



LID SUPPORTS

SOFT-DOWN STAYS
VERTICAL SWING LIFT-UP MECHANISM
HORIZONTAL BI-FOLD DOOR MECHANISM
SOFT CLOSING SYSTEM
LID STAYS
SPRING LOADED LID STAYS
MULTI ANGLE LID STAYS
DOOR HOLDERS

LAPCON/SOFT CLOSING STAYS

| Picture | Item No. | Application | Torque (lbs-inch) or Door weight (lbs) | Page |
|---------|-----------------------|---------------------------------|---|-----------------|
| | SDS-C100 SDS-C301N | DOWNWARD, UPWARD/TOP-OPENING | 30~43 (lbs-inch)/pc, 35~60 (lbs-inch)/pc | 295 296~ 297 |
| | SDS-100-TV/TVZ | DOWNWARD | 4.3~32.6 (lbs-inch)/pc | 298 |
| | UDD | DOWNWARD | 4.4~26.6 (lbs-inch)/pc | 299 |
| | NSDX-10, NSDX-20 | DOWNWARD, TOP-OPENING | 19~60 (lbs-inch)/pc | 301, 302 |
| | NSDX-35 | UPWARD | | 303 |
| | NSDX-10/TV | DOWNWARD | 8.7~17.4 (lbs-inch)/pc | 304 |
| | HDS-10, HDS-20 | DOWNWARD, TOP-OPENING | 121~260 (lbs-inch)/pair | 306, 307 |
| | HDS-30 | UPWARD | | 308 |
| | HDSN-30 | UPWARD | 122~260 (lbs-inch)/pair | 309 |
| | SLS-ELAN | UPWARD | 48~87 (lbs-inch)/pc | 311 |
| | EZS-ELAN | UPWARD | Door Weight: 11~27.5 (lbs) | 312~313 |
| | SLU-ELAN | UPWARD (VERTICAL SWING) | Door Weight: 11~24.2 (lbs) | 314~315 |
| | SLUN | UPWARD (VERTICAL SWING) | Door Weight: 6.2~12.8 (lbs) | 318~319 |
| | SLD | DOWNWARD (VERTICAL SWING) | Door Weight: 6.6~13.2 (lbs) | 320~321 |
| | HBFN | UPWARD (BI-FOLDING) | Door Weight: 5.5~12.1 (lbs) | 322~323 |
| | OV-EZ | UPWARD | Door Weight: 5.5~25.2 (lbs) | 324~325 |
| | OVN | UPWARD | Door Weight: 6.6~15.4 (lbs) | 326~327 |
| | OV | UPWARD | Door Weight: 6.6~11 (lbs) | 328~329 |
| | IF | UPWARD | Door Weight: 3.3~14.3 (lbs) | 330~331 |

LID STAYS

| Picture | Item No. | Application | Load Capacity (lbs) | Page |
|---------|----------------------|-------------|---|------|
| | F-100, 150, 200, 250 | TOP-OPENING | - | 332 |
| | F-300 | TOP-OPENING | - | 332 |
| | S-20, S-21, S-23 | TOP-OPENING | - | 333 |
| | S-100T30, S-52T15 | TOP-OPENING | Torque Moment : 13.3~26.5 (lbs-in \pm 20%) /pc | 334 |

LID STAYS

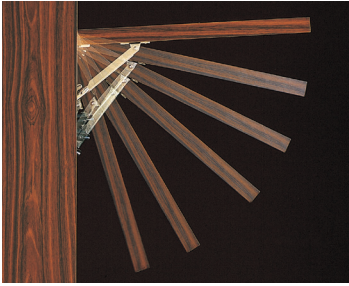
| Picture | Item No. | Application | Load Capacity (lbs) | Page |
|---------|------------------|-------------|-------------------------------|----------|
| | S-91 , 92 , 93 | TOP-OPENING | 66~88 (lbs)/pc | 335 |
| | HS | DOWNWARD | 22~28.5 (lbs)/pc | 335 |
| | L-100S, L-140S | UPWARD | 13.2 (lbs)/pc | 336 |
| | L-SL140, L-FS140 | UPWARD | 33 (lbs)/pc, 13.2 (lbs)/pc | 337 |
| | L-200P | UPWARD | 33 (lbs)/pc | 337 |
| | LB-215 ,290 | UPWARD | 33 (lbs)/pc | 338 |
| | L | UPWARD | 33 (lbs)/pc | 339 |
| | LB | UPWARD | 44~66 (lbs)/pc | 339 |
| | LB-CV215A | UPWARD | 33 (lbs)/pc | 340 |
| | LB-S | UPWARD | 214~293 (lbs)/pc | 341 |
| | LBTS | UPWARD | 154 (lbs)/pc | 341 |
| | L-FS350A | UPWARD | 55 (lbs)/pc | 342 |
| | U-3005, U-3031 | UPWARD | 44 (lbs)/pc, 15 (lbs)/pc | 342, 343 |
| | LSP | UPWARD | 66 (lbs)/pc | 343 |

SPRING LOADED LID STAYS

| Picture | Item No. | Application | Torque | Page |
|---------|------------------------------------|----------------------|-------------------|------|
| | LK | UPWARD / TOP-OPENING | - | 338 |
| | S-YT | TOP-OPENING | 26~34 (lbs-inch) | 344 |
| | S-AT01, S-AT02 S-AT01S, S-AT02S | TOP-OPENING | 78~104 (lbs-inch) | 345 |

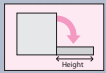
DOOR CLOSERS / DOOR HOLDERS

| Picture | Item No. | Application | Torque | Page |
|---------|----------------|--|---|------|
| | YMC | DOOR CLOSERS | 0.66~1.54 (lbs) | 346 |
| | YF | FOOT STAY | Tensile Force: 198~330 (lbs) Compression Load: 110~132 (lbs) | 347 |
| | YA-0812, 1216 | UPWARD / TOP-OPENING / DOOR HOLDERS | - | 348 |
| | YA-2020W, 2020 | DOOR HOLDERS | Tensile Force: 330 (lbs) Compression Load: 132 (lbs) | 349 |



Lapcon = Soft & Smooth Movement

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



Downward-Opening Lids

Secretary Desks * Keyboard Trays * Media Cabinets

With catch in closed position :

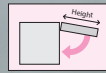
- SDS-C100, SDS-C100TV
- NSDX-10, NSDX-10TV
- HDS-10

Without catch in closed position :

- SDS-100, SDS-100TV

Use with :

- SDH Drop Hinges (P.234, sold separately)
- ML Touch Latches (P.120~120, sold separately)



Upward-Opening Lids

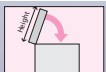
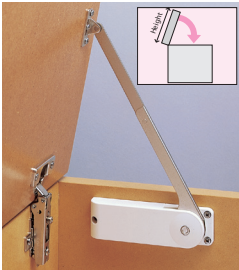
Upper Kitchen & Bath Cabinets * Display Boxes

With catch in open position :

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

Use with :

- 230 Concealed Hinges (P.276~277, sold separately)



Top-Opening Lids

Toy Boxes & Chests * Display Cases * Access Panels

With catch in open position :

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

Use with :

- 230 Concealed Hinges (P.276~277, sold separately)
- LSD Piano Hinges (P.220, sold separately)

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

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

Torque Rating

Door Weight × Door Height ÷ 2 = Applied Torque

Approximate lid weight can be calculated as follows

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

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

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

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

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

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

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

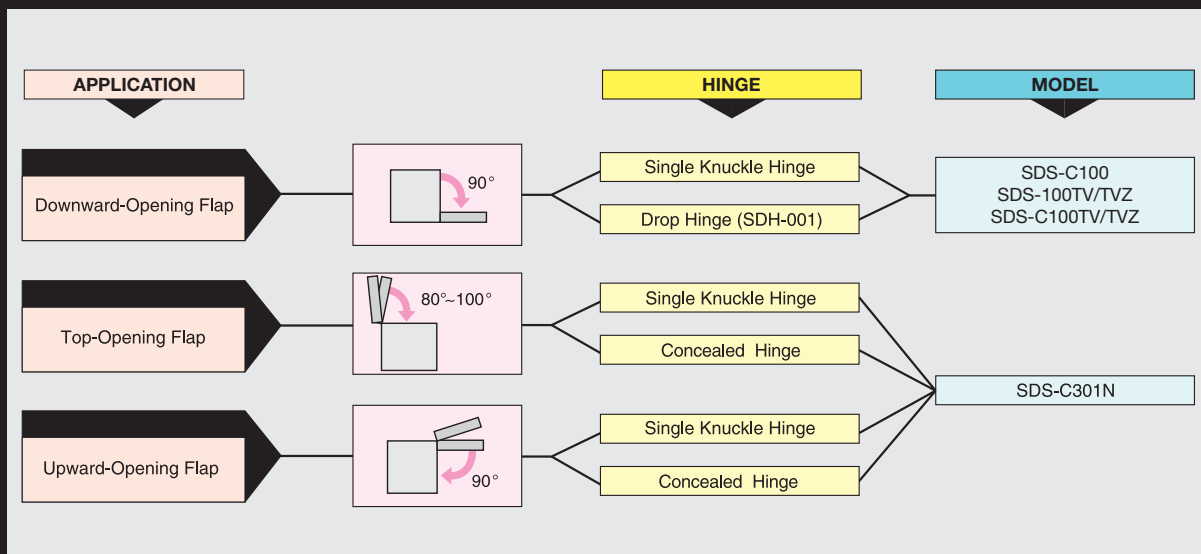
SDS

SOFT-DOWN STAY



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

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



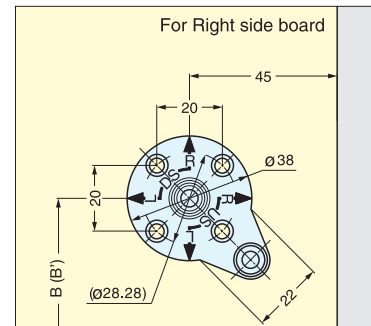
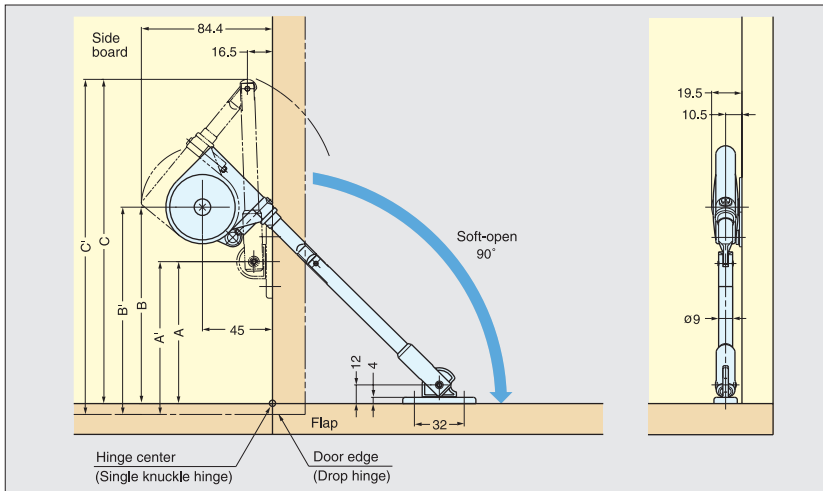
SOFT-DOWN STAY



SDS-C100



- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop hinges.
- SDS-C100 (with catch) is designed to hold door in closed position.
- SDS-100 does not have a catch feature. Designed to be used with a magnetic catch or touch latch.
- Non-handed.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
Per Piece: 35~50 kg-cm (30~43 lbs-inch)
Per Pair: 70~100 kg-cm (60~86 lbs-inch)
- Recommended Door Thickness: 20 mm (25/32")
- Short-arm version SDS-100TV (or C100TV) for smaller door height available (Please see page 298 for details).



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

*Overlay: 16 mm (5/8")

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

SOFT-DOWN STAY



SDS-C301N



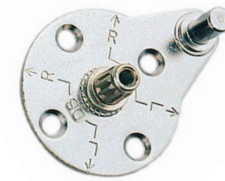
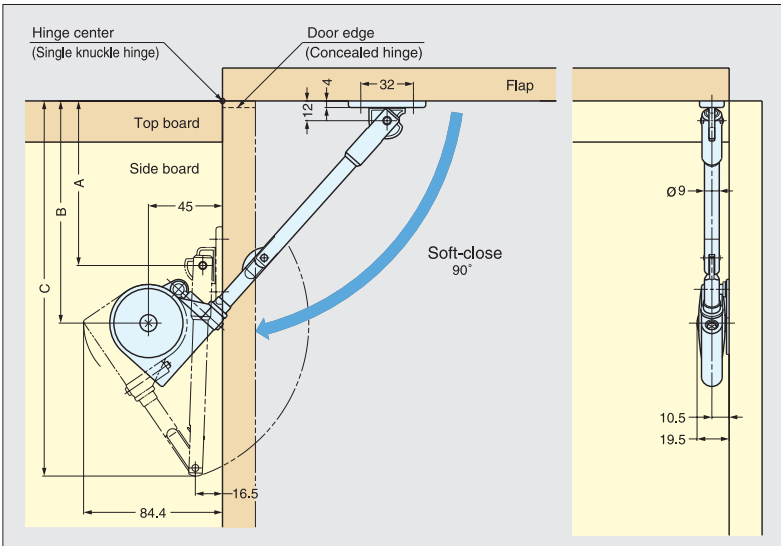
- For UPWARD-OPENING FLAP DOOR with concealed, piano or butt hinges.
- SDS-C301N is designed to hold door in closed and opened position.
- Non-handed.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
Per Piece: 40~70 kg·cm (35~60 lbs·inch)
Per Pair: 80~140 kg·cm (70~120 lbs·inch)
- Recommended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



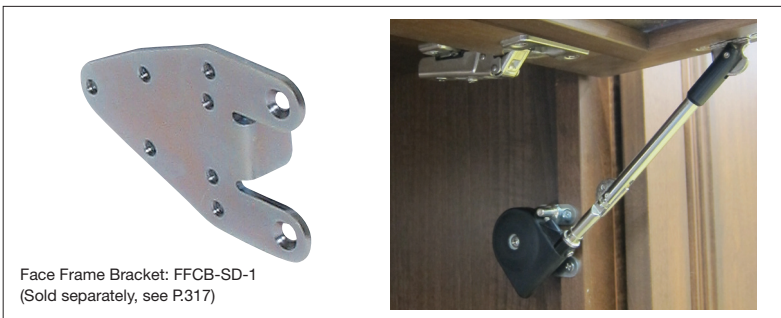
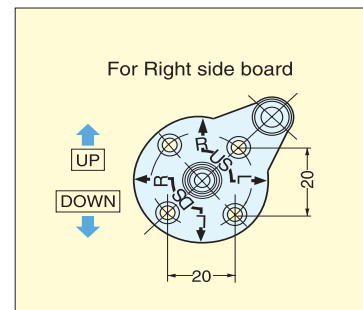
White



Black



Mounting Plate SDS-A (Included)



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

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

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

SOFT-DOWN STAY



SDS-C301N

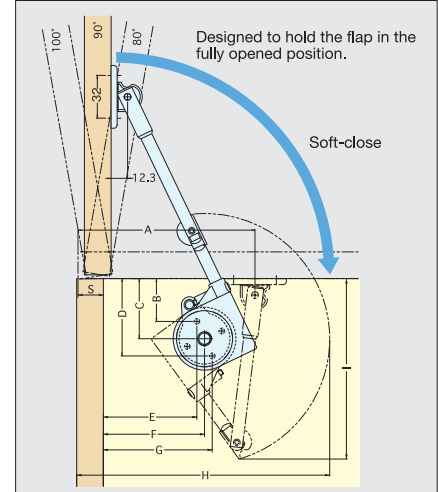
LID SUPPORTS

SOFT-DOWN STAY

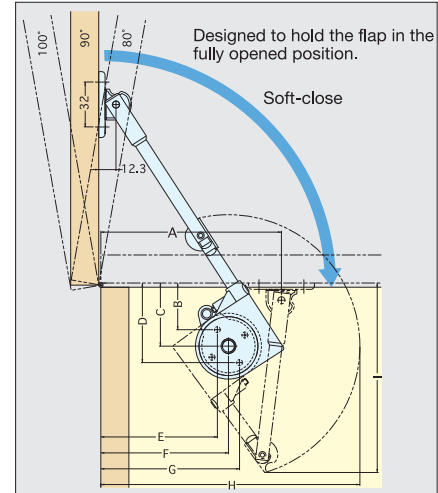


- For TOP-OPENING FLAP DOOR with concealed, piano or butt hinges.
- Designed to hold door in fully opened position.
- Non-handed.
- Available in black or white.

