

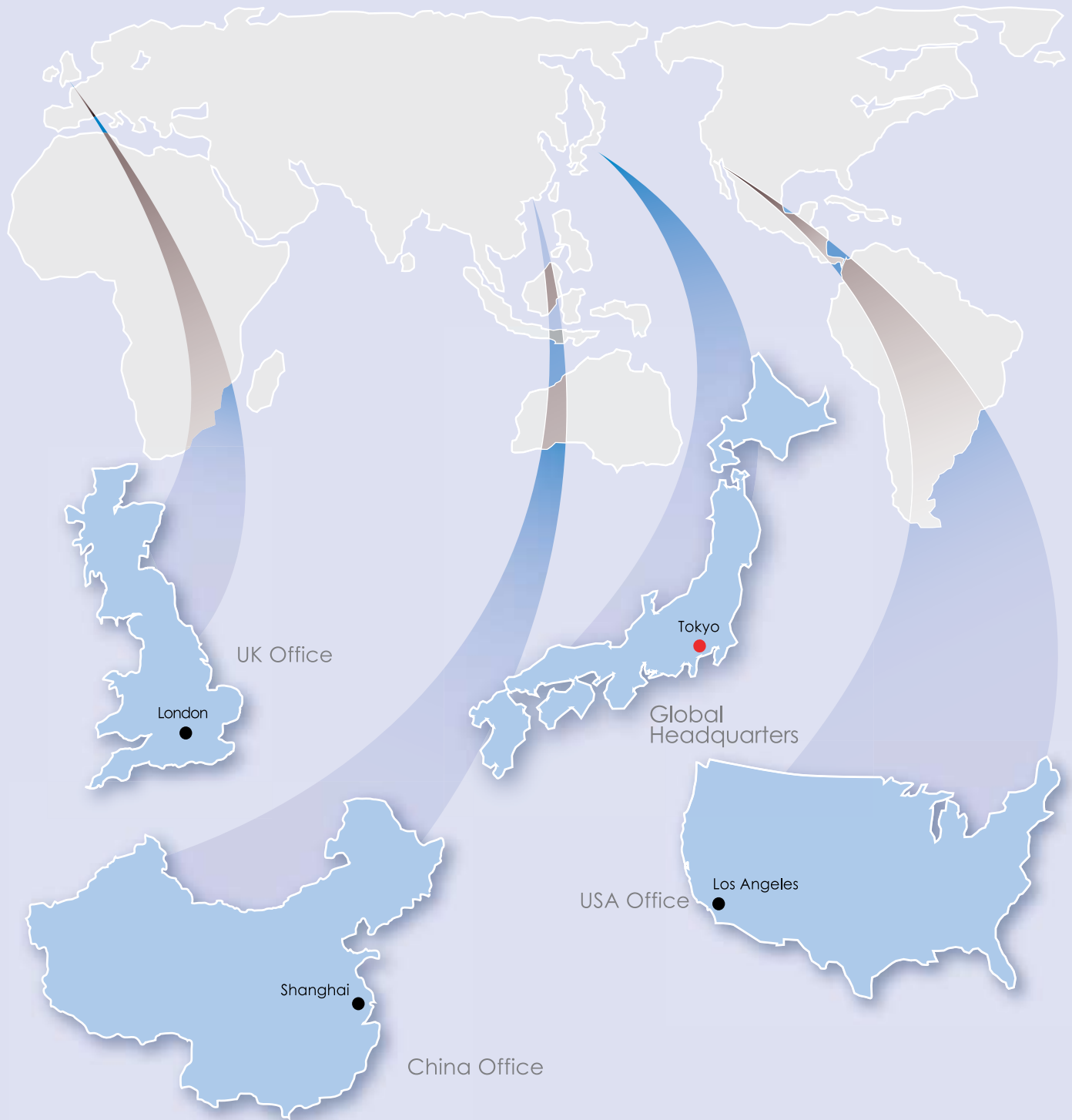
# Architectural & Furniture Hardware

No.184



■ ■  
**SUGATSUNE**  
■ ■

Sugatsune – A hardware manufacturer with worldwide reputation for high quality products that combines ingenious design with meticulous attention to detail.





Headquarters - Tokyo, Japan



Tokyo Showroom - Japan



Main Factory - Chiba, Japan



R&D Center



USA office - Carson, CA

## 80 YEARS ANNIVERSARY <1930 - 2010>

Sugatsune has a rich tradition of manufacturing and distributing premium high-quality hardware. Architects, designers and builders continue to depend on our unsurpassed quality and unparalleled craftsmanship.

## SHINING QUALITY PRODUCTS

Our products are not just hardware, they are quality hardware that can be recognized by touch. Small to large, our product will bring difference to the application with its function and style.

## FUNCTIONAL DESIGN

Sugatsune meticulously designs and manufactures functional door and cabinet hardware. From our cabinet knobs to our functional Lapcon and Monoflat series, Sugatsune is the brand you can rely on.



# Zwei L

Flag ship series.  
Combination of the eternal satin and gleaming mirror finish led to the highest level.

# LAMP®

Well known worldwide brand by Sugatsune.  
Products luminate the space.



**Lapcon**  
By Sugatsune

Products with Soft & Smooth movement to bring revolution.

Multiple Motion Door System  
**MultiMo FLAT™**

Multiple Motion Door System series.  
New and exciting movement offers special difference.

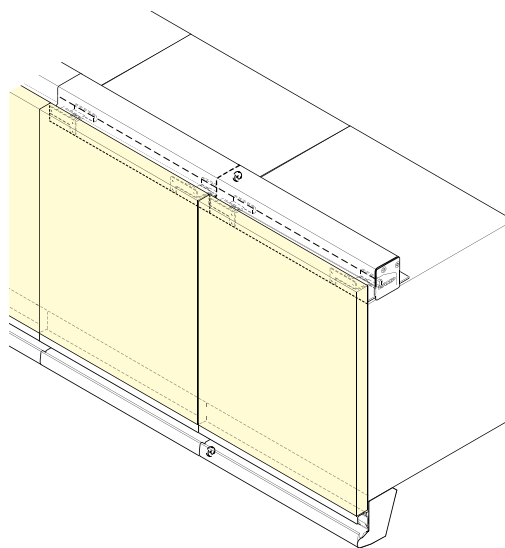


Multiple Motion Door System

# MultiMo FLAT®

## MULTIPLE MOTION DOOR SYSTEM (For Wooden Doors) PAT

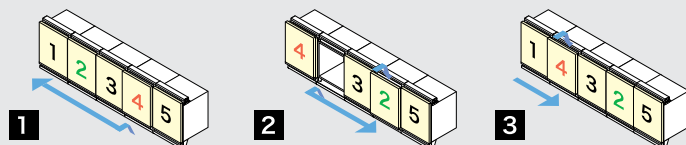
MFS-W



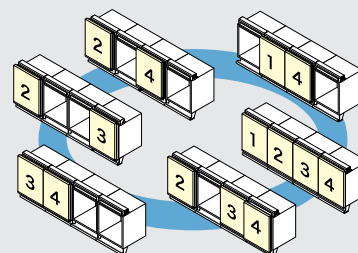
Door Width	297mm, 447mm, 597mm or 897mm (11-11/16", 17-5/8", 23-1/2" or 35-5/16")
Door Height	300 ~ 900mm (11-13/16" ~ 35-7/16")
Door Thickness	15 ~ 23mm (19/32" ~ 29/32")
Door Weight	2 ~ 8kg (4.4 ~ 17.6lbs) / Door

- **Flush Door Surface**  
All doors will be "flush" against others when in closed position. Provides sleek appearance compared to ordinary off-set sliding doors.
  - **Interchangeable Door Position**  
Opened doors can slide and close at any unoccupied position.
  - **Multiple Doors in One Line**  
Multiple doors can be added by connecting multiple sliding units.
  - **Soft & Smooth Movement**  
Equipped with damper for soft and smooth closing movement.
  - **Minimal Hardware Space**  
Ideal for shallow cabinets, hardware requires only 100mm (approx. 4") of depths.
- \*Recommended using on 3 or more doors for interchangeable door feature.  
\*Minimum door height is twice of door width.  
\*Please see page 6 for glass door version.  
(Cannot be used together with glass version on one cabinet.)

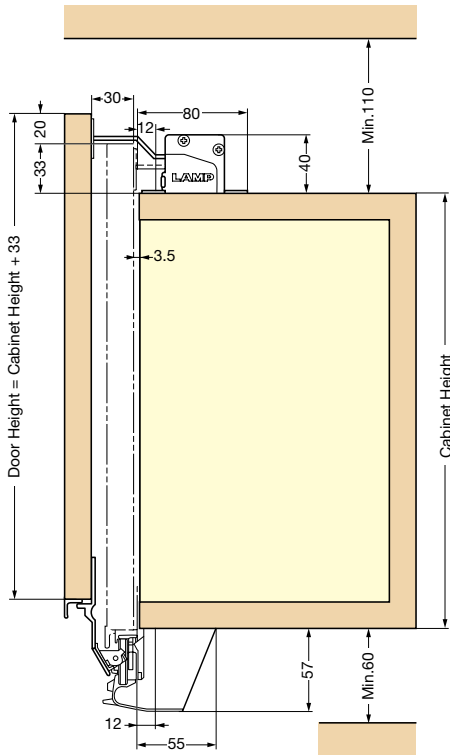
Interchangeable Door Position (3 doors or more)



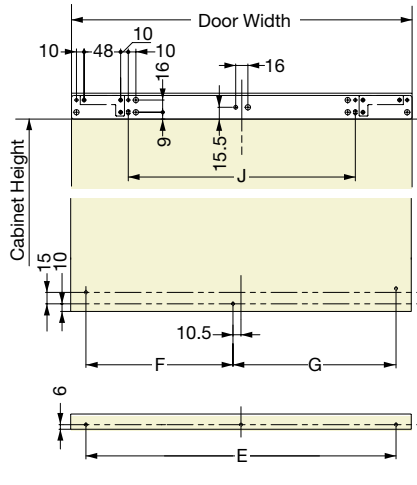
Door Opening Example



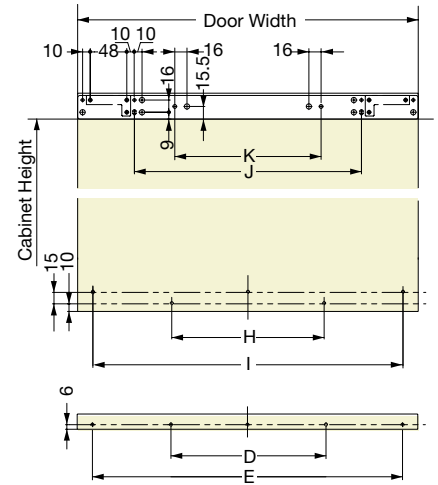
Provides various opening patterns. By adding more doors, the more opening patterns will be possible.



•Door Width 297mm, 447mm

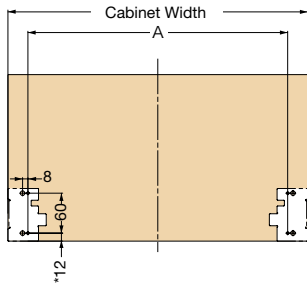


•Door Width 597mm, 897mm



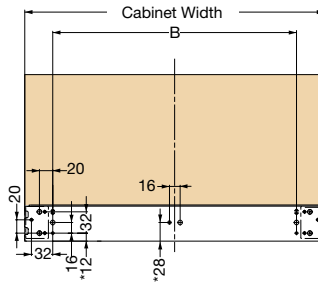
Door Width	D	E	F	G	H	I	J	K
297	-	257	118	139	-	-	148	-
447	-	407	193	214	-	-	298	-
597	278.5	557	-	-	300	557	448	200
897	428.5	857	-	-	400	857	748	300

•Top Panel



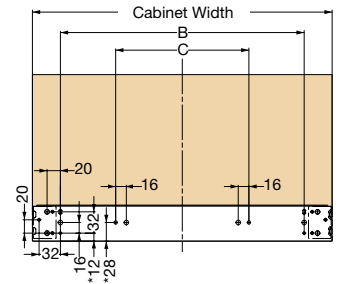
Cabinet Width	A
300	240
450	390
600	540
900	840

•Bottom Panel (Cabinet Width 300mm, 450mm)



Cabinet Width	B
300	216
450	366

•Bottom Panel (Cabinet Width 600mm, 900mm)



Cabinet Width	B	C
600	516	200
900	816	300

\* When using gaskets on cabinet thicker than 3mm, subtract "gasket thickness - 3mm" from the \* marked dimensions.

Item No.	Each Cabinet Width	Door Width	Door Weight / Door
MFS-W300/S2	300mm (11-13/16")	297mm (11-11/16")	2~3kg ( 4.4 ~ 6.6lbs)
MFS-W450/S2	450mm (17-23/32")	447mm ( 17-5/8" )	2~3kg ( 4.4 ~ 6.6lbs)
MFS-W450/S3	450mm (17-23/32")	447mm ( 17-5/8" )	3~4kg ( 6.6 ~ 8.8lbs)
MFS-W600/S3	600mm ( 23-5/8" )	597mm ( 23-1/2" )	3~4kg ( 6.6 ~ 8.8lbs)
MFS-W600/S4	600mm ( 23-5/8" )	597mm ( 23-1/2" )	4~5kg ( 8.8 ~11.0lbs)
MFS-W600/S5	600mm ( 23-5/8" )	597mm ( 23-1/2" )	5~6kg (11.0 ~13.2lbs)
MFS-W900/S5	900mm (35-7/16")	897mm (35-5/16")	5~6kg (11.0 ~13.2lbs)
MFS-W900/S6	900mm (35-7/16")	897mm (35-5/16")	6~7kg (13.2 ~15.4lbs)
MFS-W900/S7	900mm (35-7/16")	897mm (35-5/16")	7~8kg (15.4 ~17.6lbs)

**MFS-W Ordering Info:**

Designed for cabinet with minimum 2 doors. Each set contains hardware for one door only. To order, please reference the total cabinet width, the number of doors that will be in the cabinet, and the set required (MFS-W\_ \_ \_ /S\_ ), for example:  
1 cabinet 94" wide w/ 4 doors (23 1/2" ea, 12lbs./door), order as MFS-W600/S5 qty 4 each MFS-ED qty 1 pair

Item No.	Description
MFS-ED	End Cap Set*

\*1 pair of MFS-ED required per cabinet, not per door



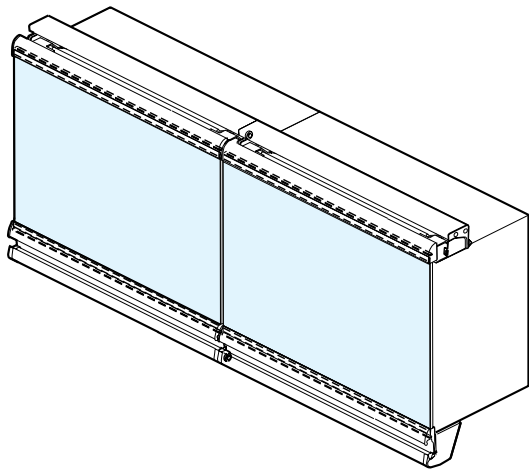
Multiple Motion Door System

# MultiMo FLAT<sup>®</sup>



## MULTIPLE MOTION DOOR SYSTEM (For Glass Doors) PAT

## MFS-G



Door Width	295mm, 445mm, 595mm or 895mm (11-5/8", 17-1/2", 23-7/16" or 35-1/4")
Door Height	300 ~ 900mm (11-13/16" ~ 35-7/16")
Door Thickness	5mm (13/64")
Door Weight	1.3 ~ 6.7kg (2.9 ~ 14.7lbs) / Glass

- **Flush Door Surface**  
All doors will be "flush" against others when in closed position. Provides sleek appearance compared to ordinary off-set sliding doors.
- **Interchangeable Door Position**  
Opened doors can slide and close at any unoccupied position.
- **Multiple Doors in One Line**  
Multiple doors can be added by connecting multiple sliding units.
- **Soft & Smooth Movement**  
Equipped with damper for soft and smooth closing movement.
- **Minimal Hardware Space**  
Ideal for shallow cabinets, hardware requires only 100mm (approx. 4") of depths.

\*Recommended using on 3 or more doors for interchangeable door feature.

\*Maximum door height is twice of door width.

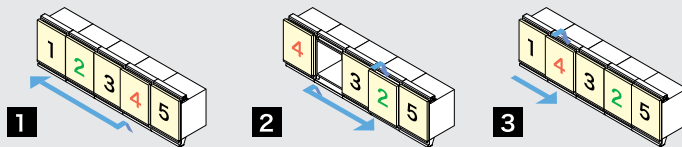
\*Please see page 4 for wooden door version.

(Cannot be used together with wooden version on one cabinet.)

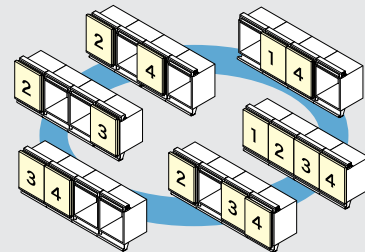
\*Tempered glass recommended.

\*For glass door assembly, Silicon caulk or double-sided tape (3M VHB recommended) is required. (Not included.)

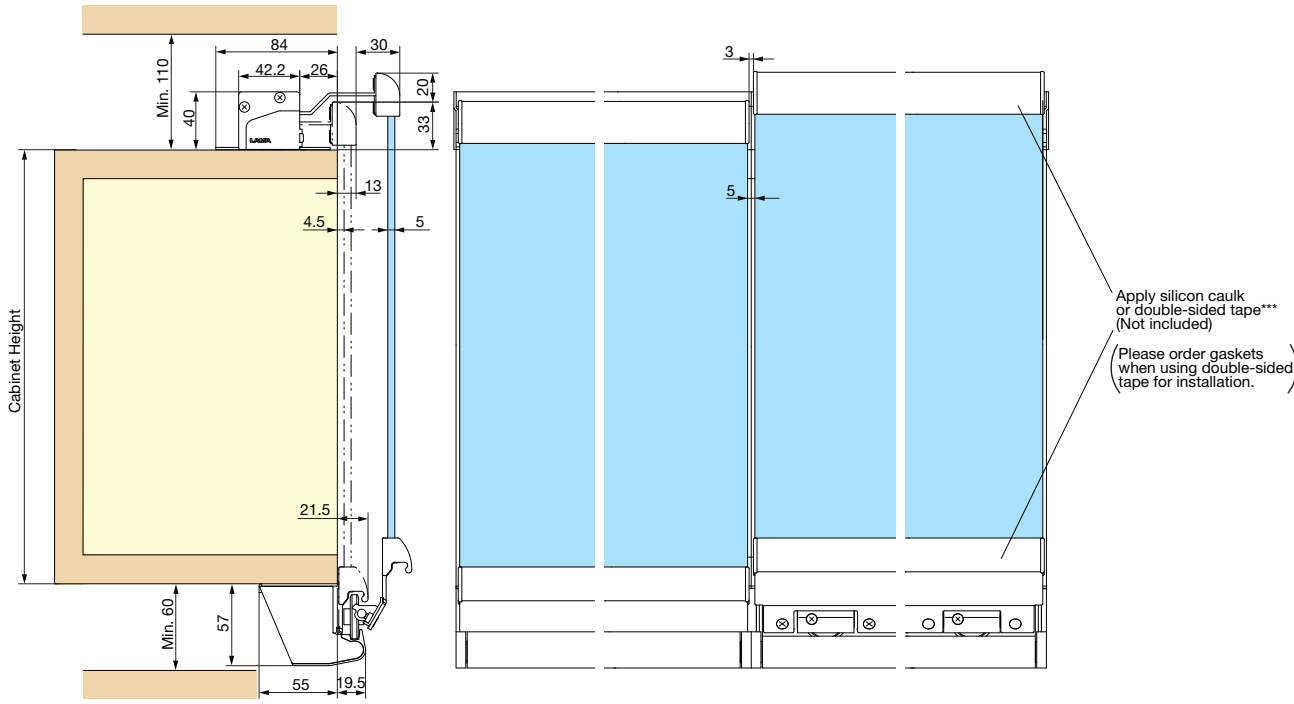
### Interchangeable Door Position (3 doors or more)



### Door Opening Example

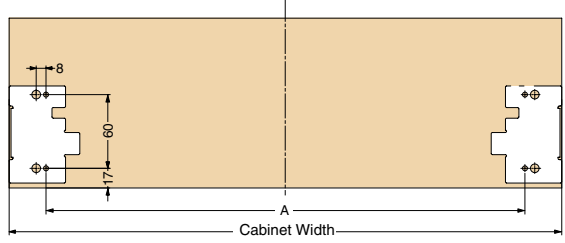


Provides various opening patterns. By adding more doors, the more opening patterns will be possible.

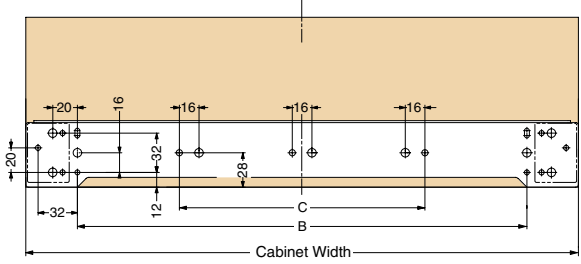


Glass Height = Cabinet Height + 18.5mm

•Top Panel



•Bottom Panel



Cabinet Width	A
300	240
450	390
600	540
900	840

Cabinet Width	B	C
300	216	-
450	366	-
600	516	200
900	816	300

Item No.	Each Cabinet Width	Glass Width	Door Weight / Door
MFS-G300/S2	300mm (11-13/16")	295mm ( 11-5/8" )	1.5 ~ 2.4kg ( 3.3 ~ 5.3lbs)
MFS-G450/S2	450mm (17-23/32")	445mm ( 17-1/2" )	1.3 ~ 2.2kg ( 2.9 ~ 4.8lbs)
MFS-G450/S3	450mm (17-23/32")	445mm ( 17-1/2" )	2.3 ~ 3.2kg ( 5.1 ~ 7.0lbs)
MFS-G600/S3	600mm ( 23-5/8" )	595mm ( 23-7/16" )	2.1 ~ 3.0kg ( 4.6 ~ 6.6lbs)
MFS-G600/S4	600mm ( 23-5/8" )	595mm ( 23-7/16" )	3.1 ~ 4.0kg ( 6.8 ~ 8.8lbs)
MFS-G600/S5	600mm ( 23-5/8" )	595mm ( 23-7/16" )	4.1 ~ 5.0kg ( 9.0 ~11.0lbs)
**MFS-G900/S5	900mm (35-7/16" )	895mm ( 35-1/4" )	3.8 ~ 4.7kg ( 8.4 ~10.3lbs)
**MFS-G900/S6	900mm (35-7/16" )	895mm ( 35-1/4" )	4.8 ~ 5.7kg (10.6 ~12.5lbs)
**MFS-G900/S7	900mm (35-7/16" )	895mm ( 35-1/4" )	5.8 ~ 6.7kg (12.8 ~14.7lbs)

**MFS-G Ordering Info:**

Designed for cabinet with minimum 2 doors.  
 Each set contains hardware for one door only.  
 To order, please reference the total cabinet width, the number of doors that will be in the cabinet, and the set required (MFS-G\_ \_ \_ /S\_ ), for example:  
 1 cabinet 94-1/2" wide w/ 4 doors (23-7/16"ea, 10lbs./door),  
 order as MFS-G600/S5 qty 4 each MFS-ED qty 1 pair

\*\*\*Please order gaskets when using double-sided tape for installation.

**Optional Gasket**

Item No.	Door Width
MFS-PK300	295mm (11-5/8")
MFS-PK450	445mm (17-1/2")
MFS-PK600	595mm (23-7/16")
MFS-PK900	895mm (35-1/4")

Item No.	Description
MFS-ED	End Cap Set*

\*1 pair of MFS-ED required per cabinet, not per door  
 \*\*Special order item

\*1 set of gasket required per door, when using double sided-tape for door assembly.

# MONOFLAT DOOR SERIES



MonoFlat **FAD™**

**FAD-5**

Door Weight: Max.5kg (11lbs)  
Please see P9 for details



MonoFlat **LIN-X hinge™**

**LIN-X450 / 600**

Door Weight: Max.17~24kg (37~53lbs)  
Please see P10~15 for details



MonoFlat **FAD™**

**FAD-20**

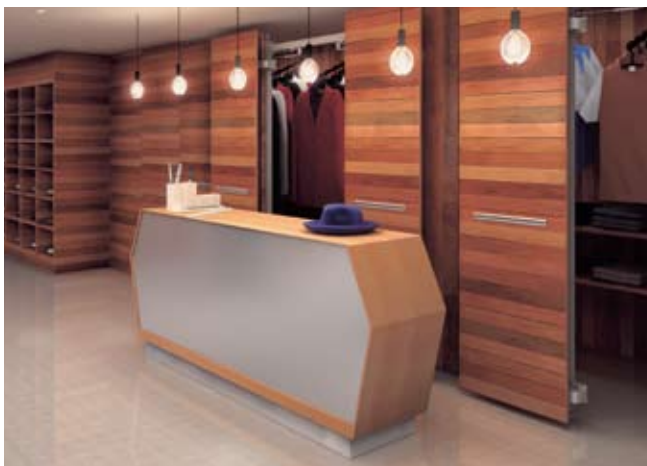
Door Weight: Max.20kg (44lbs)  
Please see P16~17 for details



MonoFlat **FAD™**

**FAD-44 / 44L**

Door Weight: Max.35kg (77lbs)  
Please see P18~19 for details



MonoFlat **FAD™**

**FAD-54 / 54L**

Door Weight: Max.35kg (77lbs)  
Please see P20~21 for details



MonoFlat **UNISON™**

**MFU**

Door Weight: Max.30kg (66lbs)  
Please see P22~23 for details





# MonoFlat FAD™

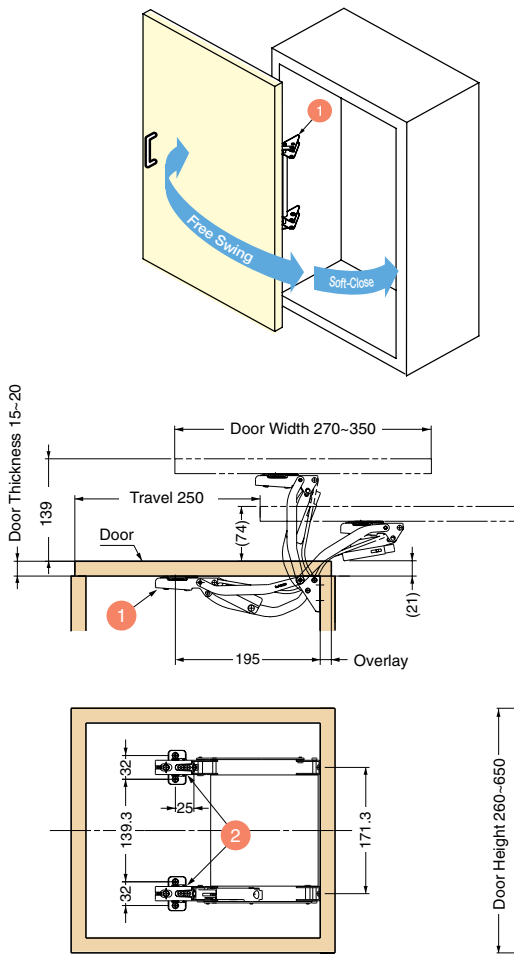
## MONOFLAT FAD (For Light Weight Doors) PAT.P

## FAD-5

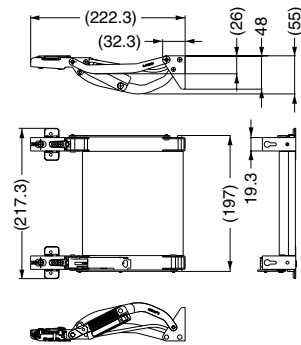
Door Width	270 ~ 350mm (10-5/8" ~ 13-25/32")
Door Height	260 ~ 650mm (10-1/4" ~ 25-19/32")
Door Thickness	15 ~ 20mm (19/32" ~ 25/32")
Door Weight	5kg (11lbs)

- **Lateral Swing Mechanism**  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- **Free Swing & Soft-close**
- **3-Way Adjustable**
- **Various Applications**  
Can be used in single or double door configuration.  
Ideal for cabinets in kitchen, bathroom, laundry room etc.  
\*For overlay use.

- **Other "MonoFlat series" available.**
  - MonoFlat FAD-20 For door weight 20kg (44lbs) – Page 16
  - MonoFlat LIN-X For door weight 24kg (53lbs) – Page 10
  - MonoFlat Unison For door weight 30kg (66lbs) – Page 22
  - MonoFlat FAD-44 For door weight 35kg (77lbs) – Page 18
  - MonoFlat FAD-54 For door weight 35kg (77lbs) – Page 20

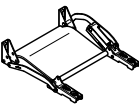
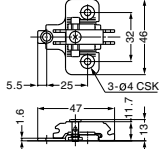



■ Hinge Dimensions



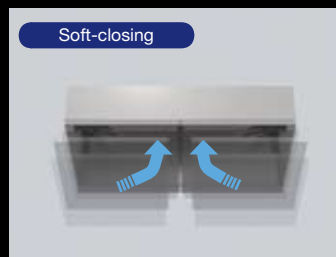
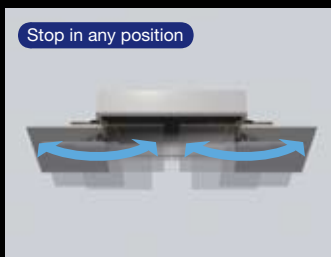
■ Part Details

Item No.	Box (sets)
FAD-5	1

No.	Qty	Part Name	Dimensions	Material / Finish
1	1pc	Hinge Body	Please see ■ Hinge Dimensions	<ul style="list-style-type: none"> <li>• Material Aluminum, Polyacetal, Steel</li> <li>• Finish / Color Anodized, Grey, Nickel</li> </ul>
				
2	2pcs	Mounting Plate		<ul style="list-style-type: none"> <li>• Material Steel</li> <li>• Finish Nickel</li> </ul>
		 230-P4W-32T		



# MonoFlat LIN-X hinge™



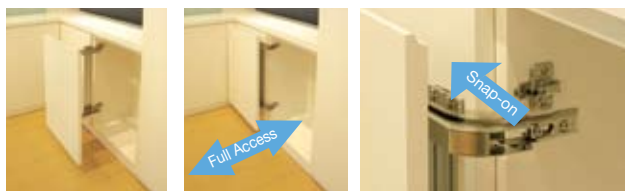
## MONOFLAT LIN-X HINGE PAT

## LIN-X450 / LIN-X600

Item No.	LIN-X450	LIN-X600
Door Width	400 ~ 500mm (15-3/4" ~ 19-11/16")	550 ~ 650mm (21-21/32" ~ 25-19/32")
Door Height	600 ~ 2400mm (23-5/8" ~ 94-1/2")	
Door Thickness	15~24mm (19/32"~61/64")	
Door Weight	*Max 17kg (37.4lbs)	*Max 24kg (52.8lbs)

\*Max door weight will vary depending on number of hinges used.

