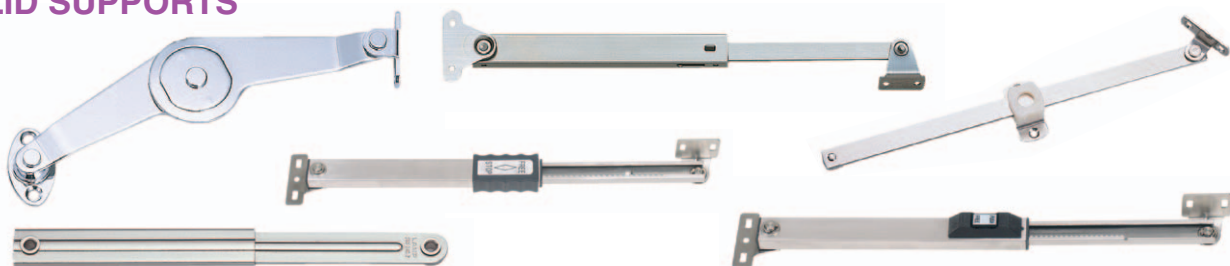


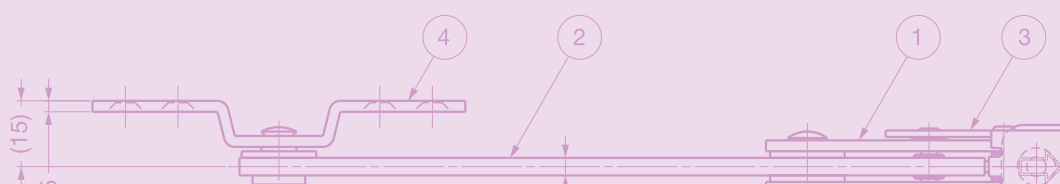
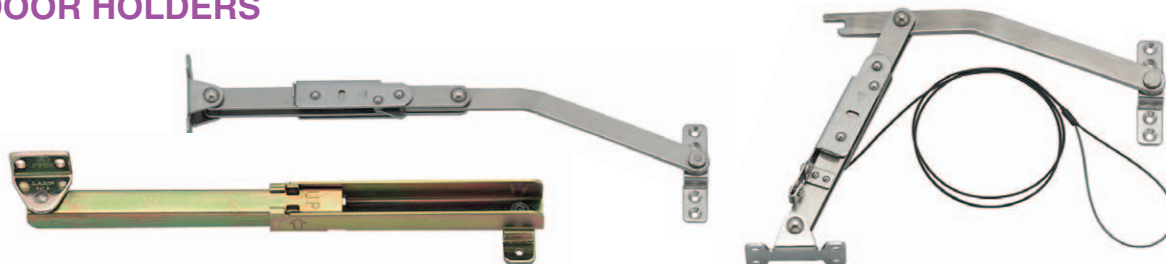
## SOFT-DOWN / LIFT-UP STAYS



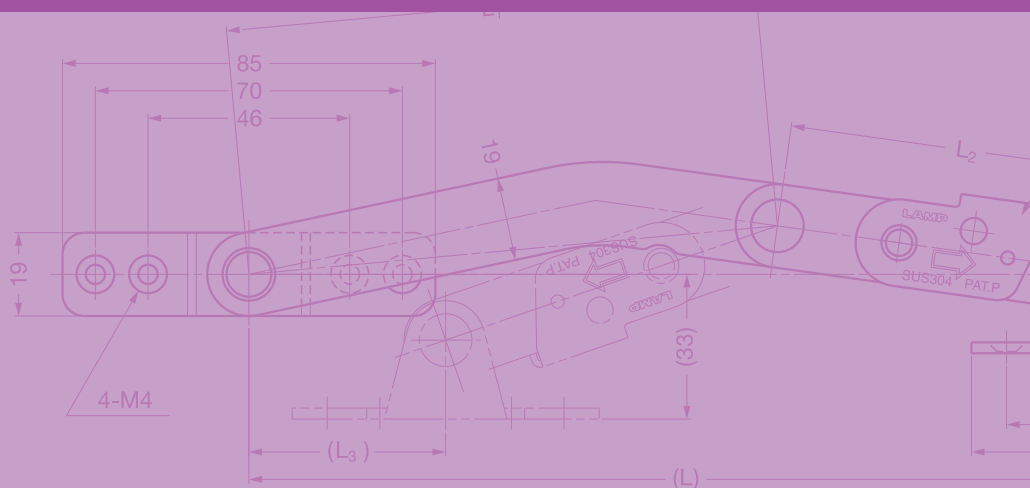
## LID SUPPORTS



## DOOR HOLDERS



## LID SUPPORTS



SOFT CLOSE / LIFT ASSIST STAYS

Picture	Item Name	Application	Page
	SLS-ELAN		110
	EZS-ELAN		112

Picture	Item Name	Application	Page
	SLU-ELAN		134
	SLD		135
	HBFN		137

SOFT CLOSING STAYS

Picture	Item Name	Application	Page
	SDS-100-TV/TVZ		115
	SDS-C100		116
	SDS-400-W		117
	SDS-C301N		118
	NSD-10		121
	NSD-20		122
	NSD-35		123
	NSDX-10(R/L)K/TV		124
	HDS-10		127
	HDS-20		128
	HDS-30		129
	HDSN-30		130
	SLUN-N		133

SPRING LOADED LIFT ASSIST STAYS

Picture	Item Name	Application	Page
	S-YT	<b>STAINLESS 304 STEEL</b>	138
	S-AT	<b>STAINLESS 430 STEEL</b>	139
	LK	<b>STAINLESS 304 STEEL</b>	140

TORQUE LID STAYS

Picture	Item Name	Application	Page
	S-100T30	<b>STAINLESS 430 STEEL</b>	141
	S-52T15	<b>STAINLESS 430 STEEL</b>	141

**LID STAYS**

Picture	Item Name	Application	Page	Picture	Item Name	Application	Page
	L-100S, L-140S		142		HS		150
	L-S-BT		142		SAD-160		150
	L-SL140		143		S-91, 92, 93		150
	L-FS140		143		F-300		151
	L-200P		143		F-150, 200, 250		151
	L		144		F-100		151
	LSP		144		S-23		152
	LB		145		S-21		152
	LB-215, 290		145		S-20		152
	LB-S		146		YF		153
	LBTS		146		YF-300W		153
	LB-CV215A		147		YA-2020		154
	L-FS350A		147		YA-0812, 1216		155
<b>Discontinued</b> 	L-FSP350A		148				
<b>Discontinued</b> 	L-FSS350A		148				
	U-3005		149				
	U-3031		149				



= Soft & Smooth

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.



## Lapcon series

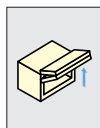
■ Variation

APPLICATION	HINGE	MODEL	OPENING ANGLE
Downward	<ul style="list-style-type: none"> <li>• Butt Hinge</li> <li>• Drop Hinge</li> <li>• Concealed Hinge</li> </ul>	<ul style="list-style-type: none"> <li>SDS - 100TV, SDS - C100TV</li> <li>SDS - 100, SDS - C100</li> <li>NSD - 10</li> <li>HDS - 10</li> </ul>	90°
Top-Opening	<ul style="list-style-type: none"> <li>• Butt Hinge</li> <li>• Concealed Hinge</li> </ul>	<ul style="list-style-type: none"> <li>SDS - C301N</li> <li>NSD - 20</li> <li>HDS - 20</li> </ul>	<ul style="list-style-type: none"> <li>70° / 105°</li> <li>70° / 105°</li> <li>70°</li> </ul>
Upward	<ul style="list-style-type: none"> <li>• Butt Hinge</li> <li>• Concealed Hinge</li> </ul>	<ul style="list-style-type: none"> <li>SDS - C301N</li> <li>NSD - 35</li> <li>NSD - 35</li> <li>HDS - 30</li> <li>HDSN - 30</li> <li>SLS-ELAN</li> <li>EZS - ELAN</li> </ul>	<ul style="list-style-type: none"> <li>80° / 90° / 100°</li> <li>80° / 90° / 100°</li> <li>80° / 90° / 100°</li> <li>80°</li> <li>80° / 90°</li> <li>90°</li> <li>70°</li> </ul>
Downward Opening	<ul style="list-style-type: none"> <li>• Butt Hinge</li> </ul>	<ul style="list-style-type: none"> <li>SDS - 400 - W</li> </ul>	70°

L R

### Other Unique Door Opening Solutions

#### BI-FOLDING STAY

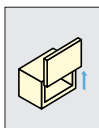


##### HBFN

- Arm length adjustable

P.137

#### LIFT-UP STAY

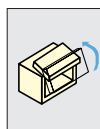


##### SLUN-N/SLU-ELAN

- Swing out vertically in a small radius

P.132-  
P.134

#### LIFT ASSIST STAY

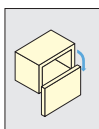


##### EZS-ELAN

- Large door lift semi up-over
- No connecting bar, no hinge required

P.112

#### LIFT-DOWN STAY



##### SLD

- Swing out vertically in a small radius

P.135

**Door weight ranges**
**■ SDS**

Door Height	SDS-100-TV/SDS-C100-TV		SDS-100-TVZ/SDS-C100-TVZ		SDS-100/SDS-C100/SDS-400		SDS-C301N	
	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/piece
200	0.50 ~ 1.20 kg	1.00 ~ 2.40 kg	1.65 ~ 3.76 kg	3.30 ~ 7.52 kg	—	—	—	—
250	0.40 ~ 0.96 kg	0.80 ~ 1.92 kg	1.32 ~ 3.01 kg	2.64 ~ 6.02 kg	2.80 ~ 4.00 kg	5.60 ~ 8.00 kg	3.20 ~ 5.60 kg	6.40 ~ 11.20 kg
300	0.34 ~ 0.80 kg	0.67 ~ 1.60 kg	1.10 ~ 2.51 kg	2.20 ~ 5.01 kg	2.34 ~ 3.33 kg	4.67 ~ 6.66 kg	2.67 ~ 4.66 kg	5.34 ~ 9.33 kg
350	0.29 ~ 0.68 kg	0.58 ~ 1.37 kg	0.94 ~ 2.15 kg	1.89 ~ 4.30 kg	2.00 ~ 2.85 kg	4.00 ~ 5.71 kg	2.29 ~ 4.00 kg	4.58 ~ 8.00 kg
400	0.25 ~ 0.60 kg	0.50 ~ 1.20 kg	0.83 ~ 1.88 kg	1.65 ~ 3.76 kg	1.75 ~ 2.50 kg	3.50 ~ 5.00 kg	2.00 ~ 3.50 kg	4.00 ~ 7.00 kg
450	0.23 ~ 0.53 kg	0.45 ~ 1.06 kg	0.73 ~ 1.67 kg	1.47 ~ 3.34 kg	1.56 ~ 2.22 kg	3.12 ~ 4.44 kg	1.78 ~ 3.11 kg	3.56 ~ 6.22 kg
500	—	—	0.66 ~ 1.50 kg	1.32 ~ 3.01 kg	1.40 ~ 2.00 kg	2.80 ~ 4.00 kg	1.60 ~ 2.80 kg	3.20 ~ 5.60 kg

**■ NSD**

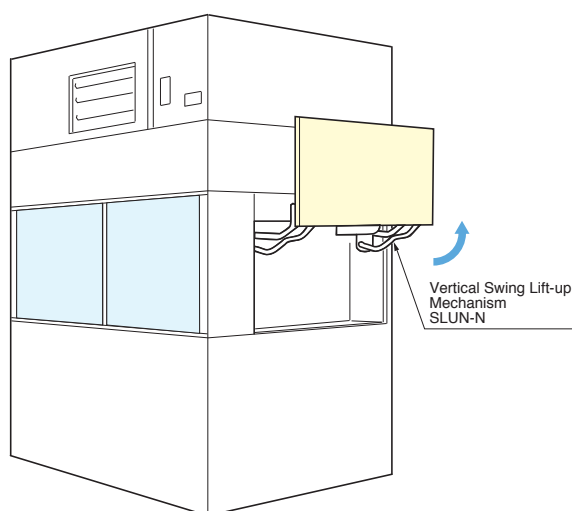
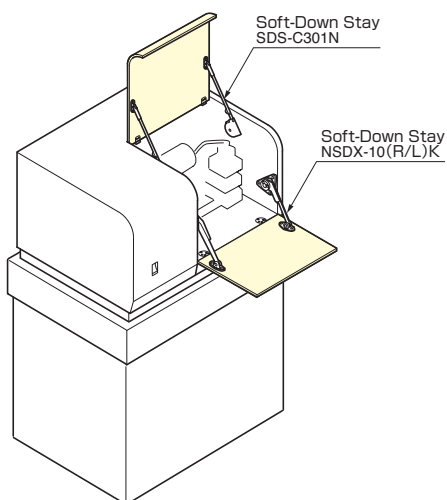
Door Height	NSD-10 (R/L) NSD-20 (R/L) NSD-35 (R/L)		NSDX-10 (R/L) K-TV	
	Door Weight/piece	Door Weight/piece	Door Weight/piece	Door Weight/pair
250	1.60 ~ 5.60 kg	3.20 ~ 11.20 kg	0.80 ~ 1.60 kg	1.60 ~ 3.20 kg
300	1.34 ~ 4.66 kg	2.67 ~ 9.33 kg	0.60 ~ 1.30 kg	1.20 ~ 2.60 kg
350	1.15 ~ 4.00 kg	2.29 ~ 8.00 kg	0.57 ~ 1.10 kg	1.14 ~ 2.20 kg
400	1.00 ~ 3.50 kg	2.00 ~ 7.00 kg	0.50 ~ 1.00 kg	1.00 ~ 2.00 kg
450	0.89 ~ 3.11 kg	1.78 ~ 6.22 kg	0.44 ~ 0.88 kg	0.88 ~ 1.76 kg
500	0.80 ~ 2.80 kg	1.60 ~ 5.60 kg	0.40 ~ 0.80 kg	0.80 ~ 1.60 kg

**■ HDS**

Door Height	HDS-10K HDS-20K HDS-30K	HDS-10M HDS-20M HDS-30M	HDS-10H HDS-20H HDS-30H
	Door Weight/piece	Door Weight/piece	Door Weight/piece
300	9.34 ~ 13.33 kg	13.34 ~ 16.66 kg	16.67 ~ 20.00 kg
350	8.00 ~ 11.42 kg	11.43 ~ 14.28 kg	14.29 ~ 17.14 kg
400	7.00 ~ 9.99 kg	10.00 ~ 12.49 kg	12.50 ~ 15.00 kg
450	6.23 ~ 8.88 kg	8.89 ~ 11.11 kg	11.12 ~ 13.33 kg
500	5.60 ~ 7.99 kg	8.00 ~ 9.99 kg	10.00 ~ 12.00 kg
550	5.1 ~ 7.27 kg	7.28 ~ 9.09 kg	9.10 ~ 10.90 kg
600	4.67 ~ 6.66 kg	6.67 ~ 8.33 kg	8.34 ~ 10.00 kg

**■ HDSN**

Door Height	Opening angle 90°				Opening angle 80°			
	HDSN-30K	HDSN-30M	HDSN-30H	HDSN-30S	HDSN-30K	HDSN-30M	HDSN-30H	HDSN-30S
	Door Weight/pair	Door Weight/pair	Door Weight/pair	Door Weight/pair	Door Weight/pair	Door Weight/pair	Door Weight/pair	Door Weight/pair
250	11.20 ~ 15.19 kg	15.20 ~ 18.39 kg	18.40 ~ 21.59 kg	21.60 ~ 24.00 kg	—	—	—	—
300	9.33 ~ 12.66 kg	12.67 ~ 15.32 kg	15.33 ~ 17.99 kg	18.00 ~ 20.00 kg	—	—	—	—
350	8.00 ~ 10.85 kg	10.86 ~ 13.13 kg	13.14 ~ 15.42 kg	15.43 ~ 17.14 kg	8.00 ~ 11.42 kg	11.43 ~ 14.28 kg	14.29 ~ 17.13 kg	17.14 ~ 20.00 kg
400	7.00 ~ 9.49 kg	9.50 ~ 11.49 kg	11.50 ~ 13.49 kg	13.50 ~ 15.00 kg	7.00 ~ 9.99 kg	10.00 ~ 12.49 kg	12.50 ~ 14.99 kg	15.00 ~ 17.50 kg
450	6.22 ~ 8.43 kg	8.44 ~ 10.21 kg	10.22 ~ 11.99 kg	12.00 ~ 13.33 kg	6.22 ~ 8.88 kg	8.89 ~ 11.10 kg	11.11 ~ 13.32 kg	13.33 ~ 15.56 kg
500	5.60 ~ 7.59 kg	7.60 ~ 9.19 kg	9.20 ~ 10.79 kg	10.80 ~ 12.00 kg	5.60 ~ 7.99 kg	8.00 ~ 9.99 kg	10.00 ~ 11.99 kg	12.00 ~ 14.00 kg
550	5.09 ~ 6.90 kg	6.91 ~ 8.35 kg	8.36 ~ 9.81 kg	9.82 ~ 10.91 kg	5.09 ~ 7.26 kg	7.27 ~ 9.08 kg	9.09 ~ 10.90 kg	10.91 ~ 12.73 kg
600	4.67 ~ 6.32 kg	6.33 ~ 7.66 kg	7.67 ~ 8.99 kg	9.00 ~ 10.00 kg	4.67 ~ 6.66 kg	6.67 ~ 8.33 kg	8.33 ~ 9.99 kg	10.00 ~ 11.67 kg



# EASY LIFT-UP STAY

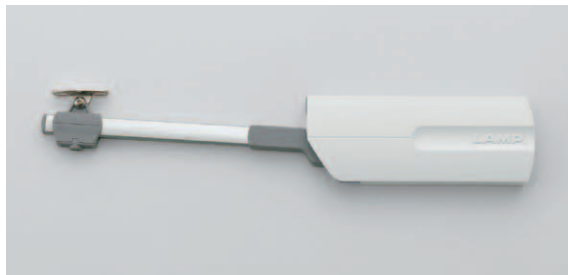


# SLS-ELAN



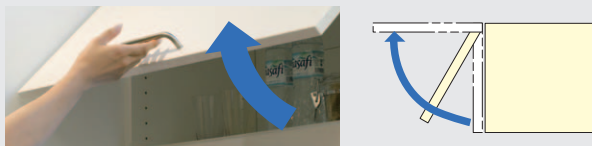
- For Upward-Opening Flap Doors with concealed, piano, butt, or drop hinges.
- Designed to provide effortless opening and hold door in closed and opened position.
- Offers smooth and soft downward movement preventing lids or doors from slamming shut.
- Easy to install by aligning the body to the edge of cabinet.
- Free stop from 30° to 90° .
- Single or pair use allows wide range of door size/ weights.
- 2 Powers available (M,H).
- Successfully passed 40,000 open/close cycle test.

Designed to operate at room temperature 0° ~40° C



### 3 functions on 1 stay

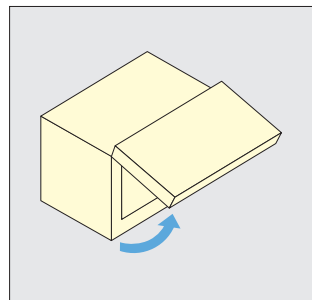
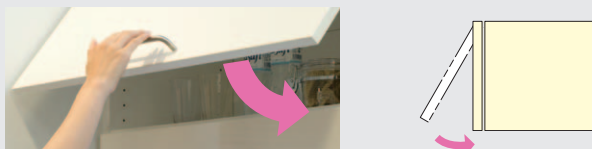
#### 1. Lift-assist



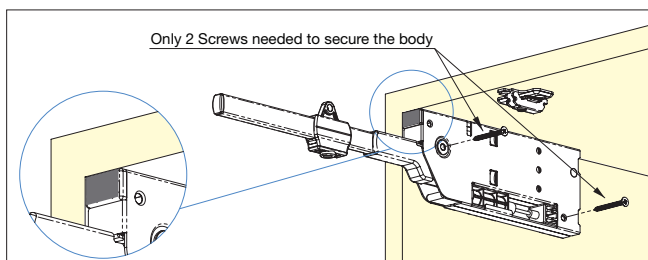
#### 2. Free stop



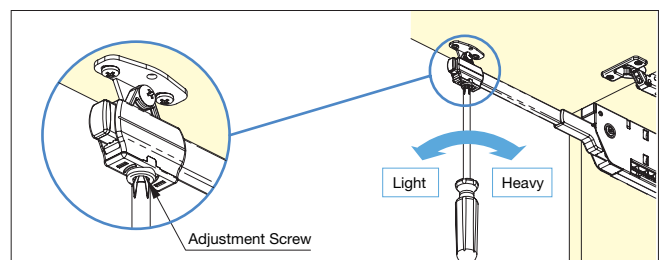
#### 3. Soft-close



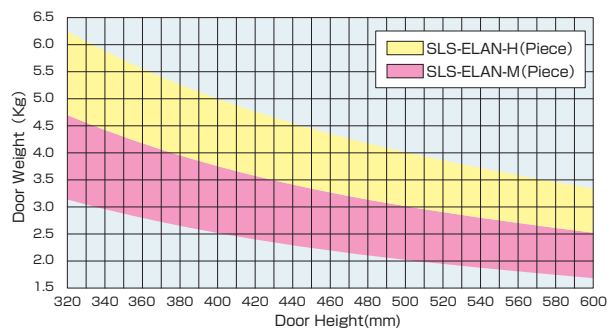
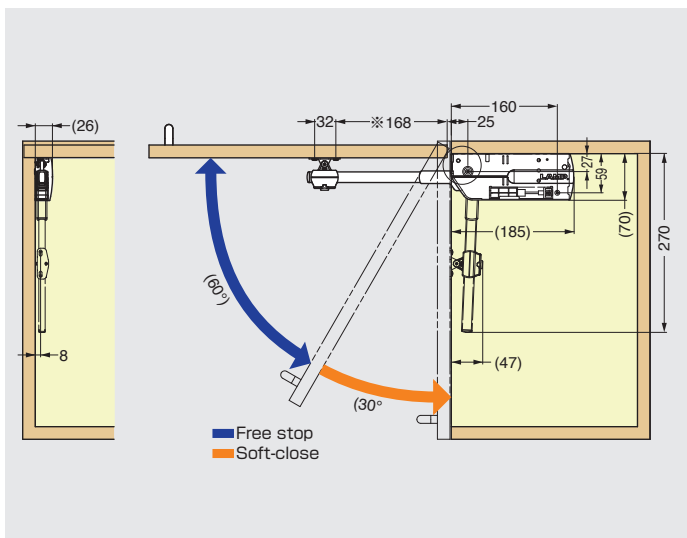
### Easy Installation



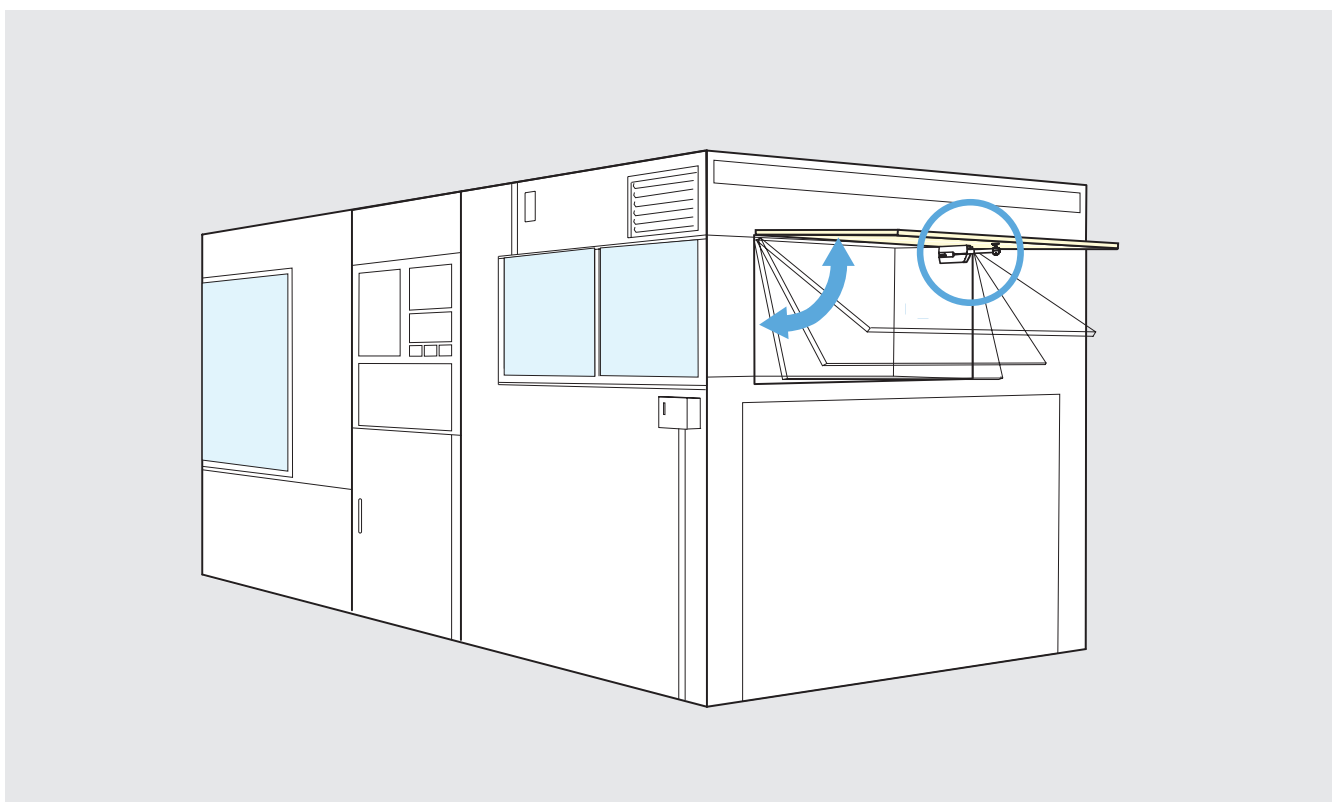
### Adjustment



■ Door Size Ranges



For heavier flap application, please contact your local dealer or Sugatsune office.