With Concealed Hinge



With Single Knuckle Hinge



Concealed Hinge

| Opening angle | A | B | C | D | E | F | G | H | S=Overlay Coverage | |
|---------------|-------|------|----|------|--------|---------|---------|-------|--------------------|--|
| | | | | | | | | | 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 | | 57.7 | 88.7-S | 95 -S | 101.3-S | 189 | | |
| 100° | 126.5 | 32.9 | | 57.1 | 81.2-S | 88.5-S | 95.8-S | 182.5 | | |

Single Knuckle Hinge/Overlay Type

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

Single Knuckle Hinge/Inset Type

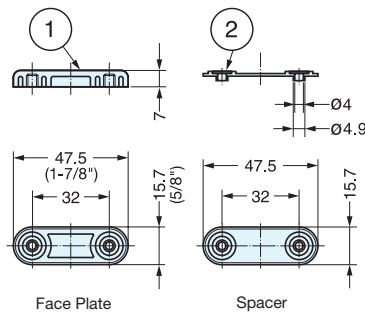
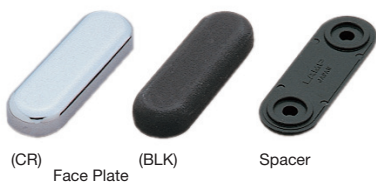
| Opening angle | A | B | C | D | E | F | G | H | I |
|---------------|-------|------|----|------|------|------|------|-------|-------|
| 80° | 129 | 31.7 | 45 | 58.3 | 86.7 | 91.5 | 96.3 | 185.5 | 134.8 |
| 90° | 118.5 | 32 | | 58 | 75.3 | 81 | 86.7 | 175 | |
| 100° | 111 | 32.5 | | 57.5 | 67 | 73.5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

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

SDS FACE PLATE



SDS-50G



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

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

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

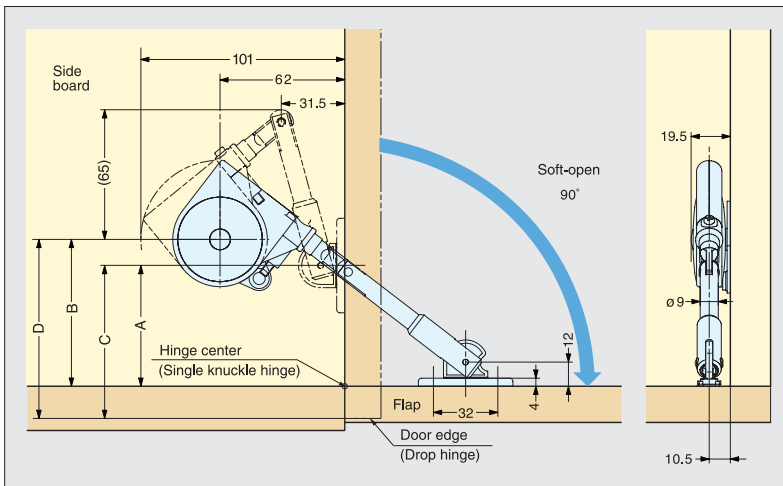
SOFT-DOWN STAY (SHORT-ARM)



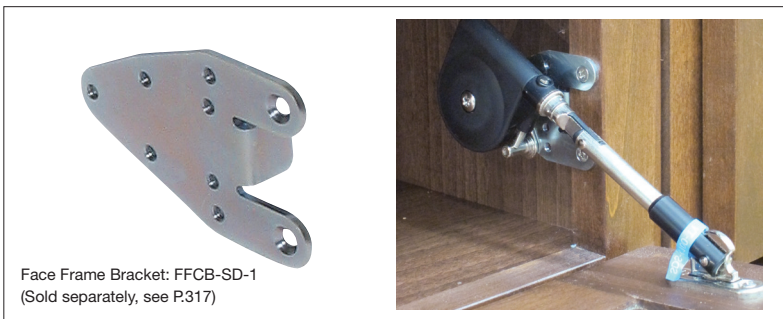
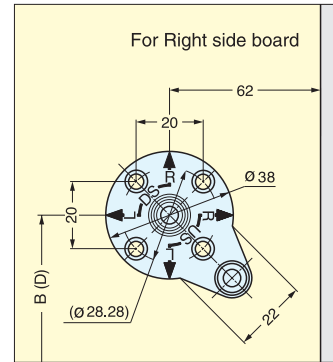
SDS-100-TV/TVZ



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



Mounting Plate SDS-A (Included)



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

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

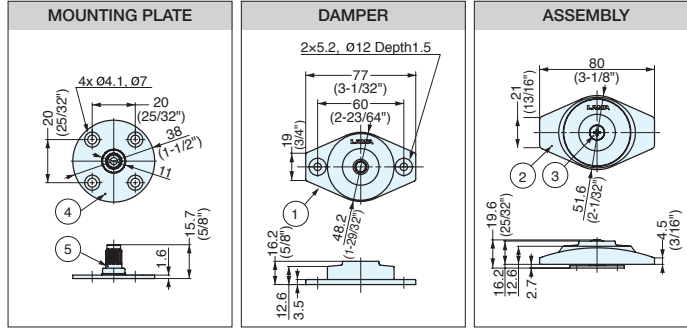
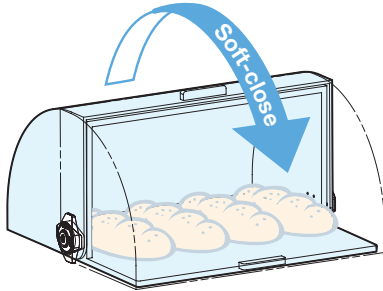
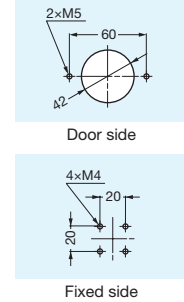
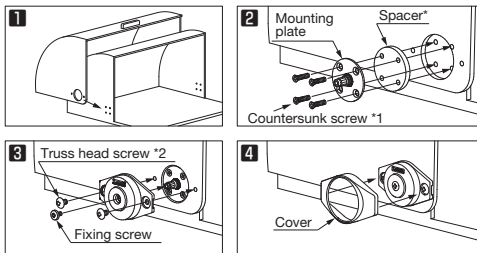
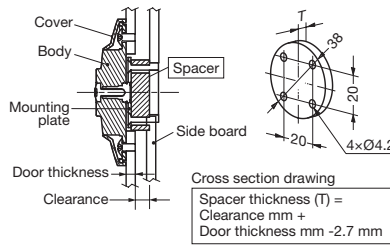
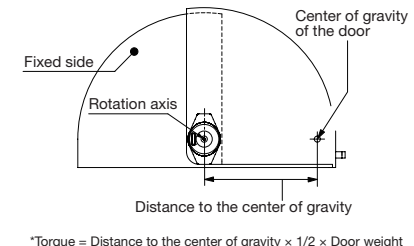
S=Overlay Coverage in case of drop hinge

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

DISK DAMPER



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


■ Cut Out Dimensions

■ How to Install

■ Spacer

■ Damper Selection


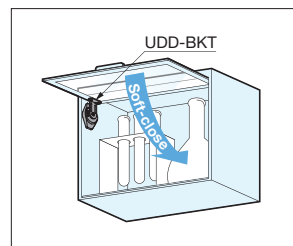
*1, *2 screws and Spacer are not included.

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

| No. | Part Name | Material | Finish |
|-----|----------------|----------|------------|
| ① | Main Body | ABS | Light Grey |
| ② | Cover | | |
| ③ | Fixing Screw | Steel | Nickel |
| ④ | Mounting Plate | | |
| ⑤ | Shaft | | |

BRACKET FOR DISK DAMPER UDD

UDD-BKT


■ Application Example


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

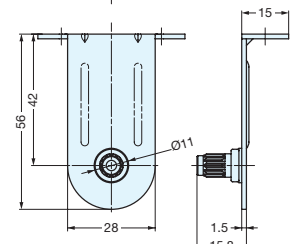
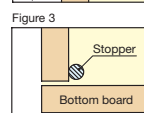
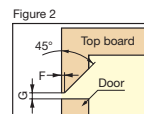
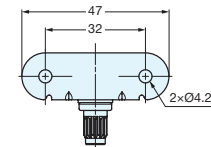
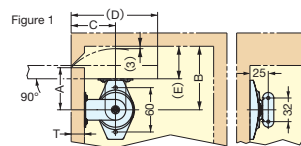
■ Cut Out Dimensions


Table 1

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

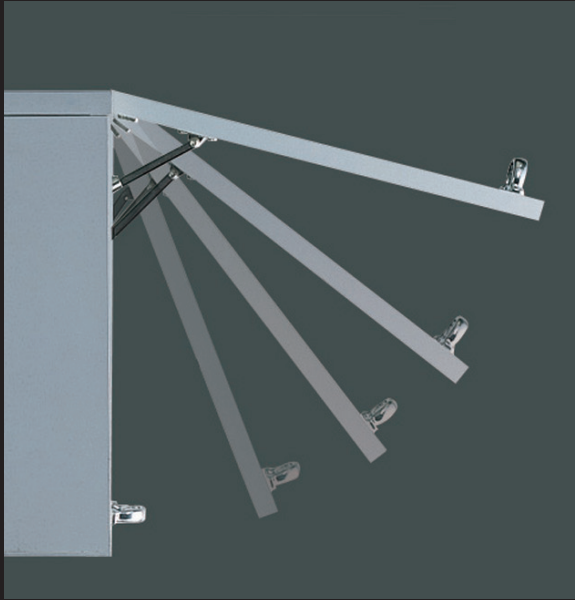
Table 1

| F | G |
|---|---|
| 1 | 3 |
| 2 | 4 |
| 3 | 5 |

| Item No. | Weight (g) | Box (pcs) | Material |
|----------|------------|-----------|---------------------|
| UDD-BKT | 40 | 60 | 304 Stainless Steel |

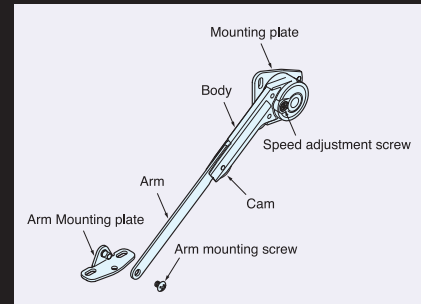
NSDX

ADJUSTABLE SOFT-DOWN STAY



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

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



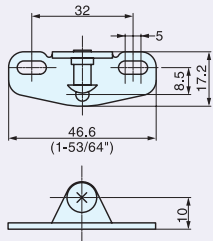
| APPLICATION | | MOUNTING SIDE | MODEL |
|-----------------------|--|---------------|---------------------------|
| Downward-Opening Flap | | Right | NSDX-10RK NSDX-10RK/TV |
| | | Left | NSDX-10LK NSDX-10LK/TV |
| Top-Opening Flap | | Right | NSDX-20RK |
| | | Left | NSDX-20LK |
| Upward-Opening Flap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

Arm Mounting Plates

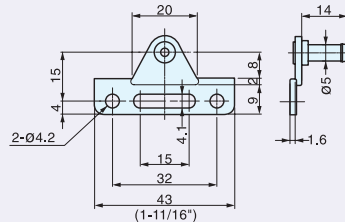
All NSDX series lid stays include the standard model for wooden doors (NSDX-SZ).

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

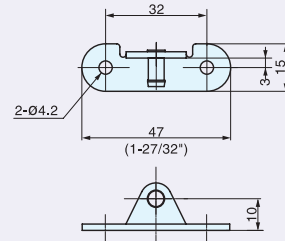
NSDX-SZ
(Included)
Mounting Plate for wooden door, screw-on type.



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



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



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

ADJUSTABLE SOFT-DOWN STAY



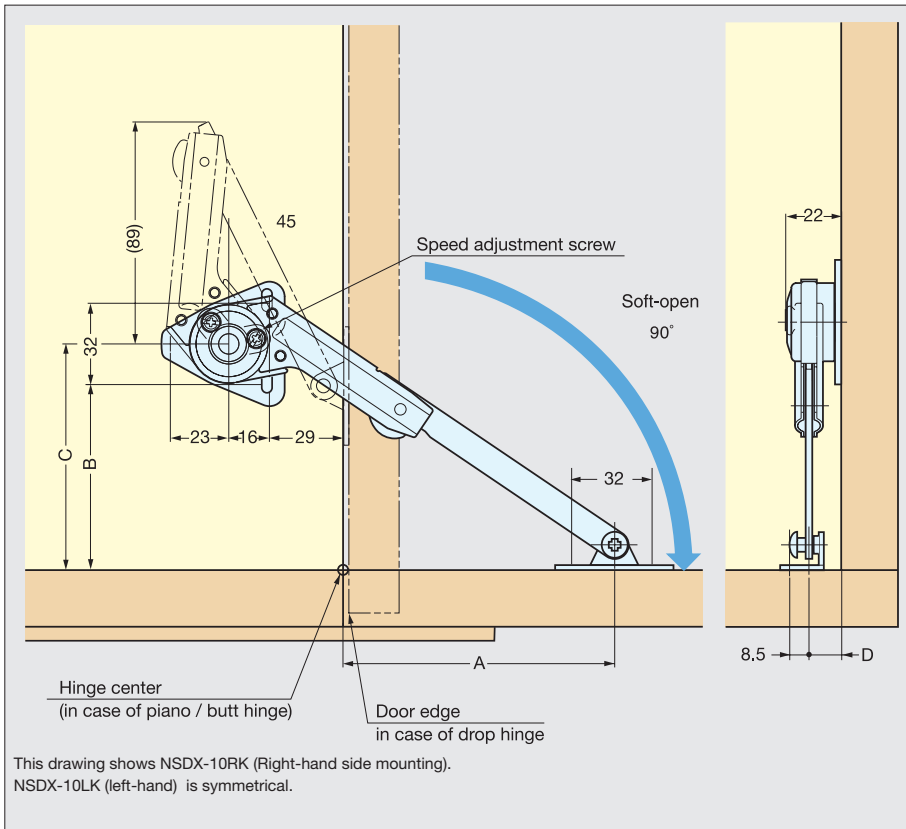
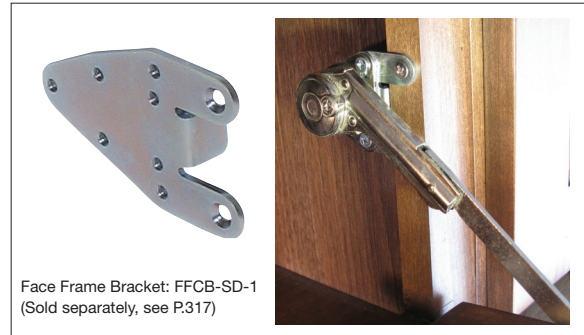
NSDX-10

LID SUPPORTS

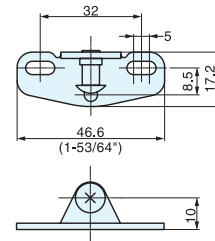
ADJUSTABLE SOFT-DOWN STAY



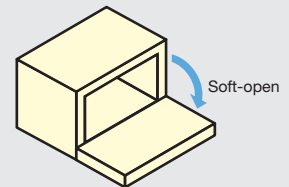
- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop Hinges.
- NSDX-10 is designed to hold door in closed position.
- Speed adjustment screw located on front for easy adjustment.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
Per Piece: 20~70 kg-cm (19~60 lbs-inch)
Per Pair: 40~140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



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



90° Opening



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

☆ In case overlay 16 mm

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

| Material | Finish |
|------------|--------|
| Zinc Alloy | Nickel |
| Steel | |

