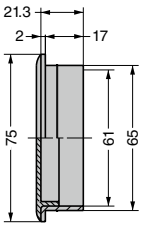
CABLE GROMMET S165-76

- Please push ☐ part into back when using thin cables.
- Cap ⓐ is removable for wide opening.

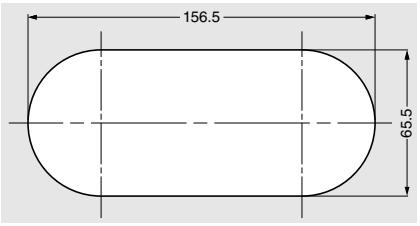
[Remarks]

- Be sure to read the "Cautions" 1.





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-827	S165-76CM	Ivory	ABS	48	5	50
G	3D	210-031-826	S165-76W	White		48	5	50
G	3D	210-031-825	S165-76G	Grey		48	5	50
G	3D	210-031-824	S165-76B	Black		48	5	50

Refer to 1 : P.965

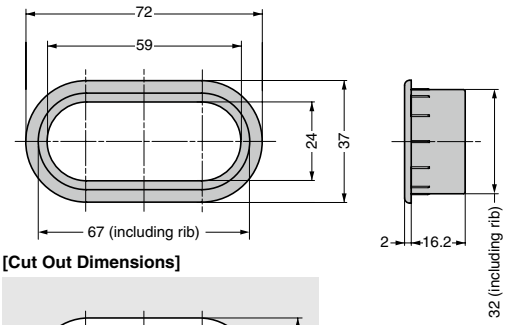
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABLE GROMMET LN72P

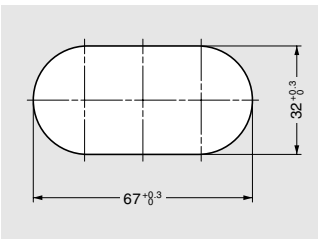
- Without cap version of LN72S 1.
- Plating finish provides a sense of quality.

[Remarks]

- Be sure to read the "Cautions" 2.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-225	LN72P-CR	Chrome	ABS	8	40	320
G	3D	210-026-235	LN72P-DC	Dull Chrome		8	40	320
G	3D	210-024-226	LN72P-GC	Gold		8	40	320

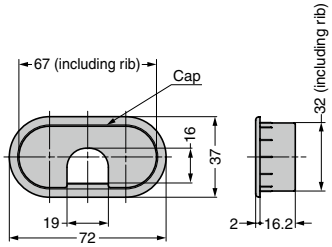
Refer to 1 : P.1017, 2 : P.965

CABLE GROMMET LN72S

- Cap is removable for wide opening.

[Remarks]

- Be sure to read the "Cautions" 1.



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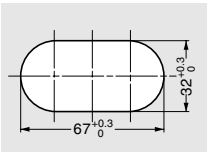
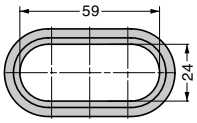


[Opening Size Without Cap]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-021-706	LN72S-WT	White	ABS	9	40	320
G	3D	210-021-707	LN72S-BL	Black		9	40	320

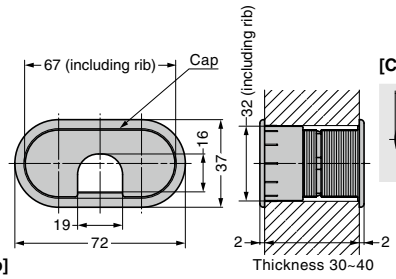
Refer to 1 : P.965

CABLE GROMMET LN72 Double Sided Type

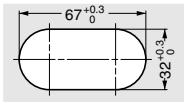
- Double sided cable grommet.
- Applicable board thickness: 30 mm~40 mm. Also available for 18 mm~30 mm thickness board by cutting the slit on body.
- Cap is removable for wide opening.

[Remarks]

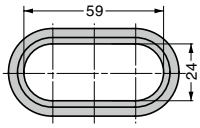
- After cutting the slit, ensure that the cut edge is free from burrs.



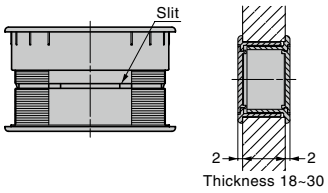
[Cut Out Dimensions]



[Opening Size Without Cap]

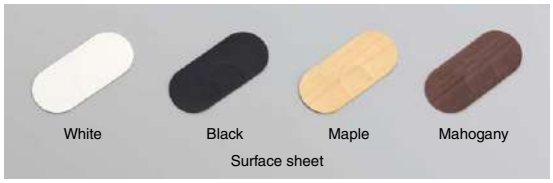


[After Cutting Slit]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-020-562	LN72-WT	White	ABS	19	40	320
G	3D	210-020-563	LN72-BL	Black		19	40	320

CABLE GROMMET LN72SF



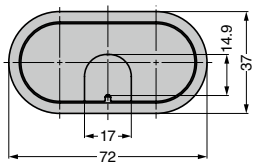
- 4 surface sheets (with double-sided tape) available for matching the finishes of desks or tables.
- When used as cable grommet, plate can be stored on the back side of cap (see the figure below).
- Cap is removable for wide opening.

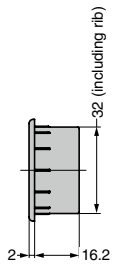
[Remarks]

- Be sure to read the “Cautions” 1.
- Surface sheet is sold separately in pieces. Please order with the main body.

[Sold Separately]

- Surface sheet LN72SF-ST

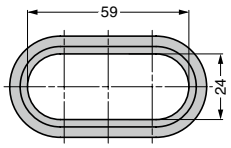




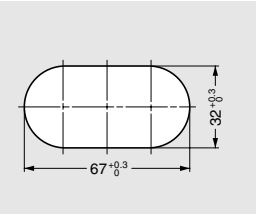
[Combination Example]

Main bodies and surface sheets can be combined in total 8 patterns.

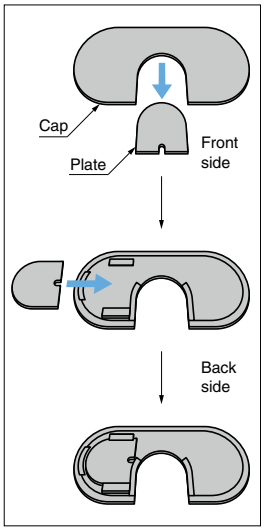
[Opening Size Without Cap]



[Cut Out Dimensions]



[How to Store Plate]



[Main Body]

RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-223	LN72SF-WT	White	ABS	9.0	40	320
G	3D	210-024-224	LN72SF-BL	Black		9.0	40	320

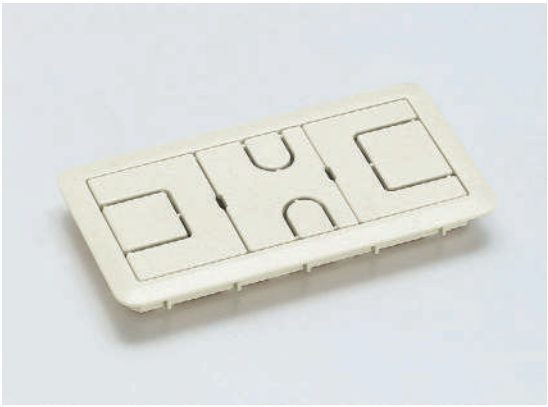
[Surface Sheet] Sold Separately

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-025-807	LN72SF-ST-WT	White: HWS5414 (AICA)	0.9	1500	–
G	3D	210-025-808	LN72SF-ST-BL	Black: HWS7101S (AICA)	0.9	1500	–
G	3D	210-026-450	LN72SF-STMAP	Maple: JWS1550V (AICA)	0.8	800	–
G	3D	210-026-449	※LN72SF-STMAO	Mahogany: AWS2021G (AICA)	0.8	800	–

※The finish of the item will be "mahogany: JWS2021V (AICA)" when the current stock is run out.

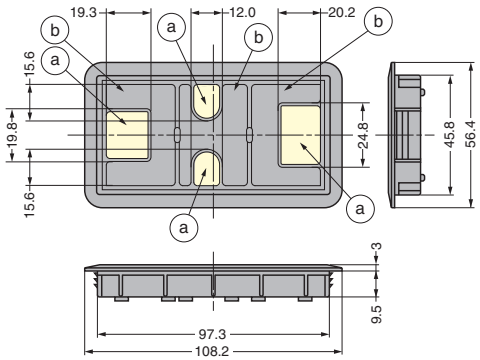
Refer to 1 : P.965

CABLE GROMMET ART973

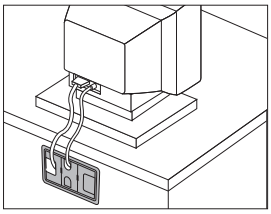


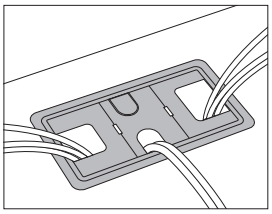
●In case of using with thin small cables, please remove the ⓐ parts.
●The ⓑ parts are also removable for wider opening.

[Remarks]
●Be sure to read the “Cautions” 1.

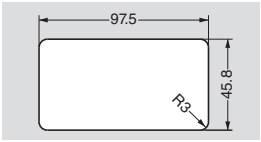


[Application Example]

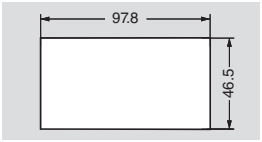




[Cutout for Wood]



[Cutout for Sheet Metal]

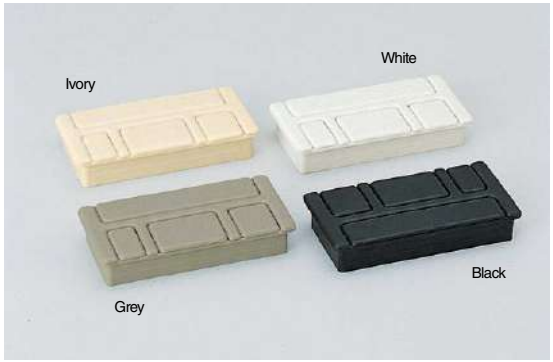


Thickness: 0.8 - 1 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-132	ART973	White	ABS	17	1	140

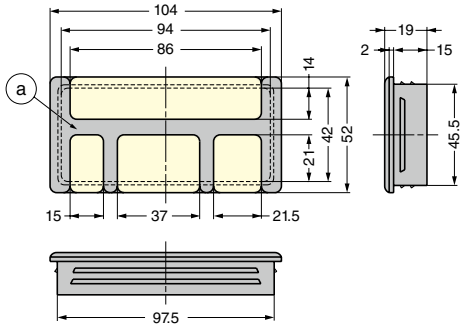
Refer to 1 : P.965

CABLE GROMMET S1015-51

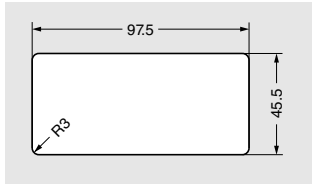


●Please fold and remove ▭ part according to the size of cables and location.
●Cap ⓐ is removable for wide opening.

[Remarks]
●Be sure to read the “Cautions” 1.



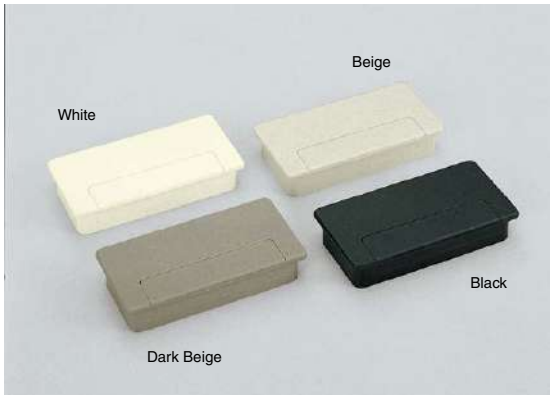
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-822	S1015-51CM	Ivory	ABS	22	15	150
G	3D	210-031-823	S1015-51W	White		21	15	150
G	3D	210-031-821	S1015-51G	Grey		21	15	150
G	3D	210-031-820	S1015-51B	Black		22	15	150

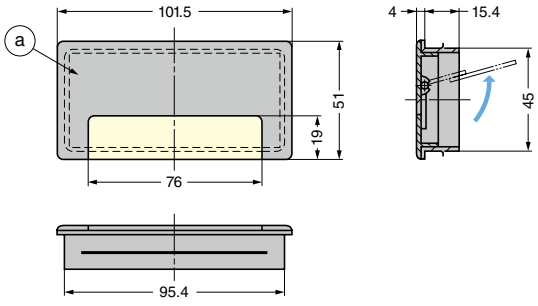
Refer to 1 : P.965
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

CABLE GROMMET S100-50

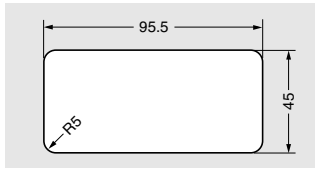


●Please push ▭ part into back when using thin cables.
●Cap ⓐ is removable for wide opening.

