



# LID SUPPORTS

SOFT-DOWN STAYS

VERTICAL SWING LIFT-UP MECHANISM

HORIZONTAL BI-FOLD DOOR MECHANISM

SOFT CLOSING SYSTEM

LID STAYS

SPRING LOADED LID STAYS

MULTI ANGLE LID STAYS

DOOR HOLDERS

LAPCON/SOFT CLOSING STAYS

Picture	Item No.	Torque (in-lbs) or Door weight (lbs)	Page
	ARN-2 Top Opening	35.4~70.8	117.1
	ARN-3 Upward Opening	35.4~70.8	117.2
	SDS-C100	30~43 (in-lbs) / pc	319
	SDS-C301N	35~60 (in-lbs) / pc	320~321
	SDS-50G	-	321
	SDS-100-TV/TVZ	4.3~32.6 (in-lbs) / pc	322
	UDD	4.4~26.6 (in-lbs) / pair	323
	UDD-BKT	-	323
	CSD-10-TV	8.8~35.4 (in-lbs) / pc	324
	NSDX-10	19~60 (in-lbs) / pc	327
	NSDX-20	19~60 (in-lbs) / pc	328
	NSDX-35	19~60 (in-lbs) / pc	329
	NSDX-10(R/L)K/TV	8.7~17.4 (in-lbs) / pc	330
	HDS-10	121~260 (in-lbs) / pair	332
	HDS-10S	52~156 (in-lbs) / pair	333
	HDS-20	121~260 (in-lbs) / pair	334
	HDS-20S	61~130 (in-lbs) / pair	335
	HDS-30	121~260 (in-lbs) / pair	336
	HDSN-30	122~260 (in-lbs) / pair	337

Picture	Item No.	Torque (in-lbs) or Door weight (lbs)	Page
	SLS-ELAN	48~87 (in-lbs) / pc	339
	EZS-ELAN	Door Weight 11~27.5 lbs	340~341
	SLU-ELAN	Door Weight 11~24.2 lbs	342~343
	FFCB-HG-1	-	344
	FFCB-SLS	-	344
	FFCB-SLU	-	345
	FFCB-SD-1	-	345
	SLUN	Door Weight 6.2~12.8 lbs	346~347
	SLD	Door Weight 6.6~13.2 lbs	348~349
	HBFN-SZ	-	350
	HBFN	Door Weight 5.5~12.1 lbs	351
	OV-EZ	Door Weight 5.5~25.2 lbs	352~353
	OVN	Door Weight 6.6~15.4 lbs	354~355
	OV	Door Weight 6.6~11 lbs	356~357
	IF	Door Weight 3.3~14.3 lbs	358~359

LID STAYS

Picture	Item No.	Torque (in-lbs) or Door weight (lbs)	Page
	F-100, 150, 200, 250	-	360
	F-300	-	360
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	S-20	-	361
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LID STAYS

Picture	Item No.	Torque (in-lbs) or Door weight (lbs)	Page
	S-23		362
	S-24, S-25, S-27		362
	S-100T30	26.5 (in-lbs) / pc	363
	S-52T15	13.3 (in-lbs) / pc	363
	S-91, 92, 93	66~88 lbs	364
	HS	22~28.5 lbs	364
	L-100S	13.2 lbs	365
	L-140S	13.2 lbs	365
	L-S-BT	365	365
	L-SL140	33 lbs	366
	L-SL140-BT	366	366
	L-FS140	13.2 lbs	367
	L-FS140-BT	367	367
	L-200P	33 lbs	368
	L-200P-BT	368	368
	LK	5.5~9.4 lbs	369
	LB-215, 290	33 lbs / pc	369
	L	33 lbs / pc	370
	LB	44~66 lbs / pc	370
	LB-CV215A	33 lbs / pc	371
	LB-S	214~293 lbs / pc	372
	LBTS	154 lbs / pc	372
	L-FS350A	55 lbs / pc	373

Picture	Item No.	Torque (in-lbs) or Door weight (lbs)	Page
	U-3005	44 lbs / pc	373
	U-3031	15 lbs / pc	374
	LSP	66 lbs / pc	374

SPRING LOADED LID STAYS

Picture	Item No.	Torque (in-lbs)	Page
	S-YT	26~34 (in-lbs) / pc	375
	S-ATJ	78~104 (in-lbs) / pc	376
	S-ATJD	78~104 (in-lbs) / pc	376
	SATD	376.1	
	S-ATJS	78~104 (in-lbs) / pc	376.1
	S-AT01, S-AT02	78~104 (in-lbs) / pc	376.2
	S-AT01S, S-AT02S	78~104 (in-lbs) / pc	376.2

DOOR CLOSERS / DOOR HOLDERS

Picture	Item No.	Torque (in-lbs), Load (lbs), or Door Weight (lbs)	Page
	YMC	0.66~1.54 lbs	377
	LAD-ST	70.1~141.9 (in-lbs) / pc	378
	LAD-DP	-	379
	LAD-BKT	-	379
	LADH	Torque: 221~442 lbs	379.1
	YFN	Tensile: Max. 198~330 lbs Compression: Max 110~132 lbs	380
	YFNS, YFNS-300W	Tensile: Max. 198~330 lbs Compression: Max 110~132 lbs	380.1
	YA-0812, 1216	-	381
	YA-2020, 2020W	Tensile: Max. 330 lbs Compression: Max 132 lbs	382



## = Soft & Smooth Movement

Lapcon series products provide the smoothest opening and closing system imaginable, equipped with Sugatsune's built-in patented dampening device. As a Lapcon opens and closes, it moves with quiet assurance. Lapcon products also provide safety to your application with its revolutionary damper. Doors and lids will come down slowly and softly which eliminates slamming doors or smashed fingers.

LID SUPPORTS

LAPCON



### Downward-Opening Lids

Secretary Desks \* Keyboard Trays \* Media Cabinets

With catch in closed position:

- SDS-C100, SDS-C100TV
- NSDX-10, NSDX-10TV
- HDS-10

Without catch in closed position:

- SDS-100, SDS-100TV

Use with:

- SDH Drop Hinges (P.238, sold separately)
- ML Touch Latches (P.118~119, sold separately)



### Upward-Opening Lids

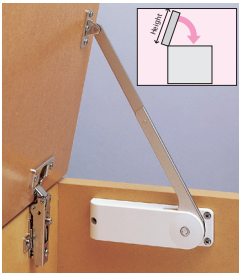
Upper Kitchen & Bath Cabinets \* Display Boxes

With catch in open position:

- SDS-C301
- NSDX-35
- HDS-30
- HDSN-30
- SLS-ELAN

Use with:

- 230 Concealed Hinges (P.298~303, sold separately)



### Top-Opening Lids

Toy Boxes & Chests \* Display Cases \* Access Panels

With catch in open position:

- SDS-210, SDS-C301
- NSDX-20
- HDS-20

Use with:

- 230 Concealed Hinges (P.298~303, sold separately)
- LSD Piano Hinges (P.224, sold separately)

## Torque Rating

$$\text{Door Weight} \times \text{Door Height} \div 2 = \text{Applied Torque}$$

### Approximate lid weight can be calculated as follows

1. Calculate area of lid:  
e.g) 28" x 12" = 336 sq. in.
2. Convert to square ft. if needed:  
e.g) 336 sq. in. divide by 144 = 2.33 sq. ft
3. Select density factor from table on the left:  
e.g) 3.5 lbs./sq. ft for 3/4" thick door (MDF)
4. Determine door weight:  
e.g) 2.33 sq. ft x 3.5 lbs./sq. ft = **8.16 lbs.**

Material, 3/4" (19 mm) thick	Density (lbs./sq.ft)
Particle board	3.0
MDF (Medium Density Fiberboard)	3.5
Plywood (Lumbercore)	2.5
Solid Wood (Oak, Beech, Ash, Birch, Elm, Maple)	2.7
Solid Wood (Red Pine, Red Cedar)	1.9

Above values are approximate. Please weigh lid for exact weight.

## Door Weight Range Table (Per pair, in lbs.)

Door Height (inches)	SDS-C100TV		SDS-C100TVZ		SDS-C100		SDS-C301N		NSDX-TV		NSDX	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
6	2.9	6.9	9.5	21.7	-	-	-	-	5.8	11.6	-	-
7	2.5	5.9	8.2	18.6	-	-	-	-	5.0	9.9	-	-
8	2.2	5.2	7.2	16.3	15.0	21.5	17.5	30.0	4.4	8.7	9.5	30.0
9	1.9	4.6	6.4	14.5	13.3	19.1	15.6	26.7	3.9	7.7	8.4	26.7
10	1.7	4.2	5.7	13.0	12.0	17.2	14.0	24.0	3.5	6.9	7.6	24.0
11	1.6	3.8	5.2	11.9	10.9	15.6	12.7	21.8	3.2	6.3	6.9	21.8
12	1.5	3.5	4.8	10.9	10.0	14.3	11.7	20.0	2.9	5.8	6.3	20.0
13	-	-	-	-	9.2	13.2	10.8	18.5	-	-	5.8	18.5
14	-	-	-	-	8.6	12.3	10.0	17.1	-	-	5.4	17.1
15	-	-	-	-	8.0	11.5	9.3	16.0	-	-	5.1	16.0
16	-	-	-	-	7.5	10.8	8.8	15.0	-	-	4.8	15.0
17	-	-	-	-	7.1	10.1	8.2	14.1	-	-	4.5	14.1
18	-	-	-	-	6.7	9.6	7.8	13.3	-	-	4.2	13.3
19	-	-	-	-	6.3	9.1	7.4	12.6	-	-	4.0	12.6
20	-	-	-	-	6.0	8.6	7.0	12.0	-	-	3.8	12.0
21	-	-	-	-	5.7	8.2	6.7	11.4	-	-	3.6	11.4
22	-	-	-	-	5.5	7.8	6.4	10.9	-	-	3.5	10.9
23	-	-	-	-	5.2	7.5	6.1	10.4	-	-	3.3	10.4
24	-	-	-	-	5.0	7.2	5.8	10.0	-	-	3.2	10.0
25	-	-	-	-	4.8	6.9	5.6	9.6	-	-	3.0	9.6
26	-	-	-	-	4.6	6.6	5.4	9.2	-	-	2.9	9.2

## Door Weight Range Table (Per pair, in lbs.)

Door Height (inches)	HDS-K		HDS-M		HDS-H		HDSN-K		HDSN-M		HDSN-H		HDSN-S	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
8	30.3	43.3	43.3	54.0	54.0	65.0	30.5	38.8	39.0	47.5	47.8	56.3	56.5	65.0
9	26.9	38.4	38.4	48.0	48.0	57.8	27.1	34.4	34.7	42.2	42.4	50.0	50.2	57.8
10	24.2	34.6	34.6	43.2	43.2	52.0	24.4	31.0	31.2	38.0	38.2	45.0	45.2	52.0
11	22.0	31.5	31.5	39.3	39.3	47.3	22.2	28.2	28.4	34.5	34.7	40.9	41.1	47.3
12	20.2	28.8	28.8	36.0	36.0	43.3	20.3	25.8	26.0	31.7	31.8	37.5	37.7	43.3
13	18.6	26.6	26.6	33.2	33.2	40.0	18.8	23.8	24.0	29.2	29.4	34.6	34.8	40.0
14	17.3	24.7	24.7	30.9	30.9	37.1	17.4	22.1	22.3	27.1	27.3	32.1	32.3	37.1
15	16.1	23.1	23.1	28.8	28.8	34.7	16.3	20.7	20.8	25.3	25.5	30.0	30.1	34.7
16	15.1	21.6	21.6	27.0	27.0	32.5	15.3	19.4	19.5	23.8	23.9	28.1	28.3	32.5
17	14.2	20.4	20.4	25.4	25.4	30.6	14.4	18.2	18.4	22.4	22.5	26.5	26.6	30.6
18	13.4	19.2	19.2	24.0	24.0	28.9	13.6	17.2	17.3	21.1	21.2	25.0	25.1	28.9
19	12.7	18.2	18.2	22.7	22.7	27.4	12.8	16.3	16.4	20.0	20.1	23.7	23.8	27.4
20	12.1	17.3	17.3	21.6	21.6	26.0	12.2	15.5	15.6	19.0	19.1	22.5	22.6	26.0
21	11.5	16.5	16.5	20.6	20.6	24.8	11.6	14.8	14.9	18.1	18.2	21.4	21.5	24.8
22	11.0	15.7	15.7	19.6	19.6	23.6	11.1	14.1	14.2	17.3	17.4	20.5	20.5	23.6
23	10.5	15.0	15.0	18.8	18.8	22.6	10.6	13.5	13.6	16.5	16.6	19.6	19.7	22.6
24	10.1	14.4	14.4	18.0	18.0	21.7	10.2	12.9	13.0	15.8	15.9	18.8	18.8	21.7
25	9.7	13.8	13.8	17.3	17.3	20.8	9.8	12.4	12.5	15.2	15.3	18.0	18.1	20.8
26	9.3	13.3	13.3	16.6	16.6	20.0	9.4	11.9	12.0	14.6	14.7	17.3	17.4	20.0
27	9.0	12.8	12.8	16.0	16.0	19.3	9.0	11.5	11.6	14.1	14.1	16.7	16.7	19.3
28	8.6	12.4	12.4	15.4	15.4	18.6	8.7	11.1	11.1	13.6	13.6	16.1	16.1	18.6

Door Height (inches)	SLS-ELAN M		SLS-ELAN H		EZS-ELAN LL		EZS-ELAN LM		EZS-ELAN MM		EZS-ELAN MH		EZS-ELAN HH	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
12	16.0	21.7	21.7	29.0	-	-	-	-	-	-	-	-	-	-
13	14.8	20.0	20.0	26.8	-	-	-	-	-	-	-	-	-	-
14	13.7	18.6	18.6	24.9	-	-	-	-	-	-	-	-	-	-
15	12.8	17.3	17.3	23.2	-	-	-	-	-	-	-	-	-	-
16	12.0	16.3	16.3	21.8	-	-	-	-	-	-	-	-	-	-
17	11.3	15.3	15.3	20.5	-	-	-	-	-	-	-	-	-	-
18	10.7	14.4	14.4	19.3	-	-	-	-	-	-	-	-	-	-
19	10.1	13.7	13.7	18.3	-	-	-	-	-	-	-	-	-	-
20	9.6	13.0	13.0	17.4	-	-	-	-	-	-	-	-	-	-
21	9.1	12.4	12.4	16.6	10.0	14.0	13.8	18.3	18.1	22.6	21.6	25.3	25.1	30.8
22	8.7	11.8	11.8	15.8	9.7	13.5	13.3	17.6	17.4	21.7	20.7	24.2	24.1	29.5
23	8.3	11.3	11.3	15.1	9.4	13.0	12.8	16.9	16.7	20.8	19.9	23.3	23.1	28.3
24	8.0	10.8	10.8	14.5	9.1	12.5	12.4	16.3	16.1	20.1	19.2	22.4	22.2	27.2
25	7.7	10.4	10.4	13.9	8.8	12.1	12.0	15.7	15.5	19.3	18.5	21.6	21.4	26.2
26	7.4	10.0	10.0	13.4	8.5	11.7	11.6	15.2	15.0	18.7	17.9	20.9	20.7	25.3
27	7.1	9.6	9.6	12.9	8.3	11.4	11.2	14.7	14.6	18.1	17.3	20.2	20.0	24.4
28	6.9	9.3	9.3	12.4	8.1	11.0	10.9	14.3	14.1	17.5	16.7	19.5	19.4	23.6
29	6.6	9.0	9.0	12.0	7.9	10.7	10.6	13.8	13.7	17.0	16.2	18.9	18.8	22.9
30	6.4	8.7	8.7	11.6	7.7	10.5	10.3	13.5	13.3	16.5	15.8	18.4	18.2	22.2
31	6.2	8.4	8.4	11.2	-	-	-	-	-	-	-	-	-	-
32	6.0	8.1	8.1	10.9	-	-	-	-	-	-	-	-	-	-

\*Note: -Door weight range is calculated based on center of gravity point at the middle of door.  
 -Door weight range for HDSN is for opening angle 90°.

# LIFT-ASSIST LID STAY with soft close (top opening)

- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19).
- The lift-assist function allows for light opening of doors.
- The free-stop function enables doors to hold in position (30°-Max. ).
- The soft-close function makes doors close gently (0°-30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- Closing speed of doors is adjustable.

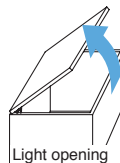


### Components for a single door

	Aileron	1
	Mounting plate for Aileron	1
	Olympia Concealed Hinge	2
	Mounting plate for Olympia	1
	Screws	16
Olympia 8	Aileron 6	Aileron 2

#### Lift-assist

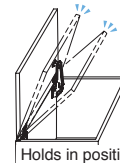
Allows for light opening of doors



Light opening

#### Free stop

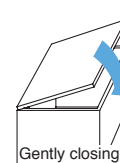
Enables doors to hold in position (30°-Max.).



Holds in position

#### Soft close

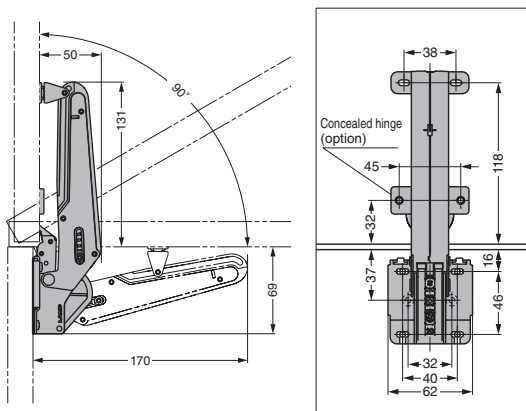
Built-in damper makes doors close slowly.



Gently closing

## THE OLYMPIA HINGE

With 5-level damper function, part of the Aileron soft-opening system.



Damper power adjustment lever

5-speed adjustable soft close.  
The first Sugatsune concealed hinge ever built with Lapcon technology.



Item No.	Torque (kg-cm)	Weight (g)	Box (pcs)	Carton (pcs)
ARN-2-M-S	40.8~61.2 (35.4~53.1 lbs-in)	703	1	10
ARN-2-H-S	61.2~81.6 (53.1~70.8 lbs-in)			

Material	Finish/Color
Steel, Zinc Alloy	Nickel
Plastic	Grey

# LIFT-ASSIST LID STAY with soft close (upward opening)



ARN-3

LID SUPPORTS

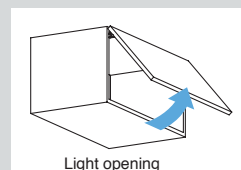
LID STAYS



- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19).
- The lift-assist function allows for light opening of doors.
- The free-stop function enables doors to hold in position (30°-Max. ).
- The soft-close function makes doors close gently (0°-30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- Closing speed of doors is adjustable.

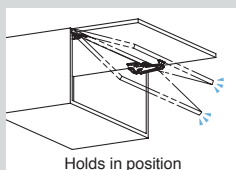
**Lift-assist**

Allows for light opening of doors



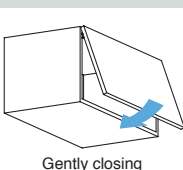
**Free stop**

Enables doors to hold in position (30°-Max.).



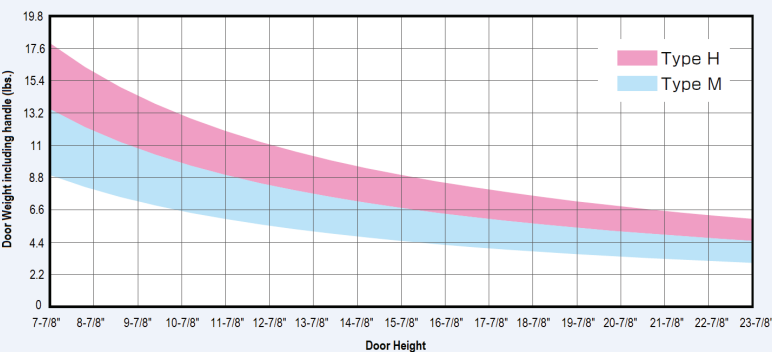
**Soft close**

Built-in damper makes doors close slowly.



Components for a single door

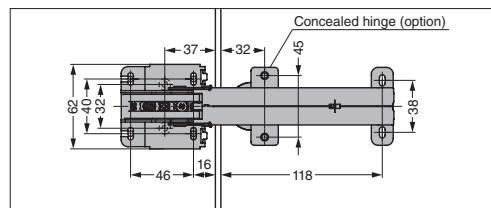
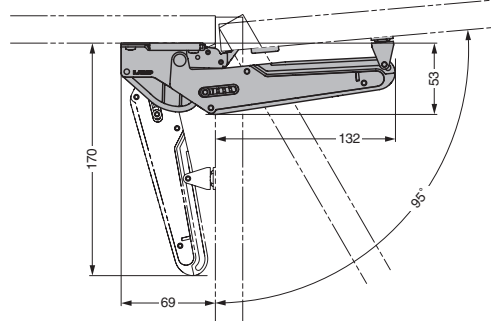
	Aileron	1
	Mounting plate for Aileron	1
	Olympia Concealed Hinge	2
	Mounting plate for Olympia	1
	Screws	16
	Olympia 8	
	Aileron 6	
	Aileron 2	



Refer to the graph above as a guide for model selection. For use with doors outside of the scope of this graph, use the calculation below. Door weight must include all attached accessories.

Torque (lbs • inch) = Door height (inches) × 0.5 × weight (lbs).

Torque Range (lbs-in)	Type	Number of AILERON
35.4~53.1	M	1 pc
53.1~70.8	H	



Item No.	Torque (kg-cm)	Weight (g)	Box (pcs)	Carton (pcs)	Material	Finish/Color
ARN-3-M-S	40.8~61.2 (35.4~53.1 lbs-in)	703	1	10	Steel, Zinc Alloy	Nickel
ARN-3-H-S	61.2~81.6 (53.1~70.8 lbs-in)				Plastic	Grey

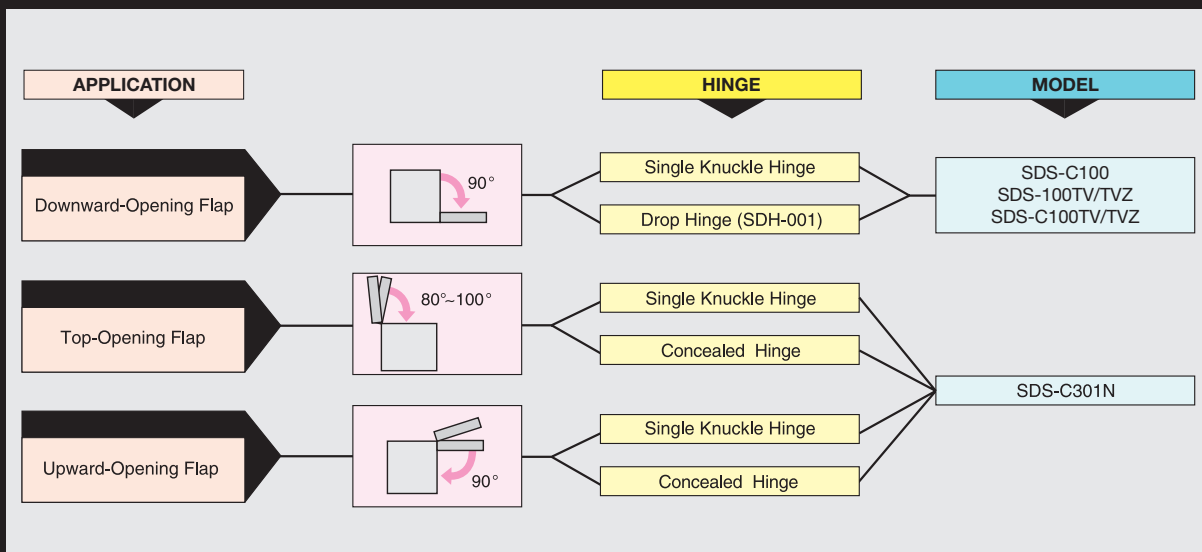
# SDS

## SOFT-DOWN STAY



- One-way rotary damper offers smooth and soft downward movement.
- Installation is quick and easy.
- Recognized by LGA for 30,000 cycles.
- Compact design.
- Non-handed.

Designed to operate at room temperature 0°~40°C (32°~104°F).





# SOFT-DOWN STAY



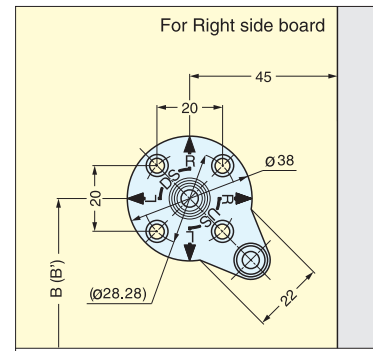
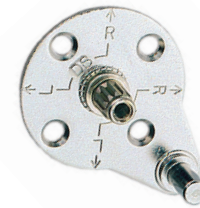
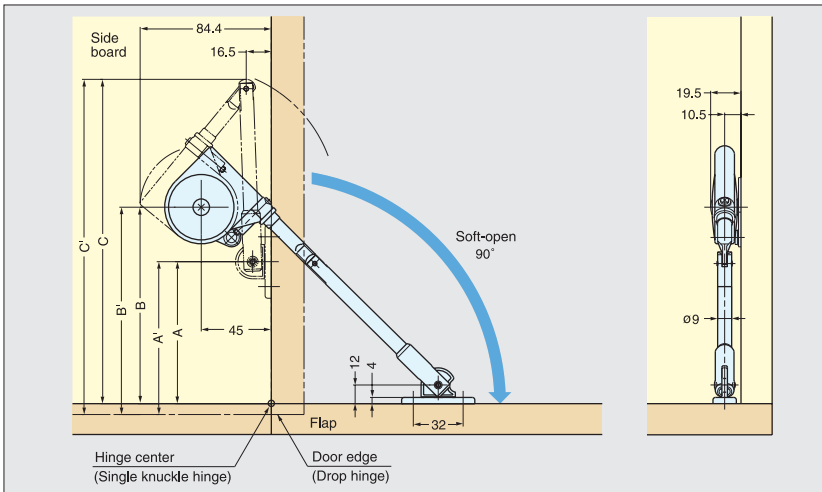
# SDS-C100

LID SUPPORTS

SOFT-DOWN STAYS



- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- SDS-C100 (with catch) is designed to hold door in closed position.
- SDS-100 does not have a catch feature. Designed to be used with a magnetic catch or touch latch.
- Non-handed.
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight  
Per Piece: 35~50 kg·cm (30~43 lbs·inch)  
Per Pair: 70~100 kg·cm (60~86 lbs·inch)
- Recommended Door Thickness: 20 mm (25/32")
- Short-arm version SDS-100TV (or C100TV) for smaller door height available.



Hinge Type	A	A'	B	B'	C	C'
Single Knuckle Hinge	100 (3-15/16")	-	135 (5-5/16")	-	218 (8-37/64")	-
Drop Hinge*	-	107 (4-7/32")	-	142 (5-19/32")	-	225 (8-55/64")

\*Overlay: 16 mm (5/8")

Item No.	Color	Weight (g)	Box (pcs)	Carton (pcs)	Material	Finish/Color
SDS-C100/WHT	White	167	20	100	Steel, Zinc Alloy	Nickel
SDS-C100/BLK	Black				Plastic	Black, White

# SOFT-DOWN STAY



# SDS-C301N

LID SUPPORTS

SOFT-DOWN STAYS



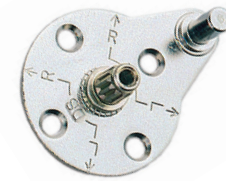
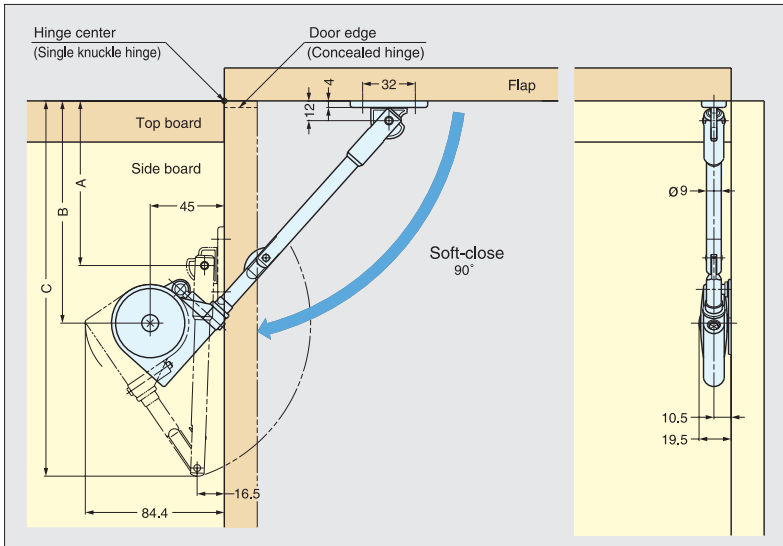
- For UPWARD-OPENING FLAP DOOR used with concealed, piano or butt hinges.
- SDS-C301N is designed to hold door in closed and opened position.
- Non-handed.
- Torque Calculation:  
 Torque = Door Height × 1/2 × Door Weight  
 Per Piece: 40~70 kg·cm (35~60 lbs·inch)  
 Per Pair: 80~140 kg·cm (70~120 lbs·inch)
- Recommended Door Thickness : 20 mm (25/32")



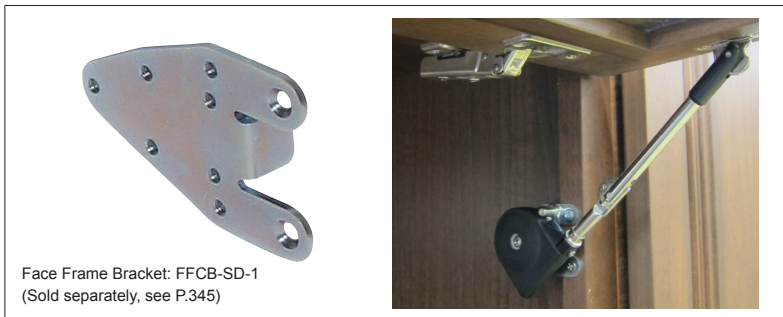
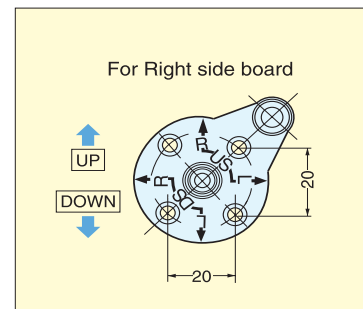
White



Black



Mounting Plate SDS-A (Included)



Face Frame Bracket: FFCB-SD-1 (Sold separately, see P.345)

Hinge Type	Coverage	A	B	C
Concealed Hinge	Full overlay (3/4")	108 ( 4-1/4" )	143 ( 5-5/8" )	232 ( 9-9/64" )
Single Knuckle Hinge	Overlay	100 ( 3-15/16" )	135 ( 5-5/16" )	223 ( 8-25/32" )
	Inset	97 ( 3-13/16" )	132 ( 5-13/64" )	220 ( 8-21/32" )

Item No.	Color	Weight (g)	Box (pcs)	Carton (pcs)
SDS-C301N/WHT	White	165	20	100
SDS-C301N/BLK	Black			

Material	Finish/Color
Steel, Zinc Alloy	Nickel
Plastic	Black, White

# SOFT-DOWN STAY

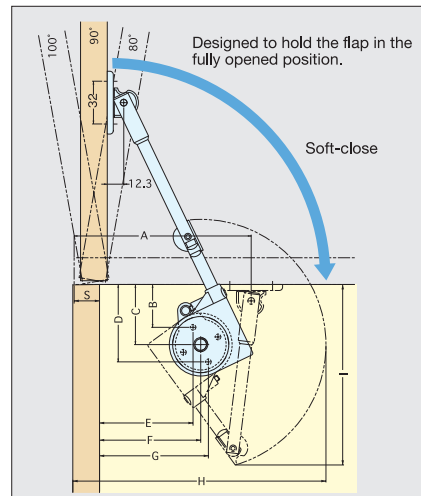


# SDS-C301N

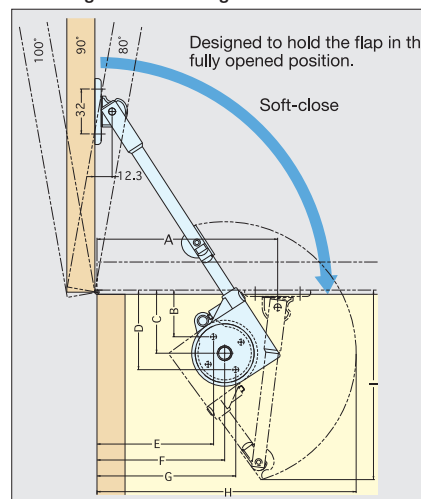


- For TOP-OPENING FLAP DOOR used with concealed, piano or butt hinges.
- Designed to hold door in fully opened position.
- Non-handed.
- Available in black or white.

With Concealed Hinge



With Single Knuckle Hinge



Concealed Hinge

Opening angle	A	B	C	D	E	F	G	S=Overlay Coverage	
								H	I
80°	141.0	31.9	45	58.1	98.2-S	103.5-S	108.8-S	197.5	134.8
90°	132.5	32.3		57.7	88.7-S	95.0-S	101.3-S	189.0	
100°	126.5	32.9		57.1	81.2-S	88.5-S	95.8-S	182.5	

Single Knuckle Hinge/Overlay Type

Opening angle	A	B	C	D	E	F	G	H	I
									I
80°	138.5	32.6	45	57.4	94.1	101	107.9	195	134.8
90°	128.5	33.2		56.8	83.1	91	98.9	185	
100°	121.5	33.9		56.1	75.2	84	92.8	178	

Single Knuckle Hinge/Inset Type

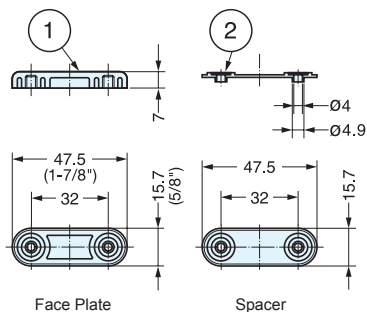
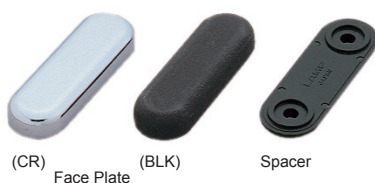
Opening angle	A	B	C	D	E	F	G	H	I
									I
80°	129.0	31.7	45	58.3	86.7	91.5	96.3	185.5	134.8
90°	118.5	32.0		58.0	75.3	81.0	86.7	175.0	
100°	111.0	32.5		57.5	67.0	73.5	80.0	167.5	

Material	Finish/Color
Steel, Zinc Alloy	Nickel
Plastic	Black, White

# SDS FACE PLATE



# SDS-50G



- Cover plate for glass door applications.
- To be used with SDS HDS, or NSDX soft-down stays.
- Screws and spacer included.

No.	Part Name	Material	Finish/Color
①	Face Plate	Zinc Alloy	Chrome (CR)
			Black (BLK)
②	Spacer	ABS	Black

Item No.	Weight (g)	Box	Carton
SDS-50G/BLK	25	100	400
SDS-50G/CR			



# SOFT-DOWN STAY (SHORT-ARM)

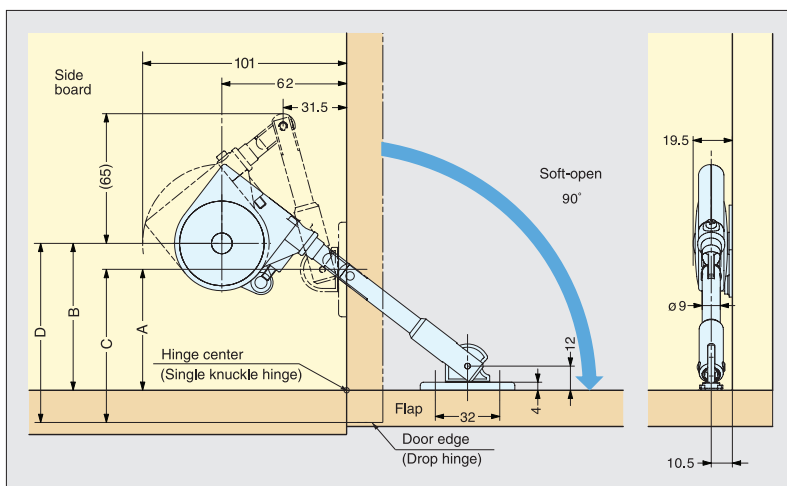
# SDS-100-TV/TVZ

LID SUPPORTS

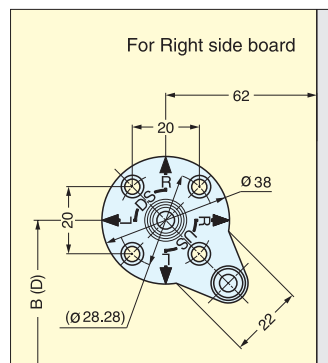
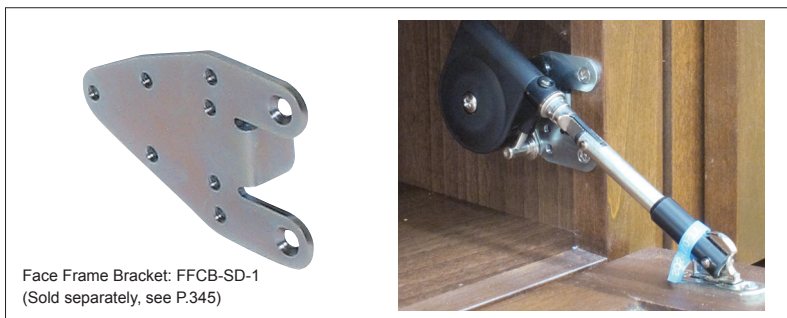
SOFT-DOWN STAYS



- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- Short arm type designed for short door applications.
- 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 × 1/2 × Door Weight



Mounting Plate SDS-A  
(Included)



Hinge Type	A	B	C	D
Single Knuckle Hinge	60	73	-	-
Drop Hinge	-	-	49+S	62+S

Material	Finish/Color
Steel, Zinc Alloy	Nickel
Plastic	Black, White

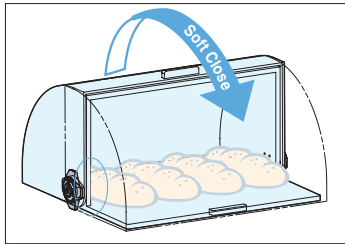
S=Overlay Coverage in case of drop hinge

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

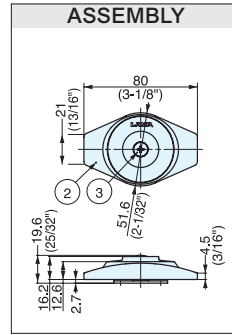
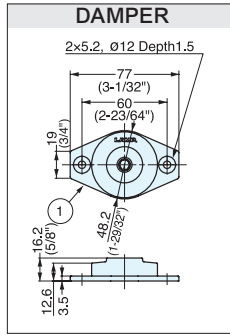
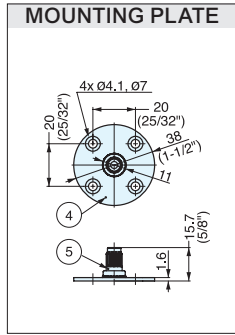
# DISK DAMPER



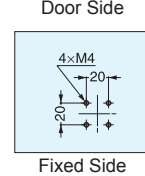
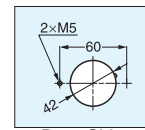
# UDD



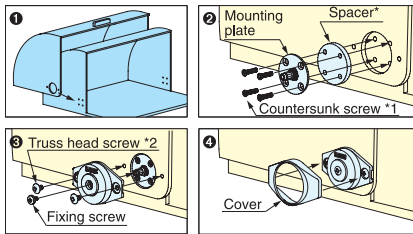
- Disc-shaped damper gently closes lid without slamming shut.
- Narrow profile for unobtrusive installation.
- Suitable for food service environments.
- Successfully passed 30,000 open/close private cycle test.
- Operating temperature: 5-35 °C (41-95°F)
- Spacer and installation screws are not included, and vary with application. Please contact customer service for more information.