ADJUSTABLE SOFT-DOWN STAY



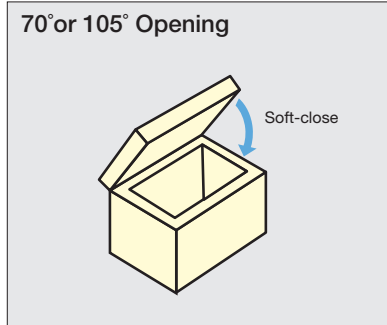
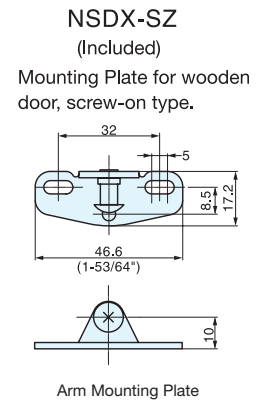
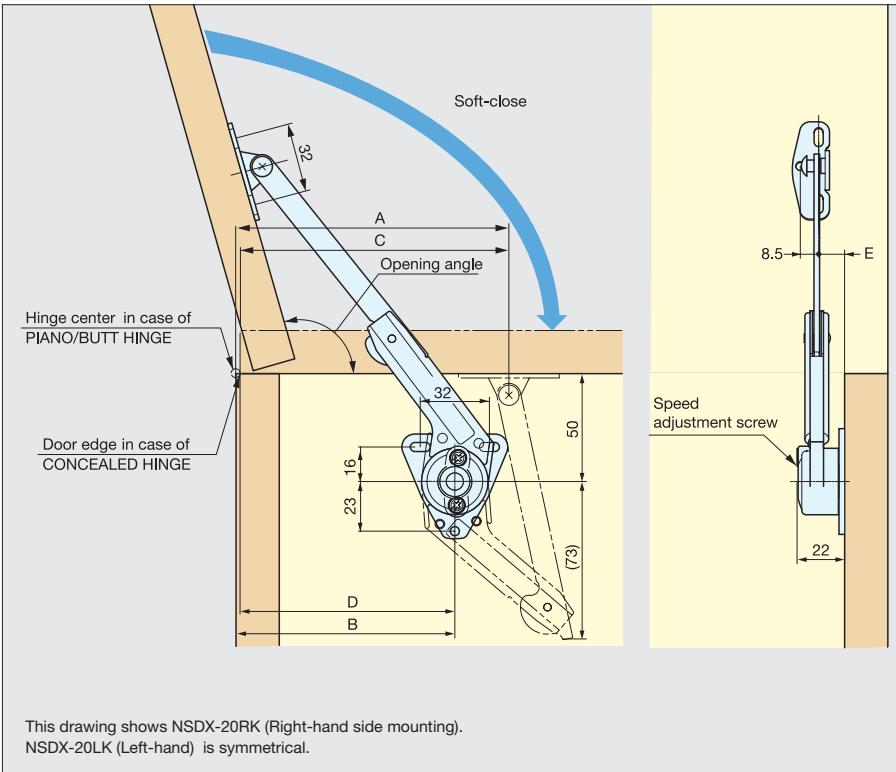
NSDX-20

LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAY



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



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

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

ADJUSTABLE SOFT-DOWN STAY



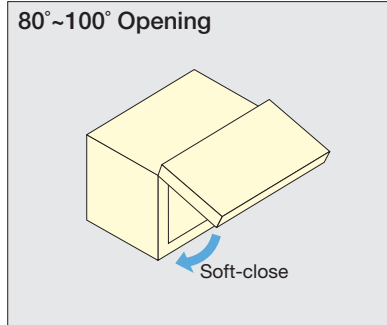
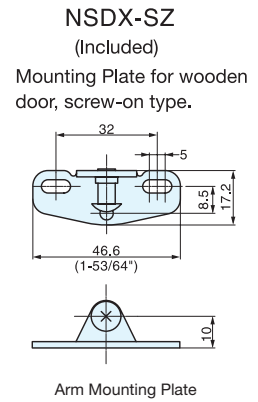
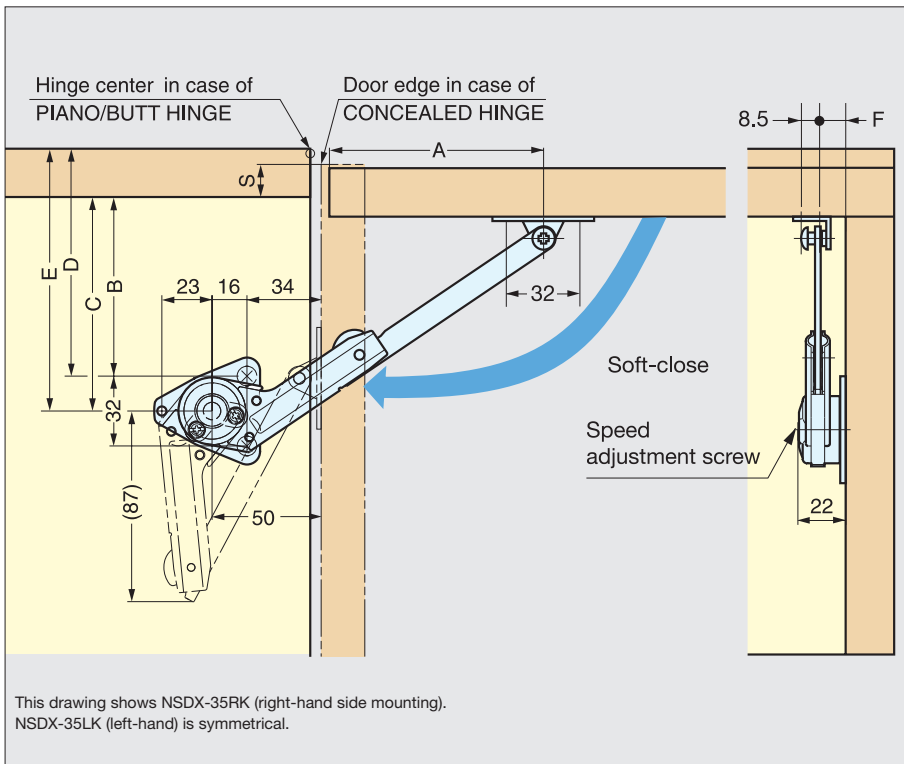
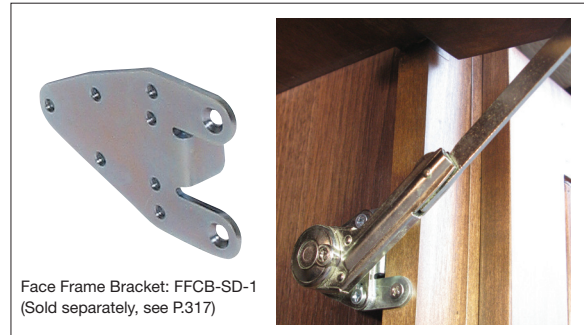
NSDX-35

LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAY



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



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

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

| Opening Angle | Hinge Type | A | B | C | D | E | F |
|---------------|------------------|------|--------|---------|------|-------|----|
| 80° | Concealed Hinge | 106 | 105 -S | 121 -S | - | - | 11 |
| | Piano/Butt Hinge | 100 | - | - | 99 | 115 | |
| 90° | Concealed Hinge | 98 | 97 -S | 113 -S | - | - | |
| | Piano/Butt Hinge | 91.5 | - | - | 90.5 | 106.5 | |
| 100° | Concealed Hinge | 92.5 | 91.5-S | 107.5-S | - | - | |
| | Piano/Butt Hinge | 85 | - | - | 84 | 100 | |

ADJUSTABLE SOFT-DOWN STAY (SHORT-ARM)

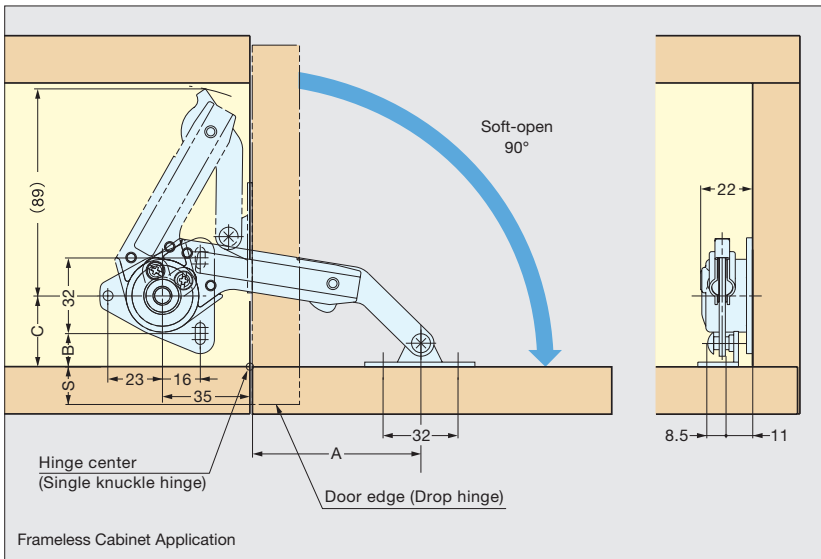
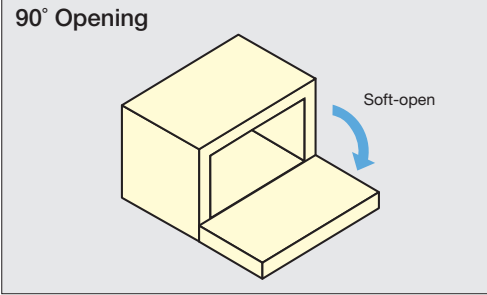
NSDX-10(R/L)K/TV

LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAY

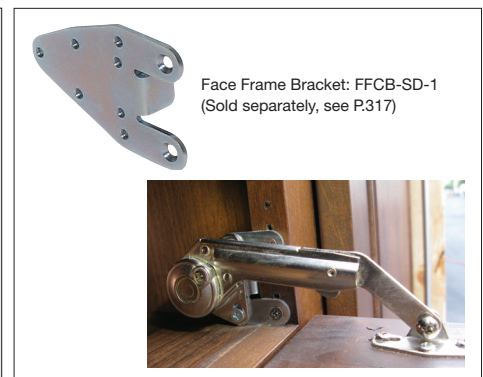
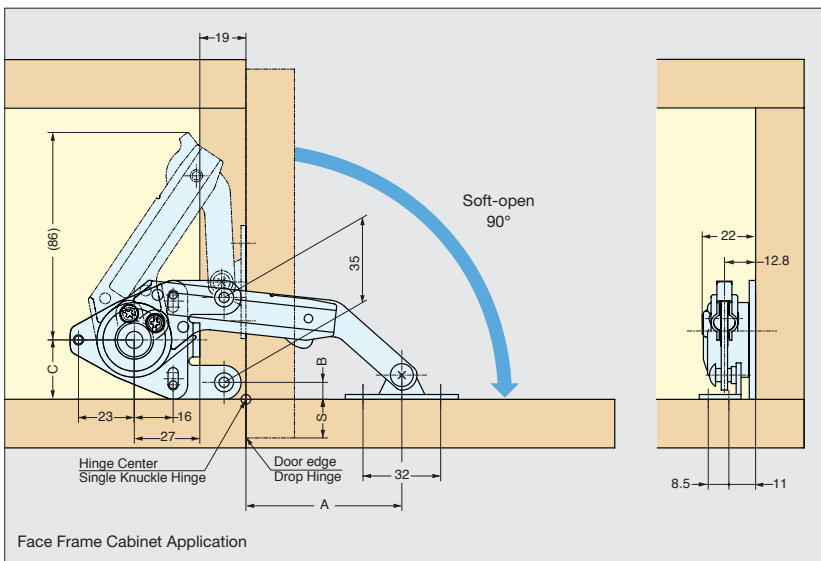


- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop hinges.
- Short arm type designed for small door application.
- Torque Calculation :
Torque = Door Height × 1/2 × Door Weight
Per Piece : 10~20 kgf-cm (8.7~17.4 lbs-in)
Per Pair : 20~40 kgf-cm (17.4~34.7 lbs-in)



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

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



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

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

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

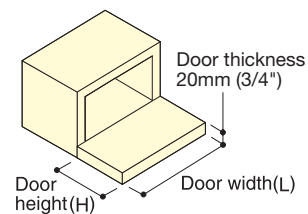
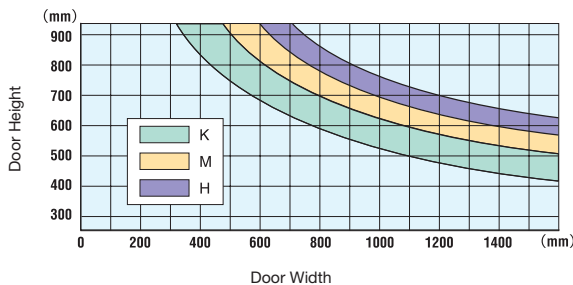
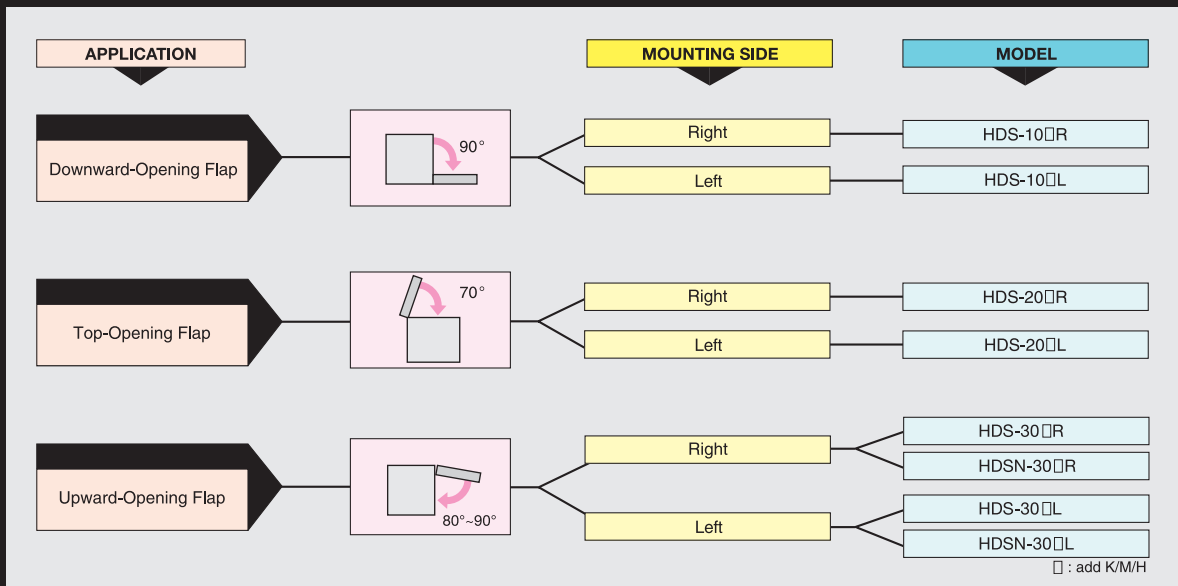
HDS/HDSN



HEAVY DUTY SOFT-DOWN STAY

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

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



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

HEAVY DUTY SOFT-DOWN STAY



HDS-10

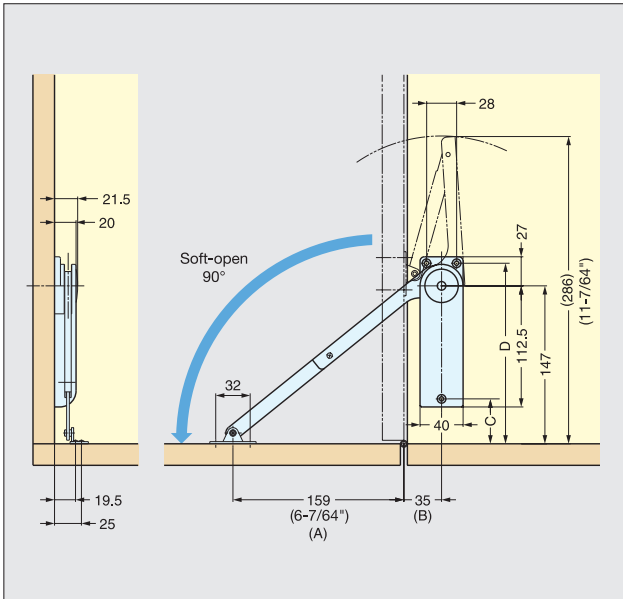
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAY

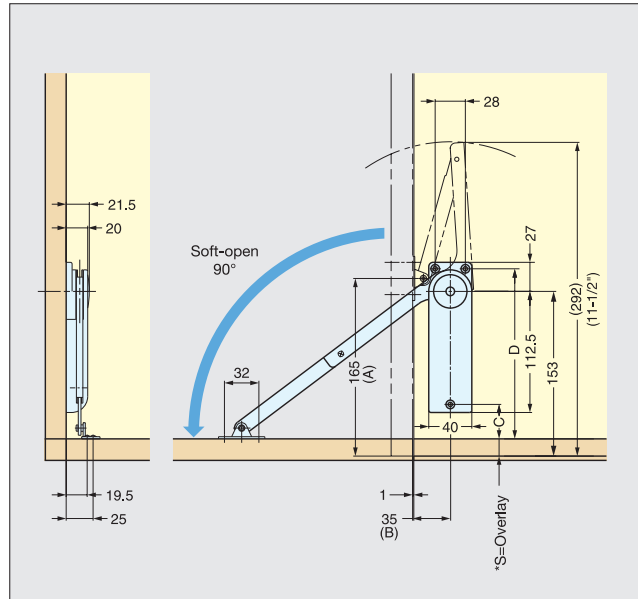


- For DOWNWARD-OPENING FLAP DOOR with piano, butt or drop hinges.
- HDS-10 is designed to hold door in closed and opened position.
- Used in pairs
- Torque Calculation:
 $\text{Torque} = \text{Door Height} \times 1/2 \times \text{Door Weight}$
 - K-Type (Light Duty): 140~200 kg-cm (121~173 lbs-inch)/pair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