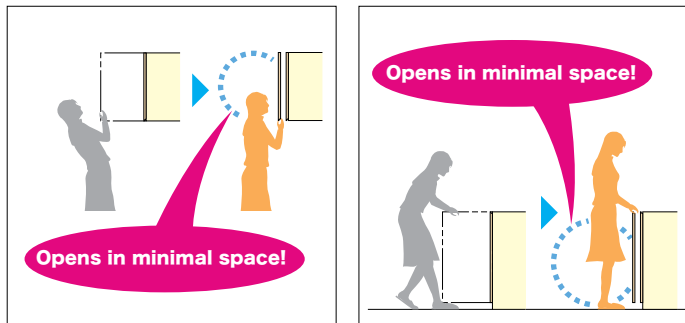
- **Lateral Swing Mechanism**  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- **Full Access to Cabinet**  
Door will not get in the way when fully opened providing full access to the cabinet.
- **Free Swing & Soft-close**
- **Easy Installation**  
Designed for standard 32 system mounting, with snap-on hinge.
- **4-Way Adjustable**  
3-way adjustable like concealed hinges and also with parallel adjustment.
- **Various Applications**  
Can be used in single or double door configuration. Ideal for cabinets in kitchen, bathroom, laundry room etc.  
\*For overlay use.



• Easy access full opening  
Ideal for wall / base cabinet, corner use etc.

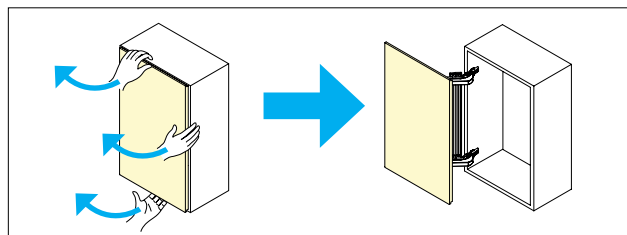
• Easy installation

### Lateral Swing Mechanism



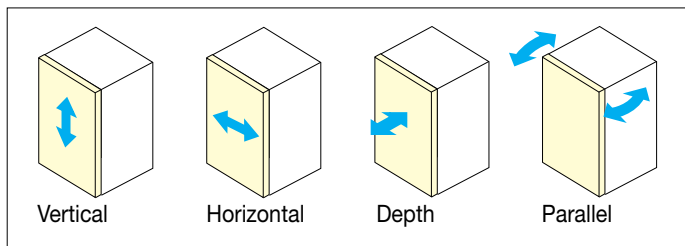
Ideal for tight front space application

### Can be Opened from Various Points

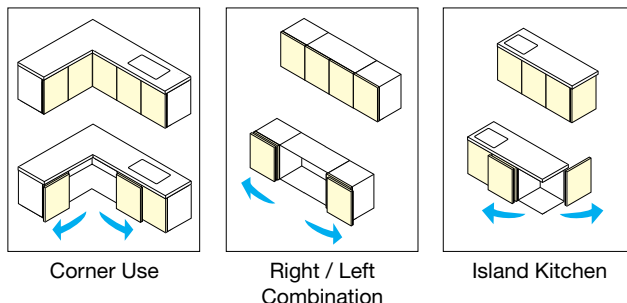


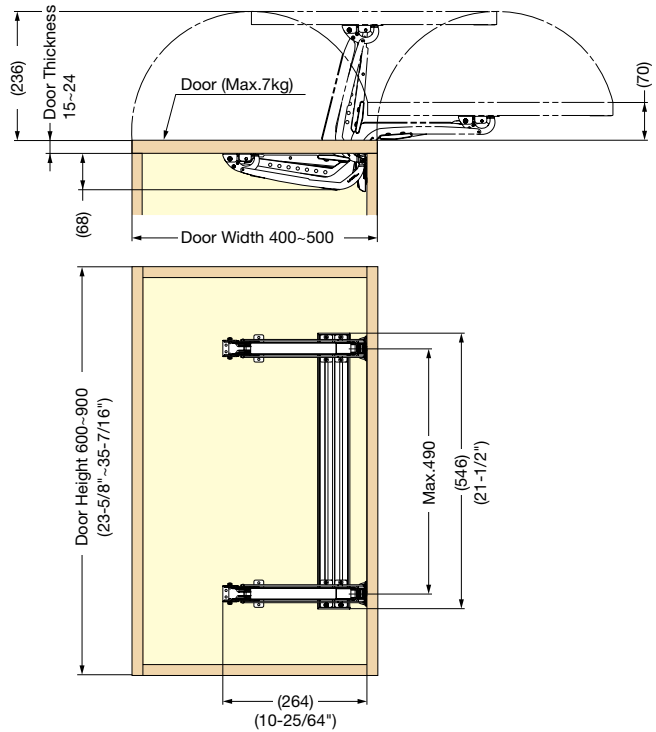
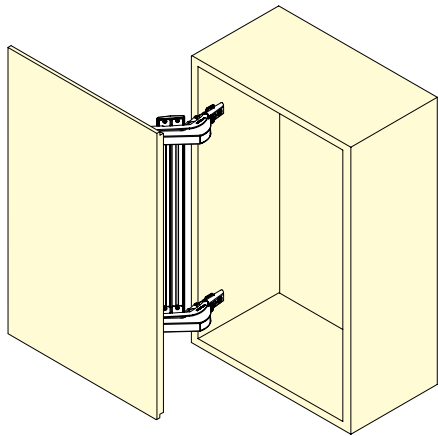
Please note handle position before installation.  
Handle may interfere with hinge.

### 4Way Adjustment



### Various Applications





Door Width	400 ~ 500mm (15-3/4" ~ 19-11/16")
Door Height	600 ~ 900mm (23-5/8" ~ 35-7/16")
Door Thickness	15 ~ 24mm (19/32" ~ 61/64")
Door Weight	Max. 7kg (15.4lbs) / Door

\*Can be used on heavier / taller doors by adding hinge arms.  
Please see page 12 for details.

Item No.	Overlay	Material	Finish
LIN-X450	19mm (3/4")	Steel / Aluminum	Nickel / Anodized
LIN-X450+5	14mm (35/64")		



- \*Parts included: •Hinge Body: 2pcs      •Connecting Bar: 1pc  
                          •Mounting plate: 2pcs      •Cover Cap: 2pcs



# ■ LIN-X450 PAT Individual Parts for Tall / Heavy Doors

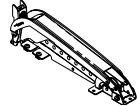
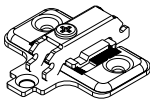
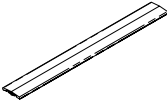
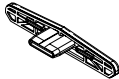
Door Width	400 ~ 500mm (15-3/4" ~ 19-11/16")
Door Height	600 ~ 2400mm (23-5/8" ~ 94-1/2")
Door Thickness	15 ~ 24mm (19/32" ~ 61/64")
Door Weight	Max. 17kg (37.4lbs)

### Ordering Info

Use corresponding letter in below table, and see "Parts Breakdown Table" for parts to be ordered.

Door Height	Door Weight				Connecting Bar / Cover Cap
	~ 15.5lbs (~ 7.0kg)	15.6 ~ 23.0lbs (7.1 ~ 10.5kg)	23.1 ~ 31lbs (10.6 ~ 14.0kg)	31.1 ~ 37.4lbs (14.1 ~ 17.0kg)	
23-5/8" ~ 35-7/16" (600 ~ 900mm)	LIN-X450 Standard Set Connecting Bar & Cover included	B			LIN-X450-L540 1pc LIN-X450C 2pcs
35-7/16" ~ 47-1/4" (901 ~ 1200mm)	A	B	C		LIN-X450-L840 1pc LIN-X450C 2pcs
47-1/4" ~ 59-3/64" (1201 ~ 1500mm)	A	B	C	D	LIN-X450-L1140 1pc LIN-X450C 2pcs
59-3/64" ~ 70-7/8" (1501 ~ 1800mm)	B	B	C	D	LIN-X450-L1140 1pc LIN-X450C 2pcs
70-7/8" ~ 82-11/16" (1801 ~ 2100mm)	B	B	C	D	LIN-X450-L1740 1pc LIN-X450C 2pcs
82-11/16" ~ 94-1/2" (2101 ~ 2400mm)	C	C	C	D	LIN-X450-L2040 1pc LIN-X450C 2pcs

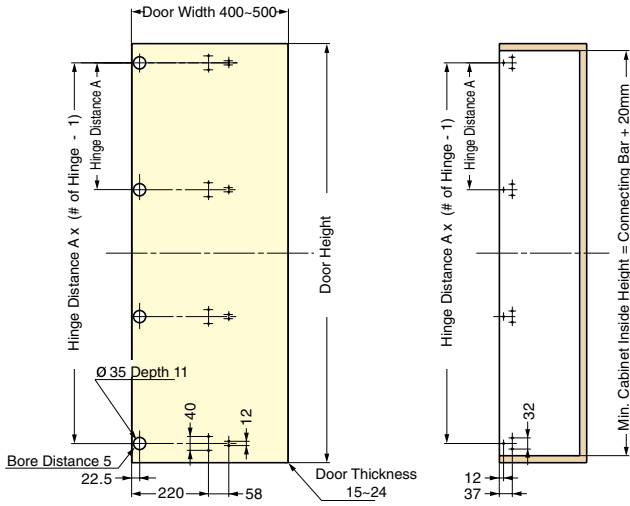
### Parts Breakdown Table

Item Number	Description		Qty Required			
			A	B	C	D
LIN-X450ACD	Single Arm ( with Damper )		2	3	3	3
LIN-X450A	Single Arm ( without Damper )		-	-	1	2
230-P4W-32T (for 19mm overlay) or 230-P4W-32T+5 (for 14mm overlay)	Mounting Plate		2	3	4	5
LIN-X450-L540	Connecting Bar L=540MM		See table above			
LIN-X450-L840	Connecting Bar L=840MM					
LIN-X450-L1140	Connecting Bar L=1140MM					
LIN-X450-L1440	Connecting Bar L=1440MM					
LIN-X450-L1740	Connecting Bar L=1740MM					
LIN-X450-L2040	Connecting Bar L=2040MM					
LIN-X450C	End Cap for Connecting Bar		See table above			

**Example:** 36"H×18"W, 16lbs door. Item number and quantity required.

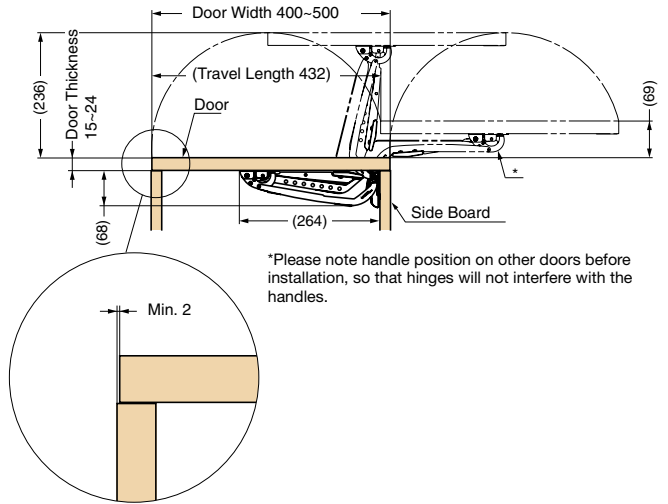
LIN-X450ACD      3pcs  
 230-P4W-32T      3pcs  
 LIN-X450-L840    1pcs  
 LIN-X450C        2pcs

■ Door Preparation



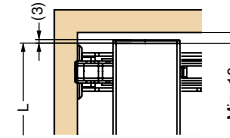
Hinge in middle should be positioned at or equally distributed from center of door.

■ Cabinet Preparation

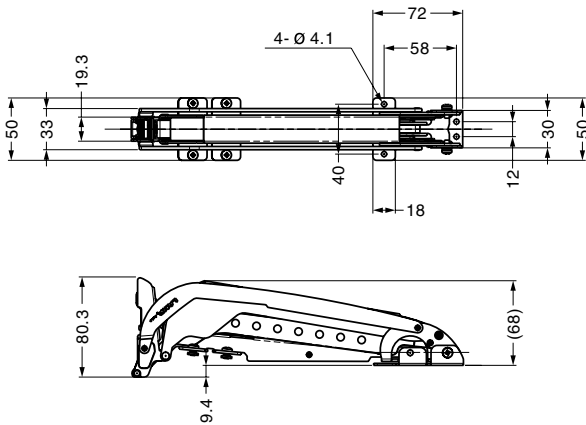


■ Hinge Distance A

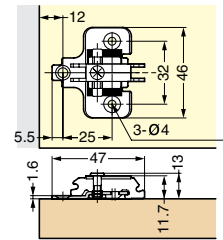
# of Hinges	Length of Connecting Bar (mm)					
	540	840	1140	1440	1740	2040
2 pcs	490	790	1090	-	-	-
3 pcs	245	395	545	695	845	-
4 pcs	-	263.3	363.3	463.3	563.3	663.3
5 pcs	-	-	272.5	347.5	422.5	497.5



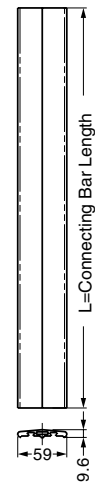
■ Hinge Arm



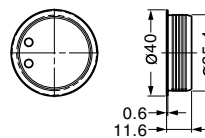
■ Mounting Plate (230-P4W-32T)



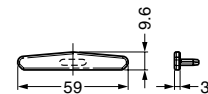
■ Connecting Bar



■ Cup Cover



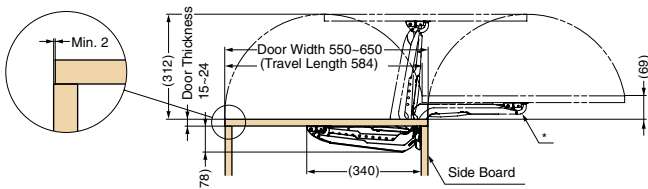
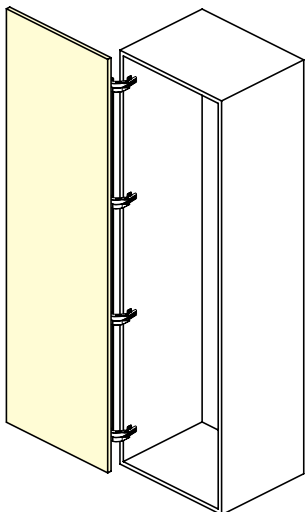
■ Bar End Cap



# MONOFLAT LIN-X 600

MONOFLAT LIN-X

In case of using 4 hinge arms.



Please note handle position on other doors before installation, so that hinges will not interfere with the handles.

Door Width	550 ~ 650mm (21-21/32" ~ 25-19/32")
Door Height	600 ~ 2400mm (23-5/8" ~ 94-1/2")
Door Thickness	15 ~ 24mm (19/32 ~ 61/64")
Door Weight	MAX. 24kg (52.8lbs)

\*Max door weight will vary depending on number of hinges used.

- **Lateral Swing Mechanism**  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- **Full Access to Cabinet**  
Door will not get in the way when fully opened providing full access to the cabinet.
- **Free Swing & Soft-close**
- **Easy Installation**  
Designed for standard 32 system mounting, with snap-on hinge.
- **4-Way Adjustable**  
3-way adjustable like concealed hinges and also with parallel adjustment.
- **Various Applications**  
Can be used in single or double door configuration. Ideal for cabinets in kitchen, bathroom, laundry room etc.  
\*For overlay use.

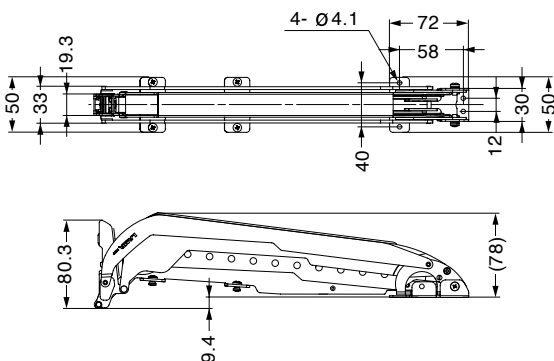
## LIN-X600 PAT Basic Standard Kit

Door Width	550 ~ 650mm (21-21/32" ~ 25-19/32")
Door Height	600 ~ 900mm (23-5/8" ~ 35-7/16")
Door Thickness	15 ~ 24mm (19/32 ~ 61/64")
Door Weight	MAX. 9kg (19.8lbs)

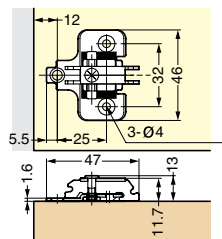
Item No.	Overlay	Material	Finish
LIN-X600	19mm (3/4")	Steel, Aluminum	Nickel, Anodized

Included Parts: 2 each of Hinge Arms, Mounting Plates, Cup Covers, Bar End Caps and 1 Connecting Bar.

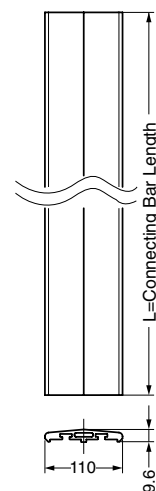
### ■ Hinge Arm



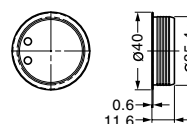
### ■ Mounting Plate (230-P4W-32T)



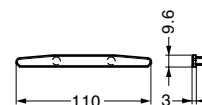
### ■ Connecting Bar



### ■ Cup Cover



### ■ Bar End Cap



# LIN-X600 PAT Individual Parts for Tall / Heavy Doors

Door Width	550 ~ 650mm (21-21/32" ~ 25-19/32")
Door Height	600 ~ 2400mm (23-5/8" ~ 94-1/2")
Door Thickness	15 ~ 24mm (19/32" ~ 61/64")
Door Weight	Max. 24kg (52.8lbs)

### Ordering Info

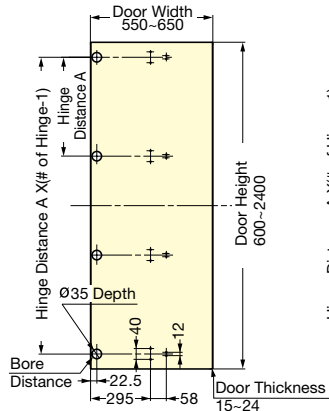
Use corresponding letter in below table, and see "Parts Breakdown Table" for parts to be ordered.

Door Height	Door Weight					Connecting Bar / Cover Cap
	~ 19.9lbs (~ 9.0kg)	20.0 ~ 26.5lbs (9.1 ~ 12.0kg)	26.6 ~ 35.4lbs (12.1 ~ 16.0kg)	35.5 ~ 44.2lbs (16.1 ~ 20.0kg)	44.3 ~ 52.8lbs (20.1 ~ 24.0kg)	
23-5/8" ~ 35-7/16" (600 ~ 900mm)	LIN-X600 Standard Set Connecting Bar & Cover included	B				LIN-X60-L540 1pc LIN-X60C 2pcs
35-7/16" ~ 47-1/4" (901 ~ 1200mm)		B	B			LIN-X60-L840 1pc LIN-X60C 2pcs
47-1/4" ~ 59-3/64" (1201 ~ 1500mm)		B	B	C		LIN-X60-L1140 1pc LIN-X60C 2pcs
59-3/64" ~ 70-7/8" (1501 ~ 1800mm)		B	B	C	D	LIN-X60-L1140 1pc LIN-X60C 2pcs
70-7/8" ~ 82-11/16" (1801 ~ 2100mm)		B	B	C	D	LIN-X60-L1740 1pc LIN-X60C 2pcs
82-11/16" ~ 94-1/2" (2101 ~ 2400mm)			C	C	D	LIN-X60-L2040 1pc LIN-X60C 2pcs

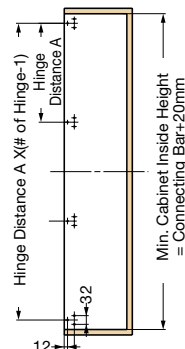
### Parts Breakdown Table

Item Number	Description	Image	Qty Required			
			A	B	C	D
LIN-X600ACD	Single Arm ( with Damper )		2	3	3	3
LIN-X600A	Single Arm ( without Damper )		-	-	1	2
230-P4W-32T (for 19mm overlay)	Mounting Plate		2	3	4	5
LIN-X60-L540	Connecting Bar L=540MM		See table above			
LIN-X60-L840	Connecting Bar L=840MM					
LIN-X60-L1140	Connecting Bar L=1140MM					
LIN-X60-L1440	Connecting Bar L=1440MM					
LIN-X60-L1740	Connecting Bar L=1740MM					
LIN-X60-L2040	Connecting Bar L=2040MM					
LIN-X60C	End Cap for Connecting Bar		See table above			

### Door Preparation



### Cabinet Preparation



### Hinge Distance A

# of Hinges	Length of Connecting Bar (mm)					
	540	840	1140	1440	1740	2040
2 pcs	490	790	-	-	-	-
3 pcs	245	395	545	695	845	-
4 pcs	-	-	363.3	463.3	563.3	663.3
5 pcs	-	-	-	347.5	422.5	497.5



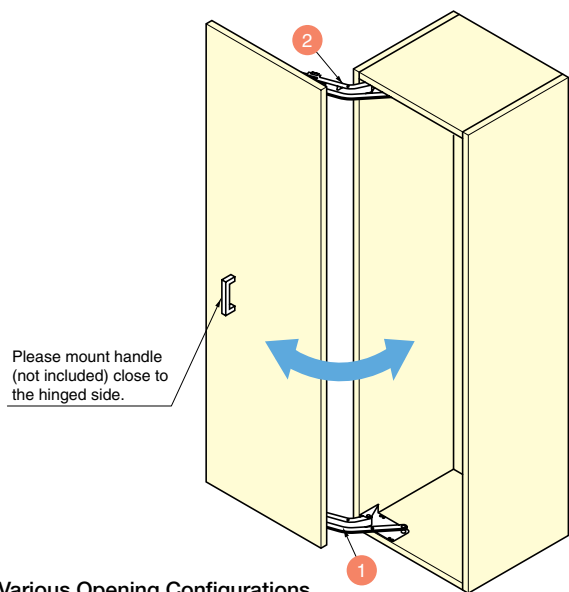
# MonoFlat FAD™

Inside Door Width	500 ~ 550mm (19-11/16" ~ 21-21/32")
Inside Door Height	Max. 2420mm (95-9/32")
Door Thickness	Max. 35mm (1-3/8")
Door Weight	Max. 20kg (44lbs) / Door

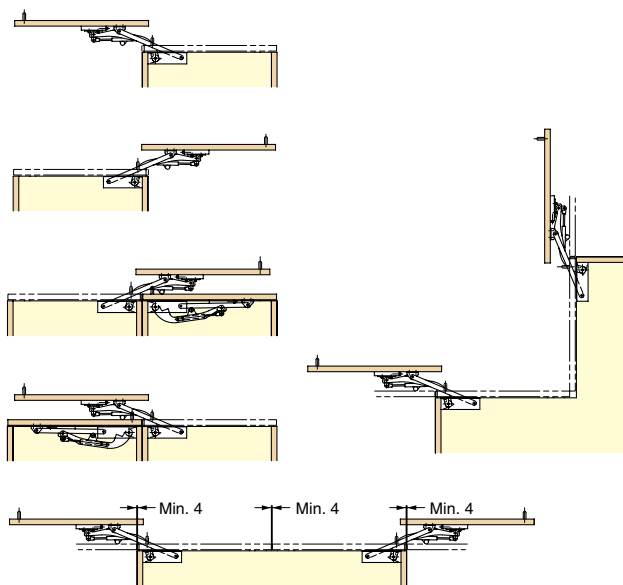
- **Lateral Opening Mechanism**  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- **Smooth Movement**  
Built-in gas spring provides a smooth self opening & closing movement.
- **Various applications**  
Can be used in single or double door configuration.  
Ideal for storage cabinets in kitchen, closet room, bathroom, laundry room etc.  
\*For overlay use.

## MONOFLAT FAD (For Medium Weight Doors) PAT. P

## FAD-20

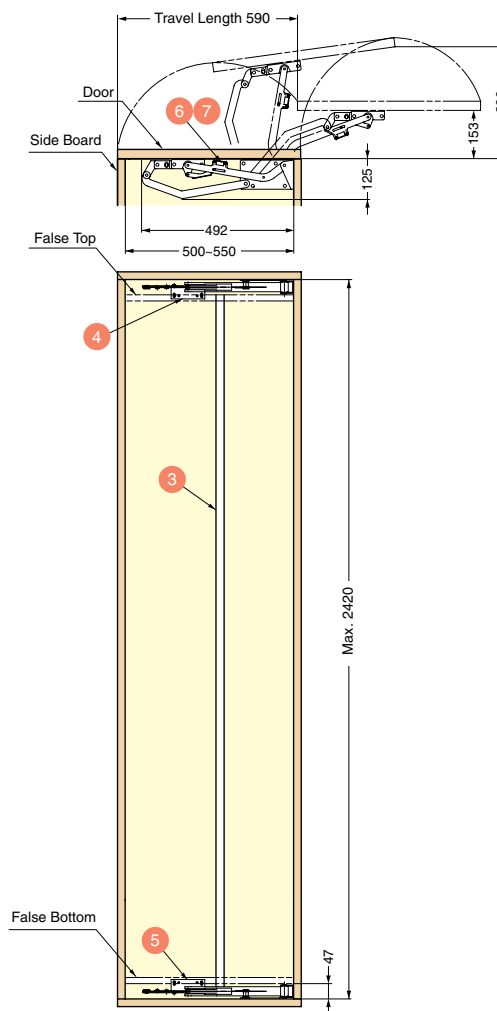


### ■ Various Opening Configurations



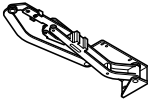
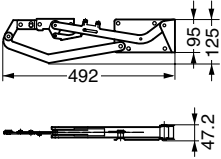
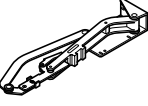
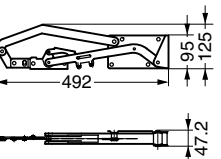

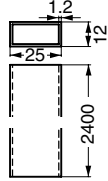
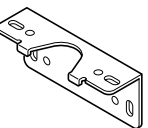
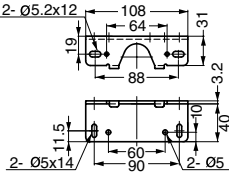
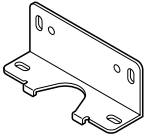
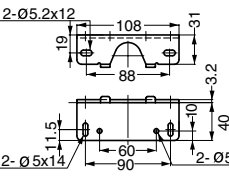
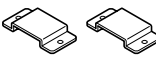
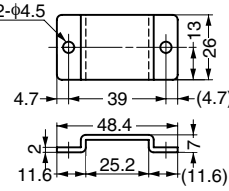

### • Other "MonoFlat series" available.

- MonoFlat FAD-5 For door weight 5kg (11lbs) – Page 9
- MonoFlat LIN-X For door weight 24kg (53lbs) – Page 10
- MonoFlat Unison For door weight 30kg (66lbs) – Page 22
- MonoFlat FAD-44 For door weight 35kg (77lbs) – Page 18
- MonoFlat FAD-54 For door weight 35kg (77lbs) – Page 20





■ Part Details

No.	Qty	Part Name	Dimensions	Description
1	1pc	Arm A 		<ul style="list-style-type: none"> <li>• Material Aluminum, Steel</li> <li>• Finish / Color Silver</li> </ul>
2	1pc	Arm B 		<ul style="list-style-type: none"> <li>• Material Aluminum, Steel</li> <li>• Finish / Color Silver</li> </ul>
3	1pc	Connecting Bar 		<ul style="list-style-type: none"> <li>• Material Steel</li> <li>• Finish / Color Silver</li> </ul>
4	1pc	Door Bracket (Top) 		<ul style="list-style-type: none"> <li>• Material Steel</li> <li>• Finish / Color Silver</li> </ul>
5	1pc	Door Bracket (Bottom) 		<ul style="list-style-type: none"> <li>• Material Steel</li> <li>• Finish / Color Silver</li> </ul>
6	2pcs	Bar Clamp 		<ul style="list-style-type: none"> <li>• Material Steel</li> <li>• Finish / Color Silver</li> </ul>
7	2pcs	End Cap 	-	<ul style="list-style-type: none"> <li>• Material Polyethylene</li> <li>• Finish / Color Black</li> </ul>

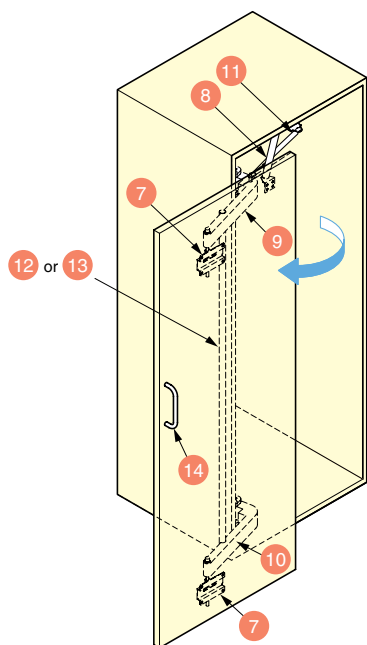


# MonoFlat FAD™

Item No.	FAD-44	FAD-44L
Door Width	800 ~ 850mm (31-1/2" ~ 33-15/32")	
Door Height	Max. 2380mm (93-11/16")	Max. 2980mm (117-5/16")
Door Thickness	24 ~ 38mm (61/64" ~ 1-1/2")	
Door Weight	Max. 35kg (77lbs)	

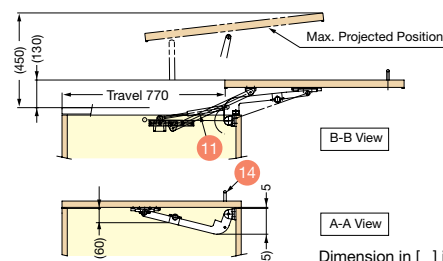
## MONOFLAT FAD (For Large Cabinet Doors) PAT

## FAD-44 / FAD-44L



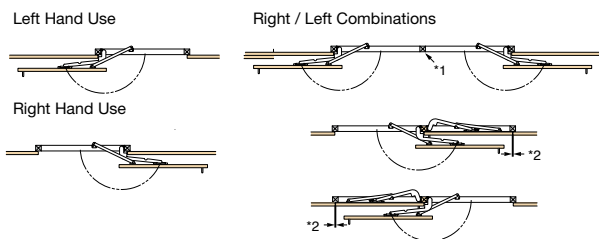
- **Lateral Opening Mechanism**  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- **No rails and bottom guide required**
- **Smooth Movement**  
Built-in gas spring provides a smooth self opening & closing movement.
- **Height adjustable by cutting arm connecting pipe**
- **Various applications**  
Can be used in single or double door configuration. Ideal for storage cabinets in kitchen, closet room, bathroom, laundry room etc.
- \*For overlay use.

- Other "MonoFlat series" available.
  - MonoFlat FAD-5 For door weight 5kg (11lbs) – Page 9
  - MonoFlat FAD-20 For door weight 20kg (44lbs) – Page 16
  - MonoFlat LIN-X For door weight 24kg (53lbs) – Page 10
  - MonoFlat Unison For door weight 30kg (66lbs) – Page 22



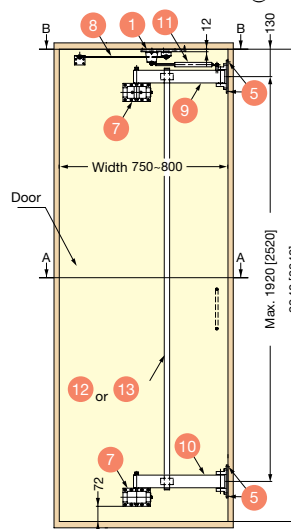
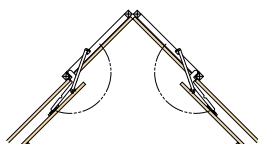
Dimension in [ ] is for FAD-44L.