Cut-Out Dimension

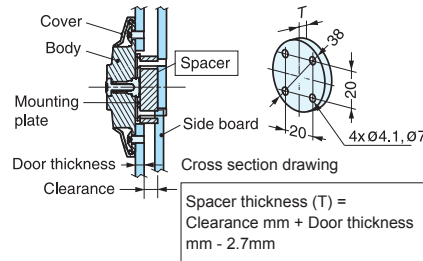


### How to Install

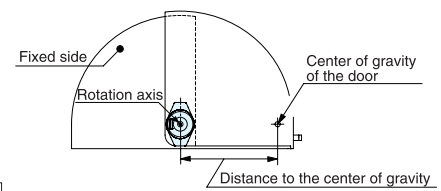


\*1, \*2 screws and Spacer are not included.

### Spacer



### Damper Selection



\*Torque = Distance to the center of gravity x 1/2 x Door weight

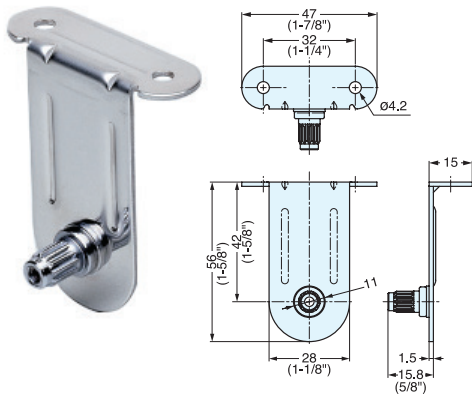
Item No.	Handing	Torque (kgf·cm)	Weight (g)	Box Qty (pcs)
UDD-S-L	Left	5.1~10.2	90	20
UDD-S-R	Right	( 4.4~8.9 lbs·in )		
UDD-M-L	Left	10.2~20.4		
UDD-M-R	Right	( 8.9~17.7 lbs·in )		
UDD-H-L	Left	20.4~30.6		
UDD-H-R	Right	( 17.7~26.6 lbs·in )		

No.	Part Name	Material	Finish
①	Main Body	ABS Plastic	Light Grey
②	Cover		
③	Screws	Steel	Nickel
④	Mounting Plate		Zinc
⑤	Axis		

# UDD DISK DAMPER BRACKET

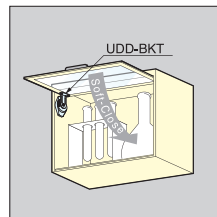


# UDD-BKT

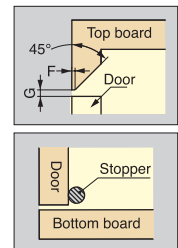
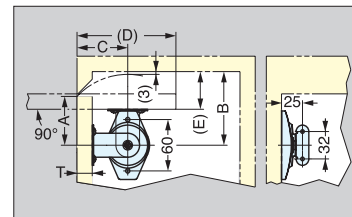


- Bracket for disk damper UDD for upward-opening door.
- Catch is needed for holding door in opened position (not included).
- Use SDS-50G face plate for glass/acrylic door.
- Stop required to prevent over rotation (not included).

### Application Example



### Cut-Out Dimension



Item No.	Material	Finish	T: Door Thickness	A	B	C	D	E	F	G
UDD-BKT	304 Stainless Steel	Plain	5	46	70	49	95	26	1	3
			15	54	82	57	111	40	2	4
			18	57	86	60	117	44	3	5

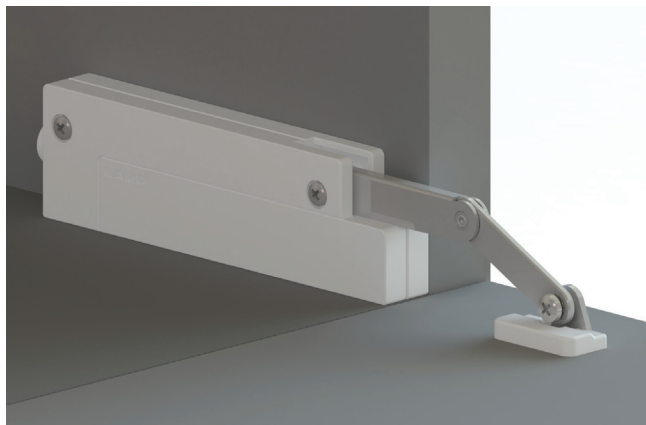


# COMPACT SOFT-DOWN STAY

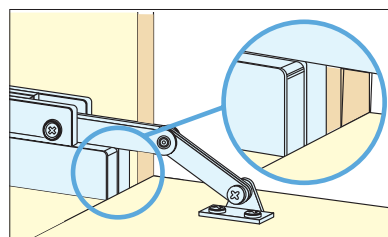
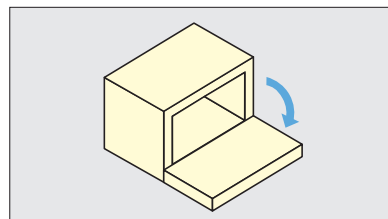
# CSD-10-TV

LID SUPPORTS

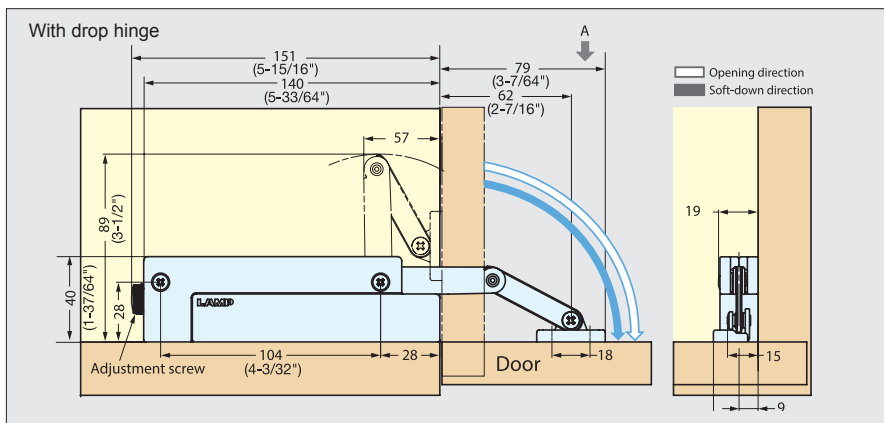
COMPACT SOFT-DOWN STAYS



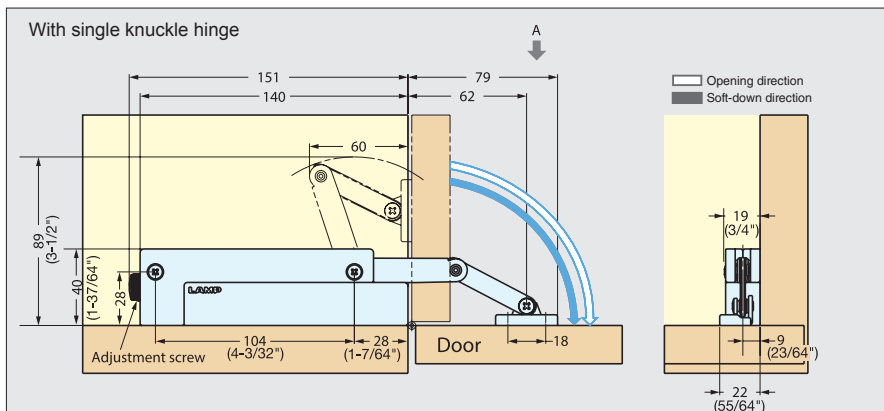
- Soft-down stay for (DOWNWARD-OPENING FLAP DOORS) used with piano, butt, or drop hinge (SDH-001, SDH-P, P.238).
- Easy to install by aligning the body to the edge of a cabinet.
- Designed for smaller cabinet doors in media centers or TV consoles.
- Opening speed adjustable. The adjustment screw located on back for clean appearance.
- Easy to close.
- Holds lid in closed position.
- Torque Calculation:  
 $Torque = Door\ Height \times 1/2 \times Door\ Weight$   
 L-Type (Light Duty): 10.2~20.4 kg·cm (8.8~17.7 lbs·in)  
 M-Type (Medium Duty): 20.4~30.6 kg·cm (17.7~26.6 lbs·in)  
 H-Type (Heavy Duty): 30.6~40.8 kg·cm (26.6~35.4 lbs·in)



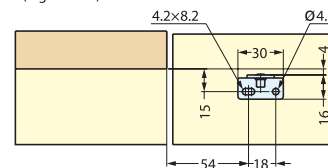
### Installation



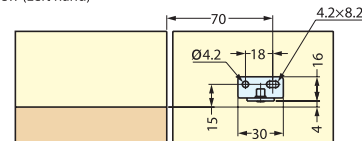
### Installation of Mounting Plate



A-view (Right hand)



A-view (Left hand)



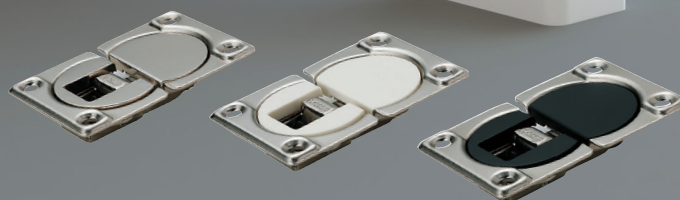
Item No.	Type	Torque (kg·cm)	Weight (g)	Box (pcs)	Carton (pcs)
CSD-10-TV-L-WT	Light Duty	10.2~20.4 (8.8~17.7 lbs·in)	125	10	100
CSD-10-TV-L-BL					
CSD-10-TV-M-WT	Medium Duty	20.4~30.6 (17.7~26.6 lbs·in)	130		
CSD-10-TV-M-BL					
CSD-10-TV-H-WT	Heavy Duty	30.6~40.8 (26.6~35.4 lbs·in)	130		
CSD-10-TV-H-BL					

Material	Finish/Color
Steel	Nickel
Plastic	White/Black

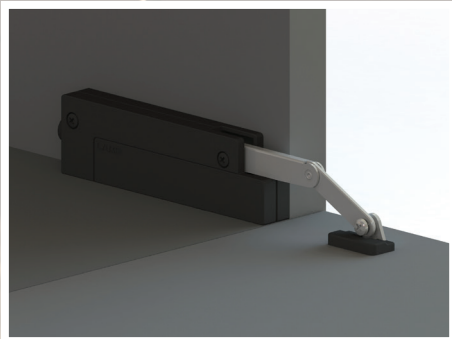
# Soft-Down Lid Stay

CSD-10TV

Smooth, soft-closing movement for downward opening flap doors. Available for light, medium or heavyweight cabinet doors.



\*Used with piano, butt, or drop hinge (P.238).

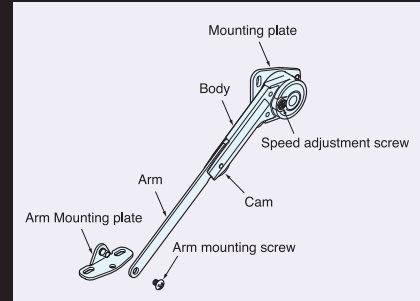
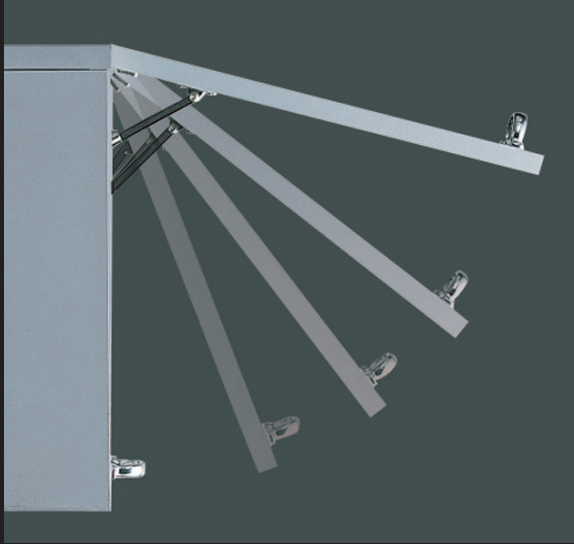


# NSDX

## ADJUSTABLE SOFT-DOWN STAY

- Keeps flap/lid from slamming down.
- Recognized by LGA for 30,000 cycles.
- Soft-down speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed

Designed to operate at room temperature  
0°~40°C (32°~104°F).



APPLICATION	MOUNTING SIDE	MODEL
Downward-Opening Flap 	Right	NSDX-10RK NSDX-10RK/TV
	Left	NSDX-10LK NSDX-10LK/TV
Top-Opening Flap 	Right	NSDX-20RK
	Left	NSDX-20LK
Upward-Opening Flap 	Right	NSDX-35RK
	Left	NSDX-35LK

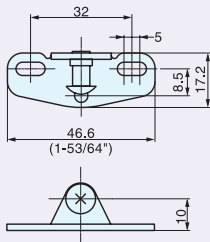
### Arm Mounting Plates

All NSDX series lid stays include the standard model for wooden doors (NSDX-SZ).

Optional models available for aluminum frame doors (NSDX-AZ) and glass doors (NSDX-GZ).

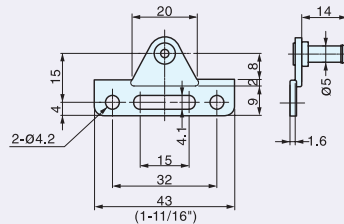
#### NSDX-SZ

(Included)  
Mounting Plate for wooden door, screw-on type.



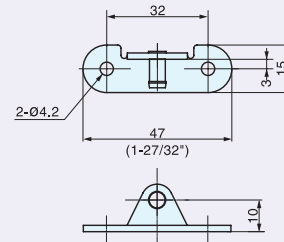
#### NSDX-AZ

(Sold separately)  
Mounting Plate for aluminum frame door, clip-on type.



#### NSDX-GZ

(Sold separately)  
Mounting Plate for glass door, clip-on type. Face Plate SDS-50G available as option.



\*Clip-on type does not screw on, simply insert the pin on mounting plate to the Arm when installing.



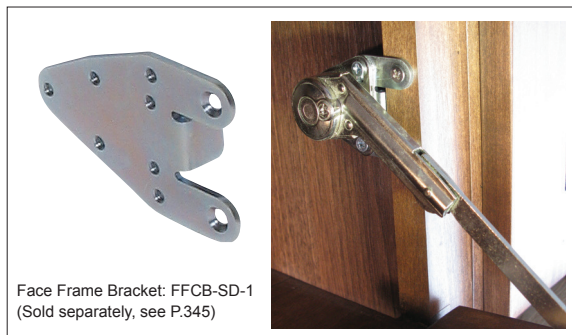
# ADJUSTABLE SOFT-DOWN STAY



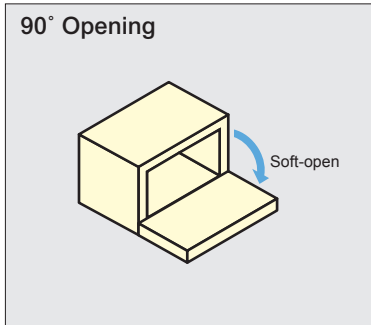
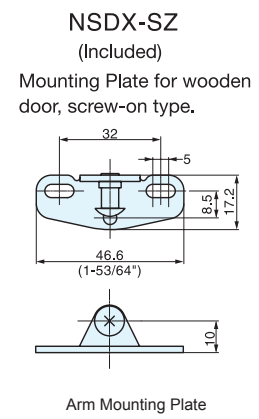
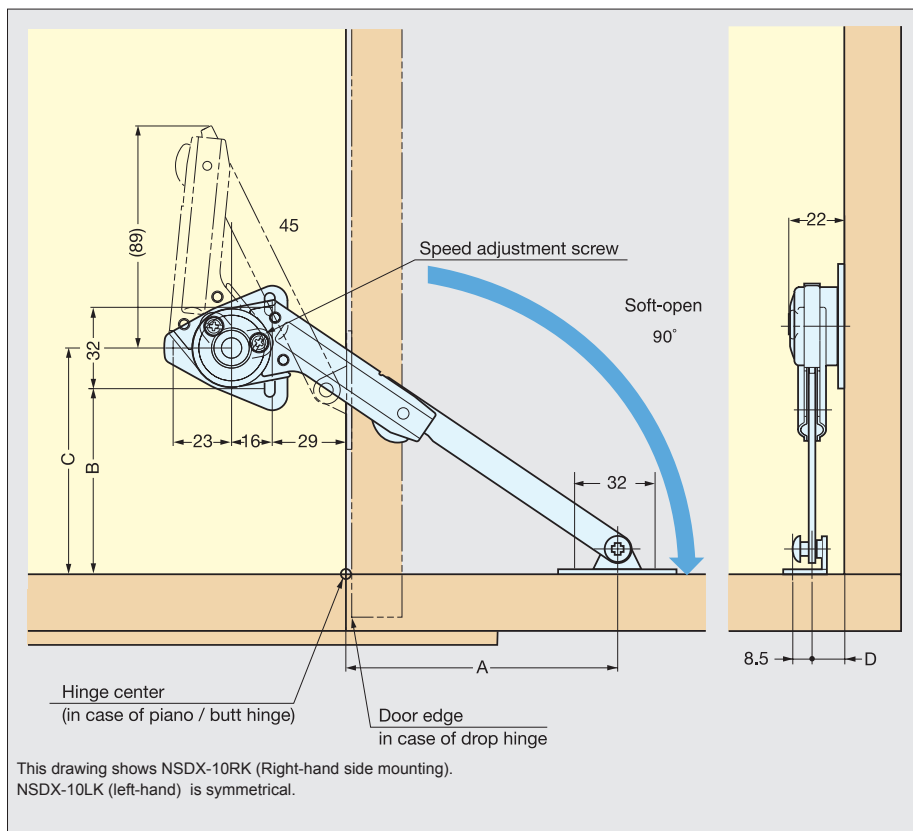
## NSDX-10



- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop Hinges (SDH-001, SDH-P, P.238).
- NSDX-10 is designed to hold door in closed position.
- Speed adjustment screw located on front for easy adjustment.
- Torque Calculation:  
 $\text{Torque} = \text{Door Height} \times 1/2 \times \text{Door Weight}$   
 Per Piece: 20~70 kg-cm (19~60 lbs-inch)  
 Per Pair: 40~140 kg-cm (38~120 lbs-inch)



Face Frame Bracket: FFCB-SD-1  
(Sold separately, see P.345)



Hinge Type	A	B	C	D
☆ Drop Hinge (SDH-001)	97	91	107	11
Piano/Butt Hinge	90	99	115	

☆ In case overlay 16 mm

Item No.	Weight (g)	Box (pcs)	Carton (pcs)
NSDX-10RK Right	181	20	80
NSDX-10LK Left			

Material	Finish
Zinc Alloy	Nickel
Steel	

# ADJUSTABLE SOFT-DOWN STAY



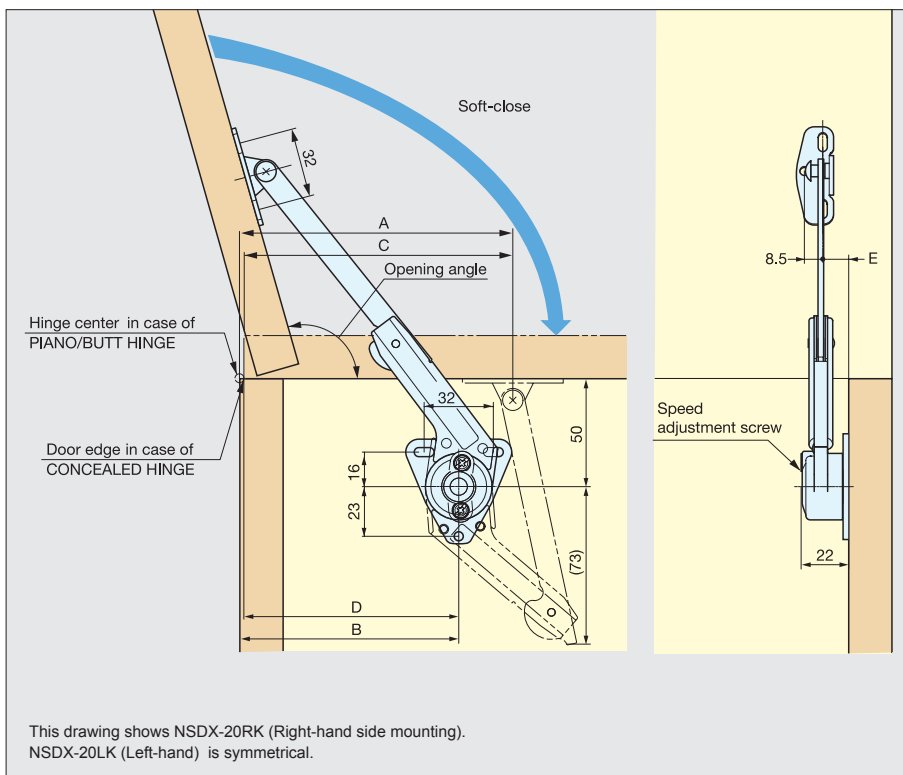
## NSDX-20

LID SUPPORTS

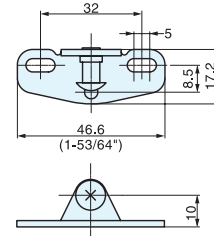
ADJUSTABLE SOFT-DOWN STAYS



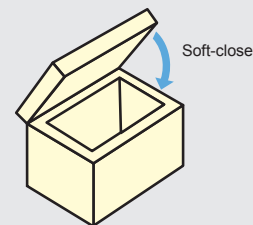
- For TOP-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- Opening angle 70° or 105°.
- NSDX-20 is designed to hold door in fully opened position.
- Speed adjustment screw located on front for easy adjustment.
- Torque Calculation :  
 Torque = Door Height × 1/2 × Door Weight  
 Per Piece : 20~70 kg·cm (19~60 lbs·inch)  
 Per Pair : 40~140 kg·cm (38~120 lbs·inch)



**NSDX-SZ**  
(Included)  
Mounting Plate for wooden door, screw-on type.



**70° or 105° Opening**



Material		Finish		
Zinc Alloy		Nickel		
Steel		Nickel		
Item No.	Weight (g)	Box (pcs)	Carton (pcs)	
NSDX-20RK	181	20	80	
NSDX-20LK			80	

Opening Angle	Hinge Type	A	B	C	D	E
70°	Concealed Hinge	-	-	126	101	11
	Piano/Butt Hinge	125	100	-	-	
105°	Concealed Hinge	-	-	103	78	
	Piano/Butt Hinge	97	72	-	-	

# ADJUSTABLE SOFT-DOWN STAY



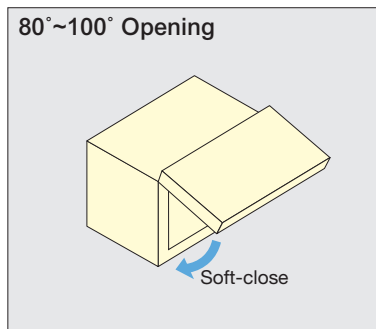
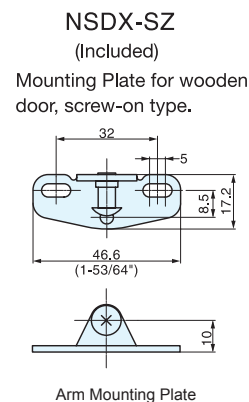
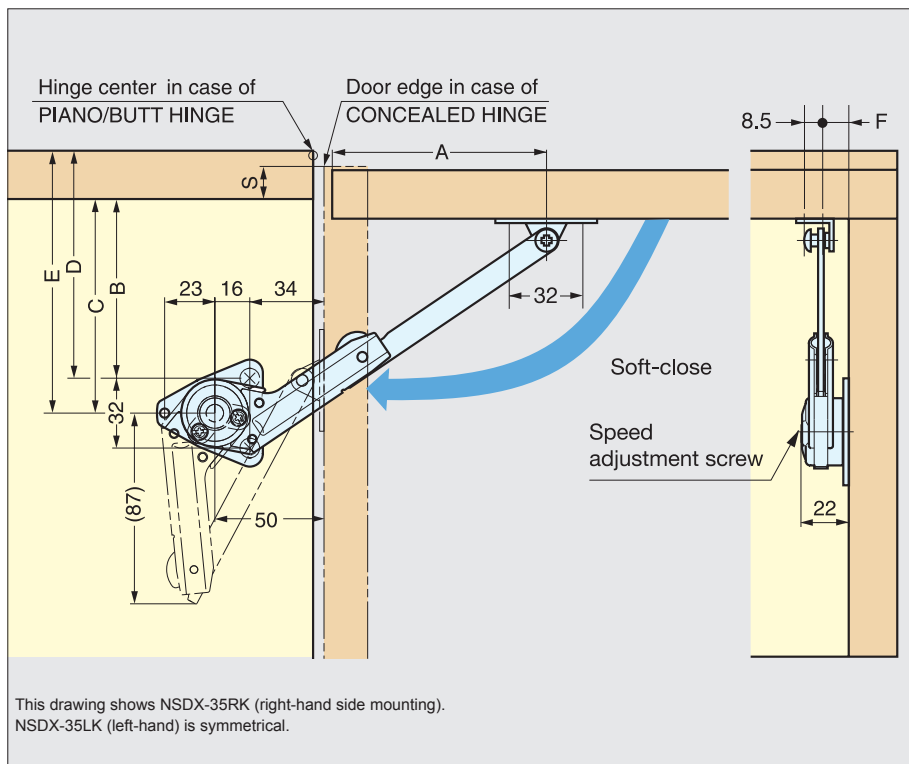
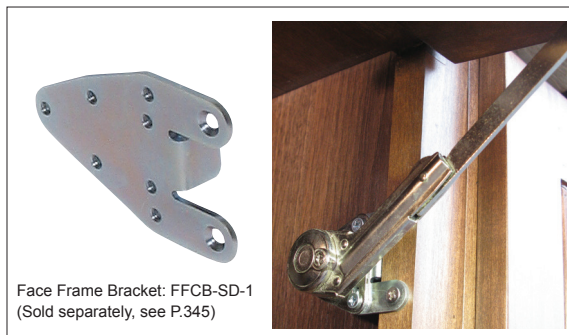
## NSDX-35

LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAYS



- For UPWARD-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- Opening angle 80°, 90° or 100°.
- NSDX-35 is designed to hold door in fully opened position.
- Speed adjustment screw located on front for easy adjustment.
- Two stop version (holds door at 65° and 90°) is also available.
- Torque Calculation :  
Torque = Door Height × 1/2 × Door Weight  
Per Piece: 20~70 kg·cm (19~60 lbs·inch)  
Per Pair: 40~140 kg·cm (38~120 lbs·inch)



Note: "S" dimension is the overlay coverage for concealed hinge(s).

Material		Finish		
Zinc Alloy		Nickel		
Steel				
Item No.	Weight (g)	Box (pcs)	Carton (pcs)	
NSDX-35RK	181	20	80	
NSDX-35LK				

Opening Angle	Hinge Type	A	B	C	D	E	F
80°	Concealed Hinge	106.0	105.0-S	121.0-S	-	-	11
	Piano/Butt Hinge	100.0	-	-	99.0	115.0	
90°	Concealed Hinge	98.0	97.0-S	113.0-S	-	-	
	Piano/Butt Hinge	91.5	-	-	90.5	106.5	
100°	Concealed Hinge	92.5	91.5-S	107.5-S	-	-	
	Piano/Butt Hinge	85.0	-	-	84.0	100.0	



ADJUSTABLE SOFT-DOWN STAY (SHORT-ARM)

NSDX-10(R/L)K/TV

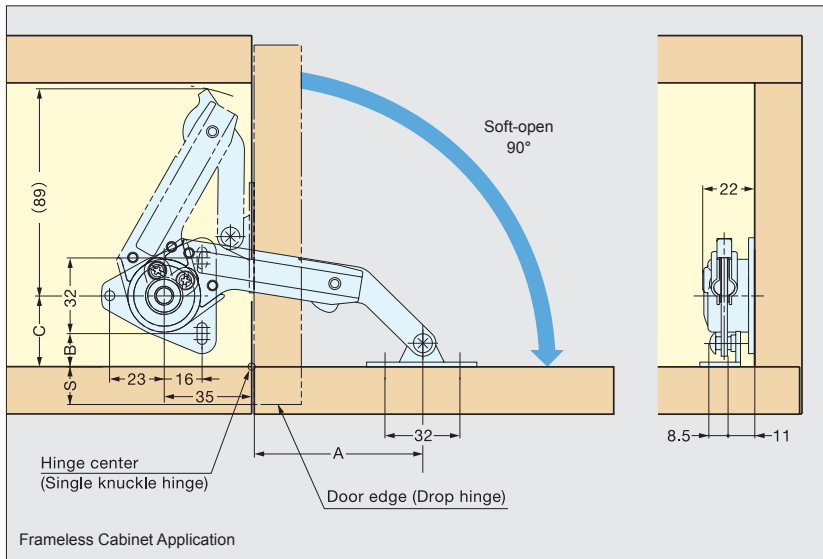
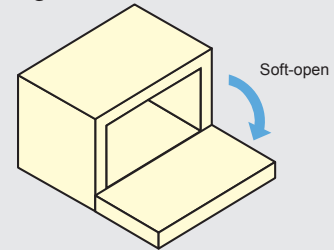
LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAYS



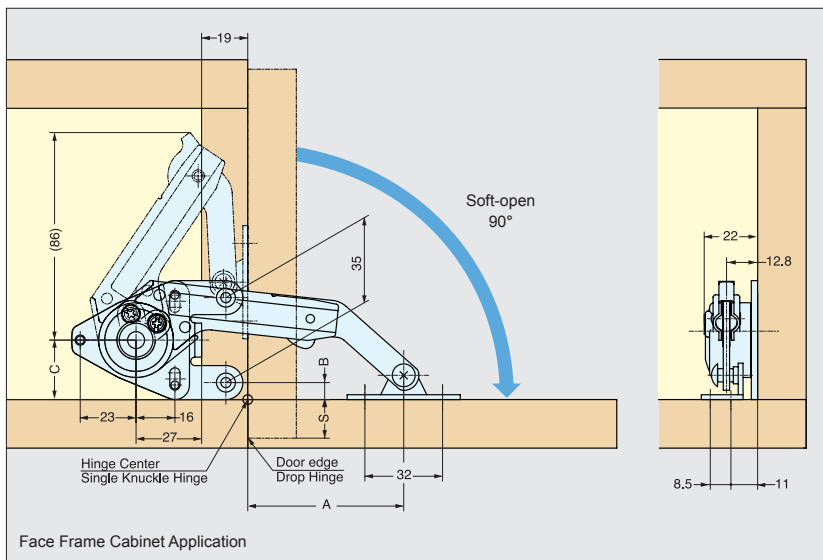
- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- Short arm type designed for small door application.
- Torque Calculation :  
 Torque = Door Height × 1/2 × Door Weight  
 Per Piece : 10~20 kgf·cm (8.7~17.4 lbs·in)  
 Per Pair : 20~40 kgf·cm (17.4~34.7 lbs·in)

90° Opening



Hinge Type	A	B	C
Drop Hinge	58+S (2-9/32"+S)	14 (9/16")	30 (1-3/16")
Single Knuckle Hinge	71 (2-13/16")	27 (1-1/16")	43 (1-11/16")

"S" dimension is the overlay coverage for drop hinge(s).



Face Frame Bracket: FFCB-SD-1  
(Sold separately, see P.345)



Hinge Type	A	B	C
Drop Hinge (SDH-001)	48+S (1-7/8"+S)	74 (9/32")	24.5 (31/32")
Single Knuckle Hinge	32 (2-7/16")	20.5 (13/16")	38 (1-1/2")

"S" dimension is the overlay coverage for drop hinge(s).

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

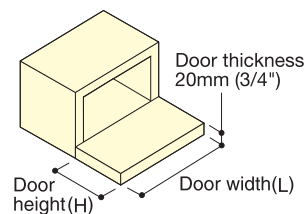
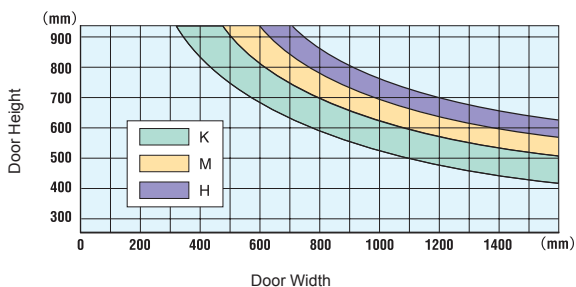
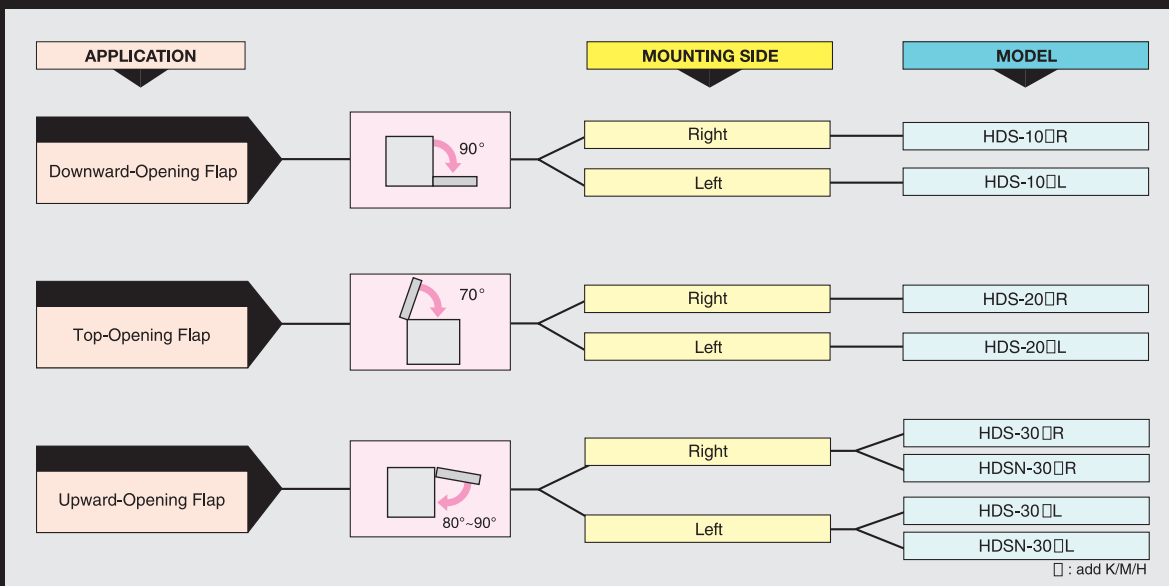
# HDS/HDSN



## HEAVY DUTY SOFT-DOWN STAY

- Keeps flap/lid from slamming down.
- Recognized by LGA for 90,000 cycles.
- Used in pairs.

Designed to operate at room temperature 5°~35°C (41°~95°F).



For the right type selection, refer to the graph and the illustration.