With Piano/Butt Hinge



With Drop Hinge (SDH-001)



*S=Overlay coverage in case of drop hinge

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

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

HEAVY DUTY SOFT-DOWN STAY



HDS-20

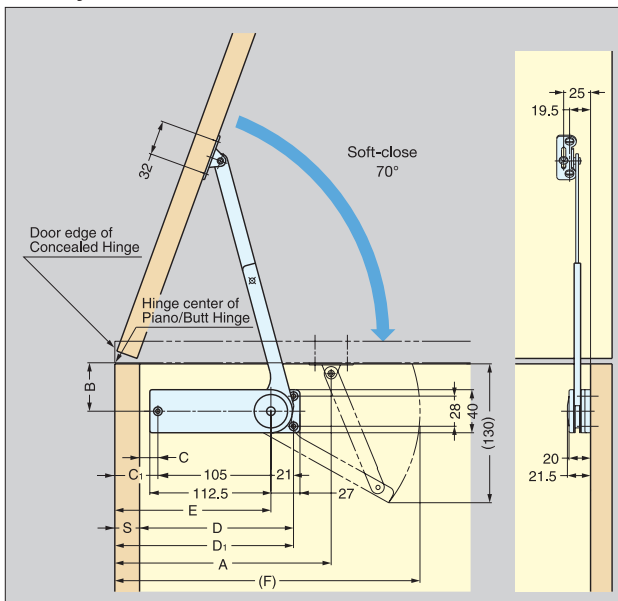
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAY

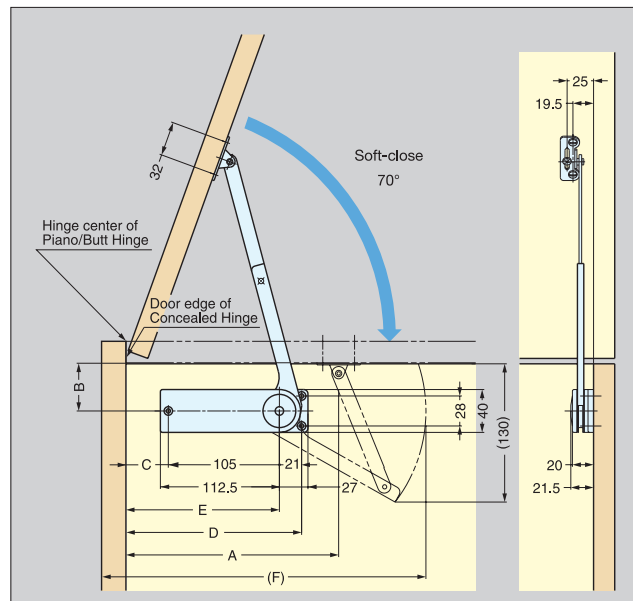


- For TOP-OPENING FLAP DOOR with piano, butt or concealed hinges.
- Used in pairs.
- HDS-20 is designed to hold door in fully opened position.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):
140~200 kg-cm (121~173 lbs-inch)/pair
- M-Type (Medium Duty):
200~250 kg-cm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

Overlay Use



Inset Use



Overlay Use

| Hinge Type | A | B | C | D | C ₁ | D ₁ | E | F |
|------------------|-------|----|------|-------|----------------|----------------|-------|-------|
| Concealed Hinge | 198.5 | 45 | 42-S | 168-S | - | - | 145 | 283.5 |
| Piano/Butt Hinge | | | - | - | 41 | 167 | 142.5 | 281 |

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

Inset Use

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

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

| Material | Finish/Color |
|----------|--------------|
| Steel | Nickel |
| Plastic | Black, White |

HEAVY DUTY SOFT-DOWN STAY



HDS-30

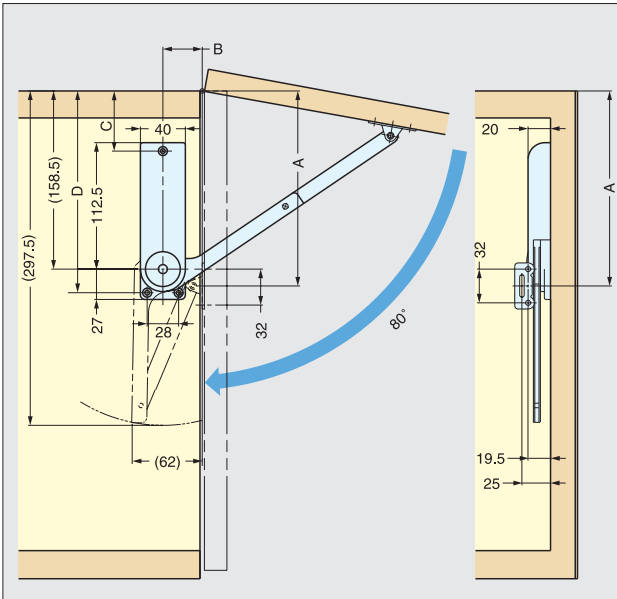
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAY

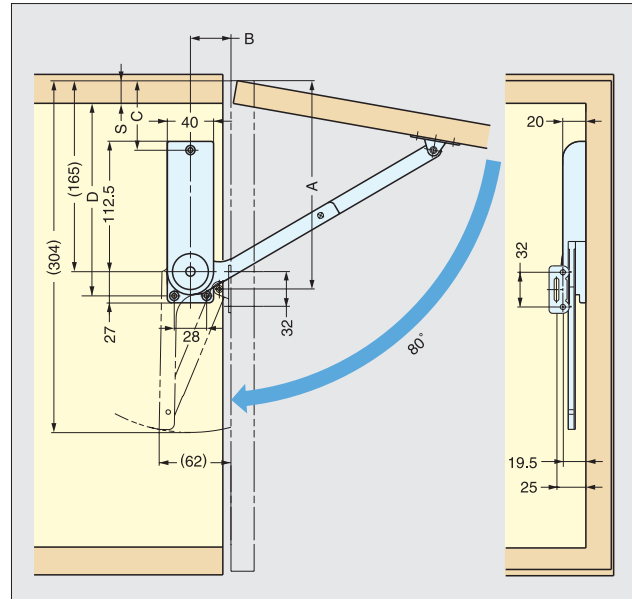


- For UPWARD-OPENING FLAP DOOR with piano, butt or concealed Hinges.
- Used in pairs.
- HDS-30 is designed to securely latch a flap closed and hold it in the fully opened position.
- Torque Calculation:
Torque = Door Height x 1/2 x Door Weight
- K-Type (Light Duty):
140~200 kg-cm (121~173 lbs-inch)/pair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

With Single Knuckle Hinge



With Concealed Hinge



Overlay Use

| Hinge Type | A | B | C | D |
|------------------|-------|----|-------|--------|
| Concealed Hinge | 180 | 35 | 60 -S | 186 -S |
| Piano/Butt Hinge | 173.5 | 35 | 53.5 | 179.5 |

S=Overlay coverage by concealed hinge

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

| Material | Finish/Color |
|----------|--------------|
| Steel | Nickel |
| Plastic | Black, White |

HEAVY DUTY SOFT-DOWN STAY



HDSN-30

LID SUPPORTS

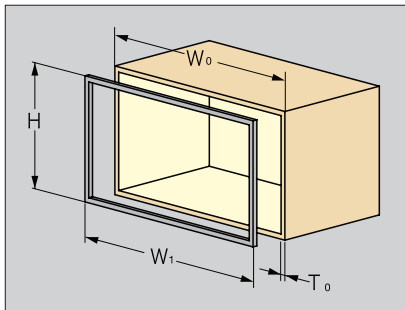
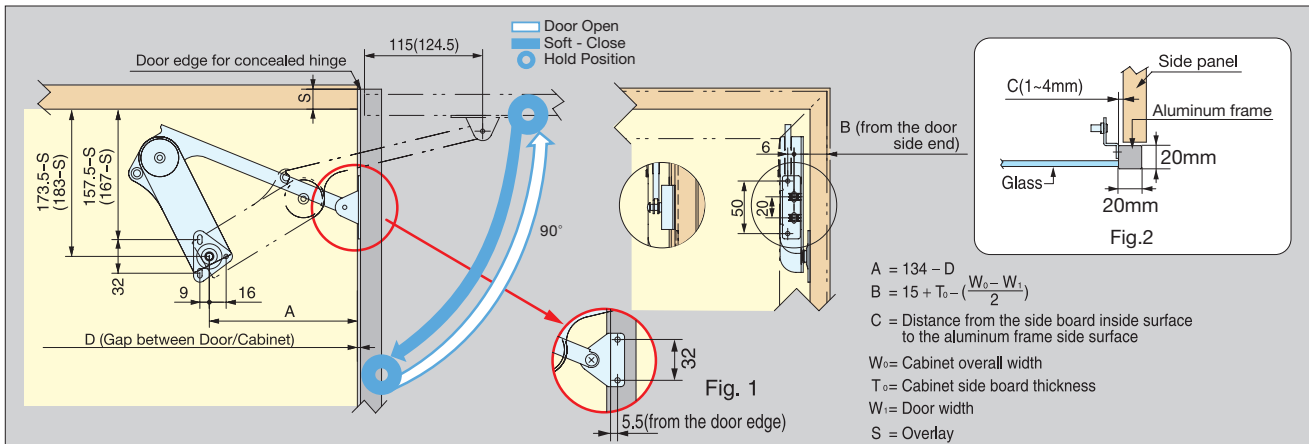
HEAVY DUTY SOFT-DOWN STAY



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

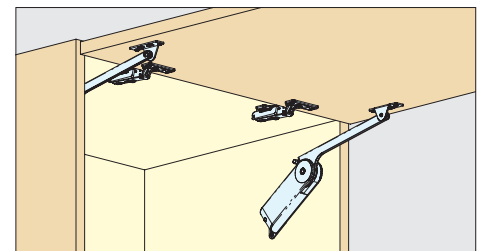
| Material | Finish/Color |
|----------|--------------|
| Steel | Nickel |
| Plastic | Light Grey |

Dimensions are for 90° opening, solid wood or 45mm width aluminum frame door.
For 80° opening, please use the figures in ().
Fig.1 and Fig. 2 show the dimensions for 20 mm width aluminum frame door using mounting plate HDSN-AZ.
Recommended concealed hinge is overlay/105° opening/free swing type.



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

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



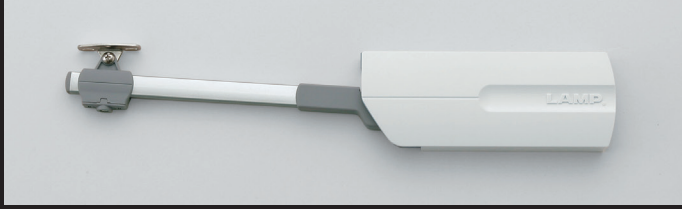
Arm Mounting Plate (Sold separately, please specify when ordering.)

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

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

SLS-ELAN

EASY LIFT-UP STAY



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

3 functions on 1 stay

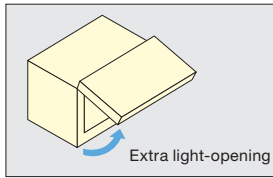
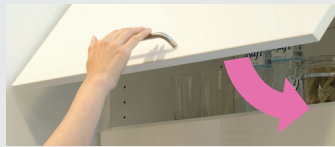
1. Lift-assist



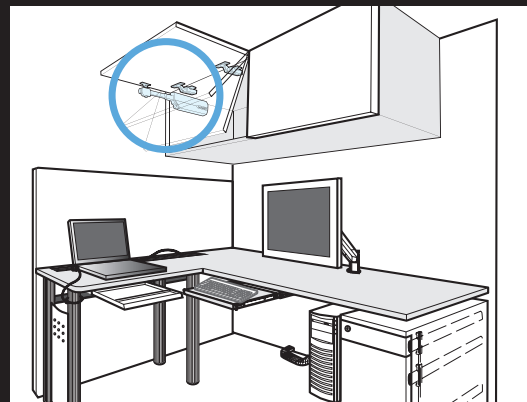
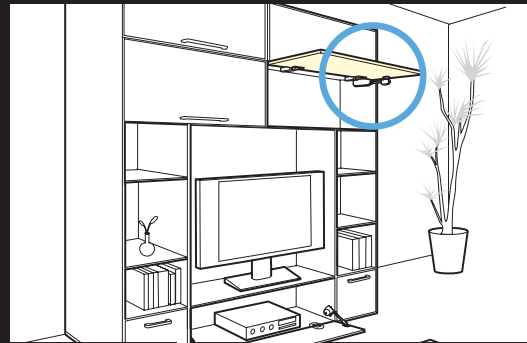
2. Free stop



3. Soft-close



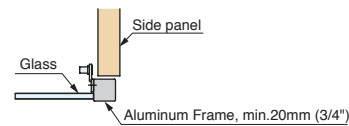
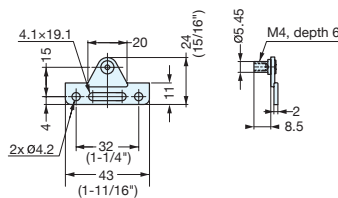
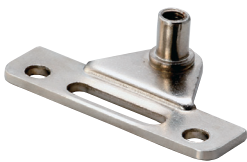
Designed to operate at room temperature 0°~40°C (32°~104°F).



Arm Mounting Plate for Aluminum Frame Door



SLS-ELAN-AZ



| Item No. | Type | Material | Finish | Box (pcs) | Carton (pcs) |
|--------------|----------------|----------|--------|-----------|--------------|
| SLS-ELAN-AZ | Mounting Plate | Steel | Nickel | 20 | 200 |
| SLS-ELAN-AZS | Screw Set | | | 80 | 400 |

EASY LIFT-UP STAY



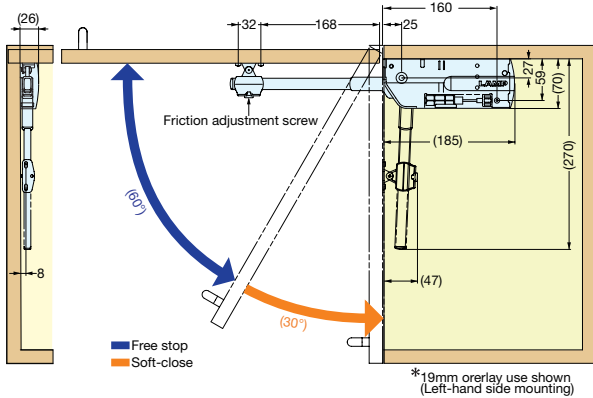
SLS-ELAN

LID SUPPORTS

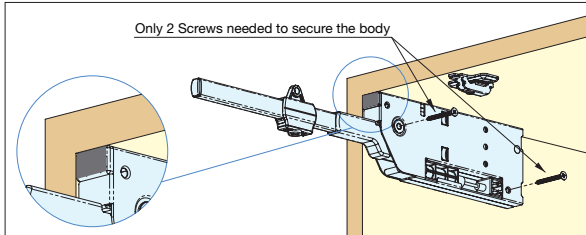
EASY LIFT-UP STAYS



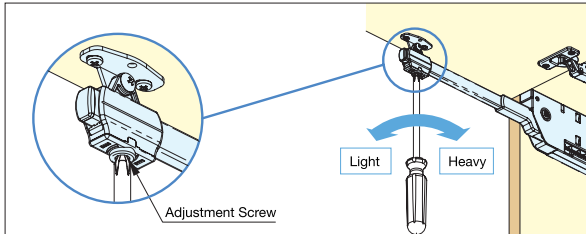
- For UPWARD-OPENING FLAP DOOR with concealed, piano, butt, or drop hinges.
- Designed to provide effortless opening and hold door in closed and opened position.
- Damper equipped for soft & silent closing.
- Optional bracket for aluminum frame door available.
- Single or pair use allows wide range of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



Easy Installation



Adjustment



Door Weight Range Table (lbs.)