### Various Opening Configurations



\*1 Vertical frame or door stoppers on floor for both doors required in center.  
\*2 Min.4mm gap around door.

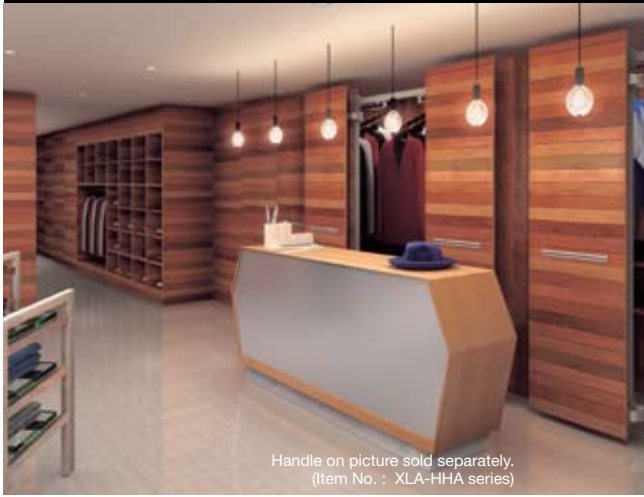
### Corner Use



Item No.	Door Height	Description
FAD-44	Max. 2380mm (93-11/16")	Please see Qty <input type="checkbox"/>
FAD-44L	Max. 2980mm (117-5/16")	Please see Qty <input type="checkbox"/>

■ Part Details

No.	Qty		Part Name	Dimensions	Description	No.	Qty		Part Name	Dimensions	Description
	a	b					a	b			
1	1pc	1pc	Gas Spring Bracket		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>	9	1pc	1pc	Upper Arm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>
2	1pc	1pc	Screw Pin		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>	10	1pc	1pc	Lower Arm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>
3	1pc	1pc	Channel Rail		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Nickel</li> </ul>	11	1pc	1pc	Gas Spring		<ul style="list-style-type: none"> <li>Color Grey</li> </ul>
4	1ea	1ea	Square Nut		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>	12	1set	-	Connecting Pipe & Clamp		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish / Color Silver</li> </ul>
5	4pcs	4pcs	Bearing Housing		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>	13	-	1set	Connecting Pipe & Clamp		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish / Color Silver</li> </ul>
6	2pcs	2pcs	Hinge Base Plate		<ul style="list-style-type: none"> <li>Material Zinc</li> <li>Finish / Color Silver</li> </ul>	14	1pc	1pc	Handle		<ul style="list-style-type: none"> <li>Material 304 Stainless Steel</li> <li>Finish Mirror</li> </ul>
7	2pcs	2pcs	Arm Bracket		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Material Polyacetal</li> <li>Finish / Color Silver</li> </ul>	15	1pc	1pc	Bumper		<ul style="list-style-type: none"> <li>Material Polyurethane</li> <li>Finish Clear</li> </ul>
8	1pc	1pc	Support Arm		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Material Polyacetal</li> <li>Finish / Color Silver</li> </ul>	16	1pc	1pc	Strip Brush	-	<ul style="list-style-type: none"> <li>Color Grey</li> </ul>



Handle on picture sold separately.  
(Item No. : XLA-HHA series)

# MonoFlat FAD™

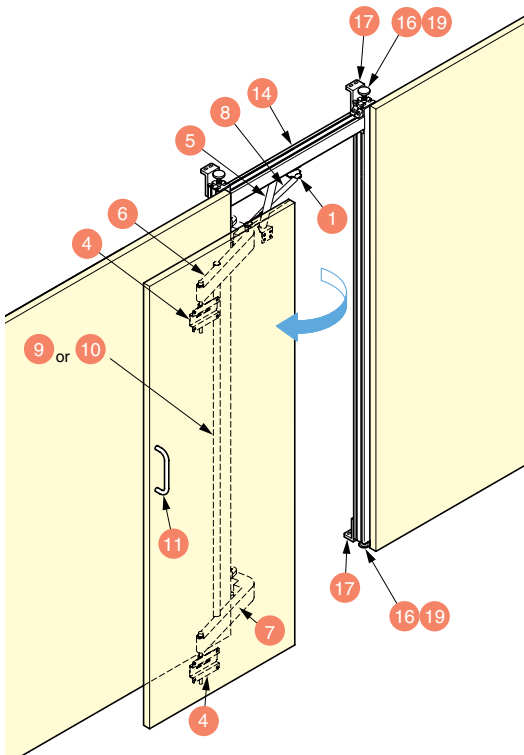
Item No.	FAD-54	FAD-54L
Door Width	800 ~ 850mm (31-1/2" ~ 33-15/32")	
Door Height	Max. 2380mm (93-11/16")	Max. 2980mm (117-5/16")
Door Thickness	24 ~ 38mm (61/64" ~ 1-1/2")	
Door Weight	Max. 35kg (77lbs) / Door	

\*In case of 25mm (1") overlay.

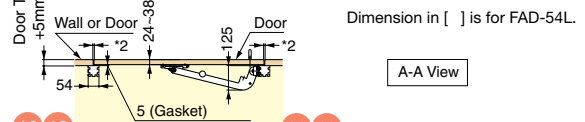
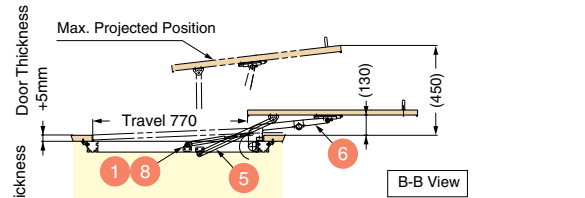
- Other "MonoFlat series" available.
  - MonoFlat FAD-5 For door weight 5kg (11lbs) – Page 5
  - MonoFlat FAD-20 For door weight 20kg (44lbs) – Page 16
  - MonoFlat LIN-X For door weight 24kg (53lbs) – Page 10
  - MonoFlat Unison For door weight 30kg (66lbs) – Page 22

## MONOFLAT FAD (For Large Opening Doors) PAT

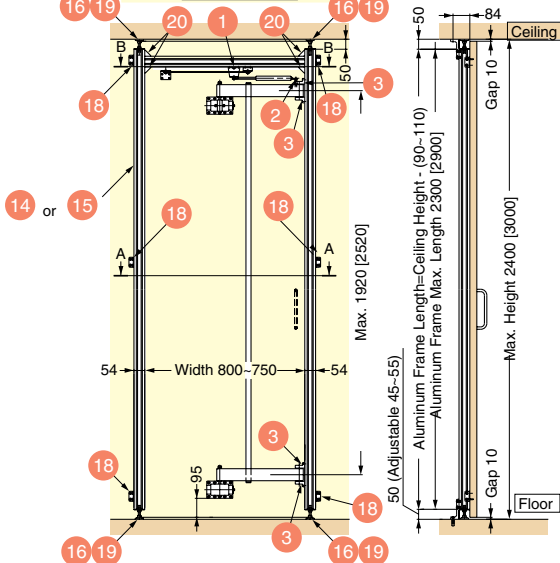
## FAD-54 / FAD-54L



- Flush Surface  
Designed to close flush against surrounding walls, providing clean appearance.
- Lateral Opening Mechanism  
Allows doors to swing out laterally in a small radius, ideal for tight front space application.
- Aluminum frame supplied for durable construction
- No rails or bottom guide required
- Smooth Movement  
Built-in gas spring provides a smooth self opening & closing movement.
- Height adjustable by cutting arm connecting pipe
- Various applications  
Can be used in single or double door configuration.  
Ideal for walk-in closets, partitions, hidden door applications etc.



Dimension in [ ] is for FAD-54L.



\*2 Min.4mm gap on both side of door.

### Various Opening Configurations

Left Hand Use

Right / Left Combinations

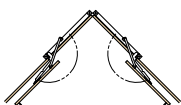


Right Hand Use



\*1 Vertical frame or door stoppers on floor for both doors required in center.

Corner Use



Item No.	Door Height	Description
FAD-54	Max. 2380mm (93-11/16")	Please see Qty <b>A</b>
FAD-54L	Max. 2980mm (117-5/16")	Please see Qty <b>B</b>

Part Details

No.	Qty		Part Name	Dimensions	Description	No.	Qty		Part Name	Dimensions	Description
	a	b					a	b			
1	1pc	1pc	Gas Spring Bracket		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>	11	1pc	1pc	Handle		<ul style="list-style-type: none"> <li>Material 304 Stainless Steel</li> <li>Finish Mirror</li> </ul>
2	1pc	1pc	Screw Pin		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>	12	1pc	1pc	Bumper		<ul style="list-style-type: none"> <li>Material Polyurethane</li> <li>Finish Clear</li> </ul>
3	4pcs	4pcs	Bearing Housing		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>	13	1pc	1pc	Strip Brush	-	<ul style="list-style-type: none"> <li>Color Grey</li> </ul>
4	2pcs	2pcs	Arm Bracket		<ul style="list-style-type: none"> <li>Material Steel / Polyacetal</li> <li>Finish / Color Silver</li> </ul>	14	V 2pcs	-	Alum. Frame (FAD-54) (V2300mm, H800mm)		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized</li> </ul>
5	1pc	1pc	Support Arm		<ul style="list-style-type: none"> <li>Material Steel / Polyacetal</li> <li>Finish / Color Silver</li> </ul>	15	-	V 2pcs	Alum. Frame (FAD-54L) (V2900mm, H800mm)		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized</li> </ul>
6	1pc	1pc	Upper Arm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>	16	4pcs	4pcs	Glide Base		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish / Color Silver</li> </ul>
7	1pc	1pc	Bottom Arm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>	17	4pcs	4pcs	Frame Bracket		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish / Color Silver</li> </ul>
8	1pc	1pc	Gas Spring		<ul style="list-style-type: none"> <li>Color Grey</li> </ul>	18	6pcs	6pcs	Angle Connector		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>
9	1set	-	Connecting Pipe & Clamp		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish / Color Silver</li> </ul>	19	4pcs	4pcs	Leveling Glide		<ul style="list-style-type: none"> <li>Material Steel/Elastomer</li> <li>Finish / Color Clear Zinc Chromate/Black</li> </ul>
10	-	1set	Connecting Pipe & Clamp		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish / Color Silver</li> </ul>	20	8pcs	8pcs	Frame Connector		<ul style="list-style-type: none"> <li>Material Aluminum/Zinc Alloy</li> <li>Finish Silver/Chromate</li> </ul>



# MonoFlat UNISON™



## MONOFLAT UNISON

PAT. P

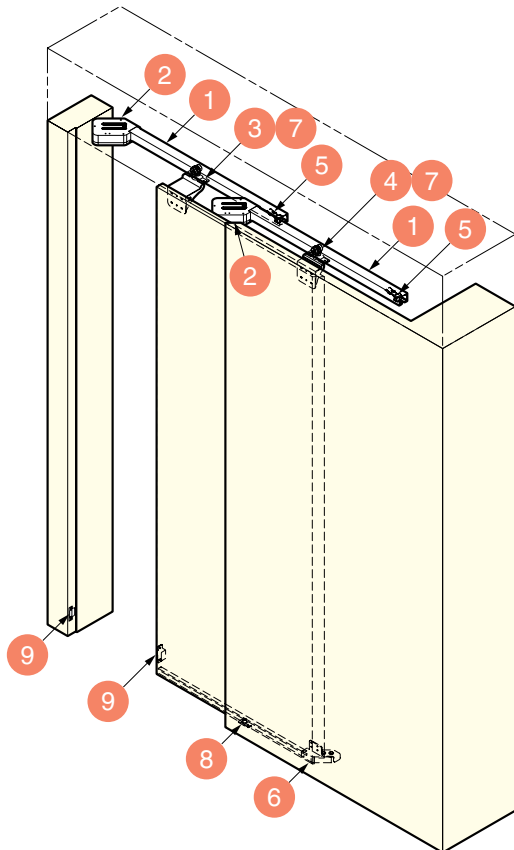
## MFU

Door Width	800 ~ 950mm (31-1/2" ~ 37-13/32")
Door Height	Max. 2500mm (98-7/16")
Door Thickness	*28 ~ 30mm (1-3/32" ~ 1-3/16")
Door Weight	Max. 30kg (66lbs)
Adjustability	Depth: ±2.5mm (3/32")
	Horizontal: ±1mm (1/32")
	Vertical: ±2.5mm (3/32")

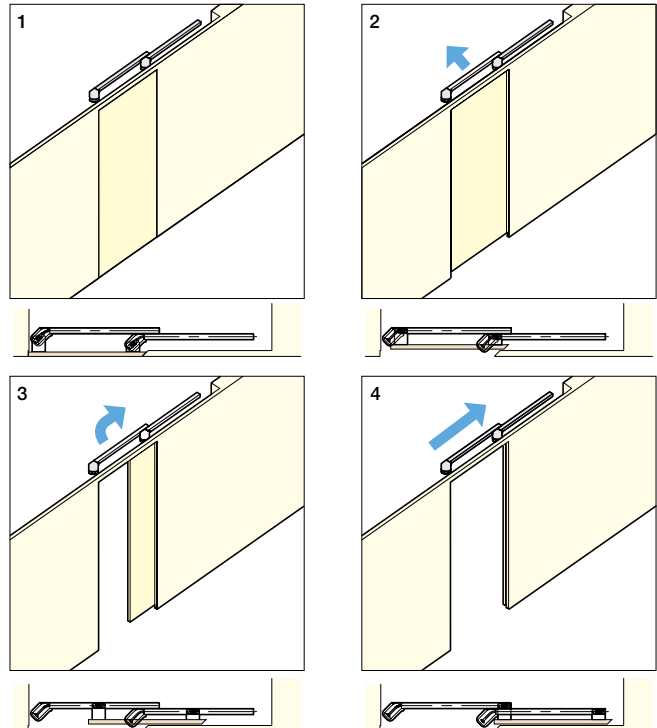
\*Can be used on door thicker than 30mm (1-3/16") by mortising hanging bracket into the door.

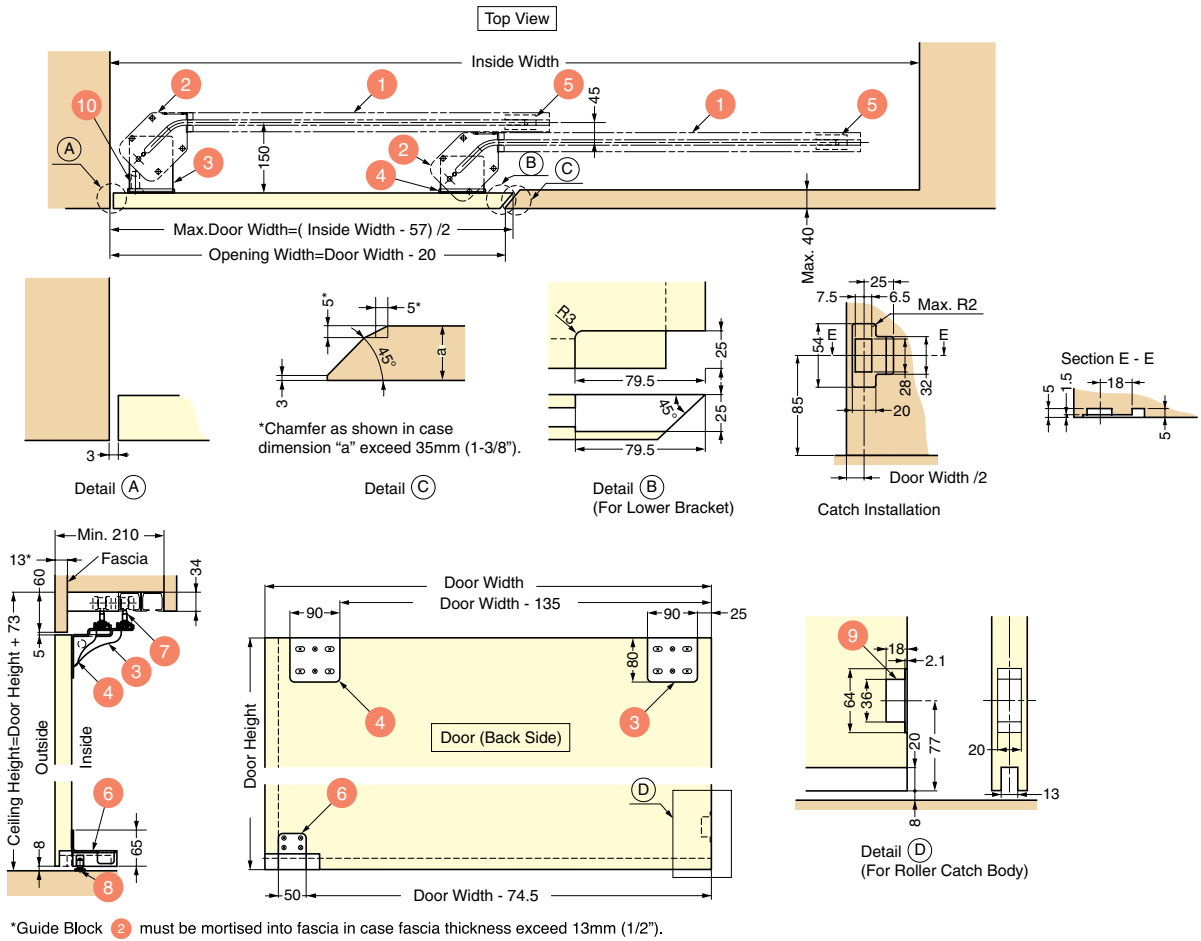
- **Flush Surface**  
Designed to close flush against surrounding walls, providing clean appearance.
- **Unique Movement**  
Door moves in first, and then slides sideways.
- **Clean Appearance**  
No bottom rails on floor required
- **Smooth Movement**  
Bearing roller provides smooth movement.  
Also door catch will pull the door to closed position.
- **Various applications**  
Ideal for walk-in closets, stock room, hidden room applications etc.  
\*For single door application.

Note: Hardware must be installed onto a rigid frame, ceiling or wall to prevent door from falling off.



### ■ How the door moves








Item No.	Description	No.	Qty	Part Name	Dimensions	Description
MFU-940-R	For Right-Handed Opening	5	2pcs	Stopper		<ul style="list-style-type: none"> <li>Material PBT / Steel</li> <li>Finish White / Zinc Chromate</li> </ul>
MFU-940-L	For Left-Handed Opening	6	1pc	Bottom Guide Block		<ul style="list-style-type: none"> <li>Material Steel / Polyamide</li> <li>Finish Clear Zinc Chromate</li> </ul>
		7	2pcs	Upper Roller		<ul style="list-style-type: none"> <li>Material Polyamide Steel Aluminum</li> </ul>
		8	1pc	Bottom Guide Pin		<ul style="list-style-type: none"> <li>Material 304 Stainless Steel / Polyacetal</li> <li>Finish Plain / White</li> </ul>
		9	1pc	Magnetic Roller Catch		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Chrome</li> </ul>
		10	1pc	Handle		<ul style="list-style-type: none"> <li>Material 304 Stainless Steel</li> <li>Finish Mirror</li> </ul>

\*All drawings shown is for Left-Handed, MFU-940-L.

■ Part Details

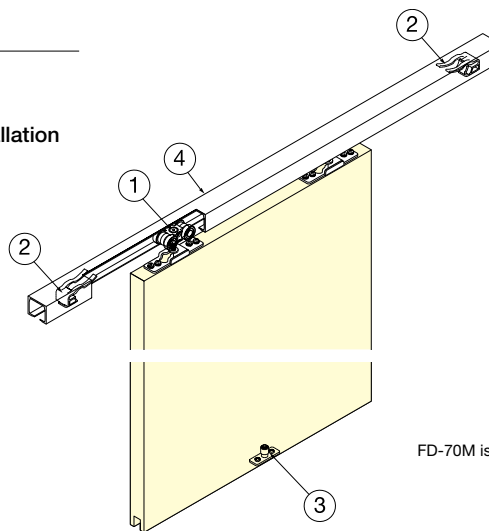
No.	Qty	Part Name	Dimensions	Description
1	2pcs	Upper Track		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized</li> </ul>
2	2pcs	Guide Block		<ul style="list-style-type: none"> <li>Material Polycarbonate Aluminum</li> <li>Color White</li> </ul>
3	1pc	Upper Bracket A		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>
4	1pc	Upper Bracket B		<ul style="list-style-type: none"> <li>Material Steel</li> <li>Finish Clear Zinc Chromate</li> </ul>



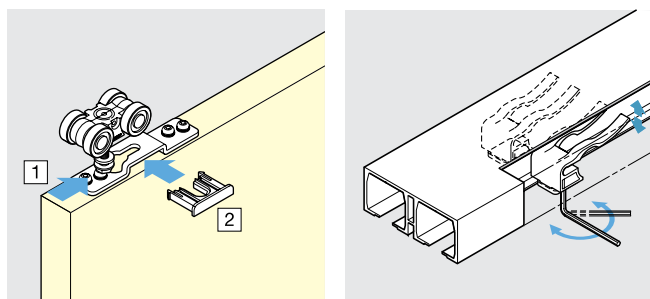
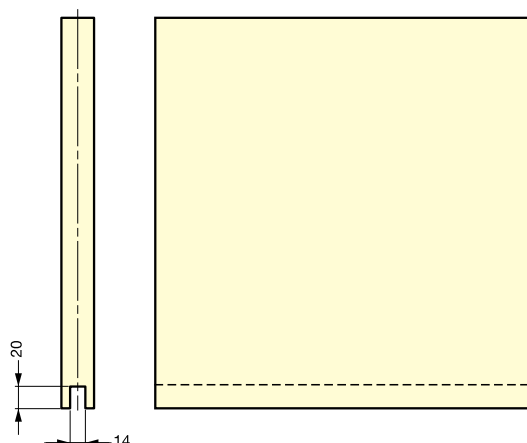
Item No.	FD-70M	FD-70C	FD-70B
Door Height	Max. 2400mm (94-1/2")		
Door Thickness	Single Track: Min. 30mm (1-3/16") Double Track: 30~40mm (1-3/16"~1-9/16")		Single Track: Min. 34mm (1-11/32") Double Track: 34~40mm (1-11/32"~1-9/16")
Door Weight	Max. 70kg (154lbs) / Door		
Mounting Type			

- Ball bearing roller provides light and smooth movement.
- No bottom rail, only guide pin on floor required.
- Easy door installation.  
Simply hang the door onto the rollers.
- Easy height adjustment.
- Available in 3 different mounting types.  
FD-70M --- Ceiling mount type for mortised, drop or false ceiling application.  
FD-70C --- Wall mount type with snap-in fascia for easy installation.  
FD-70B --- Ceiling mount type with minimal gap between upper rail and door. No need to use fascia.

### Installation



### Door Preparation

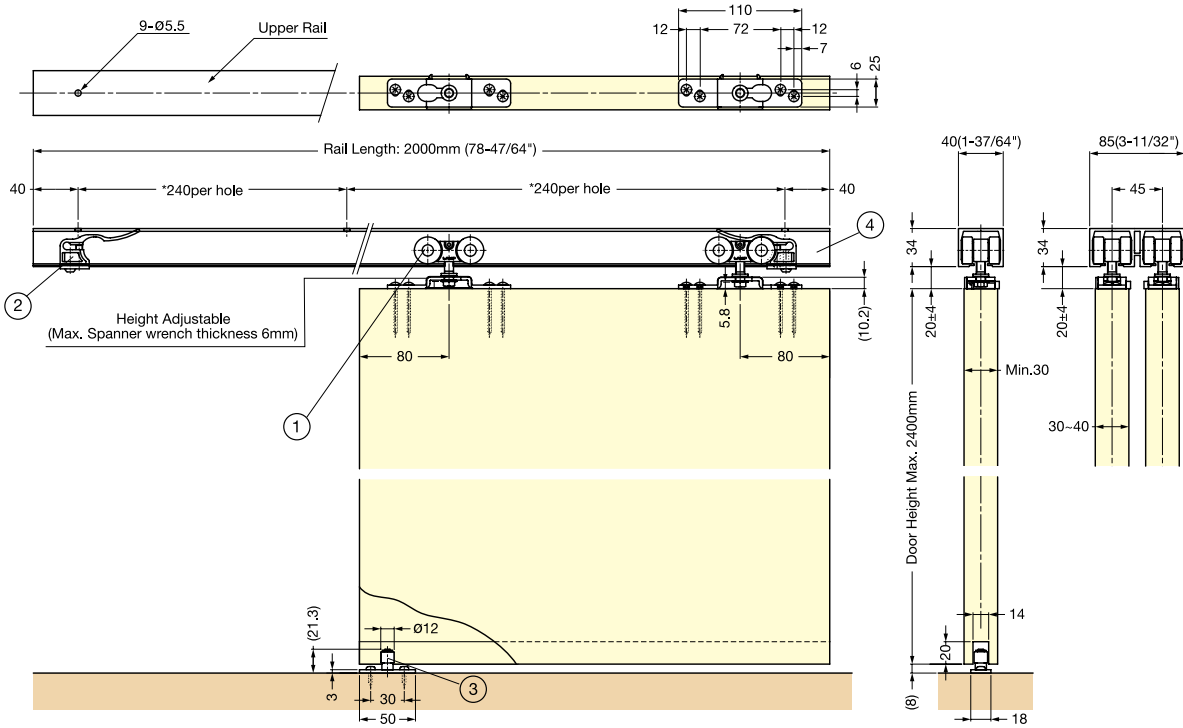


- Easy Door Installation / Removal
- Adjustable Door Height

- Adjustable Catch Force

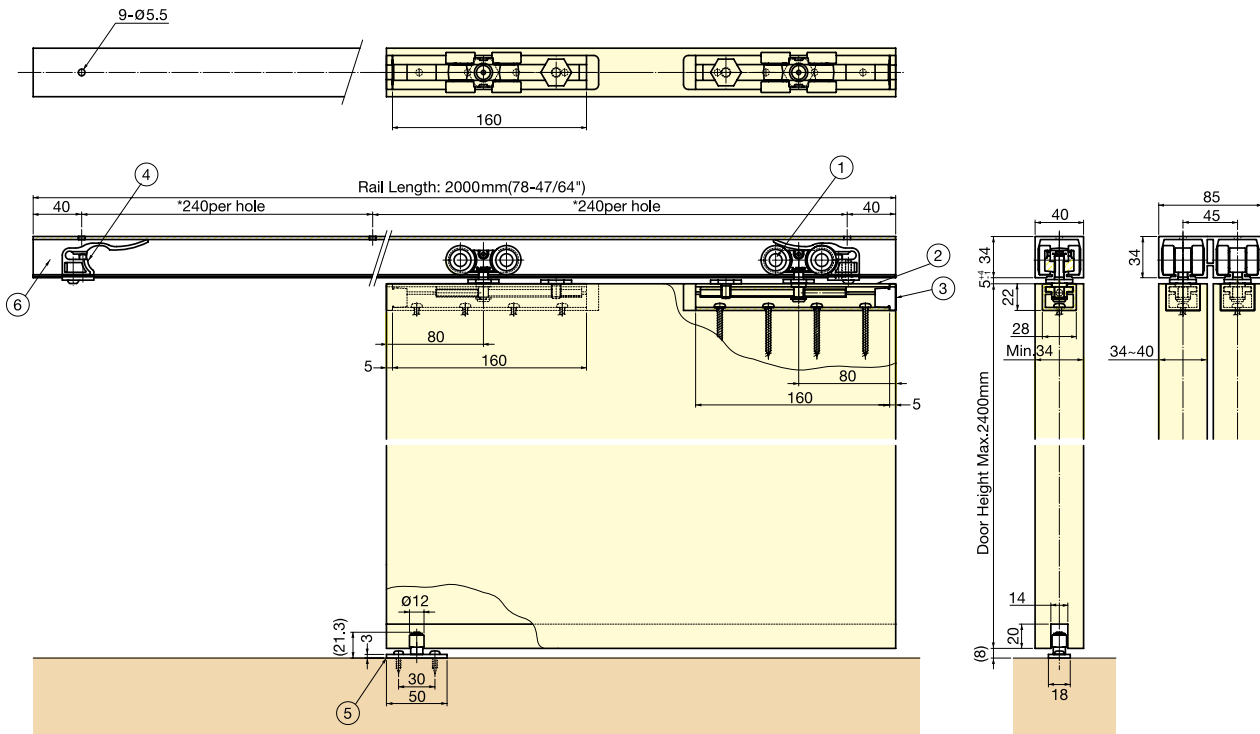


FD-70M Dimensions



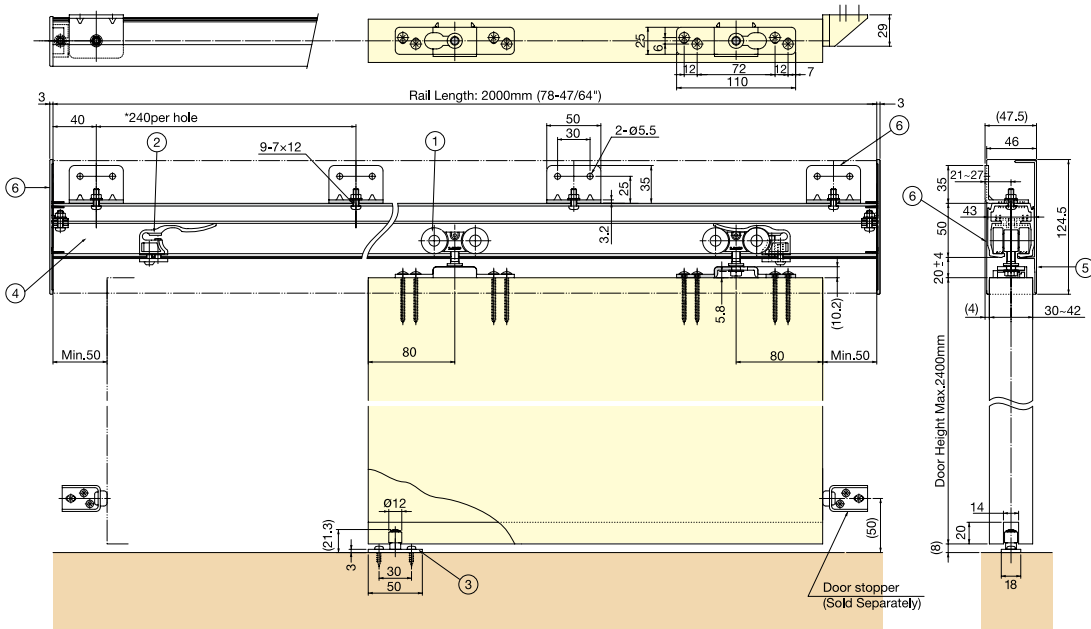
\* Note: Screw pitch should be 240mm (9-29/64") or less when upper rail shortened.

FD-70B Dimensions (Bracket Recessed Type)



\* Note: Screw pitch should be 240mm (9-29/64") or less when upper rail shortened.

FD-70C Dimensions (Fascia Type)



\* Note: Screw pitch should be 240mm (9-29/64") or less when upper rail shortened.