[Remarks]
●Be sure to read the “Cautions” 1.



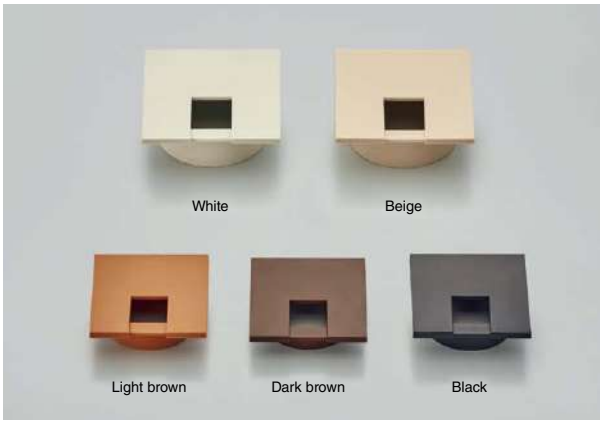
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-800	S100-50W	White	ABS	24	15	150
G	3D	210-031-801	S100-50BE	Beige			15	150
G	3D	210-031-840	S100-50DBE	Dark Beige			15	150
G	3D	210-031-841	S100-50BL	Black			15	150

Refer to 1 :P.965
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

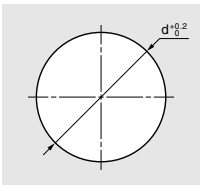
CABLE GROMMET LSUKS/LSKS Square/One-sided

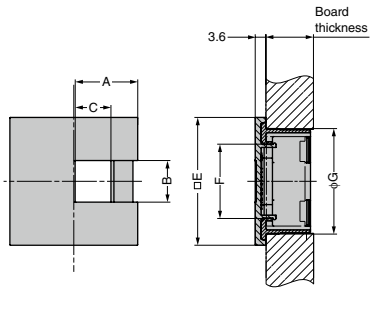


- The cap is removable for wide opening.
- Body can be fixed with nails to prevent rotation. When installing, please use nails to pierce into the 2 thin-walled locations on the backside of the body.
- Recommended nail: Pan head nail 1.2×10
  - Head diameter : 4mm or less
  - Shank diameter: 1.9mm or less

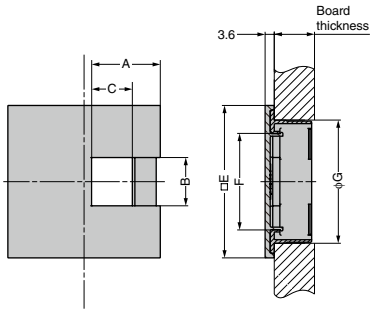
[Remarks]
- Please install by pushing into place.
- Please use an adhesive when installing on a metal sheet.

[Cut Out Dimensions]



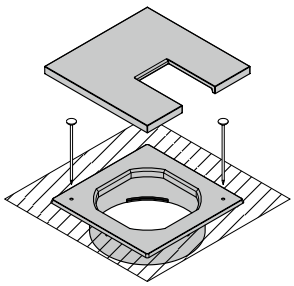


LS43KS/LS50KS



LSU60KS/LS60KS/LS76KS

[Components]



[LS43KS] Size: 43 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
	3D	210-043-445	LS43KS-WT	White	ABS	21	14	12	43	25	35.5	35	Min. 16	7	20	160
	3D	210-043-446	LS43KS-BE	Beige											20	160
	3D	210-043-447	LS43KS-LBR	Light Brown											20	160
	3D	210-043-448	LS43KS-DBR	Dark Brown											20	160
	3D	210-043-449	LS43KS-BL	Black											20	160

[LS50KS] Size: 50 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
	3D	210-043-450	LS50KS-WT	White	ABS	25	17	15	50	30	40.5	40	Min. 16	9.2	20	160
	3D	210-043-451	LS50KS-BE	Beige											20	160
	3D	210-043-452	LS50KS-LBR	Light Brown											20	160
	3D	210-043-453	LS50KS-DBR	Dark Brown											20	160
	3D	210-043-454	LS50KS-BL	Black											20	160

[LSU60KS] Size: 60 mm / Low-profile type

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
	3D	210-035-866	LSU60KS-WT	White	ABS	27	19	16.1	60	38	48.5	48	Min. 12	12	20	160
	3D	210-035-867	LSU60KS-BE	Beige											20	160
	3D	210-035-868	LSU60KS-LBR	Light Brown											20	160
	3D	210-035-869	LSU60KS-DBR	Dark Brown											20	160
	3D	210-035-870	LSU60KS-BL	Black											20	160

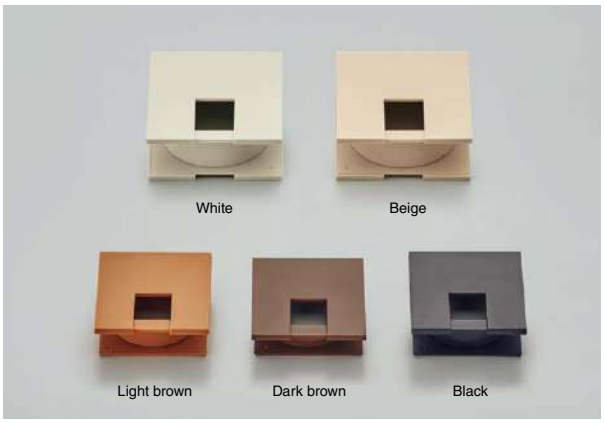
[LS60KS] Size: 60 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
	3D	210-035-871	LS60KS-WT	White	ABS	27	19	16.1	60	38	48.5	48	Min. 16	13	20	160
	3D	210-035-872	LS60KS-BE	Beige											20	160
	3D	210-035-873	LS60KS-LBR	Light Brown											20	160
	3D	210-035-874	LS60KS-DBR	Dark Brown											20	160
	3D	210-035-875	LS60KS-BL	Black											20	160

[LS76KS] Size: 76 mm

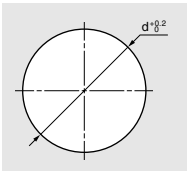
RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
	3D	210-035-876	LS76KS-WT	White	ABS	34	22	22.8	76	53.5	64.5	64	Min. 25	22	12	160
	3D	210-035-877	LS76KS-BE	Beige											12	160
	3D	210-035-878	LS76KS-LBR	Light Brown											12	160
	3D	210-035-879	LS76KS-DBR	Dark Brown											12	160
	3D	210-035-880	LS76KS-BL	Black											12	160

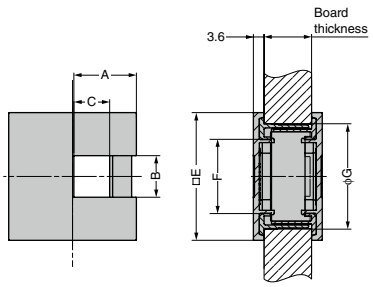
CABLE GROMMET LSUK/LSK Square/Double-sided



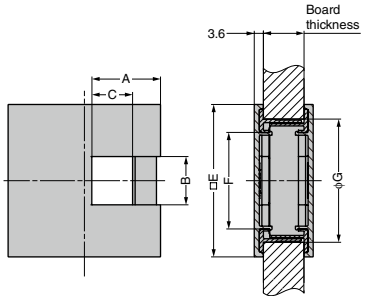
- Double-sided model which is suitable for vertical use.
- Applicable board thickness: 12-18mm, 16-26mm, 25-40mm.
- The cap is removable for wide opening.
- Square/one-sided model 1 is also available.
- Round/double-sided 2 and oval/double-sided 3 models are also available.
- The body can be fixed with nails to prevent rotation. When installing, please use nails to pierce into the 2 thin-walled locations on the backside of the body.
- Recommended nail: Pan head nail 1.2×10
  - Head diameter : 4mm or less
  - Shank diameter: 1.9mm or less

[Cut Out Dimensions]



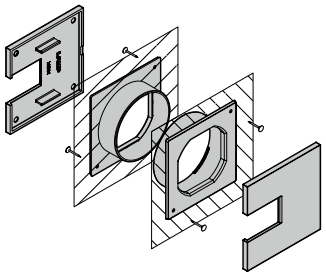


LS43K/LS50K



LSU60K/LS60K/LS76K

[Components]



[LS43K] Size: 43 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-043-455	LS43K-WT	White	ABS	21	14	12	43	25	35.5	35	16-26	13.7	20	160
G	3D	210-043-456	LS43K-BE	Beige											20	160
G	3D	210-043-457	LS43K-LBR	Light Brown											20	160
G	3D	210-043-458	LS43K-DBR	Dark Brown											20	160
G	3D	210-043-459	LS43K-BL	Black											20	160

[LS50K] Size: 50 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-043-460	LS50K-WT	White	ABS	25	17	15	50	30	40.5	40	16-26	18	20	160
G	3D	210-043-461	LS50K-BE	Beige											20	160
G	3D	210-043-462	LS50K-LBR	Light Brown											20	160
G	3D	210-043-463	LS50K-DBR	Dark Brown											20	160
G	3D	210-043-464	LS50K-BL	Black											20	160

[LSU60K] Size: 60 mm / Low-profile type

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-851	LSU60K-WT	White	ABS	27	19	16.1	60	38	48.5	48	12-18	24	20	160
G	3D	210-035-852	LSU60K-BE	Beige											20	160
G	3D	210-035-853	LSU60K-LBR	Light Brown											20	160
G	3D	210-035-854	LSU60K-DBR	Dark Brown											20	160
G	3D	210-035-855	LSU60K-BL	Black											20	160

[LS60K] Size: 60 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-856	LS60K-WT	White	ABS	27	19	16.1	60	38	48.5	48	16-26	25	20	160
G	3D	210-035-857	LS60K-BE	Beige											20	160
G	3D	210-035-858	LS60K-LBR	Light Brown											20	160
G	3D	210-035-859	LS60K-DBR	Dark Brown											20	160
G	3D	210-035-860	LS60K-BL	Black											20	160

[LS76K] Size: 76 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	A	B	C	E	F	G	d	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-861	LS76K-WT	White	ABS	34	22	22.8	76	53.5	64.5	64	25-40	42	12	160
G	3D	210-035-862	LS76K-BE	Beige											12	160
G	3D	210-035-863	LS76K-LBR	Light Brown											12	160
G	3D	210-035-864	LS76K-DBR	Dark Brown											12	160
G	3D	210-035-865	LS76K-BL	Black											12	160

Refer to 1 : P.1021, 2 :P.1014, 3 :P.1017

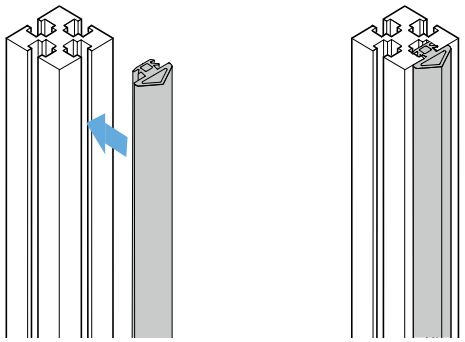
GASKET AS-PAA For Aluminium Frame

- Can be easily installed to aluminium frame groove without using glue. When installed to sliding door, it reduces the noise when closing the door and prevents scratches on the frame.
- 2 types for 6mm and 8 & 10mm width groove are available.
- Made of PVC with excellent resistance against weather, water, acid and alkali.
- Suitable for aluminium frames from various manufacturers.

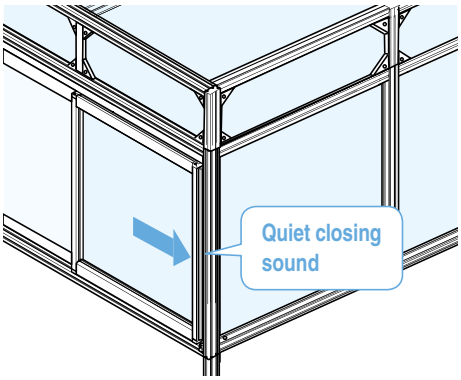
[Remarks]

- For details such as applicable aluminium frames, please contact local representatives.