# HEAVY DUTY SOFT-DOWN STAY



## HDS-10

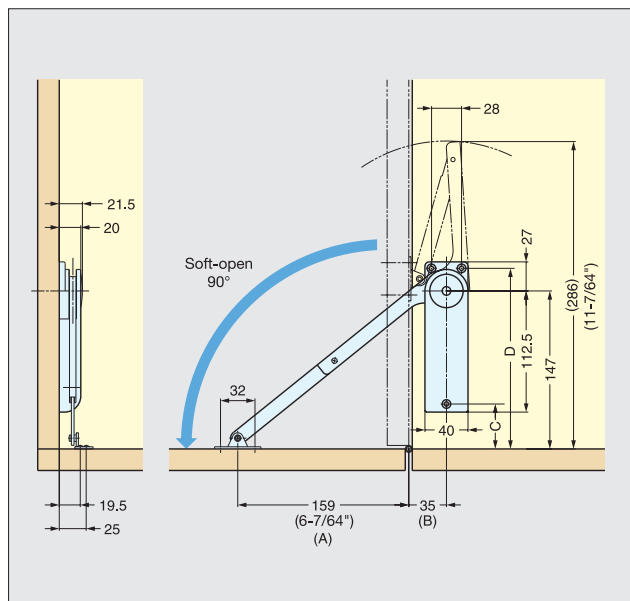
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS

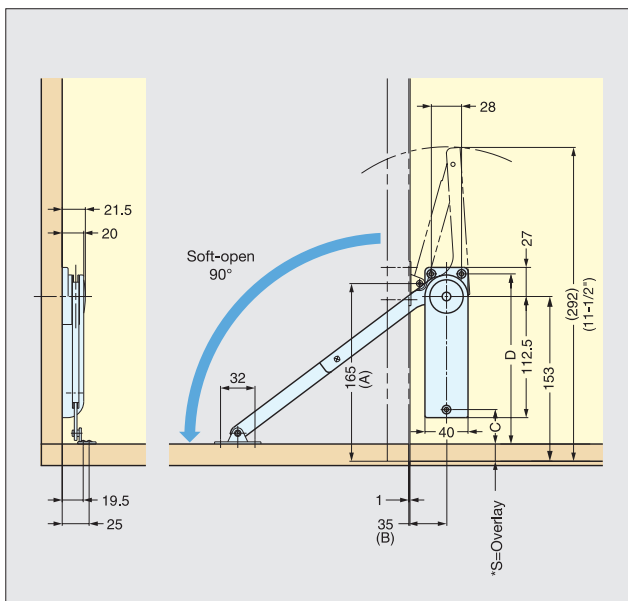


- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- HDS-10 is designed to hold door in closed and opened position.
- Used in pairs
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):  
140~200 kg·cm (121~173 lbs·inch)/pair
- M-Type (Medium Duty):  
200~250 kg·cm (173~216 lbs·inch)/pair
- H-Type (Heavy Duty):  
250~300 kg·cm (216~260 lbs·inch)/pair

With Piano/Butt Hinge



With Drop Hinge (SDH-001)



\*S=Overlay coverage in case of drop hinge

Item No.		Type	Torque (kg·cm/pair)	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right					
HDS-10KL	HDS-10KR	Light Duty	140~200	290	40	200
HDS-10ML	HDS-10MR	Medium Duty	200~250			
HDS-10HL	HDS-10HR	Heavy Duty	250~300			

Hinge Type	A	B	C	D
Drop Hinge	165	35	48-S	174-S
Piano/Butt Hinge	159		42	168
Material		Finish/Color		
Steel		Nickel		
Plastic		Black, White		

# SELF CLOSE STAY

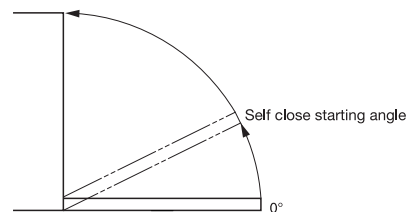


# HDS-10S



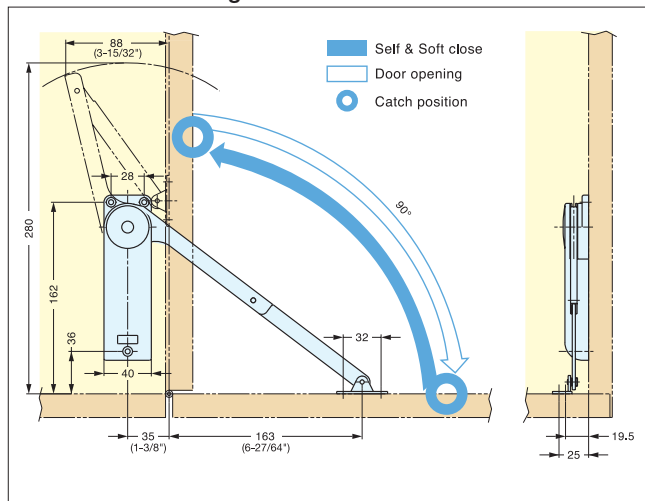
- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- When pushed to close, HDS-10S is designed to self close and soft close
- Used in pairs
- Torque Calculation:  
 $Torque = Door\ Height \times 1/2 \times Door\ Weight$   
 K-Type: 60~95 kgf.cm (52~82 lbs. Inch)/ pair  
 M-Type: 95~130 kgf.cm (82~112 lbs. Inch)/ pair  
 H-Type: 110~160 kgf.cm (95~138 lbs. Inch)/ pair  
 S-Type: 140~180 kgf.cm (121~156 lbs. Inch)/ pair

### Self close starting angle

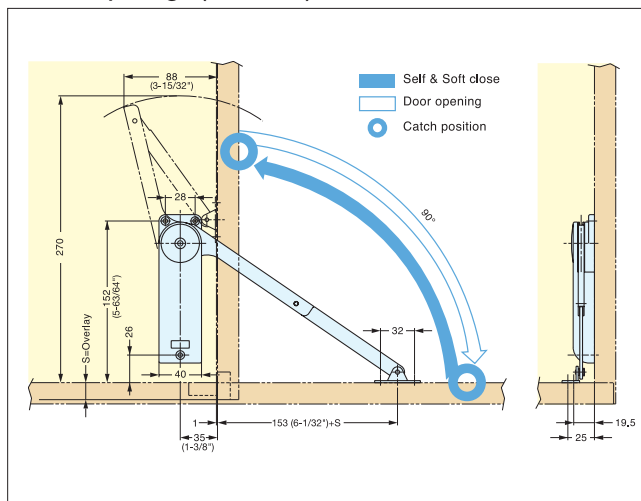


Type	Self close starting angle
K	5°~35°
M	5°~20°
H	
S	5°~15°

### With Piano/Butt Hinge



### With Drop Hinge (SDH-001)



Item No.		Type	Torque per 2 pieces (kgf·cm)
Left	Right		
HDS-10S-KL	HDS-10S-KR	Light Duty	60~95 ( 52.2~82.6 lbs·in)
HDS-10S-ML	HDS-10S-MR	Medium Duty	95~130 ( 82.6~113.0 lbs·in)
HDS-10S-HL	HDS-10S-HR	Heavy Duty	110~160 ( 95.7~139.0 lbs·in)
HDS-10S-SL	HDS-10S-SR	Super Heavy Duty	140~180 (121.7~156.5 lbs·in)

No.	Part Name	Material	Finish
①	Body	ABS plastic	Black/White
②	Arm	Steel	Nickel
③	Mounting Plate		

# HEAVY DUTY SOFT-DOWN STAY



# HDS-20

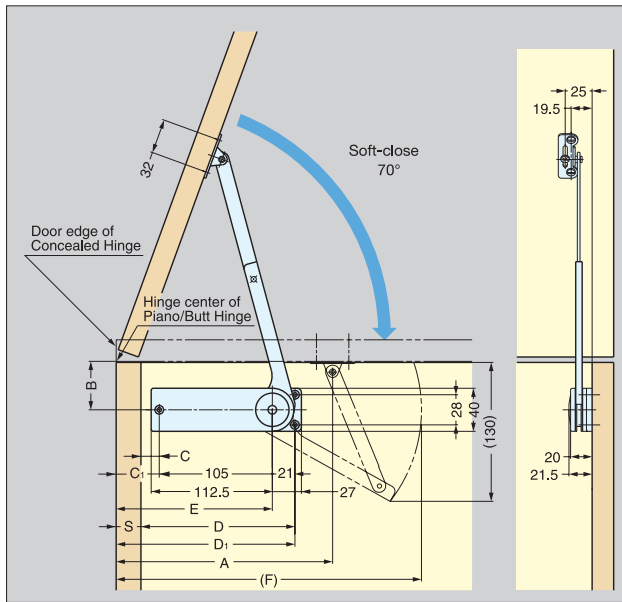
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS



- For TOP-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- Used in pairs.
- HDS-20 is designed to hold door in fully opened position.
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):  
140~200 kg·cm (121~173 lbs·inch)/pair
- M-Type (Medium Duty):  
200~250 kg·cm (173~216 lbs·inch)/pair
- H-Type (Heavy Duty):  
250~300 kg·cm (216~260 lbs·inch)/pair

### Overlay Use

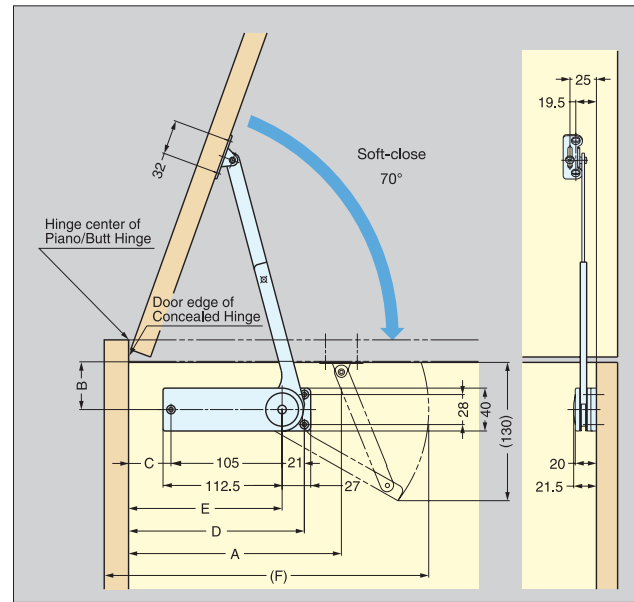


### Overlay Use

Hinge Type	A	B	C	D	C <sub>1</sub>	D <sub>1</sub>	E	F
Concealed Hinge	198.5	45	42-S	168-S	-	-	145.0	283.5
Piano/Butt Hinge	198.5	45	-	-	41	167	142.5	281.0

S=Overlay coverage in case of concealed hinge (mm)

### Inset Use



### Inset Use

Hinge Type	A	B	C	D	E	F
Concealed Hinge	203	45	46	172	151	286
Piano/Butt Hinge	190	45	33	159	138	273

Item No.		Type	Torque (kg·cm/pair)	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right					
HDS-20KL	HDS-20KR	Light Duty	140~200	280	40	200
HDS-20ML	HDS-20MR	Medium Duty	200~250	290		
HDS-20HL	HDS-20HR	Heavy Duty	250~300	300		

Material	Finish/Color
Steel	Nickel
Plastic	Black, White



# SELF OPENING STAY



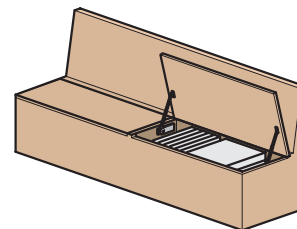
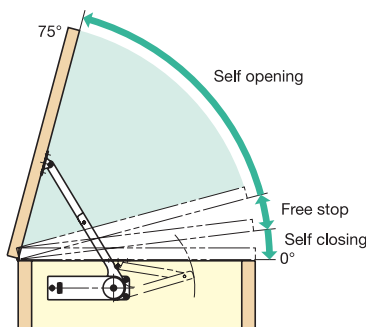
# HDS-20S

LID SUPPORTS

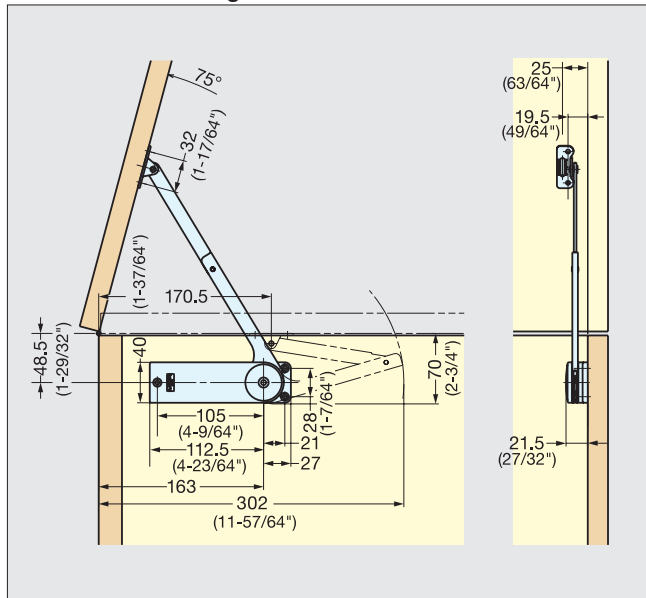
SELF OPENING STAYS



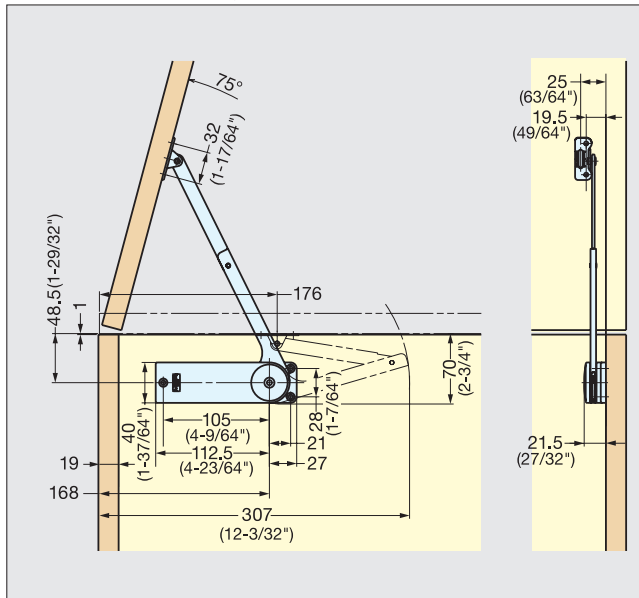
- Lid will self open past the free stop angle.
- For TOP-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- HDS-20S is designed to hold door in fully opened position.
- Used in pairs.
- Torque Calculation:  
 $Torque = Door\ Height \times 1/2 \times Door\ Weight$   
 H-Type : 70~110 kg·cm (61~95 lbs-in)/pair  
 S-Type : 111~150 kg·cm (96~130 lbs-in)/pair



## With Piano/Butt Hinge



## With Concealed Hinge



Item No.		Type	Torque (kg·cm/pair)	Weight (g)	Box (pcs)	Carton (pcs)		
Left	Right						Material	Finish/Color
HDS-20S/HL-BL	HDS-20S/HR-BL	H	70~110 kg·cm (61~95.45 lbs-in)	300	40	200	Steel	Nickel
HDS-20S/HL-WT	HDS-20S/HR-WT						Plastic	Black/White
HDS-20S/SL-BL	HDS-20S/SR-BL	S	111~150 kg·cm (96~130 lbs-in)	300	40	200	Steel	Nickel
HDS-20S/SL-WT	HDS-20S/SR-WT						Plastic	Black/White

# HEAVY DUTY SOFT-DOWN STAY



# HDS-30

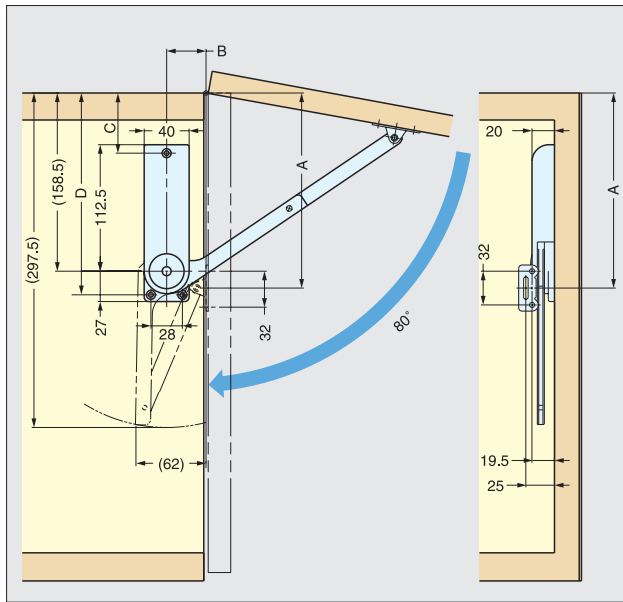
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS

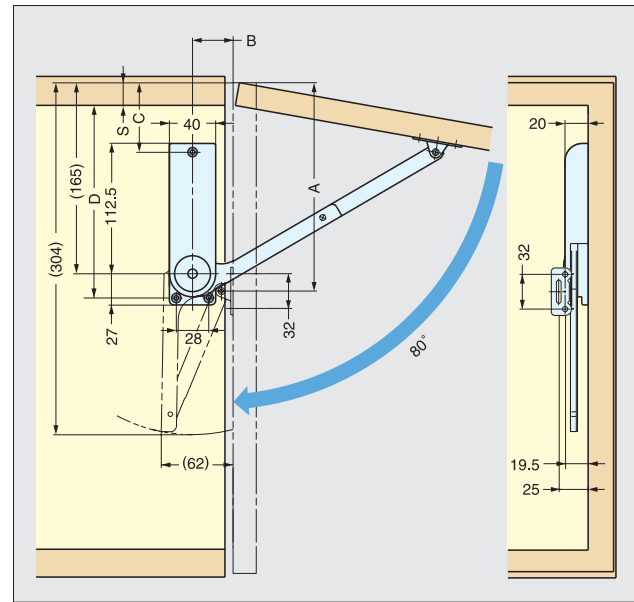


- For UPWARD-OPENING FLAP DOOR used with piano, butt or concealed Hinges.
- Used in pairs.
- HDS-30 is designed to securely latch a flap closed and hold it in the fully opened position.
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):  
140~200 kg·cm (121~173 lbs·inch)/pair
- M-Type (Medium Duty):  
200~250 kg·cm (173~216 lbs·inch)/pair
- H-Type (Heavy Duty):  
250~300 kg·cm (216~260 lbs·inch)/pair

With Single Knuckle Hinge



With Concealed Hinge



Overlay Use

Hinge Type	A	B	C	D
Concealed Hinge	180	35	60.0-S	186.0-S
Piano/Butt Hinge	173.5	35	53.5	179.5

S=Overlay coverage by concealed hinge

Item No.		Type	Torque (kg·cm/pair)	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right					
HDS-30KL	HDS-30KR	Light Duty	140~200	270	40	200
HDS-30ML	HDS-30MR	Medium Duty	200~250	290		
HDS-30HL	HDS-30HR	Heavy Duty	250~300	300		

Material	Finish/Color
Steel	Nickel
Plastic	Black, White

# HEAVY DUTY SOFT-DOWN STAY



## HDSN-30

LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS



230-26/19T  
230-P4W-32T  
(Sold separately)

HDSN-30KR/WHT

- For UPWARD-OPENING FLAP DOOR used with concealed hinges.
- Used in pairs.
- HDSN-30 is designed to hold door in closed and opened position.
- Arm bracket for wood and aluminum frame available. Specify when ordering.
- Torque Calculation:  
Torque = Door Height × 1/2 × Door Weight  
In case of opening angle 90°  
K-Type (Light Duty):  
140~179 kg·cm (122~155 lbs-inch)/pair  
M-Type (Medium Duty):  
180~219 kg·cm (156~190 lbs-inch)/pair  
H-Type (Heavy Duty):  
220~259 kg·cm (191~225 lbs-inch)/pair  
S-Type (Super Heavy Duty):  
260~300 kg·cm (226~260 lbs-inch)/pair

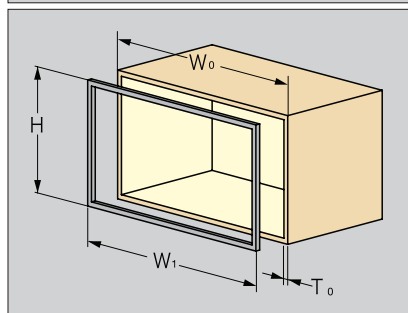
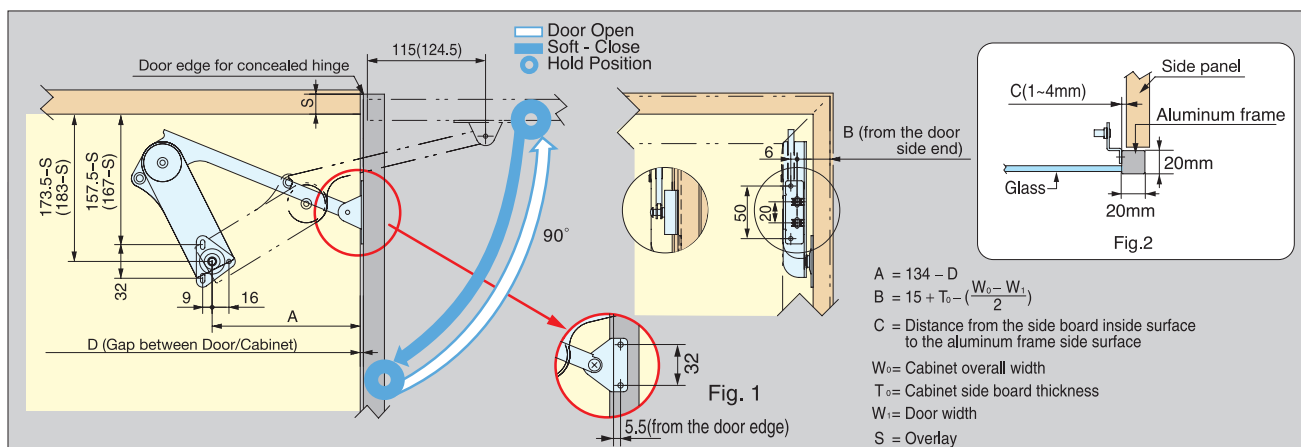
Material	Finish/Color
Steel	Nickel
Plastic	Light Grey

Dimensions are for 90° opening, solid wood or 45 mm width aluminum frame door.

For 80° opening, please use the figures in ( ).

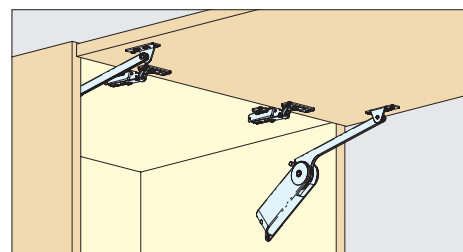
Fig.1 and Fig. 2 show the dimensions for 20 mm width aluminum frame door using mounting plate HDSN-AZ.

Recommended concealed hinge is overlay/105° opening/free swing type.



Calculate the door torque according to the following formula considering the weight and the height of the applicable door.

Door height (cm) × 1/2 × Door weight (kg) = Door torque (kg·cm)



Arm Mounting Plate (Sold separately, please specify when ordering.)

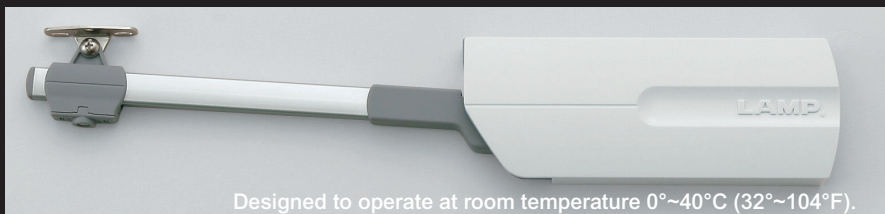
Item No.	Applicable Door
HDSN-SZ	45mm width aluminum frame door or wood door
HDSN-AZ	20mm width aluminum frame door

Item No.		Type	Door torque		Box (pcs)	Carton (pcs)
Left	Right		Opening angle 90°	Opening angle 80°		
HDSN-30KL	HDSN-30KR	K	140~179 kg·cm ( 122~155 lbs-in )	140~199 kg·cm ( 122~173 lbs-in )	40	200
HDSN-30ML	HDSN-30MR	M	180~219 kg·cm ( 156~190 lbs-in )	200~249 kg·cm ( 174~216 lbs-in )		
HDSN-30HL	HDSN-30HR	H	220~259 kg·cm ( 191~225 lbs-in )	250~299 kg·cm ( 217~260 lbs-in )		
HDSN-30SL	HDSN-30SR	S	260~300 kg·cm ( 226~260 lbs-in )	300~350 kg·cm ( 261~303 lbs-in )		

# SLS-ELAN

## EASY LIFT-UP STAY

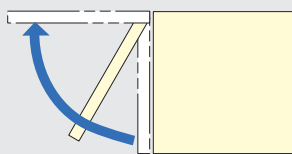
- Lift-assist mechanism for extra light-opening with free stop feature.
- Offers smooth and soft downward movement preventing lids or doors from slamming shut.
- Easy to install by aligning the body to the edge of cabinet.
- Recognized by LGA for 40,000 cycles.



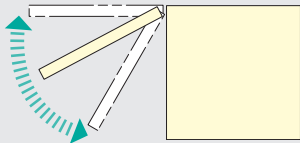
Designed to operate at room temperature 0°~40°C (32°~104°F).

### ■ 3 functions on 1 stay

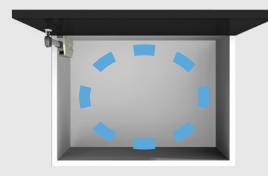
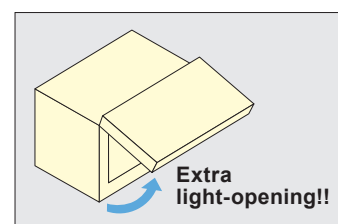
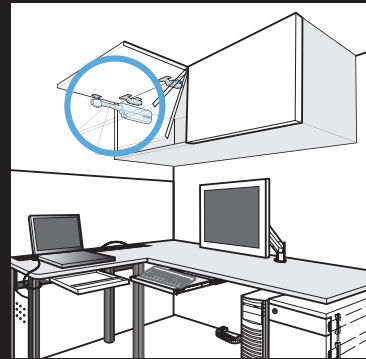
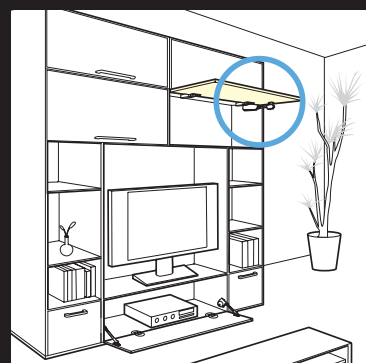
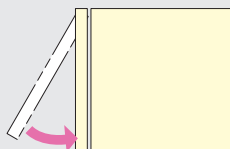
#### 1. Lift-assist



#### 2. Free stop



#### 3. Soft-close



Slim design & installed location maximizes space inside of cabinet

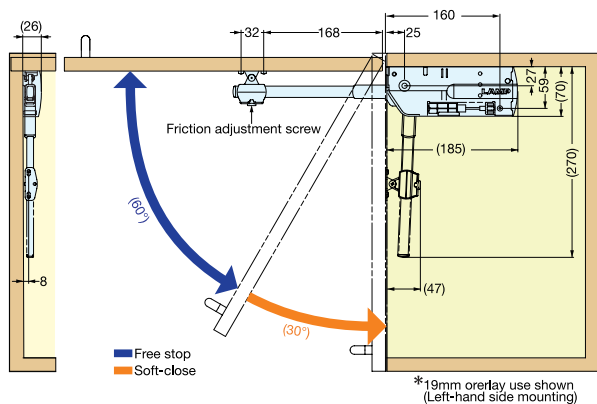
# EASY LIFT-UP STAY



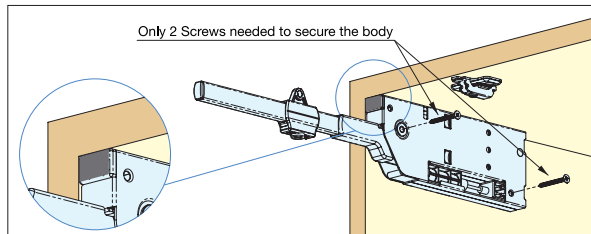
# SLS-ELAN



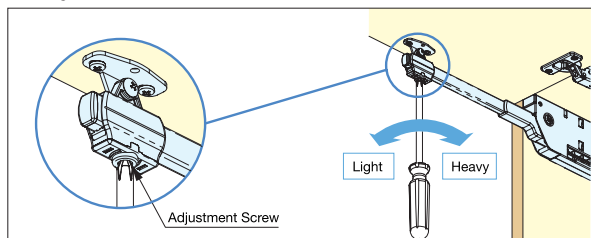
- For UPWARD-OPENING FLAP DOOR used with concealed, piano, butt, or drop hinges.
- Designed to provide effortless opening and hold door in closed and opened position.
- Damper equipped for soft & silent closing.
- Optional bracket for aluminum frame door available.
- Single or pair use allows wide range of door sizes/weights.
- Handed left or right.



### 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.

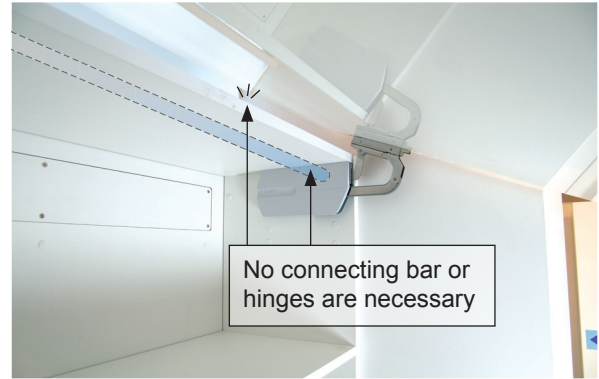


Item No.	Type	Torque per piece	Material	Finish/Color	Weight (g)	Box (pcs)	Carton (pcs)
SLS-ELAN-MR	Right	55~75 kg·cm (48~65 lbs·in)	• Aluminum • Steel • ABS	• Anodized • Galvanized • Light Grey	600	20	100
SLS-ELAN-ML	Left						
SLS-ELAN-HR	Right	75~100 kg·cm (65~87 lbs·in)					
SLS-ELAN-HL	Left						

# LIFT ASSIST MECHANISM

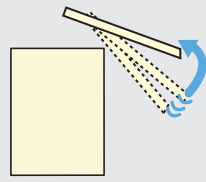


- Lapcon stay for UPWARD-OPENING FLAP DOORS.
- Door opens over the cabinet.  
(Space of 4-5/16" is required over cabinet)
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Slim design and installed location maximizes space inside of cabinet.
- Simple installation by aligning body to edge of cabinet.
- No hinges/connecting bar needed.
- Door height adjustable. (Horizontal  $\pm 1/16"$ , Vertical  $\pm 1/16"$ )
- Successfully passed 30,000 open/close private cycle tests.
- Recommended Door Size and Weight:
  - Width, Max. 1200 mm (47-1/4")
  - Height, 500~750 mm (19-11/16"~29-1/2")/Door
  - Weight, 5~12.5 kg (11~27.5 lbs)/Door
- Sold per pair.

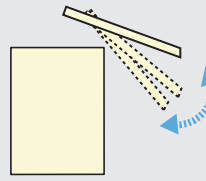


## 3 functions on 1 stay

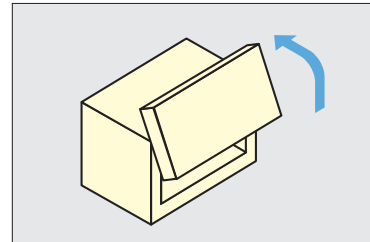
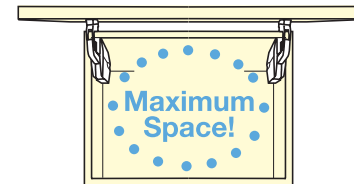
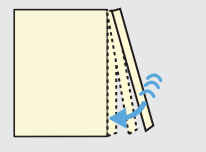
### 1. Lift-assist



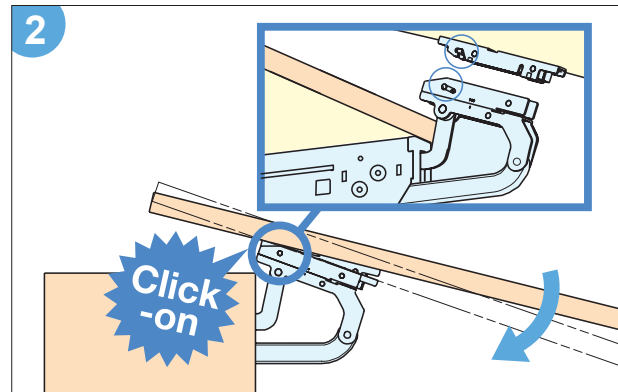
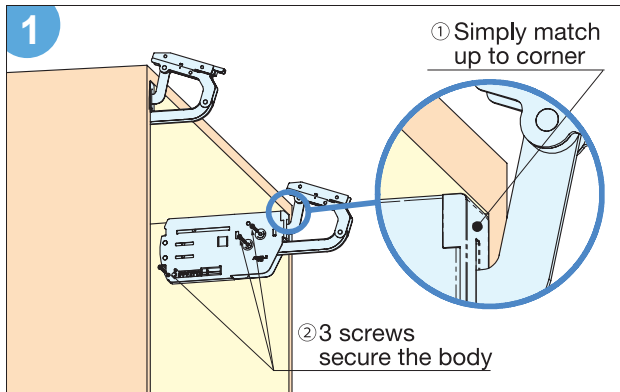
### 2. Free stop

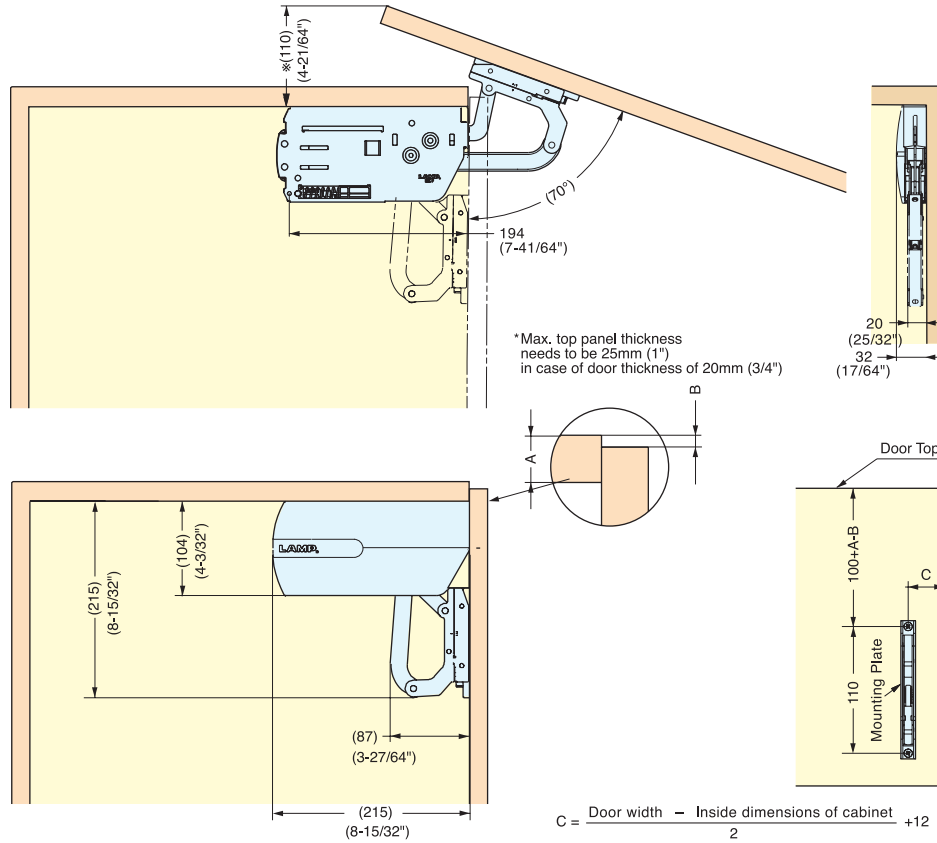


### 3. Soft-close



## Easy Installation





■ Door Weight Range Table (lbs.) Per Pair

Door Height (Inches)	EZS-ELAN-LL		EZS-ELAN-ML		EZS-ELAN-MM		EZS-ELAN-HM		EZS-ELAN-HH	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
19	10.7	15.7	15.7	21.0	21.0	26.5	26.5	29.9	29.9	36.8
20	10.3	15.0	15.0	20.0	20.0	25.3	25.3	28.5	28.5	35.0
21	9.8	14.3	14.3	19.1	19.1	24.1	24.1	27.2	27.2	33.4
22	9.4	13.7	13.7	18.3	18.3	23.0	23.0	26.0	26.0	31.9
23	9.0	13.2	13.2	17.5	17.5	22.1	22.1	24.9	24.9	30.6
24	8.7	12.7	12.7	16.8	16.8	21.2	21.2	23.9	23.9	29.3
25	8.4	12.2	12.2	16.2	16.2	20.4	20.4	23.0	23.0	28.2
26	8.1	11.8	11.8	15.6	15.6	19.7	19.7	22.2	22.2	27.2
27	7.9	11.4	11.4	15.1	15.1	19.0	19.0	21.4	21.4	26.2
28	7.6	11.0	11.0	14.6	14.6	18.3	18.3	20.6	20.6	25.3
29	7.4	10.7	10.7	14.1	14.1	17.7	17.7	20.0	20.0	24.4
30	7.2	10.3	10.3	13.7	13.7	17.2	17.2	19.3	19.3	23.7
31	7.0	10.0	10.0	13.3	13.3	16.6	16.6	18.7	18.7	22.9
32	6.8	9.8	9.8	12.9	12.9	16.2	19.2	18.2	18.2	22.3

■ Lifting power

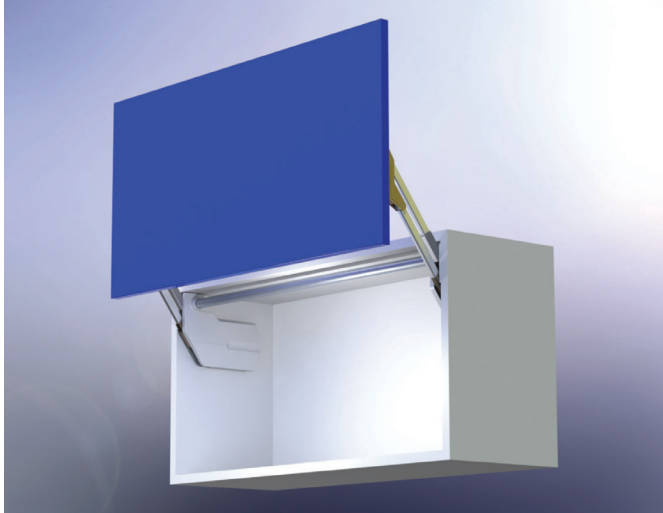
Door height (inch) x (Door weight (lbs) - 1)

Item No.	Lifting Power (lbs-in)
EZS-ELAN-LL	185~280
EZS-ELAN-ML	280~380
EZS-ELAN-MM	380~485
EZS-ELAN-HM	485~550
EZS-ELAN-HH	550~680

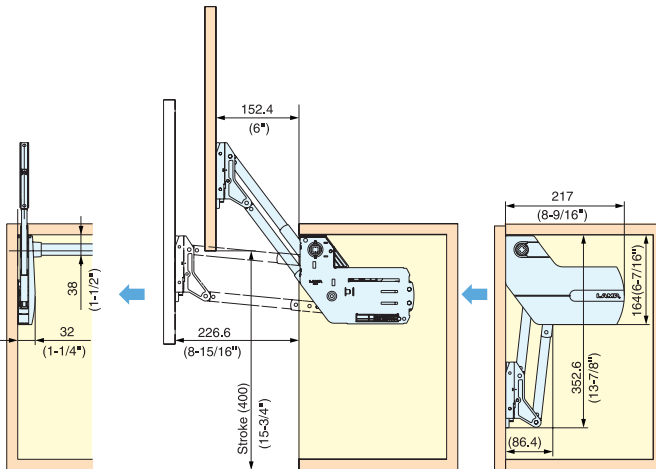
Item No.	Weight (g)	Box (pcs)
EZS-ELAN-LL	2245 (4.9 lbs)	5
EZS-ELAN-ML	2316 (5.0 lbs)	
EZS-ELAN-MM	2387 (5.25 lbs)	
EZS-ELAN-HM	2431 (5.35 lbs)	
EZS-ELAN-HH	2475 (5.45 lbs)	

Material	Finish/Color
Steel, ABS	Light Grey, Nickel

# SWING LIFT-UP STAY



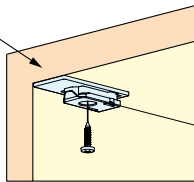
- Lapcon stay for SWING LIFT-UP DOORS.
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Simple installation by mounting guide plate and slide in main body.
- No hinges are required.
- Connecting bar stays on top for maximum access inside the cabinet.
- Recommended Door Size and Weight :
  - Width, Max. 1800mm (70-7/8")
  - Height, 390~500 mm (15-3/8"~19-11/16")/Door
  - Weight, 5~11 kg (11~24.2 lbs)/Door
- Connecting bar sold separately.