Item Code	Item Name	Spec.	Material	Finish/Color	Weight	Model	Torque per piece N · m	Torque per piece kgf · cm	Carton
180-015-491	SLS-ELAN-MR	Right	Aluminum Alloy/ABS	Anodized/Light Grey	600g	M	4.90 N · m ~ 7.35 N · m	50 kgf · cm ~ 75 kgf · cm	20pcs
180-015-490	SLS-ELAN-ML	Left	Aluminum Alloy/ABS	Anodized/Light Grey	600g	M	4.90 N · m ~ 7.35 N · m	50 kgf · cm ~ 75 kgf · cm	20pcs
180-015-493	SLS-ELAN-HR	Right	Aluminum Alloy/ABS	Anodized/Light Grey	600g	H	7.35 N · m ~ 9.80 N · m	75 kgf · cm ~ 100 kgf · cm	20pcs
180-015-492	SLS-ELAN-HL	Left	Aluminum Alloy/ABS	Anodized/Light Grey	600g	H	7.35 N · m ~ 9.80 N · m	75 kgf · cm ~ 100 kgf · cm	20pcs

# LIFT ASSIST STAY

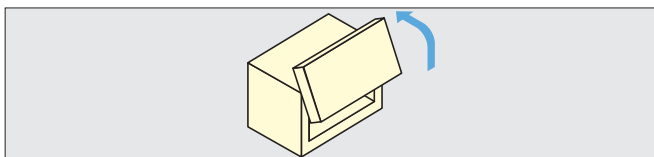
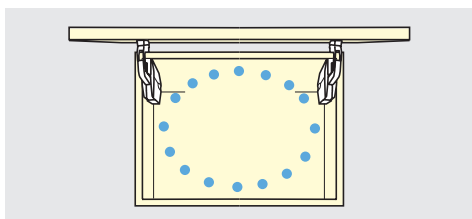


# EZS-ELAN



- For Up & Over the Cabinet Opening Flap Doors.
- Lift assist function for easy and smooth opening.
- Soft-closing function for silent and safe closing.
- Free stop function from 30°-70° .
- Easy to install by aligning the body to the edge of cabinet.
- No hinges required.
- No connecting bar required.
- Clip-on mounting plate for speedy door installation.
- 3Powers available (L,M,H).
- Successfully passed 30,000 open/close cycle test.

Designed to operate at room temperature 0°-40°C

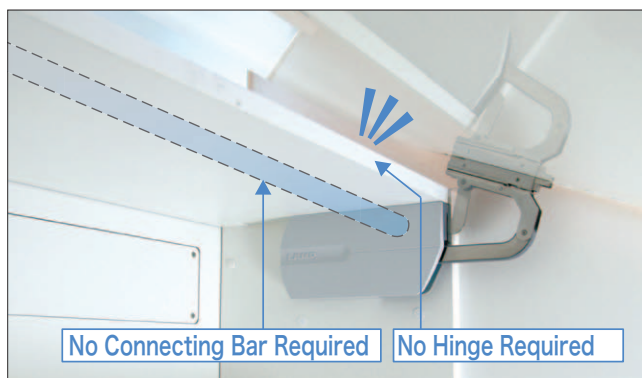


### 3 functions on 1 stay

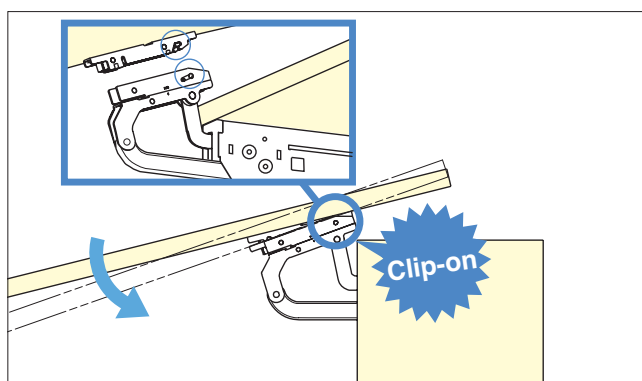
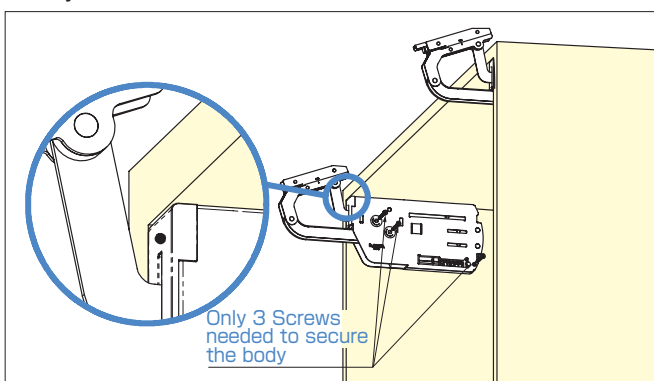
**1. Lift-assist**

**2. Free stop**

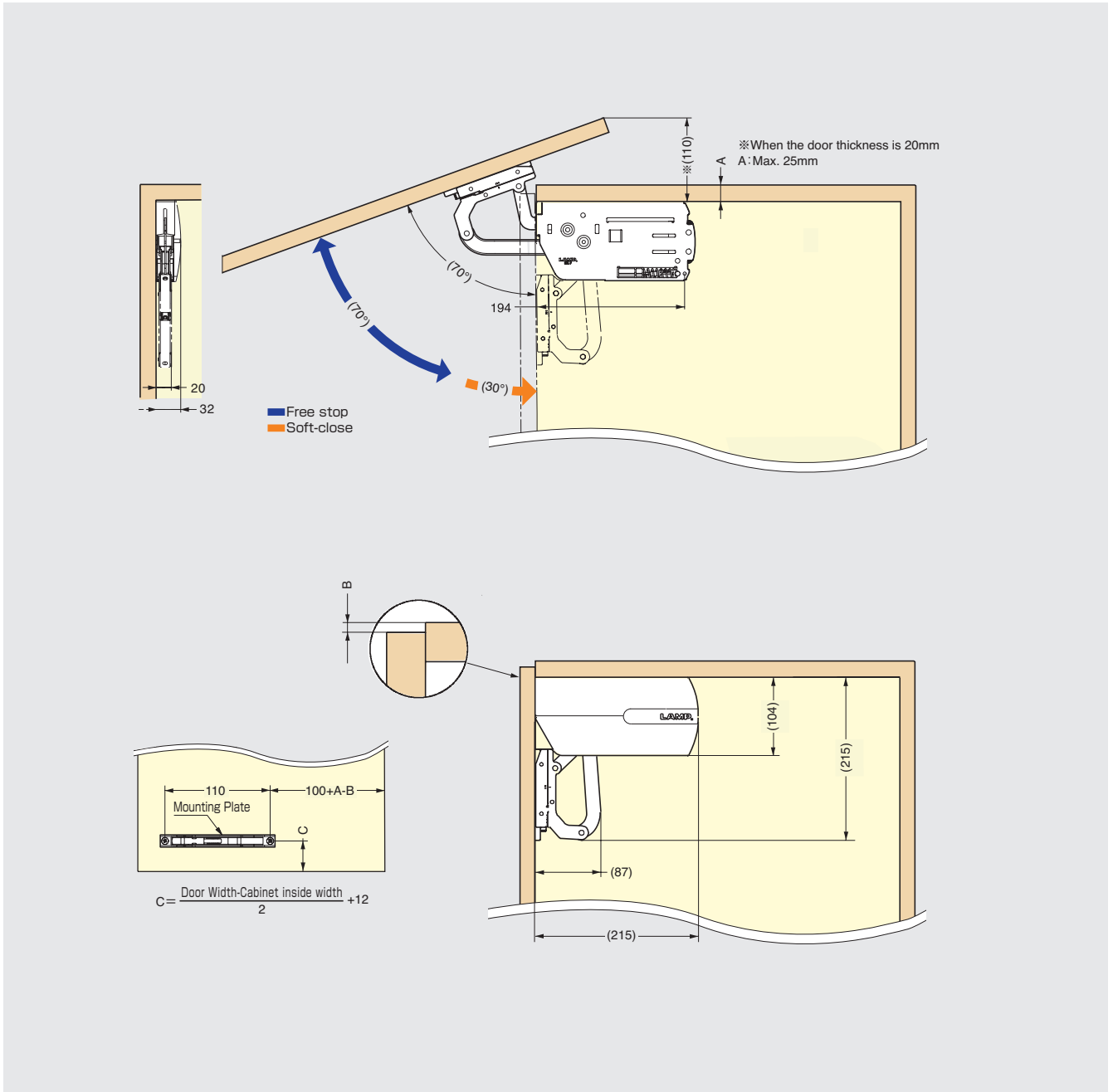
**3. Soft close**



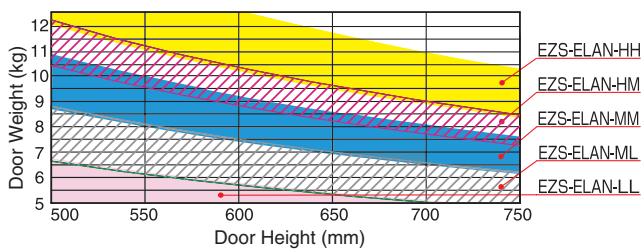
### Easy Install



# LIFT ASSIST STAY



## Door Size Ranges



Lifting Power	Model
1900 ~ 2860	EZS-ELAN-L L
2820 ~ 3900	EZS-ELAN-M L
3850 ~ 4950	EZS-ELAN-MM
4700 ~ 5600	EZS-ELAN-HM
5550 ~ 6930	EZS-ELAN-HH

※ Lifting Power = Door Height(mm) × (Door Weight(kg)-1)

Item Code	Item Name	Material	Finish/Color	Weight	Carton
180-018-903	EZS-ELAN-LL	Steel/ABS	Nickel/Light Grey	2245g	5sets
180-018-904	EZS-ELAN-ML	Steel/ABS	Nickel/Light Grey	2262g	5sets
180-018-905	EZS-ELAN-MM	Steel/ABS	Nickel/Light Grey	2350g	5sets
180-018-906	EZS-ELAN-HM	Steel/ABS	Nickel/Light Grey	2431g	5sets
180-018-907	EZS-ELAN-HH	Steel/ABS	Nickel/Light Grey	2475g	5sets

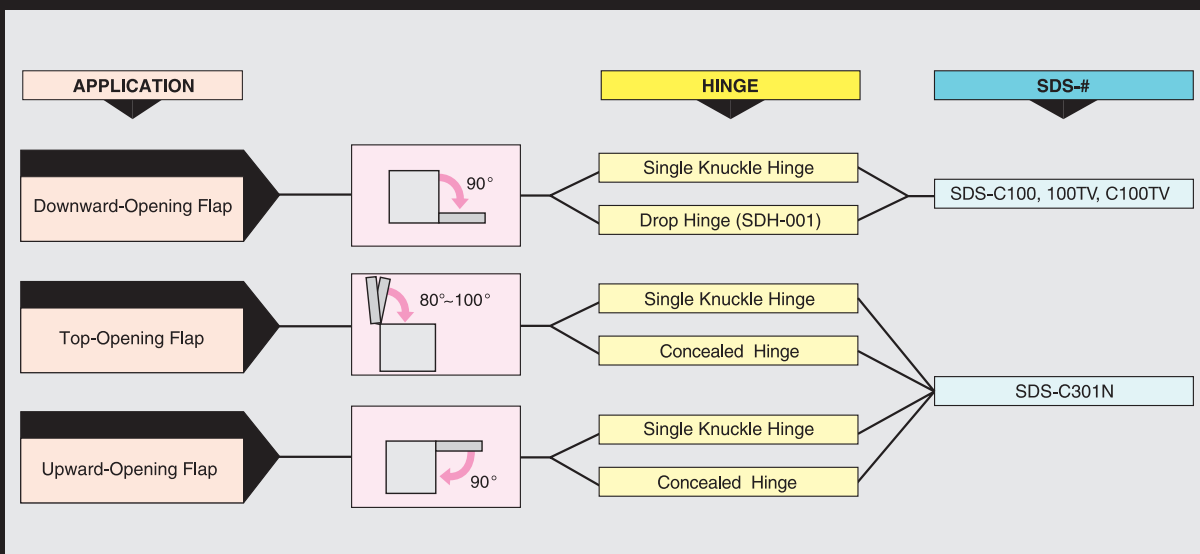
# SDS



## SOFT-DOWN STAY

- One-way rotary damper offers smooth and soft downward movement preventing lids or doors from slamming shut.
- Compact design.
- Easy Installation.
- Successfully passed for 40,000 open/close private cycle tests.

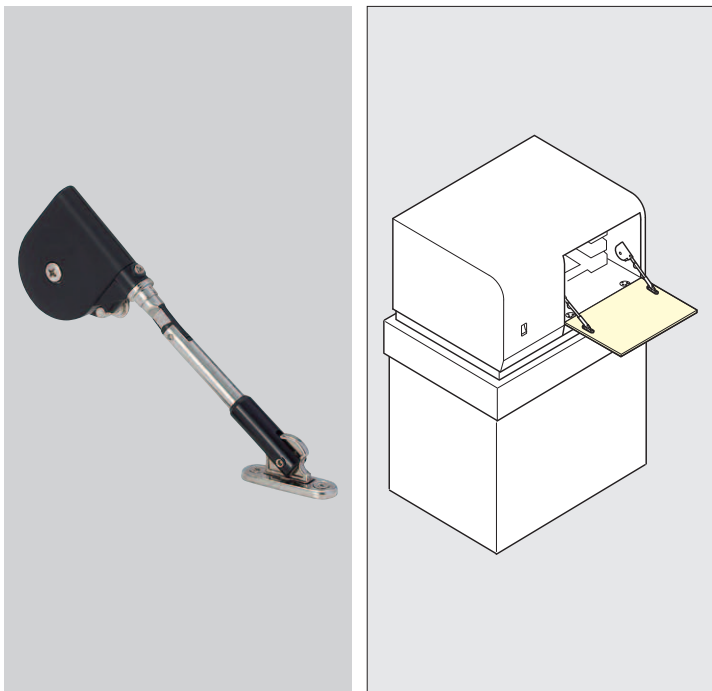
Designed to operate at room temperature 0°~40°C (32°~104°F).



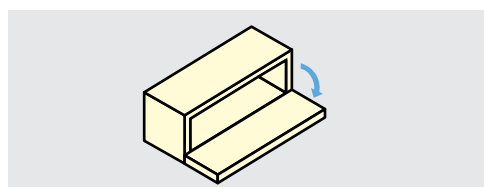
SOFT-DOWN STAY (SHORT-ARM)



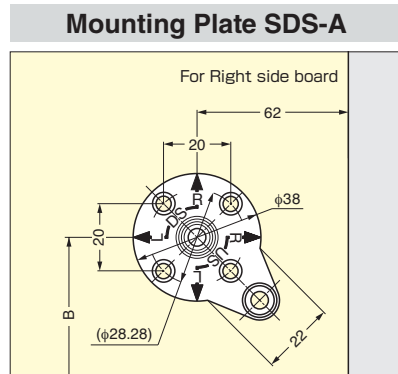
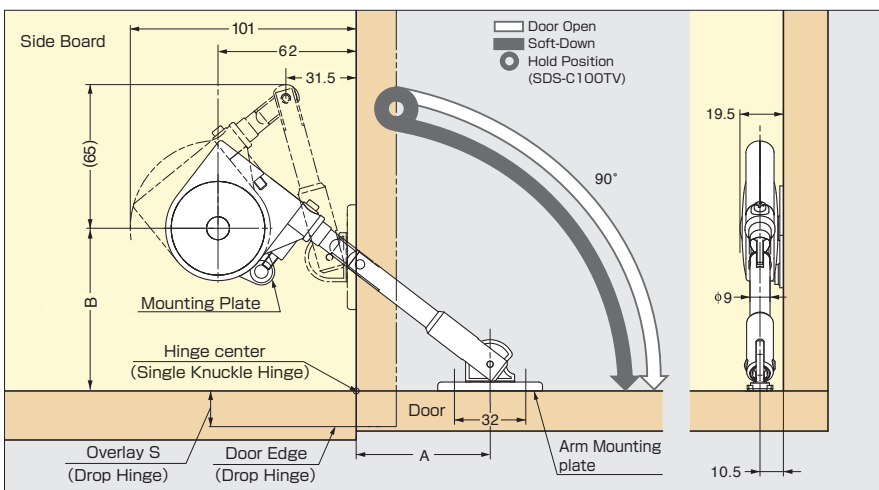
SDS-100-TV/TVZ



- For DOWNWARD-OPENING FLAP DOOR with concealed, piano, butt or drop hinges.
- Short arm type designed for shorter door height 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: Can be installed on left or right side.
- Torque Calculation:
  - Torque = Door Height x 1/2 x Door Weight.
  - Per Piece : 5~37.6kg·cm.
  - Per Pair : 10~75.2kg·cm.



■ Bore Dimensions



Hinge Type	A	B
Single Knuckle Hinge	60	73
Drop Hinge (SDH-001)	49 + S	62 + S

S: Overlay Coverage in case of drop hinge (14~16mm)

■ Body

Item Code	Item Name	Spec.	Color	Torque Moment		Box	Carton
180-100-258	SDS-100W-TV	Without Catch	White	0.49~1.18N·m	5~12kgf·cm	20pcs	100pcs
180-100-259	SDS-100B-TV	Without Catch	Black	0.49~1.18N·m	5~12kgf·cm	20pcs	100pcs
180-100-006	SDS-C100W-TV	With Catch	White	0.49~1.18N·m	5~12kgf·cm	20pcs	100pcs
180-109-263	SDS-C100B-TV	With Catch	Black	0.49~1.18N·m	5~12kgf·cm	20pcs	100pcs
180-014-181	SDS-100W-TVZ	Without Catch	White	1.62~3.68N·m	16.5~37.6kgf·cm	20pcs	100pcs
180-014-182	SDS-100B-TVZ	Without Catch	Black	1.62~3.68N·m	16.5~37.6kgf·cm	20pcs	100pcs
180-014-183	SDS-C100W-TVZ	With Catch	White	1.62~3.68N·m	16.5~37.6kgf·cm	20pcs	100pcs
180-014-184	SDS-C100B-TVZ	With Catch	Black	1.62~3.68N·m	16.5~37.6kgf·cm	20pcs	100pcs

■ Option SDS · Face Plate · Spacer for Glass

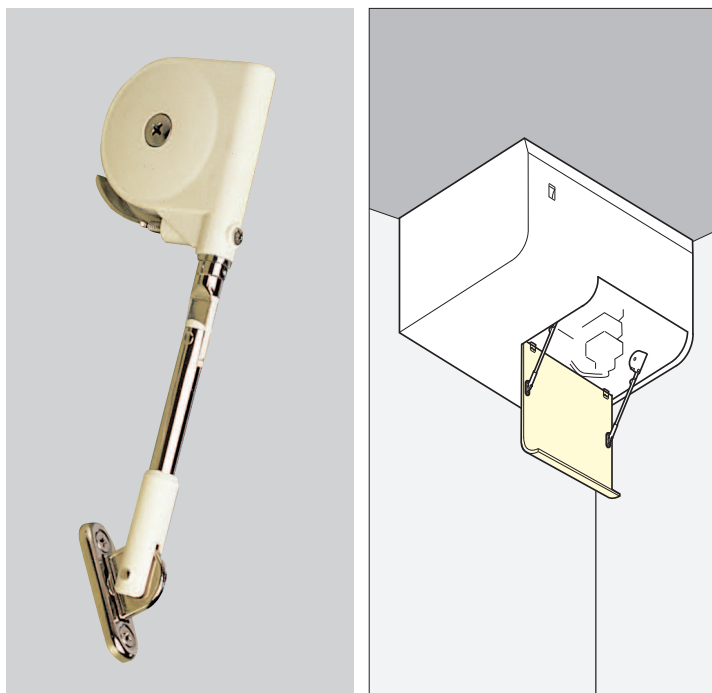
Item Code	Item Name	Material	Finish/Color	Weight	Box	Carton
180-100-260	SDS-50G-CR	Zinc Alloy/ABS	Chrome/Black	25g	50pcs	200pcs
180-928-046	SDS-50G-BL	Zinc Alloy/ABS	Baking Finish/Black	25g	50pcs	200pcs



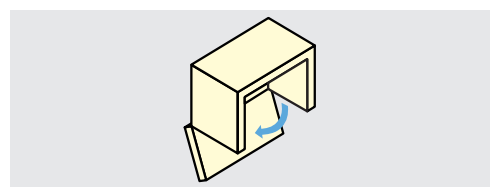
# SOFT-DOWN STAY



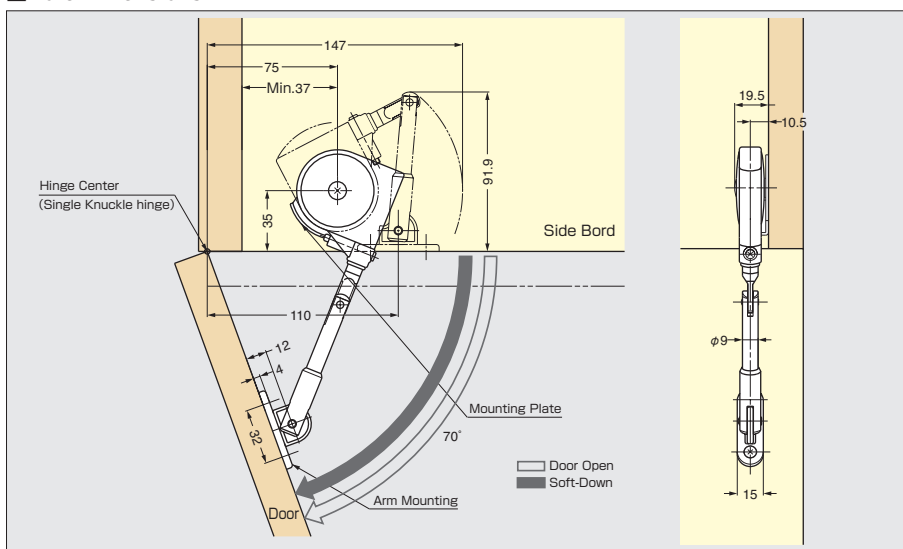
# SDS-400-W



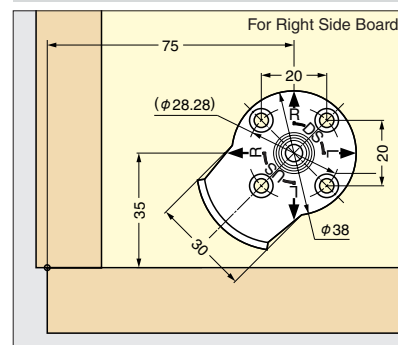
- For DOWNWARD-OPENING FLAP DOOR with concealed, piano, butt or drop hinges. SDS-400 is designed to hold door in closed position.
- Non-handed: Can be installed on left or right side.
- Torque Calculation:
  - Torque = Door Height x 1/2 x Door Weight.
  - Per Piece : 35~50 kg.cm.
  - Per Pair : 70~100 kg.cm.