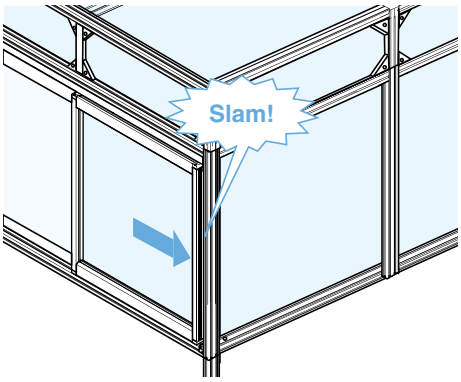
[Installation]

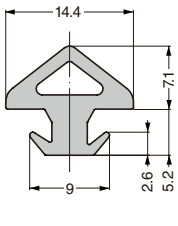


[With Gasket]

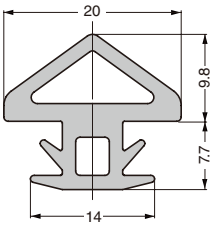


[Without Gasket]





AS-PAA-6



AS-PAA-810

Sold in metres.

RoHS	CAD	Item Code	Item Name	Material	Colour	Groove Width	Length m/Roll	Weight (g)	Box (m)	Carton (m)
–	3D	210-010-503	AS-PAA-6	PVC	Grey	6	50	99	50	100
–	3D	210-010-504	AS-PAA-810			8, 10		160	50	100

GASKET CR

- A variety of materials, sizes and cross-sectional shapes available for different purposes.

[Applications]

- Instrument, control boards, machine tools, home appliances, medical equipment, furniture, and office equipment, etc.

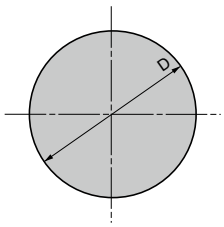
[Remarks]

- Sold in metres. Specified length and multiple cutting can be made to order.

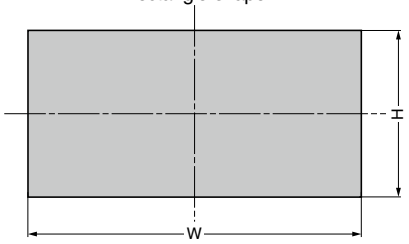
[Property of Chloroprene Gasket]

Material		CR
Colour		Black
Apparent Density (g/cm^3)		0.40
Hardness		20 (Durometer: type E)
Tensile Strength (MPa)		1.5
M100 (100% Modulus) (MPa)		0.3
Elongation (%)		300
Coefficient of Water Absorption (wt%)		Max. 5
Compressive Stress (gf/cm^2)		400
Ozone Resistance		48hr Non-crack
Operating Temperature (℃)		–25~100
Heat Aging Resistance	Hardness	22
	Elongation (%)	250

Round shape



Rectangle shape



[Round Shape]

RoHS	CAD	Item Code	Item Name	D	Length m/Roll	Weight (g)	Box (m)	Carton (m)
G	3D	210-049-535	CR-M4	4	300	7.0	1	–
G	3D	210-049-536	CR-M5	5		14.2	1	–

[Rectangle Shape]

RoHS	CAD	Item Code	Item Name	W	H	Length m/Roll	Weight (g)	Box (m)	Carton (m)
G	3D	210-039-799	CR-1003	10	3	200	30.5	200	–
G	3D	210-039-017	CR-2003	20			26.3	200	–
G	3D	210-039-984	CR-3003	30		100	39.5	100	–
G	3D	210-039-411	CR-1505	15	5		32.0	100	–
G	3D	210-039-642	CR-2505	25			41.3	100	–
G	3D	210-039-924	CR-2006	20	6		48	100	–
G	3D	210-039-090	CR-1508	15	8		70.0	100	–
G	3D	210-039-931	CR-2010	20	10		107.6	100	–
G	3D	210-039-976	CR-2510	25			90.6	100	–
G	3D	210-030-851	CR-2515		15		150	100	–
G	3D	210-039-978	CR-2518		18		180	100	–
G	3D	210-039-998	CR-4025	40	25	25	400	50	–

Gaskets, Resin Protective Materials & Cushions

Made to Order

Protective material and cushion material series with excellent heat resistance and high slidability, etc.

For sizes and minimum order, please contact local representatives.

Silicone Trim

- Silicone rubber edge protective material with excellent heat resistance, high chemical resistance and long service life.
- Can be easily installed to sheet metal without using glue.
- Conductive type of different shapes and colours also available.

Eco-resin Trim

- Edge protective material with built-in hard resin frame.
- Can be easily installed to sheet metal without using glue.
- Made entirely from resin to prevent core material from rusting.
- Can be welded (endless processing, etc.) including frame.

Silicone Sponge Sheet & Silicone Rubber Extruded Material

- Excellent heat resistance and durability.
- Can be used as cushion materials for various purposes.
- Sponge sheet can be sliced to the desired size from 1 to 20mm thick, suitable for thin applications.

Sube-up

- Coated with special activated resin, it has excellent slidability and wear resistance, providing superior functionality as sealing material and gasket.
- Can be used for preventing fixation and improving slidability.

Gel Gasket

- Composite extruded gasket used for improving usability by moulding vibration damping and water tightness gel simultaneously with elastomer.
- Ideal for vibration damping material of motors and pumps, etc.

BELT PARTITION SERIES

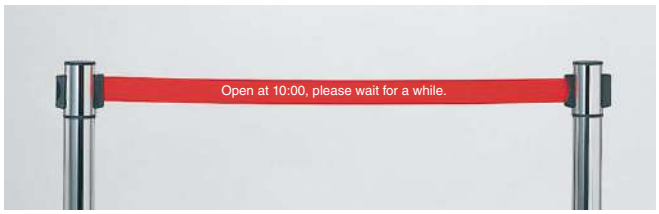
- Suitable for simple partitions at the station's platforms and factories.
- Long type with belt length 7m and stacking type available.

[Wall Mount Type] P.1026~P.1027

[Self-standing Type]

RD (red)	BU (blue)	YE (yellow)
GN (green)	BR (brown)	GR (grey)
BL (black)		

■Letters and symbols can be optionally printed on the belt.



WALL MOUNT BELT PARTITION AP-BR351

SUS

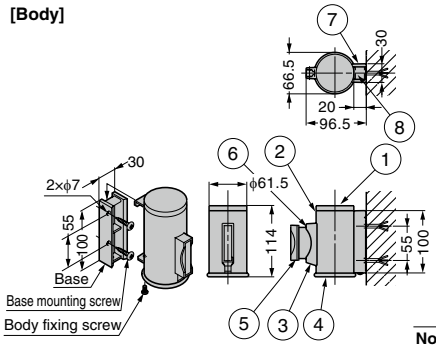
AP-BR351 (MR)

AP-BR351 (SL)

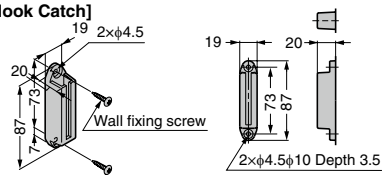
Hook catch (sold separately)

[Application Example]

[Body]



[Hook Catch]



- Use hook catch (included) to fix the pulled out belt.

[Remarks]

- Hook catch is supplied with the body. Please order separately if additional hook catches are required.
- Please install the body and hook catch as shown in the application example. If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

[Parts Included]

- Hook catch

No.	Part Name	Material	Finish / Colour
①	Head	ABS	Dark Grey
②	Slit Pipe (MR)	Stainless Steel	Polished
	Slit Pipe (SL)	Steel	Powder Coating/Silver
③	Hook Catch A	ABS	Dark Grey
④	Wall Mount Type Resin Sleeve		
⑤	Hook		
⑥	Belt	Polyester	–
⑦	Base	ABS	Dark Grey
⑧	Hook Bracket	Stainless Steel (SUS304)	Powder Coating/Dark Grey

[Body]

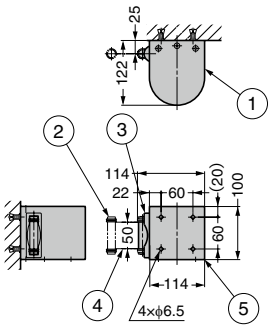
RoHS	CAD	Item Code	Item Name	Belt Colour	Belt Length m	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	290-893-247	AP-BR351 (MR)RD	Red	2	0.5	1	40
–	3D	290-893-306	AP-BR351 (MR)BU	Blue			1	40
–	–	290-893-246	AP-BR351 (SL)RD	Red			1	40
–	–	290-893-301	AP-BR351 (SL)BU	Blue			1	40

[Hook Catch] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Size	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-590	AP-BR349M (GR)	ABS	Dark Grey	W19×D20×H87	19	200	–

WALL MOUNT BELT PARTITION AP-BR057

SUS



Right-handed type shown. Left-handed type is symmetrical.

- Long type with belt length 7m.
- Use hook catch (sold separately) to fix the pulled out belt.

[Remarks]

- Belt part may collapse due to product characteristics.
- Hook catch is not supplied with the body.Please order separately.
- Please install the body and hook catch as shown in the application example. If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

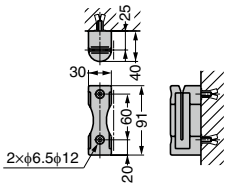
[Sold Separately]

- Hook catch

[Body]

RoHS	CAD	Item Code	Item Name	Type	Belt Length m	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	290-885-004	AP-BR057R(SH)	Right-handed	7	1.46	1	–
–	3D	290-885-005	AP-BR057L(SH)	Left-handed			1	–

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Hook	Aluminium Alloy	–
③	Belt Pull-out Opening	ABS	Black
④	Belt (7m)	Polyester	Red
⑤	Bracket	Stainless Steel (SUS304)	–



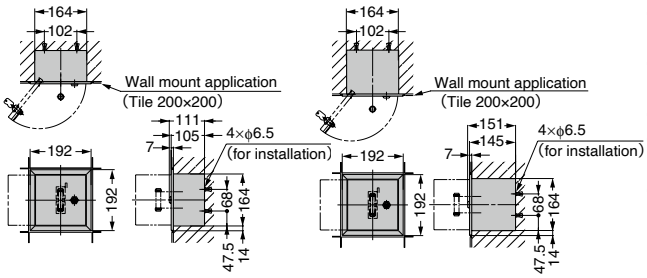
[Application Example]

[Hook Catch] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Size	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-006	AP-BR050(AS)	Aluminium Alloy	Anodised Silver	W30×D40×H91	223.5	50	–

BELT PARTITION AP-BR06 Mortise Mount Type

SUS



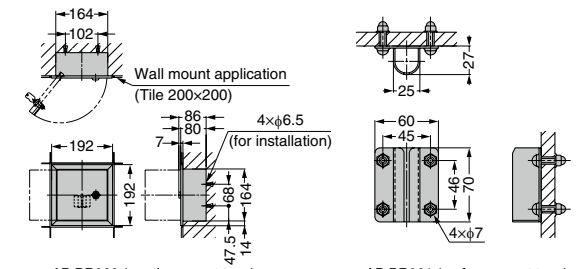
AP-BR063 (belt length 3.5 m)

AP-BR065 (belt length 5 m)

- Can be recessed inside of the wall.
- Types with belt length 3.5m and 5m available.
- Door with lock to prevent mischief.
- Use hook catch (sold separately) to fix the pulled out belt.
- Surface mount type and mortise mount type available for optional hook catches.Like the partition, the mortise mount type has a lock on the door.
- Silk printing on belt available by made to order.

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Belt Colour	Belt Length m	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-007	AP-BR063(SH)	Stainless Steel	Satin	Red	3.5	2510.0	1	–
–	–	290-885-008	AP-BR065(SH)	(SUS304)			5	3595.0	1	–



AP-BR060 (mortise mount type)

AP-BR061 (surface mount type)

[Remarks]

- Belt part may collapse due to product characteristics.
- Silk printing on belt available at surcharge.
- Please install the body and hook catch as shown in the picture.If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

[Sold Separately]

- Hook catch

[Hook Catch] Sold Separately

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	290-885-009	AP-BR060(SH)	Mortise Mount	Stainless Steel	Satin	1460	1	–
GT	3D	290-885-010	AP-BR061(SH)	Surface Mount	(SUS304)		1680	1	–

POINT FIX

Point fix is a part for fixing glass to structure or frame when using glass as a wall or panel.

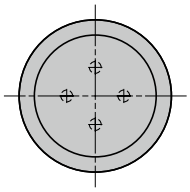
Zwei L

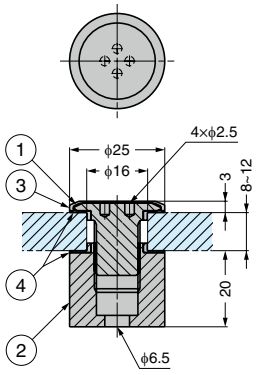
Zwei L is the flagship brand of Sugatsune and represents premium Japanese hardware quality. Zwei L stands for "Zwei Lichter" in German: a dual highlight of mirror finish and lustrous satin on a faceted profile.
Manufactured from solid billets of the finest quality 316 stainless steel, **Zwei L** brings the space luxury and dazzles your eyes.