FD-70M Part Details (for one door)

No.	Item No.	Part Name	Dimensions	Quantity	Description
①	FD-70M-WR	Upper Roller		2 pcs	<ul style="list-style-type: none"> <li>● Material: Polyamide (Roller), Steel (Base Plate)</li> <li>● Finish / Color: White (Roller), Yellow Zinc Chromate (Base Plate)</li> </ul>
②	FD-70-ST	Stopper		2 pcs	<ul style="list-style-type: none"> <li>● Material: PBT</li> <li>● Finish / Color: White</li> </ul>
③	RR-12	Bottom Guide		1 pc	<ul style="list-style-type: none"> <li>● Material: 304 Stainless Steel, Polyacetal</li> <li>● Finish / Color: Plain, White</li> </ul> <p>*Supplied with 2 Screws</p>
④	FD-70-2000SIL	Upper Rail (Single)		Necessary quantity	<ul style="list-style-type: none"> <li>● Material: Aluminum</li> <li>● Finish / Color: Anodized</li> <li>● Length: 2000mm (78-47/64")</li> <li>*3600mm (141-3/4") available (Special order)</li> </ul>
	FD-70-W2000SIL	Upper Rail (Double)		Necessary quantity	<ul style="list-style-type: none"> <li>● Material: Aluminum</li> <li>● Finish / Color: Anodized</li> <li>● Length: 2000mm (78-47/64")</li> <li>*3600mm (141-3/4") available (Special order)</li> </ul>

FD-70B Part Details (for one door)

No.	Item No.	Part Name	Dimensions	Quantity	Description
①	FD-70B-WR	Upper Roller		2 pcs	<ul style="list-style-type: none"> <li>● Material Polyamide (Roller) Steel (Bracket)</li> <li>● Finish / Color White (Roller) Yellow Zinc Chromate (Bracket)</li> <li>*Supplied with Screws</li> <li>*Special thin wrench included</li> </ul>
②	FD-70B-HB160	Hanging Bracket		2 pcs	<ul style="list-style-type: none"> <li>● Material Aluminum</li> <li>● Finish / Color Anodized</li> <li>*Supplied with Screws</li> </ul>
③	FD-70B-EC	End Cap (For Hanging Bracket)		2 pcs	<ul style="list-style-type: none"> <li>● Material Elastomer</li> <li>● Finish / Color Black</li> </ul>
④	FD-70-ST	Stopper	Please see P.26 for details.	2 pcs	Please see P.26 for details.
⑤	RR-12	Bottom Guide		1 pc	
⑥	FD-70-2000SIL	Upper Rail (Single)		Necessary quantity	
	FD-70-W2000SIL	Upper Rail (Double)		Necessary quantity	

FD-70C Part Details (for one door)

No.	Item No.	Part Name	Dimensions	Quantity	Description
①	FD-70M-WR	Upper Roller	Please see P.26 for details.	2 pcs	Please see P.26 for details.
②	FD-70C-ST	Stopper (For C type)		2 pcs	
③	RR-12	Bottom Guide	Please see P.26 for details.	1 pc	Please see P.26 for details.
④	FD-70C-2000SIL	Upper Rail (Single)		Necessary quantity	<ul style="list-style-type: none"> <li>● Material Aluminum</li> <li>● Finish / Color Anodized</li> <li>● Length 2000mm (78-47/64")</li> </ul>
⑤	FD-70C-CP 2000SIL	Short Fascia		Necessary quantity	<ul style="list-style-type: none"> <li>● Material Aluminum</li> <li>● Finish / Color Anodized</li> <li>● Length 2000mm (78-47/64")</li> </ul>
⑥	FD-70C-T	Tall Fascia Kit		1 Set	<p><b>1 Tall Fascia</b></p> <ul style="list-style-type: none"> <li>● Material Aluminum</li> <li>● Finish Anodized</li> <li>● Length 2000mm (78-47/64")</li> </ul> <p><b>2 Angle Bracket</b></p> <ul style="list-style-type: none"> <li>● Material Steel</li> <li>● Finish Zinc Chromate</li> </ul> <p><b>3 End Cover</b></p> <ul style="list-style-type: none"> <li>● Material ABS Plastic</li> <li>● Color Grey</li> </ul>

# SLIDING DOOR SYSTEM FD30-H SPECIAL ORDER



Door Width	Max. 1000mm (39-3/8")
Door Height	Max. 2400mm (94-1/2")
Door Thickness	Min. 24mm (61/64"), Side-Mount Type    Min. 28mm (1-7/64")
Door Weight	Max. 30kg (66lbs) / Door

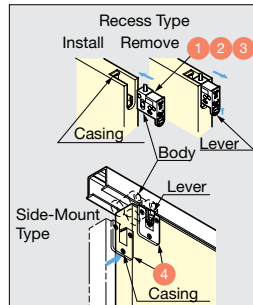
- Thin profile allows flexible design on various application
  - Soft-Close or Brake (Friction) Type available by selecting each roller type
  - Various parts available for many applications
- \*Designed for interior use, not exterior.

\*Available by selecting each roller type. 2 sets of **a** shown on picture.



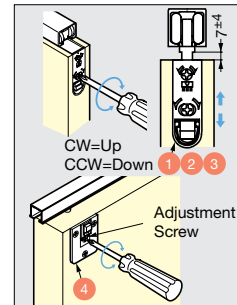
\*Can be used in double door configuration by selecting optional bottom track and guide on page 30.

### ■ Door Installation



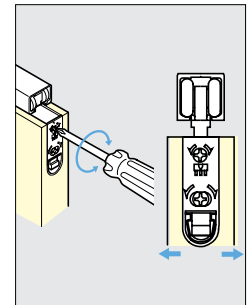
Insert Bracket ( 1 2 3 4 ) to hang door.  
To remove door, click the lever and pull out the Bracket.

### ■ Height Adjustment

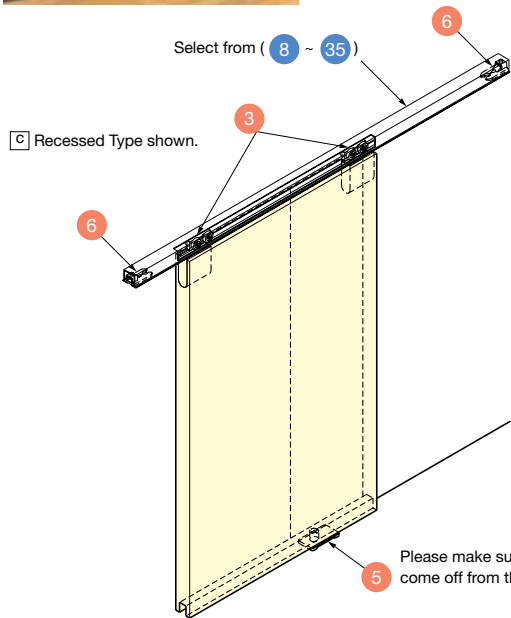


Simply turn the adjustment screw with a screw driver.  
±4mm adjustable.

### ■ Depth Adjustment

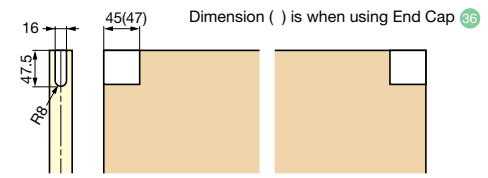


Simply turn the adjustment screw with a screw driver.  
±2mm adjustable.

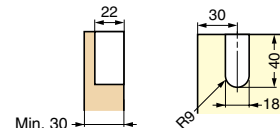


### ■ Door Preparation

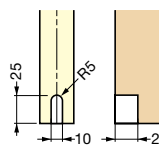
Soft-Closer ( 1 ), Brake ( 2 ) and Recess Type Roller ( 3 )



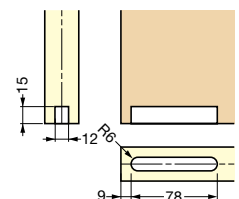
### Side-Mount Type ( 4 )



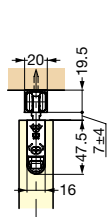
### Bottom Guide ( 48 )



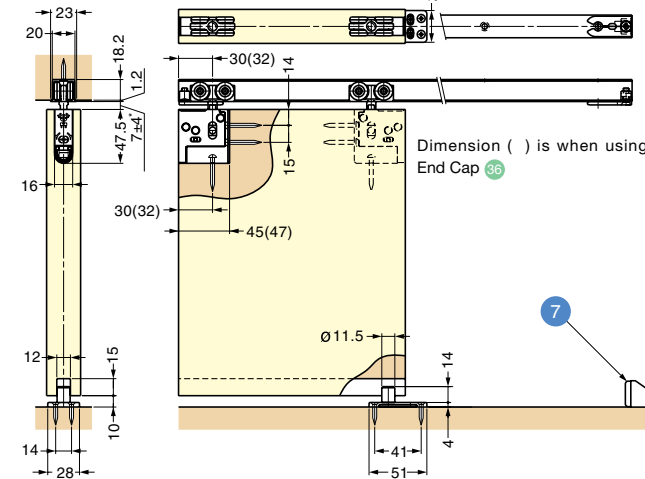
### Bottom Guide ( 49 )



### Ceiling Mount



### Mortise Mount



\*Door height adjustable ±4mm.

# FD30-H ORDERING INFO

Necessary Parts ... Parts Set **a** (per door) ... Upper Track (for Soft-Closing Type) + Door Stopper

Parts Set **b c d** (per door) ... Upper Track (for other Type) + Door Stopper

Parts for various application ... **Optional**

Parts Set (per door)		Necessary Parts	
		Please refer to "Qty <b>a</b> - <b>d</b> " for parts included in each set.	
	Item No.	Description	
<b>a</b>	FD30HCP	Soft-Closing Type	
<b>b</b>	FD30HBP	Brake (Friction) Type	
<b>c</b>	FD30HHP	Recessed Type	
<b>d</b>	FD30HUP	Side-Mount Type	

Parts Included							
No.	Qty				Part Name	Dimensions	Description
	a	b	c	d			
1	1 pc	-	-	-	Soft-Closer	Please see P.31	<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Dark Brown</li> </ul>
2	-	1 pc	-	-	Brake (Friction) Unit	Please see P.31	<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Black</li> </ul>
3	1 pc	1 pc	2 pcs	-	Recess-Roller		<ul style="list-style-type: none"> <li>Material Zinc Alloy / Polyacetal</li> <li>Finish Chromate / Light Brown</li> </ul>
4	-	-	-	2 pcs	Side-Mount Roller		<ul style="list-style-type: none"> <li>Material Zinc Alloy / Polyacetal</li> <li>Finish Chromate / Brown</li> </ul>
5	1 pc	1 pc	1 pc	1 pc	Bottom Guide Pin		<ul style="list-style-type: none"> <li>Material Zinc Alloy / Polyacetal</li> <li>Finish Chromate / Brown</li> </ul>
6	1 pc	1 pc	2 pcs	2 pcs	Upper Stopper		<ul style="list-style-type: none"> <li>Material Zinc Alloy / Polyacetal</li> <li>Finish Chromate / Brown</li> </ul>

Upper Track (Mortise Mount for Soft-Closing <b>a</b> )				Necessary Parts	
No.	Type	Item No.	Part Name	Dimensions	Description
14	Silver 1820 mm	FD30-TRH1820SCSIL			<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Silver</li> </ul>
15	Silver 2730 mm	FD30-TRH2730SCSIL			
16	Silver 3640 mm	FD30-TRH3640SCSIL			
17	Umber 1820 mm	FD30-TRH1820SCU			
18	Umber 2730 mm	FD30-TRH2730SCU			
19	Umber 3640 mm	FD30-TRH3640SCU	Screw Pitch: Approx. 300mm Pitch End: Approx. 30mm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Umber</li> </ul>

Upper Track (Ceiling Mount for <b>b c d</b> )				Necessary Parts	
No.	Type	Item No.	Part Name	Dimensions	Description
20	Silver 910 mm	FD30-TRM910SIL			<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Silver</li> </ul>
21	Silver 1820 mm	FD30-TRM1820SIL			
22	Silver 2730 mm	FD30-TRM2730SIL			
23	Silver 3640 mm	FD30-TRM3640SIL			
24	Umber 910 mm	FD30-TRM910U			
25	Umber 1820 mm	FD30-TRM1820U			
26	Umber 2730 mm	FD30-TRM2730U			
27	Umber 3640 mm	FD30-TRM3640U	Screw Pitch: Approx. 300mm Pitch End: Approx. 30mm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Umber</li> </ul>

Door Stopper		Necessary Parts (For door-rear-end)		
		*Not needed when door slides between door jam / frame.		
No.	Item No.	Part Name	Dimensions	Description
7	20773	Door Stopper (Floor)		<ul style="list-style-type: none"> <li>Material Zinc Alloy / Rubber</li> <li>Finish Matt Chrome / Grey</li> </ul>

Upper Track (Mortise Mount for <b>b c d</b> )				Necessary Parts	
No.	Type	Item No.	Part Name	Dimensions	Description
28	Silver 910 mm	FD30-TRH910SIL			<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Silver</li> </ul>
29	Silver 1820 mm	FD30-TRH1820SIL			
30	Silver 2730 mm	FD30-TRH2730SIL			
31	Silver 3640 mm	FD30-TRH3640SIL			
32	Umber 910 mm	FD30-TRH910U			
33	Umber 1820 mm	FD30-TRH1820U			
34	Umber 2730 mm	FD30-TRH2730U			
35	Umber 3640 mm	FD30-TRH3640U	Screw Pitch: Approx. 300mm Pitch End: Approx. 30mm		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Umber</li> </ul>

Upper Track (Ceiling Mount for Soft-Closing <b>a</b> )				Necessary Parts	
No.	Type	Item No.	Part Name	Dimensions	Description
8	Silver 1820 mm	FD30-TRM1820SCSIL			<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Silver</li> </ul>
9	Silver 2730 mm	FD30-TRM2730SCSIL			
10	Silver 3640 mm	FD30-TRM3640SCSIL			
11	Umber 1820 mm	FD30-TRM1820SCU			
12	Umber 2730 mm	FD30-TRM2730SCU			
13	Umber 3640 mm	FD30-TRM3640SCU			

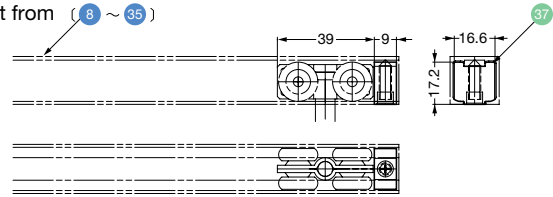
# Optional Parts

Item No.	Part Name	Dimensions	Description	
36 FD30-WRH-CP	End Cap (For Rollers)		<ul style="list-style-type: none"> <li>Material Polypropylene</li> <li>Finish Brown</li> <li>*For rollers 1-3</li> </ul>	
37 FD30-HSB	Stopper Block		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Brown</li> <li>*For Upper Tracks 8-35</li> </ul>	
38 FD30-HTK	Door Stopper		<ul style="list-style-type: none"> <li>Material Polyamide / Rubber</li> <li>Finish Brown</li> <li>*For double sliding application, to be mounted on door.</li> </ul>	
39 FD30-HBR910SIL	Bottom Track (Recess Type)		<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Silver</li> </ul>	
40 FD30-HBR1820SIL			<ul style="list-style-type: none"> <li>*To be recessed into floor, using with 47-49</li> </ul>	
41 FD30-HBR2730SIL				
42 FD30-HBR3640SIL				
43 FD30-HBR910U				
44 FD30-HBR1820U				<ul style="list-style-type: none"> <li>Material Aluminum</li> <li>Finish Anodized / Umber</li> </ul>
45 FD30-HBR2730U				<ul style="list-style-type: none"> <li>*To be recessed into floor, using with 47-49</li> </ul>
46 FD30-HBR3640U				
47 FD30-HGM	Bottom Guide (Surface Mount)		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Brown</li> <li>*Guide block to be used with bottom tracks 39-46</li> </ul>	
48 FD30-HGK	Bottom Guide (Recess Type)		<ul style="list-style-type: none"> <li>Material Polyamide</li> <li>Finish Brown</li> <li>*Guide block to be recessed into door end, using with bottom tracks 39-46</li> </ul>	
49 FD30-HGR	Bottom Roller		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Light Brown</li> <li>*To be used with bottom tracks 39-46</li> </ul>	
50 FD30-HGS	Bottom Guide (Single Door)		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Brown</li> <li>*For single sliding door application.</li> </ul>	

Item No.	Part Name	Dimensions	Description
51 FD30-HGW	Bottom Guide (Double Sliding Door)		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Brown</li> <li>*For double sliding door application.</li> </ul>
52 FD30-HTF	Door End Holder (Double Sliding Door)		<ul style="list-style-type: none"> <li>Material Polyacetal</li> <li>Finish Brown</li> <li>*Prevents door racking when door is closed, especially in double door application.</li> </ul>

### ■ Stopper Block 37 Installation

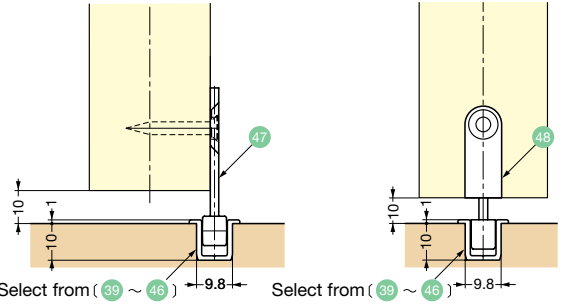
Select from ( 8 ~ 35 )



### ■ Bottom Guide / Roller 47~51 Installation

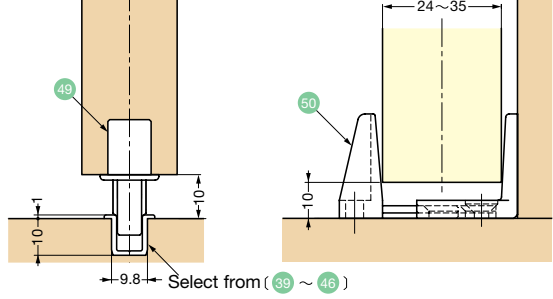
Bottom Guide (Surface Mount) 47

Bottom Guide (Recess Type) 48

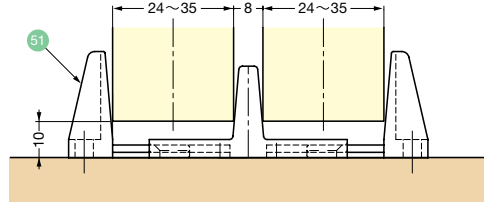


Bottom Roller 49

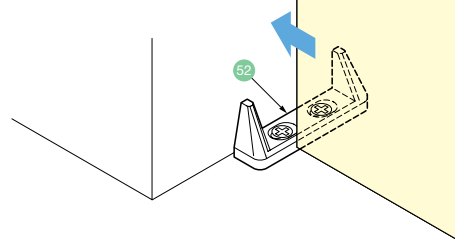
Bottom Guide (Single Door) 50



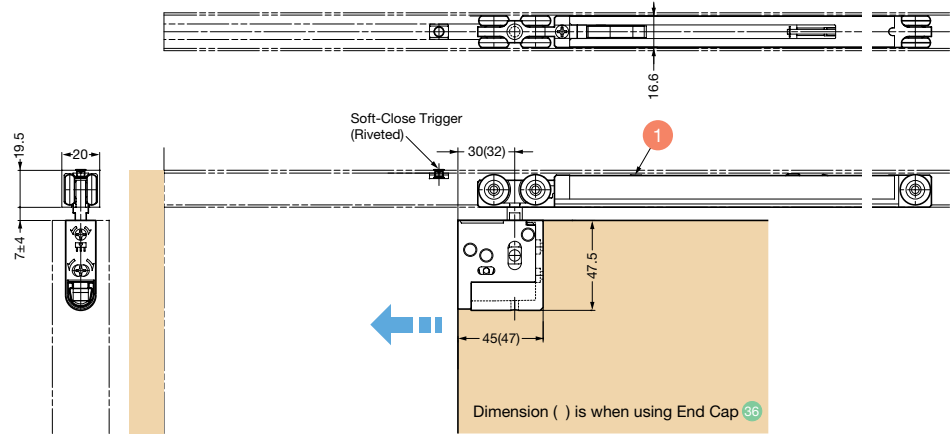
Bottom Guide (Double Door) 51



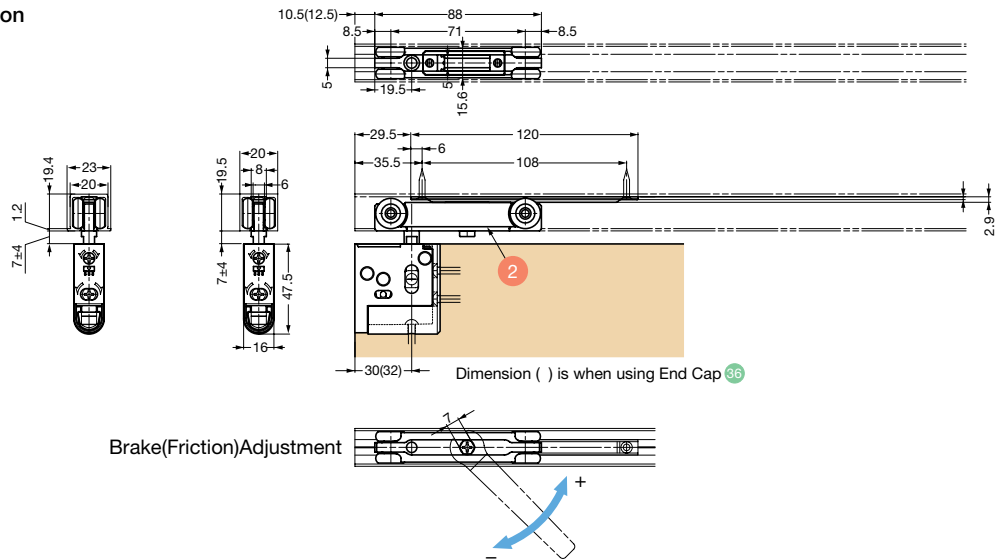
### ■ Door End Holder 52 Installation



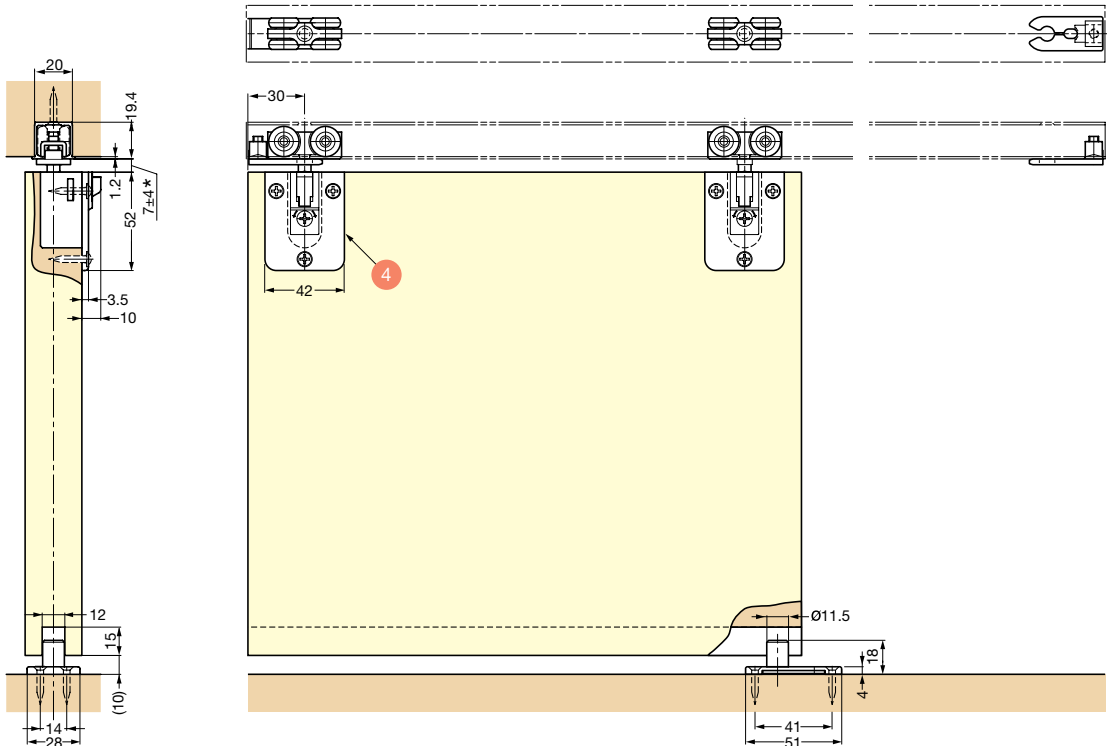
■ Soft-Closer 1 Installation



■ Brake (Friction) Unit 2 Installation



■ Side-Mount Roller 4 Installation



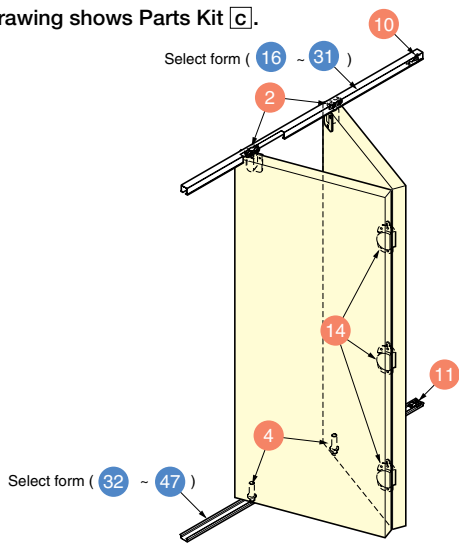
\*Door height adjustable ±4mm



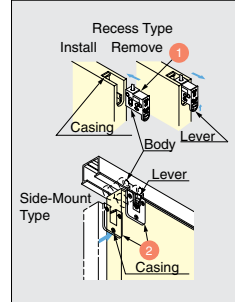
Door Thickness	Min. 30mm (1-3/16")
Door Weight	Max.15kg (33lbs) per door

- Thin profile allows flexible design on various application
- Folding door hardware series with various optional parts
- Height adjustable
- Closed position adjustable on center hinge
- Can be used on closet doors, partitions etc.
- \*Designed for interior use, not exterior.

■ Drawing shows Parts Kit .

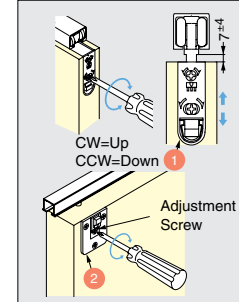


■ Door Installation



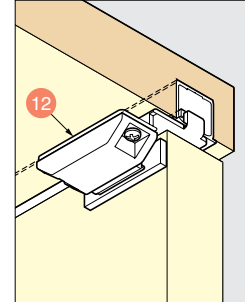
Insert Bracket 1 or 2 to hang door. To remove door, click the lever and pull out the Bracket.

■ Height Adjustment



Simply turn the adjustment screw with a screw driver. ±4mm adjustable.

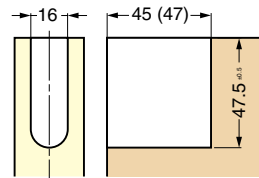
■ Magnetic Catch 12



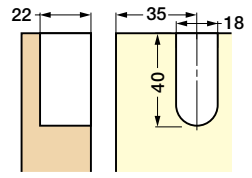
Slide in the strike bracket to track. Adjust strike position and fasten tightly. Screw on magnetic catch to top board.

■ Door Preparation

Roller (Recess Type) 1

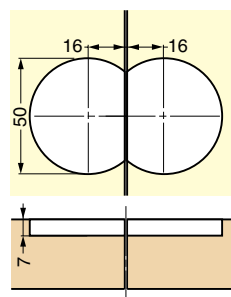


Roller (Side-Mount) 2

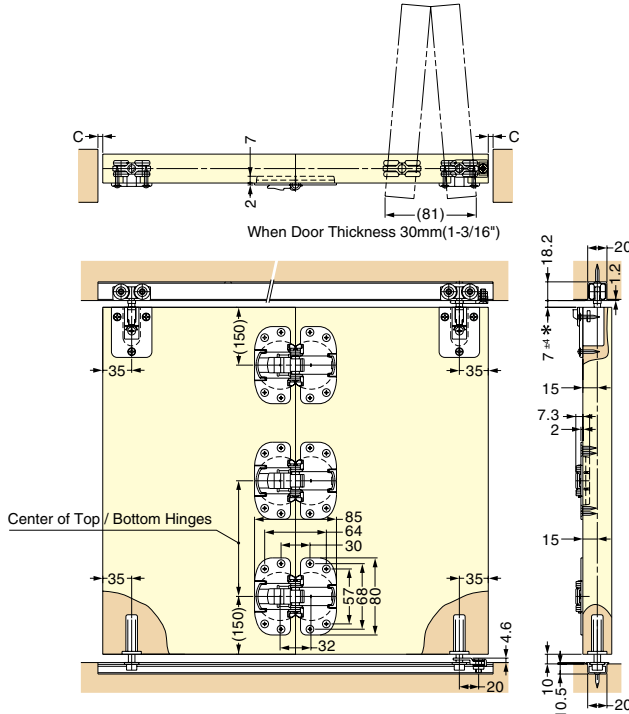
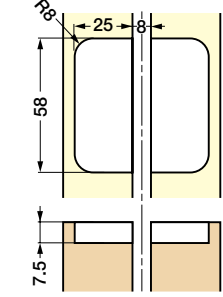


Dimension ( ) is when using End Cap 48.

Center Hinge 14



Center Hinge 15

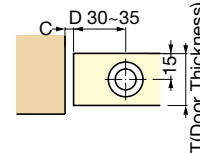


\*Door height adjustable ±4mm.