### ■ Bore Dimensions



### Mounting Plate SDS-B



### ■ Body

Item Code	Item Name	Spec.	Material	Finish/Color	Weight	Box	Carton
180-100-286	SDS-400-W	Without Catch	ABS/Steel	Nickel/White	146g	20pcs	100pcs

### ■ Option SDS · Face Plate · Spacer for Glass

Item Code	Item Name	Material	Finish/Color	Weight	Box	Carton
180-100-260	SDS-50G-CR	Zinc Alloy/ABS	Chrome/Black	25g	50pcs	200pcs
180-928-046	SDS-50G-BL	Zinc Alloy/ABS	Black/Black	25g	50pcs	200pcs

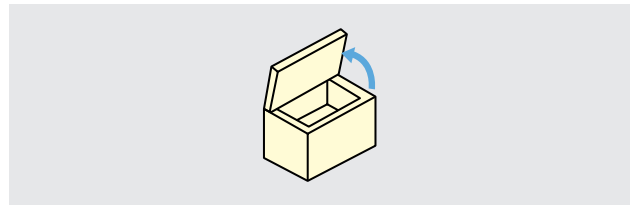
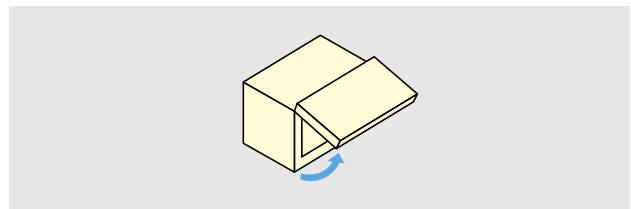
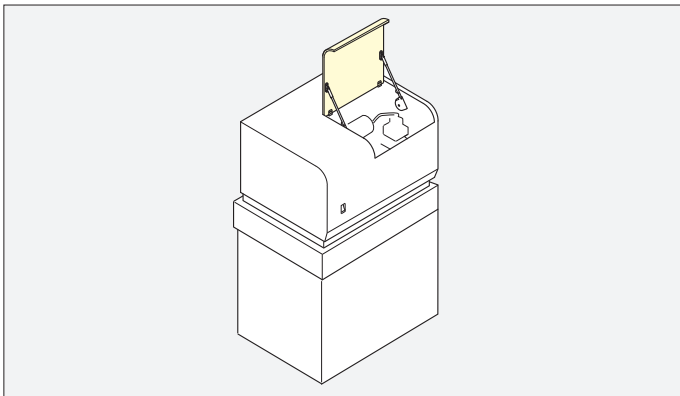
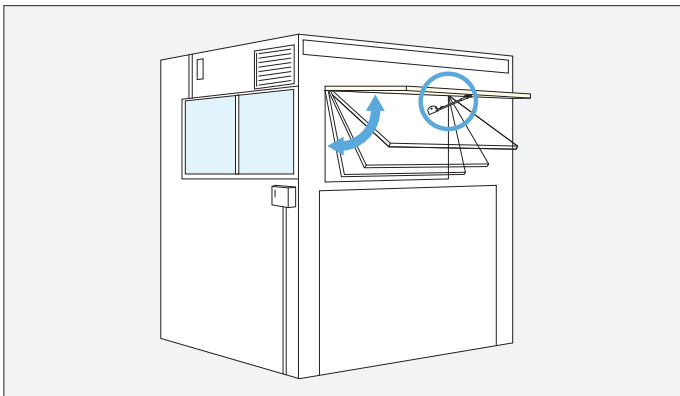
## SOFT-DOWN STAY



## SDS-C301N



- For UPWARD-OPENING FLAP DOOR & TOP-OPENING FLAP DOOR with concealed, piano, butt or drop hinges.
- SDS-C301N is designed to hold door in closed and opened position.
- Non-handed: Can be installed on left or right side.
- Torque Calculation:
  - Torque = Door Height x 1/2 x Door Weight.
  - Per Piece : 40~70 kg-cm.
  - Per Pair : 80~140 kg-cm.



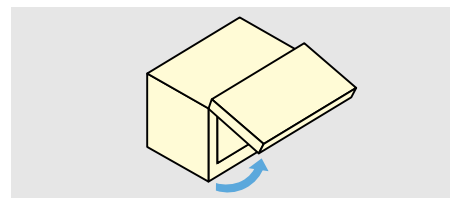
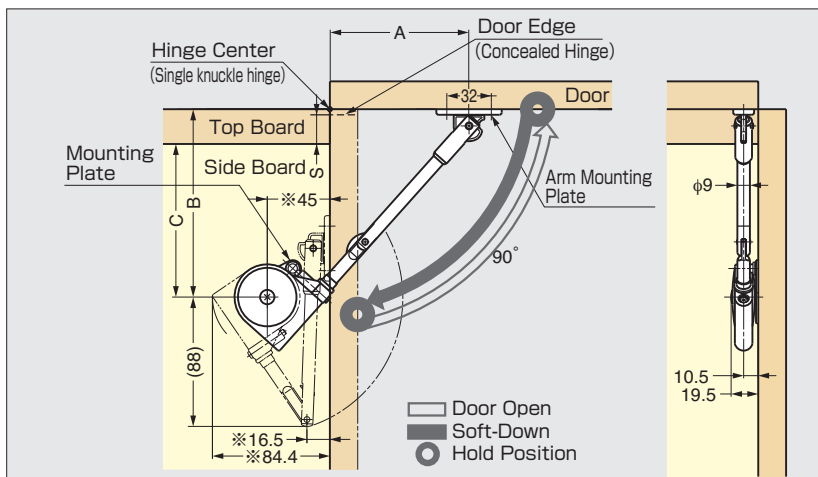
### Body

Item Code	Item Name	Spec.	Material	Finish/Color	Weight	Box	Carton
180-100-283	SDS-C301N W	With Catch	ABS/Steel	Nickel/White	165g	20pcs	100pcs
180-100-284	SDS-C301N G	With Catch	ABS/Steel	Nickel/Grey	165g	20pcs	100pcs
180-100-285	SDS-C301N BL	With Catch	ABS/Steel	Nickel/Black	165g	20pcs	100pcs

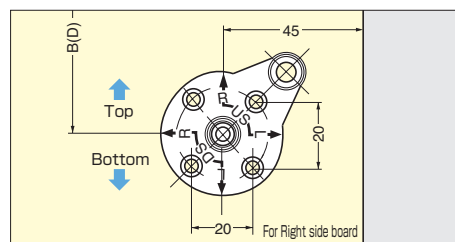
### Option SDS · Face Plate · Spacer for Glass

Item Code	Item Name	Material	Finish/Color	Weight	Box	Carton
180-100-260	SDS-50G-CR	Zinc Alloy/ABS	Chrome/Black	25g	50pcs	200pcs
180-928-046	SDS-50G-BL	Zinc Alloy/ABS	Black/Black	25g	50pcs	200pcs

■ Bore Dimensions



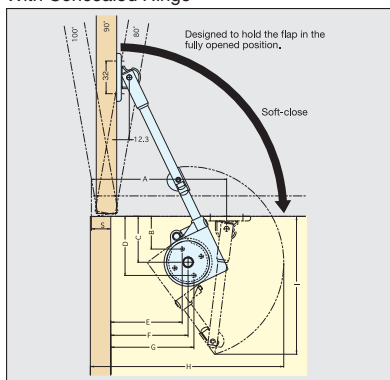
Mounting Plate SDS-A



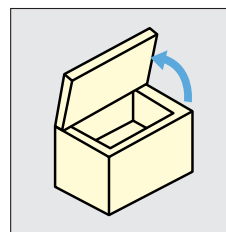
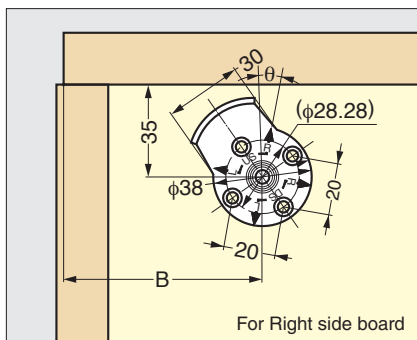
Overlay	Hinge Type	A	B	C
Full Overlay	Single Knuckle Hinge(Butt Hinge)	100	135	—
inset	Single Knuckle Hinge(Butt Hinge)	97	132	—
Full Overlay	Concealed Hinge 230-26/19T	108	—	143-S

■ Bore Dimensions

With Concealed Hinge

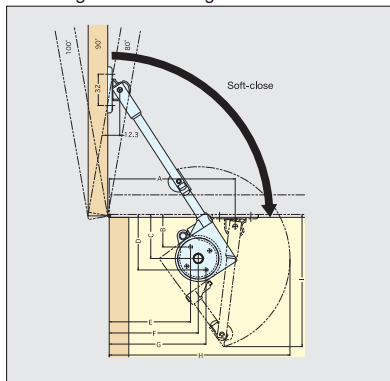


■ Mounting Plate



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

With Single Knuckle Hinge



Concealed Hinge

S=Coverage

Opening angle	A	B	C	D	E	F	G	H	I
80°	141	31.9	45	58.1	98.2-S	103.5-S	108.8-S	197.5	134.8
90°	132.5	32.3	45	57.7	88.7-S	95-S	101.3-S	189	134.8
100°	126.5	32.9	45	57.1	81.2-S	88.5-S	95.8-S	182.5	134.8

Single Knuckle Hinge / Overlay Type

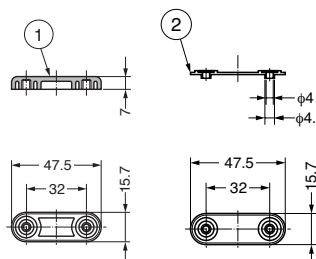
Opening angle	A	B	C	D	E	F	G	H	I
80°	138.5	32.6	45	57.4	94.1	101	107.9	195	134.8
90°	128.5	33.2	45	56.8	83.1	91	98.9	185	134.8
100°	121.5	33.9	45	56.1	75.2	84	92.8	178	134.8

Single Knuckle Hinge / Inset Type

Opening angle	A	B	C	D	E	F	G	H	I
80°	129	31.7	45	58.3	86.7	91.5	96.3	185.5	134.8
90°	118.5	32	45	58	75.3	81	86.7	175	134.8
100°	111	32.5	45	57.5	67	73.5	80	167.5	134.8

SDS FACE PLATE

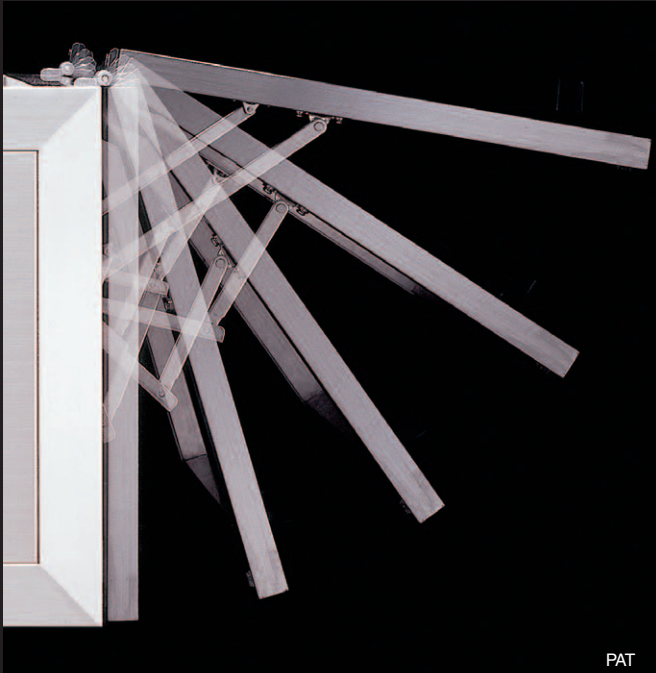
SDS-50G



Item Code	Item Name	Material	Weight	Box	Carton
180-100-260	SDS-50G-CR	Zinc Alloy/ABS	25g	50pcs	200pcs
180-928-046	SDS-50G-BL	Zinc Alloy/ABS	25g	50pcs	200pcs

No.	Part Name	Material	Finish	Box
①	Face Plate	Zinc Alloy	Chrome (CR) Black (BL)	1pcs
②	Spacer	ABS	Black	2pcs

# NSD

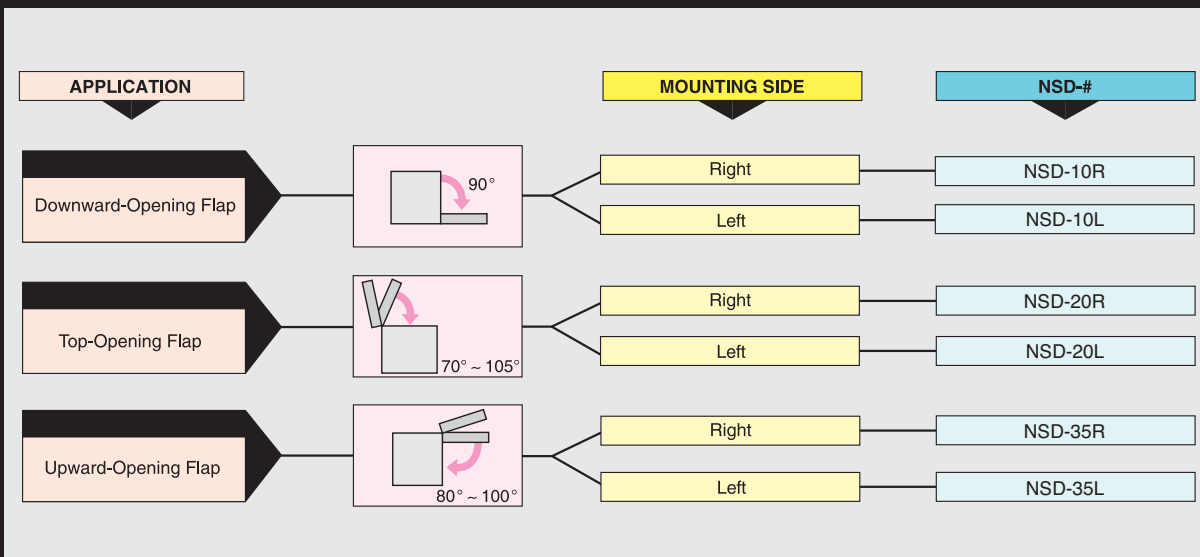
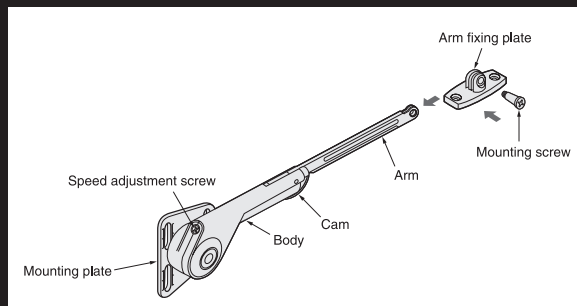


PAT

## ADJUSTABLE SOFT-DOWN STAY

- Keeps flap/lid from slamming down or flying open.
- Successfully passed for 50,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

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



# ADJUSTABLE SOFT-DOWN STAY

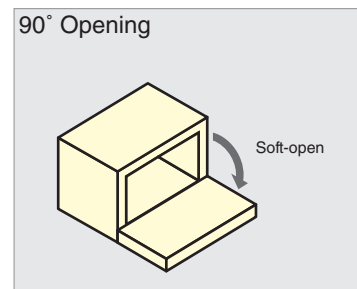
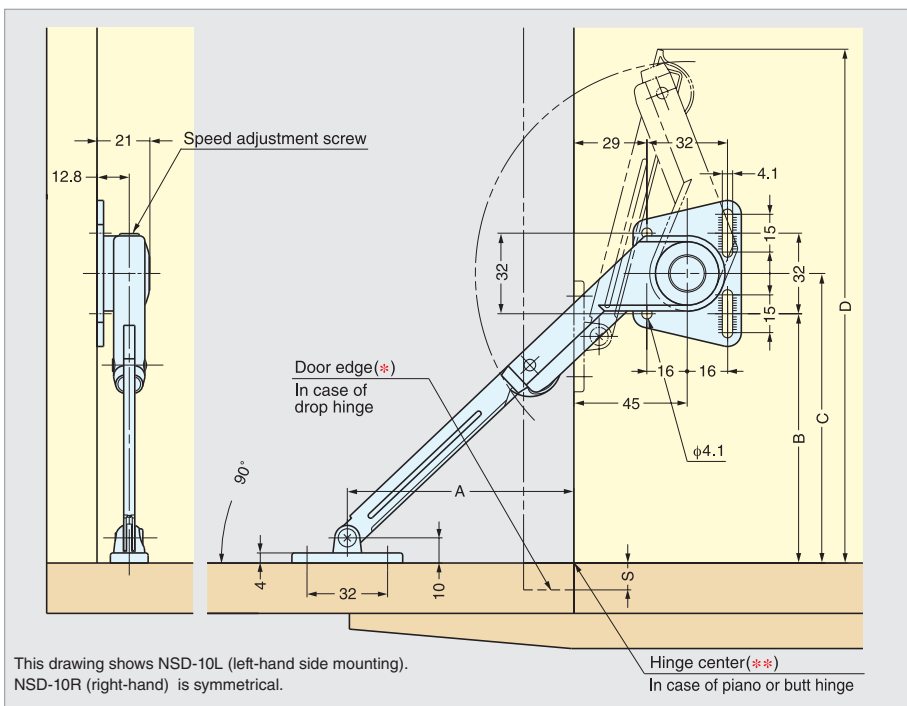
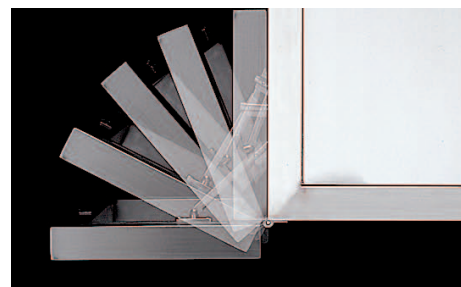


## NSD-10



- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop Hinges.
- NSD-10 is designed to hold door in closed position.
- Torque Calculation :  
Torque = Door Height x 1/2 x Door Weight.  
Per Piece: 20~70 kg·cm.  
Per Pair :40~140 kg·cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel



The distance for A, B, C is measured from "door edge (\*)" and "top surface of bottom board" when drop hinges are used, and from "hinge center (\*\*\*)" and "top surface of bottom board" when piano or butt hinges are used.

Hinge Type	A	B	C	D
Drop Hinge	97	106-S	122-S	211-S
Piano / Butt Hinge	90	99	115	204

Note: "S" dimension is the overlay distance for drop hinge(s).

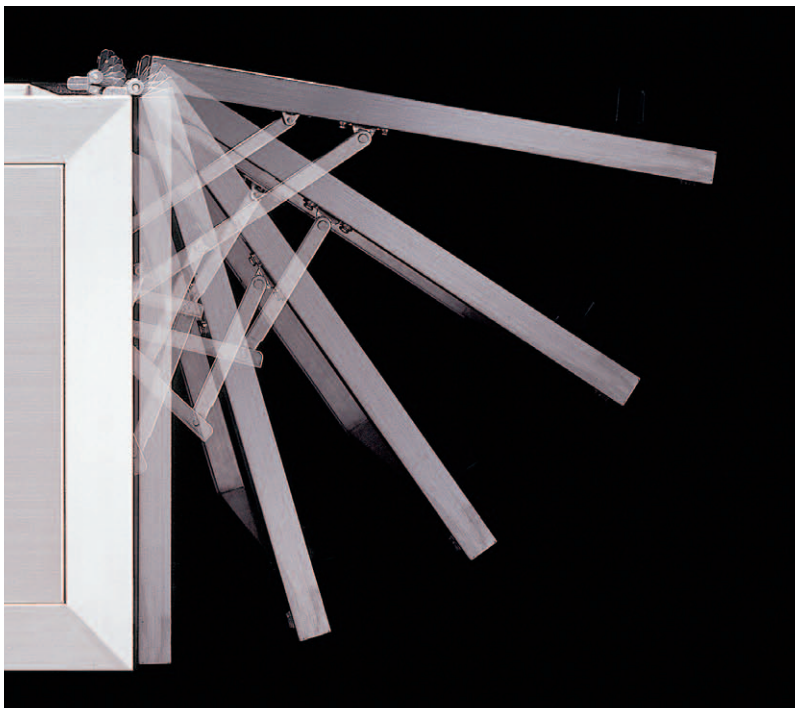
Item Code	Item Name	Weight	Box	Carton
180-109-376	NSD-10R	210g	20pcs	80pcs
180-109-381	NSD-10L	210g	20pcs	80pcs



# ADJUSTABLE SOFT-DOWN STAY



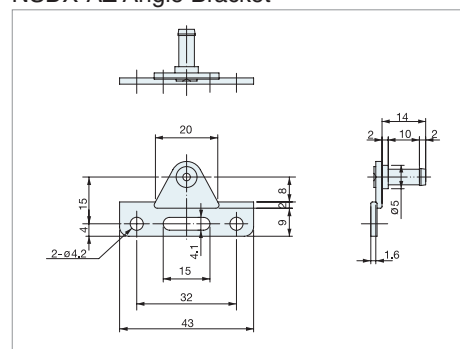
## NSD-35



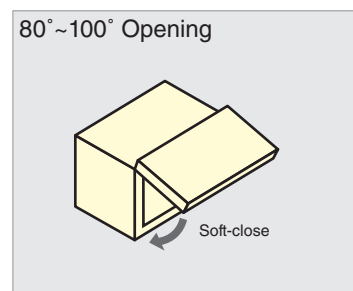
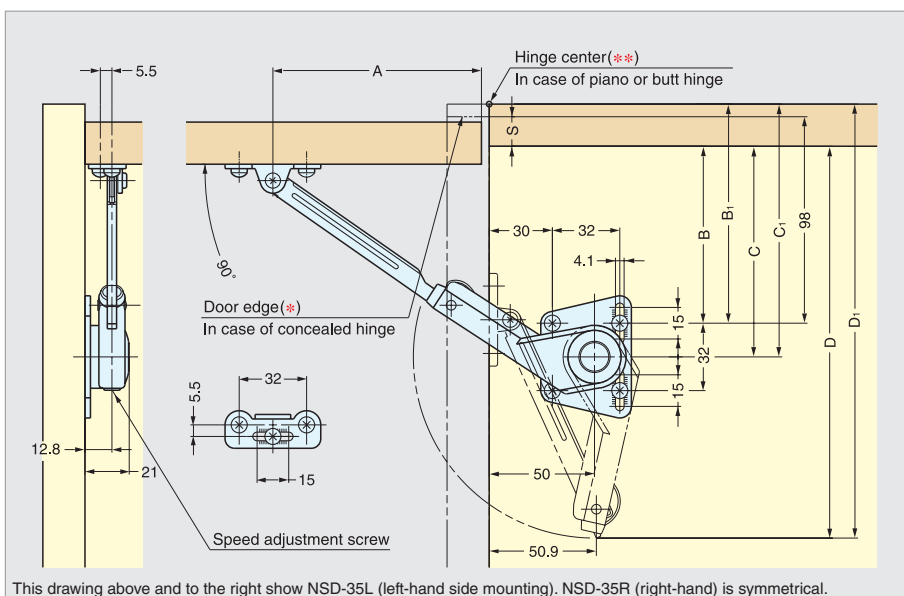
- For UPWARD-OPENING FLAP DOOR with piano, butt or concealed hinges.
- Opening angle adjustable from 80° to 100°.
- NSD-35 is designed to hold door in fully opened position.
- Two stop version (holds door at 65° and 90°) is also available.
- Torque Calculation :  
 Torque = Door Height x 1/2 x Door Weight.  
 Per Piece : 20~70 kg-cm.  
 Per Pair : 40~140 kg-cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel

### NSDX-AZ Angle Bracket



NSDX-AZ (angle bracket) for aluminum frame application available upon request.



Opening Angle	80°		90°		100°	
	Down		Middle		Up	
Position of Plates	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket
For Hinge Center (Up) ↑ (Down) ↓						

Hinge Type	A	B	C	D	B <sub>1</sub>	C <sub>1</sub>	D <sub>1</sub>	Item Code	Item Name	Weight	Box	Carton
Concealed Hinge	99	98-S	114-S	200-S	-	-	-	108-109-280	NSD-35R	210g	20pcs	80pcs
Piano / Butt Hinge	93	-	-	-	92	108	194	108-109-279	NSD-35L	210g	20pcs	80pcs

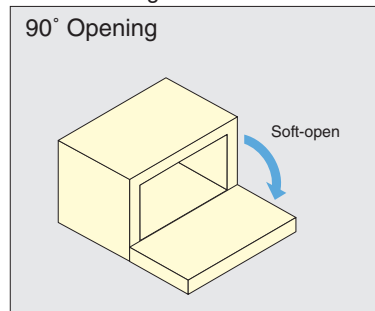
# ADJUSTABLE SOFT-DOWN STAY (SHORT-ARM)



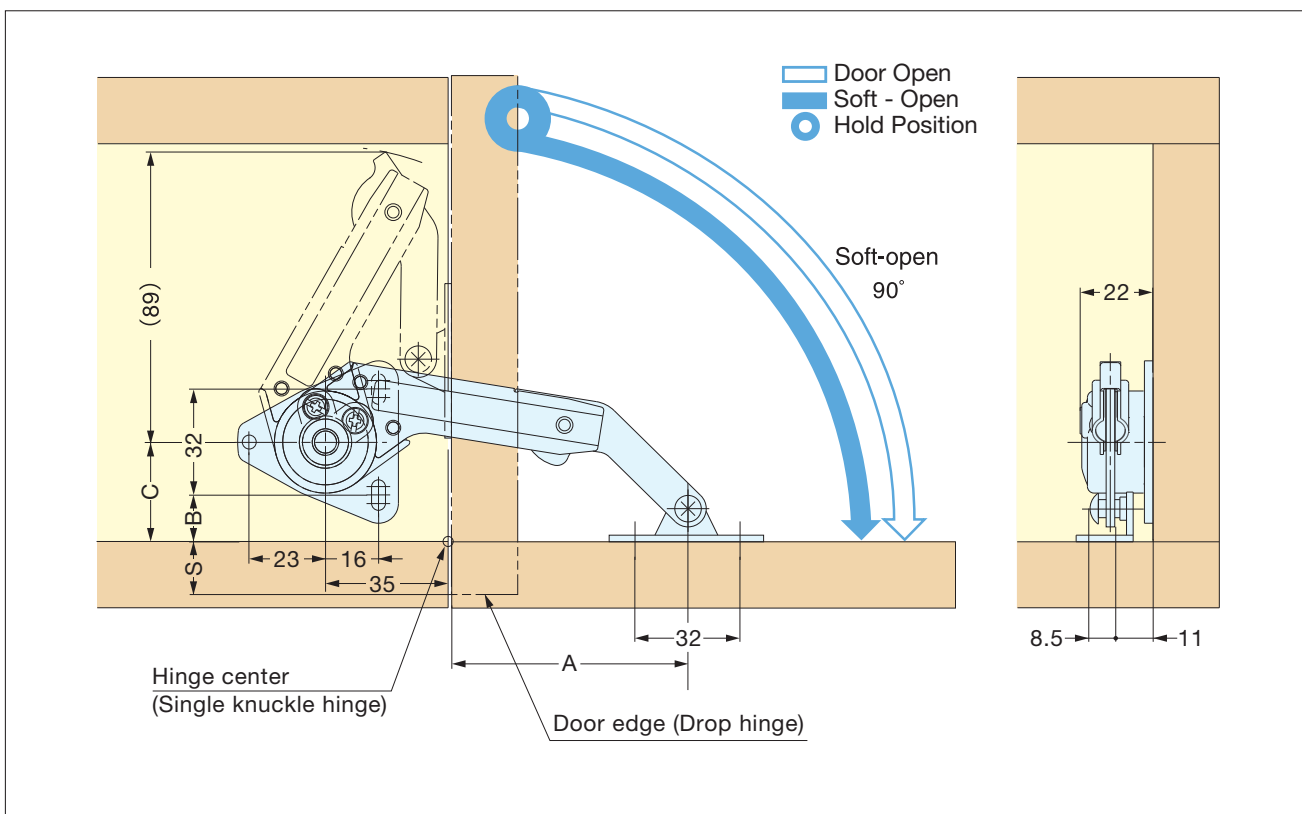
# NSDX-10(R/L)K/TV



- For DOWNWARD-OPENING FLAP DOOR with concealed, piano, butt or drop hinges.
- Short arm type designed for shorter door height applications.
- Handed: Specific left and right hand mounting.
- Torque Calculation:
  - Torque = Door Height × 1/2 × Door Weight.
  - Per Piece: 10 ~ 20kgf-cm.
  - Per Pair: 20 ~ 40kgf-cm.