Video Link

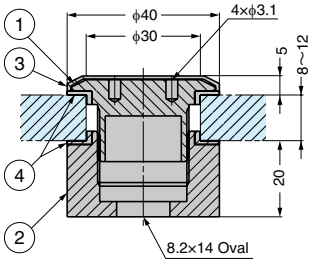
Zwei L STAINLESS STEEL POINT FIX ZL-2801

SUS316 TEMPERED GLASS





ZL-2801-25



ZL-2801-40

●Superior “Zwei L Finish”.
Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]

●Special tool (sold separately) is required for installation.

[Sold Separately]

●Special tool Z059, Z058

No.	Part Name	Material	Finish / Colour
①	Pin	Stainless Steel (SUS316)	Plain
②	Clamp		Polished (Partially)
③	Cover		Zwei L Finish
④	Spacer	POM	Black

[Body]

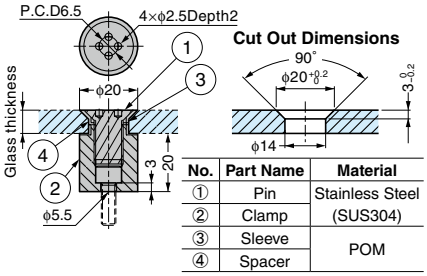
RoHS	CAD	Item Code	Item Name	Glass Thickness	Special Tool	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-674	ZL-2801-25	8~12	Z059	115.2	2	–
–	3D	120-040-675	ZL-2801-40		Z058	260.0	1	–

[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Length	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	115	38	20	–
–	3D	270-180-387	Z058	160	111	20	–

POINT FIX PE-20SR

TEMPERED GLASS



No.	Part Name	Material
①	Pin	Stainless Steel
②	Clamp	(SUS304)
③	Sleeve	POM
④	Spacer	

Special tool Z059

T-shaped holder PTH-5 1

[Remarks]
- Special tool Z059 is required for installation.

[Sold Separately]
- Special tool Z059
- T-shaped holder PTH-5 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M5

[Special Tool] Sold Separately

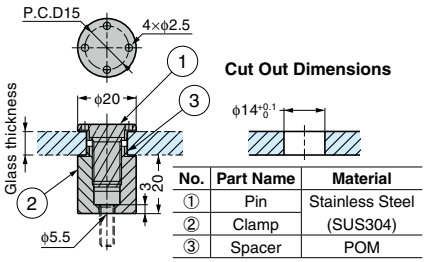
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-982	PE-20SR	8~12	51.7	50	200

Refer to 1 : P.1031

POINT FIX PE-20ST

TEMPERED GLASS



No.	Part Name	Material
①	Pin	Stainless Steel
②	Clamp	(SUS304)
③	Spacer	POM

Special tool Z059

T-shaped holder PTH-5 1

[Remarks]
- Special tool Z059 is required for installation.

[Sold Separately]
- Special tool Z059
- T-shaped holder PTH-5 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M5

[Special Tool] Sold Separately

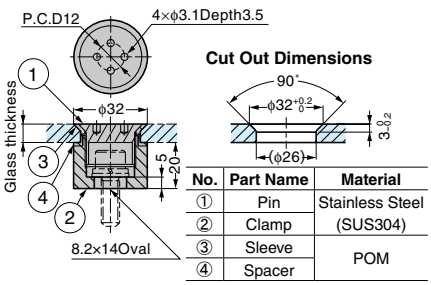
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-981	PE-20ST	8~12	56	50	200

Refer to 1 : P.1031

POINT FIX PE-32SR

TEMPERED GLASS



No.	Part Name	Material
①	Pin	Stainless Steel
②	Clamp	(SUS304)
③	Sleeve	POM
④	Spacer	

Special tool Z058

T-shaped holder PTH-8 1

[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M8

[Special Tool] Sold Separately

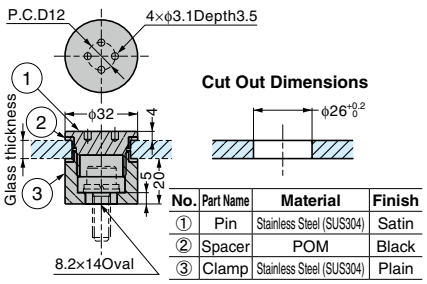
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-592	PE-32SR	8~12	112	10	80

Refer to 1 : P.1031

POINT FIX PE-32ST

TEMPERED GLASS



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z058

T-shaped holder PTH-8 1

[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M8

[Special Tool] Sold Separately

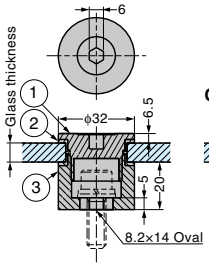
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-236	PE-32ST	8~12	140	10	80

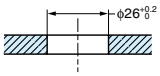
Refer to 1 : P.1031

POINT FIX PE-32HT

TEMPERED GLASS



Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

T-shaped holder PTH-8 1

[Remarks]
- Hex key (nominal 6) is required for installation.

[Sold Separately]
- T-shaped holder PTH-8 1 for point fix

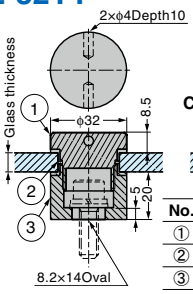
[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-238	PE-32HT	8~12	140	10	80

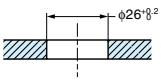
Refer to 1 : P.1031

POINT FIX PE-32YT

TEMPERED GLASS



Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z060

T-shaped holder PTH-8 1

[Remarks]
- Special tool Z060 is required for installation.

[Sold Separately]
- Special tool Z060
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-237	PE-32YT	8~12	140	10	80

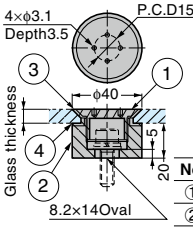
Refer to 1 : P.1031

[Special Tool] Sold Separately

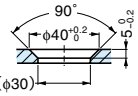
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-181-398	Z060	112	30	–

POINT FIX PE-40SR

TEMPERED GLASS



Cut Out Dimensions



No.	Part Name	Material
①	Pin	Stainless Steel (SUS304)
②	Clamp	
③	Sleeve	POM
④	Spacer	

Special tool Z058

T-shaped holder PTH-8 1

[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-980	PE-40SR	8~12	182	10	80

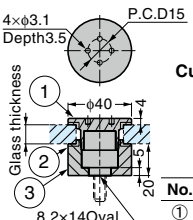
Refer to 1 : P.1031

[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

POINT FIX PE-40ST

TEMPERED GLASS



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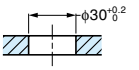


No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z058

T-shaped holder PTH-8 1

[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-235	PE-40ST	8~12	196	10	60

Refer to 1 : P.1031

[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

T-SHAPED HOLDER FOR POINT FIX PTH

L=R TEMPERED GLASS

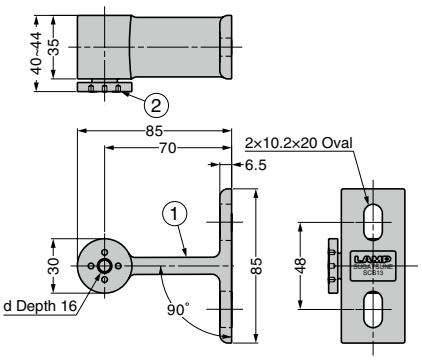
- For point fix (sold separately).
- Used for installing glass to the handrail post with point fix. Please use with point fix recommended in the table below.
- M5 screw type (PTH-5) and M8 screw type (PTH-8) available.
- Non-Handed. Can be installed on left or right side.
- Adjustment range: vertical ±5mm, depth 4mm. Horizontal adjustment is possible by using point fix (PTH-8 only).
- Ideal for exterior application. Acceptable glass weight: 36kg (4 pcs, vertical mounting).

[Remarks]

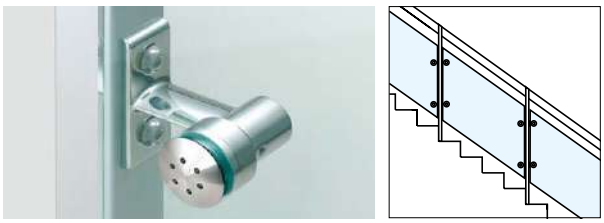
- When installing the recommended point fix to the glass, either special tool Z058, Z059, Z060 (sold separately) or hex key (nominal 6) is required. Special tools vary depending on the point fix used. Please confirm with the table below.
- When adjusting the depth adjustment screw and body of PTH-5 or PTH-8, special tool Z058 or Z059 is required.

[Recommended Screws]

- Hexagon socket button head screw M10
- Recommended tightening torque: 44 N·m (443 kgf·cm)



[Application Example]



No.	Part Name	Material	Finish
①	Body	SCS13	Polished
②	Depth Adjustment Screw	Stainless Steel (SUS304)	Satin

※SCS13 is equivalent to SUS304.

[Body]

RoHS	CAD	Item Code	Item Name	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-014-673	PTH-5	M5	419	2	24
GT	3D	120-014-672	PTH-8	M8	413	2	24

[Special Tool] Sold Separately

Z059 Z058 Z060

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–
–	3D	270-180-387	Z058	111	20	–
–	3D	270-181-398	Z060	112	30	–

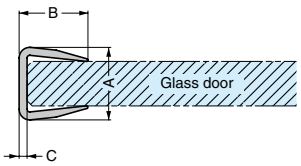
Refer to 1 : P.1029, 2 : P.1030

[Recommended Point Fix] Sold Separately

RoHS	CAD	Item Code	Item Name	Page	Horizontal Adjustment	T-shaped Holder	Special Tool	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-982	PE-20SR	1	–	PTH-5	Z059	51.7	50	200
–	3D	120-180-981	PE-20ST					56.0	50	200
–	3D	120-180-592	PE-32SR		±3	PTH-8	Z058	112.0	10	80
GT	3D	120-022-236	PE-32ST					140.0	10	80
GT	3D	120-022-238	PE-32HT	2			Hex Key 6	140.0	10	80
GT	3D	120-022-237	PE-32YT				Z060	140.0	10	80
–	3D	120-180-980	PE-40SR				Z058	182.0	10	80
GT	3D	120-022-235	PE-40ST					196.0	10	60

GLASS EDGE PROTECTOR GP

TEMPERED GLASS



- Sealing materail for protecting the edge of glass door.
- One-touch installation.
- Highly transparent.

[Remarks]

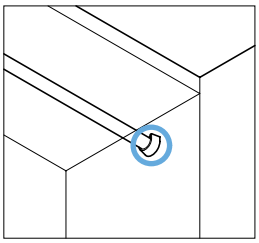
- Please choose according to the glass thickness.
- Sold at 3000mm. Can be cut to a required length by customers.

RoHS	CAD	Item Code	Item Name	Material	Colour	A	B	C	Length	Glass Thickness	Weight (kg)	Box (pcs)	Carton (pcs)
GT	3D	270-021-586	GP-06	PC	Clear	8.8	10	1.2	3000	6	104	35	–
GT	3D	270-021-587	GP-08			11.5	12	1.4		8	144	27	–
GT	3D	270-021-588	GP-10			13.7	13	1.5		10	240	25	–
GT	3D	270-021-589	GP-12			16.3	14	1.7		12	220	22	–
GT	3D	270-021-590	GP-15			19.5	15	1.8		15	250	20	–

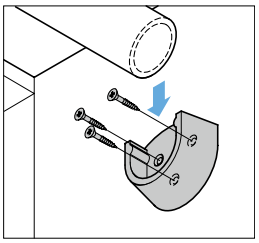
PLASTIC SOCKET PS-37

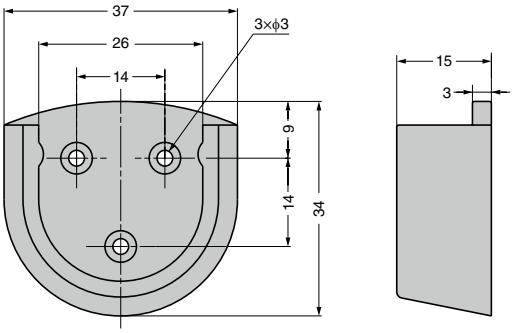
●Ideal for holding pipes (ϕ25mm) in wardrobes.

[Installation]



[Cut Out Dimensions]

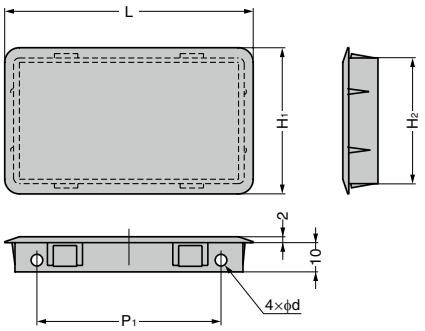




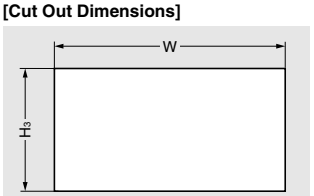
RoHS	CAD	Item Code	Item Name	Material	Colour	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-030-118	PS-37	Polystyrene	White	196	20	8	100	900

SNAP-ON WINDOW WD

●One-touch installation.
●Crack resistant.