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

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



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

LIFT ASSIST MECHANISM

LID SUPPORTS

LIFT ASSIST MECHANISM

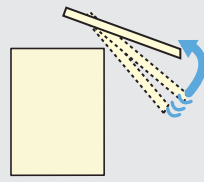


- Lapcon stay for UPWARD-OPENING FLAP DOORS.
- Door opens over the cabinet.
(Space of 4-5/16" is required over cabinet)
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Slim design and installed location maximizes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

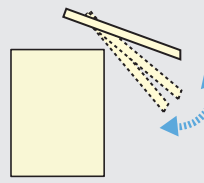


3 functions on 1 stay

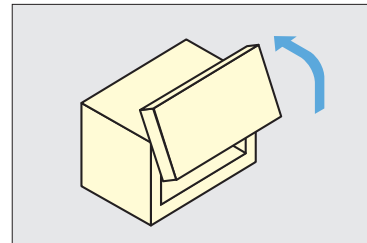
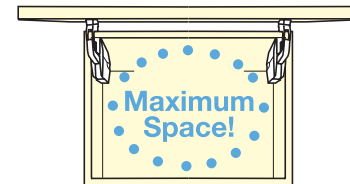
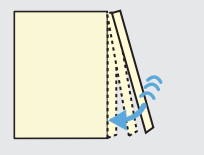
1. Lift-assist



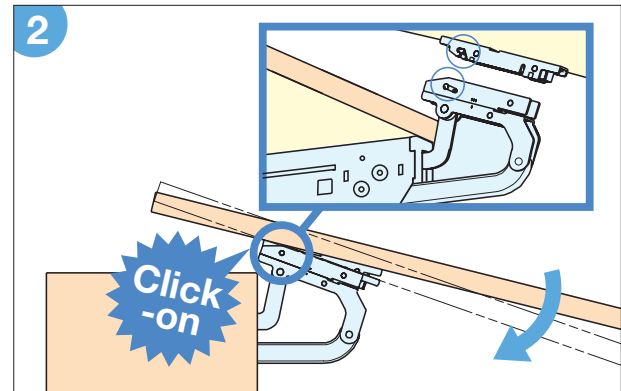
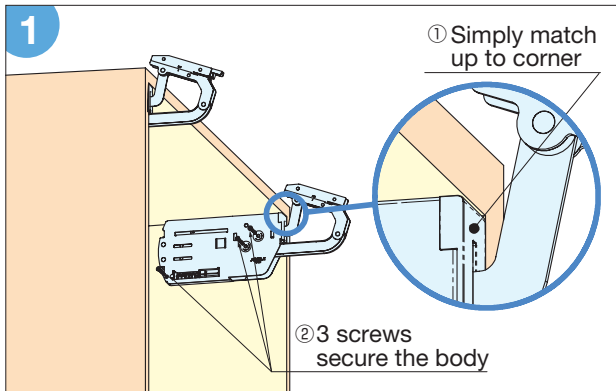
2. Free stop

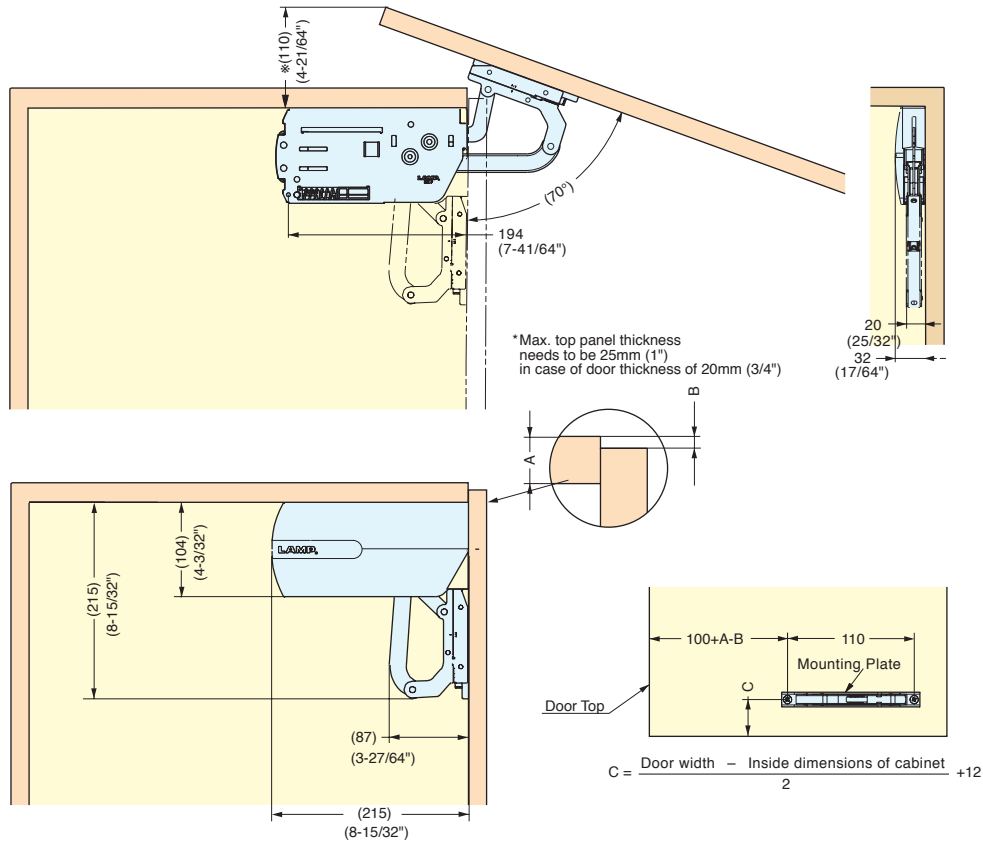


3. Soft-close



Easy Installation





■ Door Weight Range Table (lbs.) Per Pair

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

■ Lifting power

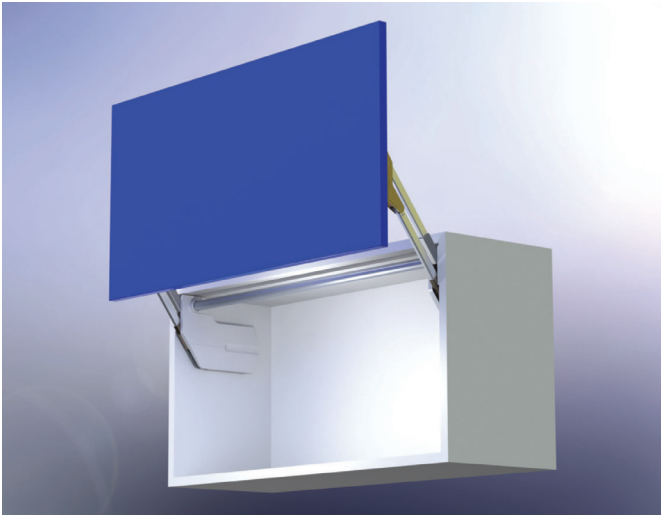
Door height (inch) x (Door weight (lbs) -1)

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

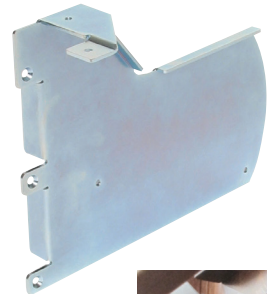
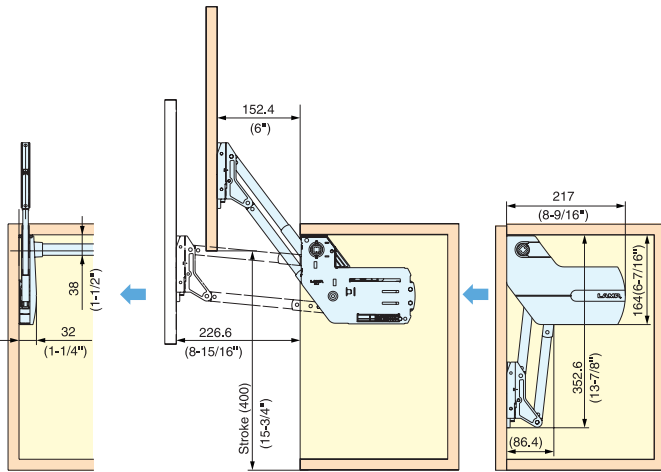
| Item No. | Weight (g) | Box (pcs) |
|-------------|------------------|-----------|
| EZS-ELAN-LL | 2245 (4.9 lbs) | 5 |
| EZS-ELAN-ML | 2316 (5 lbs) | |
| EZS-ELAN-MM | 2387 (5.25 lbs) | |
| EZS-ELAN-HM | 2431 (5.35 lbs) | |
| EZS-ELAN-HH | 2475 (5.45 lbs) | |

| Material | Finish/Color |
|------------|--------------------|
| Steel, ABS | Light Grey, Nickel |

SWING LIFT-UP STAY



- Lapcon stay for SWING LIFT-UP DOORS.
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Simple installation by mounting guide plate and slide in main body.
- No hinges are required.
- Connecting bar stays on top for maximum access inside the cabinet.
- Recommended Door Size and Weight :
 - Width, Max. 1500 mm (59")
 - Height, 390~500 mm (15-3/8"~19-11/16")/Door
 - Weight, 5~11 kg (11~24.2 lbs)/Door



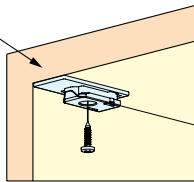
Face Frame Bracket: FFCB-SLU
(Sold separately, see P.317)



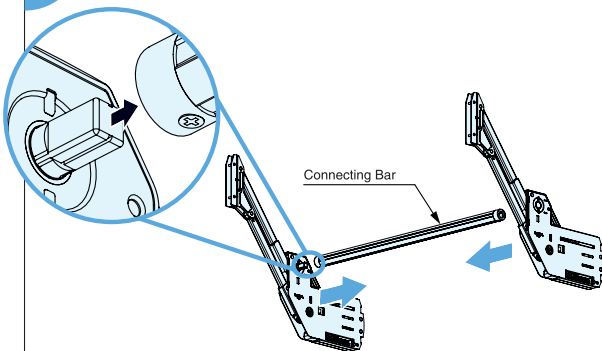
Simple Installation

1 Guide plate installation

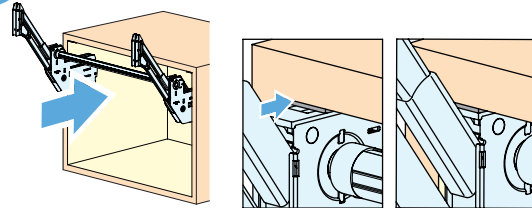
Simply match up to corner



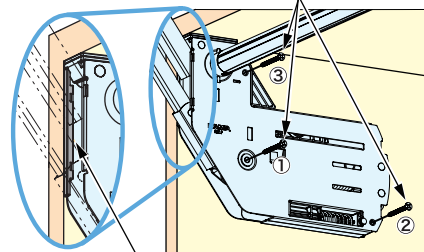
2 Installation preparation



3 Body installation



3 screws secure the body



Simply match up to corner.

SWING LIFT-UP STAY



SLU-ELAN

LID SUPPORTS

SWING LIFT-UP STAY / FACE FRAME BRACKETS

| Item No. | Door Weight (kg) | Door Height (mm) | Door Width (mm) | Box | Carton |
|-------------|-------------------------|---------------------------------|--------------------|-------|--------|
| SLU-ELAN-S4 | 5 - 6.5 (11 ~14.3 lbs) | 390~500* (15-3/8"~19-11/16") | Max. 1500 (59") | 1 set | 5 set |
| SLU-ELAN-L4 | 6.5- 8 (14.3~17.6 lbs) | | | | |
| SLU-ELAN-M4 | 8 - 9.5 (17.6~20.9 lbs) | | | | |
| SLU-ELAN-H4 | 9.5-11 (20.9~24.2 lbs) | | | | |

*Min. inside cabinet height is 360mm (14-3/16")
 *Door weight includes handle.

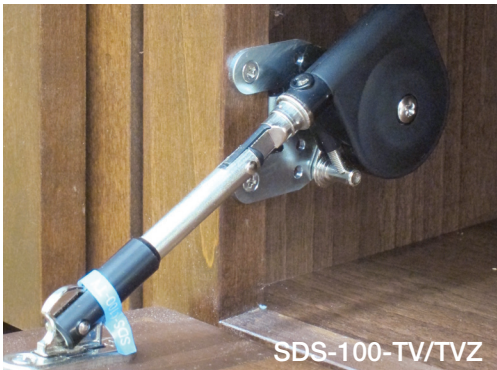
■ Connecting Bar (Sold separately)

| Item No. | Cabinet Width (mm) | Inside Dimensions (mm) |
|----------|--------------------|-------------------------------|
| ELB- 480 | 600 (23-5/8") | 556- 566 (21-7/8"~22-1/4") |
| ELB- 780 | 900 (35-1/2") | 856- 866 (33-3/4"~34-1/8") |
| ELB-1080 | 1200 (47-1/4") | 1156-1166 (45-1/2"~45-7/8") |
| ELB-1380 | 1500 (59") | 1456-1466 (57-5/16"~57-3/4") |

*Please specify the cabinet width when ordering.

FACE FRAME BRACKETS

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



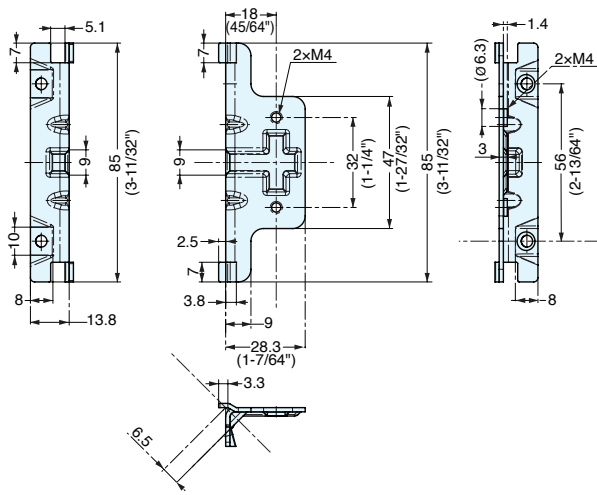
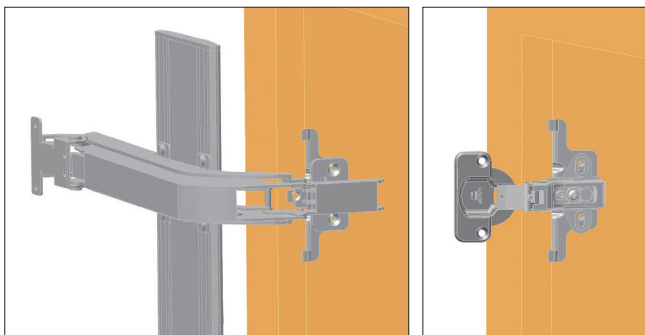
FACE FRAME BRACKET



FFCB-HG-1



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

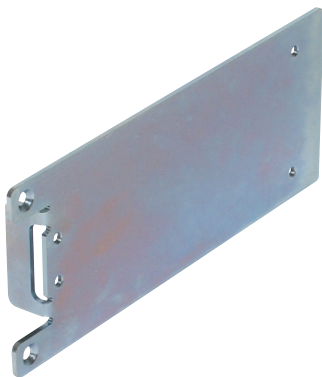


| Material | Finish |
|---------------------|----------|
| 304 Stainless Steel | Polished |

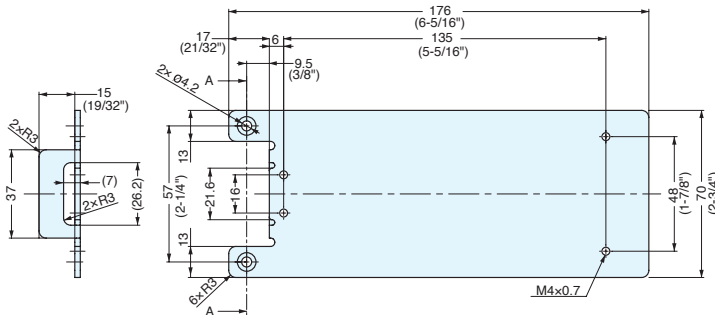
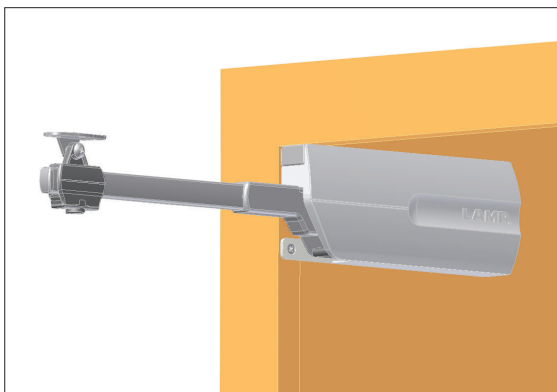
FACE FRAME BRACKET