Application



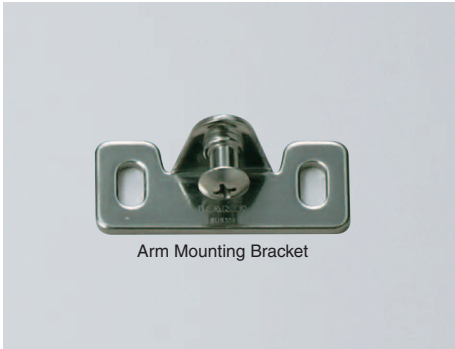
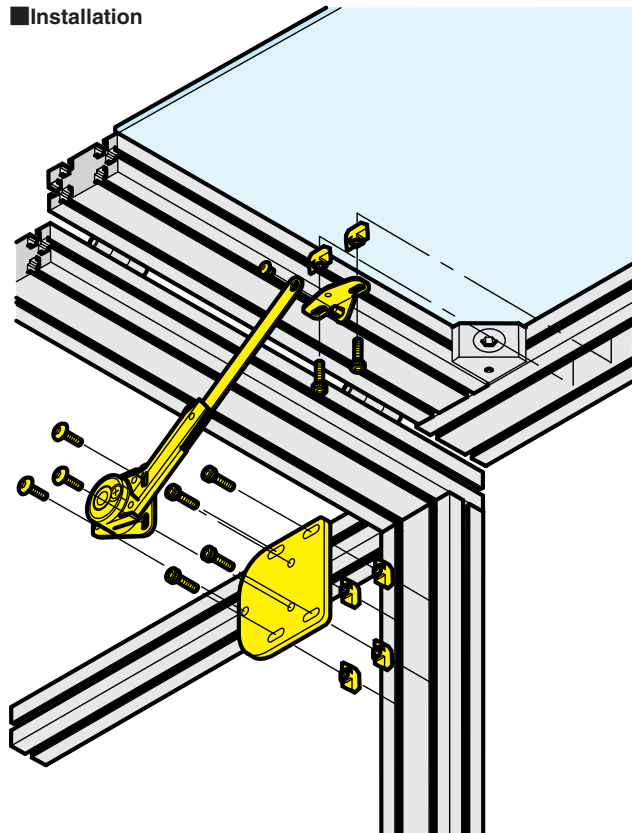
Hinge Type	A	B	C
Single Knuckle Hinge	58+S	14	30
Drop Hinge	71	27	43

Item Code	Item Name	Material	Finish	Weight	Box	Carton
180-016425	NSDX-10RK / TV Right	Zinc Alloy/Steel	Nickel	143g	20pcs	80pcs
180-016424	NSDX-10LK / TV Left					

**SOFT-DOWN STAY SOLUTIONS FOR ALUMINUM FRAME**



■ Installation



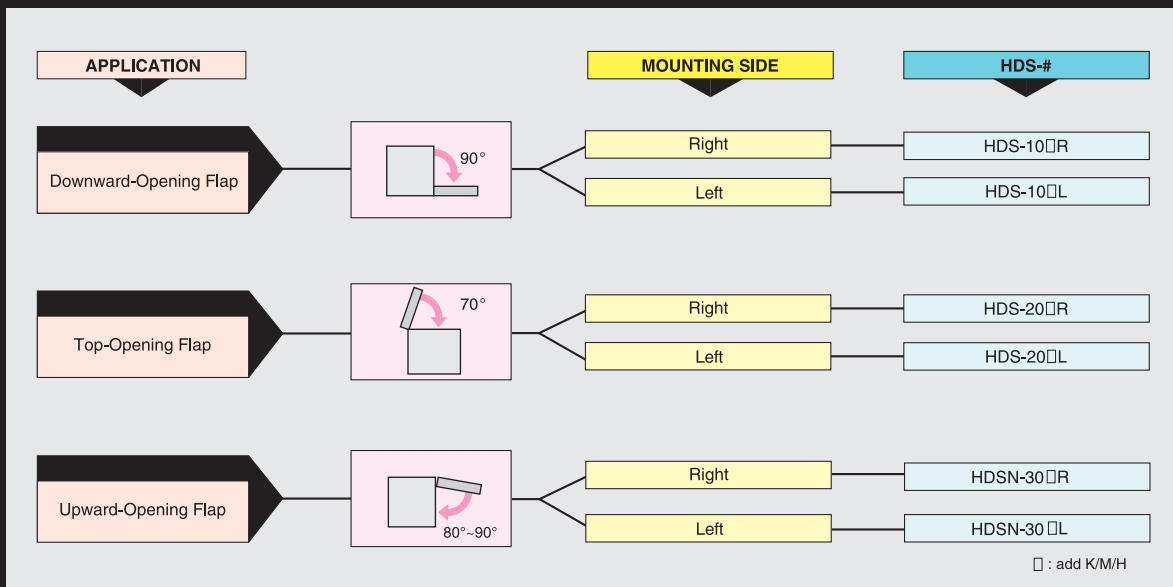
# HDS/HDSN



## HEAVY DUTY SOFT-DOWN STAY

- One-way rotary damper offers smooth and soft downward movement preventing lids or doors from slamming shut.
- Adjustable opening angle.
- Easy installation.
- Successfully passed for 30,000 open / close private cycle tests.

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



### ■ HDS

Door Height	HDS-10K HDS-20K HDS-30K	HDS-10M HDS-20M HDS-30M	HDS-10H HDS-20H HDS-30H
	Door Weight/piece	Door Weight/piece	Door Weight/piece
300	9.34 ~ 13.33 kg	13.34 ~ 16.66 kg	16.67 ~ 20.00 kg
350	8.00 ~ 11.42 kg	11.43 ~ 14.28 kg	14.29 ~ 17.14 kg
400	7.00 ~ 9.99 kg	10.00 ~ 12.49 kg	12.50 ~ 15.00 kg
450	6.23 ~ 8.88 kg	8.89 ~ 11.11 kg	11.12 ~ 13.33 kg
500	5.60 ~ 7.99 kg	8.00 ~ 9.99 kg	10.00 ~ 12.00 kg
550	5.1 ~ 7.27 kg	7.28 ~ 9.09 kg	9.10 ~ 10.90 kg
600	4.67 ~ 6.66 kg	6.67 ~ 8.33 kg	8.34 ~ 10.00 kg

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

# HEAVY DUTY SOFT-DOWN STAY



## HDS-10

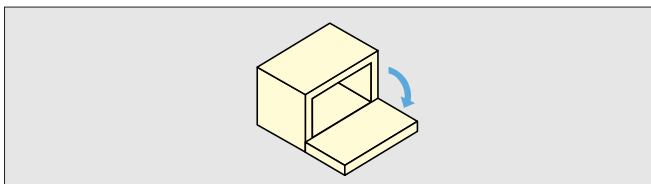


- For DOWNWARD-OPENING FLAP DOOR with concealed, piano, butt or drop hinges.
- HDS-10 is designed to hold door in closed and opened position.
- Used in pairs.
- Handed: Specific left and right hand mounting.

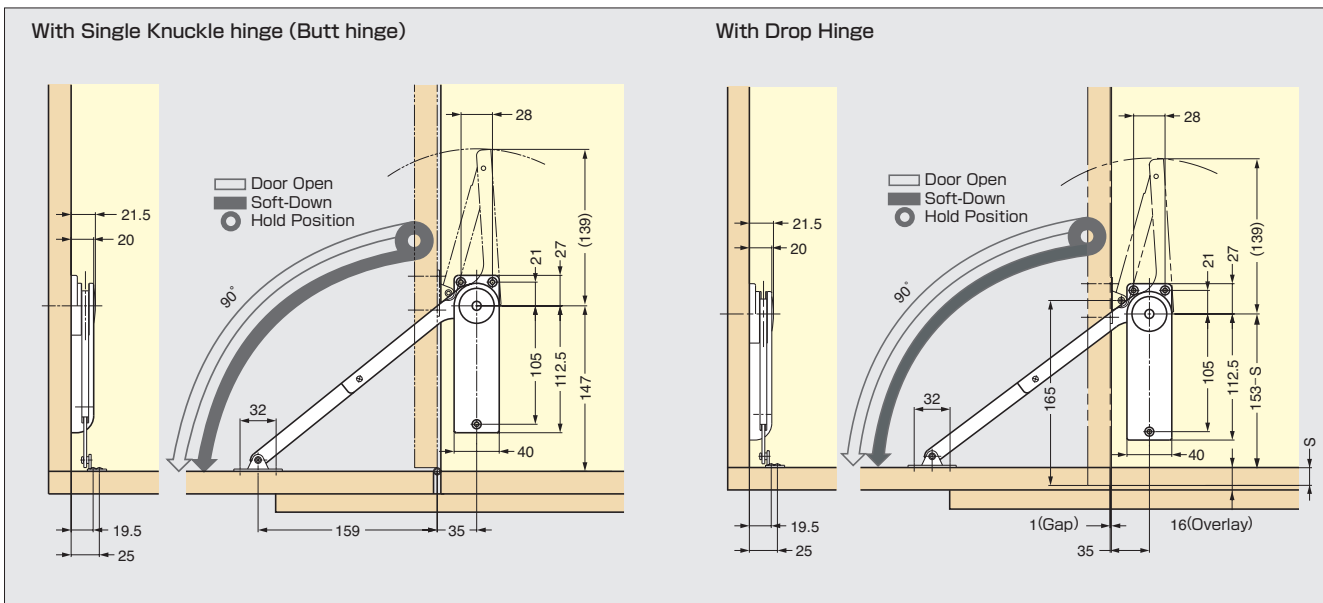
### Torque Calculation

Torque Moment/2pcs	Model	piece
13.7~ 19.5 N·m	K	2pcs
19.6~ 24.4 N·m	M	2pcs
24.5~ 29.4 N·m	H	2pcs

$$\frac{\text{Door Height (m)}}{2} \times \text{Door Weight (kg)} \times 9.8 = \text{Torque Moment (N} \cdot \text{m)}$$



### Installation



### Body

Item Code	Item Name	Spec.	Material	Finish/Color	Model	Torque Mornment/2pcs		Weight	Box
						Opening Angle80°	Opening Angle80°		
180-104-066	HDS-10KR-BL	Right	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	292g	40pcs
180-104-067	HDS-10KL-BL	Left	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	292g	40pcs
180-104-072	HDS-10KR-WT	Right	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	292g	40pcs
180-104-073	HDS-10KL-WT	Left	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	292g	40pcs
180-104-068	HDS-10MR-BL	Right	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	302g	40pcs
180-104-069	HDS-10ML-BL	Left	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	302g	40pcs
180-104-074	HDS-10MR-WT	Right	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	302g	40pcs
180-104-075	HDS-10ML-WT	Left	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	302g	40pcs
180-104-070	HDS-10HR-BL	Right	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	309g	40pcs
180-104-071	HDS-10HL-BL	Left	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	309g	40pcs
180-104-076	HDS-10HR-WT	Right	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	309g	40pcs
180-104-077	HDS-10HL-WT	Left	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	309g	40pcs

# HEAVY DUTY SOFT-DOWN STAY



## HDS-20

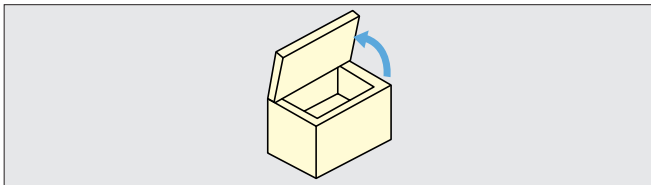


- For TOP-OPENING FLAP DOOR with concealed, piano, butt or concealed hinges.
- Used in pairs.
- HDS-20 is designed to hold door in fully opened position.
- Handed: Specific left and right hand mounting.

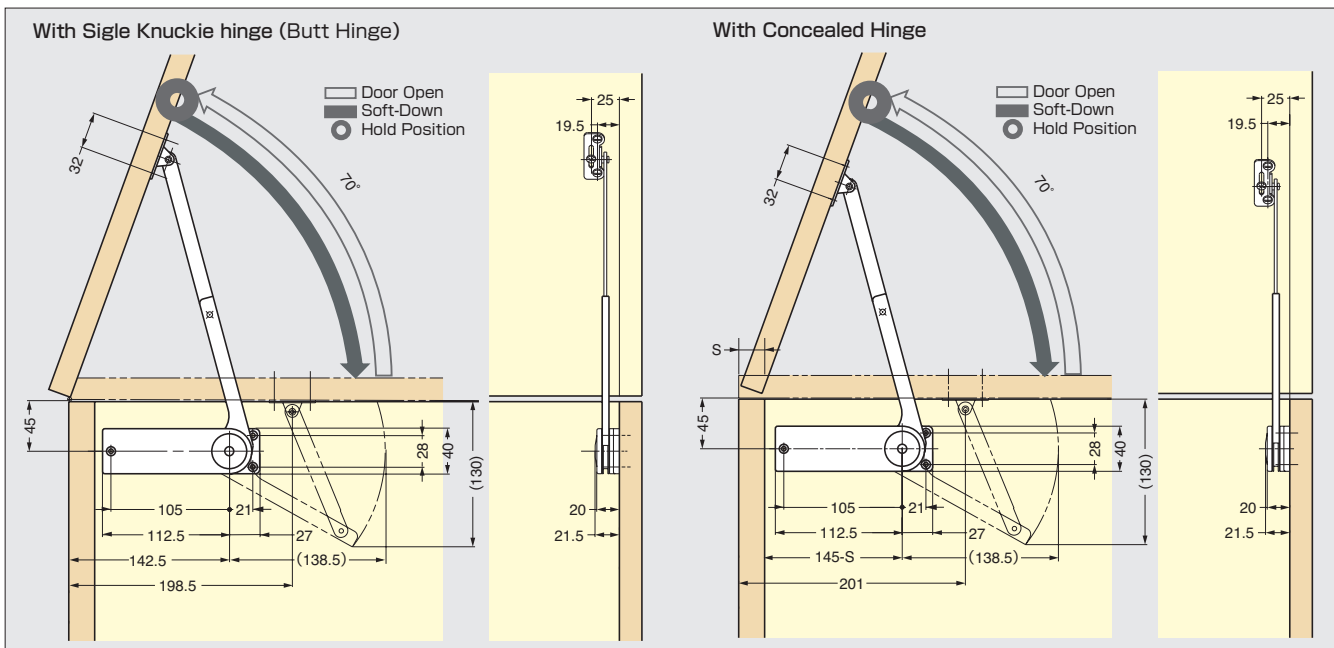
### ■ Torque Calculation

Torque Moment/2pcs	Model	piece
13.7~19.5 N·m	K	2pcs
19.6~24.4 N·m	M	2pcs
24.5~29.4 N·m	H	2pcs

$$\frac{\text{Door Height (m)}}{2} \times \text{Door Weight (kg)} \times 9.8 = \text{Torque Moment (N} \cdot \text{m)}$$



### ■ Installation



### ■ Body

Item Code	Item Name	Spec.	Material	Finish/Color	Model	Torque Moment/2pcs		Weight	Box
						Opening Angle80°	Opening Angle80°		
180-109-236	HDS-20KR-BL	Right	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	282g	40pcs
180-109-237	HDS-20KL-BL	Left	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	282g	40pcs
180-109-242	HDS-20KR-WT	Right	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	282g	40pcs
180-109-243	HDS-20KL-WT	Left	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	282g	40pcs
180-109-238	HDS-20MR-BL	Right	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	289g	40pcs
180-109-239	HDS-20ML-BL	Left	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	289g	40pcs
180-109-244	HDS-20MR-WT	Right	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	289g	40pcs
180-109-245	HDS-20ML-WT	Left	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	289g	40pcs
180-109-240	HDS-20HR-BL	Right	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	297g	40pcs
180-109-241	HDS-20HL-BL	Left	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	297g	40pcs
180-109-246	HDS-20HR-WT	Right	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	297g	40pcs
180-109-247	HDS-20HL-WT	Left	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	297g	40pcs

# HEAVY DUTY SOFT-DOWN STAY



## HDS-30

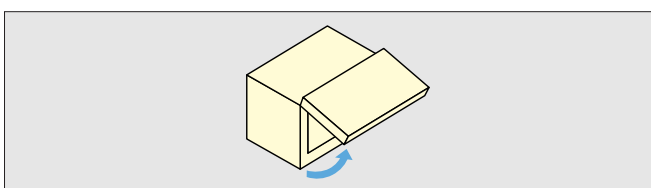


- For TOP-OPENING FLAP DOOR with concealed, hinges.
- Used in pairs.
- HDSN-30 is designed to hold door in Closed and opened position.
- Handed: Specific left and right hand mounting.

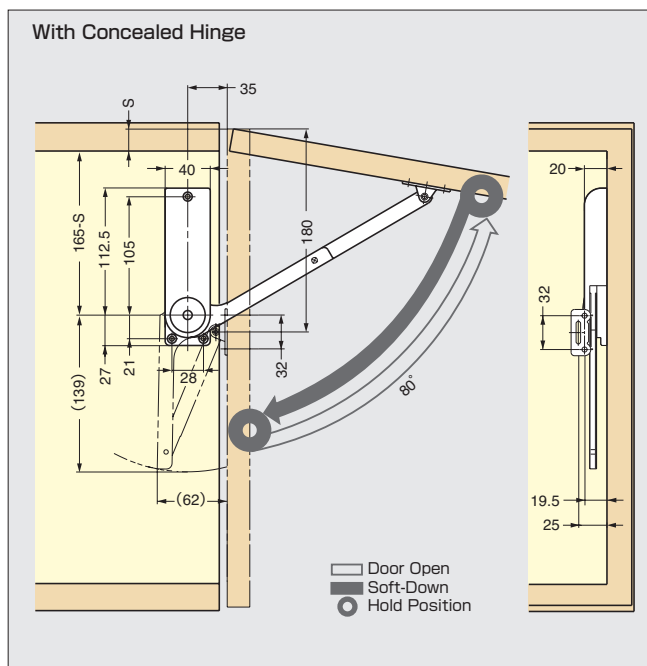
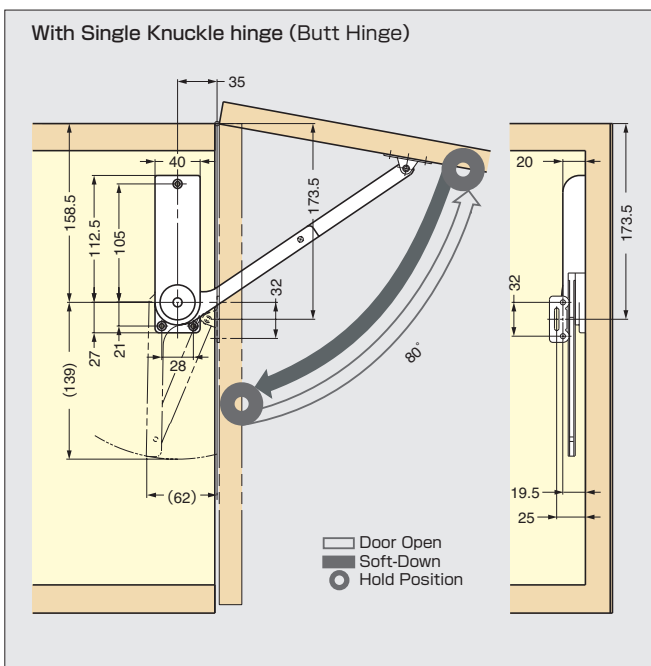
### Torque Calculation

Torque Moment/2pcs	Model	piece
13.7~ 19.5 N·m	K	2pcs
19.6~ 24.4 N·m	M	2pcs
24.5~ 29.4 N·m	H	2pcs

$$\frac{\text{Door Height (m)}}{2} \times \text{Door Weight (kg)} \times 9.8 = \text{Torque Moment (N} \cdot \text{m)}$$



### Installation



### Body

Item Code	Item Name	Spec.	Material	Finish/Color	Model	Torque Morment/2pcs		Weight	Box
						Opening Angle80°	Opening Angle80°		
180-104-078	HDS-30KR-BL	Right	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	275g	40pcs
180-104-079	HDS-30KL-BL	Left	ABS/Steel	Nickel/Black	K	13.7~19.5 N·m	140~199kgf·cm	275g	40pcs
180-109-270	HDS-30KR-WT	Right	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	275g	40pcs
180-109-271	HDS-30KL-WT	Left	ABS/Steel	Nickel/White	K	13.7~19.5 N·m	140~199kgf·cm	275g	40pcs
180-104-080	HDS-30MR-BL	Right	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	293g	40pcs
180-104-081	HDS-30ML-BL	Left	ABS/Steel	Nickel/Black	M	19.6~24.4 N·m	200~249kgf·cm	293g	40pcs
180-109-272	HDS-30MR-WT	Right	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	293g	40pcs
180-109-273	HDS-30ML-WT	Left	ABS/Steel	Nickel/White	M	19.6~24.4 N·m	200~249kgf·cm	293g	40pcs
180-104-082	HDS-30HR-BL	Right	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	298g	40pcs
180-104-083	HDS-30HL-BL	Left	ABS/Steel	Nickel/Black	H	24.5~29.3 N·m	250~300kgf·cm	298g	40pcs
180-109-274	HDS-30HR-WT	Right	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	298g	40pcs
180-109-275	HDS-30HL-WT	Left	ABS/Steel	Nickel/White	H	24.5~29.3 N·m	250~300kgf·cm	298g	40pcs

# HEAVY DUTY SOFT-DOWN STAY



## HDSN-30

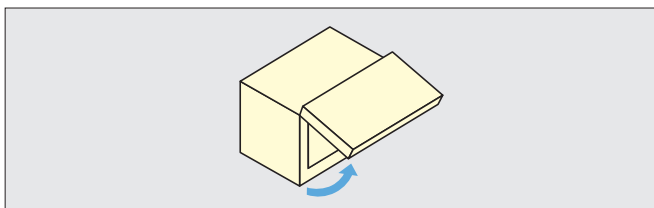


- For UPWARD-OPENING FLAP DOOR with concealed hinges.
- Used in pairs.
- HDSN-30 is designed to hold door in closed and opened position.
- Handed: Specific left and right hand mounting.