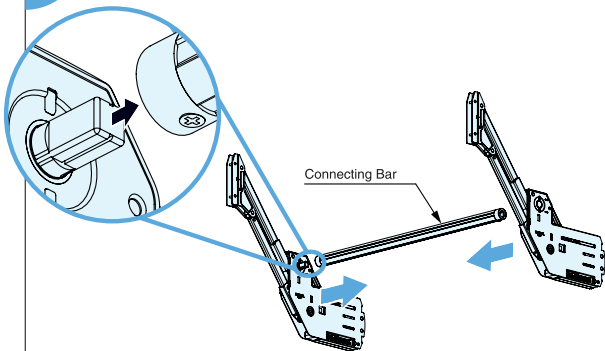
## Simple Installation

### 1 Guide plate installation

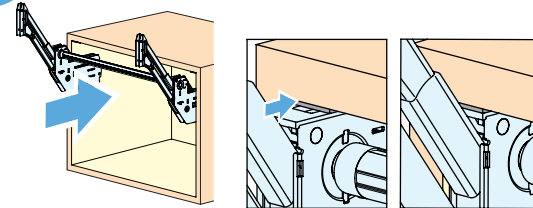
Simply match up to corner



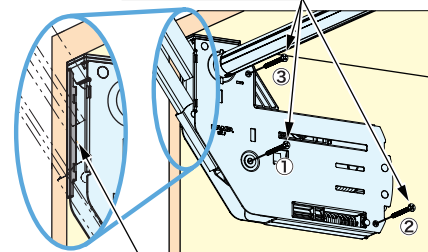
### 2 Connection bar installation



### 3 Body installation



3 screws secure the body



Simply match up to corner.



# SWING LIFT-UP STAY



# SLU-ELAN

Item No.	Door Weight (kg)	Door Height (mm)	Door Width (mm)	Box	Carton
SLU-ELAN-S4	5.0~6.5 (11.0~14.3 lbs)	390~500* (15-3/8"~19-11/16")	Max. 1800 (70-7/8)	1 set	5 set
SLU-ELAN-L4	6.5~8.0 (14.3~17.6 lbs)				
SLU-ELAN-M4	8.0~9.5 (17.6~20.9 lbs)				
SLU-ELAN-H4	9.5~11.0 (20.9~24.2 lbs)				

\*Min. inside cabinet height is 360 mm (14-3/16")

\*Door weight includes handle.

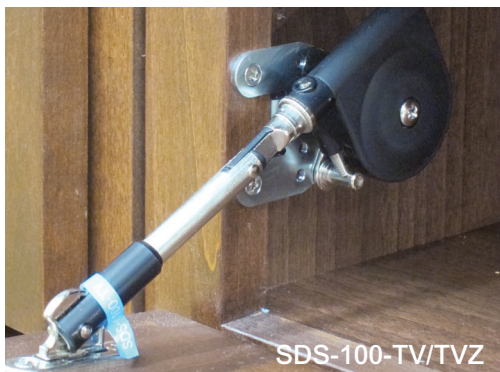
## ■ Connecting Bar (Sold separately)

Item No.	Max. Cabinet Width (mm)	Max. Interior Cabinet Width (mm)
ELB-480	600 (23-5/8")	566 (22-1/4")
ELB-780	900 (35-1/2")	866 (34-1/8")
ELB-1080	1200 (47-1/4")	1166 (45-7/8")
ELB-1380	1500 (59")	1466 (57-3/4")
ELB-1680	1800 (70 7/8")	1766 (69-1/2")

\*Please specify the cabinet width when ordering. Connecting bar can be trimmed as necessary by customer.

# FACE FRAME BRACKETS

- Bracket(s) are available to be used with below items on face frame cabinet.
- Screw set included in each set.
- \*Detailed information is shown on the following two pages.



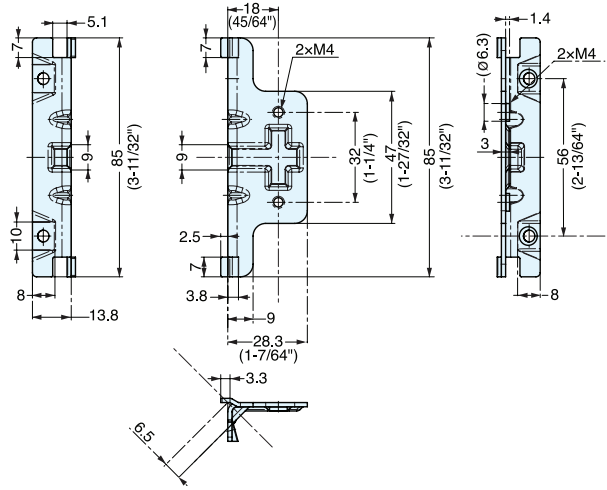
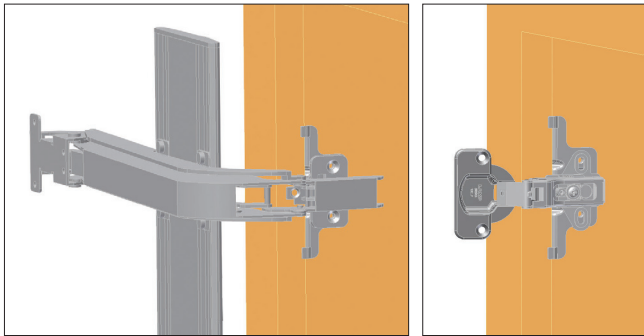
# FACE FRAME BRACKET



## FFCB-HG-1



- Works with items below on face frame cabinets:
  - LIN-X
  - 304B Hinges (with 304B-P4A-32)
  - 230 Hinges (with 230-P4W-32T)
- Sold per piece.
- Please specify the quantity of brackets necessary when ordering: 1 bracket is needed for each arm (LIN-X) or hinge (304B, 230).



Material	Finish
304 Stainless Steel	Polished

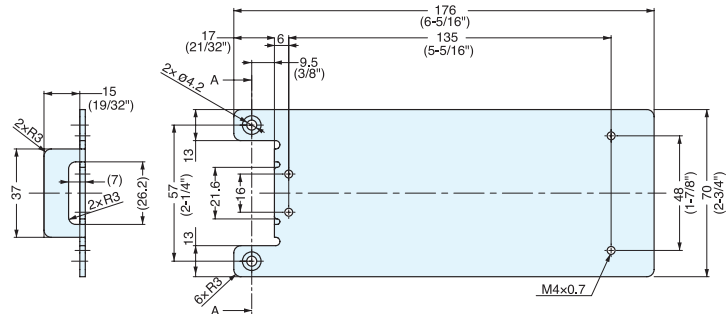
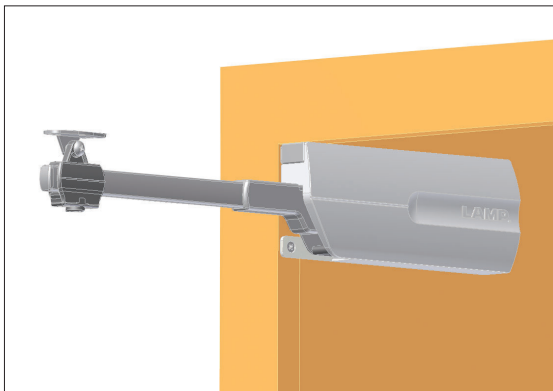
# FACE FRAME BRACKET



## FFCB-SLS



- Works with SLS-ELAN Series on face frame cabinets.
- Sold per piece.
- Please specify the quantity of brackets necessary when ordering: 1 bracket is needed for each stay.



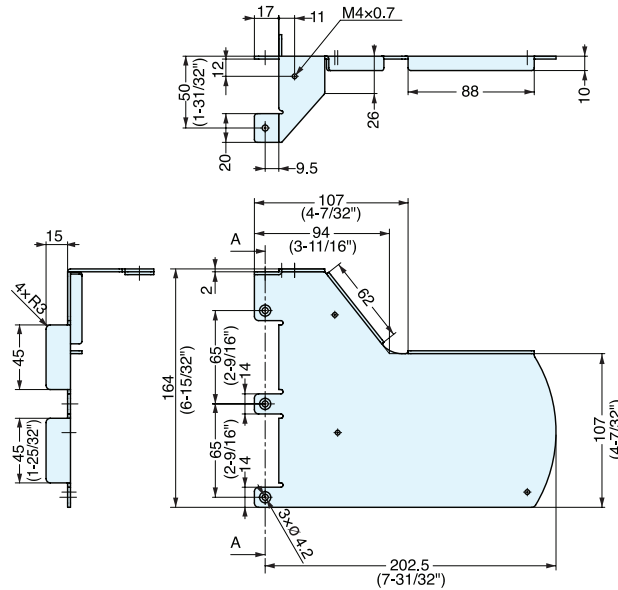
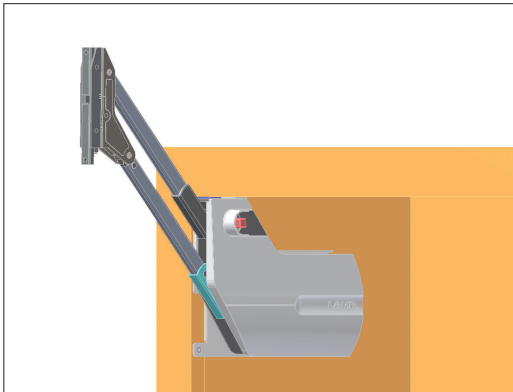
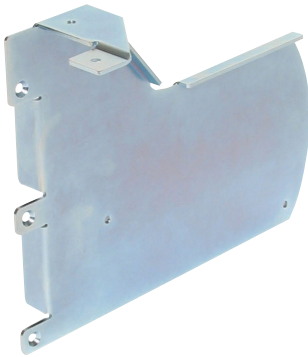
Material	Finish
Steel	Chromate

# FACE FRAME BRACKET



## FFCB-SLU

- Works with SLU-ELAN Series on face frame cabinets.
- Sold per pair.



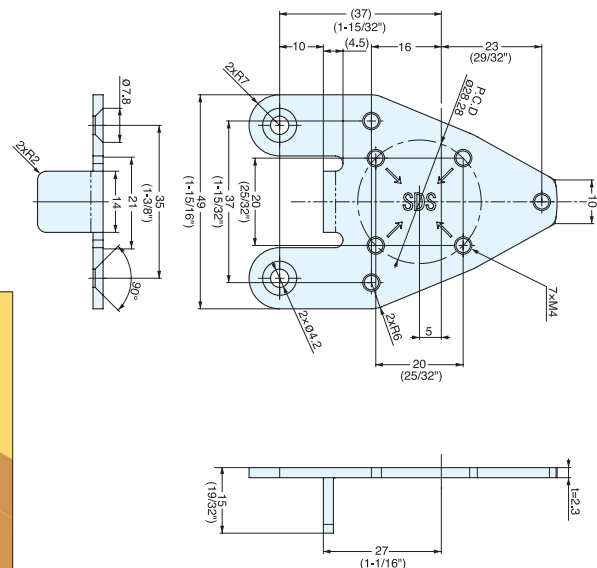
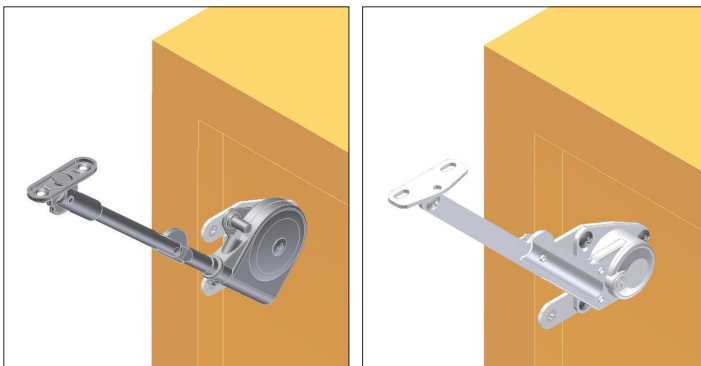
Material	Finish
Steel	Chromate

# FACE FRAME BRACKET



## FFCB-SD-1

- Works with NSDX/SDS Series on face frame cabinets.
- Sold per piece.
- Please specify the quantity of brackets necessary when ordering: 1 bracket is needed for each stay.

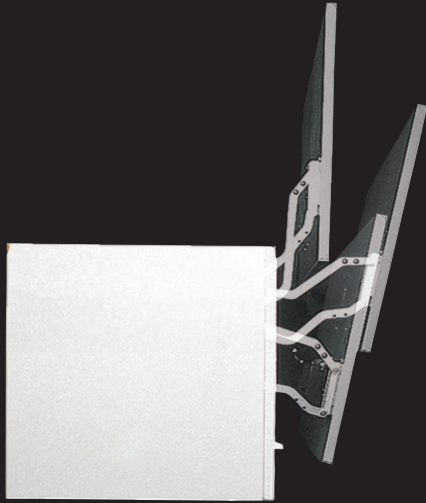


Material	Finish
Steel	Chromate

# SLUN

## VERTICAL SWING LIFT-UP MECHANISM

- Unique swing mechanism provides a lift-assist feature to help lift doors and hold at the open position.
- Sleek, compact design provides maximum access.
- Easy installation.
- Adjustable arm mounting plate.
- Successfully passed for 30,000 open/close private cycle tests.



Designed to operate at room temperature  
0°~40°C (32°~104°F).



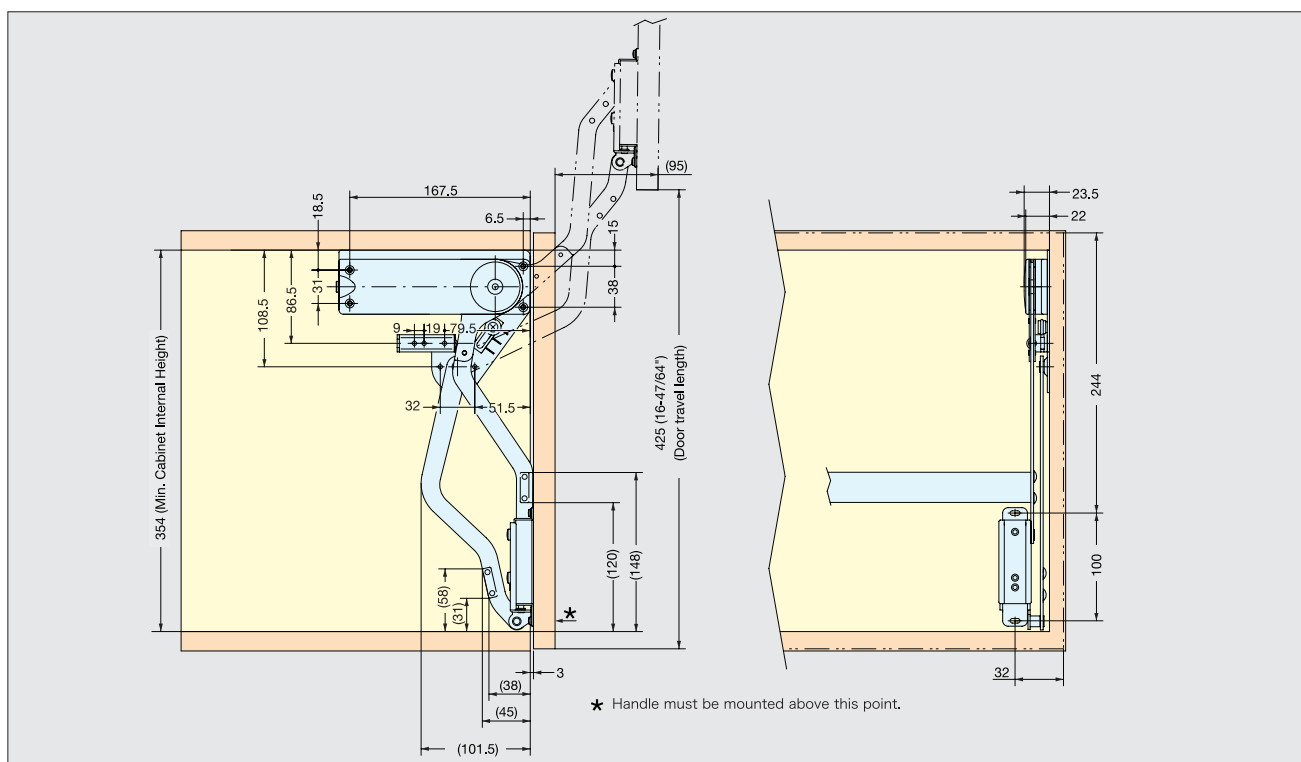
# VERTICAL SWING LIFT-UP MECHANISM



# SLUN



- Unique mechanism will help lift doors and hold at the open position.
- Sleek & compact design.
- Easy installation.
- Adjustable arm mounting plate.
- Patented LAPCON technology provides a smooth and quiet motion.
- Successfully passed 30,000 open/close private cycle tests.
- Recommended Door Size and Weight:
  - Width, 600~900 mm (23-5/8"~35-7/16")
  - Height, 390~450 mm (15-23/64"~17-23/32")
  - Weight, 2.8~5.8 kg (6.2~12.8 lbs)



Material	Finish/Color
Steel	Nickel
Plastic	Grey

Item No	Door Weight (kg)	Box (set)	Carton (set)
SLUN-3N	2.8~3.8 ( 6.2~8.4 lbs )	5	50
SLUN-4N	3.8~4.8 ( 8.4~10.6 lbs )		
SLUN-5N	4.8~5.8 ( 10.6~12.8 lbs )		

Guide Bar Length

Door Type	Cabinet Width (mm)	
	600 ( 23-5/8" )	900 ( 35-7/16" )
Solid Wood Door	535 ( 21-1/16" )	835 ( 32-7/8" )
Frame Door	551 ( 21-3/4" )	851 ( 33-1/2" )

\*SLUB-835 (835 mm (32-7/8")) included unless specified.

# SLD

## VERTICAL SWING DOWN MECHANISM



- Unique swing down mechanism provides a lift-assist feature to help open/close the doors easily & softly.
- Holds the door at the open position.
- Sleek, compact design provides maximum access.
- Easy installation.
- Adjustable arm mounting plate.
- Successfully passed for 30,000 open/close private cycle tests.

Designed to operate at room temperature  
0°~40°C (32°~104°F).



# VERTICAL SWING DOWN MECHANISM



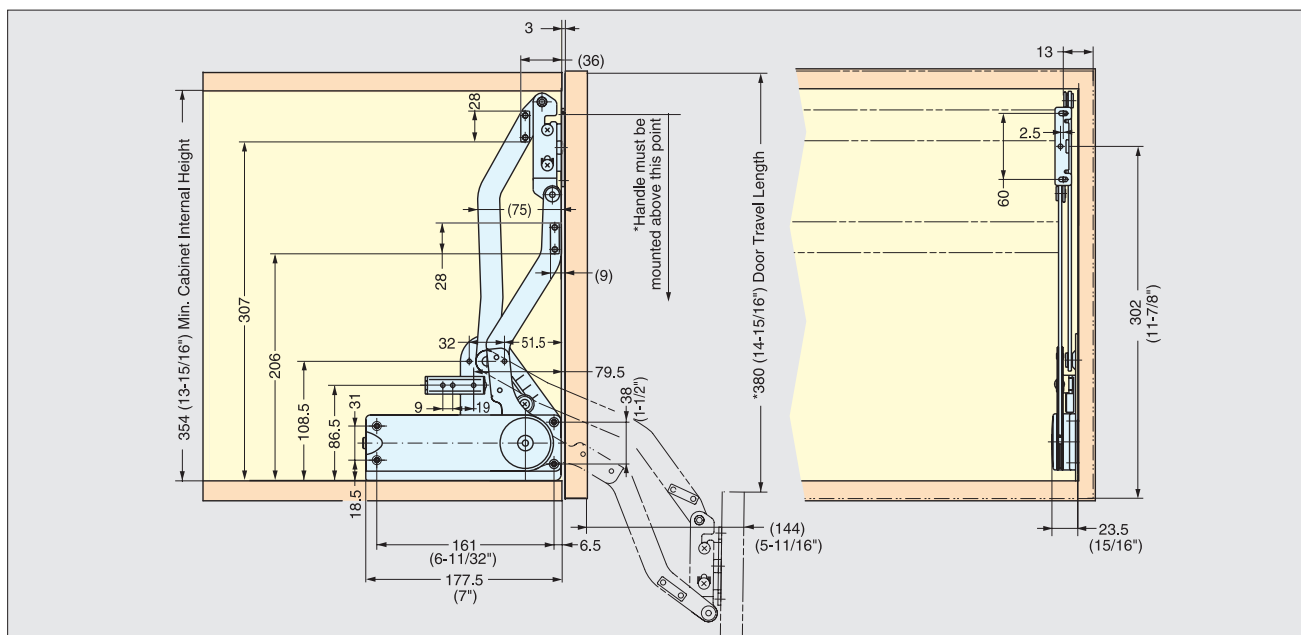
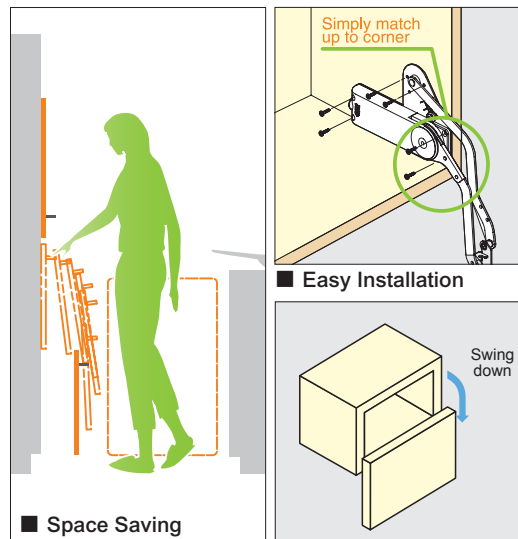
SLD

LID SUPPORTS

VERTICAL SWING DOWN MECHANISM



- Unique swing down mechanism will hold doors at the open position.
- Sleek & compact design.
- Easy installation.
- Adjustable arm mounting plate.
- Patented LAPCON technology provides a smooth and quiet motion.
- Successfully passed 30,000 open/close private cycle tests.
- Recommended Door Size and Weight:
  - Width, 600~900 mm (23-5/8"~35-7/16")
  - Height, 360~400 mm (14-1/8"~15-3/4")
  - Weight, 3~6 kg (6.6~13.2 lbs)



Material	Finish/Color
Steel	Nickel
Plastic	Grey

Item No	Door Weight (kg)	Box (set)	Carton (set)
SLD-3	3~4 ( 6.6~8.8 lbs )	5	50
SLD-4	4~5 ( 8.8~11.0 lbs )		
SLD-5	5~6 ( 11.0~13.2 lbs )		

Guide Bar Length

Door Type	Cabinet Width (mm)	
	600 ( 23-5/8" )	900 ( 35-7/16" )
Solid Wood Door	535 ( 21-1/16" )	835 ( 32-7/8" )
Frame Door	551 ( 21-3/4" )	851 ( 33-1/2" )

\*SLUB-835 (835 mm (32-7/8")) included unless specified.

# HBFN

## HORIZONTAL BI-FOLDING DOOR MECHANISM



- HBFN's unique bi-fold door mechanism will assist in opening and closing doors in a smooth motion.
- The mechanism is compact, with no tracks or guides.
- Easy installation.
- Patented Lapcon technology offers smooth and quiet motion.
- Successfully passed 30,000 open/close private cycle tests.

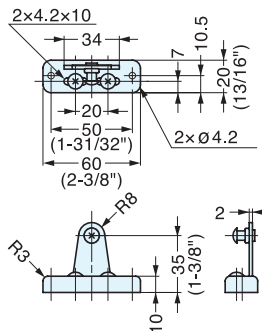
Designed to operate at room temperature  
0°~40°C (32°~104°F).



### MOUNTING PLATES FOR HBFN

### HBFN-SZ

• Included with HBFN Series hardware.



Item No	Application	Weight (g)	Box (set)
HBFN-SZ	Wood Doors, Aluminum Frame Doors, Width 45 mm (1-3/4")	44	100

Part Name	Material	Finish/Color
Plates, Screws	Steel	Nickel
Bumper	-	Grey



# HORIZONTAL BI-FOLDING DOOR MECHANISM

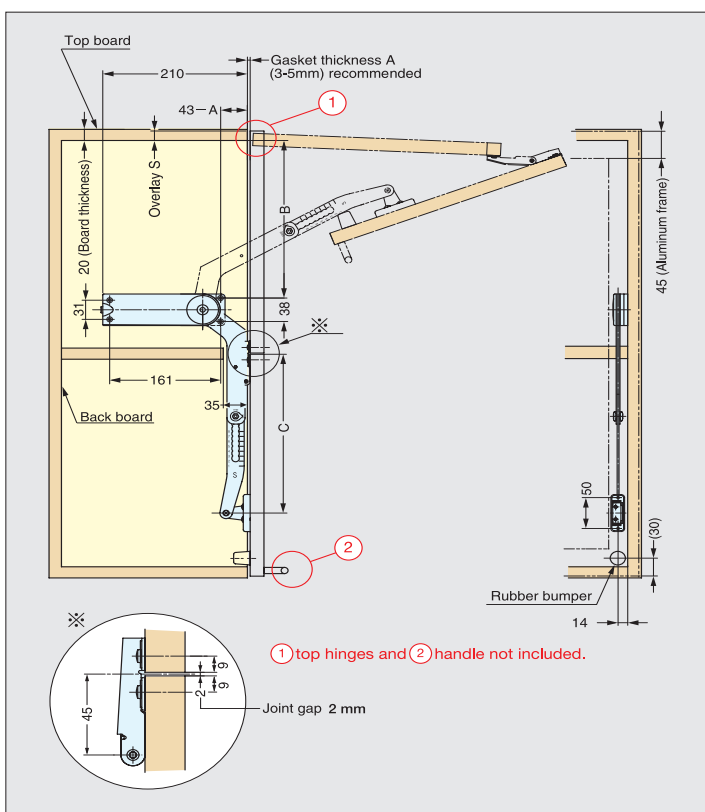
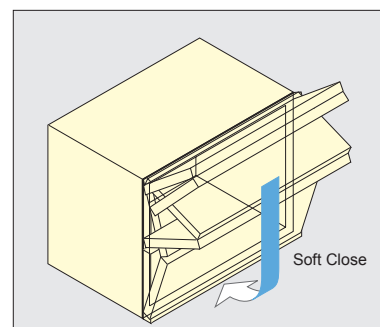


# HBFN



- Unique new bi-fold door mechanism will assist in opening and closing doors in a smooth motion.
- No tracks or guides required.
- Handle position can be at the bottom of the door.
- Arm length adjustable for various door sizes.
- Patented LAPCON technology provides smooth and quiet motion.
- Recommended Door Size and Weight):  
 Width, 450~900 mm (17-23/32"~35-7/16")  
 Height, 320~370 mm (12-19/32"~14-9/16")/each door  
 Weight, 2.5~5.5 kg (5.5~12.1 lbs)/each door

Material	Finish
Steel	Nickel
Plastic	Light Grey

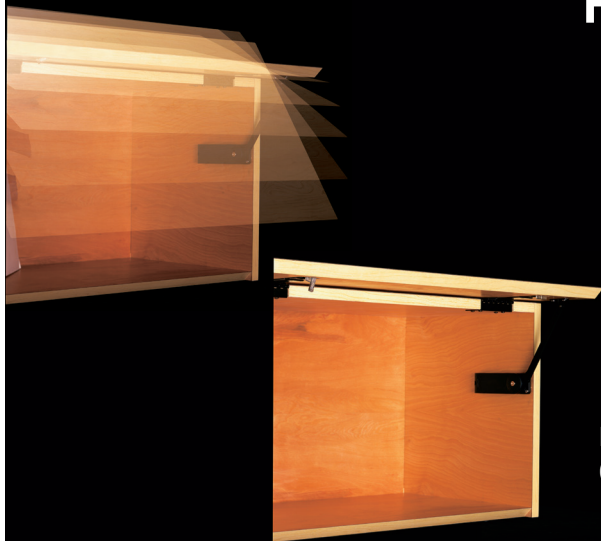


S = Overlay (Top Board)

Type	Door Height (mm)	Opening Angle 90°			Opening Angle 105°		
		Arm Position	B	C	Arm Position	B	C
M	320	1	247-S	241	4	226-S	244
	330	2	252-S	244	5	234-S	250
	340	3	258-S	248	6	243-S	257
	350	4	263-S	251	7	251-S	263
	360	5	269-S	255	8	259-S	269
	370	6	274-S	258	9	267-S	275

Item No	Door Height / door (mm)	Door Weight (kg/door)	Box (set)	Carton (set)	Material	Finish
HBFN-2M	320~370 ( 12-19/32"~14-9/16" )	2.5~3.5 ( 5.5~7.7 lbs )	10	100	Steel	Nickel
HBFN-3M		3.6~4.5 ( 7.9~9.9 lbs )			Plastic	Light Grey
HBFN-4M		4.6~5.5 ( 9.9~12.1 lbs )				

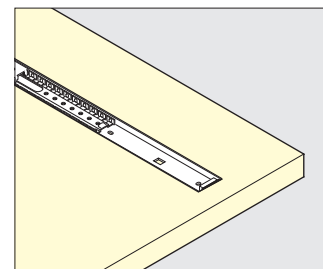
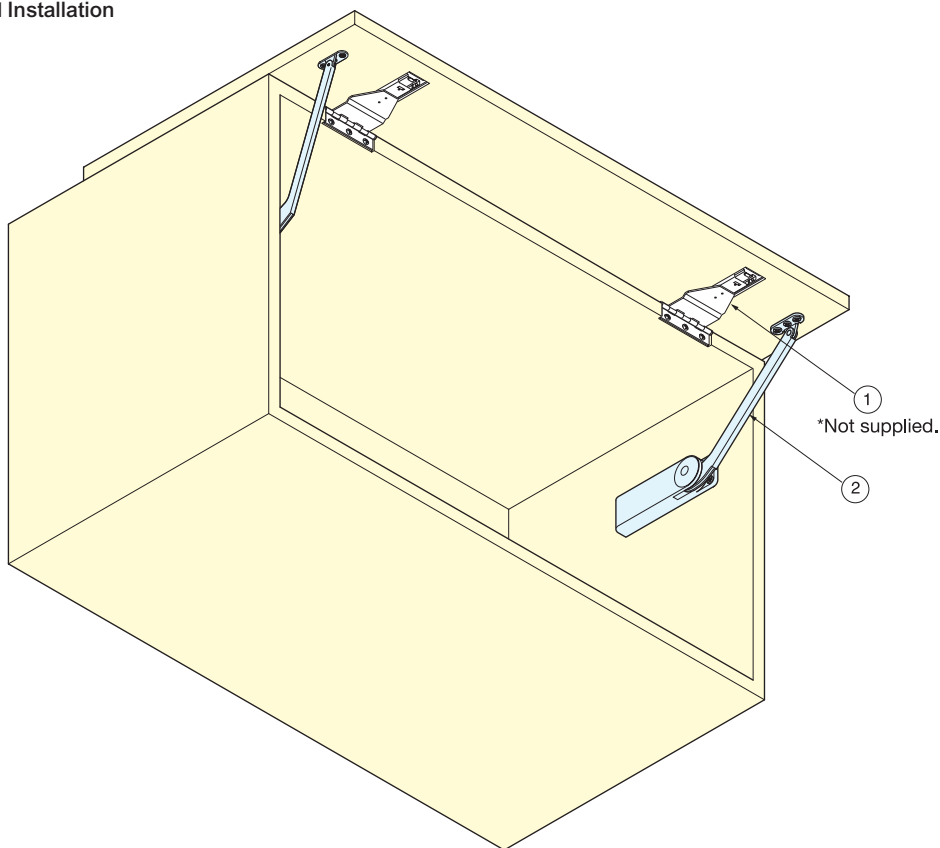
# OV-EZ LIFT-ASSIST MECHANISM FOR OVER-THE-TOP FLIPPER DOORS



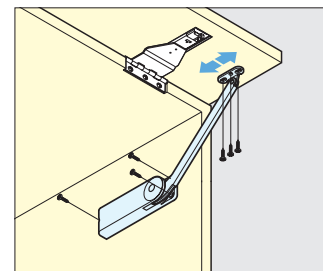
- Assists in opening of flipper doors with minimal resistance.
- Doors will not slam shut.
- Ideal for overhead binder bins, laboratory and kitchen cabinets, etc.
- Successfully passed 30,000 open/close private cycle tests.

Designed to operate at room temperature  
0°~40°C (32°~104°F).

■ Installation



① Install ball bearing flipper slide rails. (Not supplied.)



② Mount the OV-EZ mechanism to the side wall of the cabinet as illustrated in installation instructions provided with the product.

Recommended Door Size and Weight

Item No.	Door Weight For Easy-Up (kg)	Door Weight For Free-Stop (kg)	Door Height (mm)	Weight (g)	Box (pcs)	Carton (pcs)
OV-EZ-3/BL	2.5~4.0 ( 5.5~8.8 lbs )	4~6.5 ( 8.8~14.3 lbs )	Approx. 400 (15-3/4")	260	50	500
OV-EZ-5/BL	3.5~5.5 ( 7.7~11.0 lbs )	5~8.0 ( 11.0~17.5 lbs )		270		
OV-EZ-7/BL	4.5~6.0 ( 9.9~13.2 lbs )	6~10.0 ( 13.2~22.0 lbs )		280		
OV-EZ-9/BL	5.5~7.0 ( 12.0~15.3 lbs )	7~11.5 ( 15.4~25.2 lbs )		290		

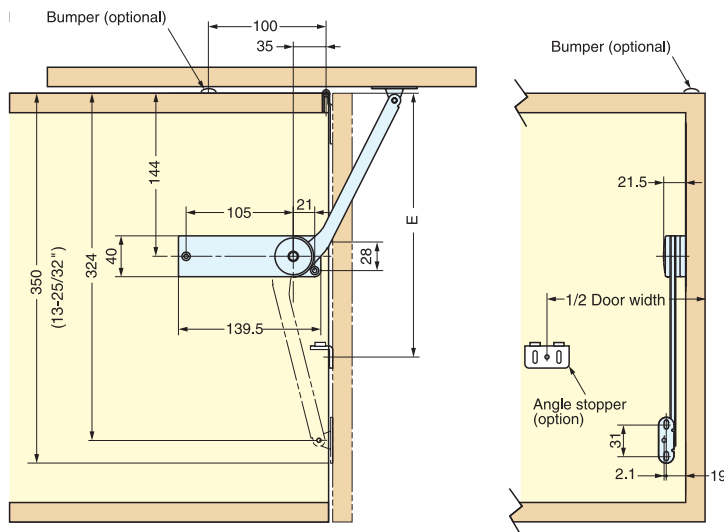
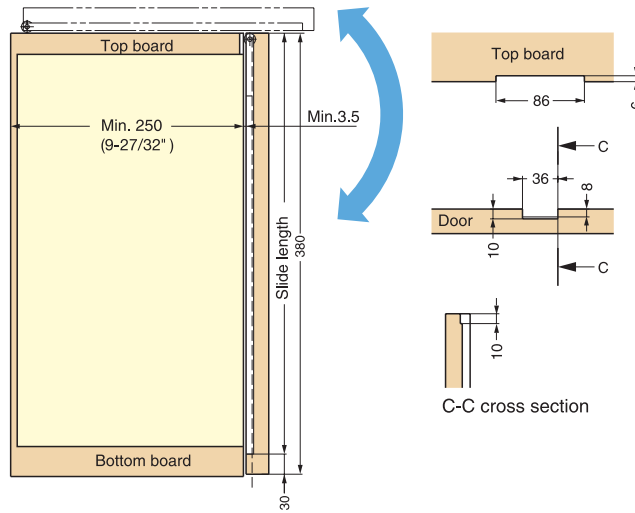
# LIFT-ASSIST MECHANISM



# OV-EZ



\* Used in pairs



Part Name	Material	Finish/Color
Housing	ABS	Black
Arm and Mounting Plate	Steel	Nickel

# OVN

## SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

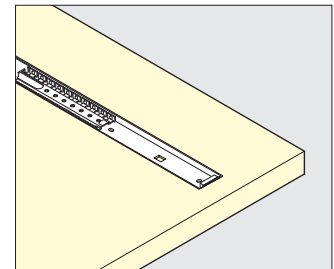
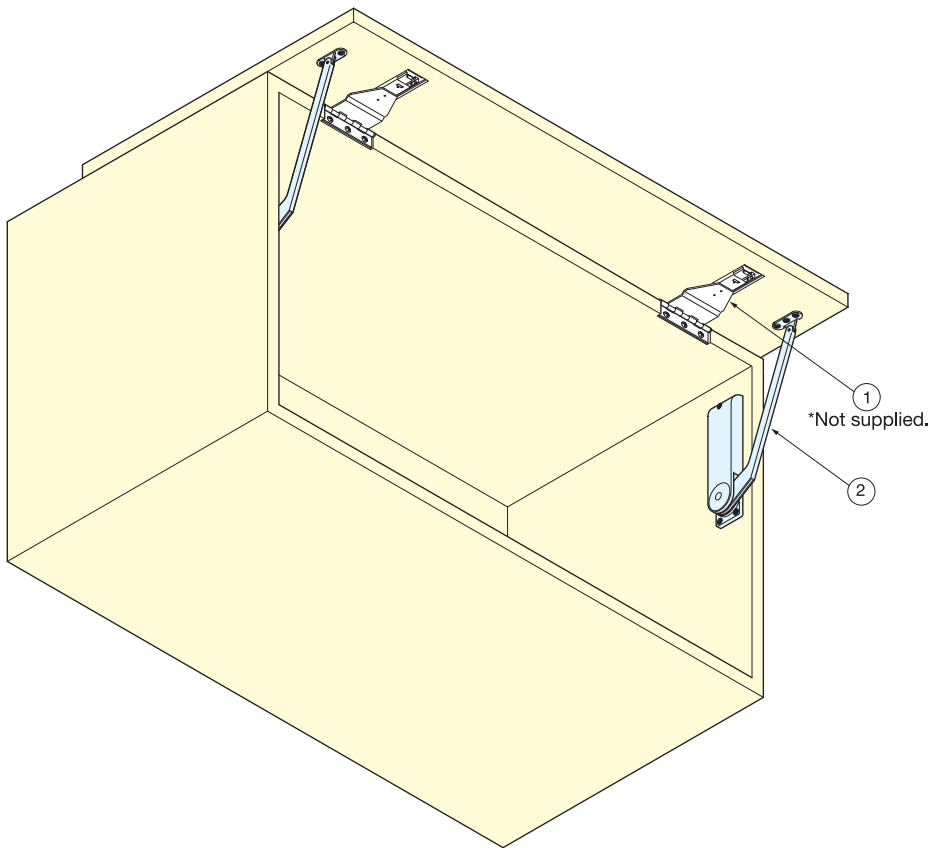


- Patented Lapcon technology offers smooth and quiet motion.
- Doors will not slam shut.
- Successfully passed 30,000 open/close private cycle tests.