Bottom Pin 3  
Guide Pin 4

Item No.	A
FD30-FBP 3	5
FD30-FGR 4	3

Door / Wall Gap  
(When using Roller 2, Stopper 10, and 11)



T	Gap C	
	D 30	35
30	5.0	3.6
35	6.6	5.8
40	9.6	8.5



# FD30-F ORDERING INFO

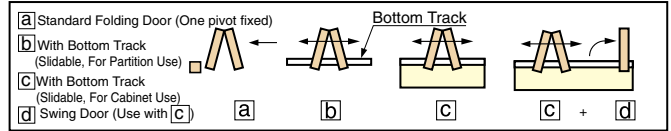
Necessary Parts ... **Parts Set** **a** - **c** or **c** + **d** ... **Upper Track** + **Bottom Track**  
 Parts for various application ... **Optional**

Parts Set (Per 2 doors)		Necessary Parts	
		Please refer to "Qty [a] - [d]" for parts included in each set.	
	Item No.	Description	
[a]	FD30UKP	Standard Folding Door (One pivot fixed)	
[b]	FD30URP	With Bottom Track (Slidable, For Partition Use)	
[c]	FD30UMP	With Bottom Track (Slidable, For Cabinet Use)	
[d]	FD30UP	Swing Door (Use with [c])	

### Parts Included

No.	Qty				Part Name	Dimensions	Description
	a	b	c	d			
1	2	2	-	1	Upper Roller (Recess Type)		<ul style="list-style-type: none"> <li>Material: Zinc Alloy / Polyacetal</li> <li>Finish: Chromate / Light Brown</li> </ul>
2	-	-	2	-	Upper Roller (Side-Mount)		<ul style="list-style-type: none"> <li>Material: Steel / Polyacetal</li> <li>Finish: Chromate / Brown</li> </ul>
3	1	-	-	1	BottomPin		<ul style="list-style-type: none"> <li>Material: Steel / Polyacetal</li> <li>Finish: Chromate / White</li> </ul>
4	2	2	-	-	Guide Pin		<ul style="list-style-type: none"> <li>Material: Steel / Polyacetal</li> <li>Finish: Chromate / White</li> </ul>
5	1	PC	1	1	Pin Insert Jig	-	-
6	1	PC	-	1	Spanner Wrench	-	-
7	-	-	-	1	Top Bracket		<ul style="list-style-type: none"> <li>Material: Steel</li> <li>Finish: Chromate</li> </ul>
8	1	PC	-	-	Pivot Bracket (Bottom)		<ul style="list-style-type: none"> <li>Material: Steel</li> <li>Finish: Chromate</li> </ul>
9	1	PC	-	1	Fixing Plate		<ul style="list-style-type: none"> <li>Material: Steel</li> <li>Finish: Chromate</li> </ul>
10	-	1	1	-	Upper Stopper		<ul style="list-style-type: none"> <li>Material: Steel / Polyacetal</li> <li>Finish: Chromate / Brown</li> </ul>
11	-	1	1	-	Bottom Stopper		<ul style="list-style-type: none"> <li>Material: Steel / Polyacetal</li> <li>Finish: Chromate / Brown</li> </ul>
12	-	-	-	1	Magnetic Catch		<ul style="list-style-type: none"> <li>Material: Steel / ABS Plastic</li> <li>Finish: Chromate / Brown</li> </ul>
13	3	PCS	-	-	Center Hinge (Surface Mount, Angle adjustable)		<ul style="list-style-type: none"> <li>Material: Steel</li> <li>Finish: Black</li> </ul>
14	-	-	3	-	Center Hinge (Recess Mount, Angle adjustable, W/Detent Stop)		<ul style="list-style-type: none"> <li>Material: Steel</li> <li>Finish: Black</li> </ul>

### Configuration



No.	Qty				Part Name	Dimensions	Description
	a	b	c	d			
15	-	3	PCS	-	Center Hinge (Door Edge Mount, Angle adjustable, W/Detent Stop)		<ul style="list-style-type: none"> <li>Material: Zinc Alloy</li> <li>Finish: Dark Brown</li> </ul>

### Upper Track Necessary Parts

No.	Mounting	Length	Item No.	Dimensions	Description
16	Ceiling Surface Mount	910mm	FD30-TRM910SIL		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Silver</li> </ul>
17		1820mm	FD30-TRM1820SIL		
18		2730mm	FD30-TRM2730SIL		
19		3640mm	FD30-TRM3640SIL		
20		910mm	FD30-TRM910U		
21	Ceiling Recess Mount	1820mm	FD30-TRM1820U		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Silver</li> </ul>
22		2730mm	FD30-TRM2730U		
23		3640mm	FD30-TRM3640U		
24		910mm	FD30-TRH910SIL		
25	Ceiling Recess Mount	1820mm	FD30-TRH1820SIL		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Silver</li> </ul>
26		2730mm	FD30-TRH2730SIL		
27		3640mm	FD30-TRH3640SIL		
28		910mm	FD30-TRH910U		
29		1820mm	FD30-TRH1820U		
30		2730mm	FD30-TRH2730U		
31	3640mm	FD30-TRH3640U	<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Umber</li> </ul>		

### Bottom Guide Track Necessary Parts

No.	Mounting	Length	Item No.	Dimensions	Description
32	Floor Surface Mount	910mm	FD30-FBRM910SIL		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Silver</li> </ul>
33		1820mm	FD30-FBRM1820SIL		
34		2730mm	FD30-FBRM2730SIL		
35		3640mm	FD30-FBRM3640SIL		
36		910mm	FD30-FBRM910U		
37	Floor Recess Mount	1820mm	FD30-FBRM1820U		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Umber</li> </ul>
38		2730mm	FD30-FBRM2730U		
39		3640mm	FD30-FBRM3640U		
40		910mm	FD30-FBRH910SIL		
41		1820mm	FD30-FBRH1820SIL		
42		2730mm	FD30-FBRH2730SIL		
43	Floor Recess Mount	3640mm	FD30-FBRH3640SIL		<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Silver</li> </ul>
44		910mm	FD30-FBRH910U		
45		1820mm	FD30-FBRH1820U		
46		2730mm	FD30-FBRH2730U		
47	3640mm	FD30-FBRH3640U	<ul style="list-style-type: none"> <li>Material: Aluminum</li> <li>Finish: Anodized / Umber</li> </ul>		

### Optional Parts

No.	Item No.	Part Name	Dimensions	Description
48	FD30-WRH-CP	End Cap (For Rollers)		<ul style="list-style-type: none"> <li>Material: Polypropylene</li> <li>Finish: Brown</li> <li>*For roller 1</li> </ul>
49	FD30-FMF	Door End Holder (Magnetic)		<ul style="list-style-type: none"> <li>Material: Polycarbonate / Neodymium</li> <li>Finish: Dark Brown</li> <li>*Prevents door racking when door is closed, especially in double door application.</li> </ul>
50	FD30-FTF	Door End Holder (Pin)		<ul style="list-style-type: none"> <li>Material: Polyamide / Steel</li> <li>Finish: White / Chromate</li> <li>*Prevents door racking when door is closed, especially in double door application.</li> </ul>
51	FD30-FHL	Latch Unit		<ul style="list-style-type: none"> <li>Material: Polyacetal</li> <li>Finish: Dark Brown</li> <li>*To be used when ordering [c] [d]</li> </ul>

Please contact customer service for details



### Application Example 1

Double sliding doors with  
2 Intermediate Supports



### Application Example 3

Triple sliding doors with  
2 Intermediate Supports



### Application Example 2

Triple sliding doors without  
Intermediate Support



### Application Example 4

Double-double sliding doors  
with 3 Intermediate Supports

# ALUMINUM FRAME SWING DOOR

AF-25D

Please contact customer service for details

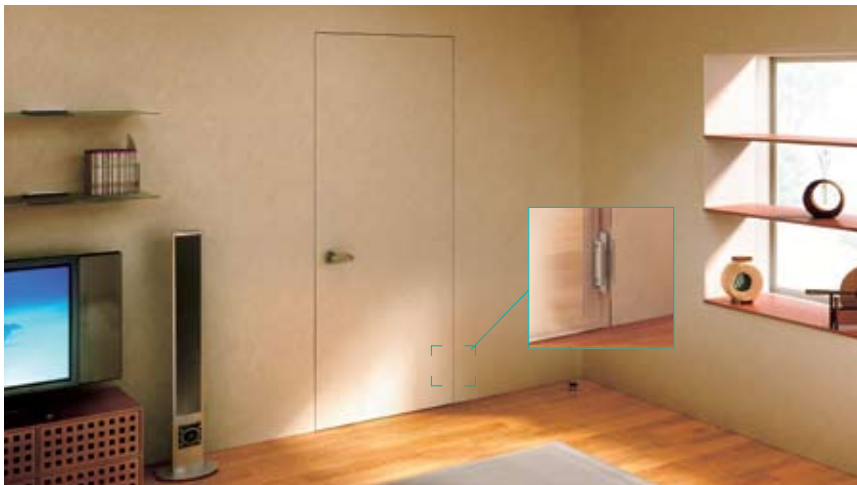
SLIDING DOORS



# 3WAY ADJUSTABLE CONCEALED HINGE



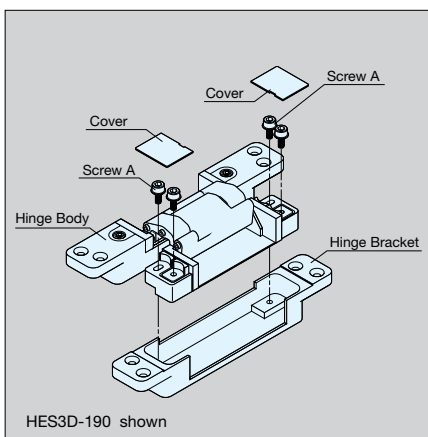
HES3D-190SL



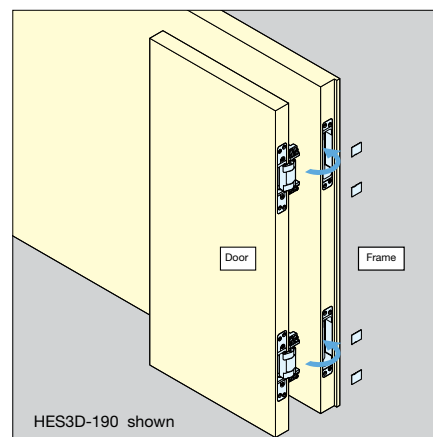
## For Easy Installation

1. Separate parts as shown in picture "a".
2. Screw on the Hinge Body to door, and Hinge Bracket to door frame.
3. As shown in picture "b", insert Hinge Body straight into Hinge Bracket. Bracket will temporarily hold the Body for easy installation.
4. Use "screw A" to fix Body on Bracket.
5. Adjust horizontally by turning "screw B".
6. Loosen "screw A" for vertical adjustment. Tighten "screw A" after vertical adjustment completed.
7. For depth adjustment, loosen "screw C" (one turn). Tighten "screw C" after completed.
8. Snap on plastic covers after all above completed.

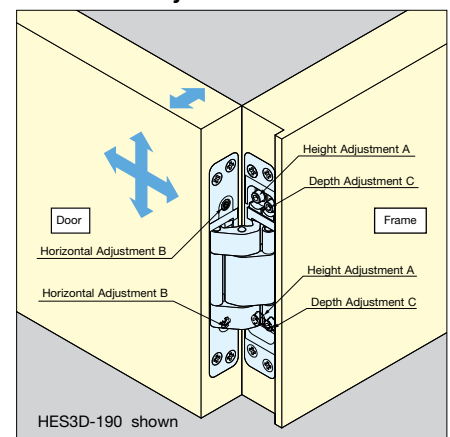
### a. Detailed View

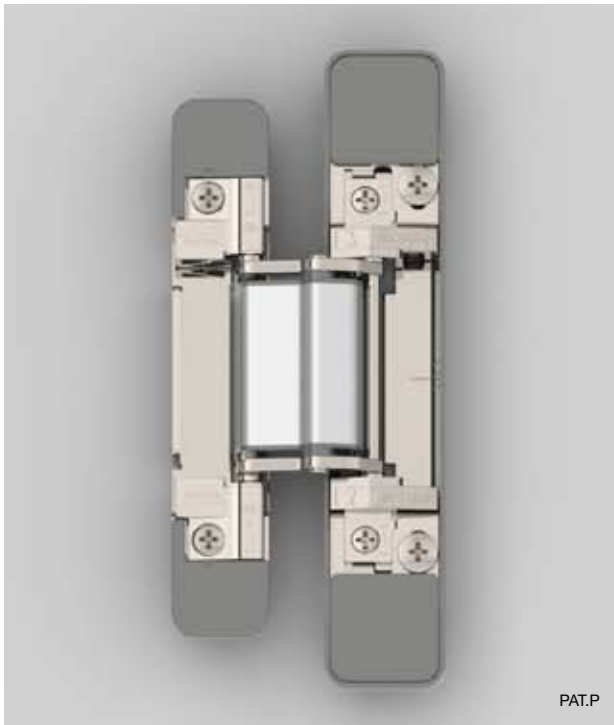


### b. Installation

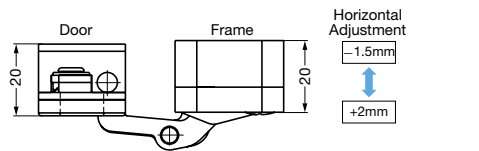
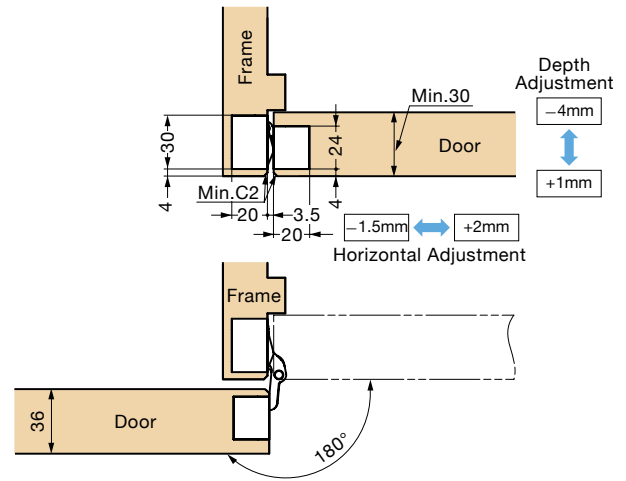


### c. 3WAY Adjustment

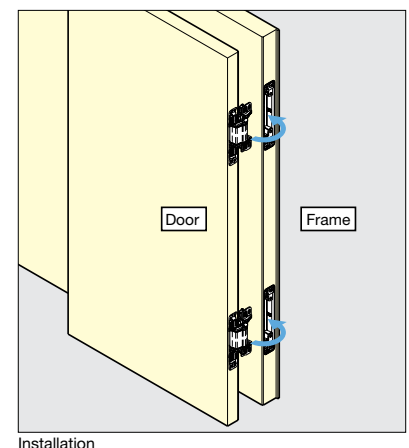
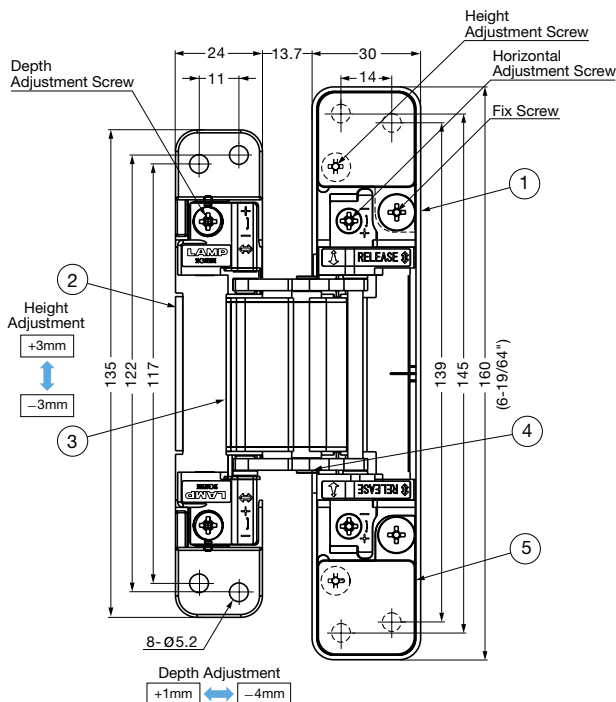
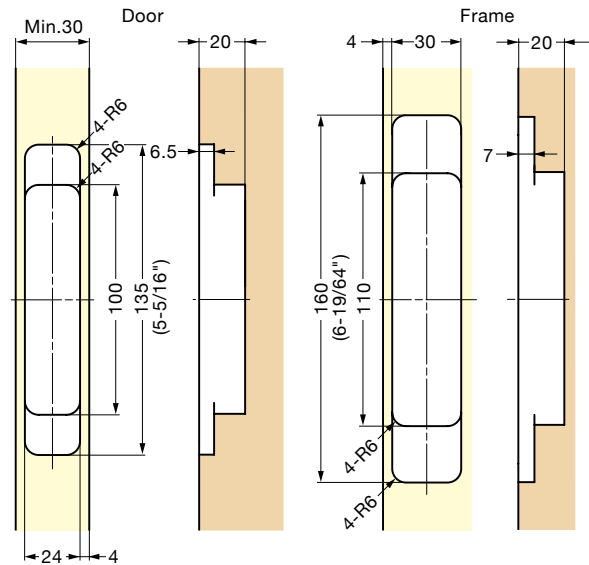




- 3 Way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed
- Easy installation / removal
- Door Weight: Max.40kg (88lbs)/2pcs
- Door Thickness: Min.30mm (1-3/16")
- Max.Door Size: H2000mm x W 900mm (H 78-47/64" x W 35-7/16")



Bore Dimensions



No.	Part Name	Material	Finish / Color
①	Base Frame	Polycetal	Grey
②	Body	Steel	Nickel
③	Arm	Aluminum	Anodized
④	Shaft	Steel	Nickel
⑤	Cover	Polycetal	Grey

Item No.	Door Width (mm)	Door Thickness (mm)	Door Weight (kg)	Door Weight (lbs)	Opening Angle	Box (pcs)	Carton (pcs)
HES3D-V135/GR	Max.900	Min.30	Max.40kg/pair	Max.88lbs/pair	180°	2	24

# LAPCON DOOR DAMPER



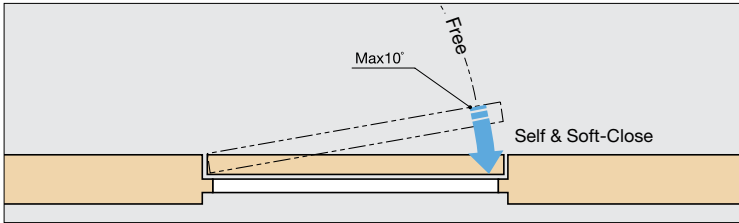
**LDD-V**

DOOR DAMPER

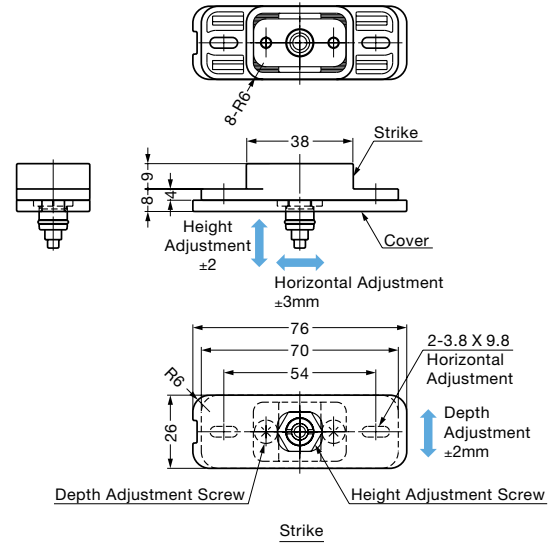
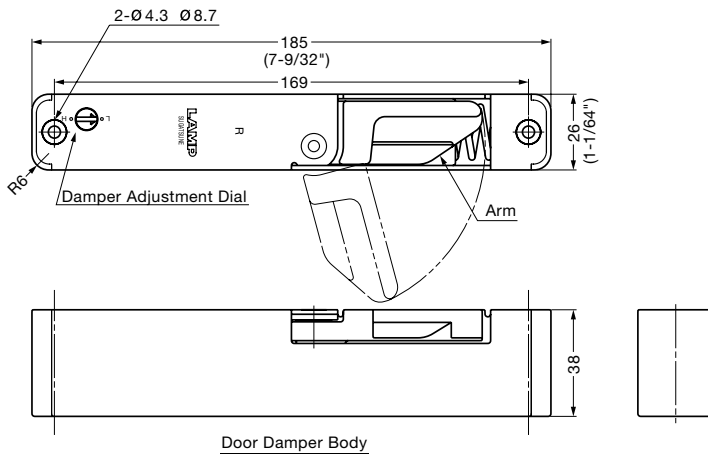


- Damper unit will pull and close the door when engaged.
- Equipped with durable damper for soft-closing.
- Unit will be recessed into door for clean appearance.
- Less holding tension when opening compared to ordinary door closers.
- 3-way adjustable mounting plate included.
- Designed for interior doors.

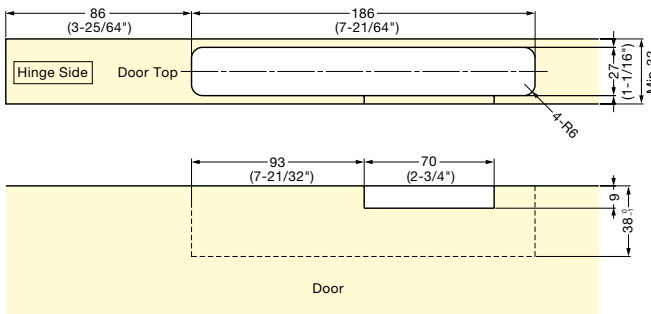
LDD-V-R is shown



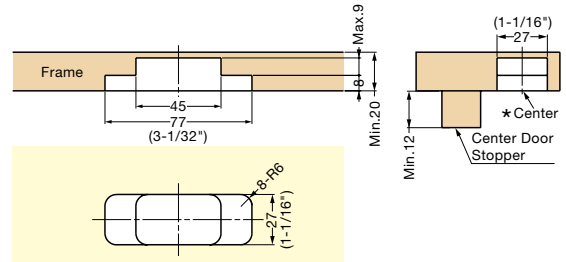
LDD-V-R is shown



**Bore Dimensions (Door) LDD-V-R**



**Bore Dimensions (Frame)**



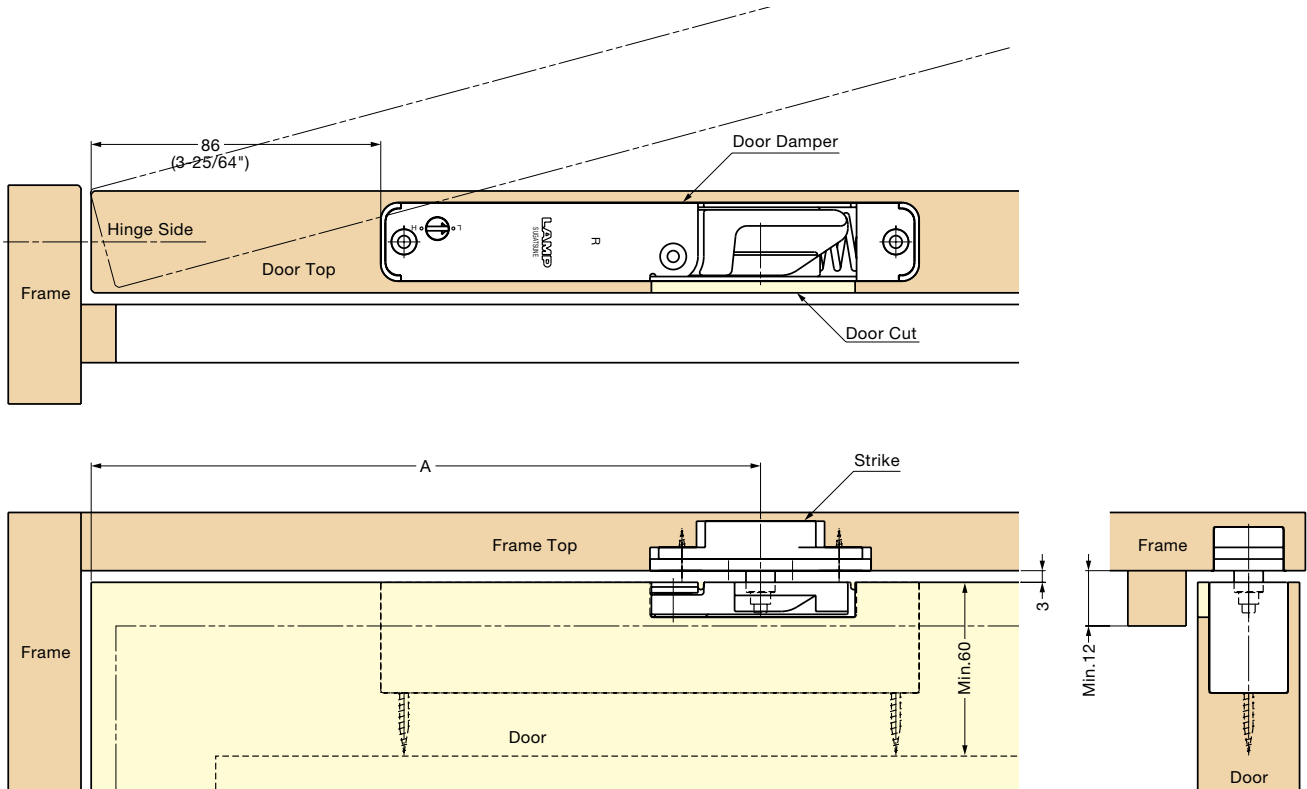
Part Name	Material	Finish / Color
Body	Steel / Polyacetal	Yellow Zinc Chromate / Grey
Strike	Steel / Polyacetal / ABS	Nickel / Grey

Item No.	Type	Door Weight	Door Width (mm)	Door Thickness (mm)	Box (pcs)	Carton (pcs)
LDD-V-R	Right	15-40kg (33 ~ 88lbs)	Max.900 (35-7/16")	Min.33 (1-19/64")	1	24
LDD-V-L	Left	15-40kg (33 ~ 88lbs)	Max.900 (35-7/16")	Min.33 (1-19/64")	1	24

Installation(LDD-V-R)

Hinge	A
HES3D-V135	217
HES3D-160	220
HES3D-190	
3535 / SS	223

\*Dimension A depends on type of hinge used



3-WAY ADJUSTABLE CONCEALED HINGE LINE-UP



HES3D-190/SL



HES3D-190/GL

HES3D-190/BL  
New color: Black



HES3D-160/SL



HES3D-160/GL



HES-3030BR/SC



HES-3030BR/PB



HES-3038BK/SC



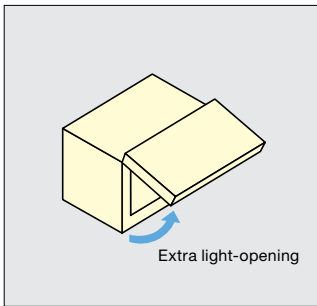
HES-3038BK/PB

# EASY LIFT-UP STAY



SLS-ELAN

LID SUPPORTS



- Lapcon stay for upward-opening flap doors
- Lift-assist mechanism for extra light-opening
- Door stays in any desired position
- Damper equipped for soft & silent closing at the end
- Slim design and installed location maximizes space inside of cabinet
- Simple installation by aligning body to edge of cabinet
- Single or pair use allows wide range of door size / weight
- Recognized by LGA for 40,000 cycles
- Optional bracket for aluminum frame door available



## 3 functions on 1 stay

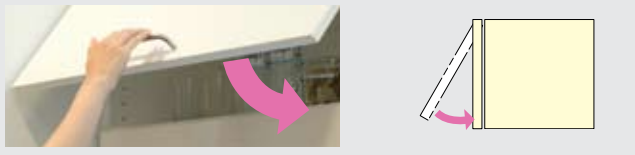
### 1. Lift-assist



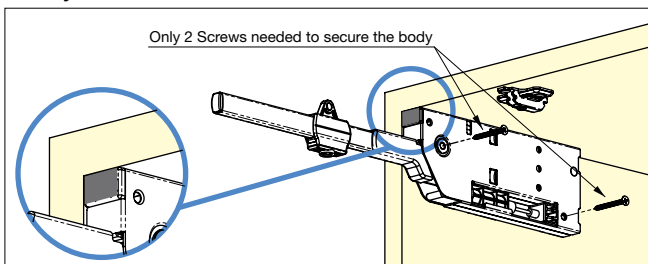
### 2. Free stop



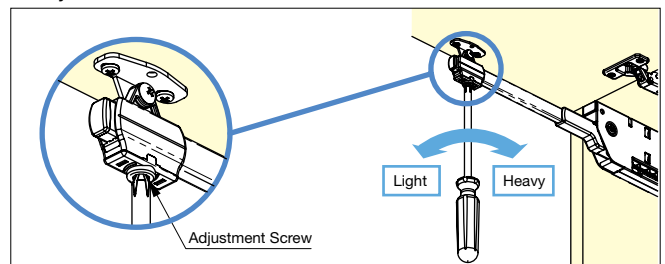
### 3. Soft-close



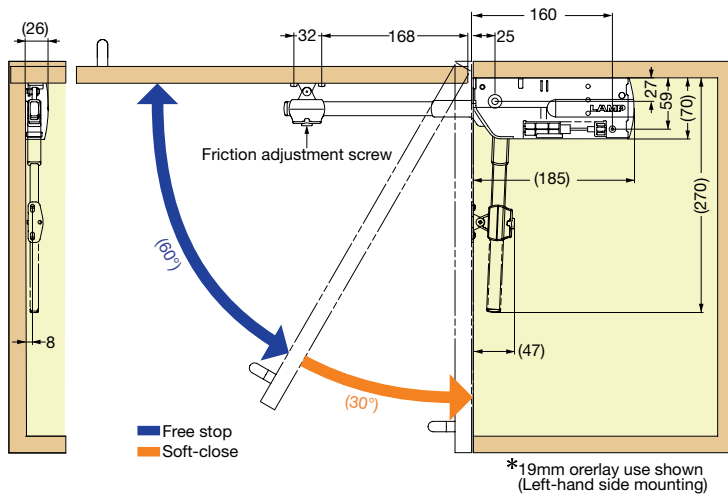
## Easy Installation



## Adjustment



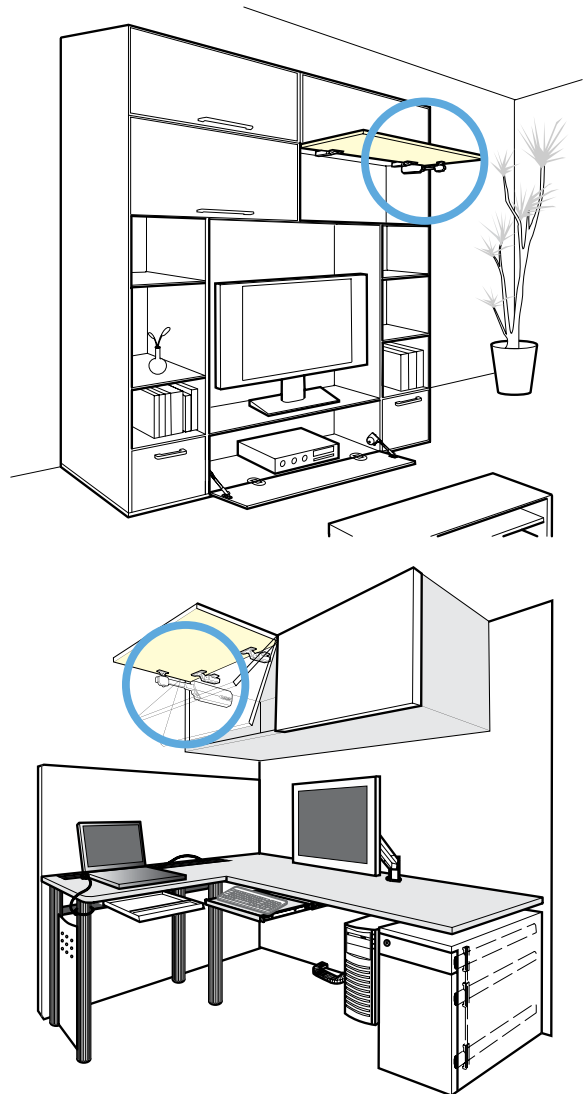




Door Weight Range Table (lbs.)

Door Height (inch)	Single use				Pair use			
	M-type		H-type		M-type		H-type	
	Min	Max	Min	Max	Min	Max	Min	Max
12"	8.0	10.8	10.8	14.5	16.0	21.7	21.7	29.0
13"	7.4	10.0	10.0	13.4	14.8	20.0	20.0	26.8
14"	6.9	9.3	9.3	12.4	13.7	18.6	18.6	24.9
15"	6.4	8.7	8.7	11.6	12.8	17.3	17.3	23.2
16"	6.0	8.1	8.1	10.9	12.0	16.3	16.3	21.8
17"	5.6	7.6	7.6	10.2	11.3	15.3	15.3	20.5
18"	5.3	7.2	7.2	9.7	10.7	14.4	14.4	19.3
19"	5.1	6.8	6.8	9.2	10.1	13.7	13.7	18.3
20"	4.8	6.5	6.5	8.7	9.6	13.0	13.0	17.4
21"	4.6	6.2	6.2	8.3	9.1	12.4	12.4	16.6
22"	4.4	5.9	5.9	7.9	8.7	11.8	11.8	15.8
23"	4.2	5.7	5.7	7.6	8.3	11.3	11.3	15.1
24"	4.0	5.4	5.4	7.3	8.0	10.8	10.8	14.5
25"	3.8	5.2	5.2	7.0	7.7	10.4	10.4	13.9
26"	3.7	5.0	5.0	6.7	7.4	10.0	10.0	13.4
27"	3.6	4.8	4.8	6.4	7.1	9.6	9.6	12.9
28"	3.4	4.6	4.6	6.2	6.9	9.3	9.3	12.4

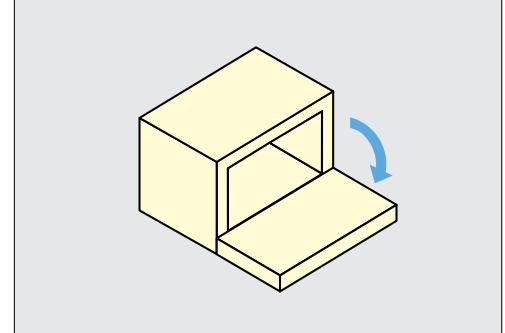
\*Single or pair use depending on door size and weight.