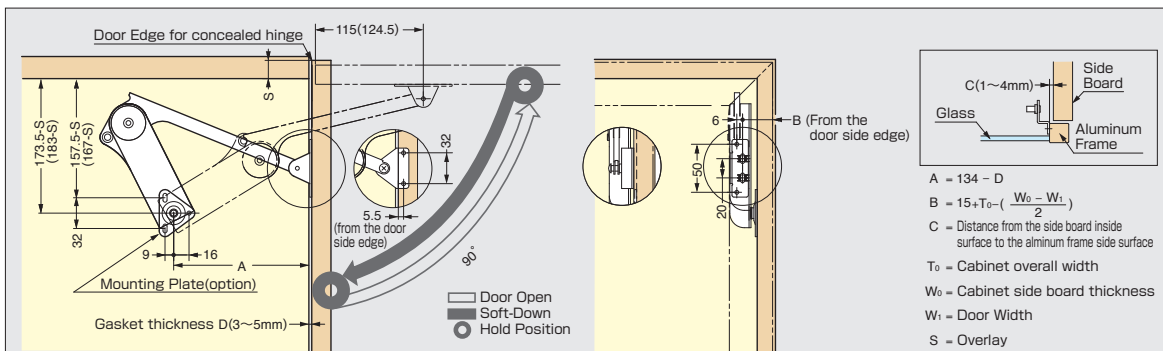
### Torque Calculation

Torque Moment (2pcs)		Model	Piece
Opening Angle90°	Opening Angle80°		
13.7~ 17.5 N·m	13.7~ 19.5 N·m	K	2pcs
17.6~ 21.5 N·m	19.6~ 24.4 N·m	M	2pcs
21.6~ 25.4 N·m	24.5~ 29.3 N·m	H	2pcs
25.5~ 29.4 N·m	29.4~ 34.3 N·m	S	2pcs

$$\frac{\text{Door Height (m)}}{2} \times \text{Door Weight (kg)} \times 9.8 = \text{Torque Moment (N} \cdot \text{m)}$$



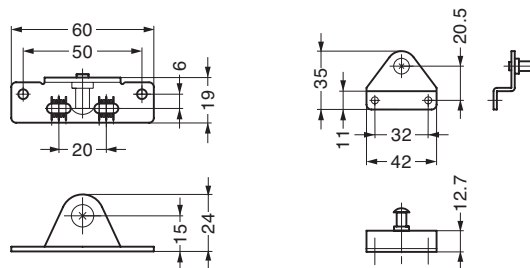
### Installation



### Body

Item Code	Item Name	Spec.	Material	Finish/Color	Model	Torque Moment/2pcs				Weight	Box
						Opening Angle90°	Opening Angle80°	Opening Angle90°	Opening Angle80°		
180-109-602	HDSN-30KR	Right	ABS/Steel	Nickel/Light Grey	K	13.7~ 17.5 N·m	13.7~ 19.5 N·m	140~ 179kgf·cm	140~ 199kgf·cm	415g	40pcs
180-109-601	HDSN-30KL	Left	ABS/Steel	Nickel/Light Grey	K	13.7~ 17.5 N·m	13.7~ 19.5 N·m	140~ 179kgf·cm	140~ 199kgf·cm	415g	40pcs
180-109-604	HDSN-30MR	Right	ABS/Steel	Nickel/Light Grey	M	17.6~ 21.5 N·m	19.6~ 24.4 N·m	180~ 219kgf·cm	200~ 249kgf·cm	415g	40pcs
180-109-603	HDSN-30ML	Left	ABS/Steel	Nickel/Light Grey	M	17.6~ 21.5 N·m	19.6~ 24.4 N·m	180~ 219kgf·cm	200~ 249kgf·cm	415g	40pcs
180-109-606	HDSN-30HR	Right	ABS/Steel	Nickel/Light Grey	H	21.6~ 25.4 N·m	24.5~ 29.3 N·m	220~ 259kgf·cm	250~ 299kgf·cm	415g	40pcs
180-109-605	HDSN-30HL	Left	ABS/Steel	Nickel/Light Grey	H	21.6~ 25.4 N·m	24.5~ 29.3 N·m	220~ 259kgf·cm	250~ 299kgf·cm	415g	40pcs
180-109-608	HDSN-30SR	Right	ABS/Steel	Nickel/Light Grey	S	25.5~ 34.3 N·m	29.4~ 34.3 N·m	260~ 300kgf·cm	300~ 350kgf·cm	415g	40pcs
180-109-607	HDSN-30SL	Left	ABS/Steel	Nickel/Light Grey	S	25.5~ 34.3 N·m	29.4~ 34.3 N·m	260~ 300kgf·cm	300~ 350kgf·cm	415g	40pcs

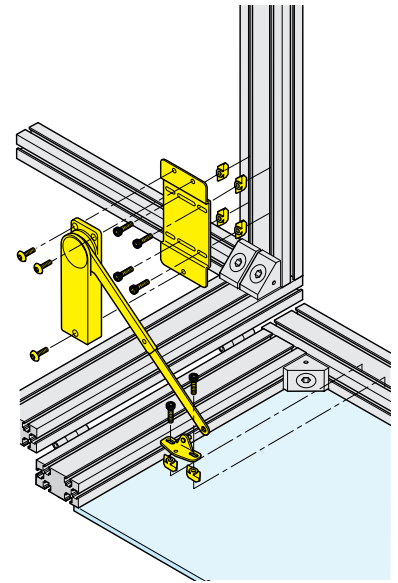
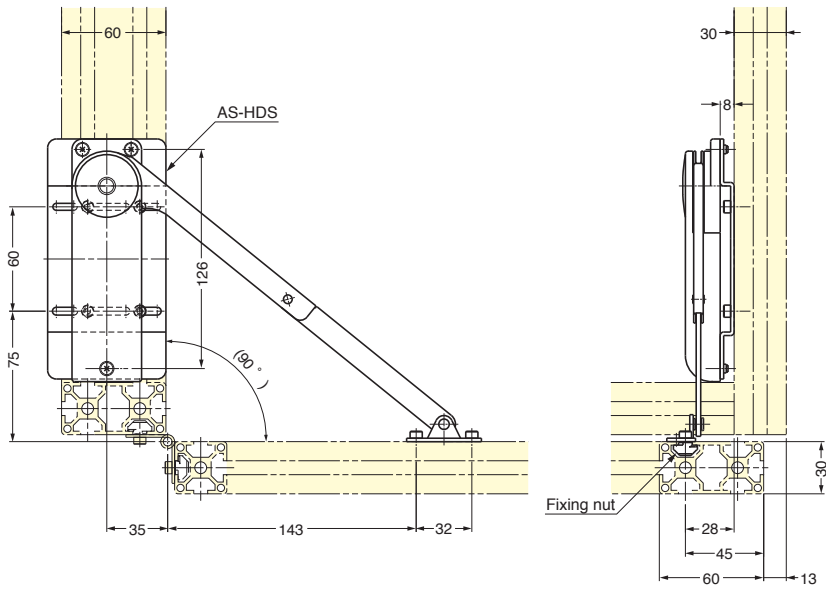
### Arm Mounting Plate (Sold separately)



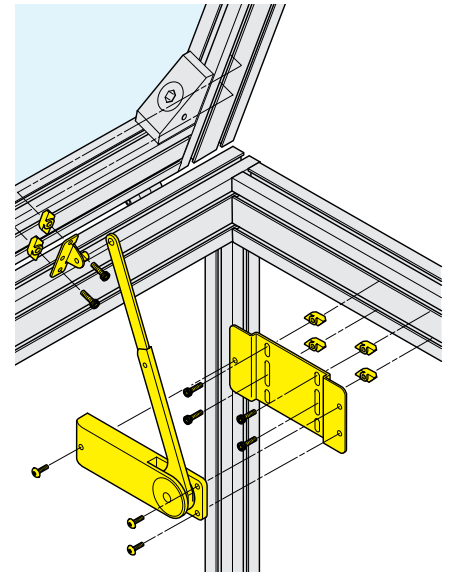
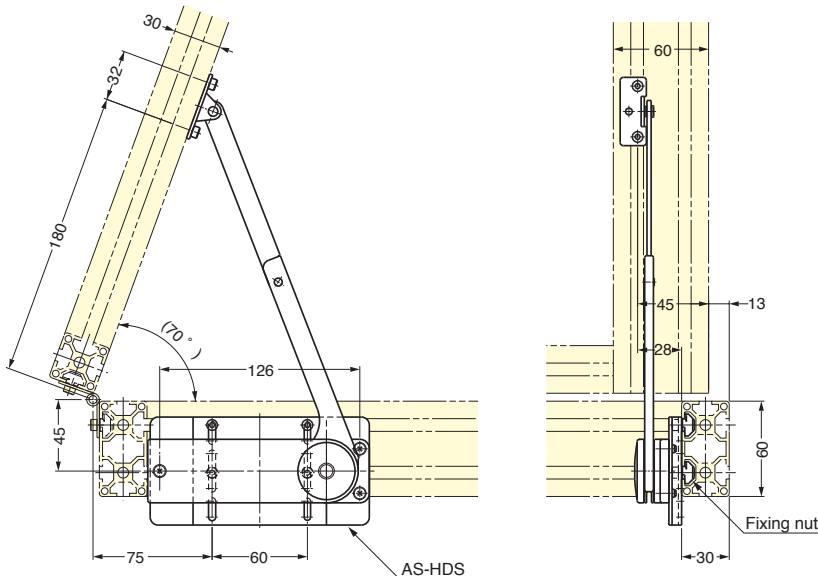
Item Code	Item Name	Spec.	Material	Finish	Weight	Box
180-109-609	HDSN-SZ	45mm width aluminum frame door or wood door	Steel	Nickel	24g	120pcs
180-109-610	HDSN-AZ	20mm width aluminum frame door	Steel	Nickel	25g	120pcs

# Aluminum Profile Applications.

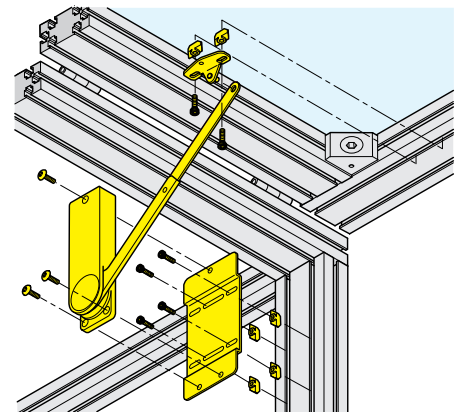
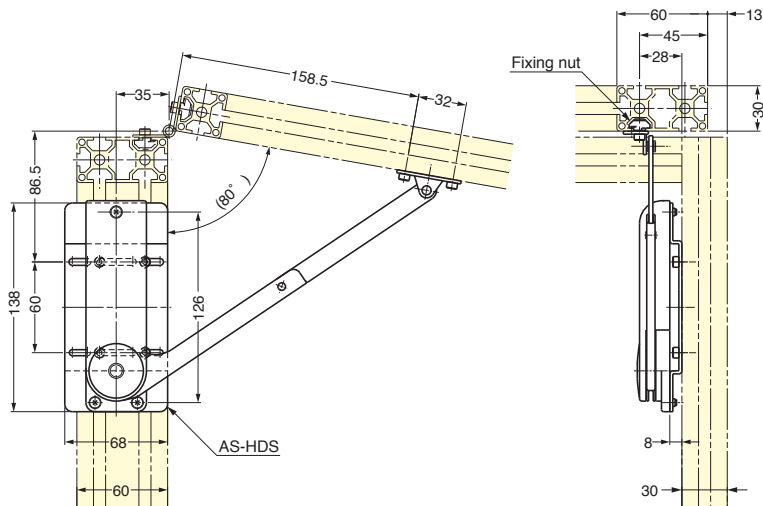
## ■ HDS-10



## ■ HDS-20



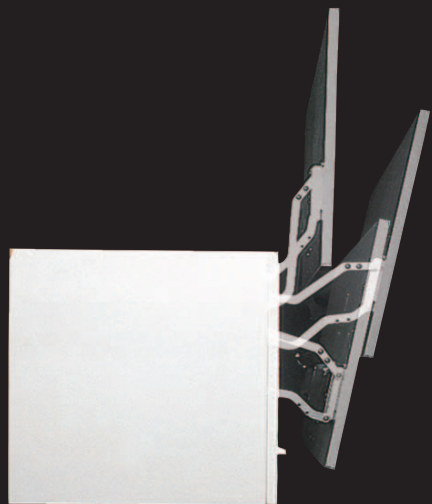
## ■ HDS-30



# SLUN

## VERTICAL SWING LIFT-UP MECHANISM

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



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



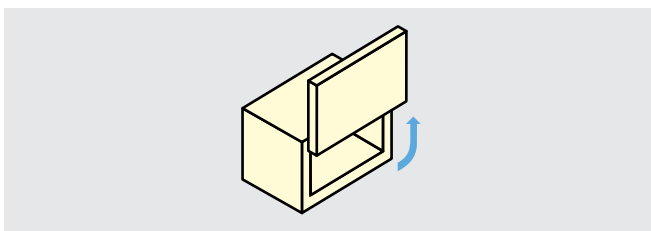
# VERTICAL SWING LIFT-UP MECHANISM



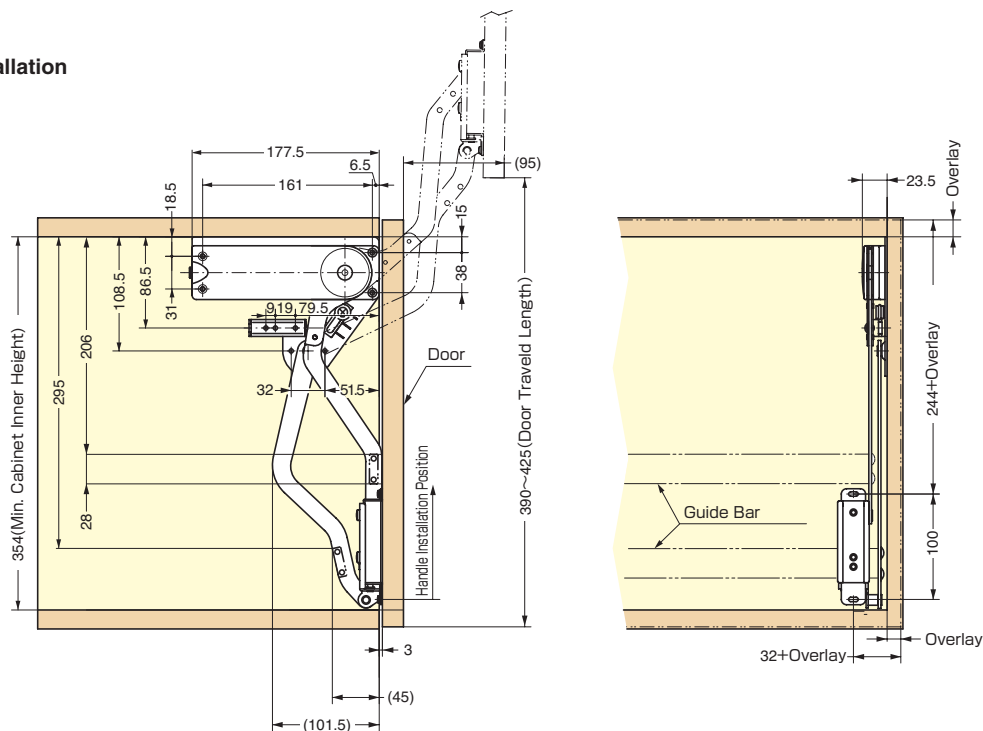
## SLUN



- 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") / door.
  - Weight, 2.5~5.2 kg (5.5~11.4 lbs) / door.
  - SLUH (short arm version) available for shorter doors.



### Installation



Item Code	Item Name	Material	Finish/Color	Door Width	Door Height	Door Weight	Travel Length	Box
180-020-832	SLUN-3N (SLUN-3)	ABS/Steel	Chrome/Grey	600~900	390~450	2.8~3.8kg	390~425	5set
180-020-833	SLUN-4N (SLUN-4)	ABS/Steel	Chrome/Grey	600~900	390~450	3.8~4.8kg	390~425	5set
180-020-834	SLUN-5N (SLUN-5)	ABS/Steel	Chrome/Grey	600~900	390~450	4.8~5.8kg	390~425	5set

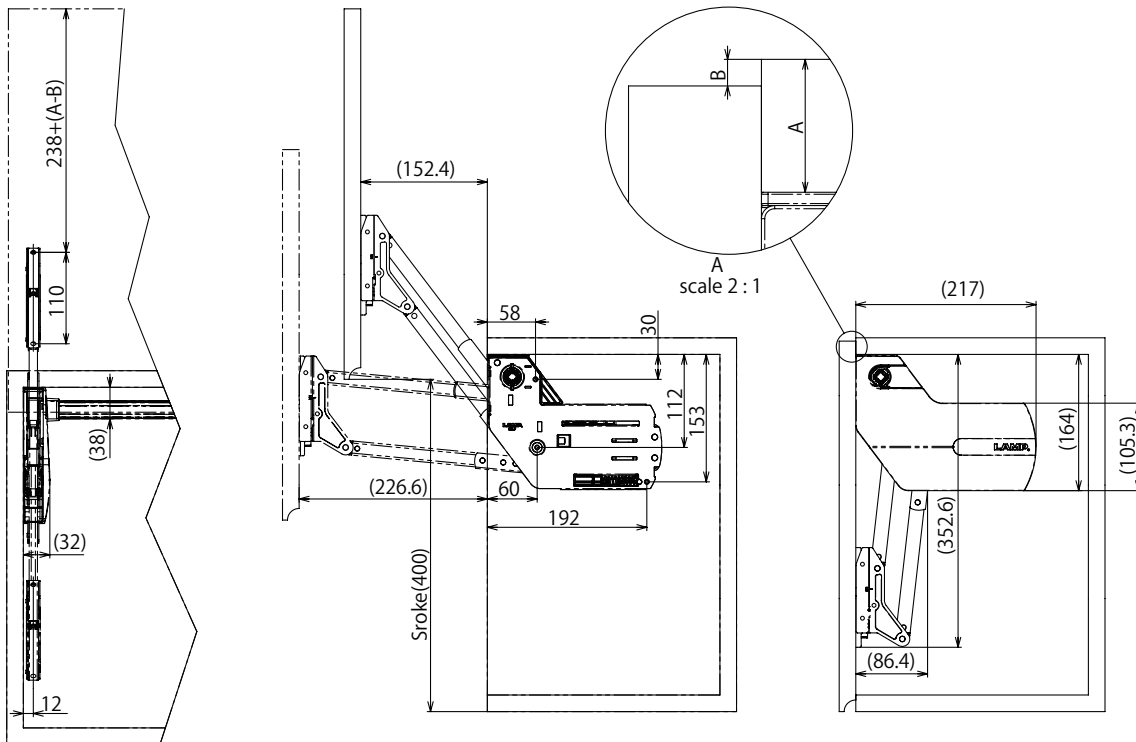
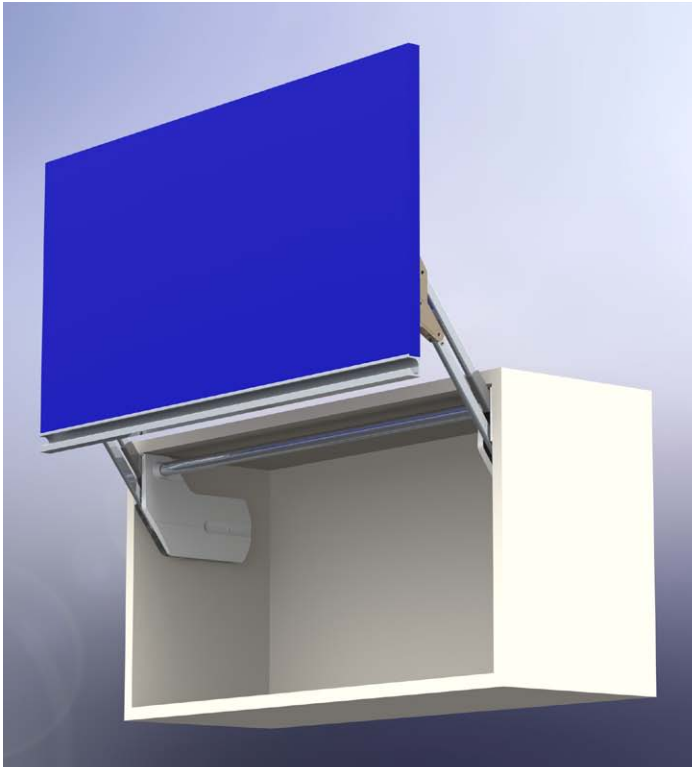
Item Code	Item Name	Guide bar for cabinet width 600mm	Guide bar for cabinet width 900mm
180-120-287	SLUB-535	535	—
180-104-088	SLUB-551	551	—
180-120-288	SLUB-835	—	835
180-100-131	SLUB-851	—	851

# SWING LIFT-UP STAY



# SLU-ELAN

- Patented easy installation includes:
  - Top corner body installation.
  - One touch door bracket.
  - Flexible bar length.
- Compact design.
- Lift-assist function.
- Free stop and soft-close.
- Optional logo plate.



Item Code	Item Name	Door Weight	Door Height	Door Width	Box	Carton
180-022-312	SLU-ELAN S4	5 - 6.5 kg	390 - 500mm	Max. 1500mm	1set	5set
180-022-313	SLU-ELAN L4	6.5 - 8 kg				
180-022-314	SLU-ELAN M4	8 - 9.5 kg				
180-022-315	SLU-ELAN H4	9.5 - 11 kg				

■ Connecting Bar (Sold Separately)

Item Code	Item Name	Cabinet Width	Inside Dimensions
180-022-319	ELB480	600mm	556-566mm
180-022-320	ELB780	900mm	856-866mm
180-022-321	ELB1080	1200mm	1156-1166mm
180-022-322	ELB1380	1500mm	1456-1466mm

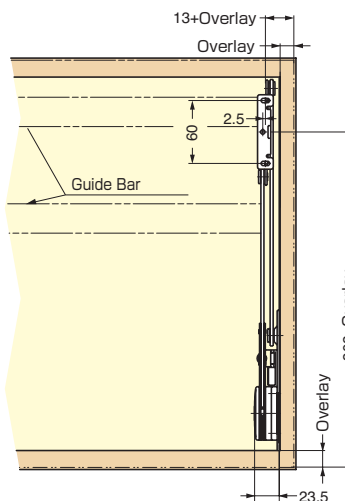
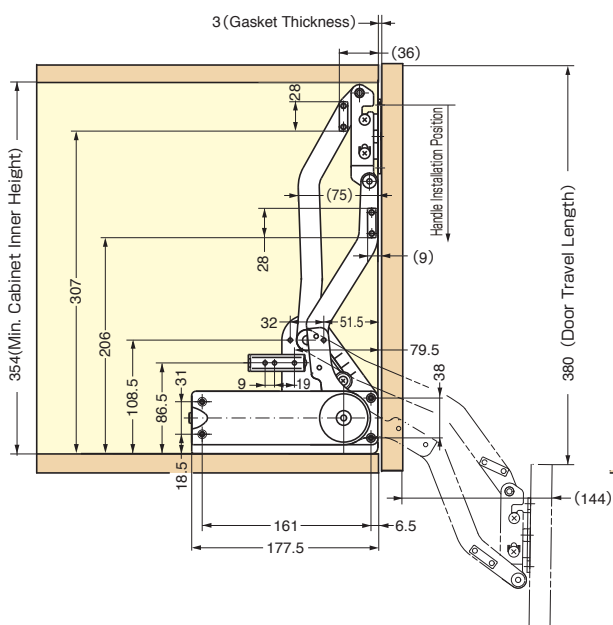
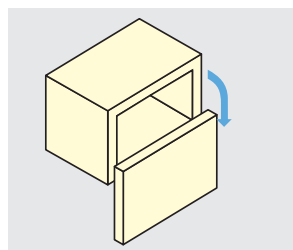
# SWING DOWN STAY



SLD



- Unique swing mechanism, provides a lift-assist feature to help open/close the doors with ease & softly.
- Holds the door at opened position.
- Sleek, compact design provides maximum access.
- Easy installation.
- Adjustable arm mounting plate.



■ Body (set)

Item Code	Item Name	Material	Finish/Color	Door Width	Door Height	Door Weight	Box
180-020-848	SLD-3	ABS/Steel	Chrome/Grey	600 ~ 900	360 ~ 400	3 ~ 4kg	5set
180-020-849	SLD-4	ABS/Steel	Chrome/Grey	600 ~ 900	360 ~ 400	4 ~ 5kg	5set
180-020-850	SLD-5	ABS/Steel	Chrome/Grey	600 ~ 900	360 ~ 400	5 ~ 6kg	5set

■ Guide Bar(Sold separately)

Item Code	Item Name	Door Spec.	Guide bar for cabinet width 600mm	Guide bar for cabinet width 900mm
180-120-287	SLUB-535	Solid wood Door	535	—
180-104-088	SLUB-551	Frame Door	551	—
180-120-288	SLUB-835	Solid wood Door	—	835
180-100-131	SLUB-851	Frame Door	—	851

# HBFN

## HORIZONTAL BI-FOLDING DOOR MECHANISM

- Unique bi-fold door mechanism provides a lift-assist feature to help lift doors and hold at the opened position.
- Compact design with no tracks or guides.
- Easy installation.
- Successfully passed 30,000 open / close private cycle tests.