FFCB-SLS



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



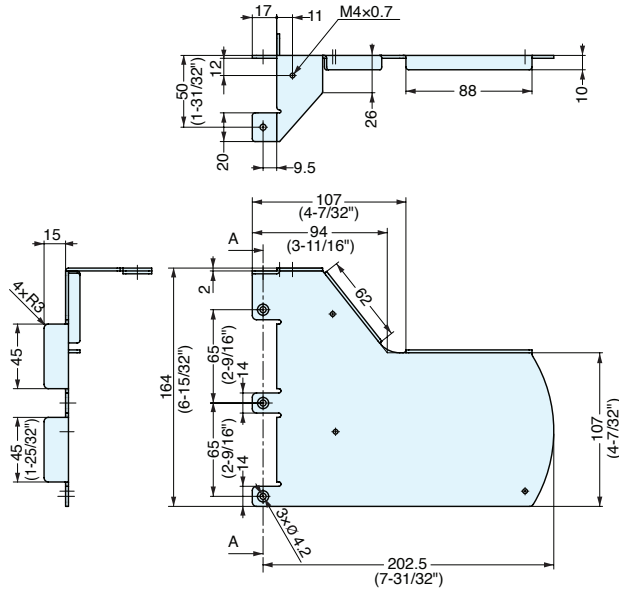
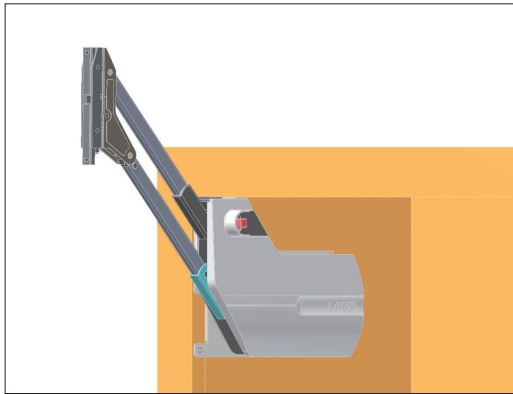
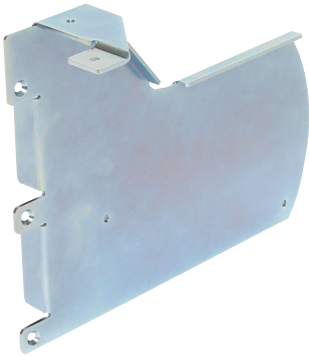
| Material | Finish |
|----------|----------|
| Steel | Chromate |

FACE FRAME BRACKET



FFCB-SLU

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



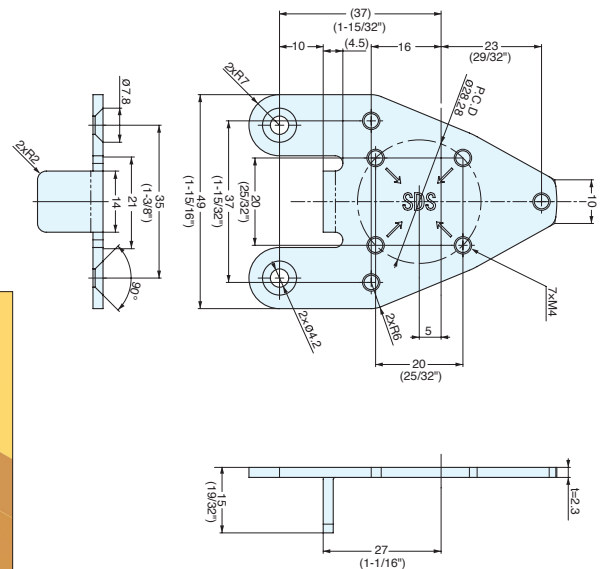
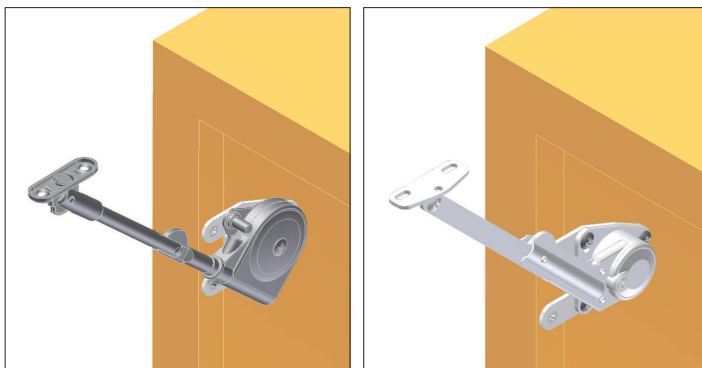
| | |
|----------|----------|
| Material | Finish |
| Steel | Chromate |

FACE FRAME BRACKET



FFCB-SD-1

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

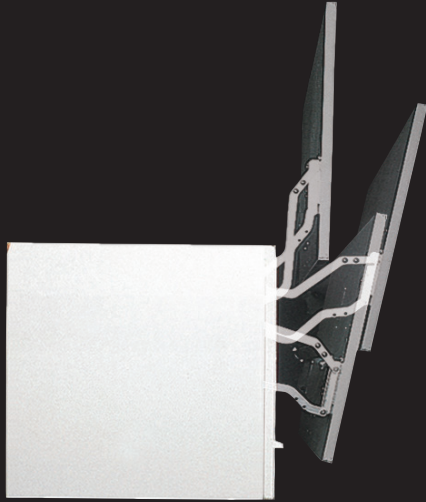


| | |
|----------|----------|
| Material | Finish |
| Steel | Chromate |

SLUN

VERTICAL SWING LIFT-UP MECHANISM

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



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



VERTICAL SWING LIFT-UP MECHANISM



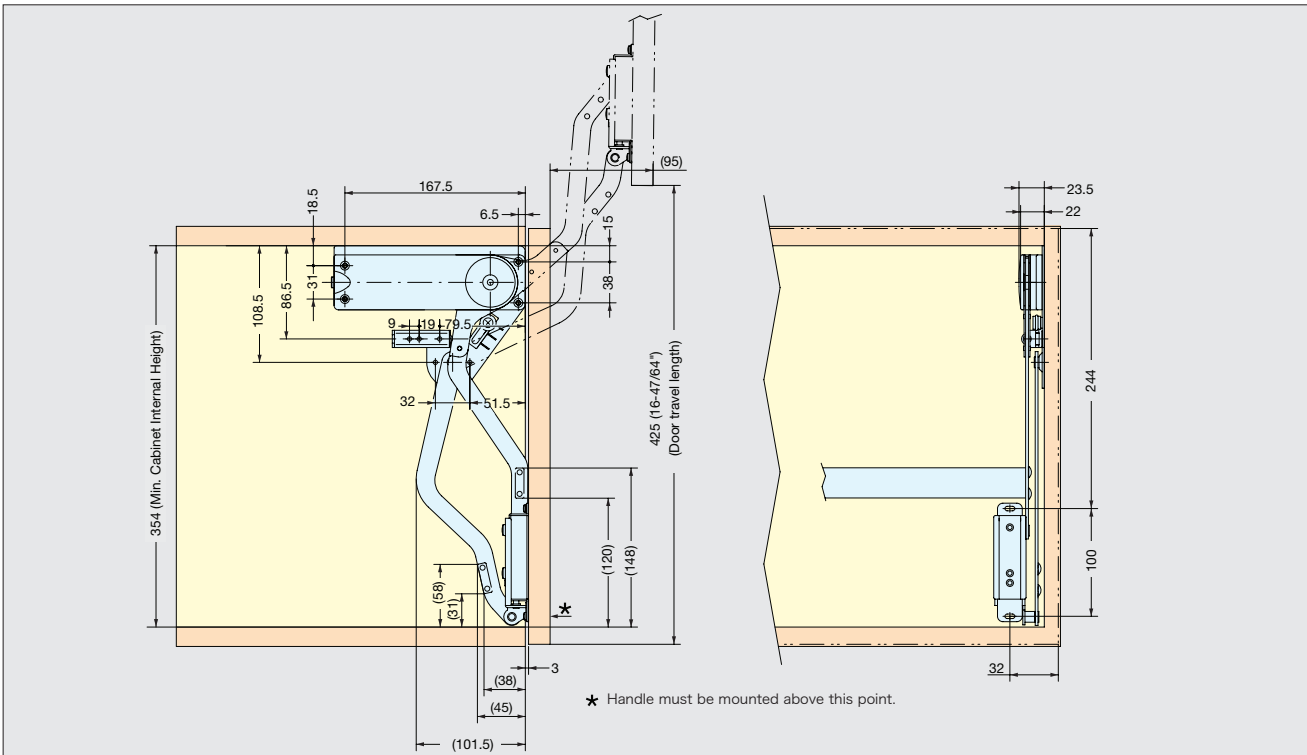
SLUN

LID SUPPORTS

VERTICAL SWING LIFT-UP MECHANISM



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



| Material | Finish/Color |
|----------|--------------|
| Steel | Nickel |
| Plastic | Grey |

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

Guide Bar Length

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

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

SLD

VERTICAL SWING DOWN MECHANISM



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

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



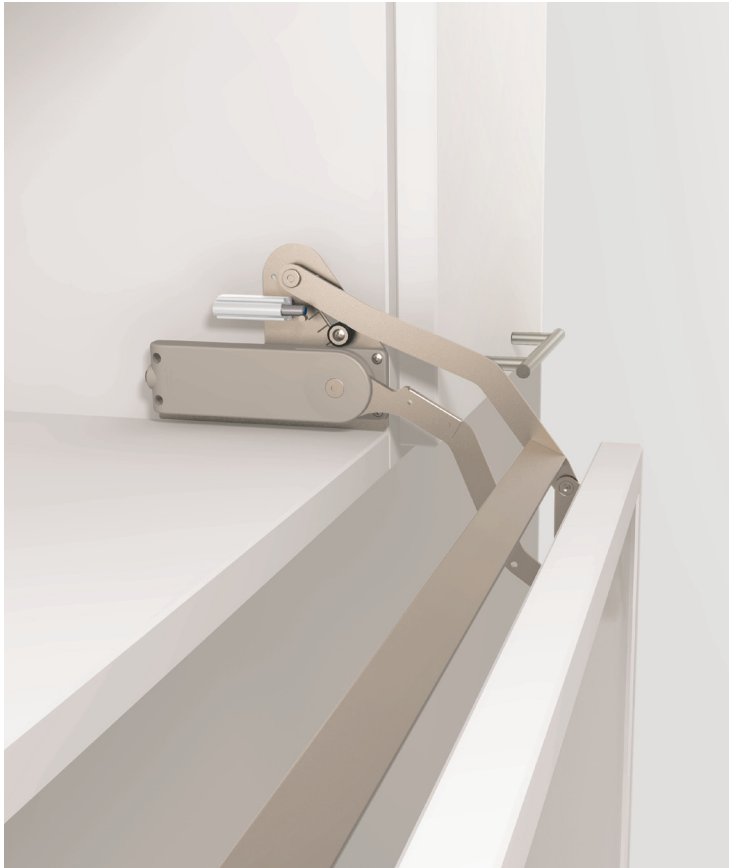
VERTICAL SWING DOWN MECHANISM



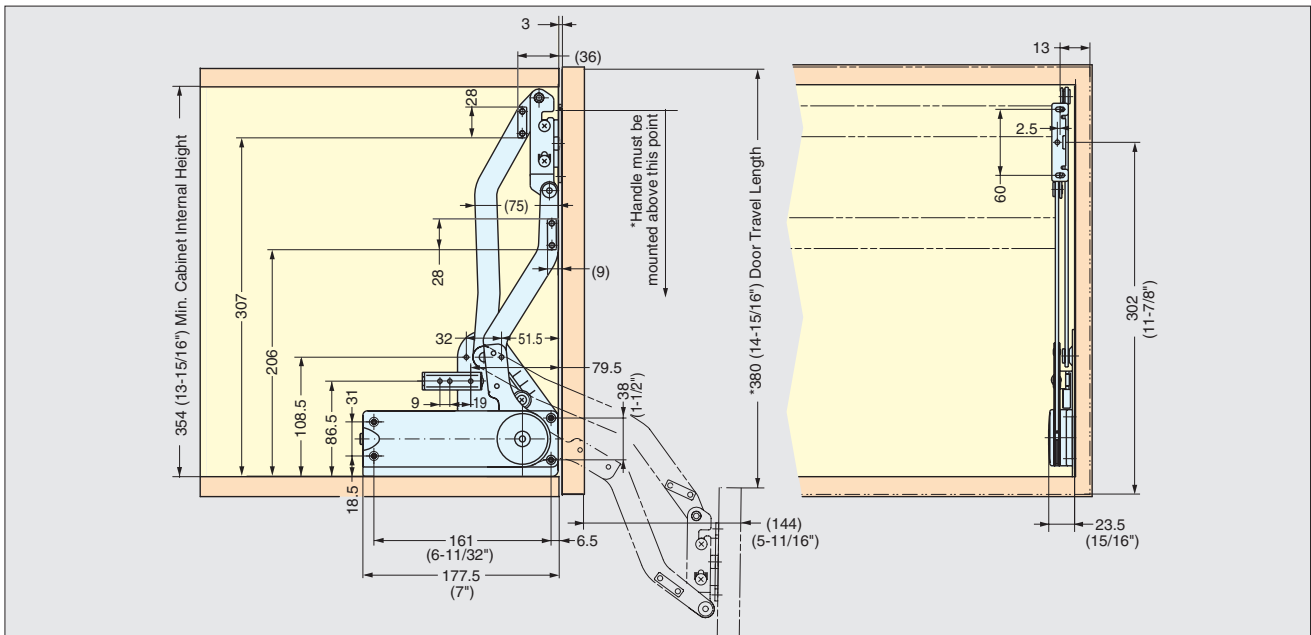
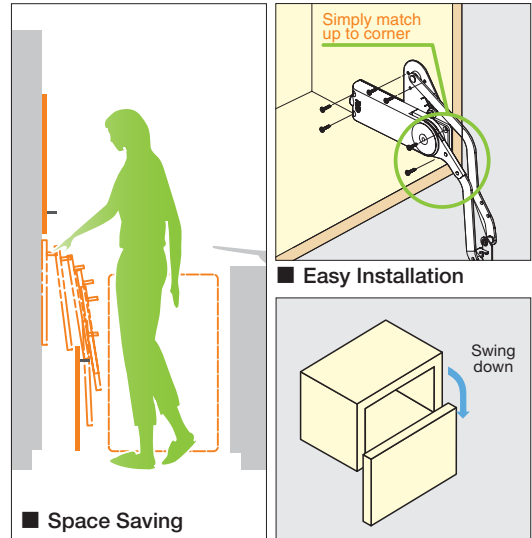
SLD

LID SUPPORTS

VERTICAL SWING DOWN MECHANISM



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



| | |
|----------|--------------|
| Material | Finish/Color |
| Steel | Nickel |
| Plastic | Grey |

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

Guide Bar Length

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

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

HBFN

HORIZONTAL BI-FOLDING DOOR MECHANISM



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

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

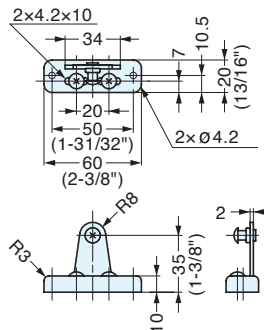


MOUNTING PLATES FOR HBFN

HBFN-SZ



- Included with HBFN Series hardware.