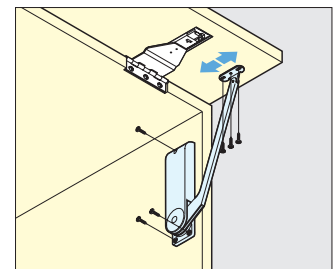
Designed to operate at room temperature 0°~40°C (32°~104°F).



### ■ Installation



① Install ball bearing flipper slide rails. (Not supplied.)



② Mount the OVN unit to the side wall of the cabinet as illustrated in installation instructions provided with the product.

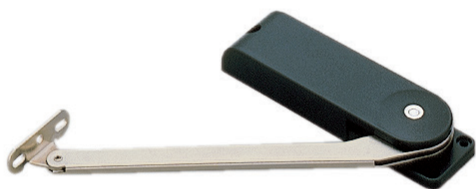
### Recommended Door Size and Weight

Item No.	Body Color	Door Weight (kg)	Door Height (mm)	Depth of Cabinet (mm)	Weight (g)	Box (pcs)	Carton (pcs)
OVN-3/BLK	Black (BLK)	3~5 ( 6.6~11.0 lbs )	Approx.400 (15~3/4")	350~400 (13-25/32"~15-3/4")	220	40	400
OVN-5/BLK		5~7 ( 11.0~15.4 lbs )			240		

# SOFT CLOSING MECHANISM

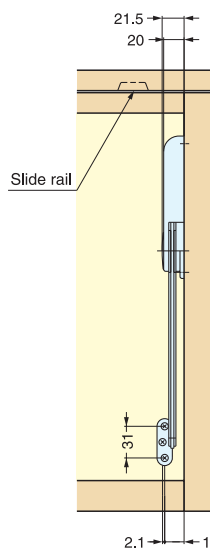
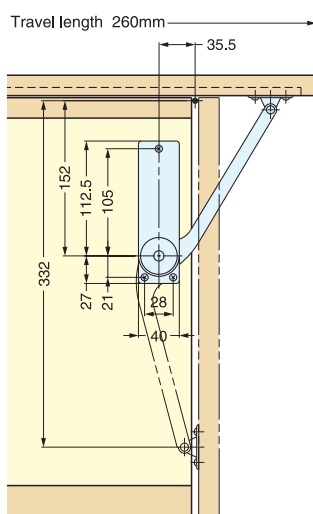
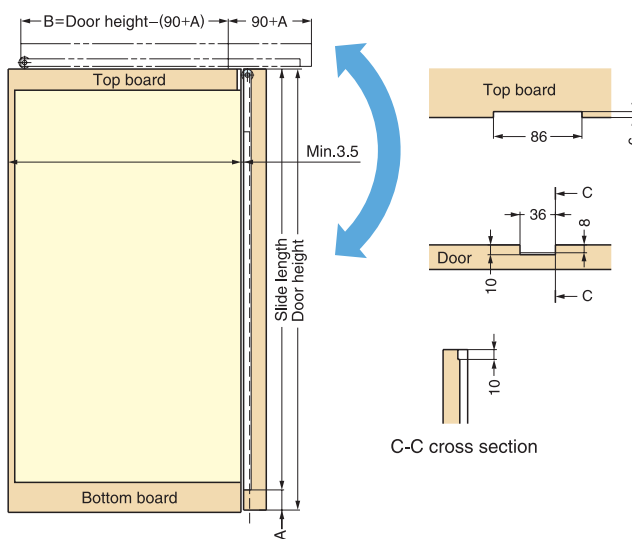


OVN



\* Used in pairs

## ■ Cabinet Preparation



Part Name	Material	Finish/Color
Housing	ABS	Black
Arm and Mounting Plate	Steel	Nickel



# OV

## SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

- Patented Lapcon technology offers smooth and quiet motions.
  - Doors will not slam shut.
  - Adjustable closing speed.
  - Successfully passed 30,000 open/close private cycle tests.
- Designed to operate at room temperature 0°~40°C (32°~104F°).



Used in pairs

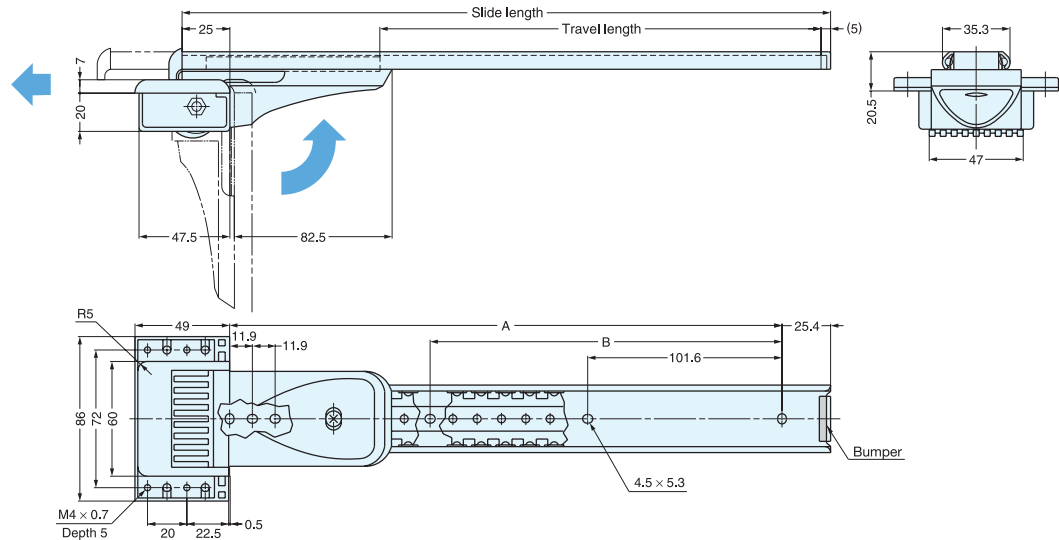


**Screws :**

Flat Head Machine Screw (M4 × 26) \*for wooden top board of 19~20 mm T - 8 pcs.  
 Binding Head Machine Screw (M4 × 8) \*for metal top board of 1.2~1.5 mm T - 8 pcs.  
 Binding Head Tapping Screws (M4 × 10) for slides.

Note : For sheet metal cabinets, if the top board is thicker than 20 mm (25/32"), longer screws are required (top board thickness plus 6 mm). When the top board is wooden, additional screws are not needed.

\*Bulk pack available.



**Flipper Door Weight and Size**

Item No	Door Weight (kg)	Torque Moment (kg·cm)	Door Thickness: T (mm)	Door Width: W (mm)	Door Height: H (mm)
OV-1	3~5 (6.6~11 lbs)	60~100 (55~85 lbs·inch)	19 (3/4") or 20 (25/32")	700~1400 (27-9/16"~55-1/8")	350~450 (13-25/32"~17-23/32")

Item No.	Slide Length	Travel Length	A	B	Weight (g)	Box (pcs)	Carton (pcs)
OV-1-13	330.2	223.8	279.4	177.8	590	10	100
OV-1-14	355.6	249.2	304.8	203.2	610		
OV-1-15	381.0	274.6	330.2	228.6	630		
OV-1-16	406.4	300.0	355.6	254.0	650		

Material	Finish/Color
Steel, Zinc Alloy, Plastic	Chromate, Black

# SOFT CLOSING MECHANISM



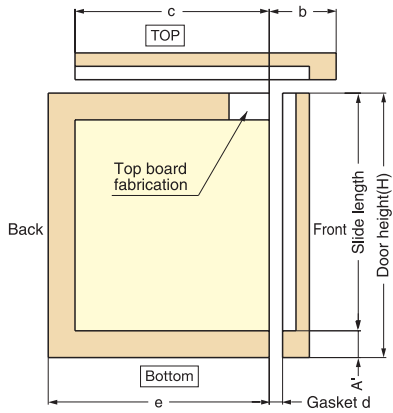
OV

LID SUPPORTS

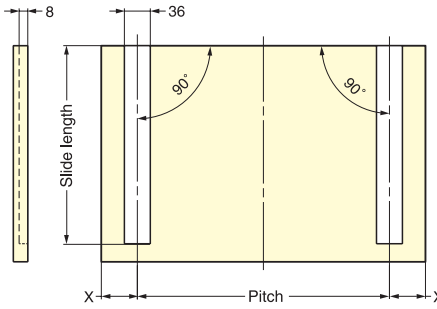
SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

## ■ Cabinet Preparation

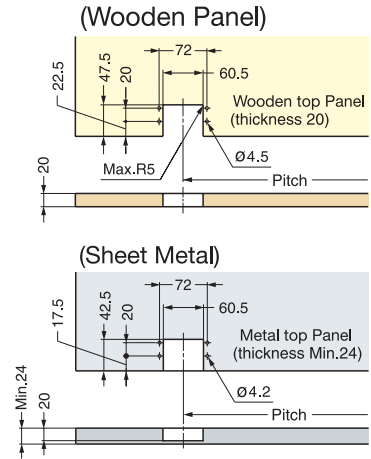
### Cabinet Dimensions



### Door Fabrication

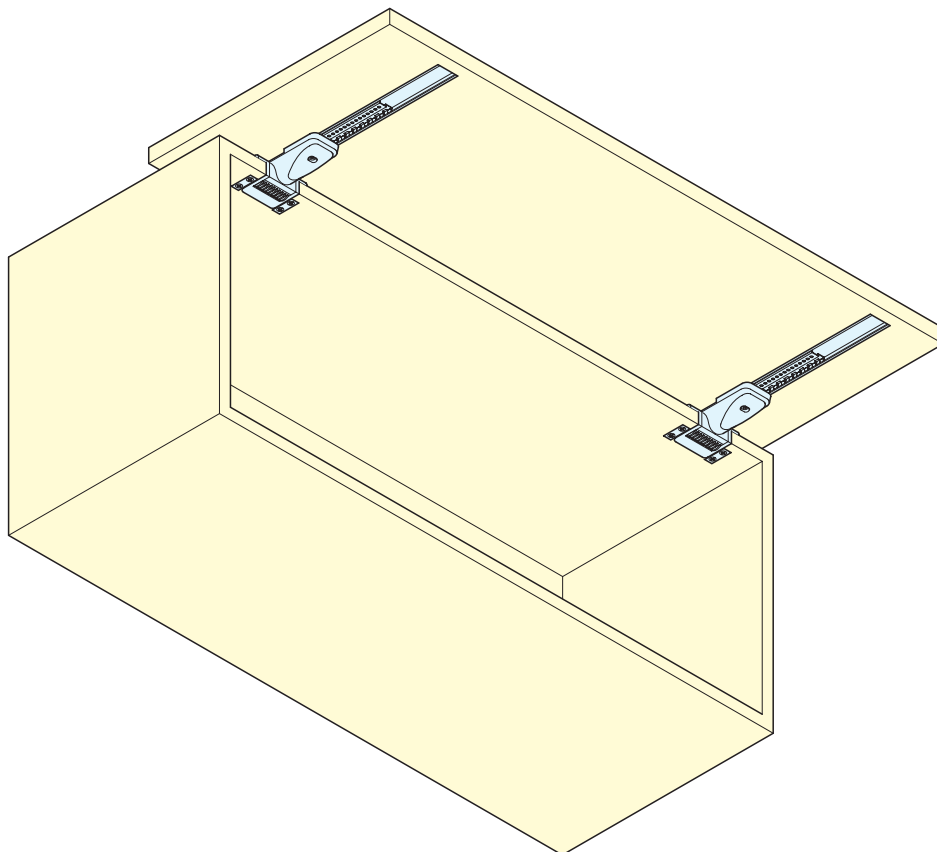
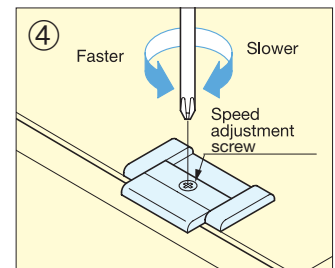
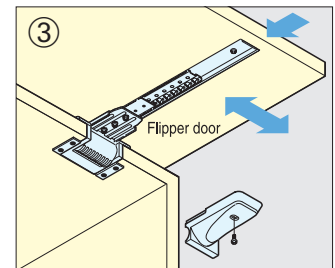
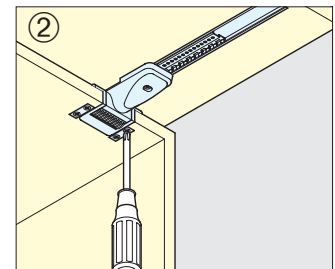
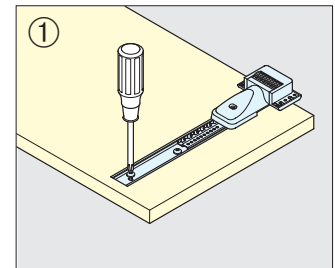


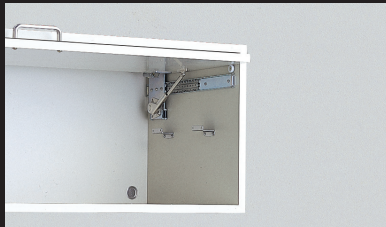
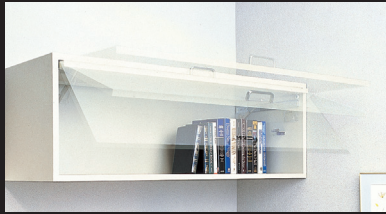
### Top Panel Fabrication



	b	c	d	e	X
Wooden Top Panel	A'+81.4	H-b	2.5	Min. c+7	Inset Application 80
Metal Top Panel	A'+86.4	H-b	7.5	Min. c+7	Overlay Application Side Board Thickness+80

## ■ Installation

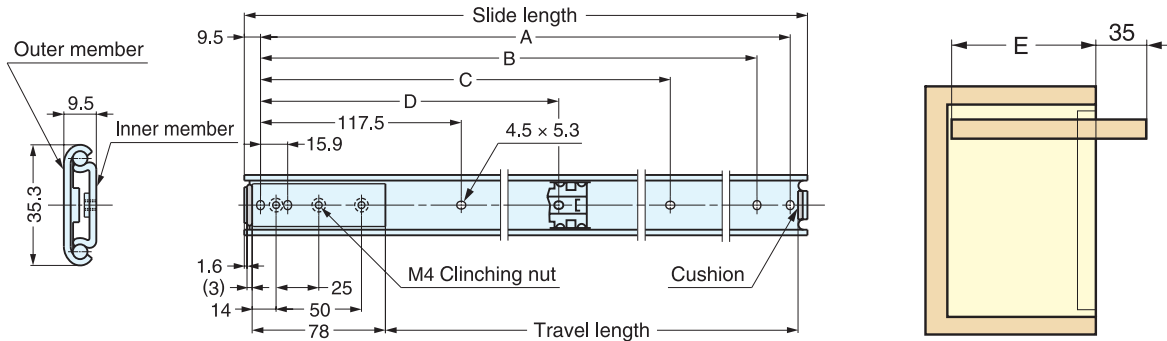




# IF-102S (SINGLE TYPE) IF-102W (DOUBLE TYPE) SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

- Incorporates patented Lapcon technology for soft, smooth closing.
- For inset doors only.
- Adjustable closing speed.
- Successfully passed 30,000 open/close private cycle tests.

Designed to operate at room temperature 0°~40°C (32°~104°F).



\*Supplied with screws.

	Soft-Down Stay	Slide	Concealed Hinge	Mounting Plate
Item No	NSDX-35 (L/R)	AL-78	230-C26/19T	230-P4W-32T
pcs/set	1 or 2/door	2 pcs/door	2 pcs/door	2 pcs/door

Part Name	Material	Finish/Color
Slide	Steel	Clear Zinc Chromate
Hinge	Steel	Nickel
Soft-Down Stay	Zinc Alloy	Nickel

Item No	Torque Moment (kg-cm)	Door Weight (kg)	Max. Door Width (mm)	Recommended Door Height (mm)	E (mm)	Door Thickness (mm)
IF-102S-14	25~ 70 ( 22~60 lbs-in )	1.5~4.0 (3.3~8.8 lbs)	1200 (47-1/4")	300+T ( 11-13/16"+T )	265+T ( 10-7/16"+T )	15~20 (19/32"~51/64")
IF-102S-16				350+T ( 13-3/4"+T )	315+T ( 12-3/8"+T )	
IF-102S-19				427+T ( 16-13/16"+T )	392+T ( 15-7/16"+T )	
IF-102S-24				554+T ( 21-13/16"+T )	519+T ( 20-7/16"+T )	
IF-102W-14	50~140 (45~120 lbs-in)	4.5~6.5 (9.9~14.3 lbs)		300+T ( 11-13/16"+T )	265+T ( 10-7/16"+T )	
IF-102W-16				350+T ( 13-3/4"+T )	315+T ( 12-3/8"+T )	
IF-102W-19				427+T ( 16-13/16"+T )	392+T ( 15-7/16"+T )	
IF-102W-24				554+T ( 21-13/16"+T )	519+T ( 20-7/16"+T )	

Item No	Slide Length	Travel Length	A	B	C	D	E	Weight (kg)	Box (pcs)	Carton (pcs)
IF-102S-14	355.6	268.4	336.6	320.7	219.1	-	264.5+T	1.92	10	100
IF-102S-16	406.4	319.2	387.4	371.5	269.9	-	315.3+T	2.00		
IF-102S-19	482.6	395.4	463.6	447.7	346.1	231.8	391.5+T	2.08		
IF-102S-24	609.6	522.4	590.6	574.7	473.1	295.3	518.5+T	2.40		
IF-102W-14	355.6	268.4	336.6	320.7	219.1	-	264.5+T	2.14		
IF-102W-16	406.4	319.2	387.4	371.5	269.9	-	315.3+T	2.22		
IF-102W-19	482.6	395.4	463.6	447.7	346.1	231.8	391.5+T	2.30		
IF-102W-24	609.6	522.4	590.6	574.7	473.1	295.3	518.5+T	2.62		

T = Door Thickness (mm)



# SOFT CLOSING MECHANISM

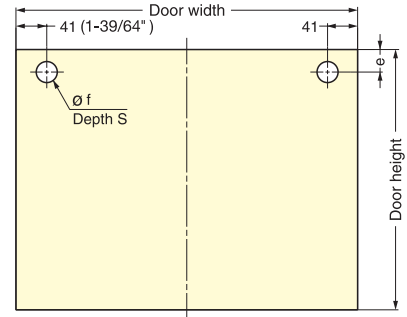
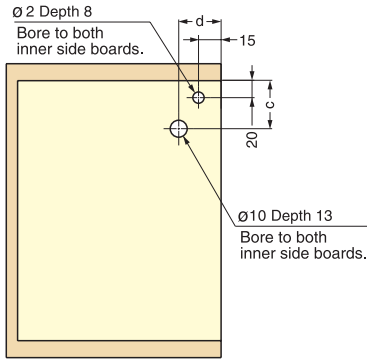
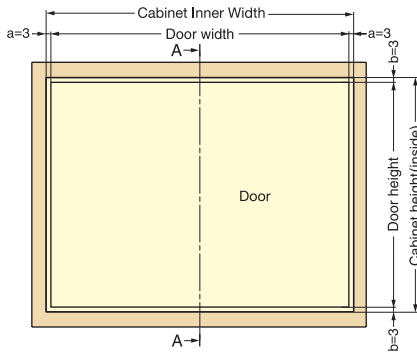


IF

LID SUPPORTS

SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

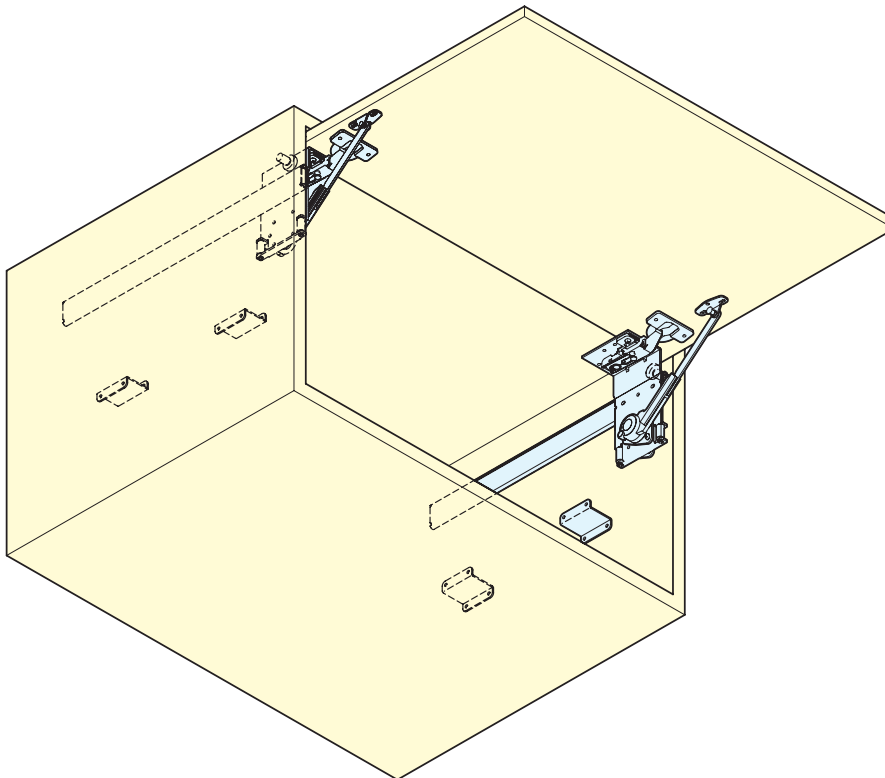
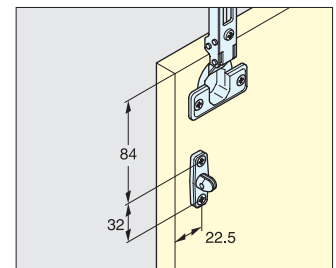
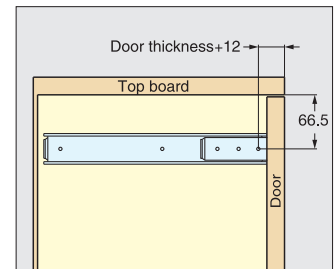
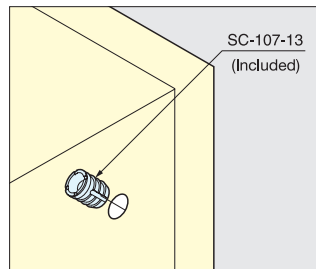
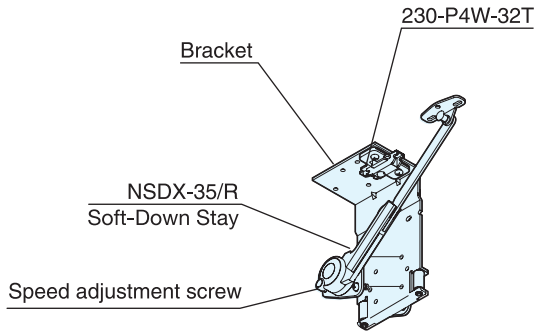
## ■ Cabinet Preparation



Type	c	d	e	f	s
IF-102	37.5	9.5+t	22.5	35	11

\*t = Door Thickness

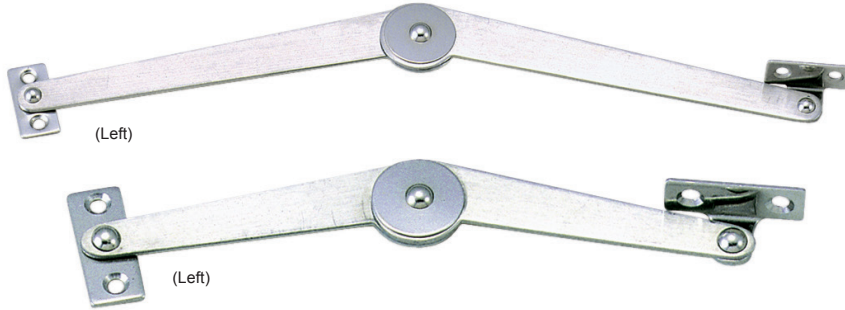
## ■ Installation



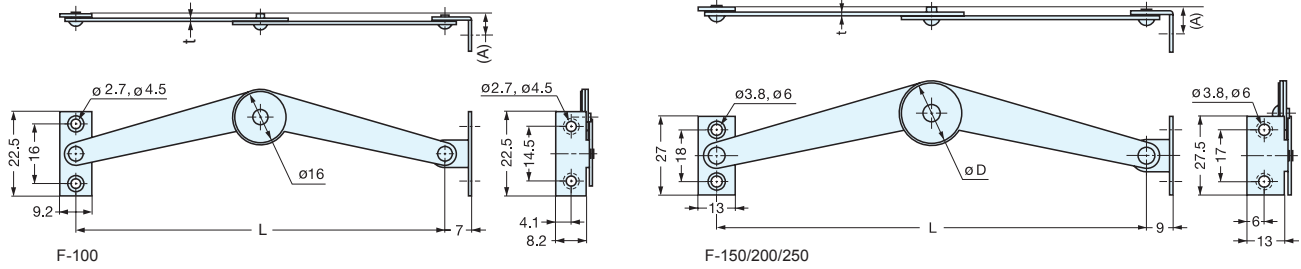
# LID STAY (W/O CATCH)



## F-100, 150, 200, 250



- Not load bearing keeps lids from over extending.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



Item No.		L	D	(A)	t	Weight (g)	Box (pcs)	Carton (pcs)
Right	Left							
F-100R	F-100L	100 (3-15/16")	16.0	6.5	1.0	13	50	500
F-150R	F-150L	150 (5-29/32")	22.0	9.0	1.2	30	40	400
F-200R	F-200L	198 (7-51/64")	22.5		1.5	37	30	300
F-250R	F-250L	250 (9-27/32")			65			

Material	Finish
304 Stainless Steel	Satin

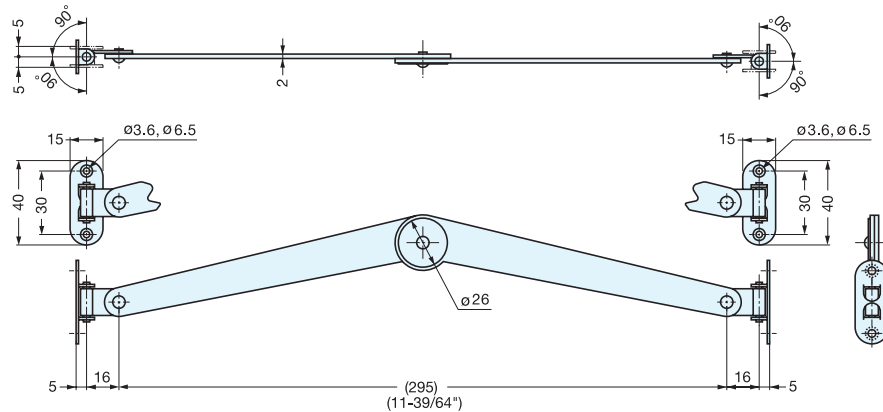
# LID STAY (W/O CATCH)



## F-300



- Not load bearing keeps lids from over extending.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.



Item No.	Weight (g)	Box (pcs)	Carton (pcs)
F-300	113	10	100

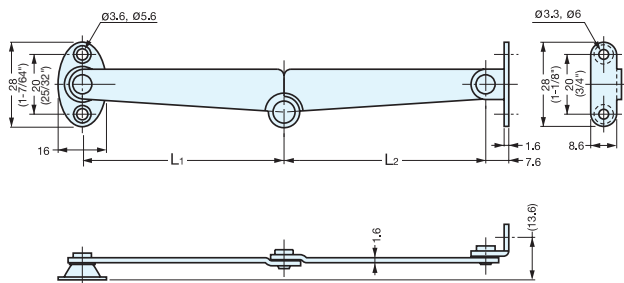
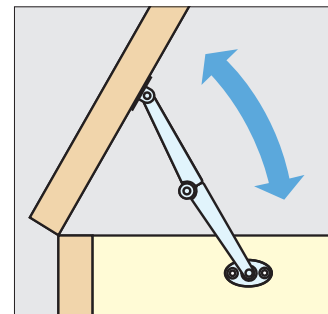
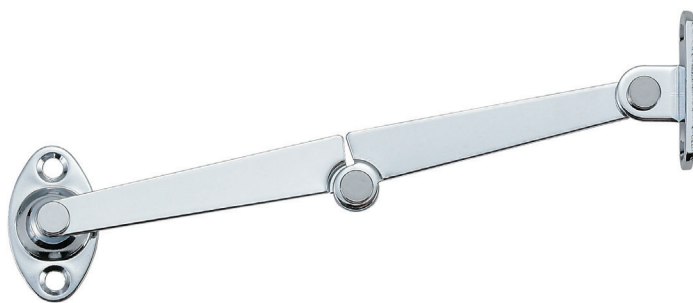
Material	Finish
304 Stainless Steel	Satin

# LID STAY



S-6, S-16

- Not load bearing keeps lids from over extending.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



Item No.		L <sub>1</sub>	L <sub>2</sub>	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right					
S-6L	S-6R	53 (2-3/32")	53 (2-3/32")	20	100	1000
S-16R	S-16L	67 (2-41/64")	67 (2-41/64")	31		

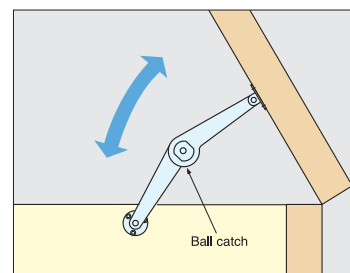
Material	Finish
Steel/Brass/Nylon (washer)	Chrome

# LID STAY (W/CATCH)

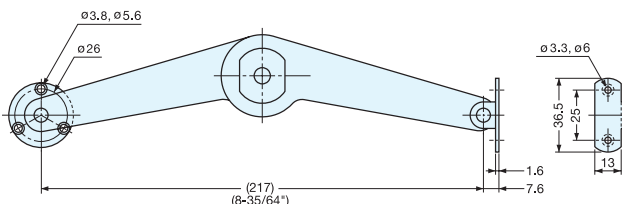
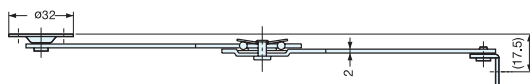


S-20

- Lid stay with ball catch for lightweight doors.
- Catch automatically holds lid in opened position.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



(Left)



Item No.		Weight (g)	Box (pcs)	Carton (pcs)
Left	Right			
S-20L	S-20R	125	40	160

Material	Finish
Steel, Brass, Nylon (washer)	Chrome

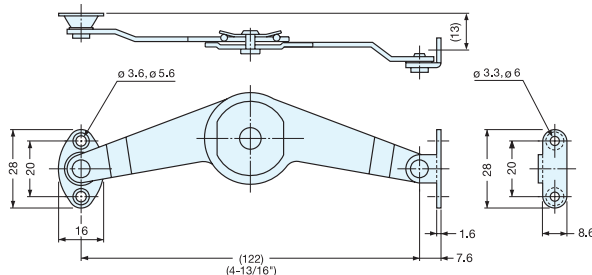
## LID STAY (W/CATCH)



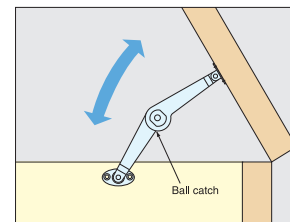
S-21



(Left)



- Lid stay with ball catch for lightweight doors.
- Catch automatically holds lid in opened position.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



Item No.		Weight (g)	Box (pcs)	Carton (pcs)
Left	Right			
S-21L	S-21R	49	50	500

Material	Finish
Steel, Brass, Nylon (washer)	Chrome

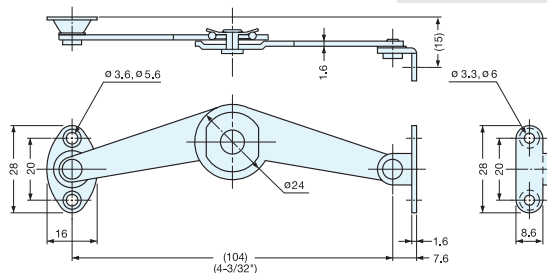
## LID STAY (W/CATCH)



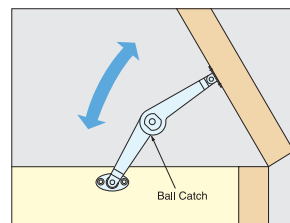
S-23



(Left)



- Lid stay with ball catch for lightweight doors.
- Catch automatically holds lid in opened position.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



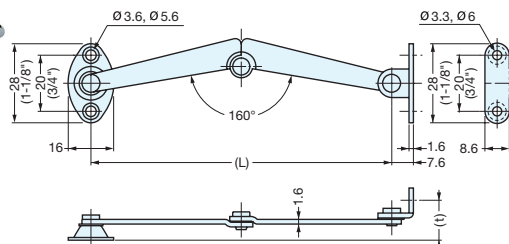
Item No.		Weight (g)	Box (pcs)	Carton (pcs)
Left	Right			
S-23L	S-23R	33	50	500

Material	Finish
Steel, Brass, Nylon (washer)	Chrome

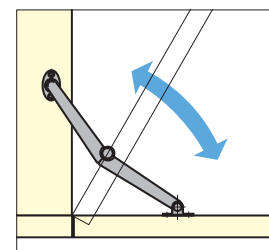
## LID STAY



S-24, S-25, S-27



- Keeps lids from over extending.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



Item No.		L	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right				
S-24L	S-24R	105.5 (4-5/32")	21	100	1000
S-25L	S-25R	163.0 (6-27/64")	35	60	600
S-27L	S-27R	133.0 (5-15/64")	31	60	600

Material	Finish
Steel, Brass, Nylon (washer)	Chrome

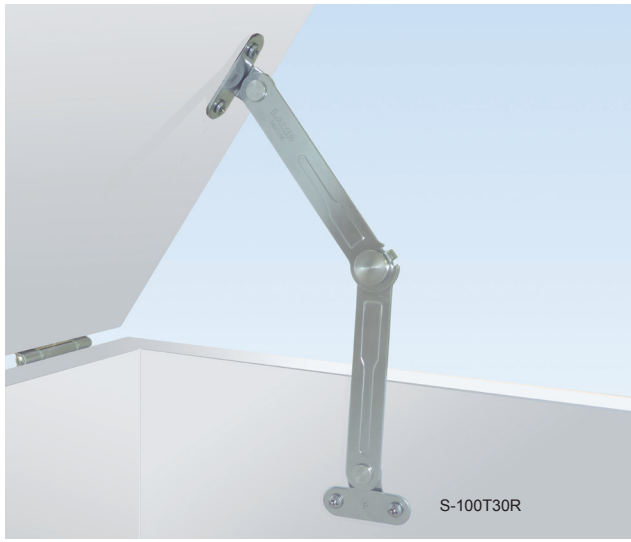
# TORQUE LID STAY (FREE STOP)



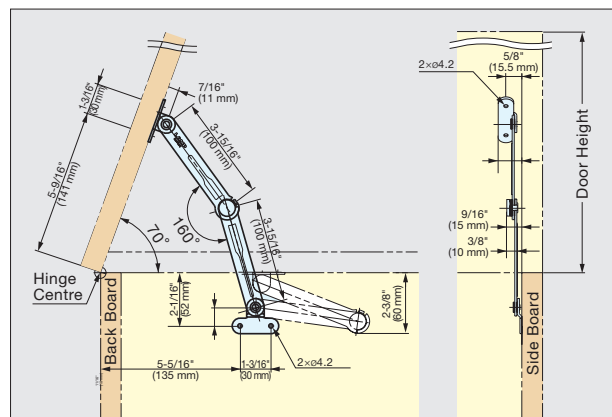
S-100T30

LID SUPPORTS

TORQUE LID STAYS (FREE STOP)



- Friction torque lid stay holds lid open at any position.
  - Narrow profile for unobtrusive installation.
  - Torque Calculation :  
Torque = Door Height × 1/2 × Door Weight
  - Left- and Right-handed models available.
  - Can be used individually or in pairs.
- Note : 1) Not recommended for lids that will be continuously opened and closed.  
2) Do not lubricate.