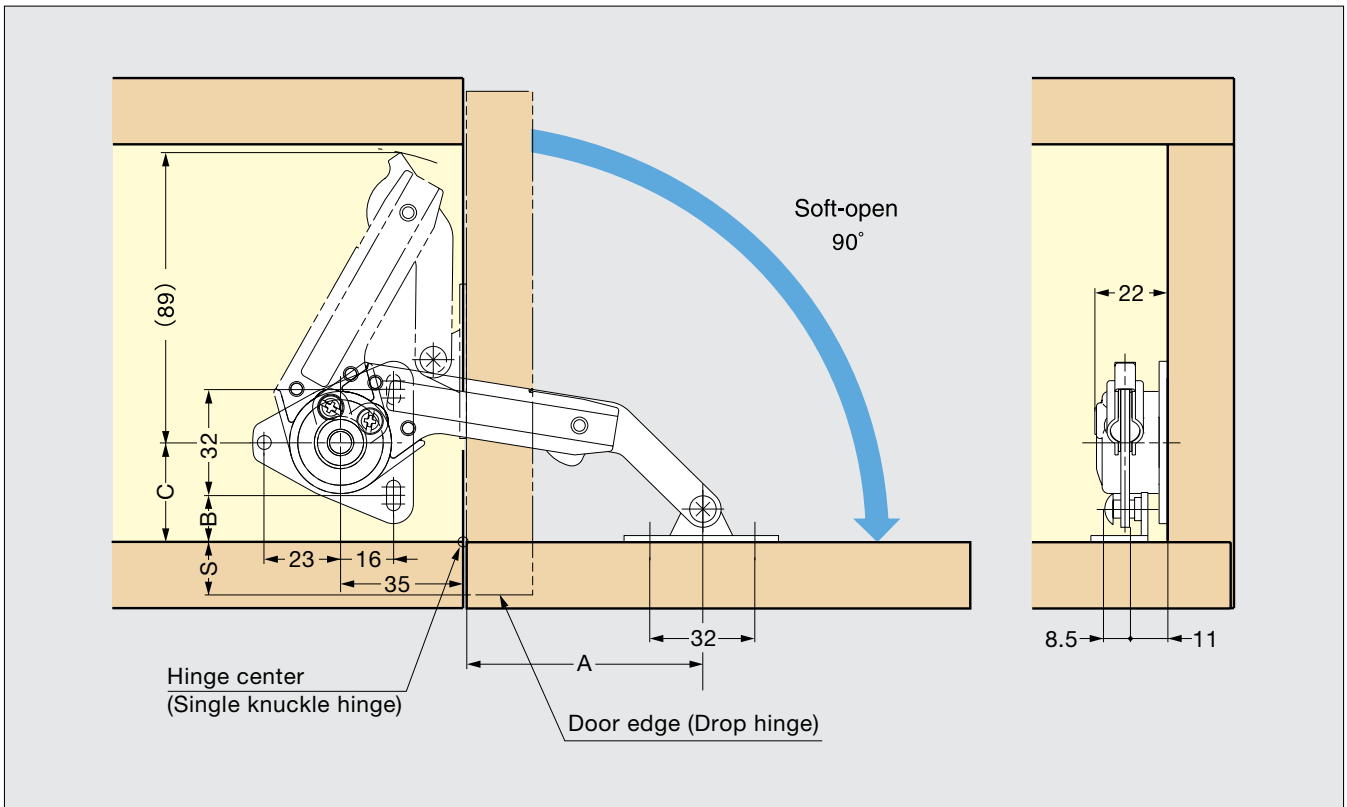
Item No.		Type	Torque per piece	Material	Finish / Color	Weight (g)	Box (pcs)	Carton (pcs)
SLS-ELAN-MR	Right	M-type (Medium Duty)	55 ~ 75kg-cm (48 ~ 65lbs-in)	<ul style="list-style-type: none"> <li>Aluminum</li> <li>Steel</li> <li>ABS</li> </ul>	<ul style="list-style-type: none"> <li>Anodized</li> <li>Galvanized</li> <li>Light Grey</li> </ul>	600	20	100
SLS-ELAN-ML	Left							
SLS-ELAN-HR	Right	H-type (Heavy Duty)	75 ~ 100kg-cm (65~87lbs-in)					
SLS-ELAN-HL	Left							



- For DOWNWARD-OPENING FLAP DOOR with piano,butt or drop hinges
- Short arm type designed for small door application
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight  
Per Piece: 10 ~ 20kgf·cm (8.7 ~ 17.4lbs-in)  
Per Pair: 20 ~ 40kgf·cm (17.4 ~ 34.7lbs-in)



Application

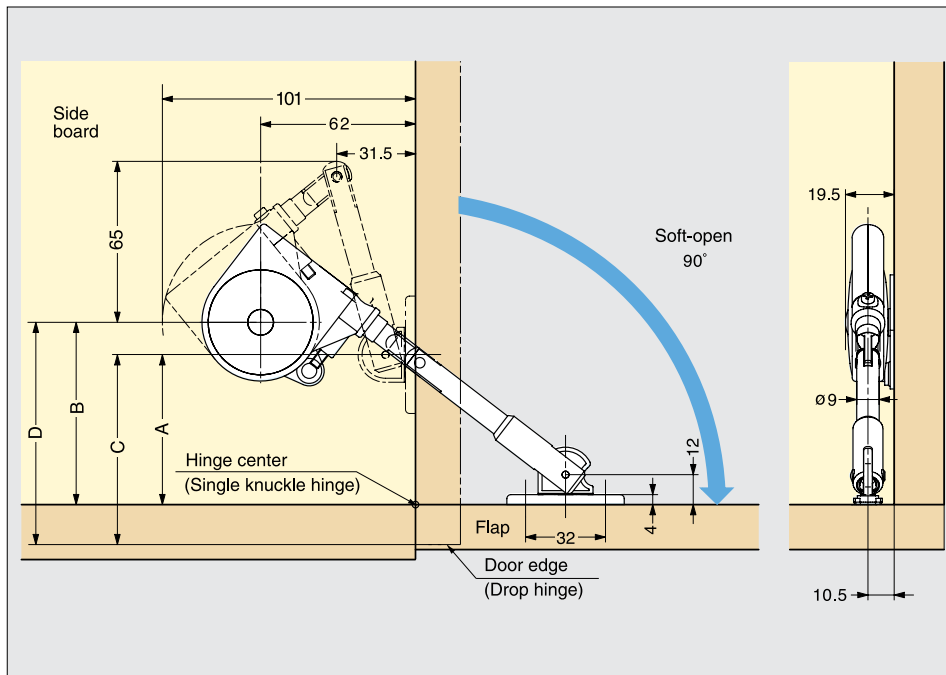


Hinge Type	A	B	C
Single Knuckle Hinge	58+S	14	30
Drop Hinge	71	27	43

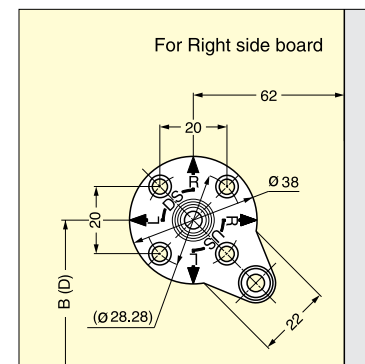
Item No.	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
NSDX-10RK / TV	Zinc Alloy/Steel	Nickel	143	20	80
NSDX-10LK / TV	Zinc Alloy/Steel	Nickel	143	20	80



- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop hinges.
- Short arm type designed for small height door application.
- SDS-C100TV has a catch to hold the lid in closed position.
- SDS-100TV does not have catch feature. Designed to be used with magnetic catch or touch latch.
- Non-handed
- Torque Calculation:  
Torque = Door Height x 1/2 x Door Weight



Mounting Plate SDS-A



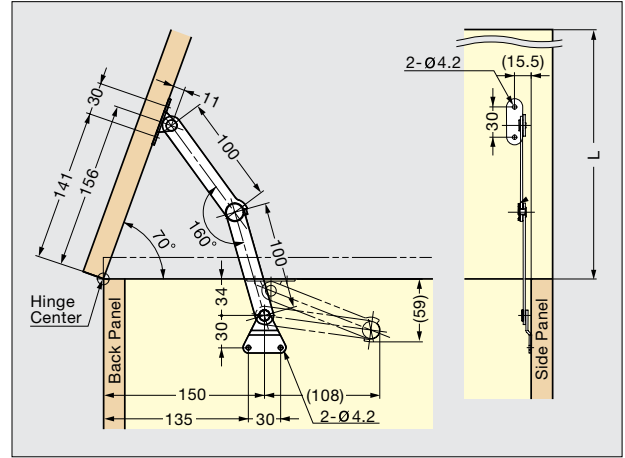
S=Overlay Coverage in case of drop hinge

Hinge Type	A	B	C	D	Material	Finish/Color
Single Knuckle Hinge	60	73	-	-	Steel, Zinc Alloy	Nickel
Drop Hinge	-	-	49+S	62+S	Plastic	Black, White

Item No.	Type	Color	Torque per piece	Torque per pair	Box (pcs)	Carton (pcs)
SDS-100W-TV	W/O Catch	White	5~12kgf-cm (4.3 ~ 10.4lbs-in)	10~24kgf-cm (8.6 ~ 20.8lbs-in)	20	100
SDS-100B-TV	W/O Catch	Black	5~12kgf-cm (4.3 ~ 10.4lbs-in)	10~24kgf-cm (8.6 ~ 20.8lbs-in)	20	100
SDS-C100W-TV	With Catch	White	5~12kgf-cm (4.3 ~ 10.4lbs-in)	10~24kgf-cm (8.6 ~ 20.8lbs-in)	20	100
SDS-C100B-TV	With Catch	Black	5~12kgf-cm (4.3 ~ 10.4lbs-in)	10~24kgf-cm (8.6 ~ 20.8lbs-in)	20	100
SDS-100W-TVZ	W/O Catch	White	16.5~37.6kgf-cm (14.3 ~ 32.6lbs-in)	33~75.2kgf-cm (28.6 ~ 65.2lbs-in)	20	100
SDS-100B-TVZ	W/O Catch	Black	16.5~37.6kgf-cm (14.3 ~ 32.6lbs-in)	33~75.2kgf-cm (28.6 ~ 65.2lbs-in)	20	100
SDS-C100W-TVZ	With Catch	White	16.5~37.6kgf-cm (14.3 ~ 32.6lbs-in)	33~75.2kgf-cm (28.6 ~ 65.2lbs-in)	20	100
SDS-C100B-TVZ	With Catch	Black	16.5~37.6kgf-cm (14.3 ~ 32.6lbs-in)	33~75.2kgf-cm (28.6 ~ 65.2lbs-in)	20	100



- Friction torque lid stay to hold lid in its position
- Torque Calculation:  
Torque = Door Height x 1/2 x Door Weight



Item No.	Material	Finish	Torque per piece	Torque per pair	Weight (g)	Box (pcs)	Carton (pcs)
S-100T30R	430 Stainless Steel	Plain	30.6kgf·cm±20% (26.5lbs·in±20%)	61.2kgf·cm±20% (53.1lbs·in±20%)	100	30	120
S-100T30L	430 Stainless Steel	Plain	30.6kgf·cm±20% (26.5lbs·in±20%)	61.2kgf·cm±20% (53.1lbs·in±20%)	100	30	120

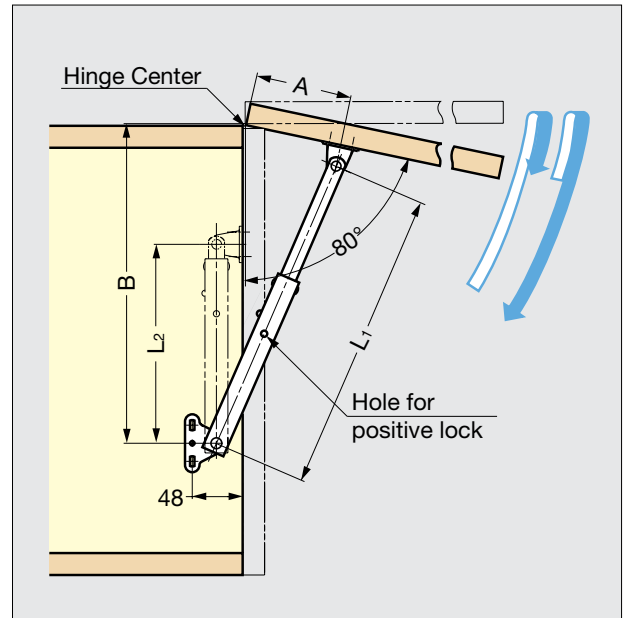
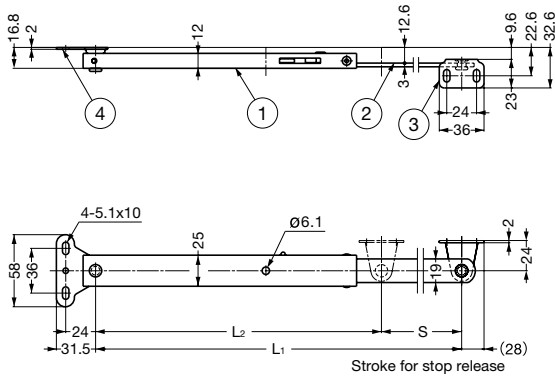
LID STAY



LB-200, LB-350, LB-500



- Holds lid or panel in fully opened position
- Lift up lid to release
- Non-handed
- Can be used singly or in pairs



No	Part Name	Material	Finish
①	Housing	304 Stainless Steel	Plain
②	Arm	304 Stainless Steel	Plain
③	Housing Bracket	304 Stainless Steel	Plain
④	Arm Bracket	304 Stainless Steel	Plain

Item No.	L1	L2	S	A	B	Load Capacity (kg)	Box (pcs)	Carton (pcs)
LB-200	200 (7-7/8")	(155) (6-3/32")	45	56	219	30kg (66lbs)	10	40
LB-350	350 (13-25/32")	(230) (9-3/64")	120	128	364	25kg (55lbs)	10	40
LB-500	500 (19-11/16")	(305) (12-1/64")	195	195	510	20kg (44lbs)	10	20

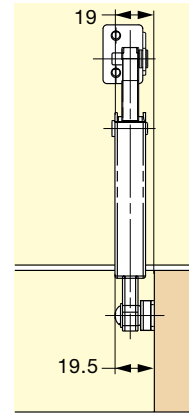
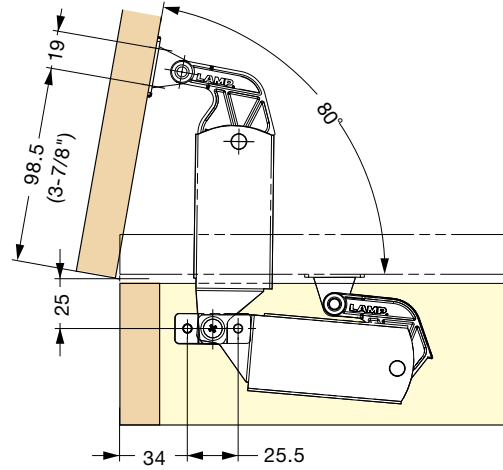
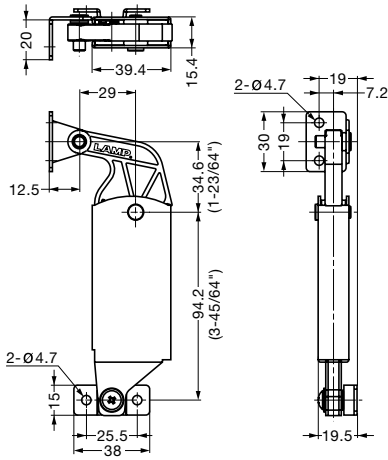
# HEAVY SPRING LOADED LID STAY (SIDE MOUNT TYPE)



# S-AT01, S-AT02



- Spring mechanism assists lifting door and holds in open position
- Non-handed



Item No.	Material	Finish	Max. Torque per piece (kgf-cm)	Box (pcs)	Carton (pcs)
S-AT01	430 Stainless Steel	Plain	90 (78lbs-in)	10	50
S-AT02	430 Stainless Steel	Plain	120 (104lbs-in)	10	50

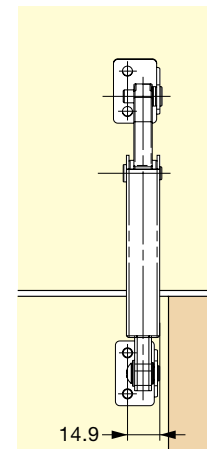
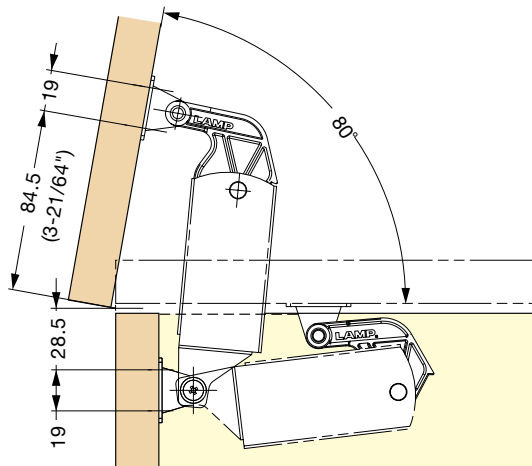
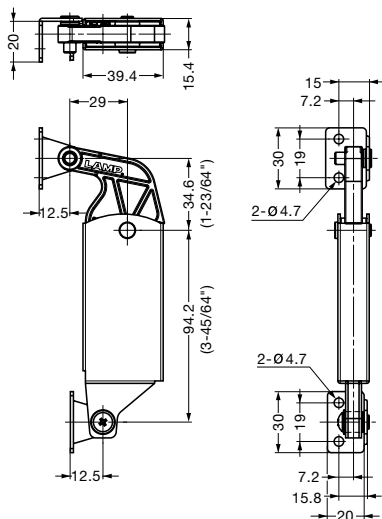
# HEAVY SPRING LOADED LID STAY (BACK PANEL MOUNT TYPE)



# S-AT01S, S-AT02S



- Spring mechanism assists lifting door and holds in open position
- Non-handed



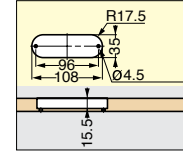
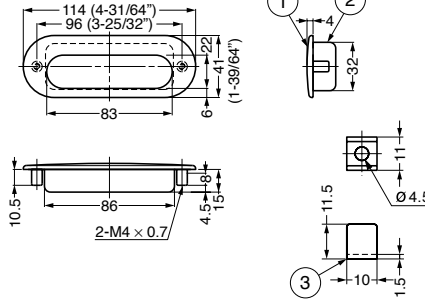
Item No.	Material	Finish	Max. Torque per piece (kgf-cm)	Box (pcs)	Carton (pcs)
S-AT01S	430 Stainless Steel	Plain	90 (78lbs-in)	10	50
S-AT02S	430 Stainless Steel	Plain	120 (104lbs-in)	10	50

# RECESSED PULL

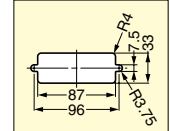


## HH-DS

RECESSED PULLS



Bore Dimensions for wood panel



Cut Out Dimensions for sheet metal

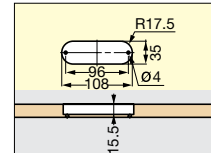
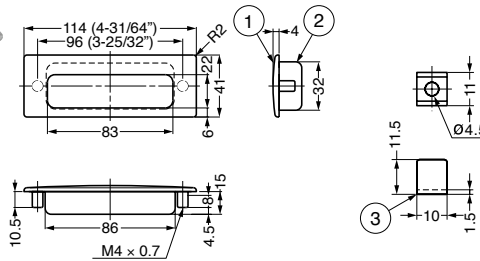
Item No.	Finish	Weight (g)	Box (pcs)	Carton (pcs)
HH-DS 114M	Mirror	105	10	60
HH-DS 114S	Satin	105	10	60

No.	Part Name	Material	Finish
①	Face Plate	316 Stainless Steel	Mirror / Satin
②	Case	304 Stainless Steel	Satin
③	Spacer	304 Stainless Steel	-

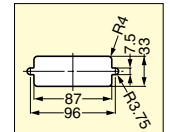
# RECESSED PULL



## HH-KS



Bore Dimensions for wood panel



Cut Out Dimensions for sheet metal

Item No.	Finish	Weight (g)	Box (pcs)	Carton (pcs)
HH-KS 114M	Mirror	110	10	60
HH-KS 114S	Satin	110	10	60

No.	Part Name	Material	Finish
①	Face Plate	316 Stainless Steel	Mirror / Satin
②	Case	304 Stainless Steel	Satin
③	Spacer	304 Stainless Steel	-

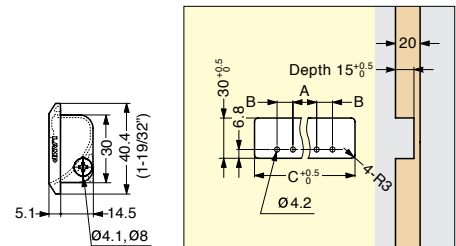
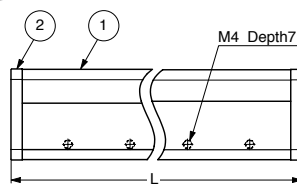
# RECESSED PULL



## XLA-HH



PAT



• The bracket for sheet metal available.  
Item No.: XLA-HH40B

Item No.	L (mm)	Weight (g)	Box (pcs)	Carton (pcs)
XLA-HH300	300 (11-13/16")	370	10	100
XLA-HH600	600 (23-5/8")	690	5	50

Material	Finish
Aluminum	Anodized
Aluminum	Anodized

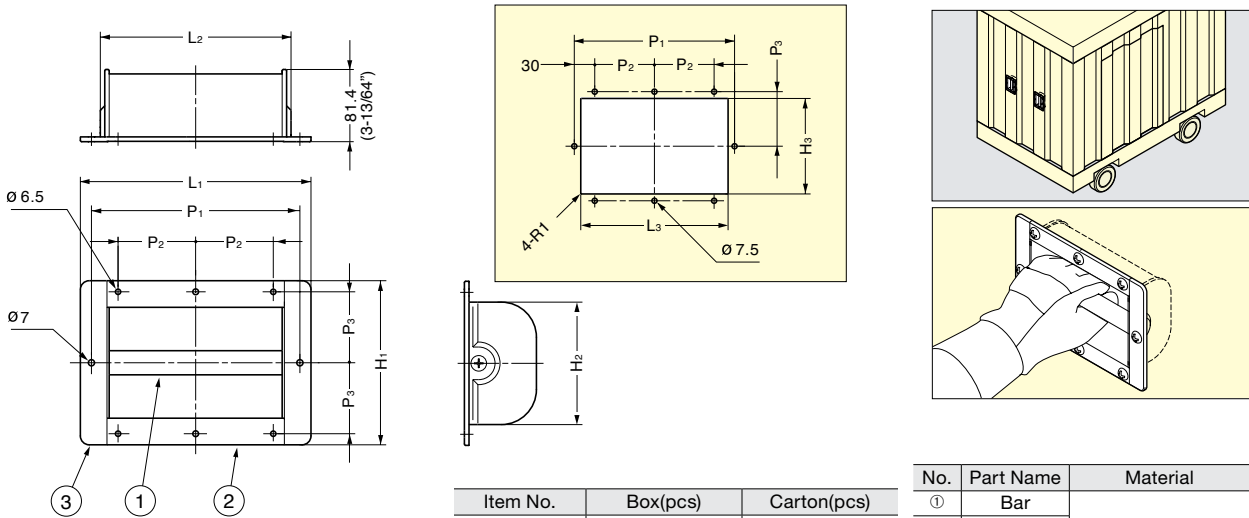
# MEGA-RECESSED PULL (WITH BAR HANDLE)



## HH-M



PAT



Item No.	Box(pcs)	Carton(pcs)
HH-M200	1	4
HH-M400	1	2

No.	Part Name	Material
①	Bar	304 Stainless Steel
②	Cup	
③	End Cover	

Item No.	L <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	L <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	L <sub>3</sub>	H <sub>3</sub>
HH-M200	260 (10-15/64")	(186.3) (7-21/64")	(138.3) (5-29/64")	215 (8-15/32")	235	87.5	80	216 (8-1/2")	140 (5-33/64")
HH-M400	460 (18-7/64")	(186.3) (7-21/64")	(138.3) (5-29/64")	415 (16-11/32")	435	125	80	416 (16-3/8")	140 (5-33/64")

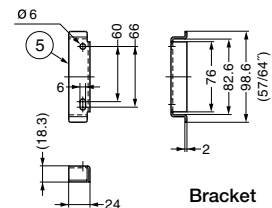
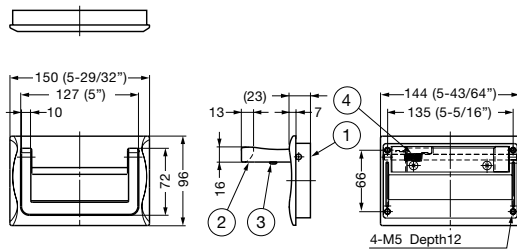
# 316 STAINLESS STEEL TRUNK HANDLE



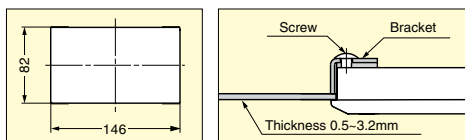
## HCT-150



PAT.P



Bracket



No.	Part Name	Material	Finish
①	Body	316 Stainless Steel	Mirror
②	Handle	316 Stainless Steel	Mirror
③	Bumper	Ethylene Propylene	Black
④	Spring	316 Stainless Steel	-
⑤	Bracket	316 Stainless Steel	Plain

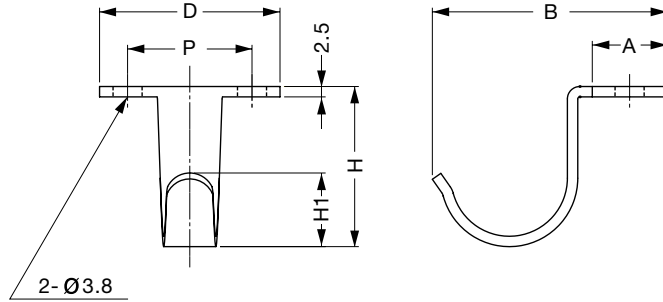
Item No.	Material	Finish	Load Capacity (kg)	Load Capacity (lbs)	Weight (g)	Box(pcs)	Carton(pcs)
HCT-150	316 Stainless Steel	Mirror	100	220	990	5	20

# 304 STAINLESS STEEL HOOK



HJU

HOOKS



Material	Finish
304 Stainless Steel	Satin

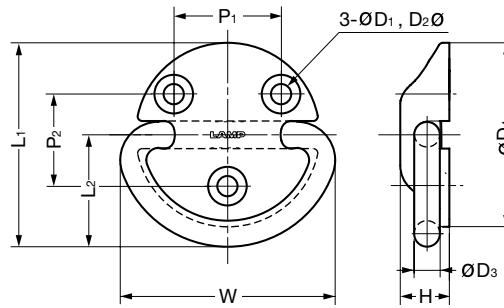
Item No.	D	P	H	H1	A	B	Load Capacity (kg)	Load Capacity (lbs)	Weight(g)	Box(pcs)	Carton(pcs)
HJU-30S	32.5 ( 1-9/32" )	20 ( 25/32" )	25 ( 63/64" )	13	13	41	8	17.5	15	30	600
HJU-50S	43.5 (1-45/64")	30 (1-11/64")	38.5 ( 1-33/64" )	18	18	56.5	10	22	30	40	800

# HEAVY DUTY FOLDING PAD EYE



EY-R

- Hook has constant torque, ideal for vibration or shock application.
- Suitable for marine, RV etc. where tough fastening is needed.