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

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

HORIZONTAL BI-FOLDING DOOR MECHANISM



HBFN

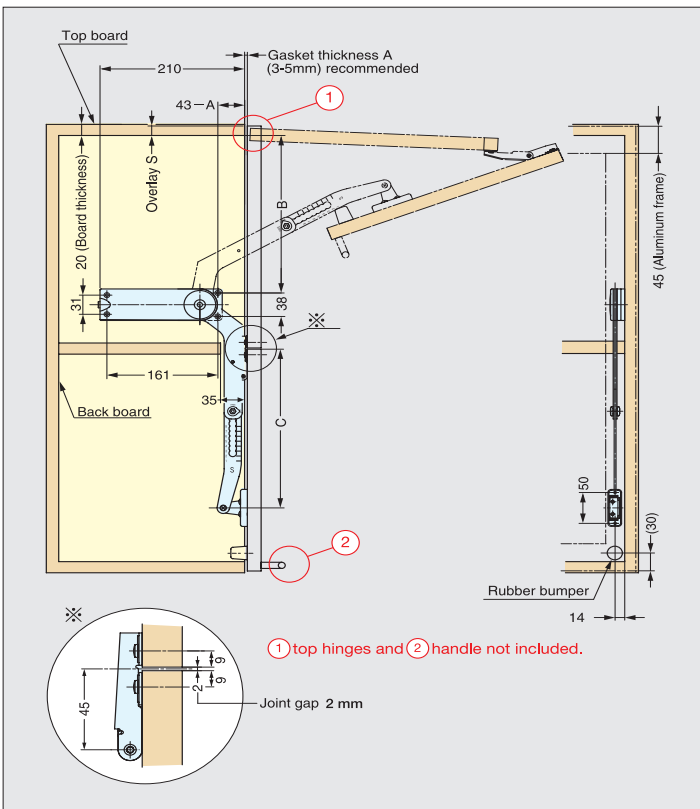
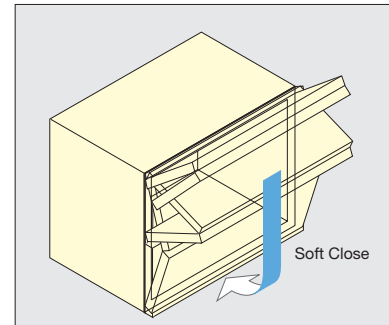
LID SUPPORTS

HORIZONTAL BI-FOLDING DOOR MECHANISM



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

| Material | Finish |
|----------|------------|
| Steel | Nickel |
| Plastic | Light Grey |



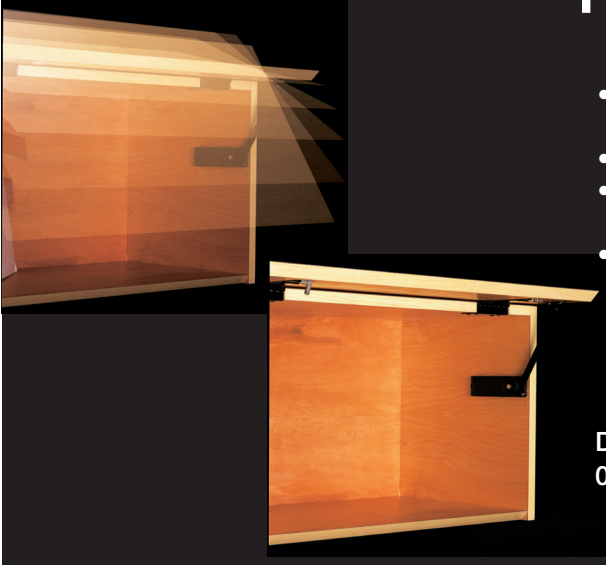
S = Overlay (Top Board)

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

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

| Material | Finish |
|----------|------------|
| Steel | Nickel |
| Plastic | Light Grey |

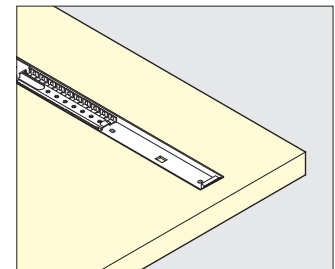
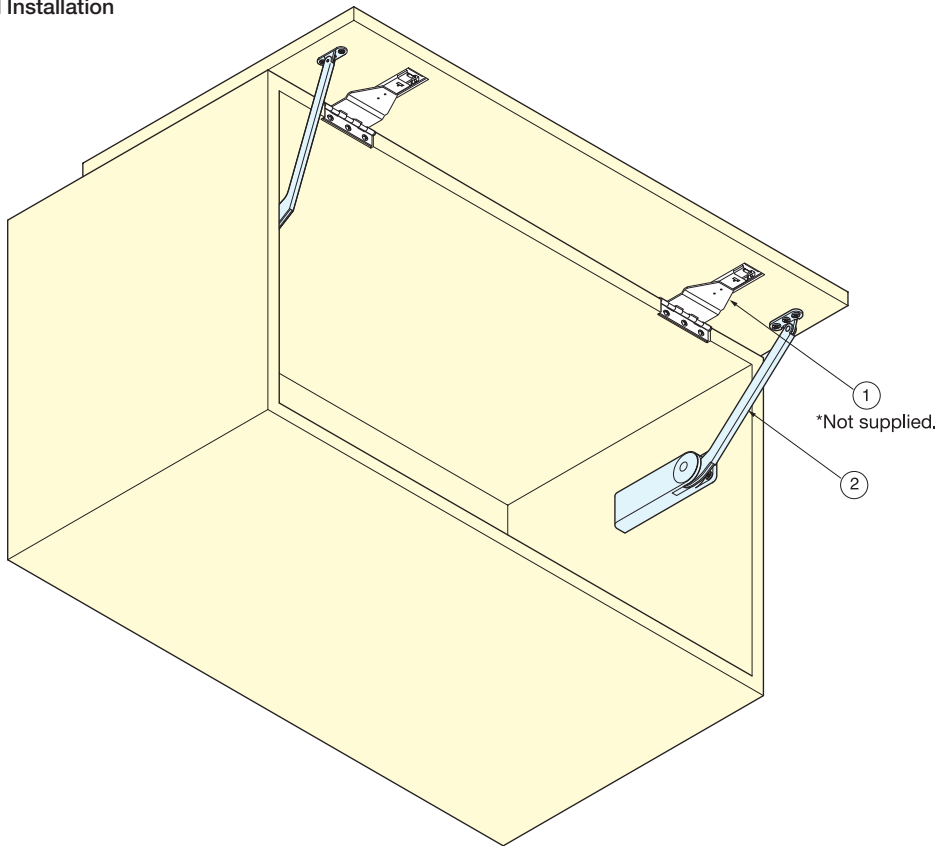
OV-EZ LIFT-ASSIST MECHANISM FOR OVER-THE-TOP FLIPPER DOORS



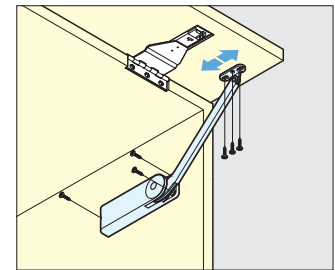
- Assists in opening of flipper doors with minimal resistance.
- Doors will not slam shut.
- Ideal for overhead binder bins, laboratory and kitchen cabinets, etc.
- Successfully passed 30,000 open/close private cycle tests.

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

Installation



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



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

Recommended Door Size and Weight

| Item No. | Door Weight For Easy-Up (kg) | Door Weight For Free-Stop (kg) | Door Height (mm) | Weight (g) | Box (pcs) | Carton (pcs) |
|------------|------------------------------|--------------------------------|-----------------------|------------|-----------|--------------|
| OV-EZ-3/BL | 2.5~4 (5.5 ~ 8.8 lbs) | 4~ 6.5 (8.8 ~ 14.3 lbs) | Approx. 400 (15-3/4") | 260 | 50 | 500 |
| OV-EZ-5/BL | 3.5~5.5 (7.7 ~ 11.0 lbs) | 5~ 8 (11 ~ 17.5 lbs) | | 270 | | |
| OV-EZ-7/BL | 4.5~6.0 (9.9 ~ 13.2 lbs) | 6~10 (13.2 ~ 22.0 lbs) | | 280 | | |
| OV-EZ-9/BL | 5.5~7.0 (12 ~ 15.3 lbs) | 7~11.5 (15.4 ~ 25.2 lbs) | | 290 | | |

LIFT-ASSIST MECHANISM



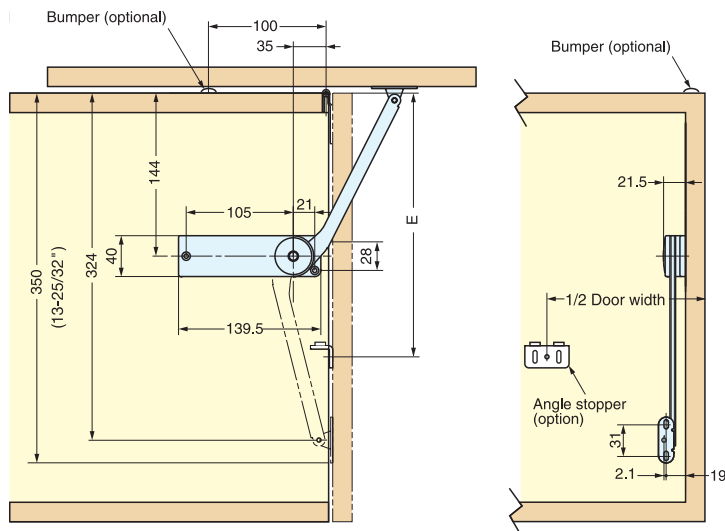
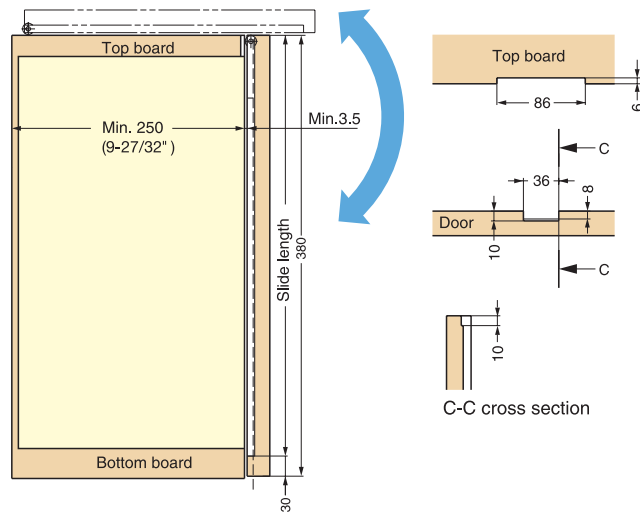
OV-EZ

LID SUPPORTS

LIFT-ASSIST MECHANISM FOR OVER-THE-TOP FLIPPER DOORS



* Used in pairs



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

OVN



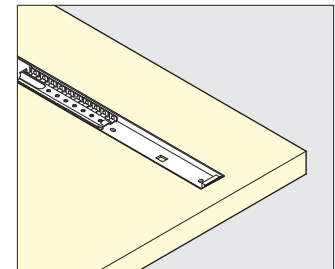
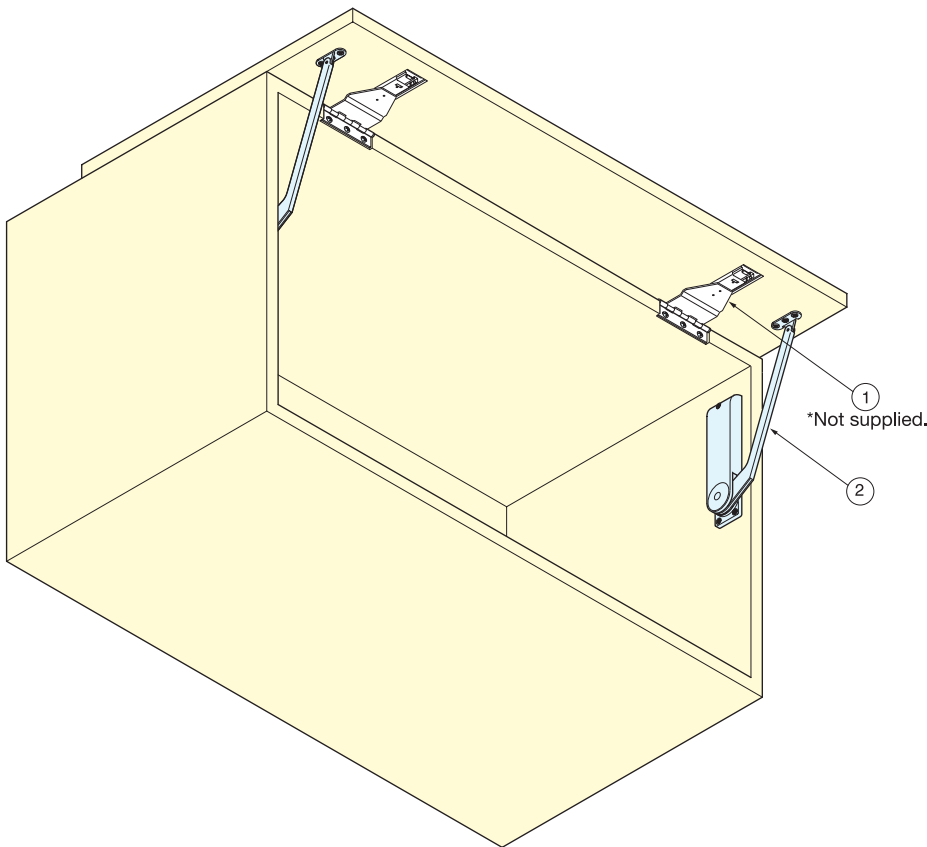
SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

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

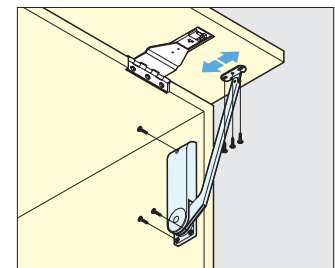
Designed to operate at room temperature 0°~40°C (32°~104°F).



■ Installation



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



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

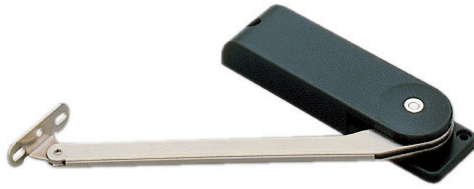
Recommended Door Size and Weight

| Item No. | Body Color | Door Weight (kg) | Door Height (mm) | Depth of Cabinet (mm) | Weight (g) | Box (pcs) | Carton (pcs) |
|-----------|-------------|---------------------|----------------------|-----------------------------|------------|-----------|--------------|
| OVN-3/BLK | Black (BLK) | 3-5 (6.6~11 lbs) | Approx.400 (15~3/4") | 350~400 (13-25/32"~15-3/4") | 220 | 40 | 400 |
| OVN-5/BLK | | 5-7 (11~15.4 lbs) | | | 240 | | |

SOFT CLOSING MECHANISM

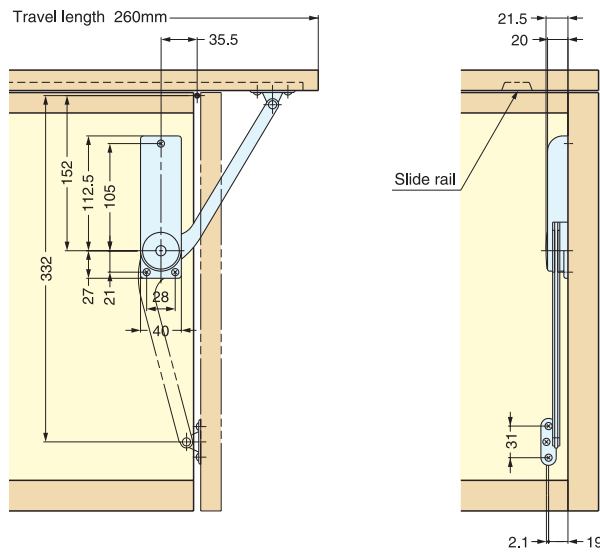
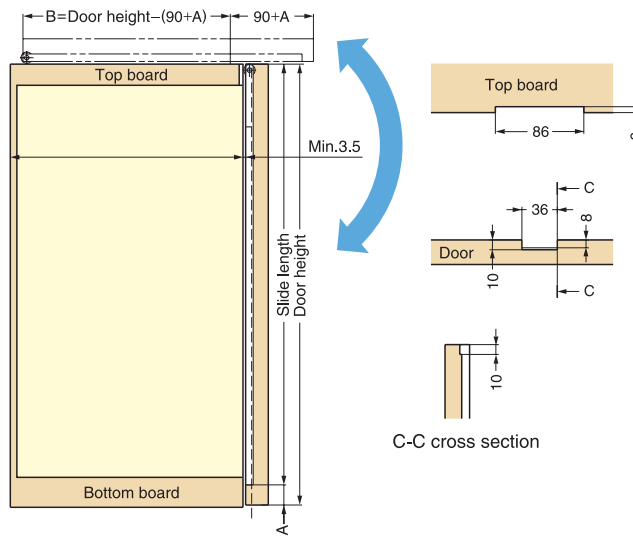


OVN



* Used in pairs

■ Cabinet Preparation



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



OV

SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

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



Used in pairs

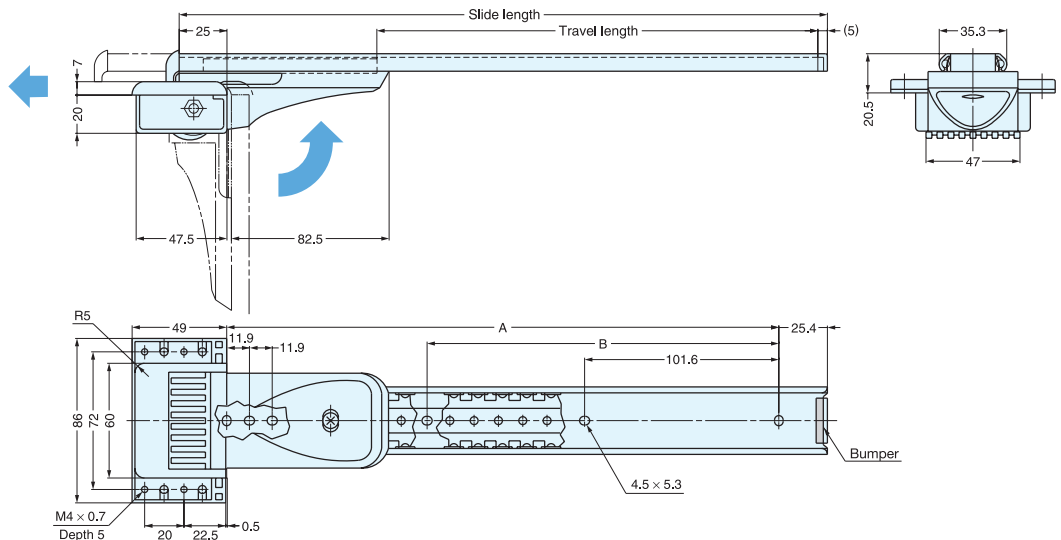


Screws :

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

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

*Bulk pack available.