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



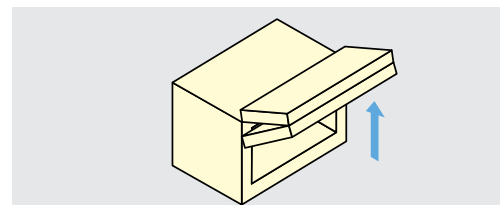
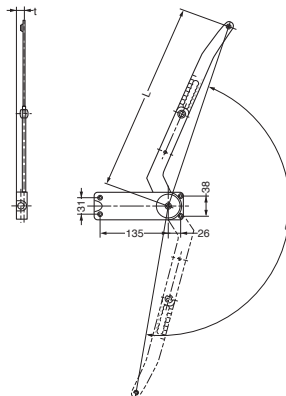
# HORIZONTAL BI-FOLDING DOOR MECHANISM



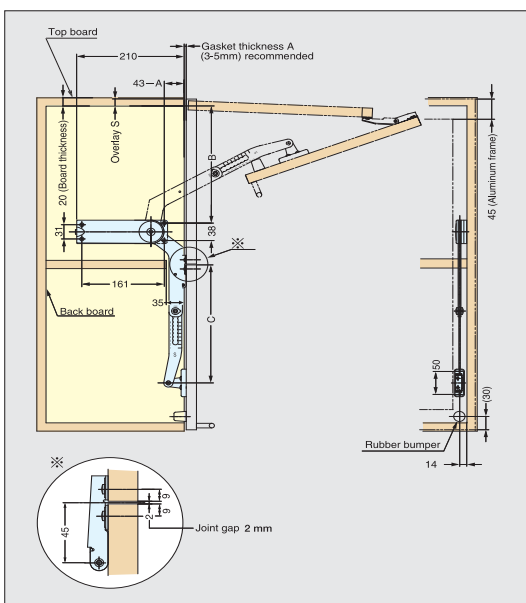
# HBFN



- Unique bi-fold door mechanism will assist the door open and close in smooth motion.
- Tracks or guides are not required.
- Handle position can be at the bottom of the door.
- Arm length adjustable for various door sizes.
- Patented LAPCON technology provides a smooth and quiet motion.
- Recommended Door Size and Weight:
  - Width, 450~900 mm.
  - Height, 260~370 mm /each door.
  - Weight, 2.5~5.5 kg /each door.



Material	Finish/Color
ABS/Steel	Nickel/Light Grey



S=Overlay (Top Board)

Type	Door Height (mm)	Opening Angle 90°			Opening Angle 105°		
		Arm Position	B	C	Arm Position	B	C
S	260	1	171-S	189	2	162-S	190
	270	2	176-S	192	3	171-S	195
	280	3	182-S	196	4	180-S	202
	290	4	187-S	199	5	189-S	209
	300	5	192-S	202	6	198-S	216
	310	6	198-S	206	7	207-S	223
	320	7	203-S	209	8	216-S	230
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

\*Lift assist version (with "Free Stop" feature) available as special order.

## Body (set)

Item Code	Item Name	Type	Door Width	Door Height	Door Thickness	Door Weight	$\theta$	L	t	Box
180-109-612	※ HBFN-2S	S	450 ~ 900	260 ~ 320	17 ~ 20	2.5 ~ 3.5kg	171°	263 ~ 319	14	10set
180-109-613	※ HBFN-3S	S	450 ~ 900	260 ~ 320	17 ~ 20	3.5 ~ 4.5kg	171°	263 ~ 319	14	10set
180-109-614	※ HBFN-4S	S	450 ~ 900	260 ~ 320	17 ~ 20	4.5 ~ 5.5kg	171°	263 ~ 319	14	10set
180-109-615	HBFN-2M	M	450 ~ 900	320 ~ 370	17 ~ 20	2.5 ~ 3.5kg	171°	299 ~ 363	14	10set
180-109-616	HBFN-3M	M	450 ~ 900	320 ~ 370	17 ~ 20	3.5 ~ 4.5kg	171°	299 ~ 363	14	10set
180-109-617	HBFN-4M	M	450 ~ 900	320 ~ 370	17 ~ 20	4.5 ~ 5.5kg	171°	299 ~ 363	14	10set
180-100-212	※ HBFN-3L	L	450 ~ 900	370 ~ 420	17 ~ 20	2.5 ~ 3.5kg	169°	335 ~ 398.5	14	10set
180-100-213	※ HBFN-4L	L	450 ~ 900	370 ~ 420	17 ~ 20	3.5 ~ 4.5kg	169°	335 ~ 398.5	14	10set
180-100-211	※ HBFN-5L	L	450 ~ 900	370 ~ 420	17 ~ 20	4.5 ~ 5.5kg	169°	335 ~ 398.5	16	10set
180-109-363	※ HBFN-6L	L	450 ~ 900	370 ~ 420	17 ~ 20	5.5 ~ 6.0kg	169°	335 ~ 398.5	16	10set
180-109-318	※ HBFN-7L	L	450 ~ 900	370 ~ 420	17 ~ 20	6.0 ~ 6.5kg	169°	335 ~ 398.5	16	10set

※ Made to order

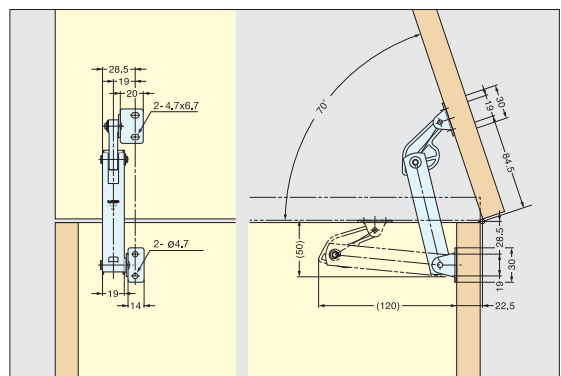
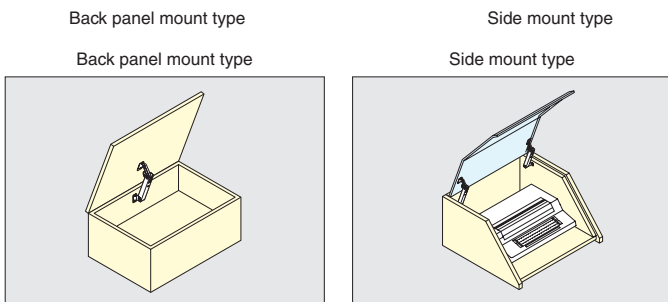
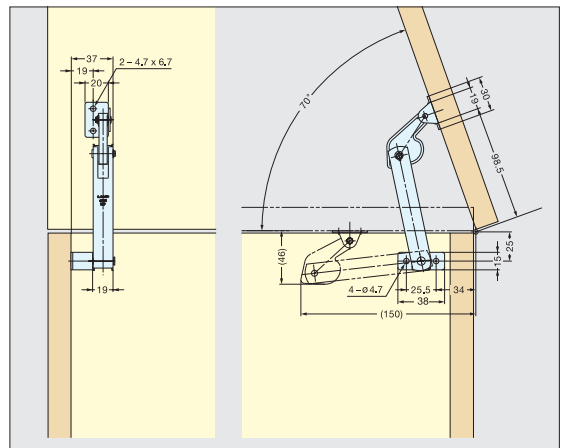
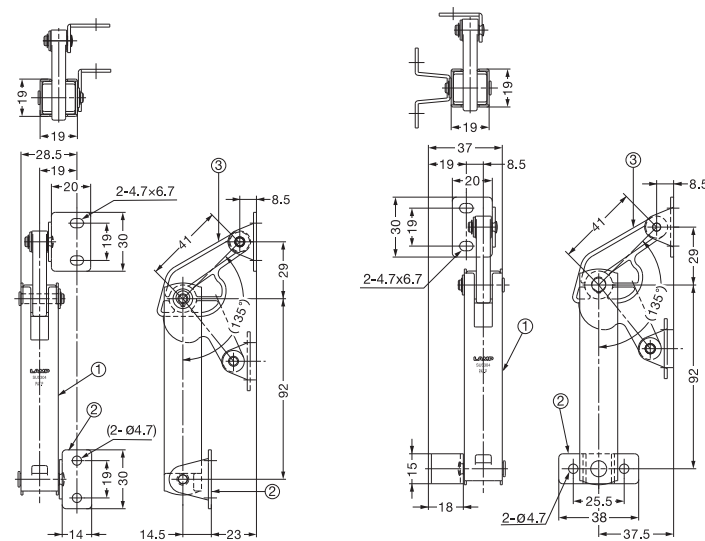
## Arm Mounting Plate (Sold separately)

Item Code	Item Name	Door Spec.	Box
180-109-618	HBFN-SZ	45mm width aluminum frame door or wood door	100set
-	※ HBFN-AZ-S	20mm width aluminum frame door	40set

※ Made to order

# SPRING LOADED LID STAY

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



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Bracket	Stainless Steel (SUS304)	Polished
③	Arm	Polycetal	-

Item Code	Item Name	Spring Tension	Mounting type	Max. Torque / pc	Weight	Box	Carton
180-100-083	S-YT01R	Soft	Side	30 kgf · cm	118g	10pcs	100pcs
180-100-084	S-YT01L	Soft	Side	30 kgf · cm	118g	10pcs	100pcs
180-100-085	S-YT02R	Hard	Side	40 kgf · cm	118g	10pcs	100pcs
180-100-086	S-YT02L	Hard	Side	40 kgf · cm	118g	10pcs	100pcs
180-100-081	S-YT01S	Soft	Back Panel	30 kgf · cm	118g	10pcs	100pcs
180-100-082	S-YT02S	Hard	Back Panel	40 kgf · cm	118g	10pcs	100pcs

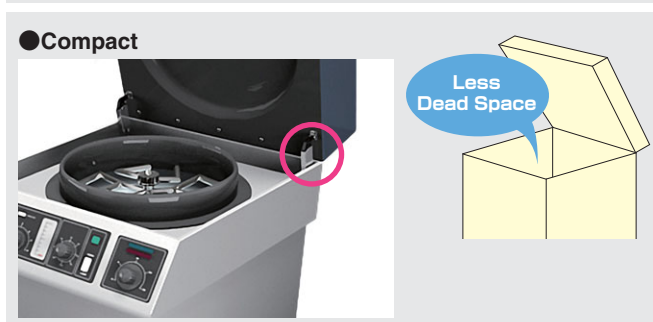
# HEAVY DUTY SPRING LOADED LID STAY



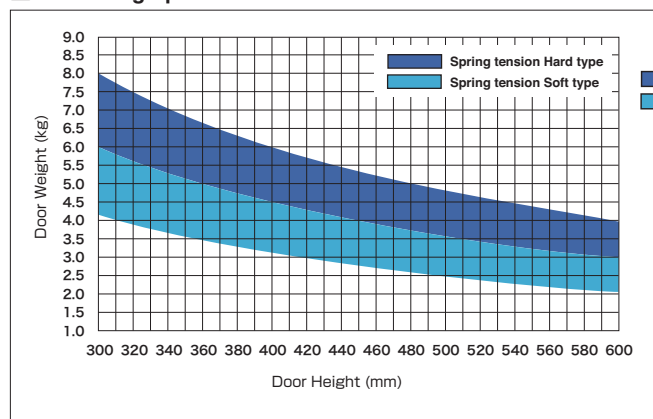
S-AT



- 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.



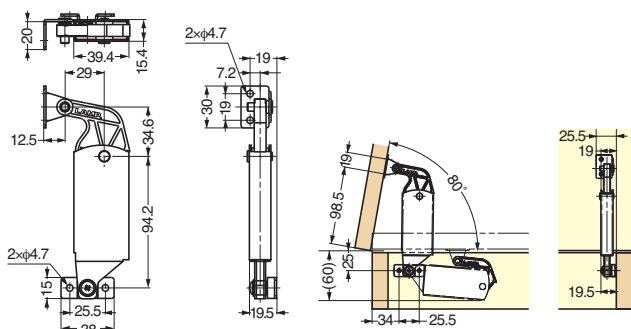
## Selection graph



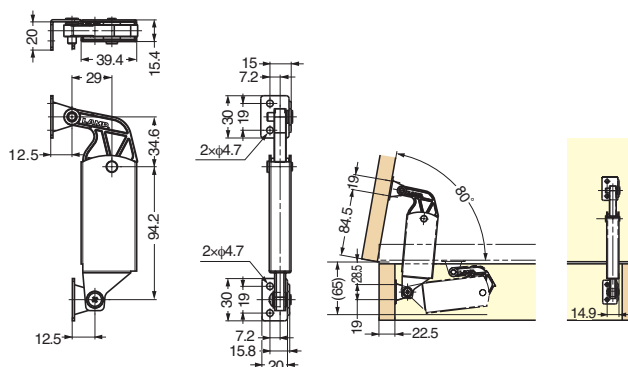
## Torque Calculation:

$$\frac{H(m)}{2} \times W(kg) \times 9.8 = \text{Torque Moment (N}\cdot\text{m)}$$

### S-AT01, S-AT02 (Side mount type)



### S-AT01S, S-AT02S (Back panel mount-type)



Item Code	Item Name	Material	Finish	Spring Tension	Mounting type	Torque Moment	per pc.	Weight	Box	Carton
180-017-544	S-AT01	Stainless Steel (SUS430)	Plain	Soft	Side	6.1 ~ 8.8 N · m	62 ~ 90 kgf · cm	195 g	10 pcs	50 pcs
180-017-545	S-AT02	Stainless Steel (SUS430)	Plain	Hard	Side	8.8 ~ 11.8 N · m	90 ~ 120 kgf · cm	195 g	10 pcs	50 pcs
180-017-546	S-AT01S	Stainless Steel (SUS430)	Plain	Soft	Back Panel	6.1 ~ 8.8 N · m	62 ~ 90 kgf · cm	195 g	10 pcs	50 pcs
180-017-547	S-AT02S	Stainless Steel (SUS430)	Plain	Hard	Back Panel	8.8 ~ 11.8 N · m	90 ~ 120 kgf · cm	195 g	10 pcs	50 pcs



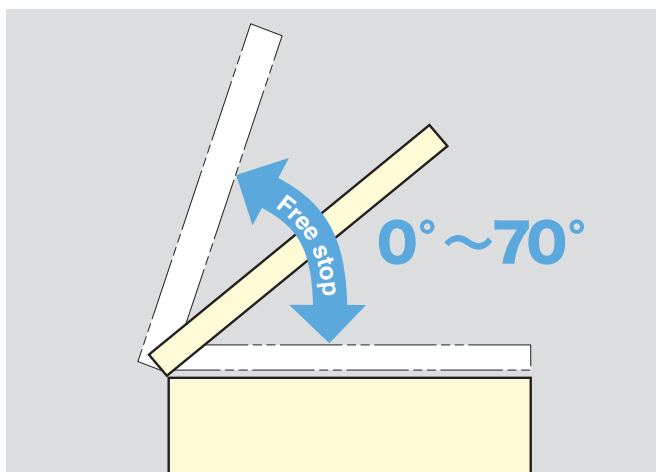
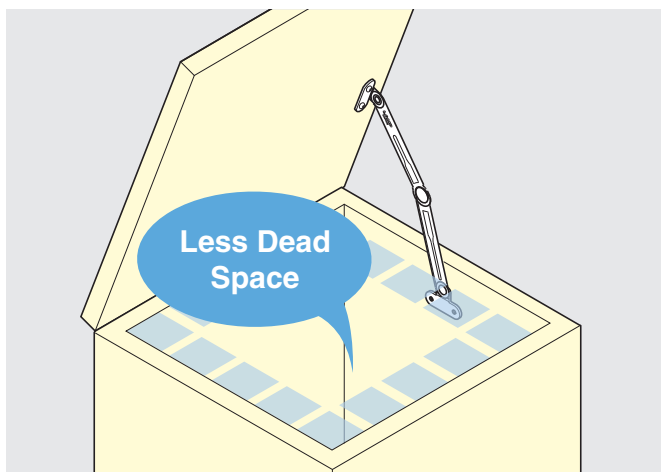
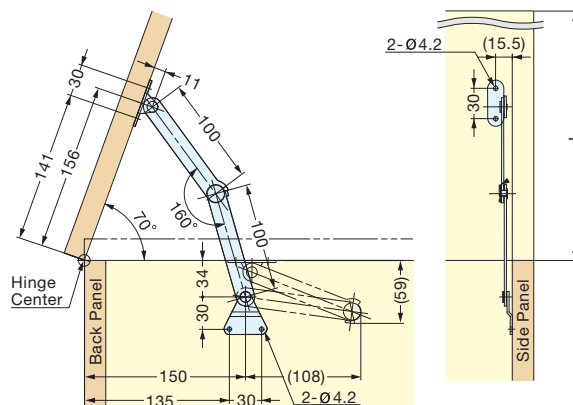
# TORQUE LID STAY (FREE STOP)



S-100T30



- Friction torque lid stay holds lid in desired position.
- Torque Calculation:  
Torque = Door Height x 1/2 x Door Weight.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



Item Code	Item Name	Material	Finish	Torque Moment(piece)	Torque Moment(pair)	Weight	Box	Carton
180-011-966	S-100T30R	430 Stainless Steel	Plain	30.6kgf·cm ± 20%	61.2kgf·cm ± 20%	100g	30pcs	120pcs
180-011-967	S-100T30L							

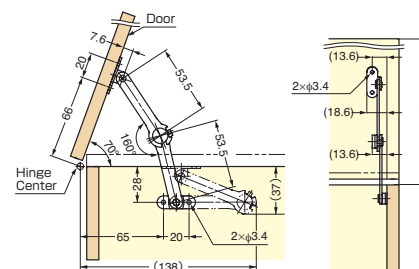
# TORQUE LID STAY (FREE STOP)



S-52T15



- Friction torque lid stay holds lid in desired position.
- Torque Calculation:  
Torque = Door Height x 1/2 x Door Weight.
- Can be installed individually or in pairs.
- Handed: Specific left and right hand mounting.



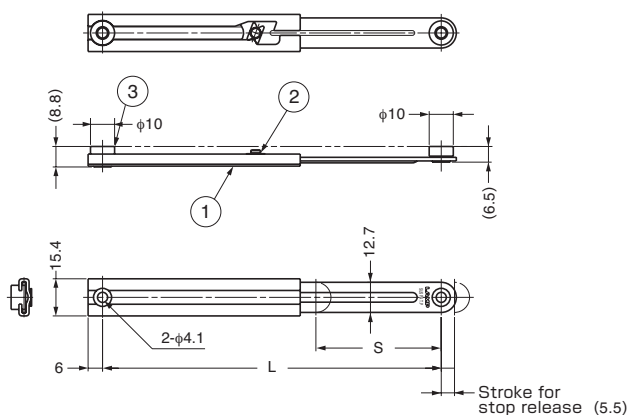
Item Code	Item Name	Spec.	Material	Finish	Torque Moment(piece)
-	S-52T15R	Right	Stainless Steel (SUS430)	Mirror	1.5 N · m / 15.3 kgf · cm
-	S-52T15L	Left	Stainless Steel (SUS430)	Mirror	1.5 N · m / 15.3 kgf · cm

# ULTRA MINI LID STAY

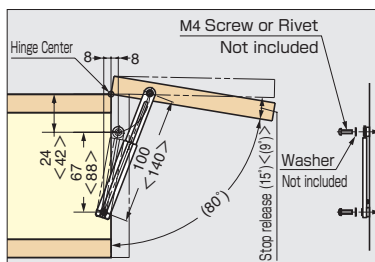


# L-100S, L-140S

- 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.
- Mounting brackets (L-S-BT) available as option.

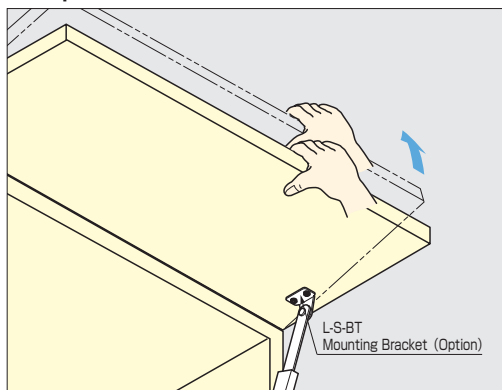


### Installation



Measurements above in < > are for L-140S

### Stop Release



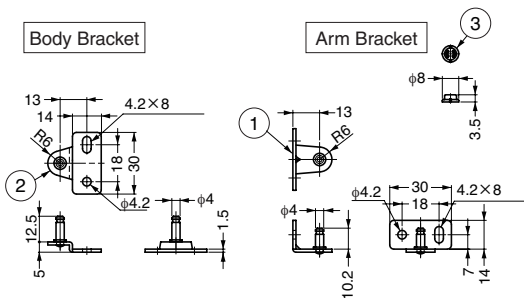
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Washer	Polyacetal	—
③	Bracket	Stainless Steel (SUS303)	—

Item Code	Item Name	Load Capacity	L	S	Weight	Box	Carton
180-109-118	L-100S	6 kg	100	32	31g	30pcs	300pcs
180-100-105	L-140S	6 kg	140	52	38g	30pcs	300pcs

# MOUNTING BRACKET



# L-S-BT



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

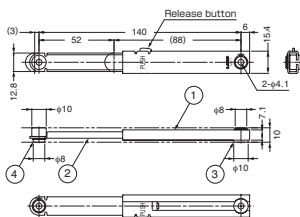
No.	Part Name	Material	Finish
①	Arm Bracket	Stainless Steel(SUS304)	Polished
②	Case Bracket	Stainless Steel(SUS304)	Polished
③	Cap	Polyacetal	White

Item Code	Item Name	Weight	Box	Carton
180-100-620	L-S-BT	17g	40set	400set

# MINI LID STAY (W/LOCK)

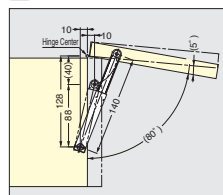


L-SL140

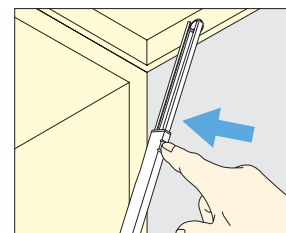


- Automatically locks lid/panel when fully opened.
- Push button to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



### Release



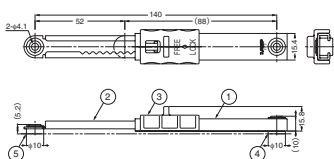
No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Polished
②	Arm	Stainless Steel(SUS304)	Polished
③	Case Bracket	Stainless Steel(SUS304)	—
④	Arm Bracket	Stainless Steel(SUS304)	—

Item Code	Item Name	Compression Load	Weight	Box	Carton
180-109-354	L-SL140	147N	15kgf	30pcs	300pcs

# MINI LID STAY (W/LOCK)

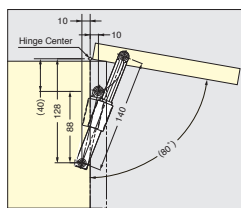


L-FS140

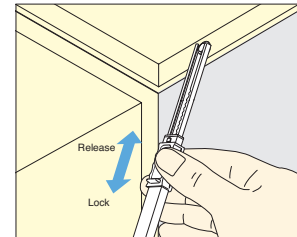


- Locks lid/panel in multiple positions by manually sliding lock lever.
- Slide lever to lock / unlock.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



### Lock and Release



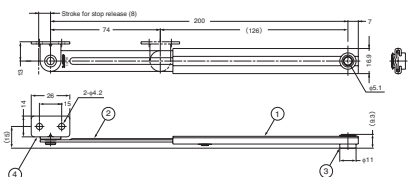
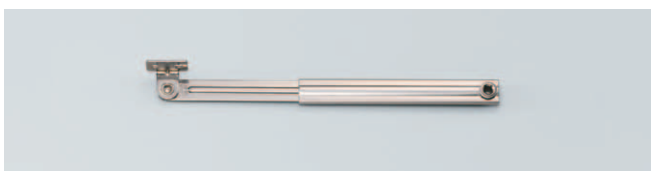
No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Polished
②	Arm	Stainless Steel(SUS304)	Polished
③	Lock Lever	Polyacetal	Dark Grey
④	Case Bracket	Stainless Steel(SUS304)	—
⑤	Arm Bracket	Stainless Steel(SUS304)	—

Item Code	Item Name	Compression Load	Weight	Box	Carton
180-100-108	L-FS140	58.8N	6kgf	50g	20pcs

# LOW PROFILE LID STAY

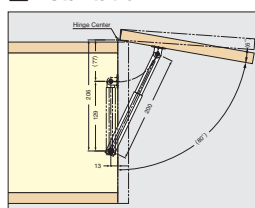


L-200P

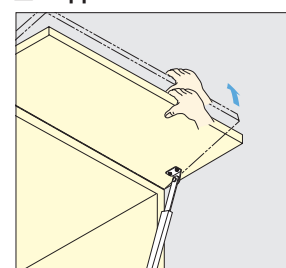


- Holds lid or panel in fully opened position.
- Lift up the lid to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



### Stopper Release



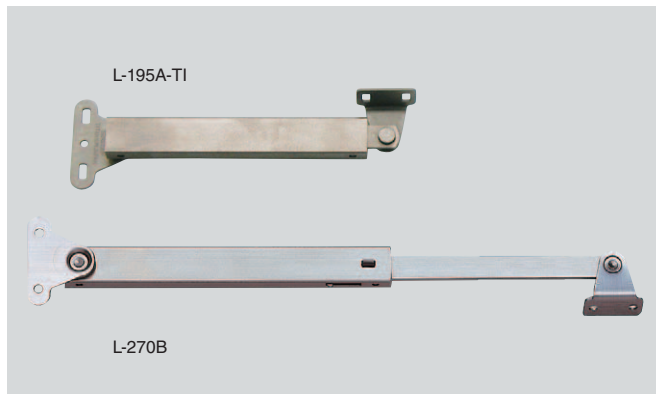
No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Polished
②	Arm	Stainless Steel(SUS304)	Polished
③	Case Bracket	Stainless Steel(SUS303)	Plain
④	Arm Bracket (Plate)	Stainless Steel(SUS304)	Polished

Item Code	Item Name	Compression Load	Weight	Box	Carton
180-100-104	L-200P	147N	15kgf	65g	30pcs

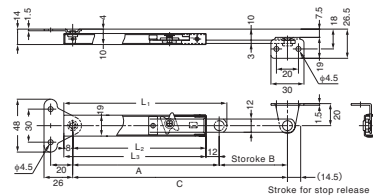
# LID STAY



L

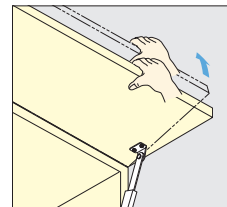


- Holds lid or panel in fully opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.
- Load Capacity: 15 kg /each.