[Cut Out Dimensions]



Item Name	H3			W
	Board Thickness0.8	Board Thickness1.0	Board Thickness1.2	
WD-85	43.3		43.5	79
WD-120	94		94.2	113.6
WD-180	78.4		78.7	173.5
WD-230	43.3		43.5	224
WD-250	110.4	110.8	111.2	244.2

※Noted that dimensions vary depending on board thickness.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	L	P1	ϕd	H1	H2	Board Thickness	Weight (g)	Box (pcs)
G	3D	210-012-214	WD-85	PC	Clear	85	63	4	50	43	0.8, 1.0, 1.2	14.2	500
G	3D	210-012-215	WD-120			120	54	2.5	100	94		36.6	250
G	3D	210-012-216	WD-180			180	88	4	85	78		44	140
G	3D	210-012-217	WD-230			230	138		50	43		36	250
G	3D	210-050-347	WD-250			250		2.5	116	110		95	60

LED TOUGH LIGHT SL-TGH

INSTRUCTION

From above to below
SL-TGH1 (Wide flood type)
SL-TGH2 (Medium flood type)
SL-TGH3 (Narrow spot type)

Can withstand high pressure and high temperature water.

- Conforms to IP69K (high temperature and high pressure water resistant) and IP67F (oilproof, waterproof and dustproof) standards.
- Special fluoro rubber allows direct contact with oil and water.
- Stainless steel body cover and tempered cover glass provide anti-rust and scratch proof properties.
- 3 types (wide flood type, medium flood type and narrow spot type) available depending on the light quantity required and the illumination range.
- Bracket 1 used for adjusting the illumination direction also available.

[Application]

- Lighting of machinery and equipment, spotlights for stores, for exterior use (street lights, porch lights, sign lights, etc.)

[Remarks]

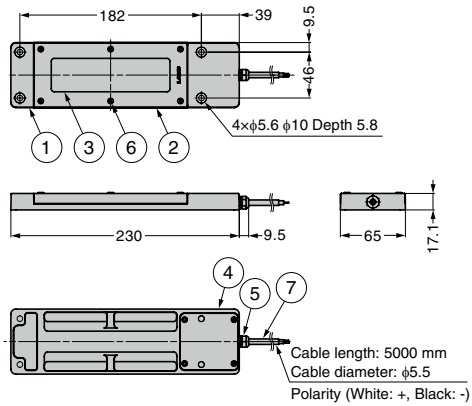
- To ensure heat dissipation, be sure to install the light by pressing the back tightly against the metal surface (steel: above 60,000mm^2). Besides, please reserve a clearance of 10mm or more around.
- Luminescent colour and brightness vary due to the characteristics of LED.
- Do not use in the following environment where the aluminium alloy may corrode.
  - Places where the body in contact with metal may be subject to electrolyte splash.
  - Acid and alkaline environment

[Sold Separately]

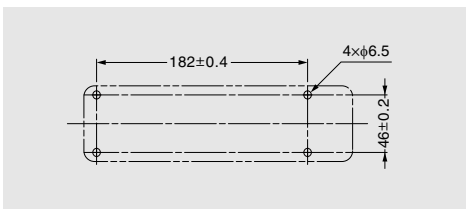
- AC adaptor STD-24010T
- AC adaptor ATS050-A240
- DC connector DC-CNT

[Optional Parts]

- Angle adjustable mounting bracket for tough light SL-WPG-Z 1

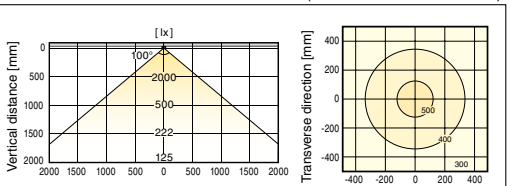


[Cut Out Dimensions] (Common to 3 Types)

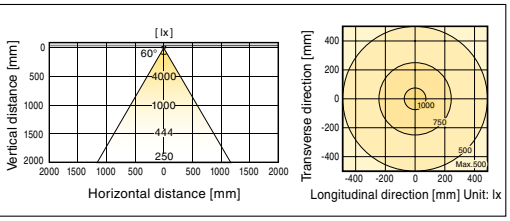


[Illumination Image] Luminous intensity distribution characteristics / Horizontal illuminance (illumination distance 1 m)

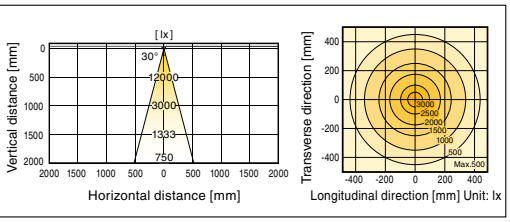
Ⓐ
〈Applicable model〉
SL-TGH1
Wide flood type
DC24V
Neutral white
12.5W



Ⓑ
〈Applicable model〉
SL-TGH2
Medium flood type
DC24V
Neutral white
12.5W



Ⓒ
〈Applicable model〉
SL-TGH3
Narrow spot type
DC24V
Neutral white
12.5W

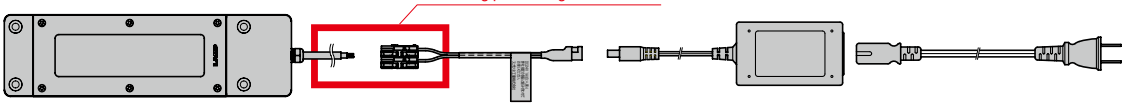


No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Silver Enamel Finish
②	Cover	Stainless Steel (SUS304)	Plain
③	Cover Glass	Tempered Glass	Clear
④	Back Cover	Stainless Steel (SUS304)	Plain
⑤	Cable Gland	Brass	Nickel
⑥	Fixing Screw	Stainless Steel (SUS304)	Plain
⑦	Cable	Heat Resistant & Oil Resistant PVC	–

Refer to 1 : P.1034

[Wiring Drawing]

●1 light



LED tough light SL-TGH

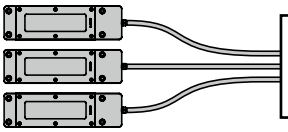
DC connector DC-CNT
(Sold separately)

AC adaptor STD-24010T
(Sold separately)

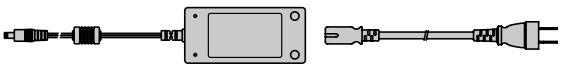
Wiring part enlarged view

※When connecting to DC connector, please connect white to white and black to black. (Polarity. White: +, Black: -)

●3 lights



When connecting more than 2 lights, customer should perform wiring without using DC connector.



LED tough light SL-TGH

AC adaptor ATS050-A240 high power type
(Sold separately)

RoHS	CAD	Item Code	Item Name	Type	Illumination Image	Illuminance lx※1	Rated Input Voltage	Rated Power Consumption	Colour Temperature K	Luminescent Colour	Illumination Angle	Luminous Flux lm	Weight (g)※2	Box (pcs)	Carton (pcs)
G	3D	220-026-705	SL-TGH1-24-WNSL	Wide Flood Type	Ⓐ	500	DC24V	12.5W	5000	Neutral White	100°	1000	450	1	10
G	3D	220-026-706	SL-TGH2-24-WNSL	Medium Flood Type	Ⓑ	1000					60°	1100		1	10
G	3D	220-026-707	SL-TGH3-24-WNSL	Narrow Spot Type	Ⓒ	3000					30°			1	10

※1 Illuminance at the place 1000mm away from the light. ※2 Excluding cable part.

ANGLE ADJUSTABLE MOUNTING BRACKET FOR TOUGH LIGHT SL-WPG-Z For SL-TGH

●For adjusting the illumination direction of tough light SL-TGH 1.

[Remarks]

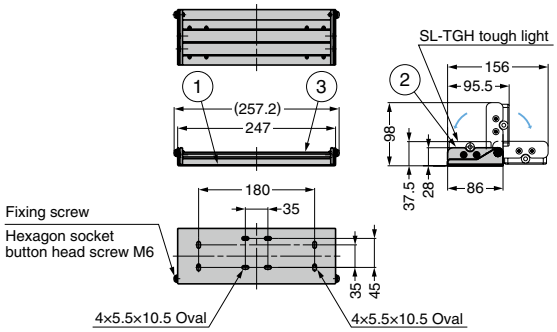
●When installing the bracket to wall or installing tough light to the bracket, please secure with screws.

●Loose the fixing screws before adjusting the angle. Please make sure the fixing screws is tightended when fixing the angle. Do not apply excessive force after fixing.

●Specifications are subject to change without prior notice.

[Parts Included]

●Hexagon socket head cap screw M5×20 (Each 4 pcs for bracket and tough light installation)



No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Side Plate		Barrel Polished
③	Flat Frame	Aluminium Alloy	Anodised

RoHS	CAD	Item Code	Item Name	Installation Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	220-021-892	SL-WPG-Z	Screw Fixing	560	1	10

Refer to 1 : P.1033

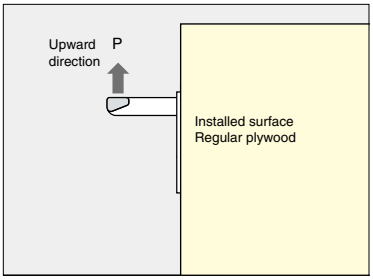
TEST METHODS

■Test Methods

In this catalogue, various values about products with TEST△ icon in the product specification columns are determined by the tests as described below. Values are to provide guidance for the safe use of our products.

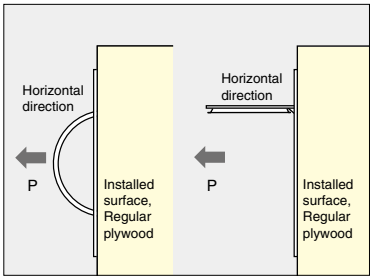
Product without TEST△ icon may not be based on these criteria in some cases.

HANDLE LOAD CAPACITY TEST (TEST 1)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

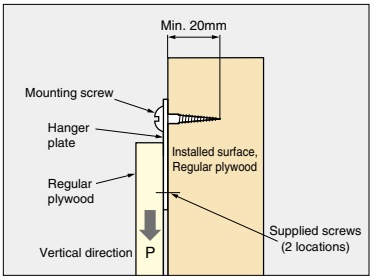
HANDLE, PULL, HOOK LOAD CAPACITY TEST (TEST 2)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Product may fail or distort if the force is applied in a direction other than the frontal direction. Please do not use on application other than in the pull direction.

HANGING-LOAD CAPACITY TEST (TEST 3)

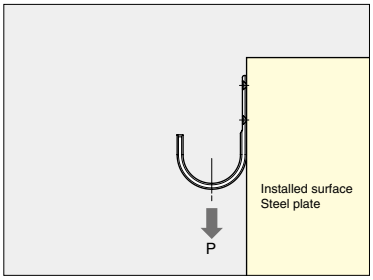


The hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

This value will vary according to the diameter / length of the screw(s) used and strength of the installed surface.

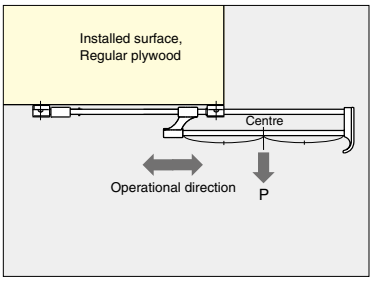
Hanging load of 10 kgf, in case of using round head wood screw 3.8 x 25.

HOOK LOAD CAPACITY TEST (TEST 4)



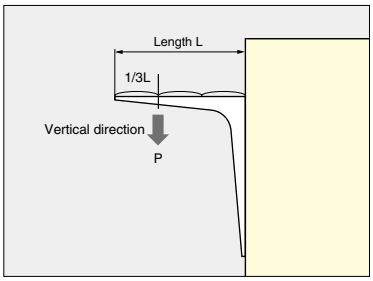
Under the conditions shown in the figure, a force (P) is gently applied to the centre of the hanging part in the vertical direction. The indicated load capacity value is about one-third of the limit load value (safety factor: 3). Therefore, this safety factor changes depending on the usage conditions. If you use it under adverse conditions, please be sure to check the actual product.

MAXIMUM HANGING-LOAD TEST (TEST 5)



The maximum hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow and operated under the condition indicated by the figure. If the load is concentrated at the front tip of the hanger, the front tip may sag or the movement may become heavy.