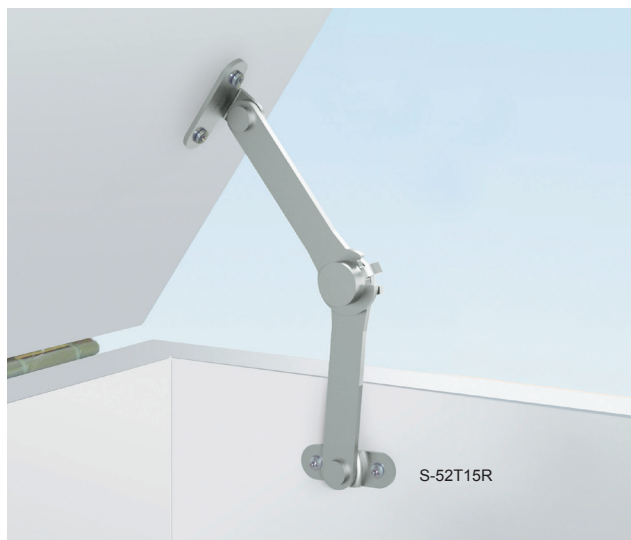
Item No.	Handing	Torque per piece	Weight (g)	Box (pcs)	Carton (pcs)
S-100T30R	Right	30.6 kg·cm ±20% (26.5 lbs·in ±20%)	100	30	120
S-100T30L	Left				

Part	Material	Finish
Body, Base & Bracket	430 Stainless Steel	Plain
Press washer & Pin	Phosphor Bronze	
Washer	Steel	

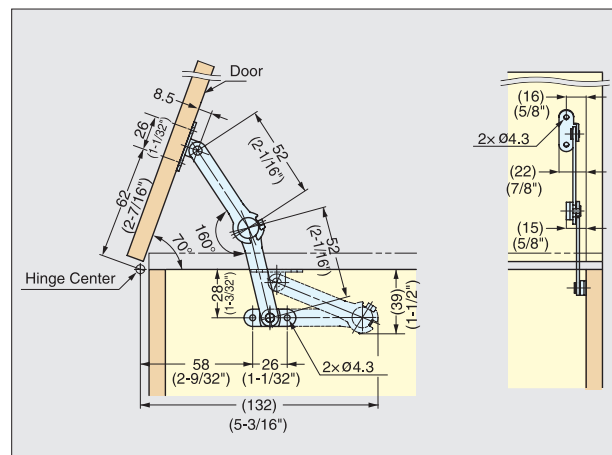
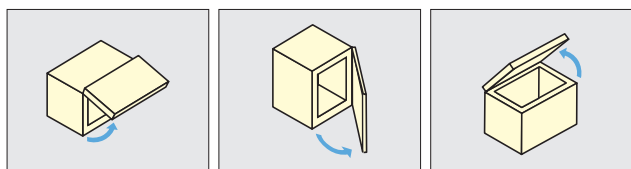
# TORQUE LID STAY (FREE STOP)



S-52T15



- Friction torque lid stay holds lid open at any position.
  - Narrow profile for unobtrusive installation.
  - Left- and Right-handed models available.
  - Can be used individually or in pairs.
- Note : 1) Not recommended for lids that will be continuously opened and closed.  
2) Do not lubricate.



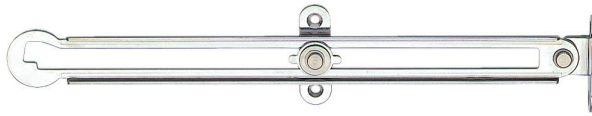
Item No.	Handing	Torque per piece	Weight (g)	Box (pcs)	Carton (pcs)
S-52T15R	Right	15.3 kg·cm ±20% (13.3 lbs·in ±20%)	40	25	250
S-52T15L	Left				

Part	Material	Finish
Body, Base & Bracket	430 Stainless Steel	Plain
Press washer & Pin	Phosphor Bronze	
Washer	Steel	

# LID STAY

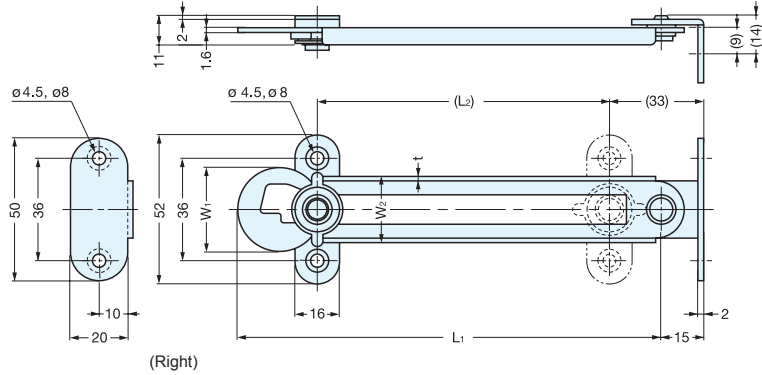
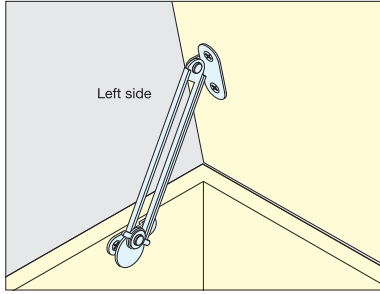


# S-91, 92, 93



(Right)

- Automatically holds lid in opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Handed : Specific left and right hand mounting.



Material	Finish
304 Stainless Steel	Polished

Item No.		L <sub>1</sub>	(L <sub>2</sub> )	W <sub>1</sub>	W <sub>2</sub>	t	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right									
S-91L	S-91R	277 ( 10-29/32" )	230	30	24	2.0	40 ( 88 lbs )	120	100	1000
S-92L	S-92R	198 ( 7-51/64" )	152	28	23	1.5		85	30	180
S-93L	S-93R	150 ( 5-29/32" )	105				30	66 lbs )	75	60

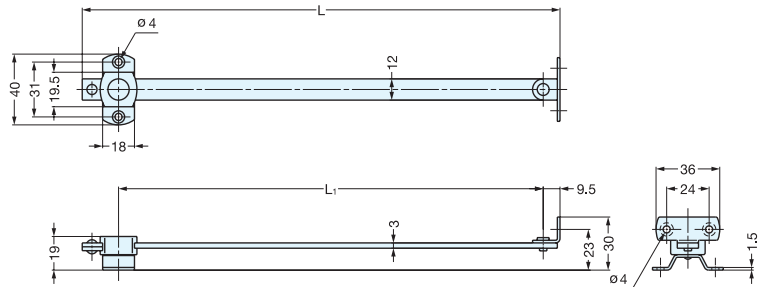
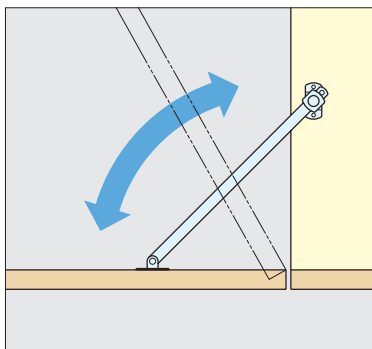
# LID STAY



# HS



- For downward-opening flap doors.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.



Material	Finish/Color
304 Stainless Steel	Satin
Polyamide	White

Item No.	L	L <sub>1</sub>	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
HS-180	210 ( 8-17/64" )	180 ( 7-3/32" )	10 ( 22.0 lbs)	80	20	220
HS-210	240 ( 9-29/64" )	210 ( 8-17/64" )	12 ( 26.5 lbs)	90		
HS-240	270 ( 10-5/8" )	240 ( 9-29/64" )	13 ( 28.5 lbs)	100		

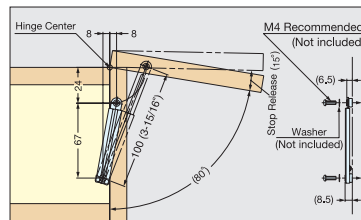
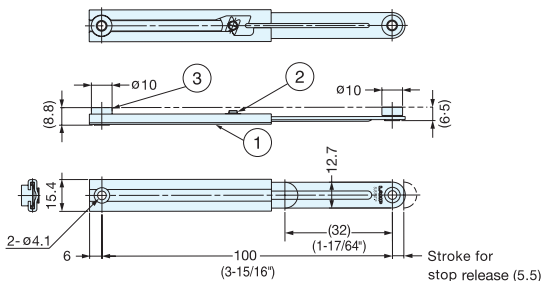
# ULTRA MINI LID STAY



# L-100S



- Holds lid or panel in opened position.
- Lift up lid to release.
- Non-Handed : Can be installed on left or right side.
- Compact design.
- Can be installed individually or in pairs.
- Designed for use with L-S-BT mounting brackets, sold separately.



Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
L-100S	6 ( 13.2 lbs )	31	30	300

No.	Part Name	Material	Finish
①	Housing	304 Stainless Steel	Polished
②	Washer	Polyamide	-
③	Bracket	304 Stainless Steel	-

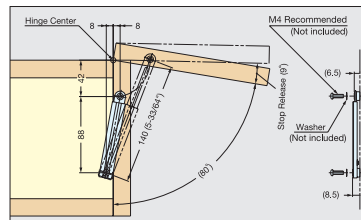
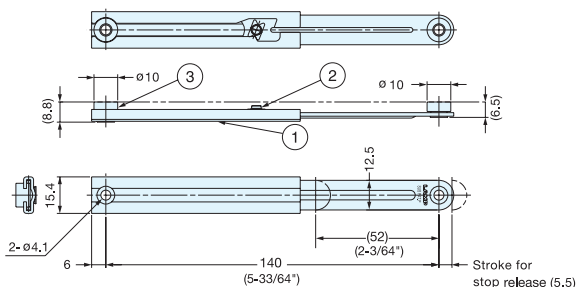
# ULTRA MINI LID STAY



# L-140S



- Holds lid or panel in open position.
- Lift up lid to release.
- Non-Handed : Can be installed on left or right side.
- Compact design.
- Can be installed individually or in pairs.
- Designed for use with L-S-BT mounting brackets, sold separately.



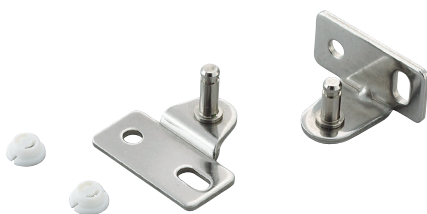
Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
L-140S	6 ( 13.2 lbs )	38	30	300

No.	Part Name	Material	Finish
①	Housing	304 Stainless Steel	Polished
②	Washer	Polyamide	-
③	Bracket	304 Stainless Steel	-

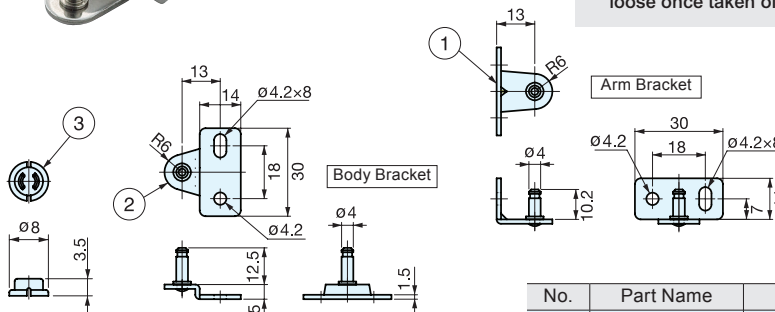
# MOUNTING BRACKET



# L-S-BT



- Optional brackets for L-100S and L-140S stays.
- Brackets for arm and body sold as set.
- Insert the retainer and bracket firmly into the stay.
- \*Do not re-use the bracket. Retainer may become loose once taken off from stay.



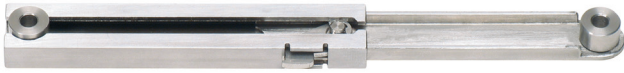
Item No.	Weight (g)	Box (pcs)	Carton (pcs)
L-S-BT	20	30	300

No.	Part Name	Material	Finish
①	Arm Bracket	304 Stainless Steel	Polished
②	Body Bracket		
③	Retainer	Polyacetal	White

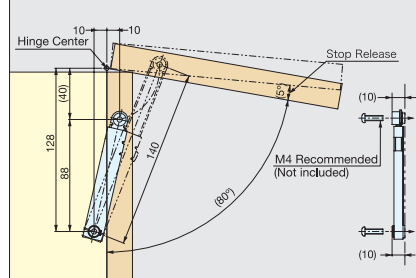
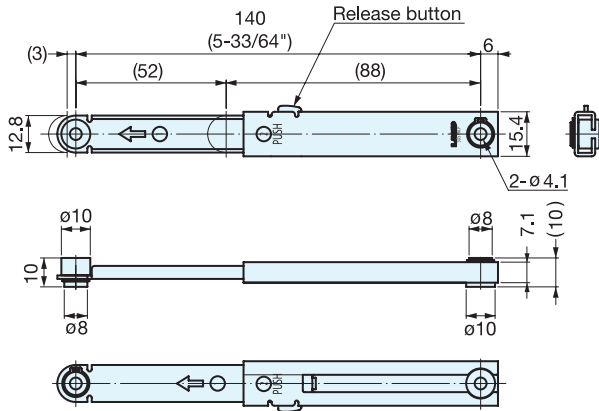
# MINI LID STAY (W/LOCK)



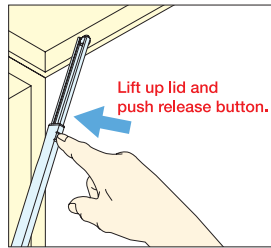
# L-SL140



- Automatically locks lid/panel when fully opened.
- Push button to release.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Mounting brackets (L-SL140-BT) available separately.



\*Lid stay must be installed parallel to the sidewall.



Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)	Material	Finish
L-SL140	15 ( 33 lbs )	40	30	300	304 Stainless Steel	Polished

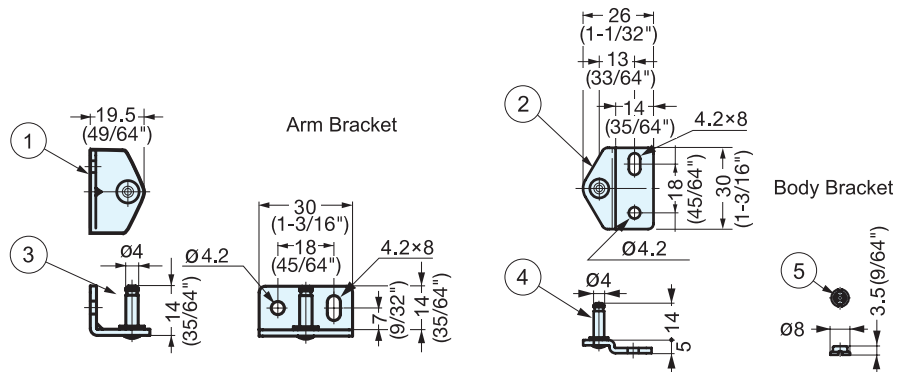
# MOUNTING BRACKET



# L-SL140-BT



- Optional brackets for L-SL140 stay.
- Insert the retainer and bracket firmly into the stay.
- \* Do not re-use the bracket. Retainer may become loose once taken off from stay



No.	Part Name	Material	Finish
①	Arm Bracket	304 Stainless Steel	Polished
②	Body Bracket		
③	Arm Bracket Pin	303 Stainless Steel	Plain
④	Body Bracket Pin		
⑤	Retainer	Polycetal	Black

Item No.	Weight (g)	Box (pcs)	Carton (pcs)
L-SL140-BT	28	30	300



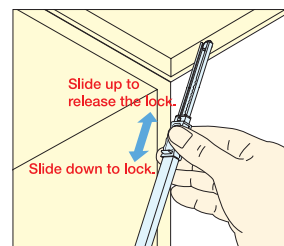
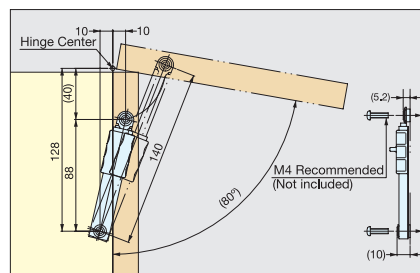
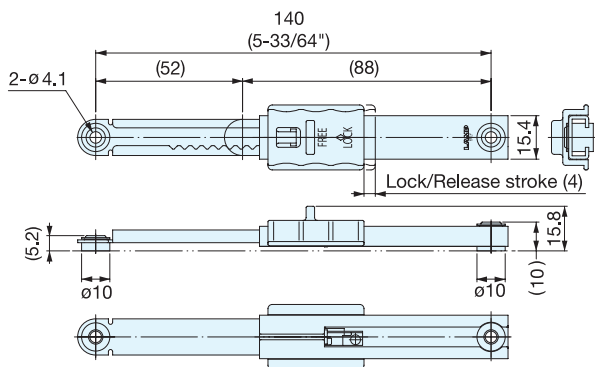
# MINI LID STAY (W/LOCK)



# L-FS140



- Locks lid/panel in multiple positions by manually sliding lock lever.
- Slide lever to lock/unlock.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Mounting brackets (L-FS140-BT) available separately.



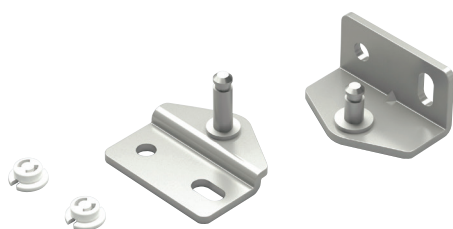
Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
L-FS140	6 ( 13.2 lbs )	50	20	200

Material	Finish
304 Stainless Steel	Polished
Polyacetal	Dark Grey

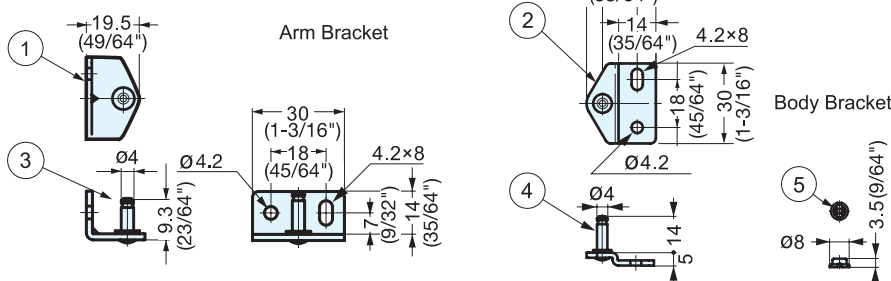
# MOUNTING BRACKET



# L-FS140-BT



- Optional brackets for L-FS140 stay.
- Insert the retainer and bracket firmly into the stay.
- \* Do not re-use the bracket. Retainer may become loose once taken off from stay



Item No.	Weight (g)	Box (pcs)	Carton (pcs)
L-FS140-BT	27	40	400

No.	Part Name	Material	Finish
①	Arm Bracket	304 Stainless Steel	Polished
②	Body Bracket		
③	Arm Bracket Pin	303 Stainless Steel	Plain
④	Body Bracket Pin		
⑤	Retainer	Polyacetal	Black

# LOW PROFILE LID STAY



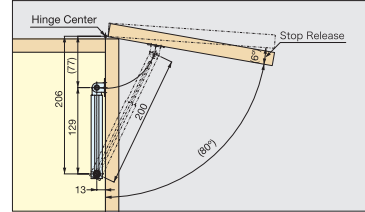
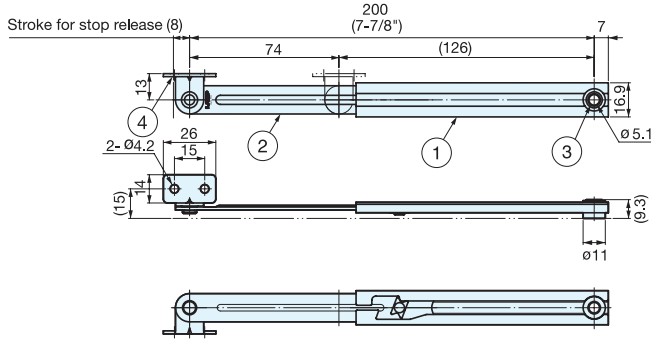
# L-200P

LID SUPPORTS

LOW PROFILE LID STAYS / MOUNTING BRACKETS



- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Mounting brackets (L-200-BT) available separately.



\*Lid stay must be installed parallel to the sidewall.

Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
L-200P	15 ( 33 lbs )	65	30	300

No.	Part Name	Material	Finish
①	Housing	304 Stainless Steel	Plain
②	Arm		
③	Hosing Bracket	303 Stainless Steel	Plain
④	Arm Bracket	304 Stainless Steel	Polished

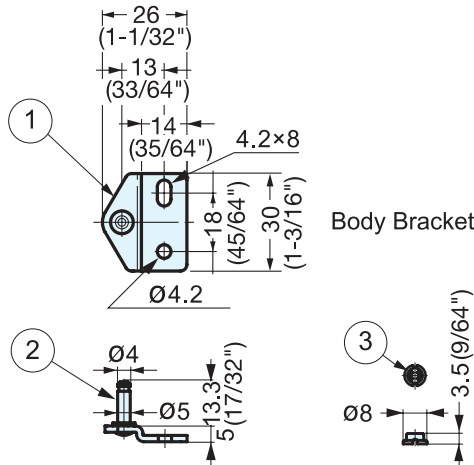
# MOUNTING BRACKET



# L-200P-BT



- Optional brackets for L-200P stay.
- Insert the retainer and bracket firmly into the stay.
- \* Do not re-use the bracket. Retainer may become loose once taken off from stay



Item No.	Weight (g)	Box (pcs)	Carton (pcs)
L-200P-BT	14	30	300

No.	Part Name	Material	Finish
①	Arm Bracket	304 Stainless Steel	Polished
②	Body Bracket Pin		
③	Arm Bracket Pin	303 Stainless Steel	Plain

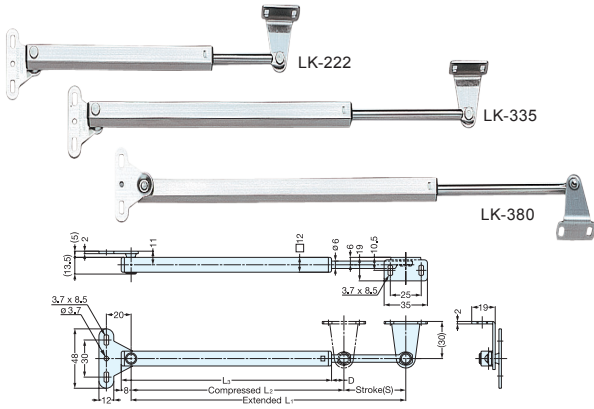
# LID STAY



LK

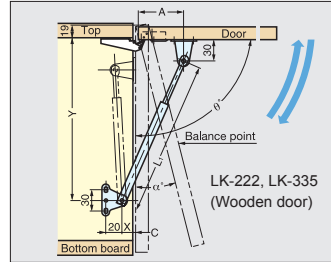
LID SUPPORTS

LID STAYS

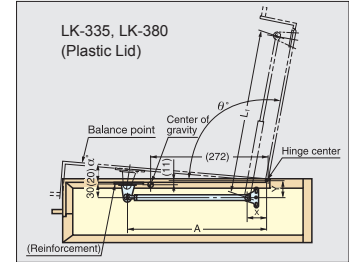


- Spring mechanism assists lifting door and holds in open position.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.

Mounting Example (1)



Mounting Example (2)



Drawing shown is based on C = 4 mm. If C = 0, please deduct 4 mm from "X" in the table below.

Material	Finish
303, 304 Stainless Steel	Satin

Door weight is based on door height : LK-222 = 350 mm, LK-335 = 500 mm

Item No.	Max. Door Weight (kg)	Door Opening (θ°)	- (α°)	L <sub>1</sub>	A	X	Y
LK-222 (2 pcs)	2.5 (5.5 lbs)	90	17	222 (8-47/64")	70 (2-3/4")	20 (25/32")	235 (9-1/4")
	2.7 (5.9 lbs)	85	15	222 (8-47/64")	75 (2-61/64")	20 (25/32")	240 (9-29/64")
	3.0 (6.6 lbs)	75	14	222 (8-47/64")	85 (3-11/32")	20 (25/32")	251 (9-7/8")
LK-335 (2 pcs)	3.1 (6.8 lbs)	90	14	335 (13-3/16")	104 (4-3/32")	20 (25/32")	344 (13-35/64")
	3.3 (7.2 lbs)	85	12	335 (13-3/16")	112 (4-13/32")	20 (25/32")	351 (13-13/16")
	3.8 (8.3 lbs)	75	11	335 (13-3/16")	127 (5-1/8")	20 (25/32")	368 (14-31/64")

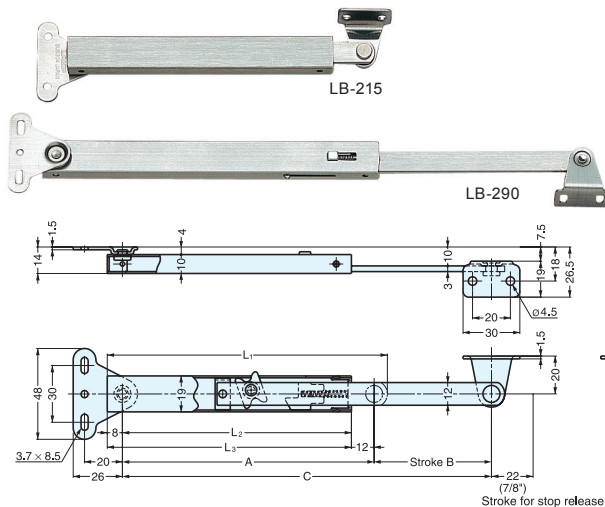
Item No.	Max. Door Weight (kg)	Door Opening (θ°)	- (α°)	L <sub>1</sub>	A	X	Y
LK-335 (2 pcs)	2.5 (5.5 lbs)	90	0.5	335 (13-3/16")	295 (11-39/64")	45 (1-25/32")	38 (1-1/2")
	3.0 (6.6 lbs)	90	14.0	335 (13-3/16")	295 (11-39/64")	45 (1-25/32")	38 (1-1/2")
	3.3 (7.2 lbs)	85	12.0	335 (13-3/16")	295 (11-39/64")	45 (1-25/32")	44 (1-47/64")
LK-380 (2 pcs)	2.5 (5.5 lbs)	110	8.0	380 (14-31/32")	330 (13")	40 (1-37/64")	36 (1-27/64")
	3.0 (6.6 lbs)	90	3.5	380 (14-31/32")	335 (13-3/16")	55 (2-5/32")	44 (1-47/64")
	4.0 (8.8 lbs)	90	4.0	380 (14-31/32")	320 (12-19/32")	41 (1-39/64")	59 (2-21/64")
	4.3 (9.4 lbs)	80	7.5	380 (14-31/32")	335 (13-3/16")	56 (2-13/64")	60 (2-23/64")

Item No.	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	S	D	Extended Force (kg)	Compressed Force (kg)	Weight (g)	Box (pcs)	Carton (pcs)
LK-222	222 ( 8-47/64")	172 ( 6-25/32")	170 ( 6-11/16")	50 ( 1-11/32")	10 ( 25/64" )	3.2	7.0	145	25	150
LK-335	335 ( 13-3/16")	250 ( 9-27/32")	238 ( 9-3/8" )	85 ( 3-11/32")	20 ( 25/32" )	3.8	8.5	185		
LK-380	380 ( 14-31/32")	280 ( 11-1/32")	269 ( 10-19/32")	100 ( 3-15/16")	19 ( 3/4" )	3.6	8.5	205		

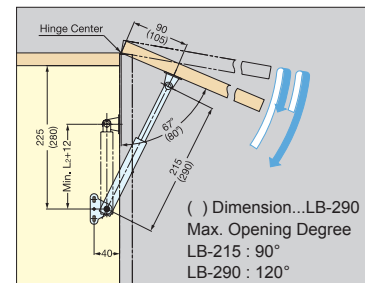
# LID STAY



# LB-215, 290



- Holds lid or panel in fully opened position.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Load Capacity : 15 kg (33 lbs)/each.



\*Lid stay must be installed parallel to the sidewall.

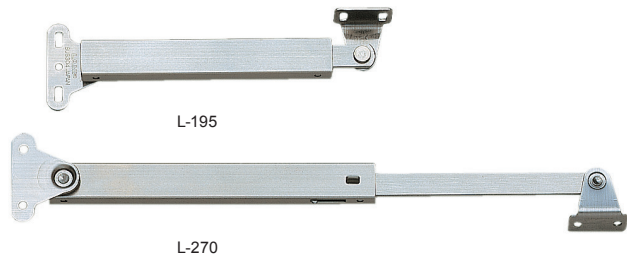
Material	Finish
Zinc Alloy/304 Stainless Steel	Chrome/Satin

Item No.	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	B	C	Door Height (mm)	Weight (g)	Box (pcs)	Carton (pcs)
LB-215	168 ( 6-39/64")	141	149	153 ( 6-1/32" )	62	215 ( 8-15/32")	260~350 (10-15/64"~13-25/32")	140	10	100
LB-290	205 ( 8-1/16" )	178	186	190 ( 7-31/64")	100	290 ( 11-27/64")	340~500 (13-25/64"~19-11/16")	160		

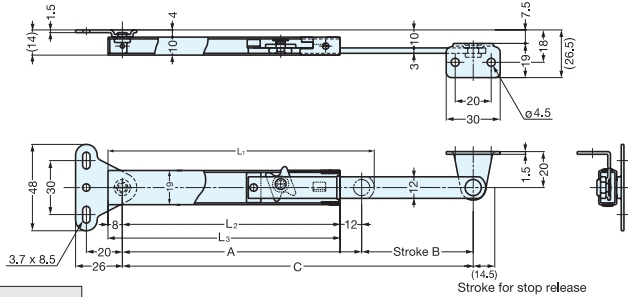
# LID STAY



L

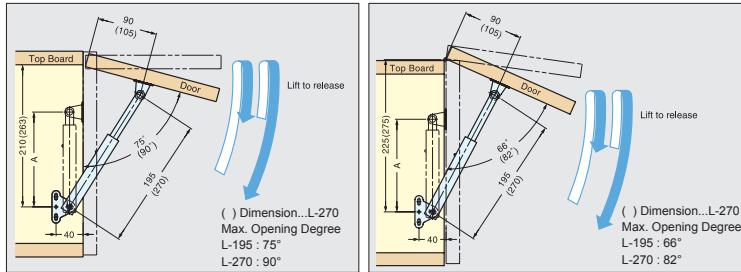


- Holds lid or panel in fully opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Load Capacity : 15 kg (33 lbs)/each.



With Concealed Hinge

With Piano/Butt Hinge



\*Lid stay must be installed parallel to the sidewall.

Material	Finish
304 Stainless Steel	Satin

Item No.	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	(A)	(B)	C	Door Height (mm)	Weight (g)	Box (pcs)	Carton (pcs)
L-195	148 (5-53/64")	121	129	133 (5-15/64")	62	195 (7-43/64")	250~350 ( 9-27/32"~13-25/32" )	125	10	100
L-270	185 ( 7-9/32" )	158	166	170 (6-11/16")	100	270 ( 10-5/8" )	320~500 ( 12-19/32"~19-11/16" )	150		

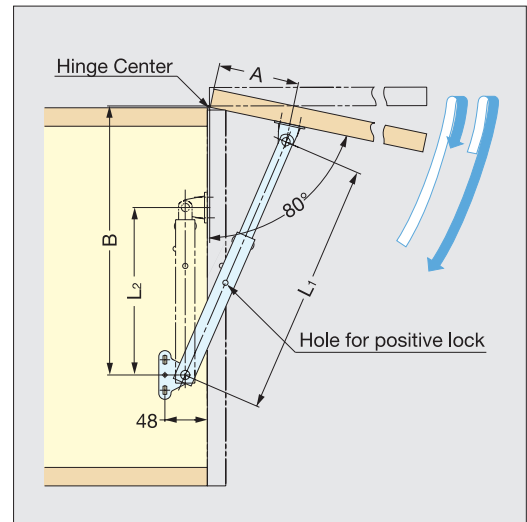
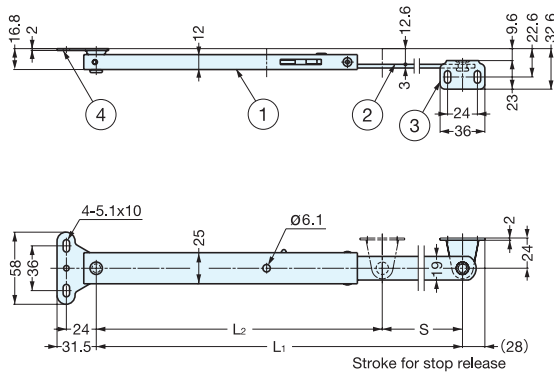
# LID STAY



LB



- Holds lid or panel in fully opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.



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

Item No.	L <sub>1</sub>	L <sub>2</sub>	S	A	B	Load Capacity (kg)	Box (pcs)	Carton (pcs)
LB-200	200 ( 7- 7/8" )	(155) ( 6-3/32" )	45	56	219	30 (66 lbs)	10	40
LB-350	350 (13-25/32")	(230) ( 9-3/64" )	120	128	364	25 (55 lbs)		20
LB-500	500 (19-11/16")	(305) (12-1/64")	195	195	510	20 (44 lbs)		

# LID STAY (CLEAN ROOM)

STAINLESS  
304  
STEEL

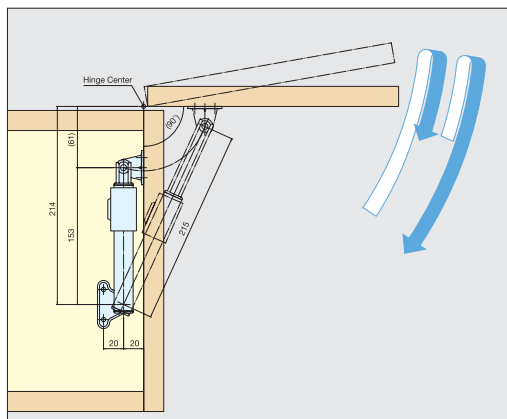
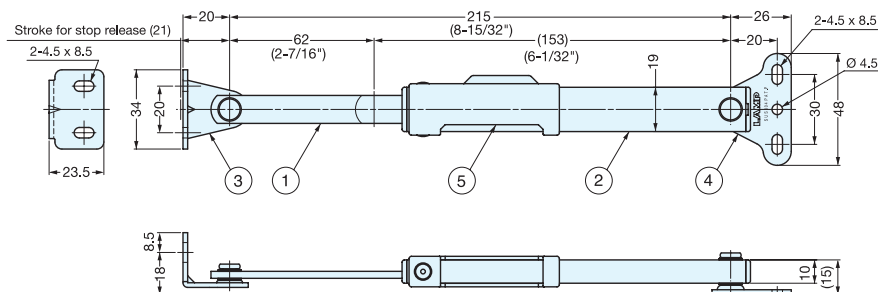
LOAD CAPACITY  
15 kg  
33 lbs

NO SCREW

# LB-CV215A



- Holds lid or panel in fully opened position.
- Plastic bushing and end cap minimizes particles.
- No metal-to-metal contact.
- Ideal for clean room, semiconductor and food industry applications.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.



\*Lid stay must be installed parallel to the sidewall.

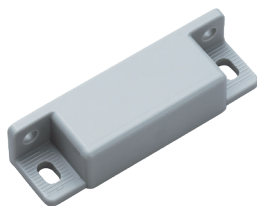
Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)	Material	Finish/Color
					LB-CV215A	15 (33 lbs)
					ABS	White

## CLEAN ROOM HARDWARE



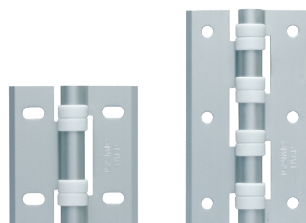
**MC-JM45**

Please see page 104 for details



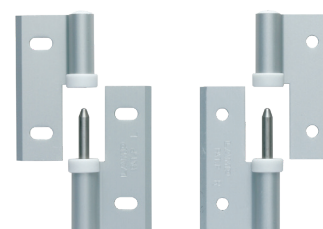
**MC-JM63G**

Please see page 104 for details



**HG-CV**

Please see page 228 for details



**HG-CV-65N**

Please see page 228 for details

# HEAVY DUTY LID STAY



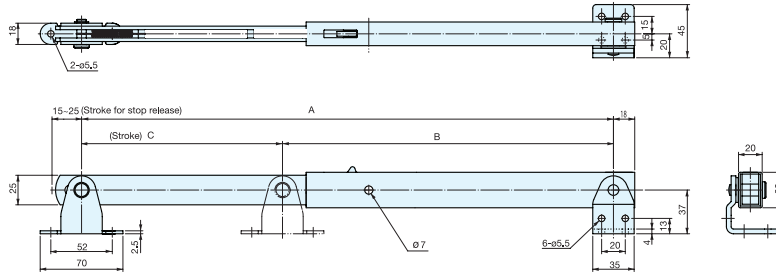
## LB-S



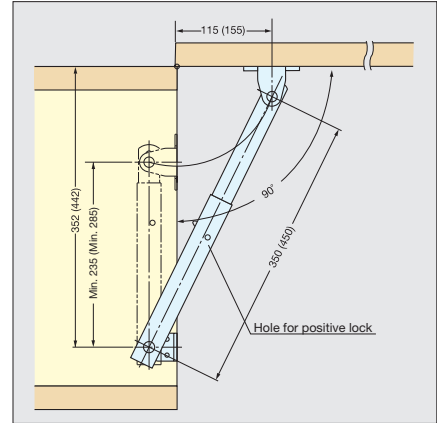
LB-S350



LB-S450



- Heavy duty lid stay holds lid or panel in fully opened position.
- Lift up the lid to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.



Measurements above in ( ) are for LB-S450.  
\*Lid stay must be installed parallel to the sidewall.

Material	Finish
304 Stainless Steel	Satin

Item No.	(A)	B	C	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
LB-S350	350 (13-25/32")	230 (9-1/16")	120 (4-23/32")	133 (293 lbs)	745	5	20
LB-S450	450 (17-25/32")	280 (11-1/32")	170 (6-11/16")	97 (214 lbs)	865		

# HEAVY DUTY MULTI-ANGLE LID STAY



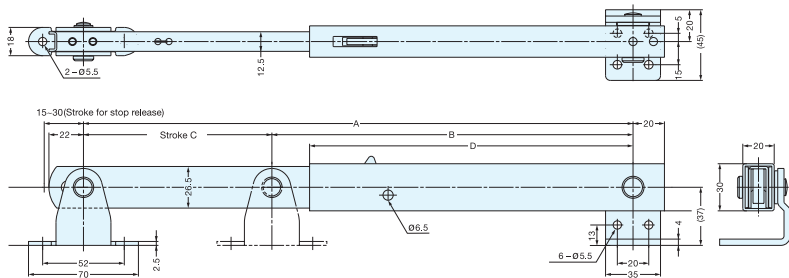
## LBTS



LBTS-350

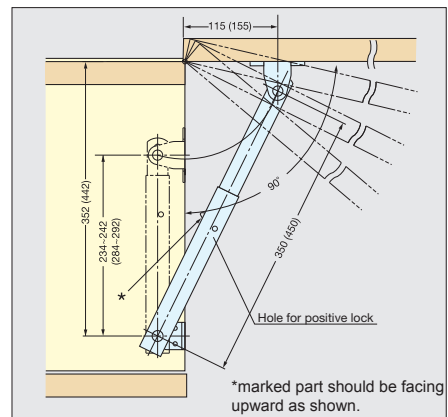


LBTS-450



Above drawing shows LBTS left-hand mounting.