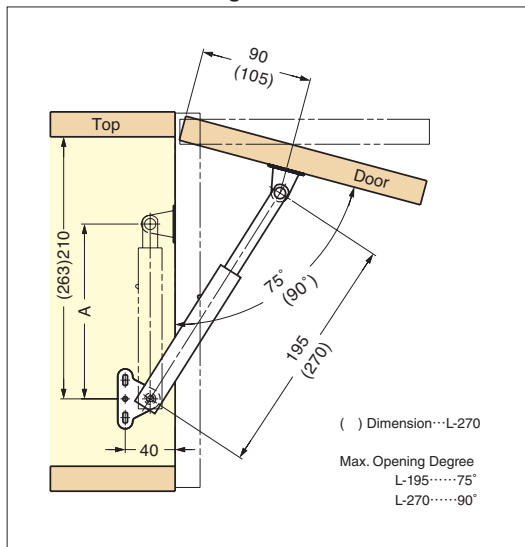


Above drawing shows L-195B or L-270B

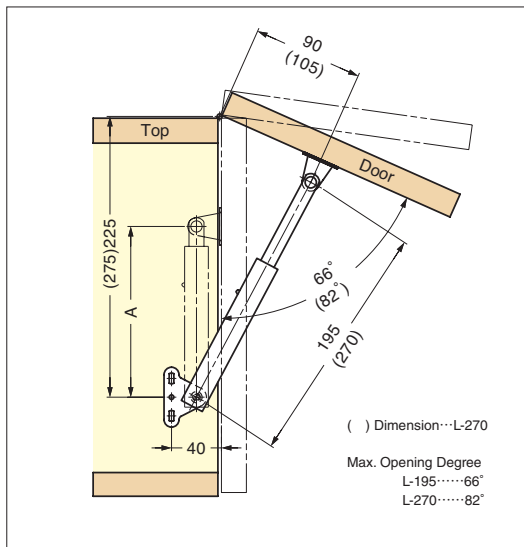
### Stpper release



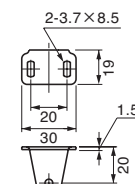
### With Concealed Hinge



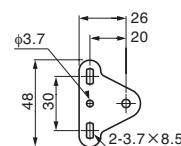
### With Piano / Butt Hinge



for Door



for Side wall



The above dimension for L-195A and L-270A

※Lid must be installed parallel to the sidewall

Item Code	Item Name	Material	Finish	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	B	C	Door Height	Compression Load	Weight	Box	Carton	
180-100-114	L-195A	Stainless Steel (SUS304)	Satin	148	121	129	133	62	195	250~350	147N	15kgf	120g	10pcs	100pcs
180-100-115	L-195B	Stainless Steel (SUS304)	Satin	148	121	129	133	62	195	250~350	147N	15kgf	122g	10pcs	100pcs
180-100-118	L-195A-TI	Titanium	Satin	148	121	129	133	62	195	250~350	147N	15kgf	71g	10pcs	100pcs
180-100-116	L-270A	Stainless Steel (SUS304)	Satin	185	158	166	170	100	270	250~350	147N	15kgf	151g	10pcs	100pcs
180-100-117	L-270B	Stainless Steel (SUS304)	Satin	185	158	166	170	100	270	250~350	147N	15kgf	184g	10pcs	100pcs
180-100-119	L-270A-TI	Titanium	Satin	185	158	166	170	100	270	250~350	147N	15kgf	87g	10pcs	100pcs

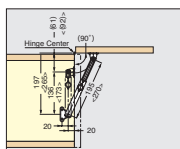
# LID STAY (W/LOCK)



LSP

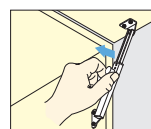


### Installation



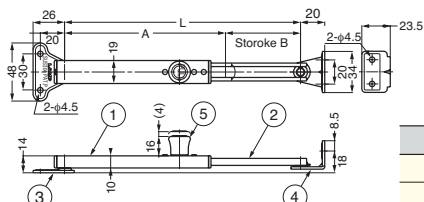
- Automatically locks lid when fully opened.
- Pull the locking knob to release lock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Release



※Lid must be installed parallel to the sidewall

< > Dimension...LSP-270B



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm	Stainless Steel (SUS304)	Satin
③	Case Bracket	Stainless Steel (SUS304)	Satin
④	Arm Bracket	Stainless Steel (SUS304)	Satin
⑤	Locking Knob	Polyacetal	Dark Grey

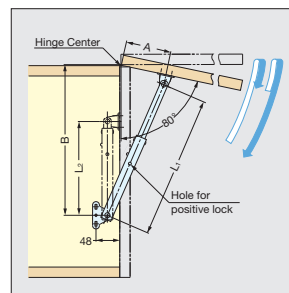
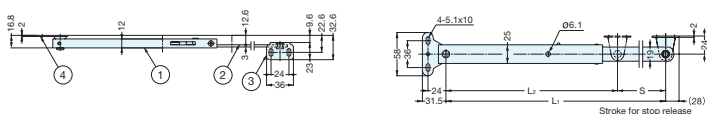
Item Code	Item Name	L	(A)	B	Compression Load	Box	Carton	
180-100-358	LSP-195B	195	133	62	294N	30kgf	6pcs	60pcs
180-100-357	LSP-270B	270	170	100	294N	30kgf	6pcs	60pcs

# LID STAY

TEST LOAD CAPACITY 20~30 kgf NO SCREW STAINLESS 304 STEEL 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	Plain
②	Arm		
③	Housing Bracket		
④	Arm Bracket		

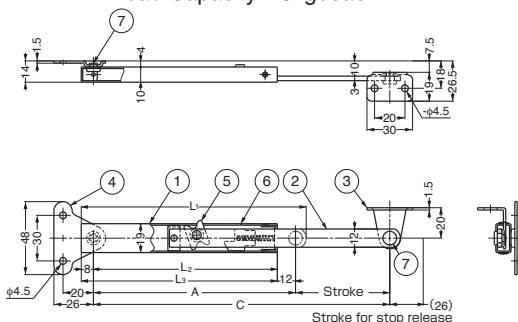
Item Code	Item Name	L <sub>1</sub>	L <sub>2</sub>	S	A	B	Weight	Compression Load	Box	Carton
180-014-929	LB-200A	200	(155)	45	56	219	235g	30kgf	10pcs	40pcs
180-100-122	LB-350A	350	(230)	120	128	364	314g	25kgf	10pcs	40pcs
180-014-928	LB-500A	500	(305)	195	195	510	400g	20kgf	10pcs	20pcs

# LID STAY

TEST LOAD CAPACITY 15 kgf STAINLESS 304 STEEL LB-215, 290

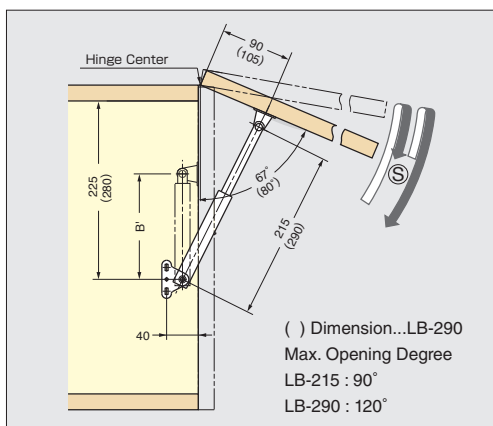


- Holds lid or panel in fully opened position.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.
- Load Capacity: 15kg /each.



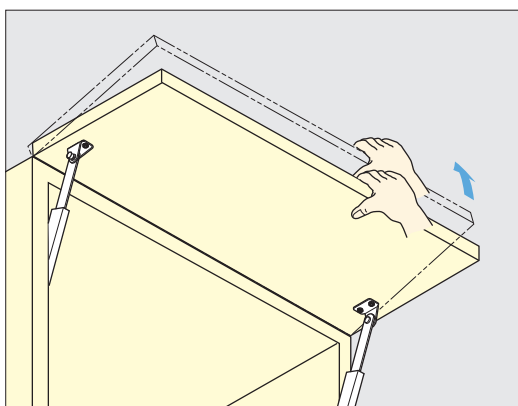
The above dimension for LB-215B and LB-290B.  
( ) Dimension...L-290

### ■Installaton

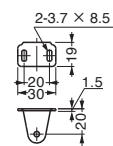


※Lid stay must be installed parallel to the side wall.

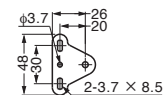
### ■Stopper Release



#### Bracket for Door



#### Bracket for Side wall



The aboved dimension for LB-215A and LB-290A.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm	Stainless Steel (SUS304)	Satin
③	Bracket	Stainless Steel (SUS304)	Satin
④	Bracket	Stainless Steel (SUS304)	Satin
⑤	Rotor	Stainless Steel (SUS304)	-
⑥	Slide Parts	Zinc Alloy	Chrome
⑦	Axis	Stainless Steel	-

Item Code	Item Name	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	B	C	Door Height	Weight	Compression Load	Box	Carton
180-100-110	LB-215A	168	141	149	153	62	215	260 ~ 350mm	140g	147N 15kgf	10pcs	100pcs
180-100-112	LB-215B	168	141	149	153	62	215	260 ~ 350mm	140g	147N 15kgf	10pcs	100pcs
180-100-120	LB-290A	205	178	186	190	100	290	340 ~ 500mm	160g	147N 15kgf	10pcs	100pcs
180-100-121	LB-290B	205	178	186	190	100	290	340 ~ 500mm	160g	147N 15kgf	10pcs	100pcs

# HEAVY DUTY LID STAY

LOAD CAPACITY  
97~133 kgf

NO SCREW

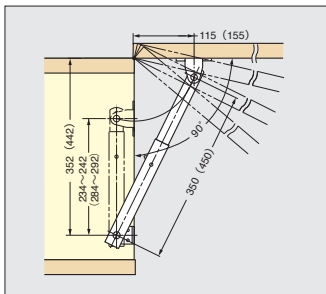
STAINLESS  
304  
STEEL

## LB-S



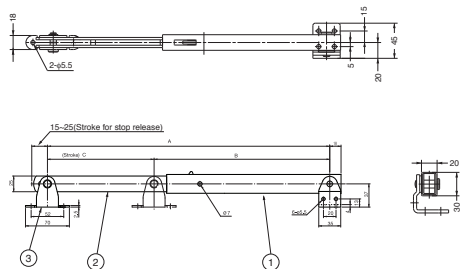
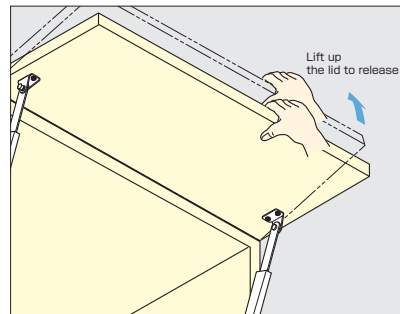
- Heavy duty lid stay holds.
- Lid or panel in fully opened position.
- Lift up the lid to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



Measurements above in ( ) are for LB-S450

### Stopper Release



No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Satin
②	Arm	Stainless Steel(SUS304)	Satin
③	Arm Bracket	Stainless Steel(SUS304)	Mirror
④	Bracket	Stainless Steel(SUS304)	Mirror

Item Code	Item Name	A	B	C	Compression Load	Weight	Box	Carton
180-100-168	LB-S350	350	230	120	1307N	133kgf	745g	5pcs 20pcs
180-100-169	LB-S450	450	280	170	953N	97kgf	865g	5pcs 20pcs

# HEAVY DUTY MULTI-ANGLE LID STAY

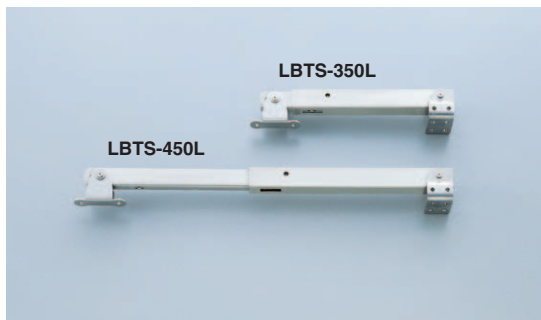
TEST

LOAD CAPACITY  
70 kgf

NO SCREW

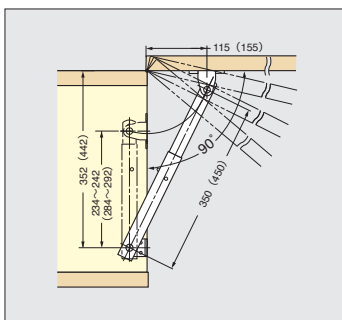
STAINLESS  
304  
STEEL

## LBTS



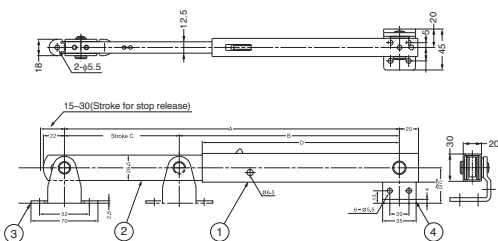
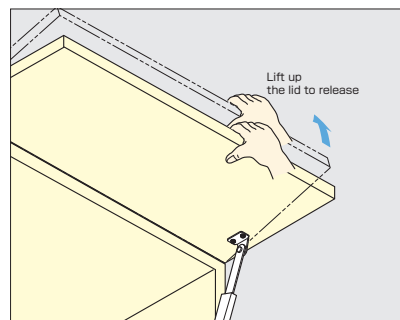
- Ratchet stay holds lid at multiple angles.
- Fully lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



( )...LBTS-450

### Stopper Release



No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Satin
②	Arm	Stainless Steel(SUS304)	Satin
③	Arm Bracket	Stainless Steel(SUS304)	Mirror
④	Bracket	Stainless Steel(SUS304)	Mirror

Item Code	Item Name	Spec.	Stop Positions	A	B	C	D	Compression Load	Weight	Box	Carton
180-109-404	LBTS-350R	Right	4	350	230	120	206	686N	70kgf	715g	5pcs 20pcs
180-109-403	LBTS-350L	Left	4	350	230	120	206	686N	70kgf	715g	5pcs 20pcs
180-109-406	LBTS-450R	Right	6	450	280	170	256	686N	70kgf	820g	5pcs 20pcs
180-109-405	LBTS-450L	Left	6	450	280	170	256	686N	70kgf	820g	5pcs 20pcs

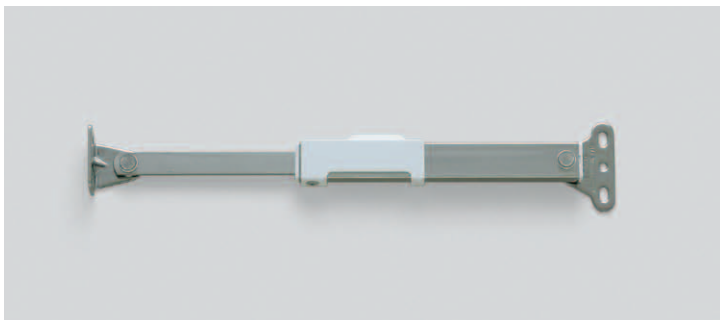
# LID STAY (CLEAN ROOM)

LOAD CAPACITY  
15 kgf

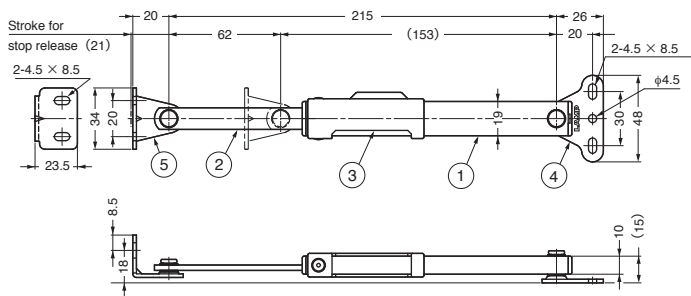
NO SCREW

STAINLESS  
304  
STEEL

## LB-CV215A

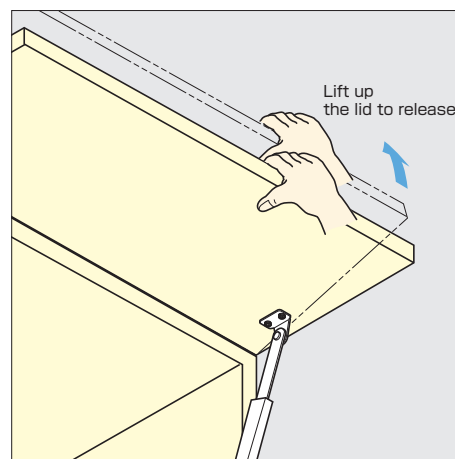


- Holds lid or panel in fully opened position.
- Plastic bushing and end cap minimizes particles.
- No metal-to-metal contact.
- Ideal for cleanroom, semiconductor and food industry applications.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.



No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Polished
②	Arm	Stainless Steel(SUS304)	Polished
③	Cover	ABS	White
④	Case Bracket	Stainless Steel(SUS304)	Polished
⑤	Arm Bracket	Stainless Steel(SUS304)	Polished

### Stopper Release



Item Code	Item Name	Compression Load	Weight	Box	Carton
180-100-197	LB-CV215A	147N	15kgf	10 pcs	100 pcs

# MULTI-ANGLE LID STAY (W/LOCK)

LOAD CAPACITY  
30 kgf

NO SCREW

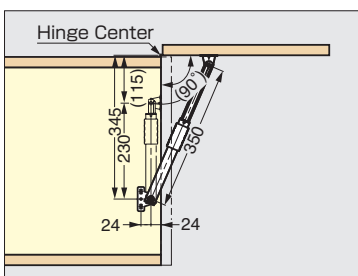
STAINLESS  
304  
STEEL

## L-FS350A

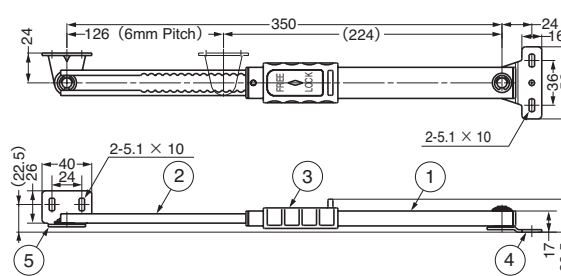
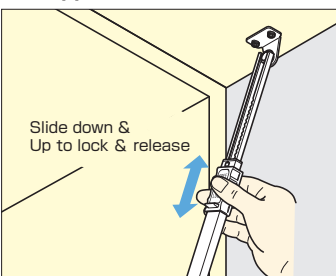


- Locks lid in multiple positions by manually sliding lock lever.
- Slide back lever to lock / unlock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



### Stopper Release



No.	Part Name	Material	Finish/Color
①	Body	Stainless Steel(SUS304)	Satin
②	Arm	Stainless Steel(SUS304)	Satin
③	Lock Lever	Polyacetal	Dark Grey
④	Case Bracket	Stainless Steel(SUS304)	Satin
⑤	Arm Bracket	Stainless Steel(SUS304)	Satin

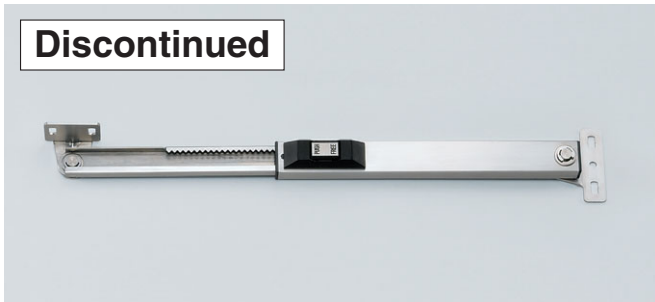
Item Code	Item Name	Compression Load	Weight	Box	Carton
180-100-617	L-FS350A	294N	30kgf	10 pcs	100 pcs

# MULTI-ANGLE STAY (W/LOCK)

LOAD CAPACITY  
20kgf

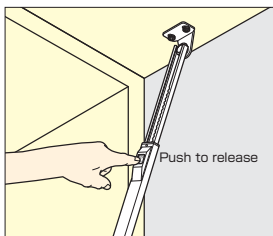
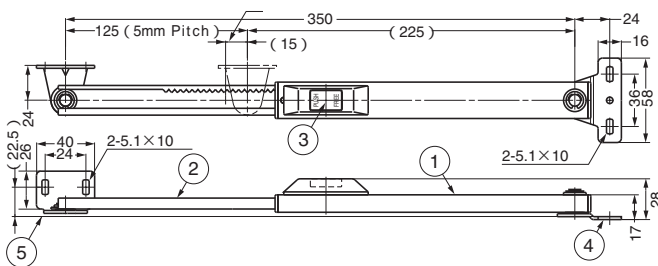
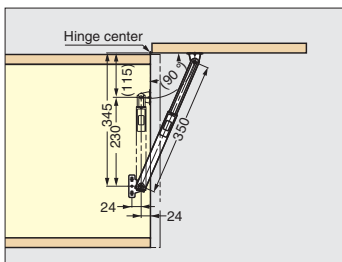
# L-FSP350A

**Discontinued**



- 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.
- Limited stock, contact your local sales for inquiries.

### Installation



No.	Part Name	Material	Finish
①	Body	Stainless Steel(SUS304)	Satin
②	Arm	Stainless Steel(SUS304)	Satin
③	Push Button	Polyacetal	Dark Grey
④	Case Bracket	Stainless Steel(SUS304)	Satin
⑤	Arm Bracket	Stainless Steel(SUS304)	Satin

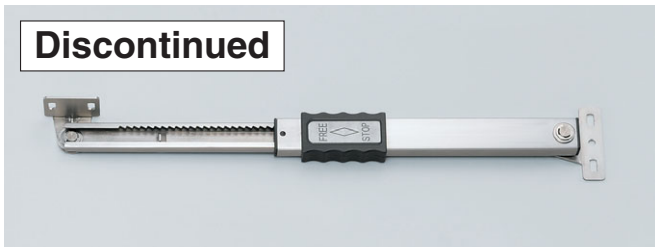
Item Code	Item Name	Compression Load	Box	Carton
180-100-619	L-FSP350A	196N	20kgf	5pcs 50pcs

# MULTI-ANGLE LID STAY

LOAD CAPACITY  
25kgf

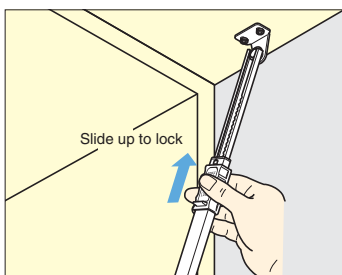
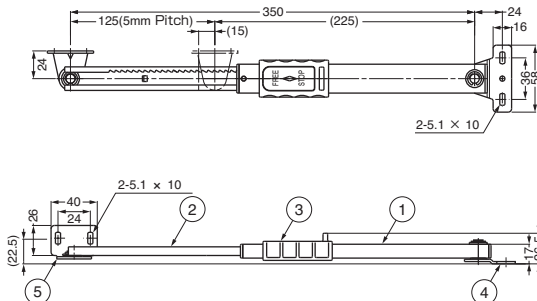
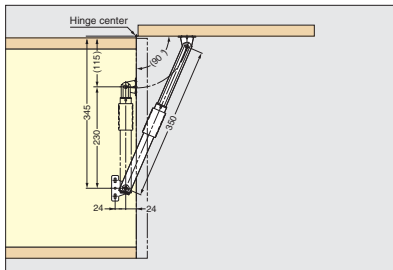
# L-FSS350A

**Discontinued**



- 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.
- Limited stock, contact your local sales for inquiries.