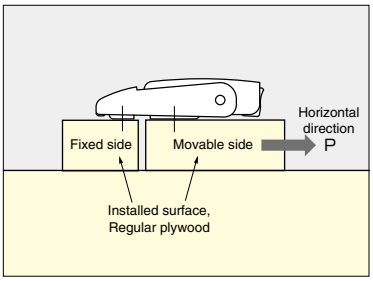
BRACKET LOAD CAPACITY TEST (TEST 6)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

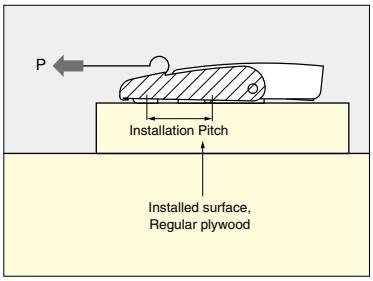
(This is based on the force (W) applied at the centre of the shelf board with its length 4/3 times longer than the shelf bracket or angle bracket.)

FASTENER LOAD CAPACITY TEST (TEST 7)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

CLAMPING FORCE TEST UNDER STANDARD INSTALLATION (TEST 8)



The capacity of the clamping force under standard installation is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure, and when the shaded portion begins to slide.

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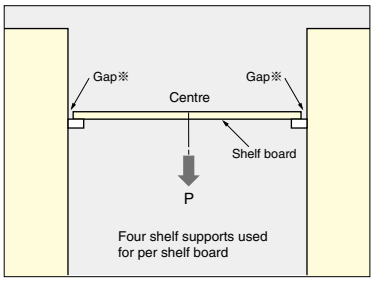
DOWEL, SHELF STANDARD LOAD CAPACITY TEST (TEST 9)



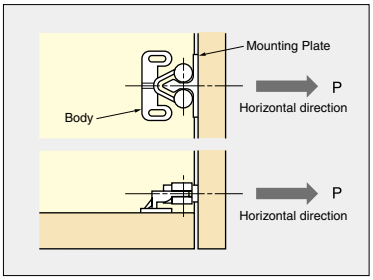
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.
Follow the conditions below to prevent the shelf supports or shelf board from falling off.

Condition 1 The gap (※) between the shelf board and the side board shall be 1mm or less.
※ The gap between the shelf board and the shelf standard if shelf support is installed on a shelf standard.

Condition 2 Use shelf board which has sufficient durability.

Condition 3 The mounting hole processing dimension of the shelf dowel shall be less than the recommended mounting hole dimension.
(The processing dimension may vary depending on the material of the side board.

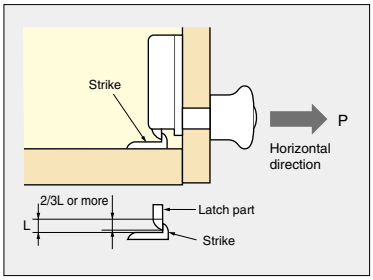
CATCH FORCE TEST (TEST 10)



The catch force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Misalignment of the mounting plate and body parts may cause the catch force to decrease or parts failure.

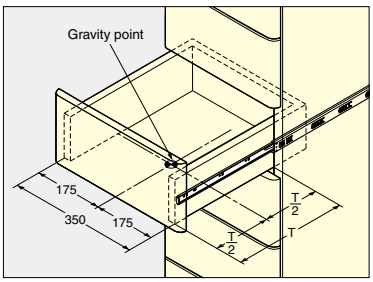
RETAINING FORCE TEST (TEST 11)



The retaining force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Latch and strike must be engaged at least 2/3L or more (see the figure).

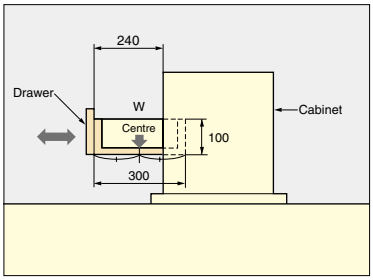
DRAWER SLIDE LOAD CAPACITY TEST (TEST 12)



Calculation of slide centre of gravity

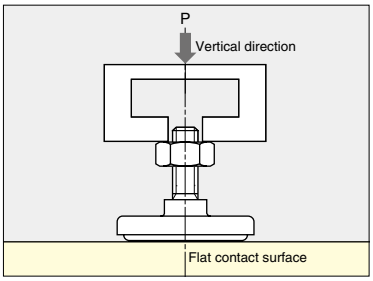
The load capacity is measured based on the condition:
- Continuous open-close: 50,000 cycles
- Speed: 10 cycles per minute
- Load is applied on the gravity point. The figure of load capacity includes drawer itself.
- Drawer width: 350mm

DRAWER SLIDE LOAD CAPACITY TEST (TEST 13)



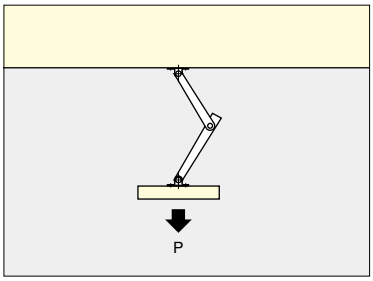
The load capacity is measured when the weight (W) is applied at the centre of the drawer under the condition indicated by the figure and the operation to pull out the drawer by 240mm is repeated.
The gap between drawer and cabinet shall be 1 mm or less.

LEVELLING GLIDE LOAD CAPACITY TEST (TEST 14)



The load capacity is measured when the force (P) is applied in the direction of the arrow under the condition indicated in the figure.
Product may break or distort if the contact surface is not flat.

PULL LOAD TEST (TEST 15)



The pull load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

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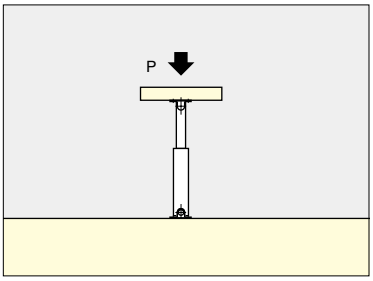
COMPRESSION LOAD TEST (TEST 16)



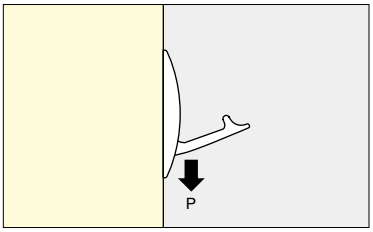
The compression load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

PERMISSIBLE LOAD OF FASTENER (TEST 17)

Permissible load kgf = Ultimate Load ÷ 3

The safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the fastener in intended application.

HOOK LOAD CAPACITY TEST (TEST 18)



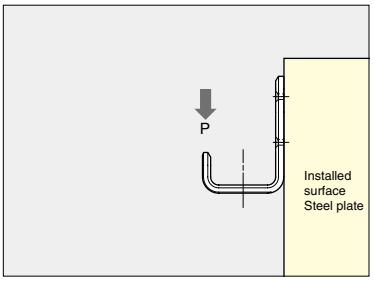
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Load capacity kgf = Ultimate Load ÷ 3

However, the safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the hook in intended application.

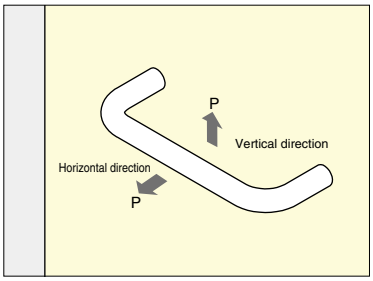
For the calculation of hinge load capacity,
Refer to INDEX 📖 P.43 of “HINGES” .

HOOK LOAD CAPACITY TEST (TEST 19)



Under the conditions shown in the figure, a force (P) is gently applied in the vertical direction. The indicated load capacity value is one-third of the limit load value (safety factor: 3). Therefore, this safety factor changes depending on the usage conditions. If you use it under adverse conditions, please be sure to check the actual product.

HANDLE LOAD CAPACITY TEST (TEST 20)



Under the conditions shown in the figure, a force (P) is gently applied in the vertical and horizontal directions. The load capacity is a value that indicates the strength of the handle itself. Install it on something with sufficient strength or reinforcement.

RoHS Directive (2011/65/EU&(EU)2015/863)

(※ For details on our RoHS compliance, please refer to 📖 P.25.)

Directive for restricting the use of specified hazardous substances to electrical and electronic equipment enforced by the EU (European Union).
(Abbreviation for the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)
Six types of substances restricted in use: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl, polybrominated diphenyl ether
From late July 2019, the use of di-2-ethylhexyl phthalate, dibutyl phthalate, butyl benzyl phthalate, diisobutyl phthalate is restricted.

SURFACE TREATMENT

Finish	Characteristics
Zinc Plating	Zinc plating is commonly used on steel to prevent oxidation. Chromate is generally applied over zinc to enhance corrosion resistance.
Chromate Conversion Coating	Major coating mainly applied on parts after zinc plated or cadmium plated. Parts are immersed in a solution mainly consisting of chromic acid or heavy chromic acid to create the coating. This is used to improve corrosion resistance and appearance of metals, metal colouration, and is also used as a pre-treatment for painting. Various chromate coatings are developed such as yellow chromate (rainbow colour), clear chromate, black chromate, green chromate, etc.
Chrome Plating	Common electroplating for various industrial purposes. Reflective finish can be achieved by polishing. High hardness and good corrosion resistance along with thermal resistance, abrasion resistance and good adhesion characteristics. Generally used as final finish for various decorative parts and products due to its uniquely deep colouration.
Nickel Plating	Nickel is commonly used for decorative and anti-corrosion purpose because of its stability against air or humidity compared to iron. However, since the surface of the nickel plating will slightly discolour through exposure to air, chrome is often used after nickel to keep the finish/colour. Nickel plating has moderate hardness / corrosion-resistance and widely used on industrial application.
Alumite or Anodising (Anodic Oxidation Film Processing)	Also called the “anodic oxidation film processing” . This process thickens and toughens natural oxide layer on metal, commonly applied to aluminium for corrosion resistance and dyeing. In aluminium anodising, aluminium object serves as the anode (the positive electrode) when electrolysed in the sulfuric acid. This will create a layer of porous oxide film which has high electric insulation and abrasion resistance. The film is normally transparent when it is thin, although it becomes dull as the thickness increases.The pores produced by anodising are closed by a process called sealing, which is done by high-pressurised or boiling-hot deionised water. This process fills the pores and creates a thin layer that is corrosion resistant, suitable for various aluminium parts / products.

※Hexavalent-Chromium (CR6) Free
Sugatsune is strictly controlling the use of chemicals that would adversely impact the environment. We are designing and developing products with minimum use of materials which has adverse environmental impact. Hexavalent chromium compound is especially known for its adverse effects on the human body. We are actively substituting this Hexavalent-chromium (CR6) with the environment friendly Trivalent-chromium (CR3).

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MATERIALS

In this catalogue, materials are indicated below. (For some items, only the materials of main parts are shown due to space limitations)

Irons and Steels

Material	Name
Steel	Iron-based screw, washer, etc.
Steel (SS)	Rolled steel for general structure
Steel (S※※C)	Carbon steel for machine structural use (Enter number for ※)
Steel (SECC)	Electrogalvanised steel sheet and steel strip
Steel (SF)	Carbon steel forging
Steel (SGCC)	Hot-dip galvanised steel sheet and steel strip
Steel (SK)	Carbon tool steel
Steel (SPCC)	Cold-rolled steel sheet and steel strip
Steel (SPHC)	Hot-rolled mild steel sheet and steel strip
Steel (SUM)	Sulfur and sulfur-composite free cutting steel
Steel (SUP)	Spring steel
Steel (SW)	Hard steel wire
Steel (SWP)	Piano wire
Steel (SWRH)	High carbon steel wire rod
Steel (SWRM)	Low carbon steel wire rod
Steel (SWCH)	Carbon steel for cold heading
Cast Iron (FC)	Grey iron casting
Stainless Steel	Stainless steel screw, washer, etc.
Stainless Steel (SUS301)	Austenitic stainless steel
Stainless Steel (SUS303)	Austenitic stainless steel
Stainless Steel (SUS304)	Austenitic stainless steel
Stainless Steel (SUS316, SUS316L)	Austenitic stainless steel
Stainless Steel (SUS420)	Martensitic stainless steel
Stainless Steel (SUS430)	Ferritic stainless steel
Stainless Steel (SUS440)	Martensitic stainless steel
Stainless Steel (SUS631)	Precipitation hardening stainless steel
Stainless Steel (SCS13)	Stainless steel casting
Stainless Steel (SCS14)	Stainless steel casting

Non-ferrous Metals

Material	Name
Aluminium Alloy	—
Aluminium Alloy (ADC)	Aluminium alloy die casting
Aluminium Alloy (AC)	Aluminium alloy casting
Zinc Alloy	—
Zinc Alloy (ZDC)	Zinc alloy die casting
Zinc Alloy (BRIC)	A kind of zinc alloy die casting
Brass	—
Free Cutting Brass	—
Phosphor Bronze	—
Phosphor Bronze for Spring	—
Nickel Silver	—
Copper Alloy Casting (CAC)	—
Magnesium Alloy (MDC)	Magnesium alloy die casting
Titanium Alloy	—