- Ratchet stay holds lid at multiple angles.
- Fully lift up lid to release.
- Can be installed individually or in pairs.
- Handed left or right.



Measurements above in ( ) are for LBTS-450R.  
\*Lid stay must be installed parallel to the sidewall.

Material	Finish
304 Stainless Steel	Satin

Item No.	Left	Right	(A)	B	C	D	Stop Positions	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
LBTS-450L	LBTS-450R	450 (17-25/32")	280 (11-1/32")	170 (6-11/16")	256 (10-5/64")	6	820				

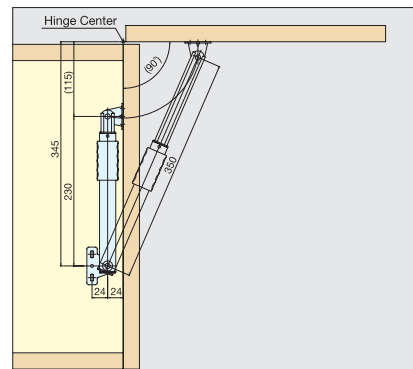
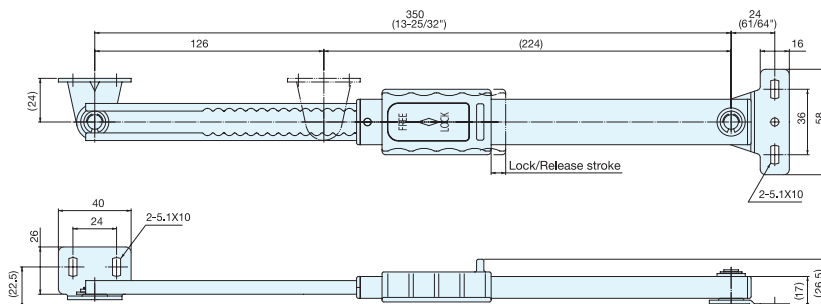
# MULTI-ANGLE LID STAY (W/LOCK)



# L-FS350A



- Locks lid in multiple positions by manually sliding lock lever.
- Slide back lever to lock/unlock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.



\*Lid stay must be installed parallel to the sidewall.

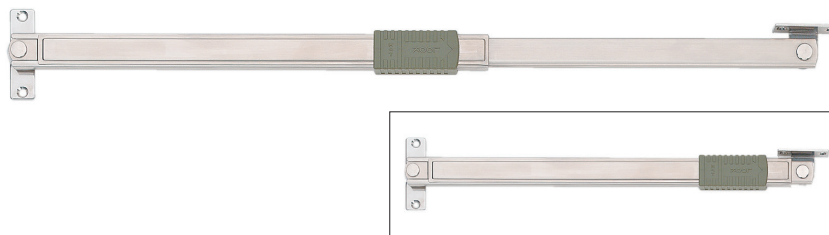
Item No.	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
L-FS350A	25 (55 lbs)	325	5	50

Material	Finish/Color
304 Stainless Steel	Satin
Polyacetal	Dark Grey

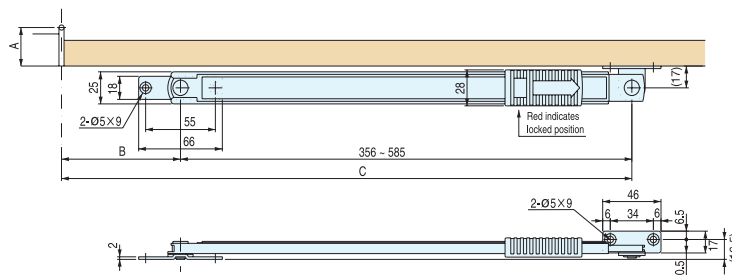
# MULTI-ANGLE LID STAY



# U-3005



- Locks lid in multiple positions by manually sliding lock lever.
- Slide back lever to lock/unlock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Door opening angle: 100° maximum
- Recommended door size  
Height - Max. 2,000 mm (78-3/4")  
Width - 600~910 mm (23-5/8"~35-53/64")  
Thickness - 25~45 mm (1"~1-3/4")
- Weight - Max. 20 kg (44 lbs)



A, B and C dimensions are for 90° door opening angle.

A	30 ( 1-11/64" )	35 ( 1-3/8" )	40 ( 1-37/64" )	45 ( 1-49/64" )	50 (1-31/32")
B	160 ( 6-19/64" )	160 ( 6-19/64" )	160 ( 6-19/64" )	160 ( 6-19/64" )	155 ( 6-3/32" )
C	525 ( 20-49/64" )	520 ( 20-15/32" )	515 ( 20-9/32" )	510 ( 20-5/64" )	505 ( 19-7/8" )

Item No.	Weight (g)	Box (pcs)	Carton (pcs)
U-3005	338	6	60

Material	Finish/Color
304 Stainless Steel	Satin
Polyacetal	-

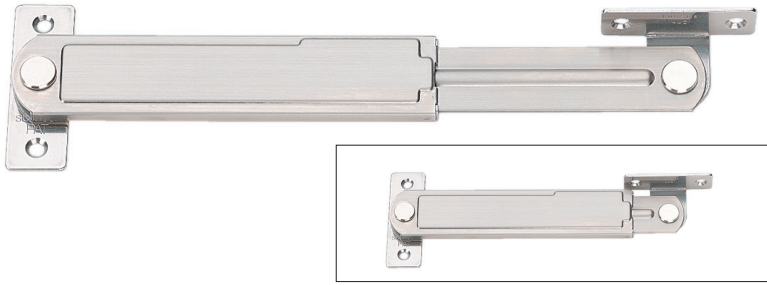
# MULTI-ANGLE LID STAY

STAINLESS  
**304**  
STEEL

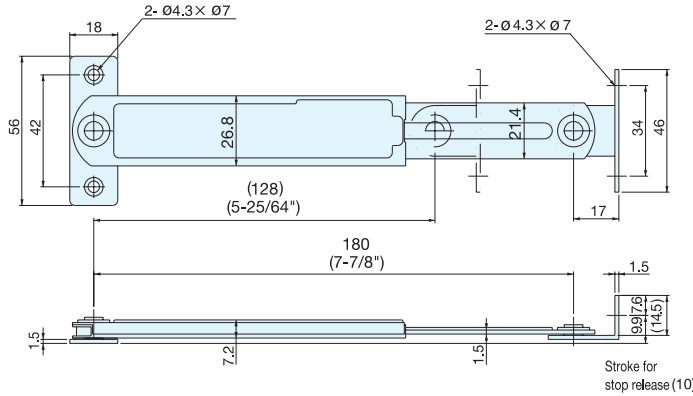
LOAD CAPACITY  
7 kg  
15 lbs

STAINLESS

**U-3031**



- Ratcheting stay holds flap lid at multiple angles.
- Non-handed.
- Thin and compact design.
- Completely open the door to release lock.
- Completely close the door to re-engage the lock.



Material	Finish
304 Stainless Steel	Satin

Item No.	Stop Positions	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
U-3031	15	7 (15 lbs)	127	10	100

# LID STAY (W/LOCK)

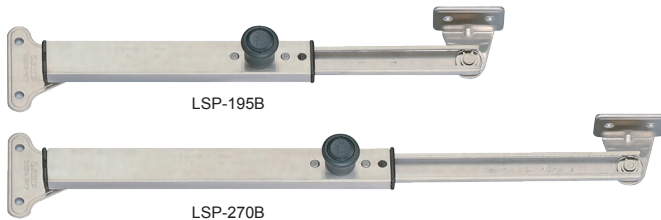
STAINLESS  
**304**  
STEEL

LOAD CAPACITY  
30 kg  
66 lbs

TEST 15  
P.698

NO SCREW

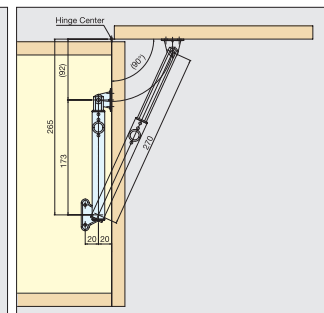
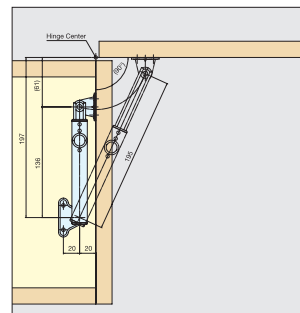
**LSP**



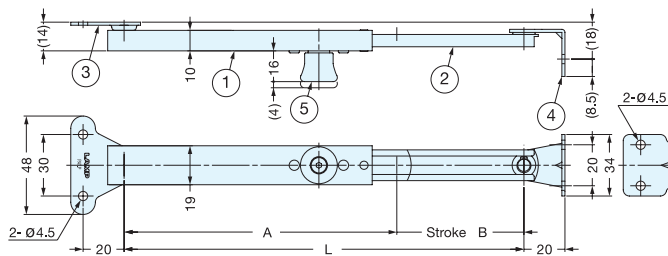
- Automatically locks lid when fully opened.
- Pull the locking knob to release lock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.

LSP-195B

LSP-270B



\*Lid stay must be installed parallel to the sidewall.



No.	Part Name	Material	Finish/Color
①	Case	304 Stainless Steel	Satin
②	Arm		
③	Case Bracket		
④	Arm Bracket		
⑤	Locking knob	ABS	Dark Grey

Item No.	L	A	B	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
LSP-195B	195 (7-43/64")	133 (5-15/64")	62 (2-7/16")	30 (66 lbs)	126	6	60
LSP-270B	270 (10-5/8")	170 (6-11/16")	100 (3-15/16")		147		



# SPRING LOADED LID STAY



S-YT

LID SUPPORTS

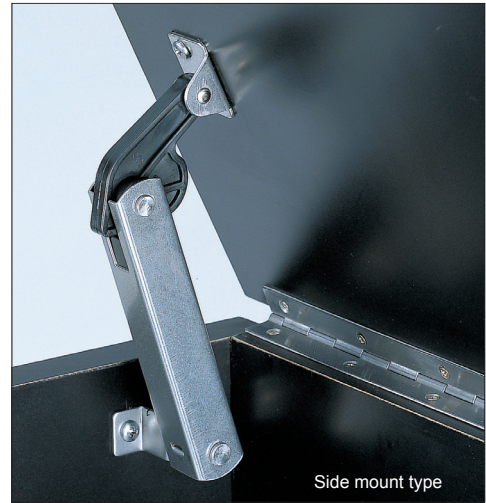
SPRING LOADED LID STAYS

- Spring mechanism assists in lifting door and holds in open position.
- Handed: Specific left and right hand mounting.

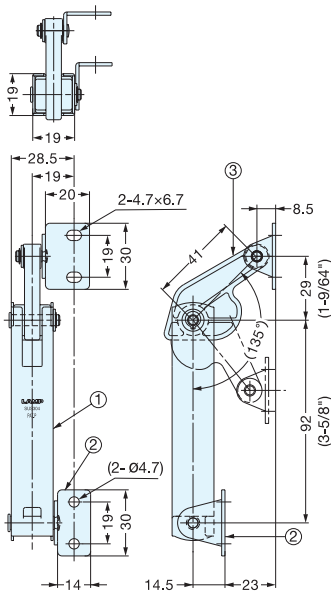


Back panel mount type

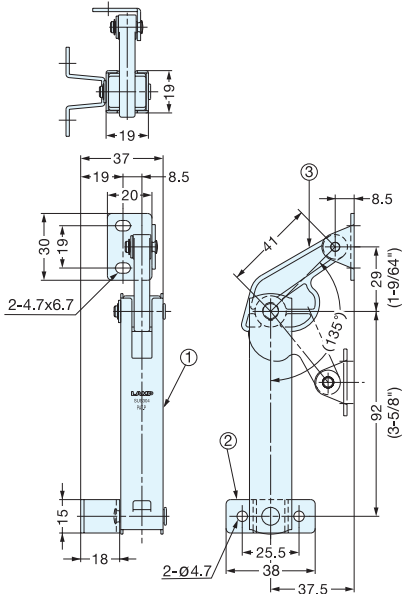
Side mount type  
(Left handed shown)



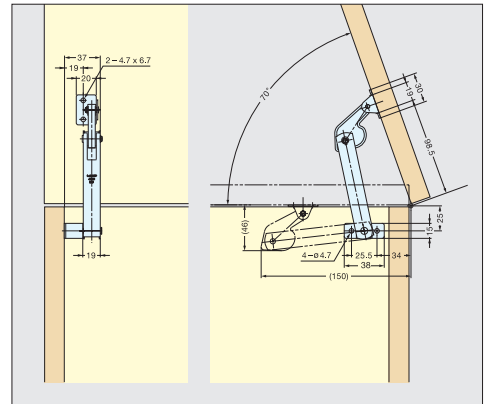
Side mount type



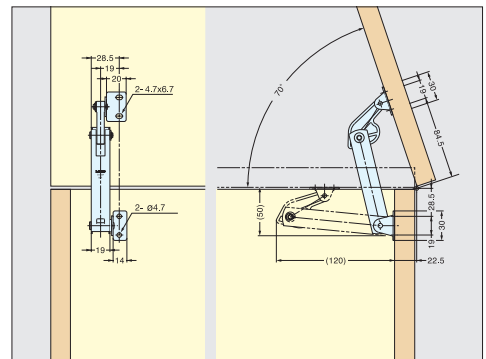
Back panel mount type



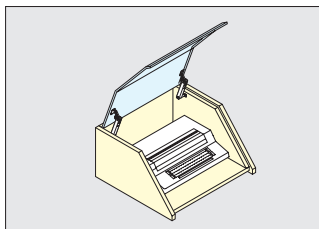
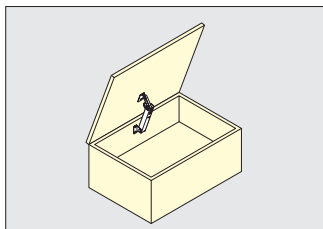
Side mount type



For side mount type



For back panel mount type



No.	Part Name	Material	Finish
①	Body	304 Stainless Steel	Plain
②	Bracket	304 Stainless Steel	Plain
③	Arm	Polyacetal	-

Item No.		Spring Tension	Mounting Type	Max. Torque (kgf-cm)	Weight (g)	Box (pcs)	Carton (pcs)
Left	Right						
S-YT01L	S-YT01R	Soft	Side	30 ( 26 lbs-in )	118	10	100
S-YT02L	S-YT02R	Hard		40 ( 34 lbs-in )			
S-YT01S		Soft	Back Panel	30 ( 26 lbs-in )			
S-YT02S		Hard		40 ( 34 lbs-in )			

# BALANCE ADJUSTABLE SPRING LOADED LID STAY



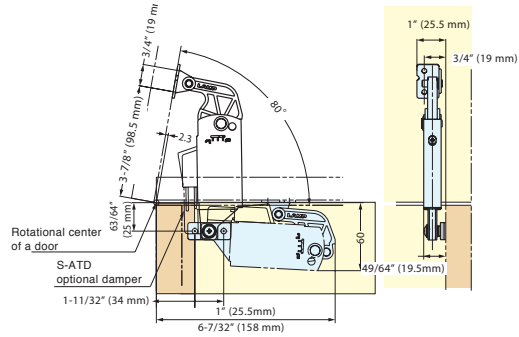
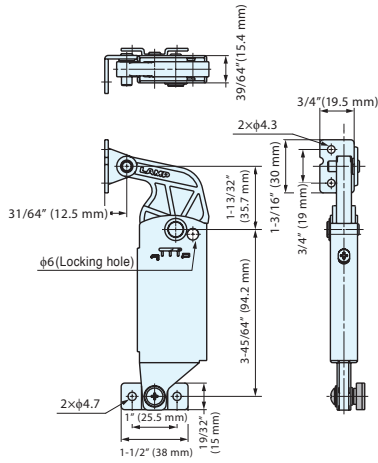
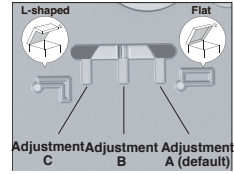
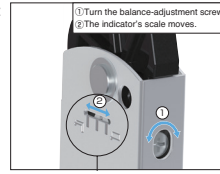
## S-ATJ



(Shown with S-ATD damper)

- Side wall mounted.
- Spring mechanism assists in lifting door and holds in open position (10°~80°).
- The balance adjustment allows for use in wider range of lids.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.
- Does not work with concealed hinges.
- Optional add on damper S-ATD.

### Balance Adjustment

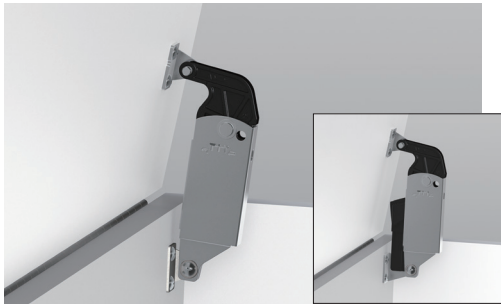


Item No.	Material	Finish	Max. Torque per piece (kgf·cm)	Box (pcs)	Carton (pcs)
S-ATJ01	430 Stainless Steel/	Plain	90 (78 lbs·in)	10	50
S-ATJ02	Steel/Polyacetal		120 (104 lbs·in)		

# BALANCE ADJUSTABLE SPRING LOADED LID STAY



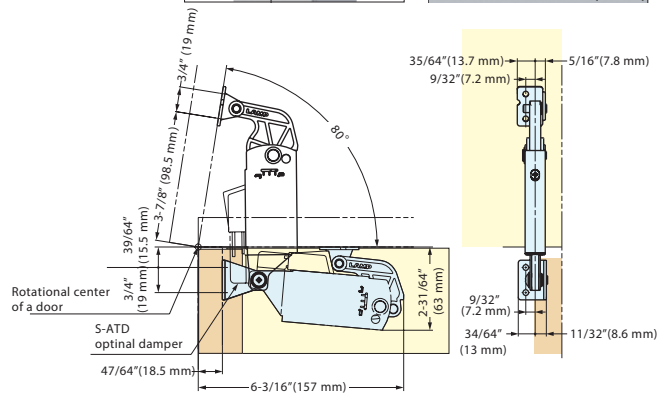
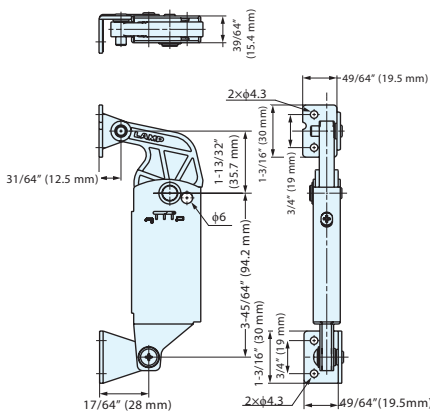
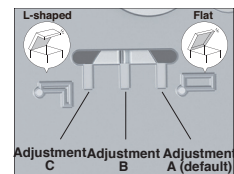
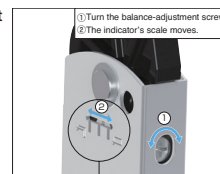
## S-ATJD



(Shown with S-ATD damper)

- Back panel mounted.
- Spring mechanism assists in lifting door and holds in open position (10°~80°).
- The balance adjustment allows for use in wider range of lids.
- Can be used individually or in multiples.
- Does not work with concealed hinges.
- Optional add on damper S-ATD.

### Balance Adjustment



Item No.	Material	Finish	Max. Torque per piece (kgf·cm)	Box (pcs)	Carton (pcs)
S-ATJ01D	430 Stainless Steel/	Plain	90 ( 78 lbs·in)	10	50
S-ATJ02D	Steel/Polyacetal		120 (104 lbs·in)		

# DAMPER FOR S-ATJ & S-ATJD

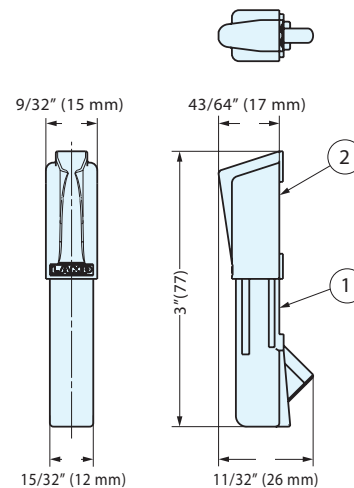
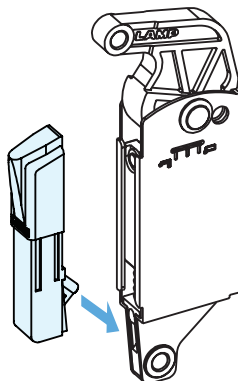


S-ATD

- Soft-close damper designed for use with the S-ATJ & S-ATJD.
- Easy to install.



(When attached to S-ATJD)



No.	Part Name	Material	Finish
①	Damper Case	Polyacetal	Black
②	Slider	Plastic (PBT)	

Item No.	Weight (g)	Box (pcs)	Carton (pcs)
S-ATD-30	15	50	-

# BALANCE ADJUSTABLE SPRING LOADED LID STAY

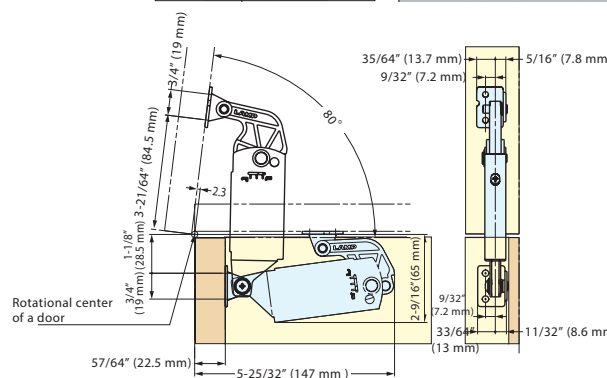
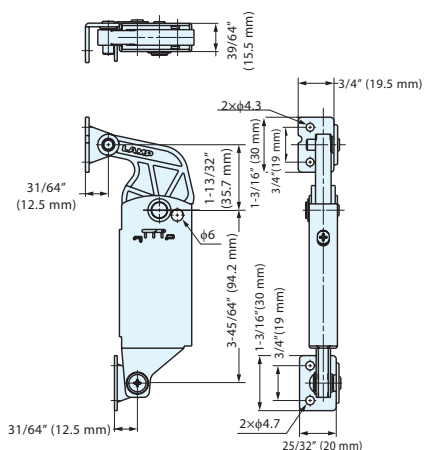
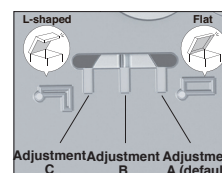
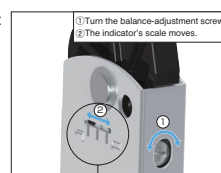


S-ATJS

- Back panel mounted.
- Spring mechanism assists in lifting door and holds in open position (10°~80°).
- The balance adjustment allows for use in wider range of lids.
- Can be used individually or in multiples.
- Does not work with concealed hinges.
- Damper option not available.



Balance Adjustment



Item No.	Material	Finish	Max. Torque per piece (kgf·cm)	Box (pcs)	Carton (pcs)
S-ATJ01S	430 Stainless Steel/ Steel/Polyacetal	Plain	90 (78 lbs-in)	10	50
S-ATJ02S			120 (104 lbs-in)		

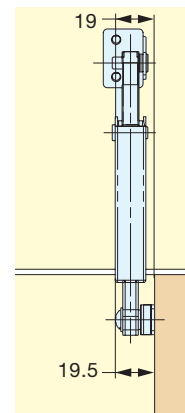
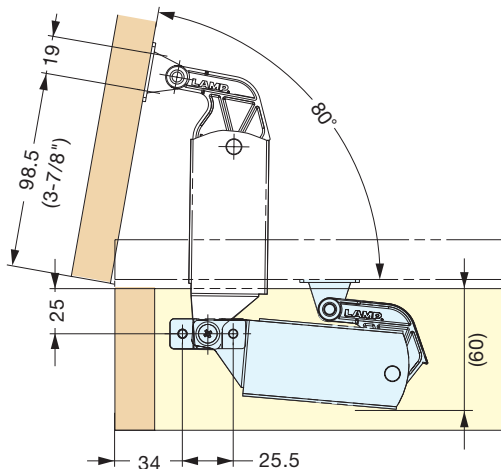
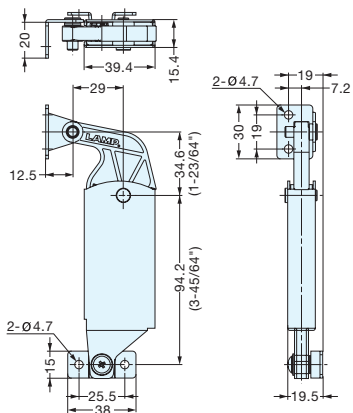
# SPRING LOADED LID STAY



## S-AT01, S-AT02



- Side wall mounted.
- Spring mechanism assists in lifting door and holds in open position (10°~80°).
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.
- Does not work with concealed hinges.



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

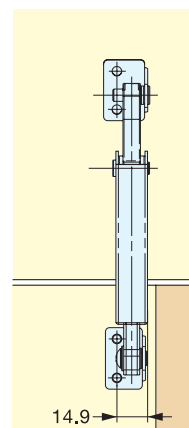
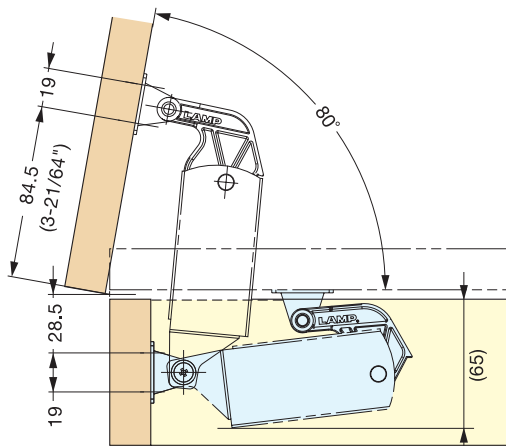
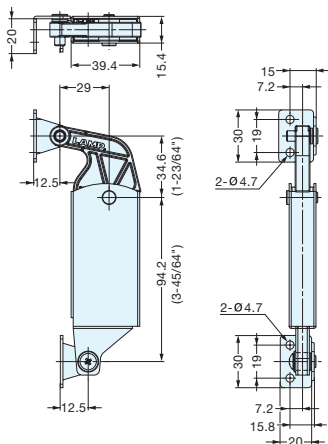
# SPRING LOADED LID STAY



## S-AT01S, S-AT02S



- Back panel mounted.
- Spring mechanism assists in lifting door and holds in open position (10°~80°).
- Can be used individually or in multiples.
- Does not work with concealed hinges.



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

# MINI-DOOR CLOSER (W/DAMPER)



YMC



YMC-R

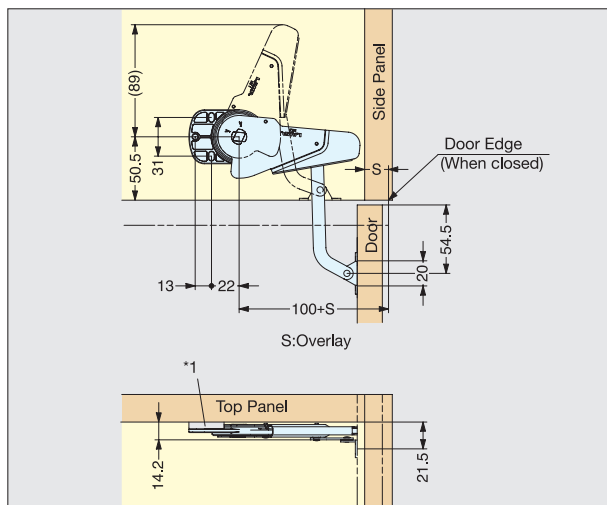
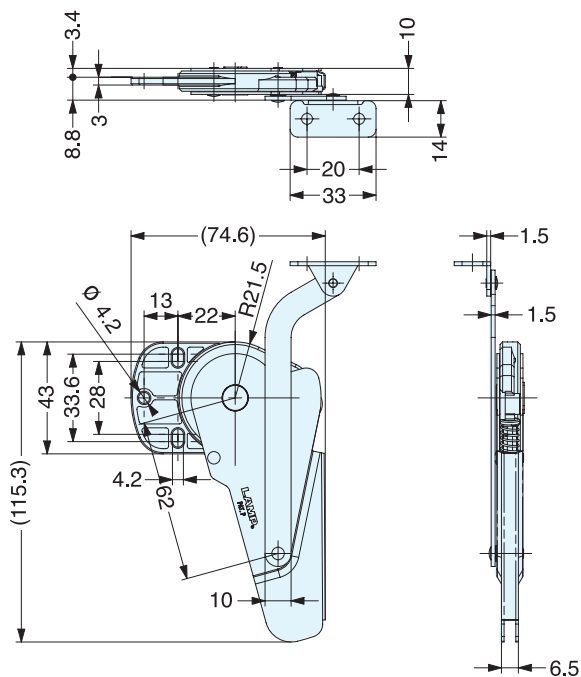
- Low profile door closer for small, horizontally swinging doors.
- Equipped with dampening mechanism for soft close.
- Stay will hold the door in 90° open position.
- Push the door to close. Once pushed, stay will gently pull the door and close.
- Thin body designed to be installed on top panel.
- Durable stainless steel construction.
- Handed: Specific left and right hand mounting.
- \*Recommended screws : M4

LID SUPPORTS

MINI-DOOR CLOSERS (W/DAMPER)

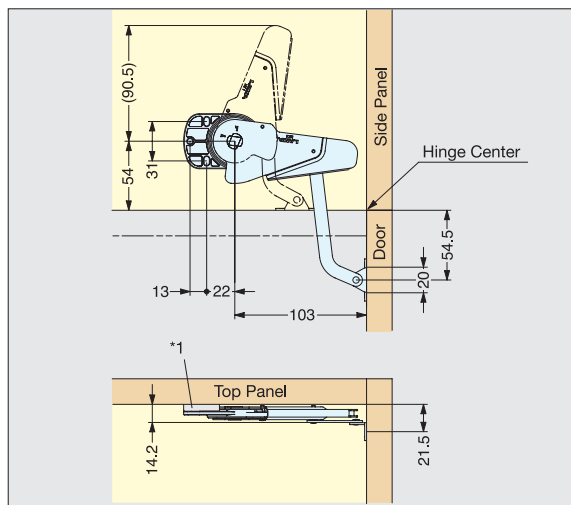


YMC-R model



\*1 Please prepare a spacer (Min. 5.4 mm Thickness) in case of wood application.

Installation (With Concealed Hinge)



\*1 Please prepare a spacer (Min. 5.4 mm Thickness) in case of wood application.

Installation (With Piano/Butt Hinge)

Item No.		Opening Angle	Door Weight (kg) (0.66~1.54 lbs)	Door Width (mm) (11-13/16")	Weight (g)	Box (pcs)	Carton (pcs)	Material	Finish/Color
Left	Right								
YMC-L	YMC-R	0°~90°		Max. 300 (11-13/16")	103	50	500	PBT, 304 Stainless Steel	Grey, Plain

# LIFT ASSIST DAMPER (W/ANGLE STOPPER)

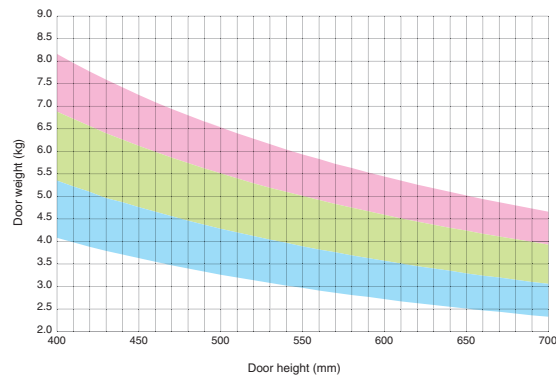
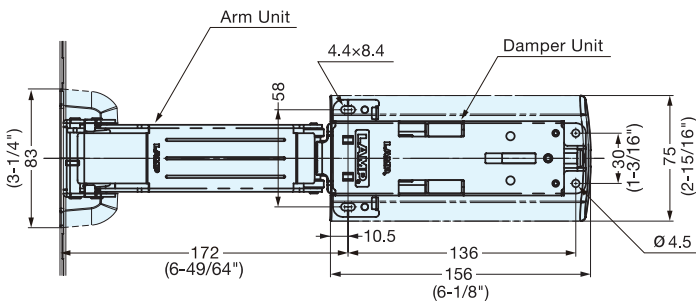
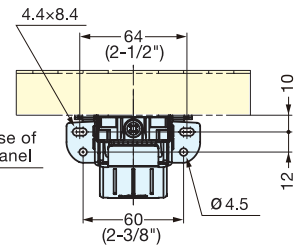
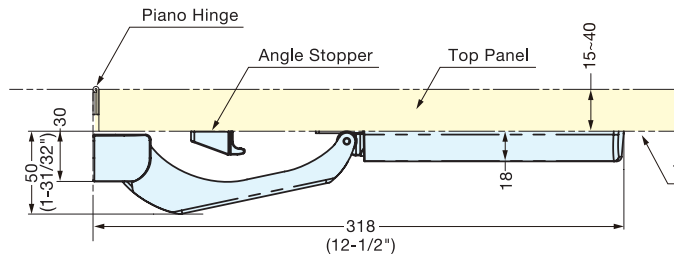
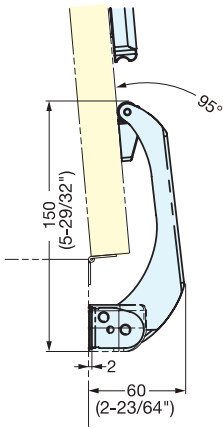
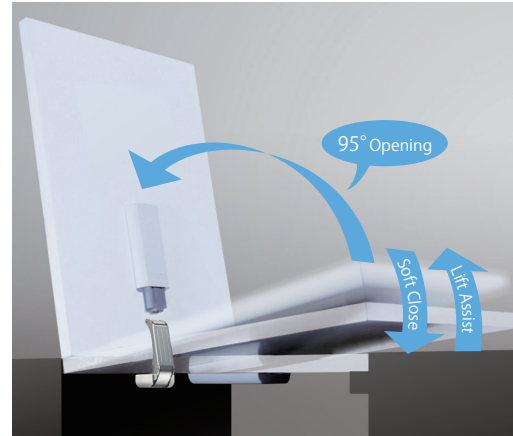


## LAD-ST

LID SUPPORTS

LIFT ASSIST DAMPERS (W/ANGLE STOPPER)

- Ideal for bar and countertop applications.
- Angle stopper designed to hold open at 95°.
- Damper equipped for soft closing.
- Simple surface mount installation.
- Brackets, spacers and mounting plate accessories available (sold separately)



Item No.	Max. Torque per piece (kgf·cm)	Panel Thickness	Weight (g)	Carton (pcs)	Material	Finish
LAD-ST-L	81.6~107.1 ( 70.1 ~ 93.1 lbs-in)	15~40 mm (9/16"~1-9/16")	750	1	ABS/Polycetal/ Steel/Zinc Alloy	Off White/ Chrome/ Nickel
LAD-ST-M	107.1~137.7 ( 93.1~119.7 lbs-in)					
LAD-ST-H	137.7~163.2 (119.7~141.9 lbs-in)					

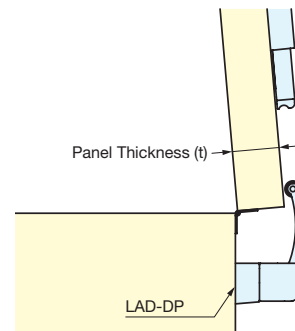
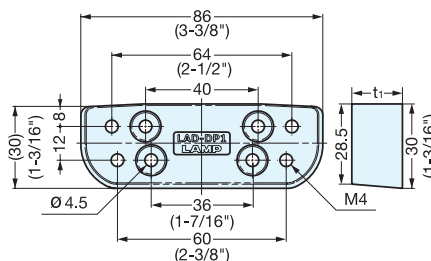
## SPACER FOR THICKER PANEL



## LAD-DP



• Optional spacer for LAD-ST.