Item No.	Weight (g)	Box (pcs)	Carton (pcs)
EY-R50	116	10	120
EY-R60	202	10	60
EY-R80	431	5	30

Material	Finish
Body: 316 Stainless Steel / Arm:304 Stainless Steel	Plain

Item No.	L <sub>1</sub>	L <sub>2</sub>	W	P <sub>1</sub>	P <sub>2</sub>	H	ØD <sub>1</sub>	ØD <sub>2</sub>	ØD <sub>3</sub>	ØD <sub>4</sub>	Load Capacity (kg)	Load Capacity (lbs)
EY-R50	54 ( 2-1/8" )	30 ( 1-11/64" )	56.5 ( 2-7/32" )	28	24	14.5	5.5	10.4	7.5	48	500	1103
EY-R60	66.5 (2-39/64")	36.5 ( 1-7/16" )	70 ( 2-3/4" )	35	30	16	6.6	12.6	8.5	60	800	1764
EY-R80	88.5 (3-31/64")	48.5 (1-29/32")	94 ( 3-45/64" )	45	40	19	9	17.3	11	80	1200	2646



# FOLDING BRACKET

LOAD CAPACITY  
11.4 - 13.4 kg  
25 - 29.5 lbs

STEEL

STAINLESS

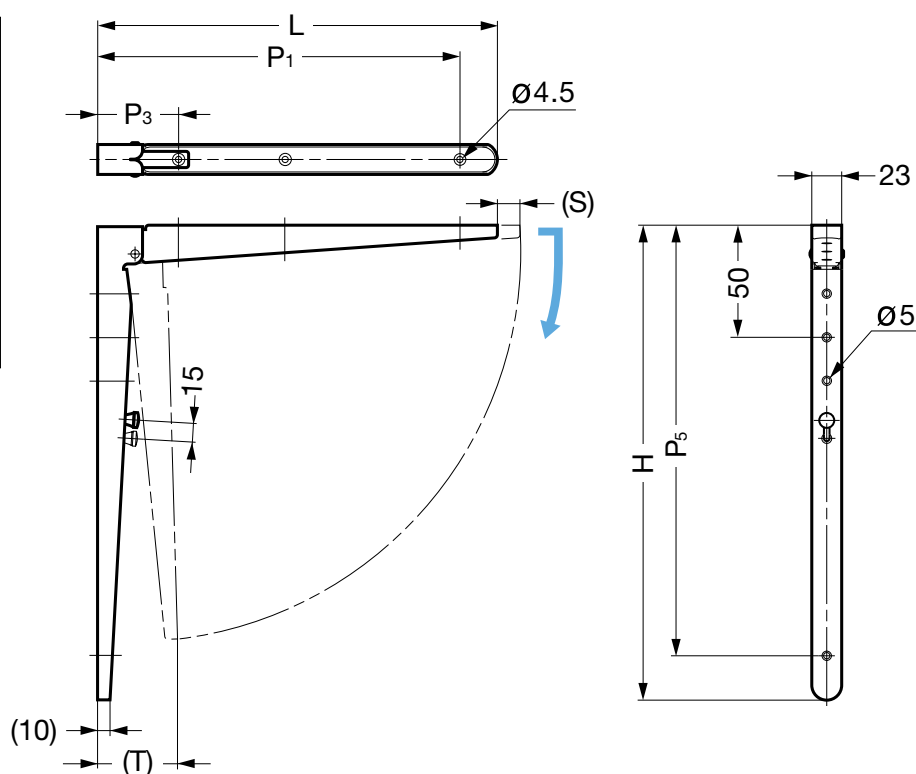
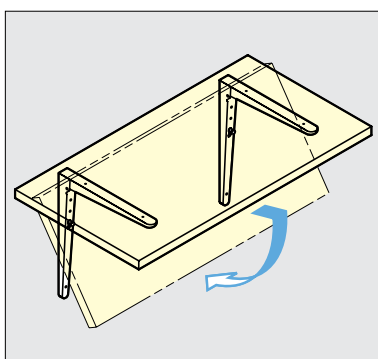
BTO

49

BRACKETS



- Folding bracket with manual lock lever.
- Slide the lock lever to lock / unlock in open position.
- Bracket with hinge function in one unit.
- Supplied with white painted screws. (BTO-300W)



BTO-300S

Item No.	Part Name	Material	Finish
①	Body	304 Stainless Steel	Satin
②	Knob	304 Stainless Steel	Plain

BTO-300W

Item No.	Part Name	Material	Finish
①	Body	Steel	White
②	Knob	304 Stainless Steel	Plain

Item No.	H	L	P <sub>1</sub>	P <sub>3</sub>	P <sub>5</sub>	S	T
BTO-300S	300 ( 11-13/16" )	241 ( 9-7/16" )	211	61	270	15	57
BTO-300W	300 ( 11-13/16" )	241 ( 9-7/16" )	211	61	270	15	57

Item No.	Load Capacity (kg)	Load Capacity (lbs)	Weight (g)	Screw Material	Box (pcs)	Carton (pcs)
BTO-300S	11.4	25	510	304 Stainless Steel	2	20
BTO-300W	13.4	29.5	510	Steel / White	2	20

# PUSH KNOB LATCH

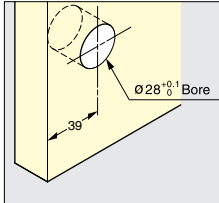
# TLP-S



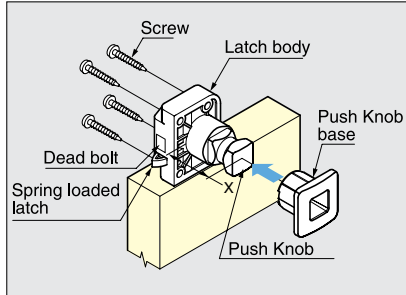
- Knob and latch combined
- Door Thickness: 19mm ~ 30mm (3/4" ~ 1-3/16")
- Door will be locked when knob is pushed in
- Has a deadbolt to securely lock the door
- Holding force: 20kg (44lbs)
- Non-handed
- Order Latch Body (TLP-LBM / WHT) and Push Knob (TLP-S-BB / xx) for complete set



### Bore Dimensions

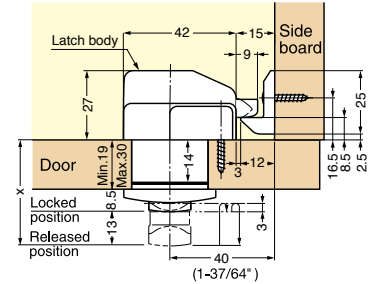
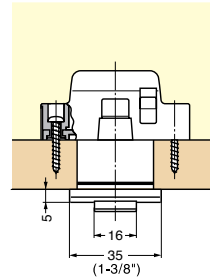
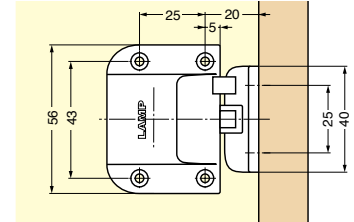


### Installation



Supplied with 2 threaded screws (L=24mm and L=30mm)

Threaded Screw	Door Thickness	Dimensions X
L=24	19 ( 3/4" )	40.5 ( 1-19/32" )
	20 ( 25/32" )	41.5 ( 1-5/8" )
	21 ( 53/64" )	42.5 ( 1-43/64" )
	22 ( 55/64" )	43.5 ( 1-23/32" )
	23 ( 29/32" )	44.5 ( 1-51/64" )
L=30	24 ( 15/16" )	45.5 ( 1-51/64" )
	25 ( 63/64" )	46.5 ( 1-53/64" )
	26 ( 1-1/64" )	47.5 ( 1-55/64" )
	27 ( 1-1/16" )	48.5 ( 1-29/32" )
	28 ( 1-3/32" )	49.5 ( 1-61/64" )
	29 ( 1-9/64" )	50.5 ( 1-63/64" )
	30 ( 1-11/64" )	51.5 ( 2-1/32" )



Part Name	Material	Finish	
		Knob	Latch
Latch Body	Polyamide	Chrome (CR)	White
Push Button	Brass	Satin Nickel (SN)	
Push Button Base	Zinc Alloy	Gold (G)	

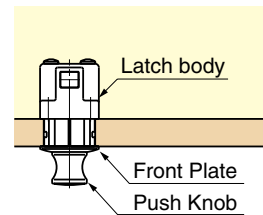
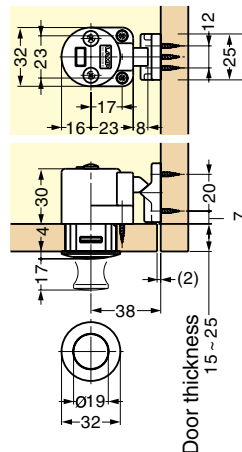
Item No.	Part Name	Holding Force (kg)
TLP-S-BB / CR	Push Knob and Base	20 (44lbs)
TLP-S-BB / SN		
TLP-S-BB / G		
TLP-LBM / WHT	Latch Body	

# PUSH KNOB LATCH

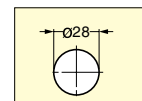
# DPL-RO



- Knob and latch combined
- Easy installation - one hole to bore
- Non-handed
- Door Thickness: 15mm ~ 25mm (19/32" ~ 63/64")
- Other ring shape available.  
Oval-DPL-OV  
Square-DPL-SQ



### Bore Dimensions

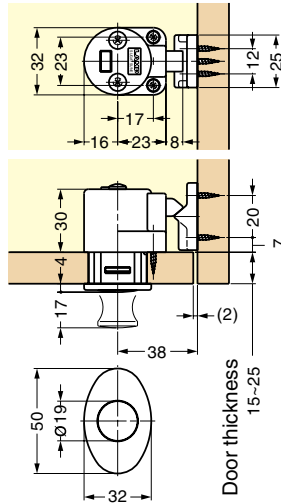
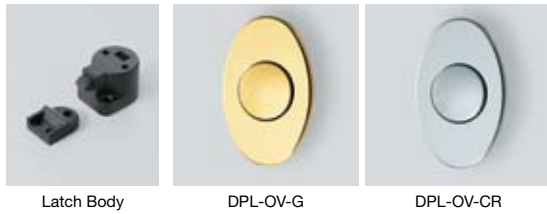


Item No.	Finish	Holding Force (kg)	Weight (g)	Box (pcs)	Carton (pcs)
DPL-RO-G	Gold	10 (22lbs)	72	10	80
DPL-RO-CR	Chrome	10 (22lbs)	72	10	80

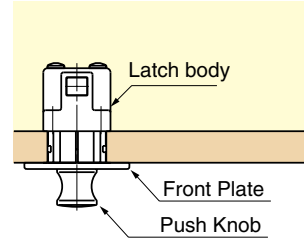
Part Name	Material
Push Knob	Zinc Alloy
Front Plate	
Latch Body	ABS
Counter Plate	

# PUSH KNOB LATCH

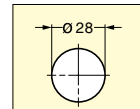
## DPL-OV



- Knob and latch combined
- Easy installation - one hole to bore
- Non-handed
- Door Thickness: 15mm~25mm (19/32"~63/64")
- Other ring shape available.  
Round- DPL-RO  
Square- DPL-SQ



Bore Dimensions

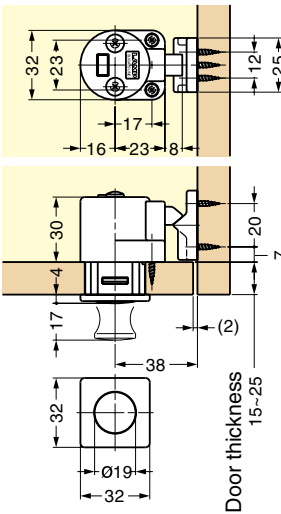


Part Name	Material
Push Knob	Zinc Alloy
Front Plate	
Latch Body	ABS
Counter Plate	

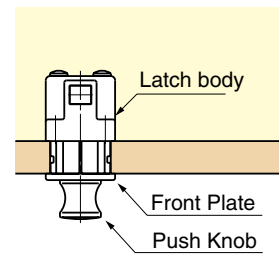
Item No.	Finish	Holding Force (kg)	Weight (g)	Box (pcs)	Carton (pcs)
DPL-OV-G	Gold	10 (22lbs)	72	10	80
DPL-OV-CR	Chrome	10 (22lbs)	72	10	80

# PUSH KNOB LATCH

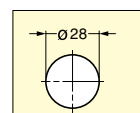
## DPL-SQ



- Knob and latch combined
- Easy installation - one hole to bore
- Non-handed
- Door Thickness: 15mm~25mm (19/32"~63/64")
- Other ring shape available.  
Round- DPL-RO  
Oval- DPL-OV



Bore Dimensions

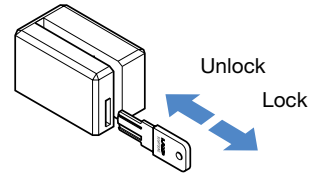


Part Name	Material
Push Knob	Zinc Alloy
Front Plate	
Latch Body	ABS
Counter Plate	

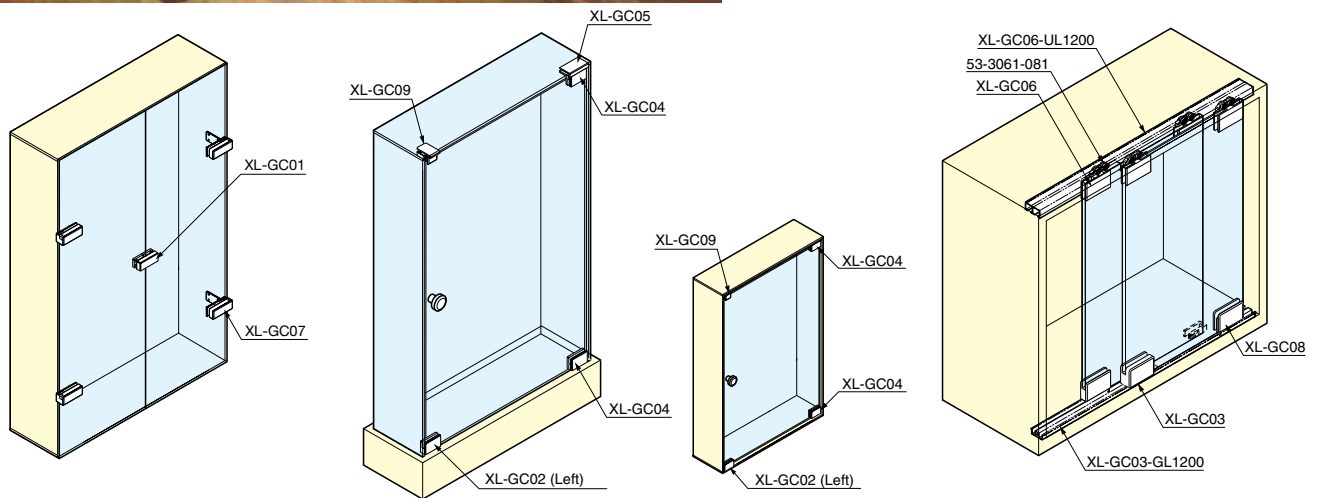
Item No.	Finish	Holding Force (kg)	Weight (g)	Box (pcs)	Carton (pcs)
DPL-SQ-G	Gold	10 (22lbs)	72	10	80
DPL-SQ-CR	Chrome	10 (22lbs)	72	10	80
DPL-SQ-SN	Satin Nickel	10 (22lbs)	72	10	80



- Hinges, Locks and Sliding door hardware with same design concept
- Swing and Sliding Doors can be operated with a single key
- Key hole is located on the side for clean appearance



- Insert key to un-lock
- Locks when key is pulled out

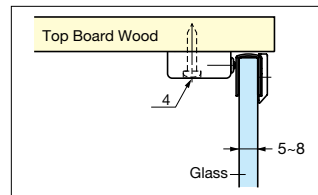


**GLASS MAGNETIC CATCH**

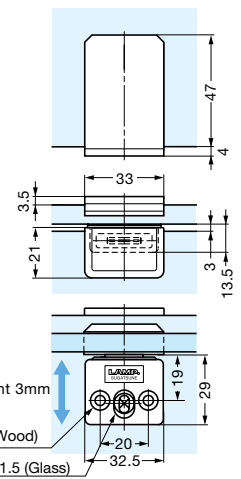
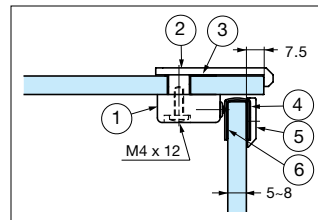
**XL-GC09-CR**



Installation Wood

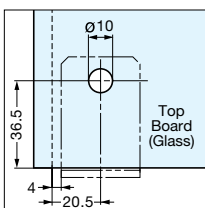


Installation Glass

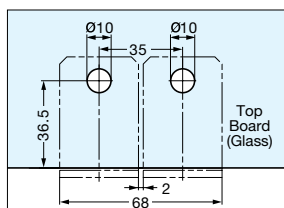


Cut Out Dimensions

Swing Door



Double Door



Item No.	Magnetic Force (kg)	Glass Thickness	Weight (g)	Box(pcs)	Carton(pcs)
XL-GC09-CR	1.5 (3.3lbs)	5~8mm	110	1	24

No.	Part Name	Material	Finish / Color
①	Housing	Zinc Alloy	Chrome
②	Plate	Zinc Alloy	Chrome
③	Spacer	Rubber	Black
④	Counter Plate	Steel	Chrome
⑤	Face Plate	Zinc Alloy	Chrome
⑥	Pad	Rubber	Black

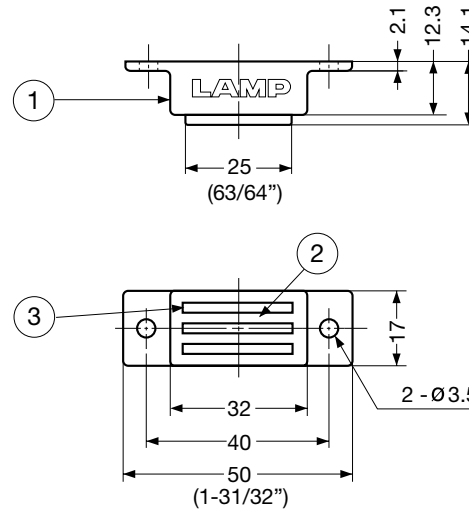
# HIGH TEMPERATURE MAGNETIC CATCH



## MC0083HP



• Suitable for high temperature environments up to 250°C (482°F)



### Optional Strike Plate

Item No.	Material
AS-68	430 Stainless Steel

Item No.	Magnetic Force (kg)	Weight (g)	Box(pcs)	Carton(pcs)
MC0083HP-70	7 ( 15lbs )	40	40	400
MC0083HP-140	14 ( 31lbs )	40	40	400

No.	Part Name	Material	Finish / Color
①	Housing	304 Stainless Steel	Plain
②	Magnet	Samarium Cobalt	-
③	Yoke	430 Stainless Steel	Plain

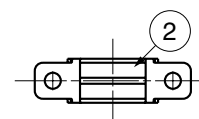
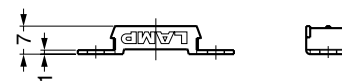
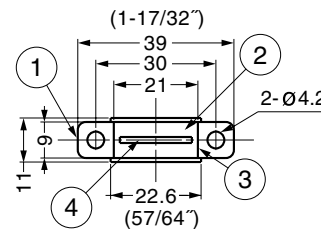
# HIGH TEMPERATURE MAGNETIC CATCH



## MC-YN005HP



• Suitable for high temperature environments up to 250°C (482°F)

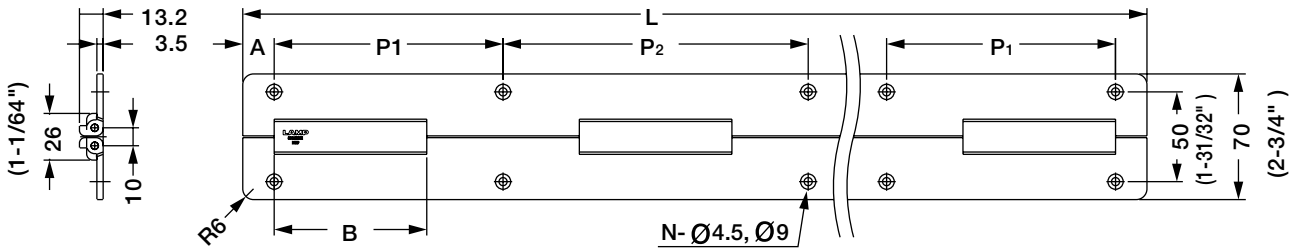


### Optional Strike Plate

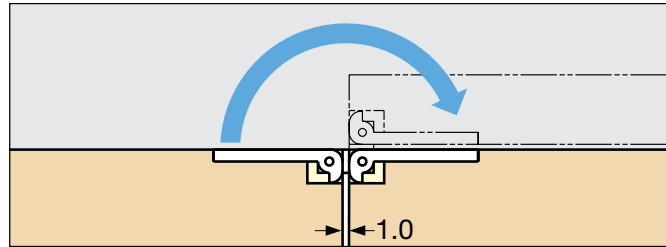
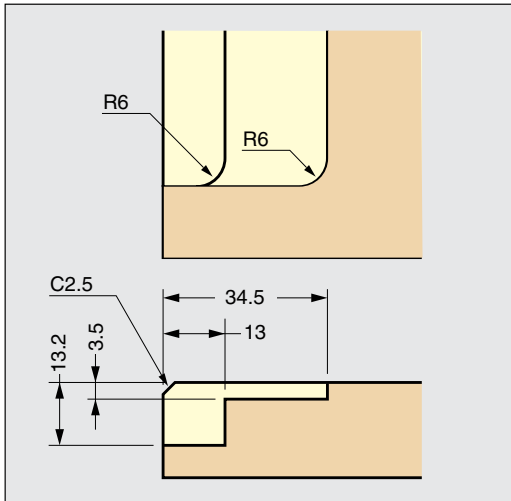
Item No.	Material
MC-JM49	316 Stainless Steel (Equivalent)

Item No.	Magnetic Force (kg)	Weight (g)	Box(pcs)	Carton(pcs)
MC-YN005HP-20	2 ( 4.4lbs )	11	200	1000
MC-YN005HP-50	5.1 ( 11lbs )	11	200	1000

No.	Part Name	Material	Finish / Color
①	Yoke	430 Stainless Steel	Plain
②	Magnet	Samarium Cobalt	-
③	Housing	304 Stainless Steel	Plain
④	Center Yoke	430 Stainless Steel	Plain



Bore Dimensions



- Unique "Double Joint" mechanism allows 180° opening.
- \* HG-MH is not a load bearing hinge.  
A secondary support is recommended.

Item No.	Material	Finish / Color	L	A	P <sub>1</sub>	P <sub>2</sub>	B	# of Holes	Carton (pcs)
HG-MH400S	Aluminum / 304 Stainless Steel (Pin)	Silver	400 (15-3/4")	15	111	148	74	8	15
HG-MH400BR		Brown	400 (15-3/4")	15	111	148	74	8	15
HG-MH400BL		Black	400 (15-3/4")	15	111	148	74	8	15
HG-MH800S		Silver	800 (31-1/2")	17.5	127.5	170	85	12	10
HG-MH800BR		Brown	800 (31-1/2")	17.5	127.5	170	85	12	10
HG-MH800BL		Black	800 (31-1/2")	17.5	127.5	170	85	12	10
HG-MH1100S		Silver	1100 (43-5/16")	16.5	145.5	194	97	14	6
HG-MH1100BR		Brown	1100 (43-5/16")	16.5	145.5	194	97	14	6
HG-MH1100BL		Black	1100 (43-5/16")	16.5	145.5	194	97	14	6

# GLASS DOOR GRAVITY HINGE

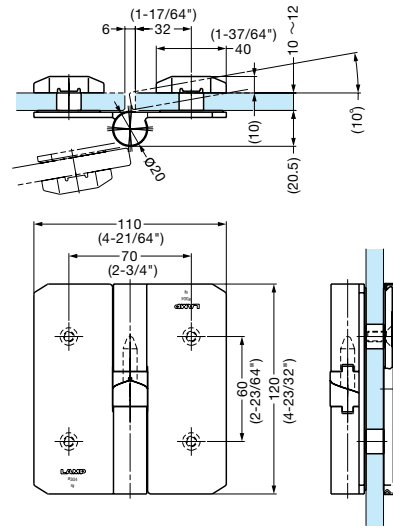


## XL-GH05-120

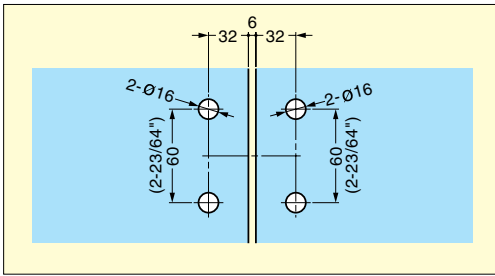


XL-GH05-120R is Shown

- Glass-to-glass hinge with self closing featurer
- Stainless steel construction suitable for shower doors
- Door will self close up to opening angle 170°
- Door will stay open beyond 170°
- Door Size: Max. W750 × H2000
- Door Weight: Max. 45kg/pair (99lbs/pair)
- Sold in pairs



### Cut Out Dimensions



Item No.	Material	Finish	Glass Width (mm)	Glass Height (mm)	Glass Thickness (mm)	Door Weight (kg)	Box (pairs)	Carton (pairs)
XL-GH05-120L	304 Stainless Steel	Mirror	Max. 750mm (29-17/32")	Max. 2000mm (78-47/64")	10~12	45kg / pair (99lbs / pair)	1	5
XL-GH05-120R								

# GLASS DOOR GRAVITY HINGE

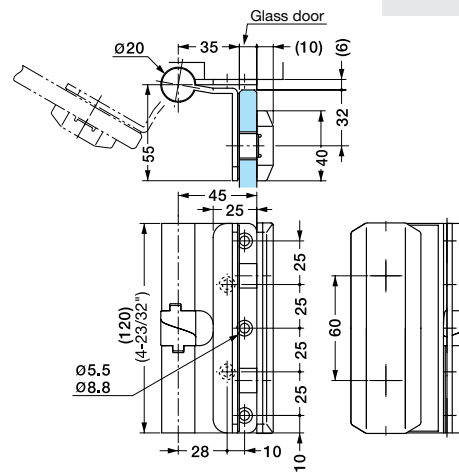


## XL-GH02-120

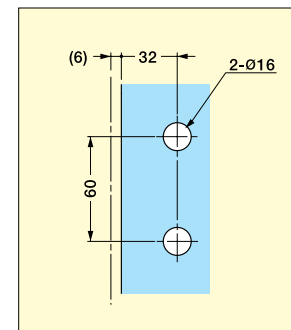
- Glass hinge with self closing feature.
- Stainless steel construction suitable for shower doors.
- Door will self close up to opening angle 170°.
- Door will stay open beyond 170°.
- Door Size: Max. W750 x H2000
- Door Weight: Max. 45kg/pair (99lbs/pair)
- Sold in pairs



XL-GH02-120R is shown.



Left-Hand Opening is shown.



Cut Out Dimensions

Item No.	Glass Thickness (mm)	Weight (g) / pair	Box (pairs)	Carton (pairs)
XL-GH02-120L	10~12	1200	1	5
XL-GH02-120R		1200	1	5

Material	Finish
304 Stainless Steel	Mirror

# DROP LID HINGE (ADJUSTABLE TYPE)



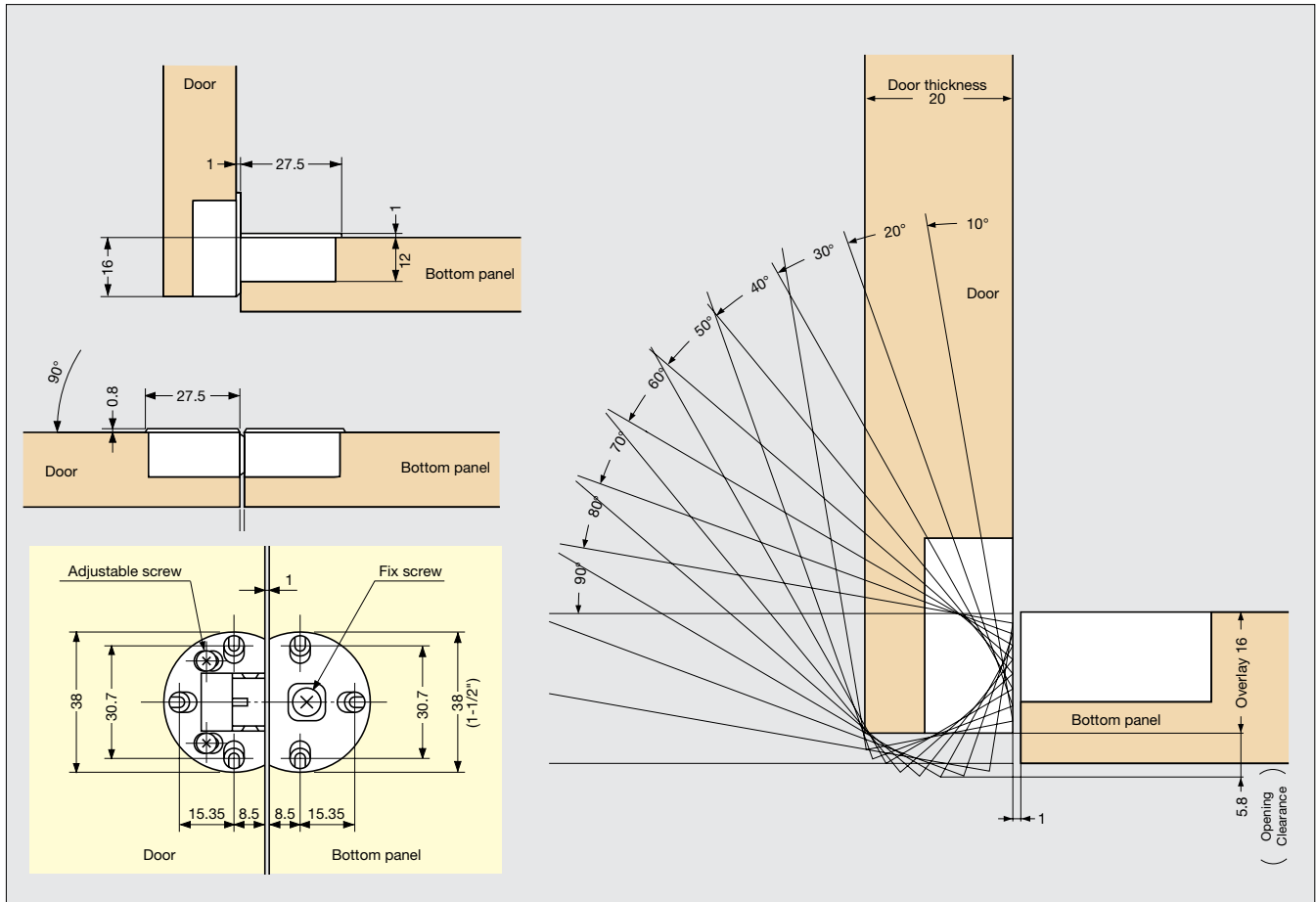
**SDH-001**

HINGES

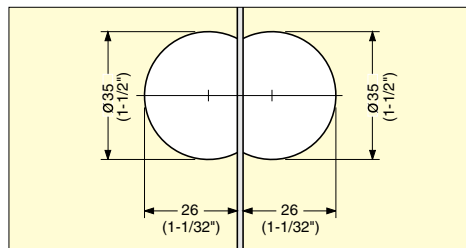


- Opening angle 90°
- Two way adjustment (overlay and door gap)
- Flush when opened, ideal for writing desk application
- Can be used with soft down stay SDS-100 or NSDX-10.
- Door Thickness: 16 ~ 20mm (5/8~25/32")
- Overlay Coverage: 14 ~ 16mm (35/64"~5/8")

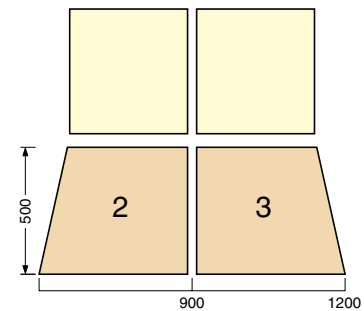
Item No.	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
SDH-001	Zinc Alloy	Nickel	79	50	200
SDH-001/BLK		Black			



**Bore Dimensions**



**# of Hinges Required**





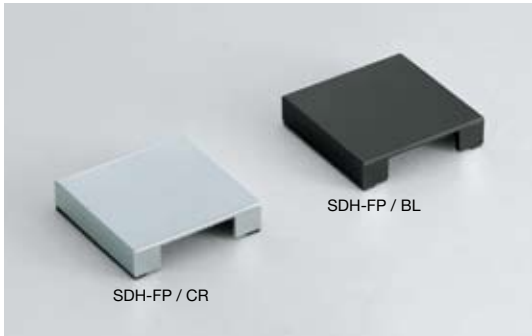
# GLASS DROP LID HINGE (ADJUSTABLE TYPE)

# SDH-G



SDH-G

- Opening angle 90°
- Two way adjustment (overlay and door gap)
- Flush when opened, ideal for writing desk application
- Can be used with soft down stay SDS-100 or NSDX-10.
- Glass Door Thickness: 4 ~ 6mm (5/32"~15/64")
- Overlay Coverage: 14 ~ 16mm (35/64"~5/8")



SDH-FP / CR

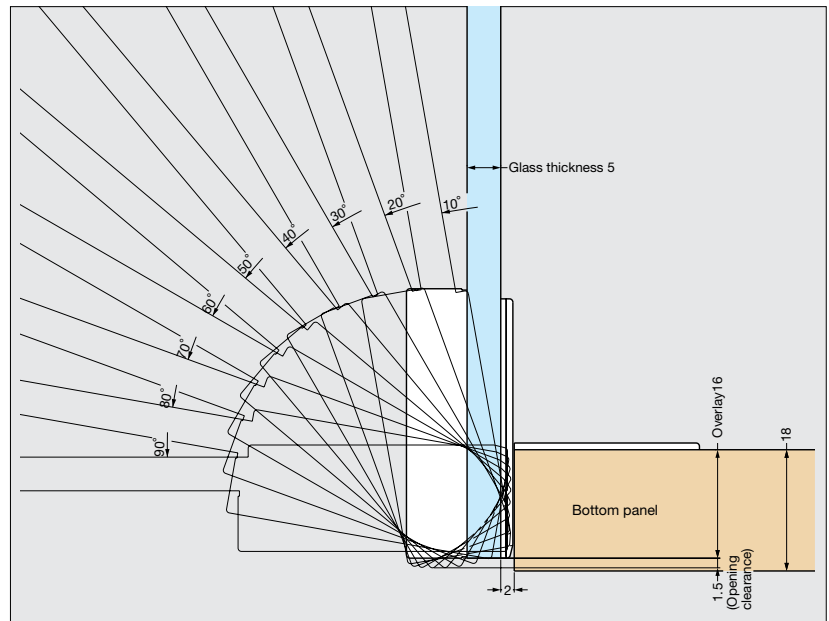
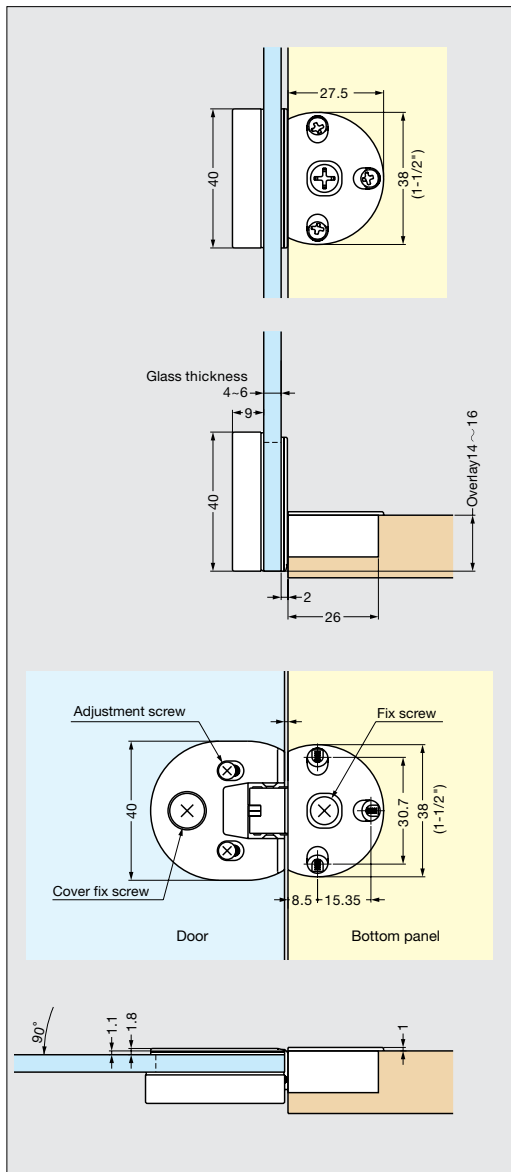
SDH-FP / BL

### Face Plate

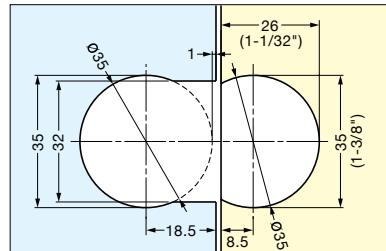
Item No.	Material	Finish	Box (pcs)	Carton (pcs)
SDH-FP / CR	Zinc Alloy	Chrome	50	200
SDH-FP / BL		Black		

### Hinge

Item No.	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
SDH-G	Zinc Alloy	Nickel	79	50	200

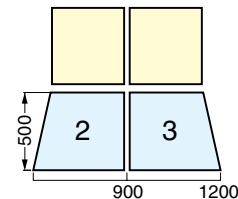


### Bore Dimensions



SDH-G, SDH-FP / CR

### # of Hinges Required



# TORQUE HINGE

# HG-TA

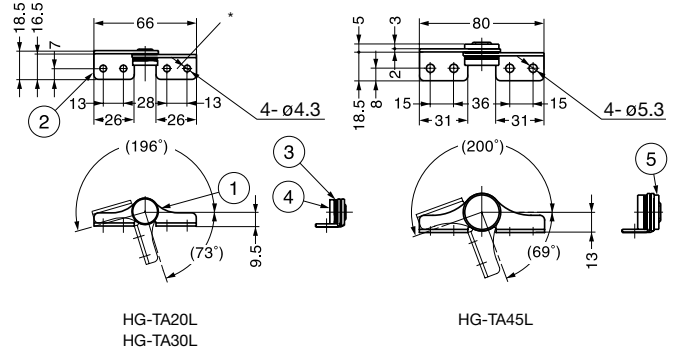


PAT

- Free stop hinge with friction torque
- Consistent torque through out working range
- Opening angle 0° ~ 140°

**Applications**

- Ideal for indoor applications
- LCD monitors, monitoring cameras, displays etc.