Magnets

Material	Name
Ferrite	—
Neodymium	—
Samarium Cobalt	Samarium-cobalt
Alnico	—

Plastics

Material	Name
ABS Resin	Acrylonitrile butadiene styrene
AES Resin	Acrylonitrile ethylene propylene rubber styrene
AS Resin	Acrylonitrile styrene
Cellulose Acetate (CA)	—
Casein (CS)	—
Epoxy Resin (EP)	—
Ethylene Vinyl Acetate (EVA)	—
EVOH Resin	Ethylene vinyl alcohol
FRP	Unsaturated polyester + glass fibre
Melamine Resin (MF)	Melamine formaldehyde resin
Polyamide (PA)	—
Polycarbonate (PC)	—
Polyethylene (PE)	—
PEEK Resin	Polyether ether ketone
High Density Polyethylene (HDPE)	—
Chlorinated Polyethylene (CPE)	—
PBT Resin	Polybutylene terephthalate
PET Resin	Polyethylene terephthalate
Phenol resin (PF)	Phenol formaldehyde resin
Methacrylic Resin (PMMA)	Polymethyl methacrylate
Polyacetal (POM)	—
Polypropylene (PP)	—
PPO Resin	Polypropylene oxide
PPS Resin	Polyphenylene sulfide
PPE Resin	Polyphenylene ether
Polystyrene (PS)	—
High Impact Polystyrene (HIPS)	—
Polytetrafluoroethylene (PTFE)	Polytetrafluoroethylene
Polyvinyl Chloride (PVC)	Polyvinyl chloride
Polyimide (PI)	—
Polyamideimide (PAI)	—
Polyetherimide (PEI)	—
Silicone Resin (SI)	Silicone plastic
Urea Resin (UF)	Urea formaldehyde resin
Unsaturated polyester Resin (UP)	—
~Elastomer	Elastomer

Rubbers

Material
Natural Rubber (NR)
Styrene Butadiene Rubber (SBR)
Butadiene Rubber (BR)
Isoprene Rubber (IR)
Nitrile Rubber (NBR)
Chloroprene Rubber (CR)
Ethylene Propylene Rubber (EPDM)
Isobutylene Isoprene Rubber (IIR)
Urethane Rubber (UR)
Polyurethane Rubber (PUR)
Silicone Rubber (Q)
Fluoro Rubber (FKM)
Synthetic Rubber

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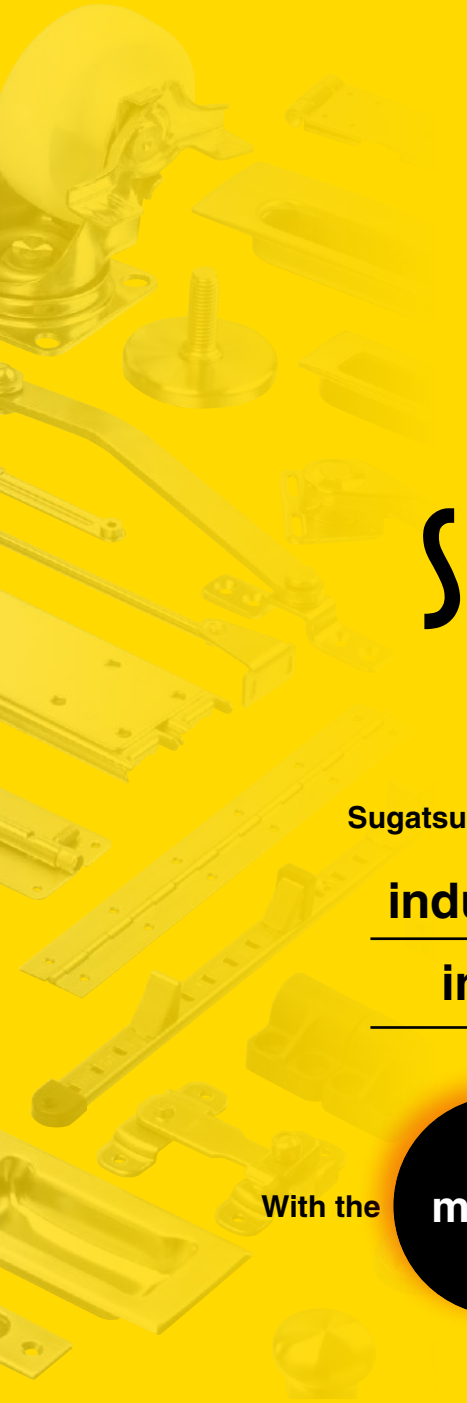


SUGATSUNE

Sugatsune is a comprehensive manufacturer of

industrial components for industrial equipment.

With the **motion** **and** **design** **of industrial components**

and **comprehensive strength** **,**

we expand the potential of industrial equipment.

30,000 Products

Sugatsune's product lineup includes various industrial components such as hinges, stays, slides and high-quality general-purpose items such as handles, magnet catches, hooks, and casters, etc. Based on our own brand "LAMP®" products, we add state-of-the-art overseas products, proposing a wide range of options for the customers.

For details about product lineup, refer to… P.26 "Outline INDEX"

Motion — Motion Design Tech

Motion Design Tech

Motion Design Tech is Sugatsune's patented technology giving further motion functions to "opening and closing". With 5 types of motion, it improves the operability of doors or lids. Meanwhile, it can also improve the efficiency of work involving opening and closing movements, increasing the added value of the device and equipment. Different types of motion can also be combined to accommodate fine requirements.

For Motion Design Tech, refer to … P.4

Design

Now, enterprises are making every endeavour to improve the users' satisfaction. As an important ring of brand promotion, design improvement is also required even for industrial equipment. At Sugatsune, the development staff developed many products with beautiful design. A number of products have been awarded the Good Design Award, greatly improving the design of equipment.

Comprehensive Strength — From Development, Production to Logistics

We offer original, fast and careful OEM and ODM service. It's our manufacturing and testing equipment and a large number of development, design and manufacturing personnel accounting for 15% of the staff to realise all of those.

Machine tools

3D printer

Constant temperature and humidity chamber

Handle made by 3D printer

Focusing on prompt shipment, we will always have various kinds of products in stock in a space of over 34,500m^2 in total floor area combined with the main Chiba Logistics Centre (S.B.C) and the Osaka Logistics Centre (S.B.W) newly built in 2016.

For details on OEM and ODM, refer to… P.1047

Motion Design Tech Lab
(Development laboratory)

Development

Design

Planning

Production

Quality Control

Distribution

Commitment to Quality and the Environment

All departments from planning, manufacturing to sales have a high awareness of quality, and through unremitting efforts, all the domestic bases in Japan have achieved ISO 9001 certification (registration No.: JSAQ384).We also actively engaged in environmental conservation activities, and achieved ISO 14001 certification (registration No.: JSAE597) at our development bases, namely Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division.

Quality Management System ISO 9001 certification (certification/registration) approved

Quality Policy: We pursue truth, essence and ideal

<Scope of Registration>
Design, development, production and purchase and sales of furniture fittings, architectural hardware, machinery hardware, components for electronic and communication equipment, metal furniture and lobby furnishings.
<Registered Organisation>
Domestic bases in Japan

Sugatsune America also achieved ISO 9001 certification (certification/registration)

In 2011, SUGATSUNE AMERICA, INC. also achieved ISO9001 certification/registration.

Environmental Management System ISO 14001 certification (certification/registration) approved

Environmental Policy
Sugatsune Kogyo's Chiba Production Division – Chiba Factory and Logistics Division – Logistics Centre, which conduct activities related to the design, development, production and logistics of furniture fittings, architectural hardware, machinery hardware, components for electronic and communication equipment, metal furniture and lobby furnishings, recognise the importance of protecting the global environment and focus on the following items in promoting environmentally friendly business activities.

1. Sugatsune will provide environment-friendly products to our customers while considering resource saving, durability, recyclability, and cleanliness beginning from development stage.
2. Sugatsune will comply with laws and regulations for environmental preservation and other requirements agreed by Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division.
3. In order to reduce our environmental impact, Sugatsune will continue to perform the following activities.
   (1) Reduce our consumption of electricity
   (2) Reduce industrial wastes (waste plastic, waste oil and combustible refuse, etc.)
   (3) Promote separation and recycling of garbage
   (4) Actively conduct greening and landscape maintenance
4. Every one of our employees will work to save energy, conserve resources and reduce wastes, create a beautiful global environment and coexist with the local community.
5. Sugatsune will maintain its environment management system, make continuous improvements and prevent pollution through environmental audits and environmental education.

RoHS Directive Compliance

In our original products (LAMP, Zwei L), we sequentially take substitution and prohibition measures aiming at conformity to the "RoHS Directive" enforced in EU. For purchased items, we also grasp the content information.
In addition to the ten substances specified in RoHS Directive, we also grasp the information on the content and use of environmentally hazardous substances specified by us and make it available to our customers.
We have equipped our Logistics Centre of Logistics Division with X-ray fluorescence spectrometer (XRF) as an instrument for verifying environmentally hazardous substances and conducting in-house analysis and testing.

X-ray fluorescence spectrometer (XRF)

For icon of RoHS compliant products in this catalogue, refer to… P.25

Global Expansion

Besides setting up bases overseas, we are also exporting to more than 80 countries and regions worldwide.

We are SUGATSUNE

Reading, UK

Shanghai, China

Global Headquarters
Tokyo, Japan

Los Angeles, USA

Montreal, Canada

Dusseldorf, Germany

Korea, Incheon

Mumbai, India

Guangzhou, China

Chicago, USA

Business Partner Countries & Regions
Sweden/Netherlands/Belgium/Spain/Portugal/France/Maltese/Monaco/Denmark/Sweden/Finland/Norway/Cyprus/Greece/Brazil/Argentina/Brazil/Argentina/Chile/Britain/Ireland/Germany/Italy/Austria/Oman/Bahrain/Jordan/Iran/Egypt/Qatar/India/Pakistan/Sri Lanka/Bangladesh/South Africa/Russia/Poland/Romania/Bulgaria/Estonia/Lithuania/Turkey/Israel/Lebanon/Saudi Arabia/Kuwait/Australia/New Zealand/Indonesia/Singapore/Malaysia/Thailand/Myanmar/Vietnam/Philippines/Mongolia/China/Hong Kong/Taiwan/Korea

For details about each base, refer to… P.1044

Our global network continues to expand. Visit our website for the latest global office information.

Overseas Showrooms

Please make use of them for information sharing with local corporations and local purchase.

Shanghai

Mumbai

For details about locations, etc., refer to … P.1044

Overseas Subsidiaries

Asia

China / SUGATSUNE SHANGHAI CO.,LTD.

Shanghai Office & Showroom

Building No.3, No.100 Hu lan West Road, Baoshan District, Shanghai 200443, China

TEL +86-21-3632-1858
400-680-2780 (toll-free within China)
FAX +86-21-3632-1868
Mail mdt@sugatsune.com.cn

Guangzhou Office

15th Floor, KeyThink Center, No. 278 Xingtai Road. Panyu District, Guangzhou 511400, China

TEL +86-20-6639-3554
FAX +86-20-6230-9772
Mail mdt@sugatsune.com.cn

Europe

United Kingdom / SUGATSUNE KOGYO (UK) LIMITED

Office / Showroom

Unit 635 Wharfedale Road, Winnersh Triangle, Wokingham RG41 5TP UK

TEL +44-118-9272-955
FAX +44-118-9272-871
Mail sales@sugatsune.co.uk

India / SUGATSUNE KOGYO INDIA PRIVATE LIMITED

Mumbai Office & Showroom

No. G-002 & B-02, Ground Floor, KANAKIA ATRIUM - 2 Next to Courtyard Marriott Hotel, Andheri Kurla Road, Andheri East, Mumbai-400093, Maharashtra, India

TEL +91-9867299597
Mail sales@sugatsune.in

Germany / SUGATSUNE EUROPE GMBH

Office / Showroom

Heerdter Lohweg 87-89 D-40549 Düsseldorf Germany

TEL +49-211-53812-900
FAX +49-211-53812-901
Mail sales@sugatsune.eu

Canada / SUGATSUNE CANADA, INC.

3775 Boulevard du Tricentenaire Montreal, Quebec H1B-5W3 Canada

TEL +1-514-312-5267
FAX +1-514-399-0538
Mail support@sugatsune.ca

North America

USA / SUGATSUNE AMERICA, INC.

Main Office

18101 Savarona Way, Carson, CA 90746 U.S.A.

TEL +1-310-329-6373
FAX +1-310-329-0819
Mail industrial@sugatsune.com

Midwest Distribution Center

1790 W Cortland Court, Addison, IL 60101 U.S.A.

TEL +1-630-317-7072
FAX +1-630-519-4107
Mail industrial@sugatsune.com

History of SUGATSUNE

1930
"Sugatsune Shoten" is founded by Tsunesaburo Sugasawara.
Sells European style furniture hardware.