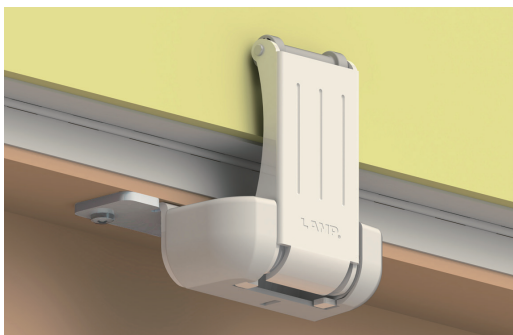


Item No.	t <sub>1</sub>	Panel Thickness (t)	Box	Carton (pcs)	Material	Color
LAD-DP1	18 (3/4")	25~35 mm	50	200	Polyacetal	Grey
LAD-DP2	25 ( 1")	30~40 mm				

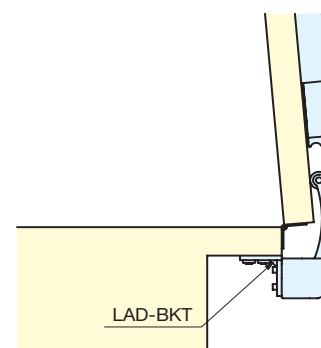
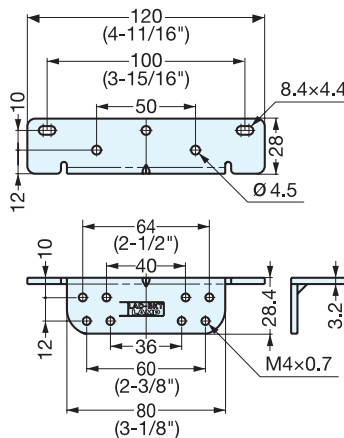
## UNDER MOUNTING BRACKET



## LAD-BKT



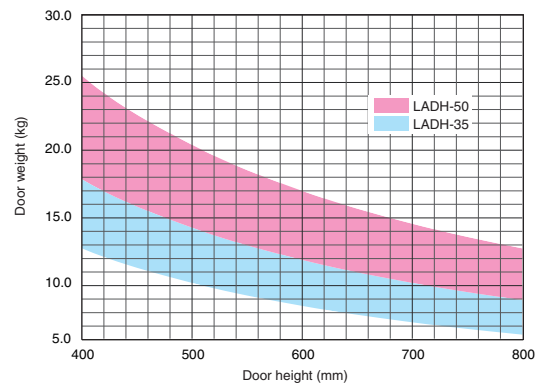
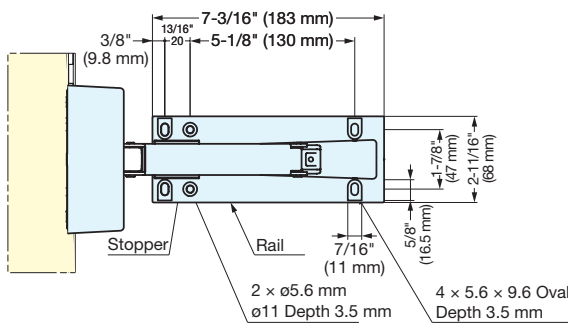
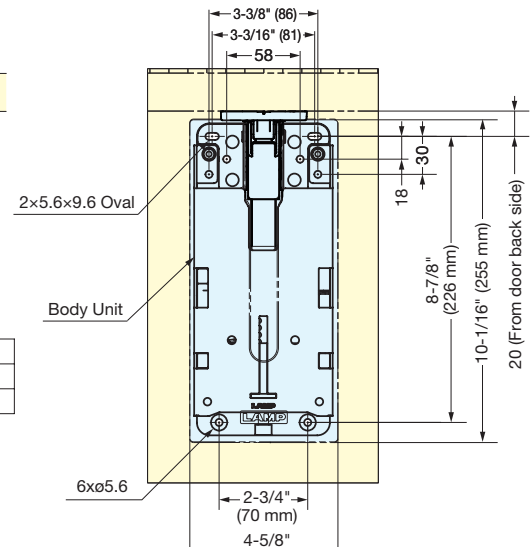
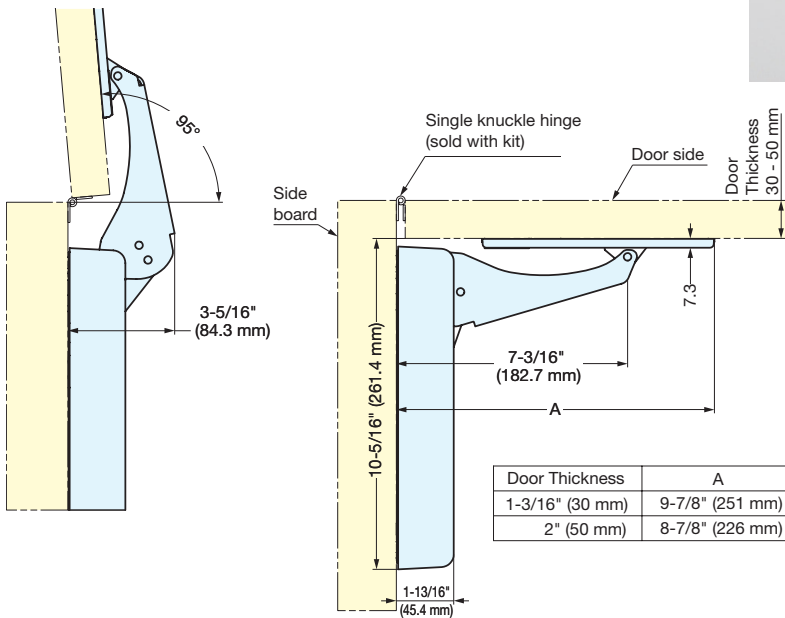
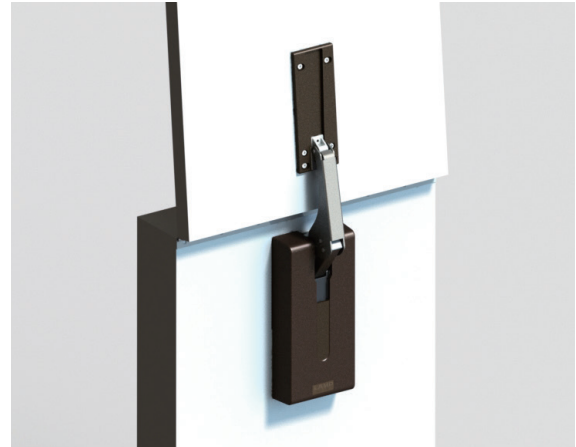
• Optional under mounting bracket for LAD-ST.



Item No.	Material	Box	Carton (pcs)	Color
LAD-BKT	Steel	20	100	Nickel

# LIFT-ASSIST DAMPER (Heavy Duty)

- Add a smooth soft-close to counter tops in restaurants, bars and reception desks to prevent slamming.
- Lift-Assist feature helps users lift countertop
- Holds door open at 95 degrees.
- Easy installation - surface mounted and can be retrofitted
- Stainless steel piano hinge included (see next page for details)



Item No.	Max. Torque per piece (lbs-in)	Panel Thickness	Wt (g)	Box (pcs)	Material	Finish
LADH-35	221 ~ 309	30~50 mm (1-3/16"~2")	2,000	1	Steel (SPCC)/ Polyacetal (POM)/ABS	Arm: Nickel Chrome Body: Dark Brown Other Parts: Nickel Plating
LADH-50	309 ~442					

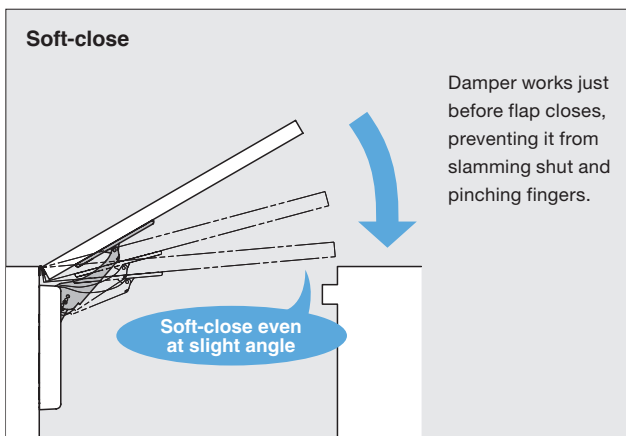


# LIFT-ASSIST DAMPER (Heavy Duty)

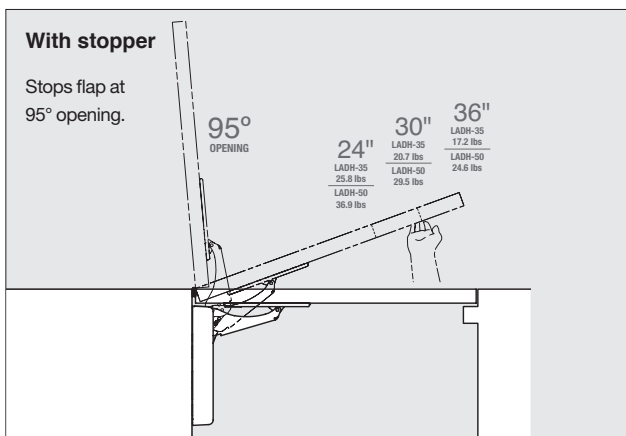
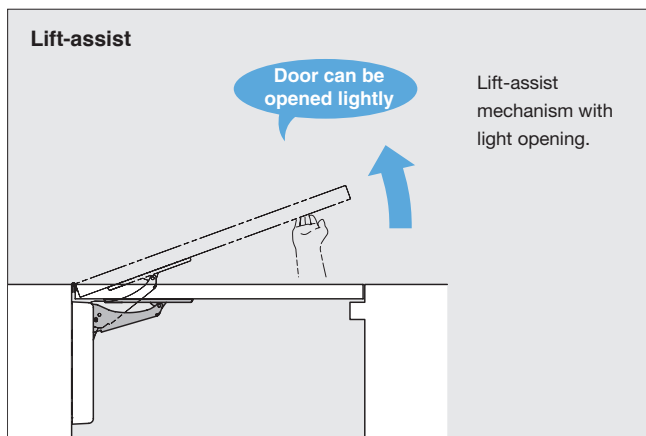


LADH

LID SUPPORTS

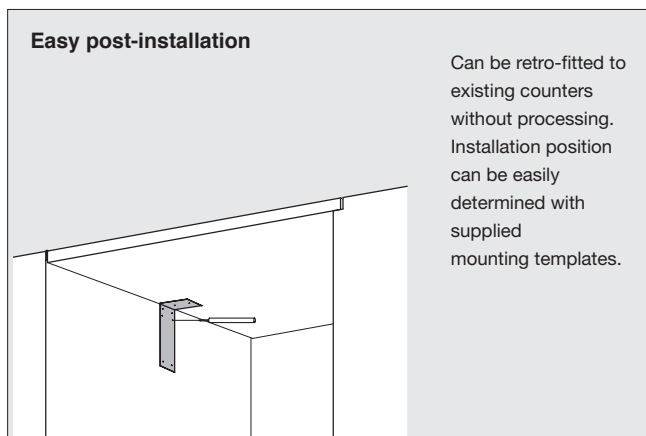


Damper works just before flap closes, preventing it from slamming shut and pinching fingers.



### With stopper

Stops flap at 95° opening.



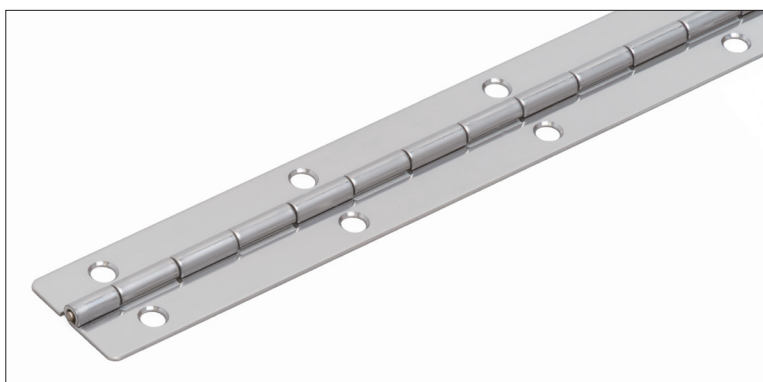
### Easy post-installation

Can be retro-fitted to existing counters without processing. Installation position can be easily determined with supplied mounting templates.

# STAINLESS STEEL PIANO HINGE for LADH



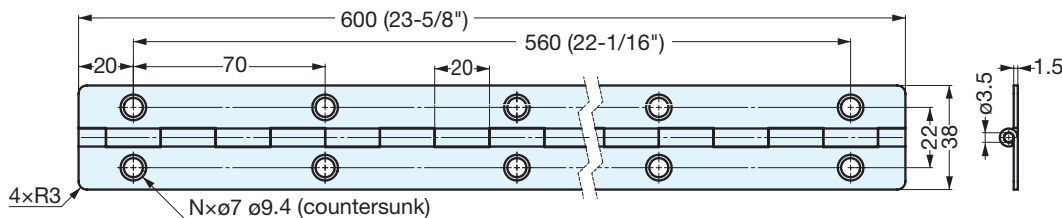
LSN-C



- Recommended use with LADH Lift Assist Damper
- Please note this product is designed for use on wood. Hole positioning on wood should be done by aligning the actual hinge. This product is not suitable for sheet metal or installations with hole pitch limitations.
- Included as part of the LADH Heavy Duty Lift Assist Damper set.
- Hinge can be cut down to shorter desired length.

Item No.	Weight (g)	Material	Finish
LSN15-38-600C	300	Stainless Steel	Polished

Other sizes available



# ENCLOSURE DOOR STOPS



**YFN**

LID SUPPORTS

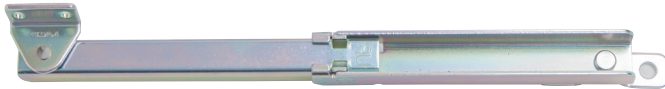
FOOT STAYS



YFN-200



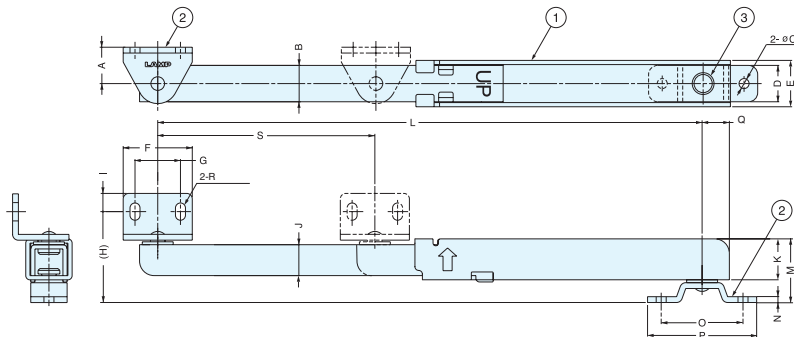
YFN-300



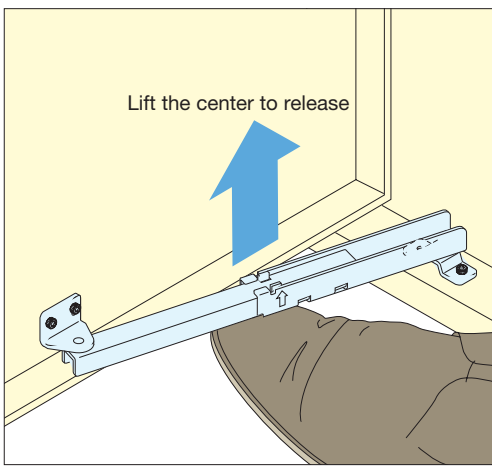
YFN-300-T50



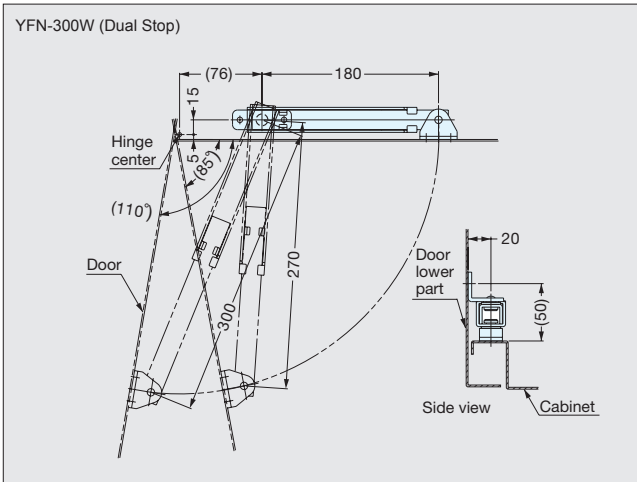
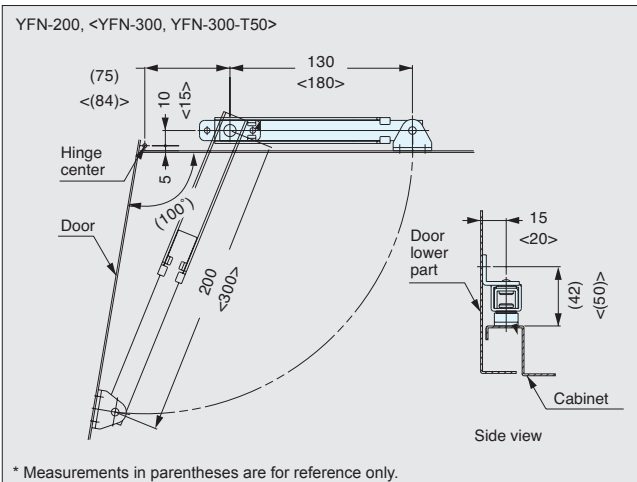
YFN-300W



- Door stops for enclosures that mechanically lock doors open.
- Release the stay by lifting with foot.
- For horizontally swinging doors only.
- Non-Handed: Install on left or right side.
- Designed for installation at the base of the enclosure.
- **YFN-300W only:** Mechanically locks door at 85° and 110° (fully opened).



No.	Part Name	Material	Finish
①	Body	Steel	Colored Zinc Chromate
②	Bracket		
③	Pin	304 Stainless Steel	Plain



Item No.	L	S	A	B	C	D	E	F	G	(H)	I	J	K	M	N	O	P	Q	R
YFN-200	200 ( 7-7/8" )	70 ( 2-3/4" )	15	15.9	5.5	17	20.0	33	20	42	8	15.7	20.0	30	2.3	35	50	10	5.5×8.0
YFN-300	300 (11-13/16")	120 (4-23/32")	20	20.0	5.5	20	25.5	38	25	50	10	17.0	22.5	35	3.2	45	60	15	5.5×9.5
YFN-300-T50					9.0											72			
YFN-300W					5.5											60			

Item No.	Old Item No.	Tensile Force (kg)	Compression Load (kg)	Weight (kg)	Box (pcs)	Carton (pcs)
YFN-200	YF-200	Max. 90 (198 lbs)	Max. 50 (110 lbs)	198	10	100
YFN-300	YF-300			438		
YFN-300-T50	YF-300-T50	Max.150(330 lbs)	Max. 60 (132 lbs)	476	5	30
YFN-300W	YF-300W			435		

STAINLESS STEEL FOOT STAY (TWO-ANGLE LOCK)



YFNS

- For horizontally swinging doors.
- Mechanically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Designed for bottom mount (Not recommended for vertical use).
- Non-Handed: Can be installed on left or right side.

LID SUPPORTS

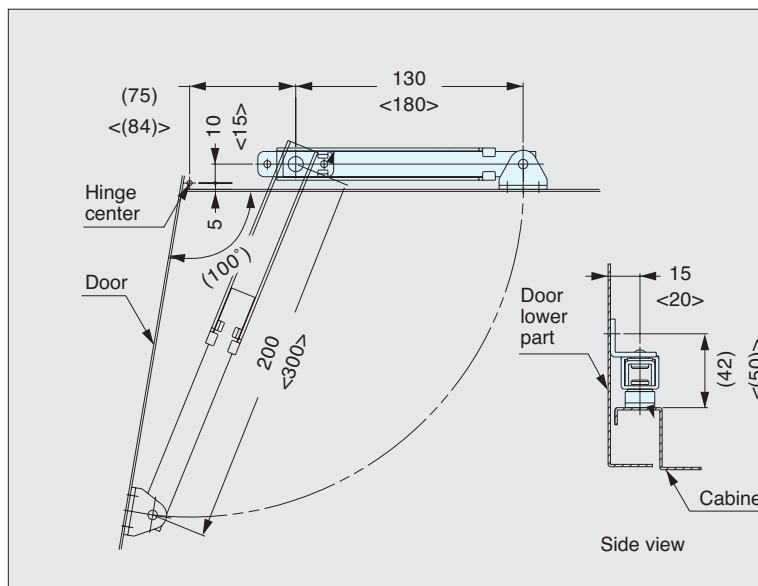
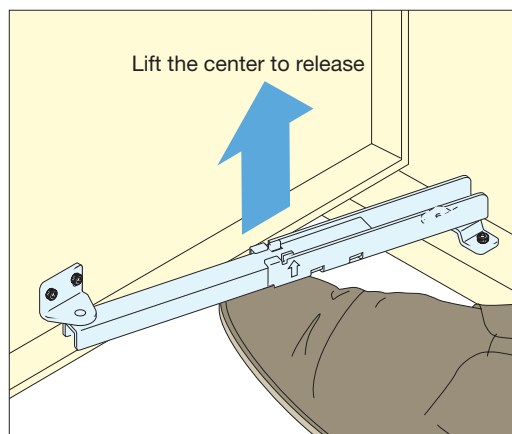
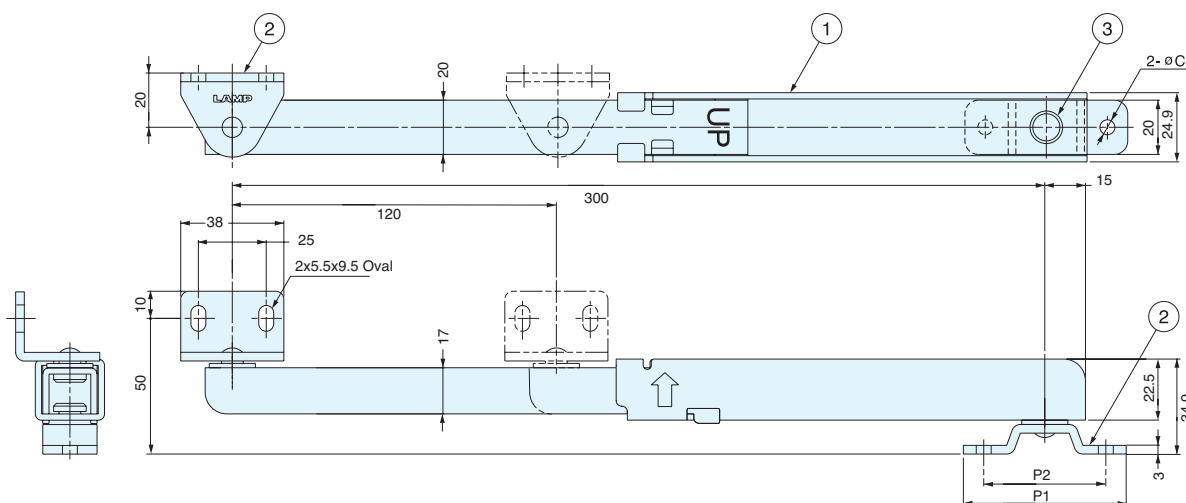
FOOT STAYS



YFNS-300



YFNS-300-T50



No.	Part Name	Material	Finish
①	Body	304 Stainless Steel	Barrel Polished
②	Bracket	304 Stainless Steel	Barrel Polished
③	Pin	Stainless Steel	-

Item No.	P1	P2	C	Tensile Force (kg)	Compression Load (kg)	Weight (g)	Box (pcs)	Carton (pcs)
YFNS-300	60	45	5.5	Max. 90 (198 lbs)	Max. 50 (110 lbs)	389	5	30
YFNS-300-T50	72	60	9	Max. 150 (330 lbs)	Max. 60 (132 lbs)	396		

# STAINLESS STEEL FOOT STAYS

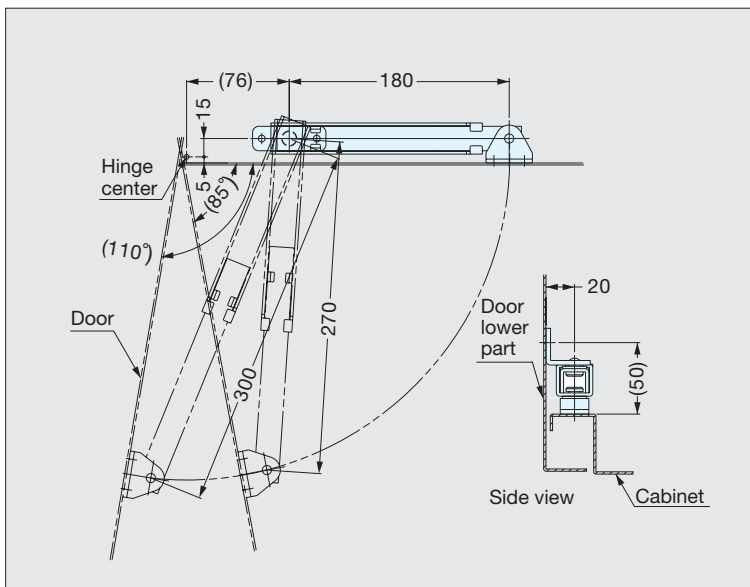
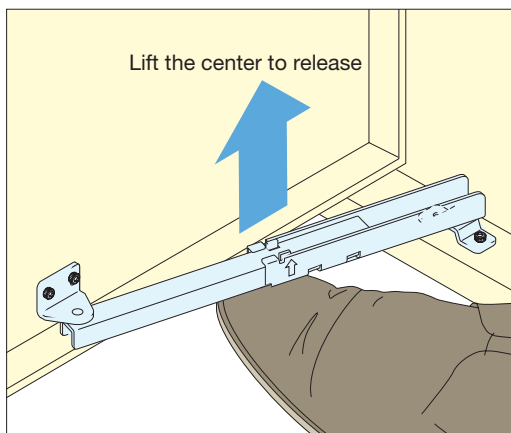
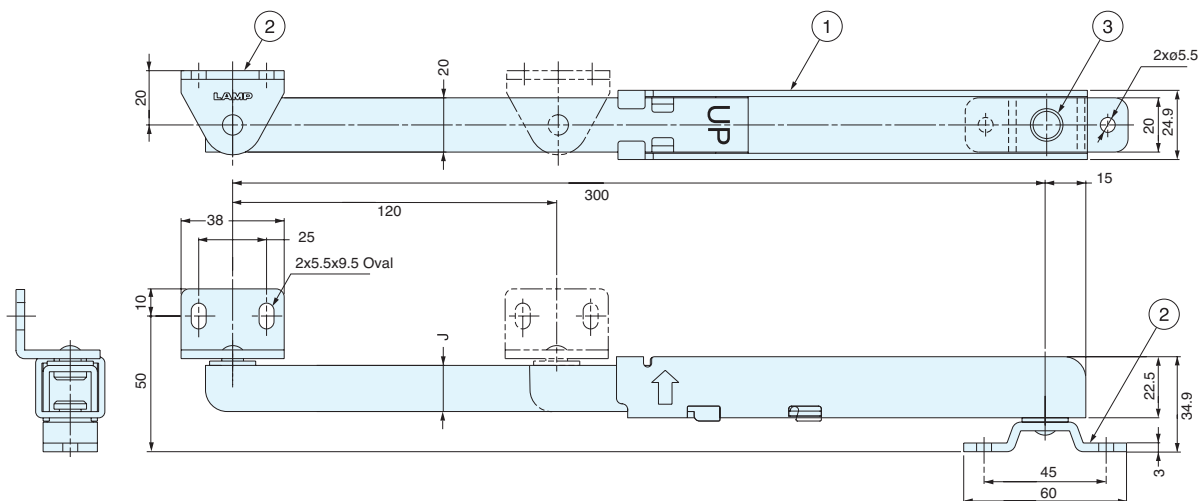


# YFNS-300W

LID SUPPORTS

FOOT STAYS

- For horizontally swinging doors.
- Mechanically locks door at 85° and 110° (fully opened).
- Simply lift the stay with foot toe to release the lock.
- Designed for bottom mount (Not recommended for vertical use).
- Non-Handed: Can be installed on left or right side.



No.	Part Name	Material	Finish
①	Body	304 Stainless Steel	Barrel Polished
②	Bracket	304 Stainless Steel	Barrel Polished
③	Pin	Stainless Steel	-

Item No.	Tensile Force (kg)	Compression Load (kg)	Weight (kg)	Box (pcs)	Carton (pcs)
YFNS-300W	Max. 150 (198 lbs)	Max. 60 (110 lbs)			

# DOOR HOLDER

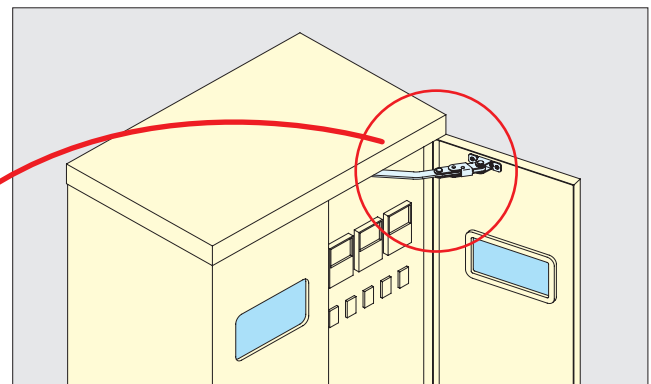
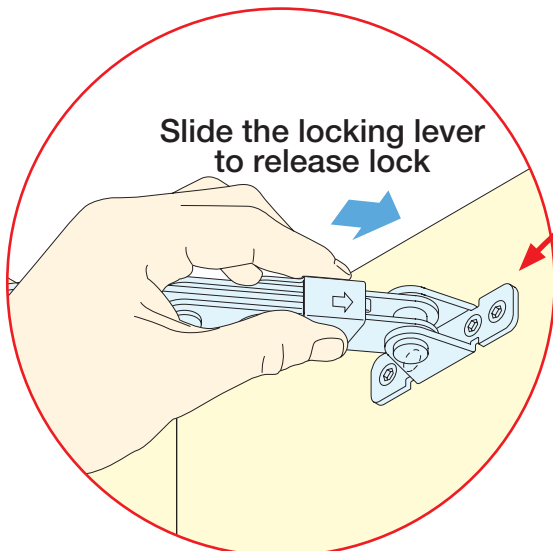
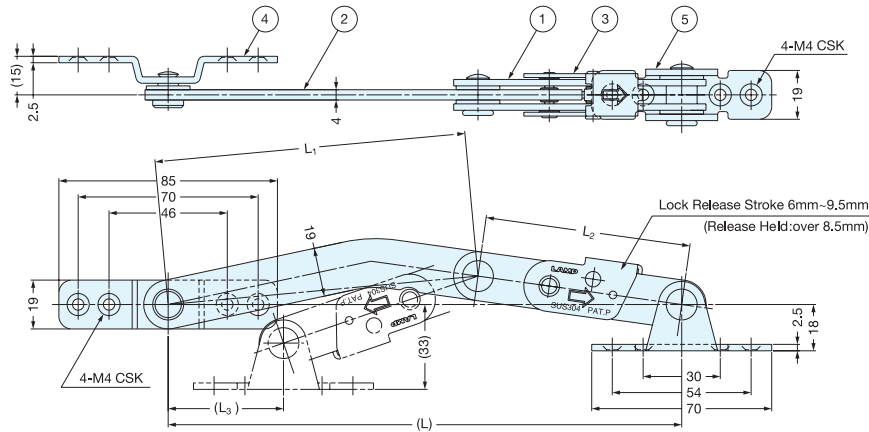
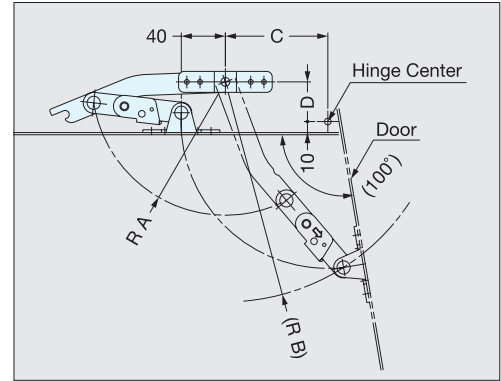
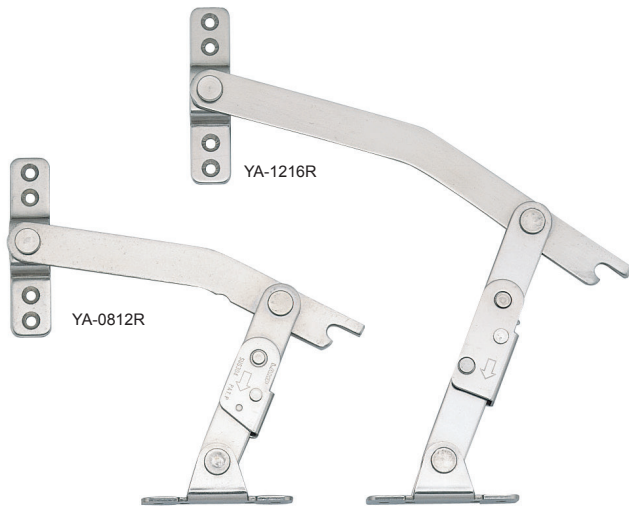


YA-0812, 1216

LID SUPPORTS

DOOR HOLDERS

- Automatically locks door when fully opened.
- Slide the locking lever to release lock.  
Lever will keep the unlocked position until the door is moved, for easy handling.
- Left-handed and Right-handed models available.



No.	Part Name	Material	Finish
①	Outer Plate	304 Stainless Steel	Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		

Item No.	Type	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	B	C	D	Weight (g)	Box (pcs)	Carton (pcs)
YA-0812L	Left	200	121	80	45	121	200	93	36	291	5	30
YA-0812R	Right	(7-7/8")	(4-49/64")	(3-5/32")								
YA-1216L	Left	280	161	120	44	161	280	145	40	340		
YA-1216R	Right	(11-1/32")	(6-11/32")	(4-23/32")								

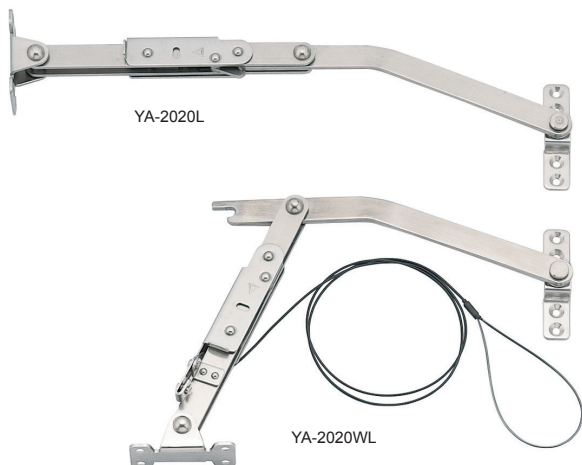


# DOOR HOLDER

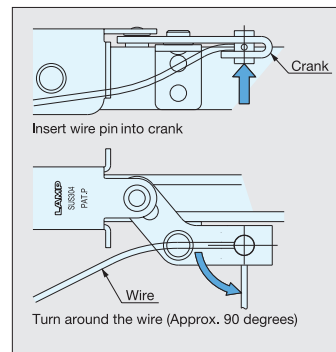
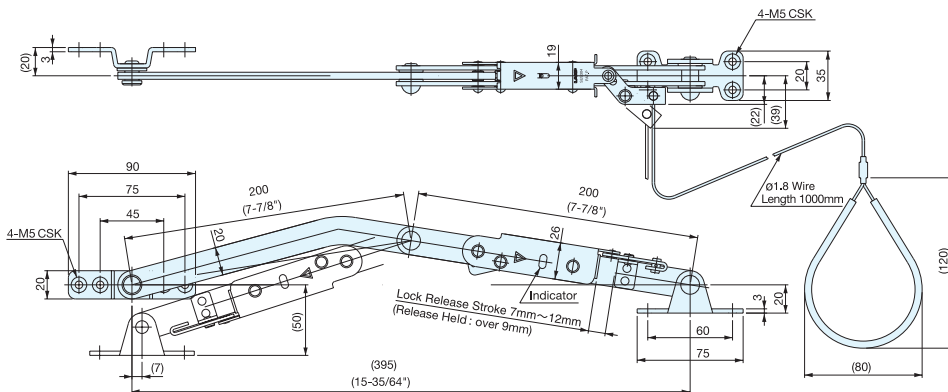
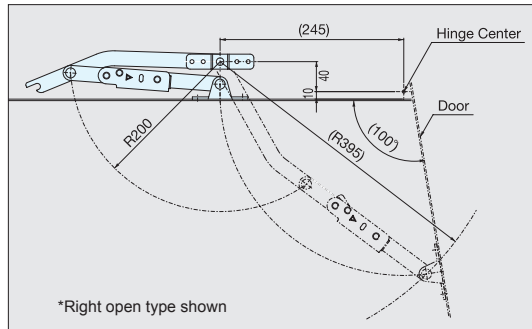
# YA-2020, 2020W

LID SUPPORTS

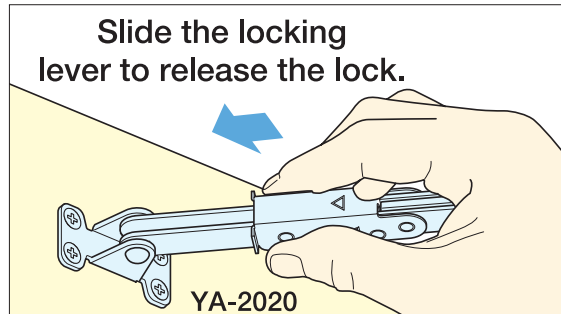
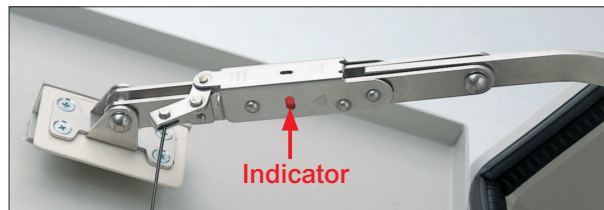
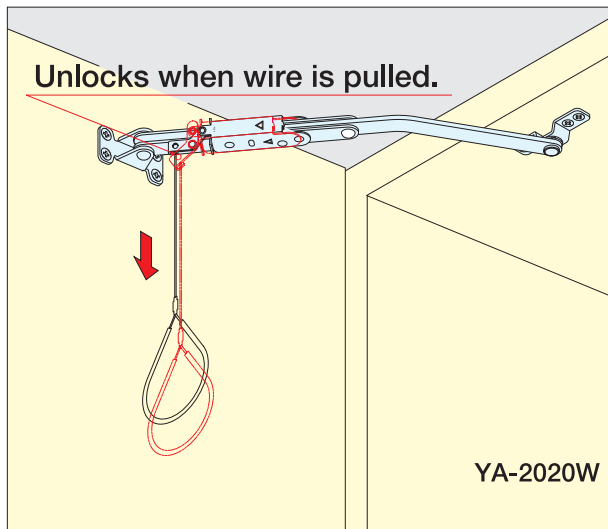
DOOR HOLDERS



- Automatically locks door when fully opened.
- Slide the locking lever to release lock. Locking grip will stay unlocked until the door is moved for easy handling.
- YA-2020WR/WL (with lock release wire) available for tall applications.
- Left-handed and Right-handed models available.
- Tensile Force: Max. 150 kg (330 lbs)
- Compression Load: Max. 60 kg (132 lbs)



Installation of lock-release wire (WR and WL type only)



Material	Finish
304 Stainless Steel	Polished

Item No.	Type	Type	Weight (g)	Box (pcs)	Carton (pcs)
YA-2020WR	With Wire	Right Open	650	4	16
YA-2020WL		Left Open			
YA-2020R	Without Wire	Right Open	630		
YA-2020L		Left Open			