### Installation



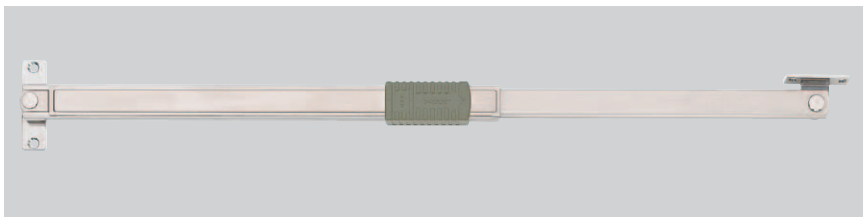
No.	Part Name	Material	Finish/Color
①	Body	Stainless Steel(SUS304)	Satin
②	Arm	Stainless Steel(SUS304)	Satin
③	Lock Lever	Polyacetal	Dark Grey
④	Case Bracket	Stainless Steel(SUS304)	Satin
⑤	Arm Bracket	Stainless Steel(SUS304)	Satin

Item Code	Item Name	Compression Load	Box	Carton
180-100-618	L-FSS350A	245N	25kgf	5pcs 50pcs

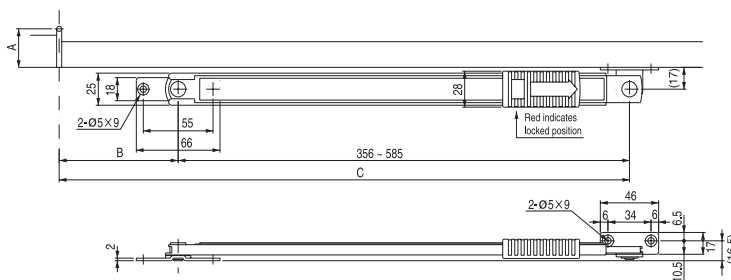
# MULTI-ANGLE LID STAY



## 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.  
Width – 600~910 mm.  
Thickness – 25~45 mm.



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

A	30	35	40	45	50
B	160	160	160	160	155
C	525	520	515	510	505

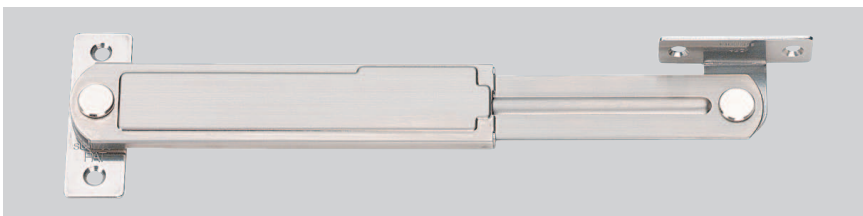
Item Code	Item Name	Weight	Box	Carton
180-109-466	U-3005	338g	6pcs	60pcs

Material	Finish/Color
304 Stainless Steel	Satin
Polyacetal	-

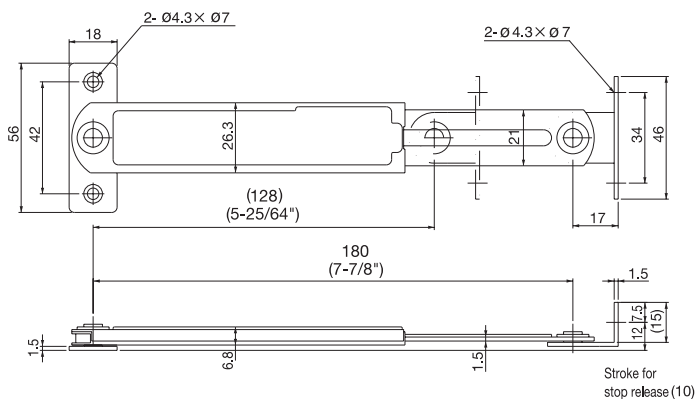
# MULTI-ANGLE LID STAY



## U-3031



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



Material	Finish
304 Stainless Steel	Satin

Item Code	Item Name	Stop Positions	Load Capacity	Weight	Box	Carton
180-109-200	U-3031	15	7kg	127g	10pcs	100pcs

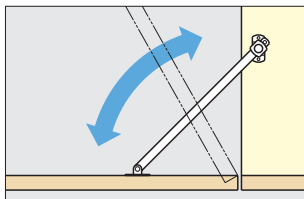
# LID STAY



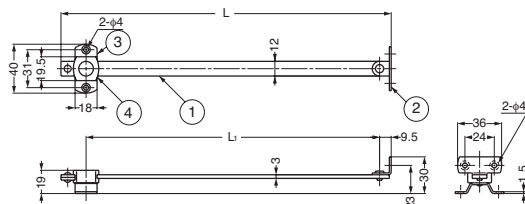
HS



### Installation



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



Item Code	Item Name	L	L <sub>1</sub>	Weight	Box	Carton
180-100-020	HS-180	210	180	80g	20pcs	220pcs
180-100-021	HS-210	240	210	90g	20pcs	220pcs
180-100-022	HS-240	270	240	100g	20pcs	220pcs

No.	Part Name	Material	Finish
①	Arm	Stainless Steel(SUS304)	Satin
②	Bracket	Stainless Steel(SUS304)	Satin
③	Mounting Plate	Stainless Steel(SUS304)	Satin
④	Body	Polyamide	White

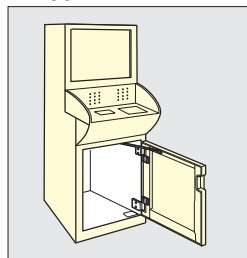
# DOOR STOPPER LID STAY



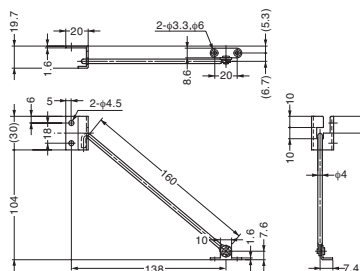
SAD-160



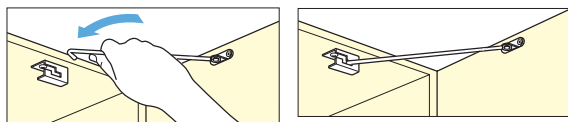
### Application



Doorstopper stay can be removed from the door. Horizontal installation for a Sidelong opening use.



### Installation



Item Code	Item Name	Material	Finish	Weight	Carton
180-109-185	SAD-160	Stainless Steel (SUS304)	Mirror	34g	500pcs

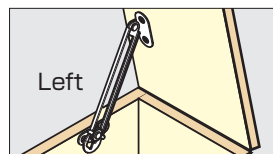
# LID STAY



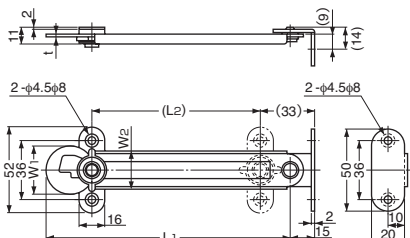
S-91, 92, 93



### Installation



- 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.



Item Code	Item Name	Spec.	Material	Finish	L <sub>1</sub>	(L <sub>2</sub> )	W <sub>1</sub>	W <sub>2</sub>	t	Load Capacity	Weight	Box
180-100-055	S-91R	Right	304 Stainless Steel	Polished	277	231	30	24	2	40kg	120g	100pcs
180-103-001	S-91L	Left										
180-100-056	S-92R	Right			198	153	28	23	1.5	30kg	85g	30pcs
180-103-002	S-92L	Left										
180-100-057	S-93R	Right			150	105	28	23	1.5	30kg	75g	60pcs
180-100-070	S-93L	Left										

# LID STAY

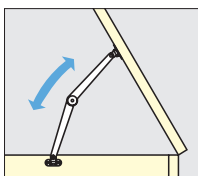


## F-300

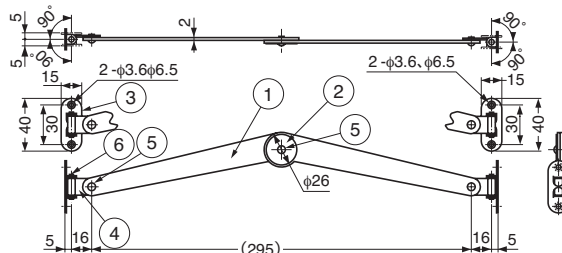


- Keep lids from over extending.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.

### Installation



No.	Part Name	Material	Finish
①	Arm	Stainless Steel(SUS304)	Satin
②	Cover	Stainless Steel(SUS304)	BA
③	Plain Washer	Stainless Steel(SUS304)	BA
④	Bracket	Stainless Steel(SUS304)	BA
⑤	Rivet	Steel	Nickel
⑥	Rivet	Brass	Nickel

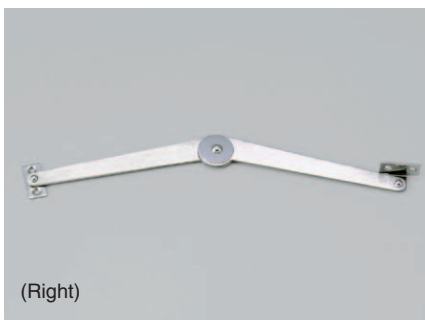


Item Code	Item Name	Weight	Box
180-100-064	F-300	113g	10pcs

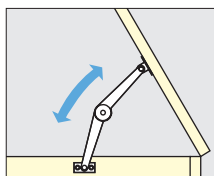
# LID STAY



## F-150, 200, 250

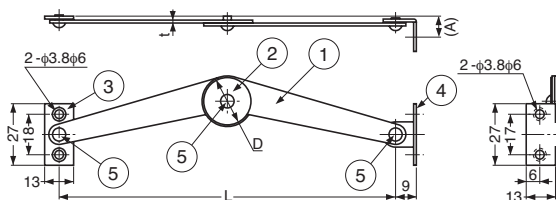


### Installation



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

No.	Part Name	Material	Finish
①	Arm	Stainless Steel(SUS304)	Satin
②	Cover	Stainless Steel(SUS304)	BA
③	Plain Washer	Stainless Steel(SUS304)	BA
④	L Washer	Stainless Steel(SUS304)	BA
⑤	Rivet	Steel	Nickel

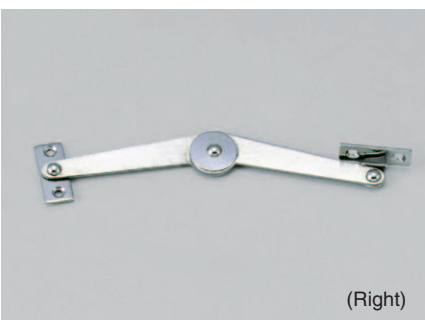


Item Code	Item Name	Spec.	L	D	(A)	t	Weight	Box
180-100-061	F-150R	Right	150	22	9	1.2	30g	40pcs
180-100-067	F-150L	Left						
180-100-062	F-200R	Right	198	22.5	9	1.2	37g	30pcs
180-100-068	F-200L	Left						
180-100-063	F-250R	Right	250	25.5	9	1.5	65g	30pcs
180-100-069	F-250L	Left						

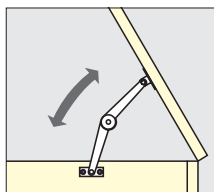
# LID STAY



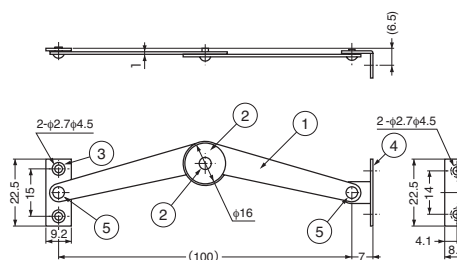
## F-100



### Installation



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



No.	Part Name	Material	Finish
①	Arm	Stainless Steel(SUS304)	Satin
②	Cover	Stainless Steel(SUS304)	BA
③	Plain Washer	Stainless Steel(SUS304)	BA
④	L Washer	Stainless Steel(SUS304)	BA
⑤	Rivet	Steel	Nickel

Item Code	Item Name	Spec.	Weight	Box
180-100-060	F-100R	Right	13g	50pcs
180-100-066	F-100L	Left	13g	50pcs

## LID STAY (W/CATCH)

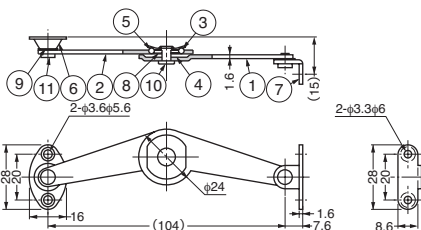


S-23



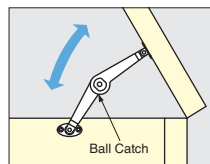
(Left)

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



No.	Part Name	Material	Finish
①	BaseA	Steel	Chrome
②	BaseB	Steel	Chrome
③	SpringA	Stainless Steel(SUS301)	—
④	SpringB	Stainless Steel(SUS301)	—
⑤	Balls	Steel	—
⑥	Mounting Plate	Steel	Chrome
⑦	Bracket	Steel	Chrome
⑧	Washer	Steel	Zinc Chromate
⑨	Washer	Polyamide	—
⑩	Center Axis	Brass	Chrome
⑪	Axis	Brass	Chrome

### Installation



Item Code	Item Name	Spec.	Tension Force	Weight	Box	Carton
180-100-142	S-23R	Right	298N	30.4kgf	33g	50pcs 500pcs
180-100-143	S-23L	Left	298N	30.4kgf	33g	50pcs 500pcs

## LID STAY (W/CATCH)

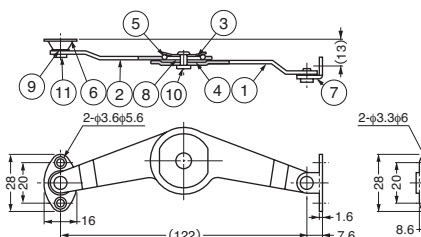


S-21



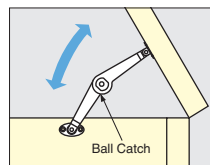
(Left)

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



No.	Part Name	Material	Finish
①	BaseA	Steel	Chrome
②	BaseB	Steel	Chrome
③	SpringA	SpringSteel	Chrome
④	SpringB	SpringSteel	—
⑤	Balls	Steel	—
⑥	Mounting Plate	Steel	Chrome
⑦	Bracket	Steel	—
⑧	Washer	Steel	Zinc Chromate
⑨	Washer	Polyamide	—
⑩	Center Axis	Brass	Chrome
⑪	Axis	Brass	Chrome

### Installation



Item Code	Item Name	Spec.	Tension Force	Weight	Box	Carton
180-100-140	S-21R	Right	309N	31.5kgf	49g	50pcs 500pcs
180-100-141	S-21L	Left	309N	31.5kgf	49g	50pcs 500pcs

## LID STAY (W/CATCH)

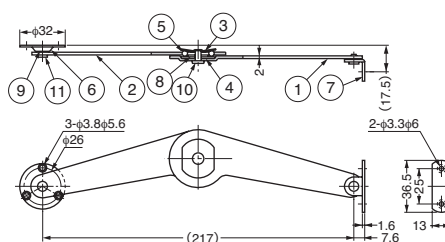


S-20



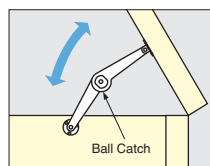
(Left)

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



No.	Part Name	Material	Finish
①	BaseA	Steel	Chrome
②	BaseB	Steel	Chrome
③	SpringA	SpringSteel	Chrome
④	SpringB	SpringSteel	—
⑤	Balls	Steel	—
⑥	Bracket	Steel	Chrome
⑦	Bracket(Big)	Steel	Chrome
⑧	Washer	Steel	Zinc Chromate
⑨	Washer	Polyamide	—
⑩	Center Axis	Steel	Chrome
⑪	Axis	Brass	Chrome

### Installation

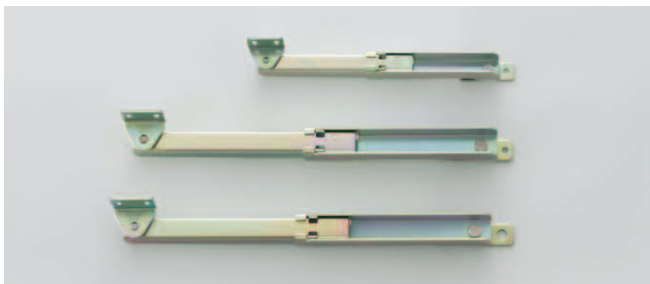


Item Code	Item Name	Spec.	Tension Force	Weight	Box	Carton
180-100-138	S-20R	Right	410N	41.8kgf	122g	40pcs 160pcs
180-100-139	S-20L	Left	410N	41.8kgf	122g	40pcs 160pcs

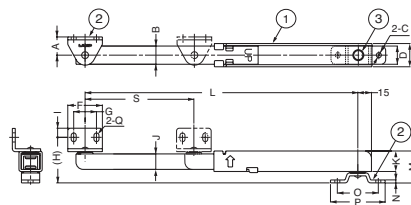
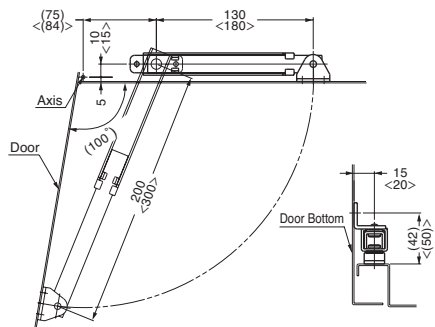
# FOOT STAYS



YF



- Mechanically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Designed for bottom mount.
- Non-Handed: Can be installed on left or right side.

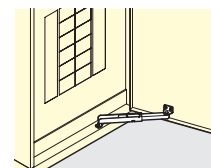


No.	Part Name	Material	Finish
①	Body	Steel	Zinc Chromate
②	Bracket	Steel	Zinc Chromate
③	Shaft	Stainless Steel(SUS304)	—

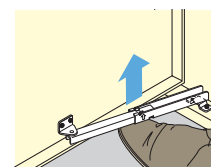
Item Name	L	S	A	B	C	D	E	F	G	(H)	I	J	K	M	N	O	P	Q
YF-200	200	70	15	15.9	5.5	17	20	33	20	42	8	15.7	20	30	2.3	35	50	5.5x8
YF-300	300	120	20	20	5.5	20	25.5	38	25	50	10	17	22.5	35	3.2	45	60	5.5x9.5
YF-300-T50	300	120	20	20	9	20	25.5	38	25	50	10	17	22.5	35	3.2	50	72	5.5x9.5

Item Code	Item Name	Tension Force	Compression Load	Box	Carton		
180-100-090	YF-200	882N	90kgf	490N	50kgf	10pcs	100pcs
180-100-157	YF-300	1470N	150kgf	588N	60kgf	5pcs	30pcs
180-100-159	YF-300-T50	1470N	150kgf	588N	60kgf	5pcs	30pcs

### Installation



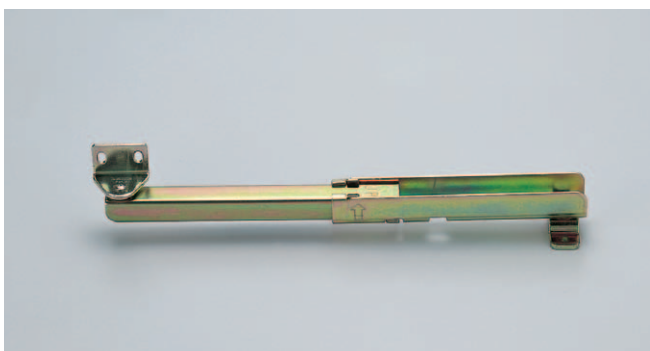
### Lock Release



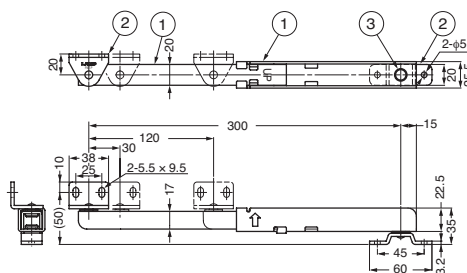
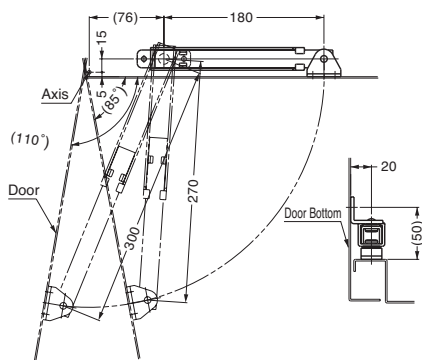
# FOOT STAYS



YF-300W



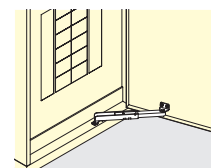
- Mechanically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Designed for bottom mount.
- Non-Handed: Can be installed on left or right side.



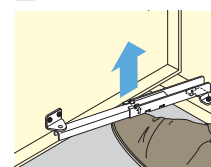
No.	Part Name	Material	Finish
①	Body	Steel	Zinc Chromate
②	Bracket	Steel	Zinc Chromate
③	Shaft	Stainless Steel(SUS304)	—

Item Code	Item Name	Tension Force	Compression Load	Box	Carton		
180-100-158	YF-300W	1470N	150kgf	588N	60kgf	5pcs	30pcs

### Installation



### Lock Release

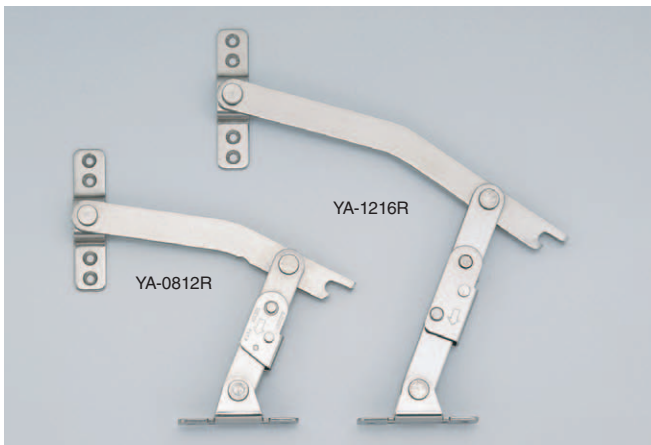




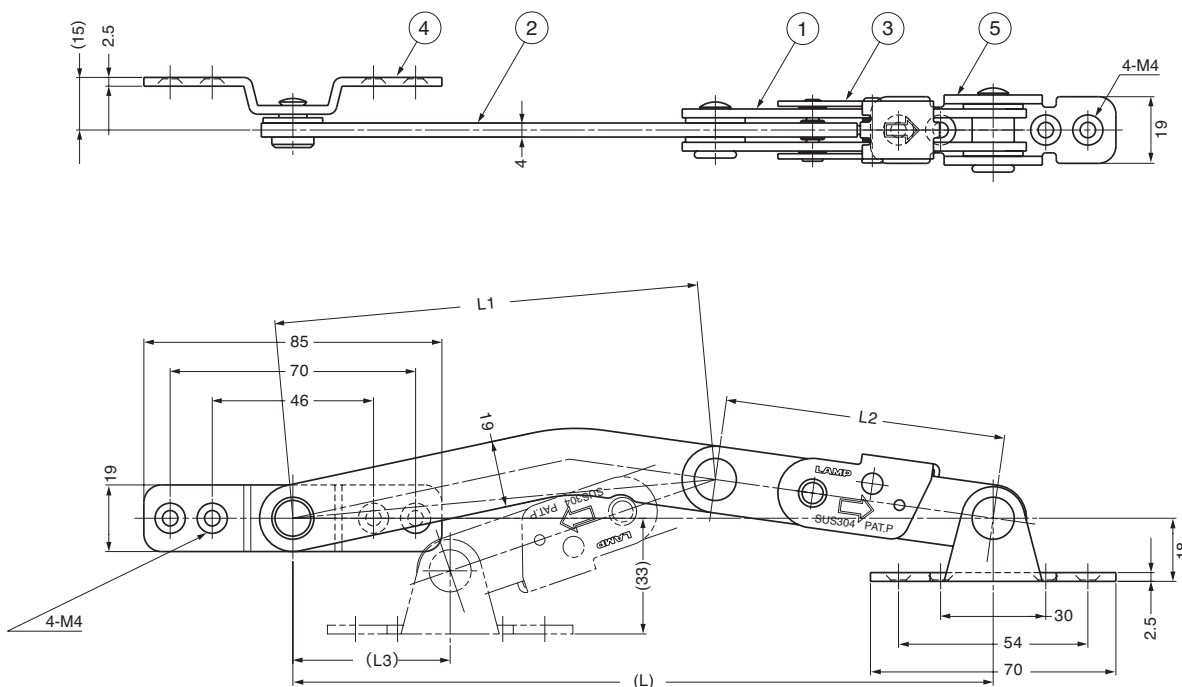
# DOOR HOLDER



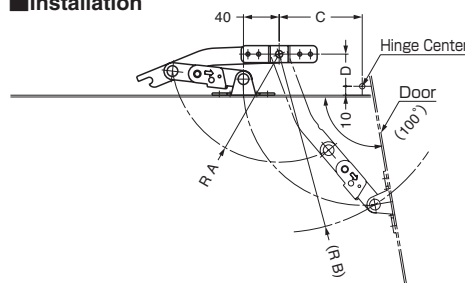
## YA-0812, 1216



- 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 and Right handed available.
- Non-Handed: Can be installed on left or right side.



### Installation



No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel(SUS304)	Mirror
②	Arm	Stainless Steel(SUS304)	Mirror
③	Slide Grip	Stainless Steel(SUS304)	Mirror
④	Arm Bracket	Stainless Steel(SUS304)	Mirror
⑤	Base Bracket	Stainless Steel(SUS304)	Mirror

Item Code	Item Name	Spec.	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	B	C	D	Weight	Box	Carton
180-100-205	YA-0812L	Left	200	121	80	45	121	200	93	36	274g	5pcs	30pcs
180-100-204	YA-0812R	Right	200	121	80	45	121	200	93	36	274g	5pcs	30pcs
180-100-199	YA-1216L	Left	280	161	120	44	161	280	145	40	340g	5pcs	30pcs
180-100-198	YA-1216R	Right	280	161	120	44	161	280	145	40	340g	5pcs	30pcs