1943
The company changes its name to
"Sugatsune Kogyo Co., Ltd.",
manufacturing metal accessories for communication until the end of the war.

The first home shop after the war (1946)

1949
The company starts manufacture furniture hardware and architectural hardware.

1968
Capital is increased to 50 million yen. Shin-ohashi Sales Office is moved to the site of Tokyo Factory (Adachi-ku, Tokyo), and Adachi Sales Office is set up.

1969
Chiba Factory is constructed on the Trading Estate at Matsuo-cho in Chiba. This marked the beginning of mass production.

1982
A logistics centre (S.B.C) with a floor area of 4,026m^2 is completed at the site of Chiba Factory.
Sugatsune America Inc. is established in the United States.

1987
Sugatsune Kogyo comes up with an original damper technology "Lapcon".

1992
Sugatsune Kogyo's President Sugasawara is presented with a Medal with a Blue Ribbon by the government of Japan.
A new logistics centre (S.B.C) with modern facilities is completed. (Floor area of 8,884m^2)

1998
Sugatsune Kogyo's President Sugasawara receives Gold and Silver Rays, an Order of the Sacred Treasure.
A technical centre is built at the site of Chiba Factory.
The company registers for ISO 9001 certification.

2004
An office and showroom are established in Shanghai, China.

2005
The largest showroom in the industry in Japan is opened at Iwamoto-cho, Chiyoda-ku, Tokyo. A large exhibition is held to commemorate the opening of the new showrooms in Tokyo and Osaka, and a new product presentation is held in Fukuoka and Sendai. Sugatsune UK is established in Great Britain. Shanghai Office is changed to Sugatsune Shanghai.

2006
New head office building No.4 and No.5 are completed.

2007
A new building at logistics centre (S.B.C) is completed. (Floor area of 7,413m^2)

2009
The product concept "Motion Design Tech" is presented for giving further motion functions to the "opening and closing of doors or lids".

2011
A showroom and sales office are opened in Chicago by Sugatsune America.

2015
Sugatsune Kogyo India Private Limited is established in India. A showroom is opened in Mumbai, India.
A new logistics centre (SBW) is established in Osaka.

2016
Sugatsune Europe GmbH is established in Germany.
Sugatsune Canada, Inc is established in Canada.

2020
Sugatsune Kogyo celebrated its 90th anniversary.

Why it is called LAMP?
Origin of Brand

HAND_LAMP Mark
Founding time ~ Around 1990

LAMP Mark
Around 1990 ~ Now

It is inspired by turning one kanji character in the founder's name Tsunesaburo Sugasawara to "灯", using lamp as trademark to express the "use of fire" which is the symbol of wisdom and courage.
At that time, it was just the chaotic period after the end of the war.It expressed the desire to brighten society with Sugatsune's products even a little.
Even if nowadays the world has changed completely, it is still used as a logo to promise Sugatsune's solid quality.

Company Outline

Company Name	**Sugatsune Kogyo Co., Ltd.**
President	Jun Sugasawara
Founded	February 11, 1930
Established	November 20, 1943
Capital	400 million yen (January, 2024)
Number of Employees	500 (January, 2024)
Business Segment	Industrial equipment related components / Industrial components / Components for electronic and communication equipment / Lighting apparatus / Metal furniture / Metal fixtures / Metal custom-made items / Furniture hardware / Architectural hardware / Decorative hardware / Imported hardware / Others
Correspondent Banks	MUFG Bank Mizuho Bank Sumitomo Mitsui Banking Corporation Resona Bank

Business Partner Countries & Regions
Sweden/Netherlands/Belgium/Spain/Portugal/France/Maltese/Monaco/Denmark/Sweden/Finland/Norway/Cyprus/Greece/Brazil/Argentina/Brazil/Argentina/Chile/Britain/Ireland/Germany/Italy/Austria/Oman/Bahrain/Jordan/Iran/Egypt/Qatar/India/Pakistan/Sri Lanka/Bangladesh/South Africa/Russia/Poland/Romania/Bulgaria/Estonia/Lithuania/Turkey/Israel/Lebanon/Saudi Arabia/Kuwait/Australia/New Zealand/Indonesia/Singapore/Malaysia/Thailand/Myanmar/Vietnam/Philippines/Mongolia/China/Hong Kong/Taiwan/Korea

Registration ISO9001 : JSAQ384
ISO14001 : JSAE597
(ISO 9001: Sugatsune's bases in Japan, ISO 14001: Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division)
General Construction Business Licence No.: Tokyo Metropolitan Governor Licence (General – 25) No.140997

Tokyo SR & Office

Osaka SR & Office

Nagoya SR & Office

Kyoto Office

Fukuoka SR & Office

Sendai Office

Kanagawa Office

Factory /Motion design tech labo

Warehouse & Distribution centre

Sugatsune Also Offers Made-to-order Products! For more information, please contact us.

What is your special order?

OEM

Specification change of ready-made item (Semi order)

We will customise according to your requests, such as change of size/colour from the items in the catalogue.

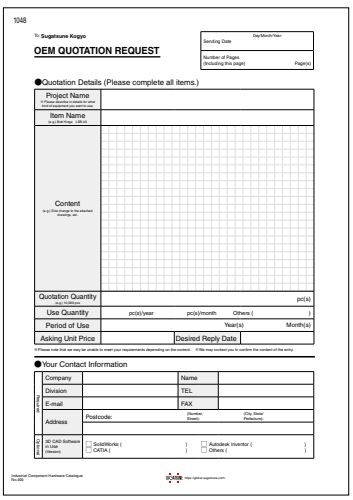
ODM

Planning and design from scratch (Full order)

We will plan and design original products from scratch based on our rich experience and know-how.

Please complete the quotation request form

Please select the quotation request form according to your custom requirements, and fill in the necessary items.



1048

To: **Sugatsune Kogyo**

OEM QUOTATION REQUEST

Sending Date: Day/Month/Year

Number of Pages (including this page): Page(s)

●Quotation Details (Please complete all items.)

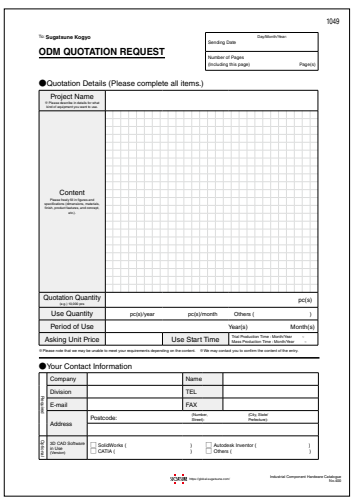
Project Name	
Item Name	
Content	
Quotation Quantity	pc(s)
Use Quantity	pc(s)/year pc(s)/month Others ( )
Period of Use	Year(s) Month(s)
Asking Unit Price	Desired Reply Date

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode: (Number, Street) (City, State/ Prefecture)		
3D CAD Software in Use (Version)	SolidWorks ( ) CATIA ( )	Autodesk Inventor ( ) Others ( )	

Industrial Component Hardware Catalogue No.400 SUGATSUNE https://global.sugatsune.com/

OEM Quotation Request



1049

To: **Sugatsune Kogyo**

ODM QUOTATION REQUEST

Sending Date: Day/Month/Year

Number of Pages (including this page): Page(s)

●Quotation Details (Please complete all items.)

Project Name	
Content	
Quotation Quantity	pc(s)
Use Quantity	pc(s)/year pc(s)/month Others ( )
Period of Use	Year(s) Month(s)
Asking Unit Price	Use Start Time

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode: (Number, Street) (City, State/ Prefecture)		
3D CAD Software in Use (Version)	SolidWorks ( ) CATIA ( )	Autodesk Inventor ( ) Others ( )	

SUGATSUNE https://global.sugatsune.com/ Industrial Component Hardware Catalogue No.400

ODM Quotation Request

To: **Sugatsune Kogyo**

OEM QUOTATION REQUEST

Day/Month/Year:	
Sending Date	
Number of Pages (Including this page)	Page(s)

●Quotation Details (Please complete all items.)

Project Name ※ Please describe in details for what kind of equipment you want to use.			
Item Name (e.g.) Butt Hinge LSB-40			
Content (e.g.) Size change to the attached drawings, etc.			
Quotation Quantity (e.g.) 10,000 pcs	pc(s)		
Use Quantity	pc(s)/year	pc(s)/month	Others ( )
Period of Use	Year(s)	Month(s)	
Asking Unit Price		Desired Reply Date	

※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Required	Company		Name	
	Division		TEL	
	E-mail		FAX	
	Address	Postcode:	(Number, Street):	(City, State/ Prefecture):
Optional	3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )		☐ Autodesk Inventor ( ) ☐ Others ( )

To: **Sugatsune Kogyo**

ODM QUOTATION REQUEST

Sending Date	Day/Month/Year:
Number of Pages (Including this page)	Page(s)

●Quotation Details (Please complete all items.)

Project Name ※ Please describe in details for what kind of equipment you want to use.			
Content Please freely fill in figures and specifications (dimensions, materials, finish, product features, and concept, etc.).			
Quotation Quantity (e.g.) 10,000 pcs	pc(s)		
Use Quantity	pc(s)/year pc(s)/month Others ( )		
Period of Use	Year(s) Month(s)		
Asking Unit Price		**Use Start Time**	Trial Production Time : Month/Year ~ Mass Production Time : Month/Year ~

※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Required	Company		Name	
	Division		TEL	
	E-mail		FAX	
	Address	Postcode: (Number, Street): (City, State/ Prefecture):		
Optional	3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )	☐ Autodesk Inventor ( ) ☐ Others ( )	

How to select components such as Lapcon stays and torque hinges?

Sasuga-kun can address such concerns!!

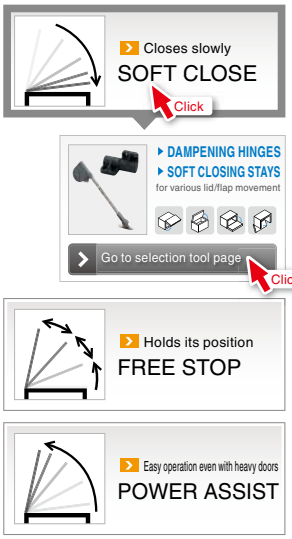
What is… Sasuga-kun

It's a web-based tool that can automatically calculate the torque required and select (※) suitable hinges, stays and other products, simply by entering the movement, size, weight and centre of gravity of a door.

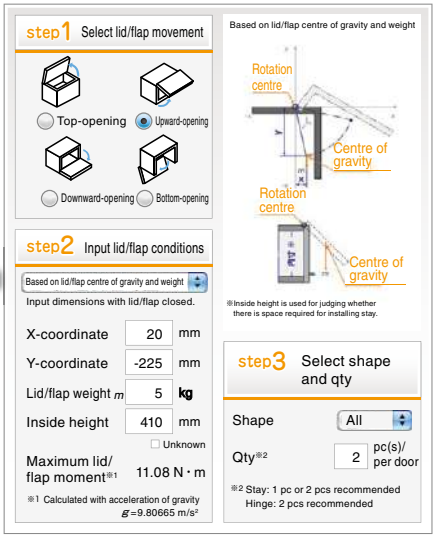
※For some products, there is also a simulation tool that can check the movement of a door by displaying a graph instead of selection. The selection is the result of calculation and for reference only. Be sure to confirm by real equipment or test machine before making a use decision.

It's very simple to use!!

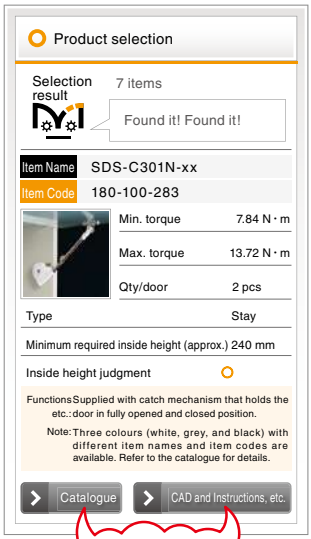
1 Select kind of movement



2 Input conditions



3 Choose a product !



●Can also select a variety of products such as torque stays and SLS-ELAN, etc.!

More details may also be obtained!

No Registration Required Free

Let's try to use **"Sasuga-kun"** right now!

From PC

Enter by clicking the Sugatsune homepage.

Selection Tool "Sasuga-kun"

From tablet

Scan the 2D barcode on the right.

June 2022

SUGATSUNE

Industrial Component Hardware

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Please find the contact information for your local area using the QR code.

06.2022 AK PRINTED IN JAPAN

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SUGA

Industrial Component Hardware

No.4