No	Part Name	Material	Finish
①	Hinge A	430 Stainless Steel	Plain
②	Hinge B	430 Stainless Steel	Plain
③	Spring Washer	Steel	-
④	Shaft	303 Stainless Steel	-
⑤	Washer	430 Stainless Steel	-

Item No.	Type	Torque per piece (kgf·cm)	Torque per piece (lbs·in)	Weight (g)	Box (pcs)	Carton (pcs)
HG-TA20R	Right hand	20.4±20%	17.7±20%	30	40	320
HG-TA20L	Left hand	20.4±20%	17.7±20%	30	40	320
HG-TA30R	Right hand	30.6±20%	26.5±20%	30	40	320
HG-TA30L	Left hand	30.6±20%	26.5±20%	30	40	320
HG-TA45R	Right hand	45.9±20%	39.8±20%	65	20	160
HG-TA45L	Left hand	45.9±20%	39.8±20%	65	20	160

# TORQUE HINGE

# HG-TB

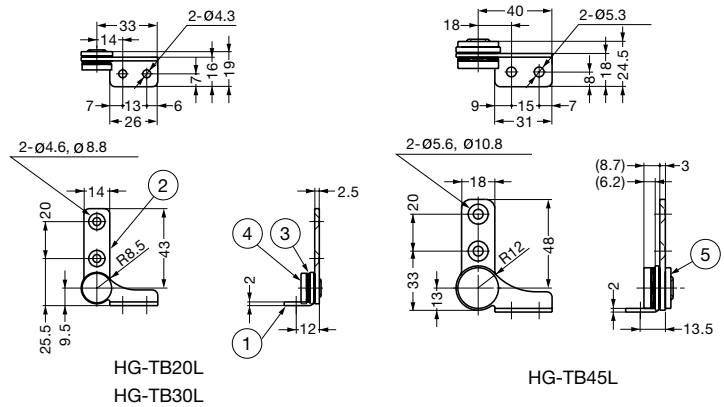
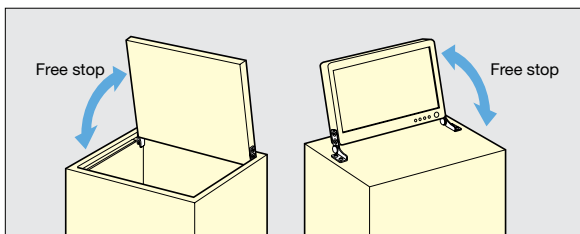


PAT

- Free stop hinge with friction torque
- Consistent torque through out working range
- Opening angle 360°

**Applications**

- Ideal for indoor applications
- LCD monitors, monitoring cameras, displays etc.



No	Part Name	Material	Finish
①	Hinge A	430 Stainless Steel	Plain
②	Hinge B	430 Stainless Steel	Plain
③	Spring Washer	Steel	-
④	Shaft	303 Stainless Steel	-
⑤	Washer	430 Stainless Steel	-

Item No.	Type	Torque per piece (kgf·cm)	Torque per piece (lbs·in)	Weight (g)	Box (pcs)	Carton (pcs)
HG-TB20R	Right hand	20.4±20%	17.7±20%	30	40	320
HG-TB20L	Left hand	20.4±20%	17.7±20%	30	40	320
HG-TB30R	Right hand	30.6±20%	26.5±20%	30	40	320
HG-TB30L	Left hand	30.6±20%	26.5±20%	30	40	320
HG-TB45R	Right hand	45.9±20%	39.8±20%	65	20	160
HG-TB45L	Left hand	45.9±20%	39.8±20%	65	20	160



- Hinge with damper built-in to keep lid from slamming shut
- Mortise mount type
- Ideal for small size lid
- Sold in pairs
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight
- \* Please see diagram below for applicable torque moment
- \* Please specify face plate color when ordering
- \* Please install Left and Right Brackets on correct side
- Smaller type HG-JHM16 available



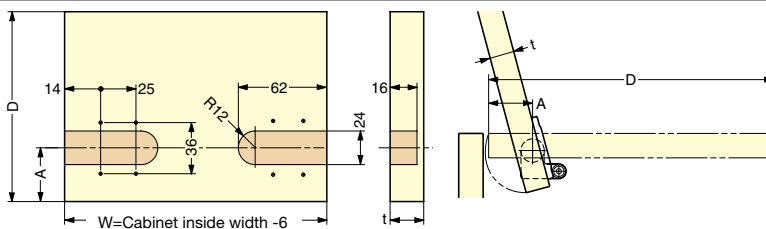
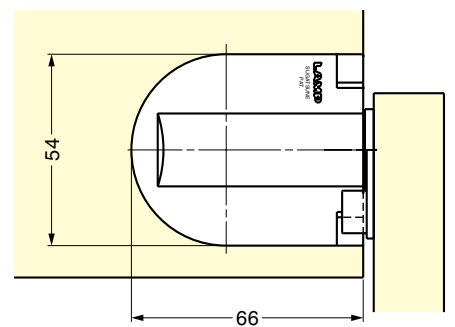
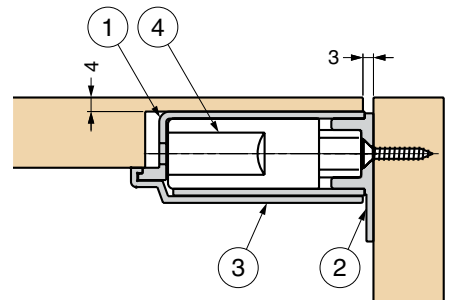
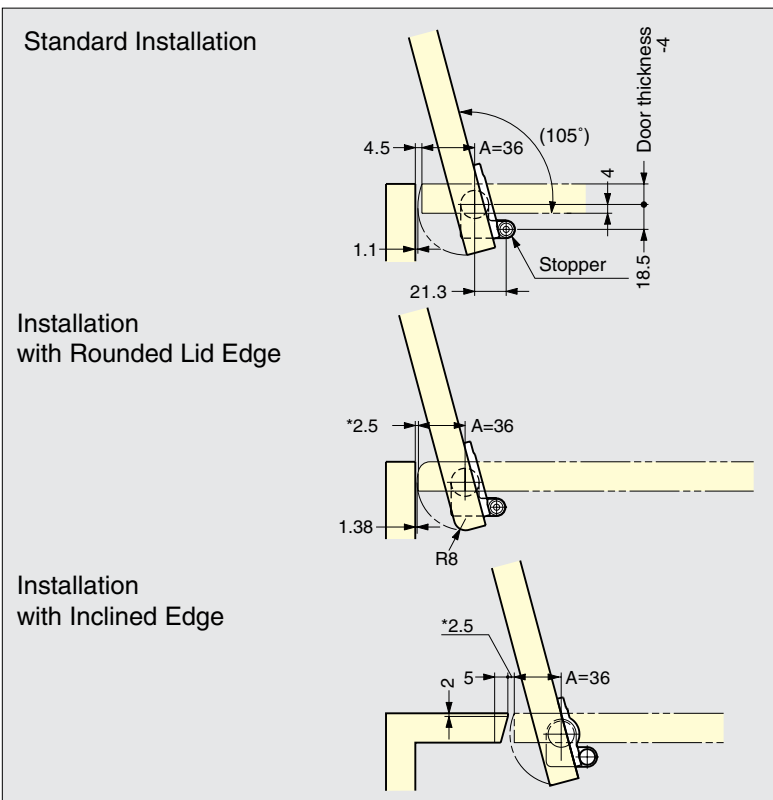
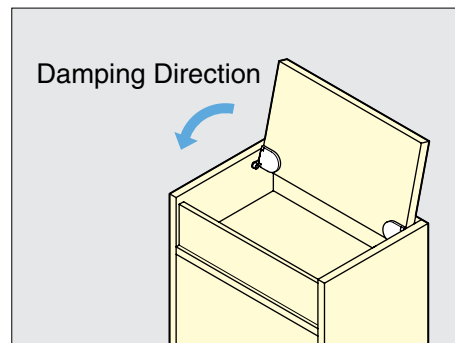
Black cover



White cover



Bracket / Mounting Plate



Item No.	Color	Part Name	Torque per pair (kgf-cm)	Box (pcs)	Carton (pcs)
HG-JHM20-80	Black	Body	61.2 ~ 81.6 (53~70.8lbs-in)	10	90
HG-JHM20-BL	Black	Cover	-	10	120
HG-JHM20-WT	White		-	10	120

No.	Part Name	Material	Finish / Color
①	Bracket	Polyacetal	Black
②	Mounting Plate	Aluminum	Black
③	Face Plate	ABS	Black / White
④	Damper	304 Stainless Steel	Plain

# 3/4 EXTENSION SLIDE

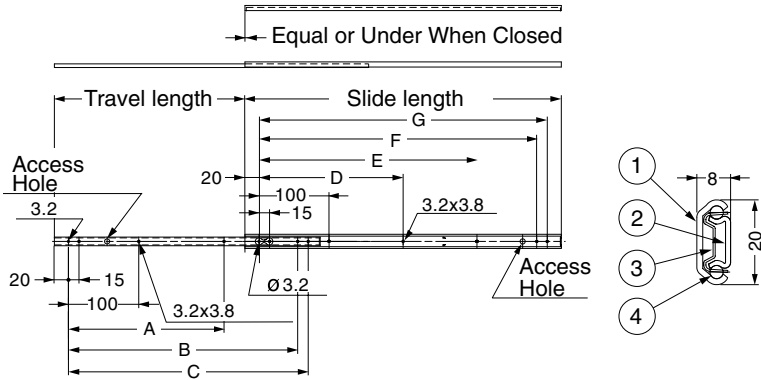


# ESR-2021

DRAWER SLIDES



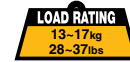
- 3/4 extension
- Positive stop
- Non-handed
- Requires #4 or M3 pan head screw



No.	Part Name	Material	Finish / Color
①	Outer Rail	304 Stainless Steel	Plain
②	Inner Rail	304 Stainless Steel	Plain
③	Retainer	304 Stainless Steel	Plain
④	Ball	304 Stainless Steel	-

Item No.	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Rating (kg / pair)	Load Rating (lbs / pair)	Weight (g / pair)	Box (pcs)
ESR-2021-200	200 ( 7-7/8" )	134 ( 5-9/32" )	-	145	160	-	-	145	160	13	28	200	200
ESR-2021-250	250 ( 9-27/32" )	184 ( 7-15/64" )	150	195	210	-	-	195	210	15	33	250	100
ESR-2021-300	300 ( 11-13/16" )	224 ( 8-13/16" )	190	245	260	-	160	245	260	16	35	300	100
ESR-2021-350	350 ( 13-25/32" )	244 ( 9-39/64" )	225	295	310	-	210	295	310	16	35	350	100
ESR-2021-400	400 ( 15-3/4" )	294 ( 11-37/64" )	265	345	360	-	260	345	360	15	33	400	100
ESR-2021-450	450 ( 17-23/32" )	334 ( 13-9/64" )	300	395	410	205	310	395	410	13	28	450	100
ESR-2021-500	500 ( 19-11/16" )	384 ( 15-7/64" )	337	445	460	230	360	445	460	11	24	500	100

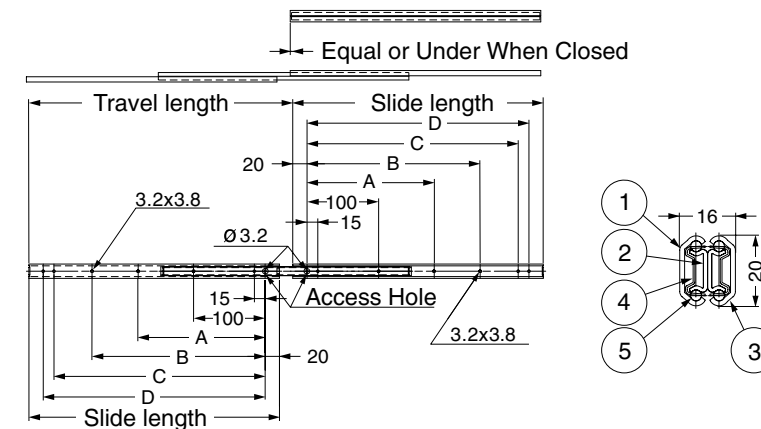
# FULL EXTENSION SLIDE



# ESR-2031



- Full extension
- Positive stop
- Non-handed
- Requires #4 or M3 pan head screw



No.	Part Name	Material	Finish / Color
①	Outer Rail	304 Stainless Steel	Plain
②	Inner Rail	304 Stainless Steel	Plain
③	Retainer	304 Stainless Steel	Plain
④	Ball	304 Stainless Steel	-

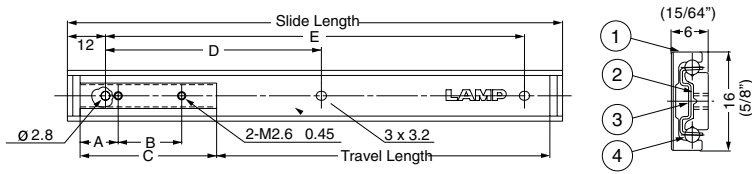
Item No.	Slide Length	Travel Length	A	B	C	D	Load Rating (kg / pair)	Load Rating (lbs / pair)	Weight (g / pair)	Box (pcs)
ESR-2031-200	200 ( 7-7/8" )	229 ( 9-1/64" )	-	-	145	160	17	37	400	96
ESR-2031-250	250 ( 9-27/32" )	269 ( 10-19/32" )	-	-	195	210	17	37	500	48
ESR-2031-300	300 ( 11-13/16" )	329 ( 12-61/64" )	-	160	245	260	17	37	600	48
ESR-2031-350	350 ( 13-25/32" )	369 ( 14-17/32" )	-	210	295	310	17	37	700	48
ESR-2031-400	400 ( 15-3/4" )	429 ( 16-57/64" )	-	260	345	360	17	37	800	48
ESR-2031-450	450 ( 17-23/32" )	469 ( 18-15/32" )	205	310	395	410	16	35	900	48
ESR-2031-500	500 ( 19-11/16" )	529 ( 20-53/64" )	230	360	445	460	13	28	1000	48

# ALUMINUM MINI GUIDE



# ARL2-16

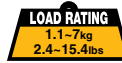
- Thin profile for various applications
- Light-weight aluminum body



No.	Part Name	Material	Finish
①	Outer Rail	Aluminum	Anodized
②	Inner Rail	Aluminum	Anodized
③	Retainer	Steel	Plain
④	Steel Ball	Steel	-

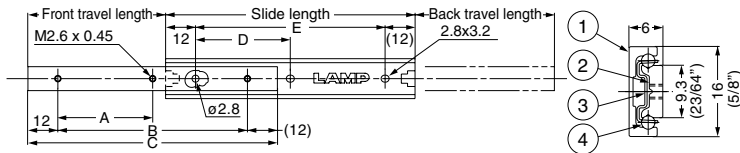
Item No.	Slide Length	Travel Length	A	B	C	D	E	Load Rating	Load Rating	Load Rating	Load Rating	Weight (g/piece)	Box (pcs)
								(kg / pair)	(lbs / pair)	(kg / pair)	(lbs / pair)		
ARL2-16- 70	70 ( 2-3/4" )	(30) ( 1-11/64" )	5	18	28	-	46	2	4.4	0.8	1.7	13.5	100
ARL2-16-100	100 ( 3-15/16" )	(52) ( 2-3/64" )	10	19	39	38	76	5	11	1.8	4	18.0	100
ARL2-16-150	150 ( 5-29/32" )	(99) ( 3-57/64" )	10	19	39	63	126	5	11	1.8	4	23.5	100

# ALUMINUM MINI SLIDE (2-WAY)



# ARW2-16

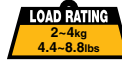
- Two-way travel
- Thin profile for various applications
- Light-weight aluminum body
- Designed without positive stop for ease of assembly
- \*Please add secondary stopper if necessary.



No.	Part Name	Material	Finish
①	Outer Rail	Aluminum	Anodized
②	Inner Rail	Aluminum	Anodized
③	Retainer	Steel	Plain
④	Steel Ball	Steel	-

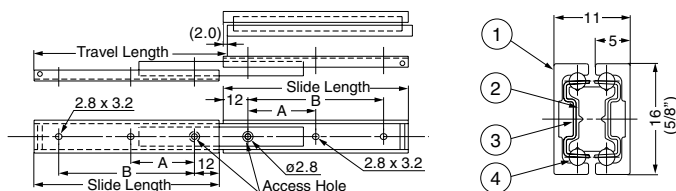
Item No.	Slide Length	Front Travel Length	Back Travel Length	A	B	C	D	E	Load Rating	Load Rating	Load Rating	Load Rating	Weight (g/piece)	Box (pcs)
									(kg/pair)	(lbs/pair)	(kg/pair)	(lbs/pair)		
ARW2-16- 70	70 ( 2-3/4" )	(30) ( 1-11/64" )	(30) ( 1-11/64" )	-	46	70	-	46	3	6.6	1.1	2.4	15.5	100
ARW2-16-100	100 ( 3-15/16" )	(40) ( 1-37/64" )	(40) ( 1-37/64" )	38	76	100	38	76	5	11	2	4.4	21.5	100
ARW2-16-150	150 ( 5-29/32" )	(79) ( 3-7/64" )	(79) ( 3-7/64" )	63	129	150	63	126	7	15.4	3.1	6.8	29.5	100

# ALUMINUM MINI SLIDE



# AR3-16

- Full extension
- Positive stop
- Thin profile for various applications
- Light-weight aluminum body



No.	Part Name	Material	Finish
①	Outer Rail	Aluminum	Anodized
②	Inner Rail	Aluminum	Anodized
③	Retainer	Steel	Plain
④	Steel Ball	Steel	-

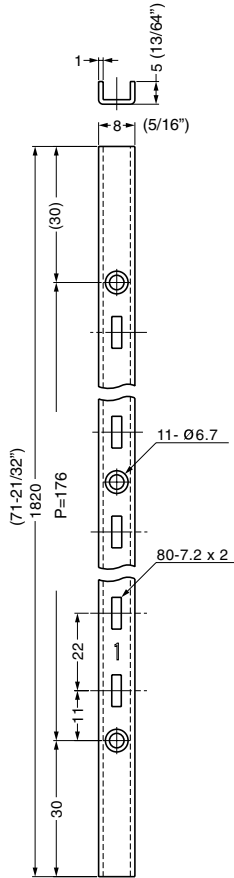
Item No.	Slide Length	Travel Length	A	B	Load Rating (kg / pair)	Load Rating (lbs / pair)	Weight (g / piece)	Box (pcs)
AR3-16- 80	80 ( 3-9/64" )	(77) ( 3-1/32" )	-	56	2	4.4	31.5	50
AR3-16-100	100 ( 3-15/16" )	(117) ( 4-19/32" )	38	76	3	6.6	36.0	50
AR3-16-150	150 ( 5-29/32" )	(151) ( 5-15/16" )	63	126	4	8.8	55.0	50

# NARROW SHELF STANDARD



## SPN-1820

SHELF STANDARD



- Slim 8x5 profile
- Easy to cut to desired length
- Shelf support options:  
SPN-15 (Shelf Support), SPN-17EC (End Cap)

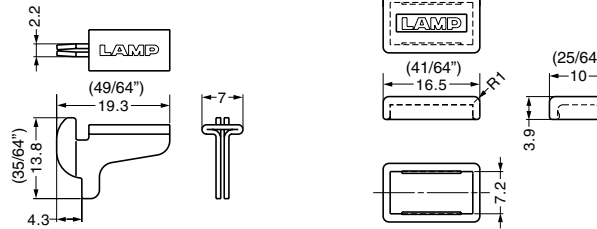
Material	Finish
430 Stainless Steel	Satin

Item No.	Length (mm)	Hole	Weight (g)	Box (pcs)
SPN-1820	1820 (71-21/32")	11	205	60

# SHELF SUPPORT



## SPN-15



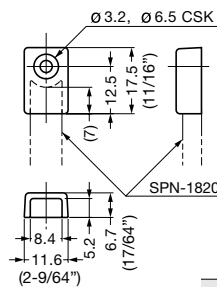
- Shelf support for SPN-1820

Item No.	Material	Color	Weight (g)	Box (pcs)	Carton (pcs)
SPN-15C	Elastamer	White	0.5	400	4000

Item No.	Material	Finish	Load Capacity (kg)	Load Capacity (lbs)	Weight (g)	Box (pcs)	Carton (pcs)
SPN-15	304 Stainless Steel	Plain	60	132	2	400	4000

# END CAP

## SPN-17EC



- Cap for SPN-1820

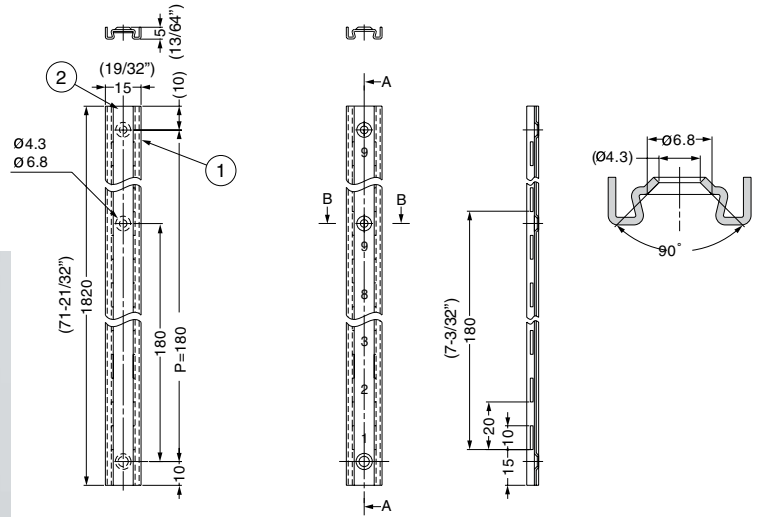
Item No.	Material	Color	Weight (g)	Box (pcs)	Carton (pcs)
SPN-17EC	Polypropylene	White	0.9	400	4000

# COVERED SHELF STANDARD



# SPW-1820

- No visible screw holes when used with cover-strip (SPW-CV)
- No visible slots
- Shelf standard and cover strip sold separately.



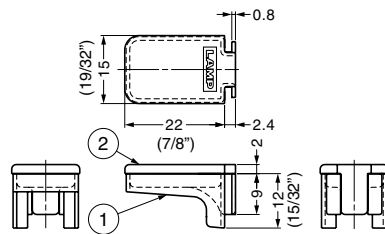
No.	Item No.	Material	Finish
①	SPW-1820	430 Stainless Steel	Satin
②	SPW-CV1820	PVC Plastic	White / Brown

Item No.	Part Name	Length (mm)	Finish	Hole	Weight (g)	Carton (pcs)
SPW-1820	Shelf Standard	1820 (71-21/32")	Satin	11	335	60

Item No.	Part Name	Length (mm)	Color	Weight (g)	Carton (pcs)
SPW-CV1820-WT	Cover Strip	1820 (71-21/32")	White	8	200
SPW-CV1820-BR		1820 (71-21/32")	Brown	8	200

# SHELF SUPPORT



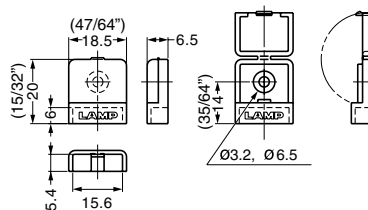
# SPW-20

- Shelf support for SPW-1820

No.	Part Name	Material	Finish
①	Housing	304 Stainless Steel	Plain
②	Cover	Elastomer	White / Brown

Item No.	Color	Load Capacity (kg)	Load Capacity (lbs)	Weight (g)	Box (pcs)	Carton (pcs)
SPW-20-WT	White	60	132	4.5	100	1000
SPW-20-BR	Brown	60	132	4.5	100	1000

# END CAP



# SPW-EC20

- Cap for SPW-1820

Item No.	Material	Color	Weight (g)	Box (pcs)	Carton (pcs)
SPW-EC20-WT	Polypropylene	White	2	400	4000
SPW-EC20-BR	Polypropylene	Brown	2	400	4000

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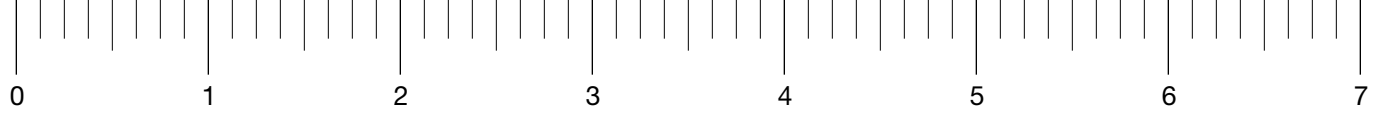
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Inch

## Measurement Conversions

### LENGTH

cm	mm	inch	feet
1	10	0.394	0.0328
0.1	1	0.0394	0.00328
2.54	25.4	1	0.083
30.48	304.8	12	1

$$\text{inch} = \text{mm} \div 25.4$$

$$\text{mm} = \text{inch} \times 25.4$$

### WEIGHT

g	kg	oz	lb
1	0.001	0.0353	0.0022
1000	1	35.27	2.205
28.4	0.0284	1	0.0625
453.6	0.454	16	1

$$\text{lb} = \text{kg} \times 2.205$$

$$\text{kg} = \text{lb} \div 2.205$$

### FORCE

N	kgf	lbf
1	0.10197	0.225
9.807	1	2.205
4.448	0.454	1

$$\text{lbf} = \text{kgf} \times 2.205 \quad \text{N} = \text{kgf} \times 9.807$$

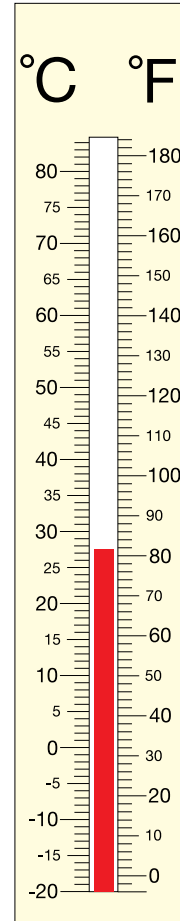
$$\text{kgf} = \text{lbf} \div 2.205 \quad \text{kgf} = \text{N} \div 9.807$$

### MOMENT

N • m	kgf • cm	lbs • in
1	10.197	8.85
0.0981	1	0.868
0.113	1.152	1

$$\text{lbs} \cdot \text{in} = \text{kgf} \cdot \text{cm} \times 0.868 \quad \text{N} \cdot \text{m} = \text{kgf} \cdot \text{cm} \times 0.0981$$

$$\text{kgf} \cdot \text{cm} = \text{lbs} \cdot \text{in} \div 0.868 \quad \text{kgf} \cdot \text{cm} = \text{N} \cdot \text{m} \div 0.0981$$



### TEMPERATURE

°C	°F
0	32
-17.77	0

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5 \div 9$$

$$^{\circ}\text{F} = ^{\circ}\text{C} \div 5 \times 9 + 32$$

\*All tools and figures are for reference only.

Metric



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