Flipper Door Weight and Size

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

| Item No. | Slide Length | Travel Length | A | B | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|--------------|---------------|-------|-------|------------|-----------|--------------|
| OV-1-13 | 330.2 | 223.8 | 279.4 | 177.8 | 590 | 10 | 100 |
| OV-1-14 | 355.6 | 249.2 | 304.8 | 203.2 | 610 | | |
| OV-1-15 | 381 | 274.6 | 330.2 | 228.6 | 630 | | |
| OV-1-16 | 406.4 | 300 | 355.6 | 254 | 650 | | |

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

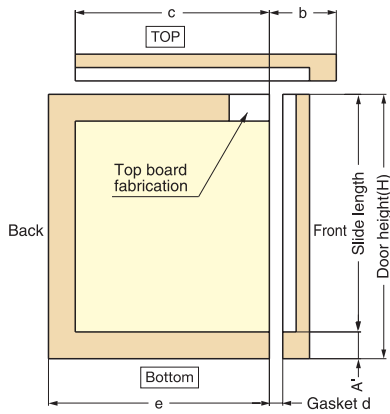
SOFT CLOSING MECHANISM



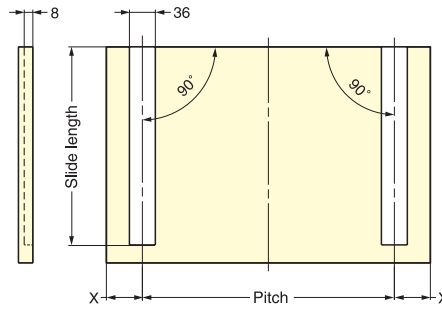
OV

■ Cabinet Preparation

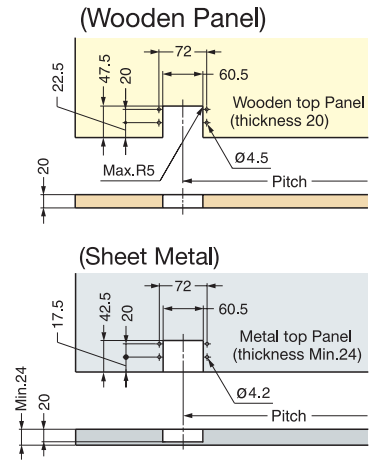
Cabinet Dimensions



Door Fabrication

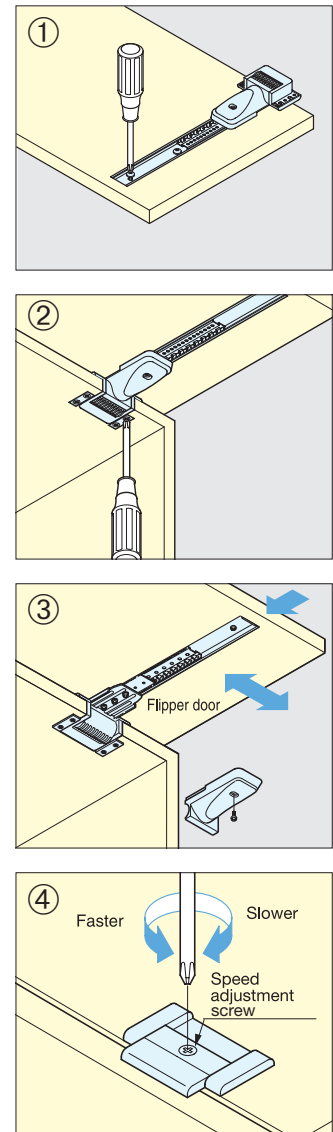
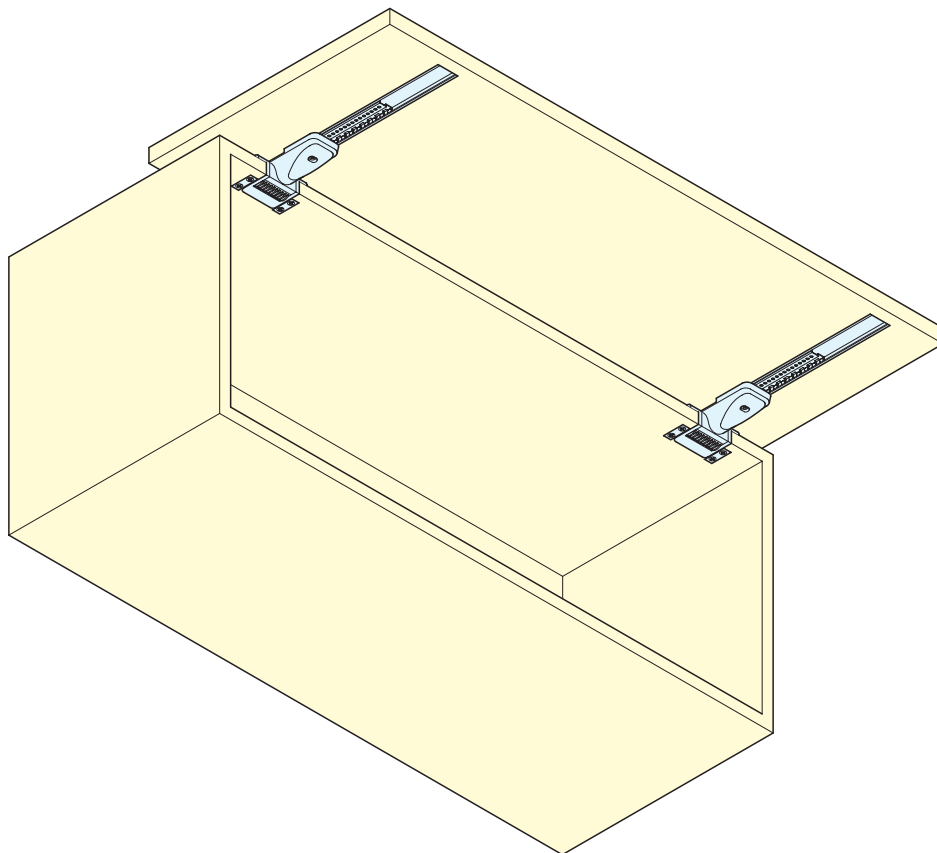


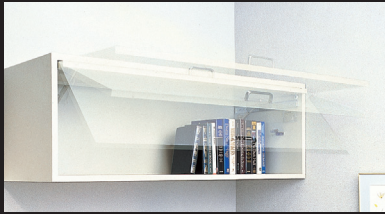
Top Panel Fabrication



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

■ Installation

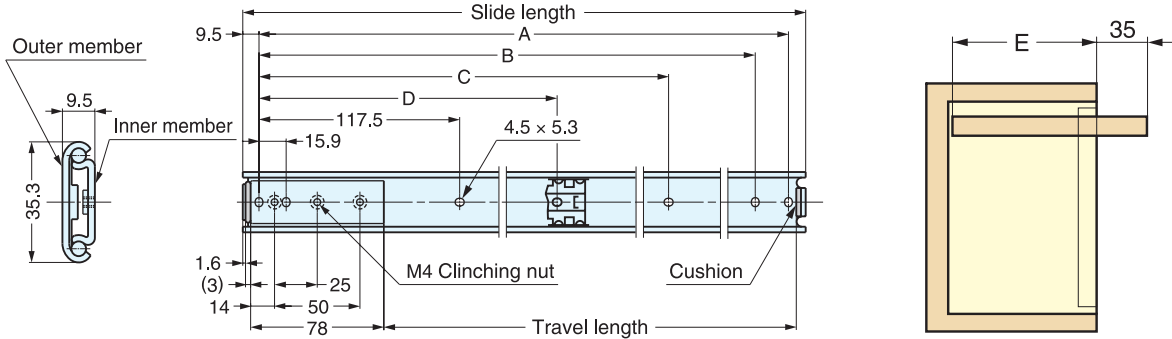




IF-102S (SINGLE TYPE) IF-102W (DOUBLE TYPE) SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

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

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



*Supplied with screws.

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

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

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

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

T = Door Thickness (mm)

SOFT CLOSING MECHANISM

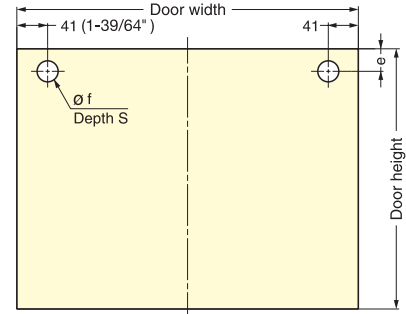
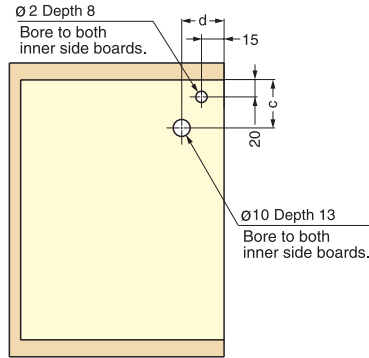
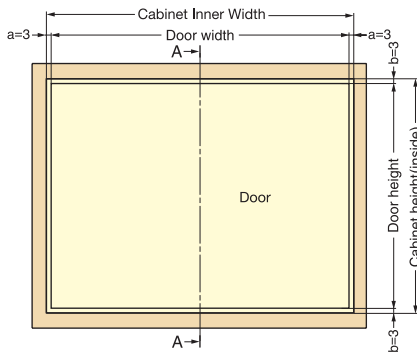


IF

LID SUPPORTS

SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

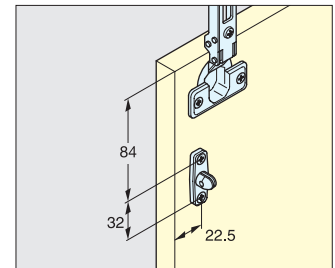
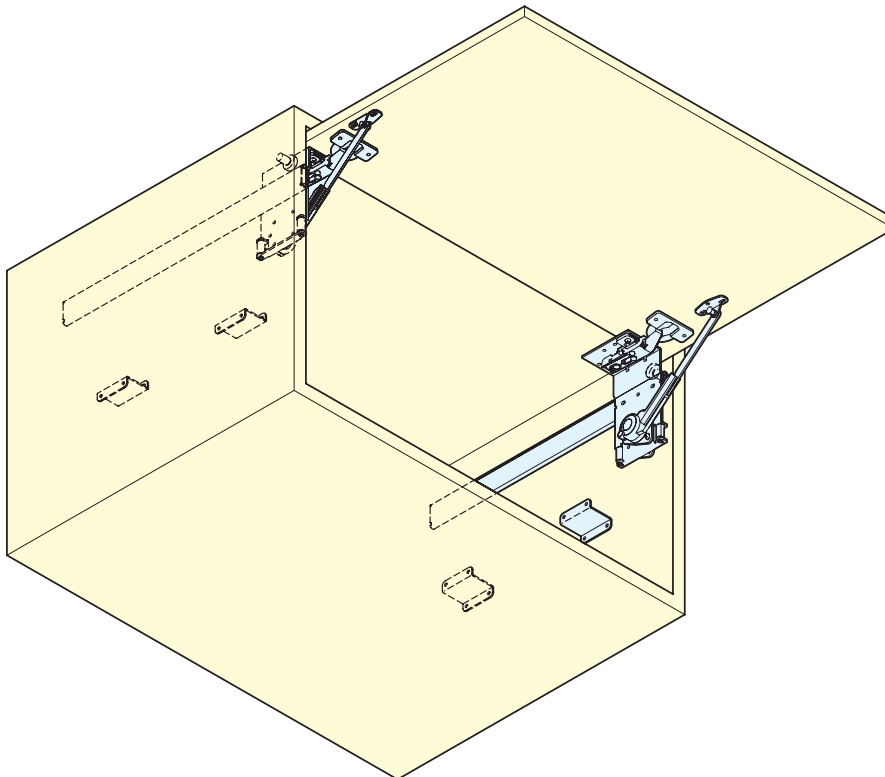
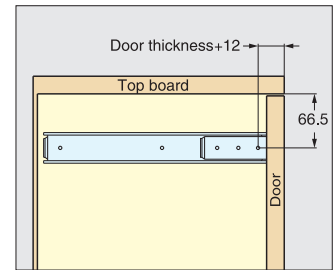
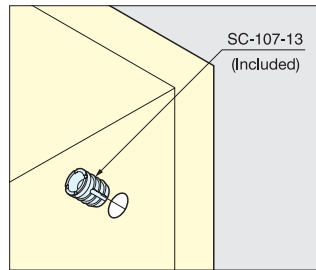
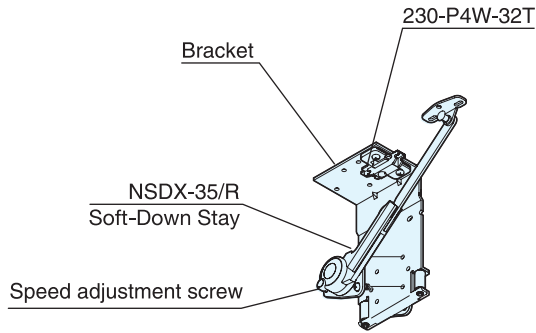
■ Cabinet Preparation



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

*t = Door Thickness

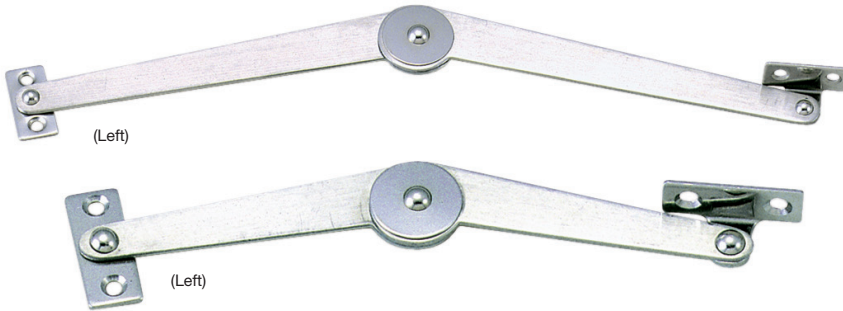
■ Installation



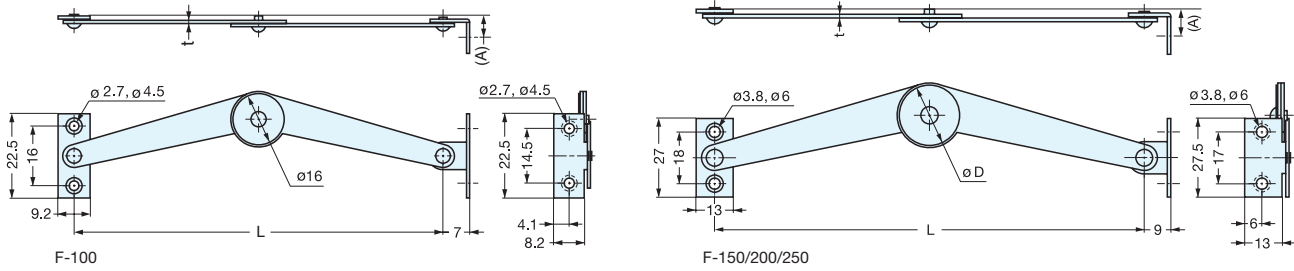
LID STAY



F-100, 150, 200, 250



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



| Item No. | | L | D | (A) | t | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|--------|----------------|------|-----|-----|------------|-----------|--------------|
| Right | Left | | | | | | | |
| F-100R | F-100L | 100 (3-15/16") | 16 | 6.5 | 1 | 13 | 50 | 500 |
| F-150R | F-150L | 150 (5-29/32") | 22 | 9 | 1.2 | 30 | 40 | 400 |
| F-200R | F-200L | 198 (7-51/64") | 22.5 | | 1.5 | 37 | 30 | 300 |
| F-250R | F-250L | 250 (9-27/32") | | | 65 | | | |

| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

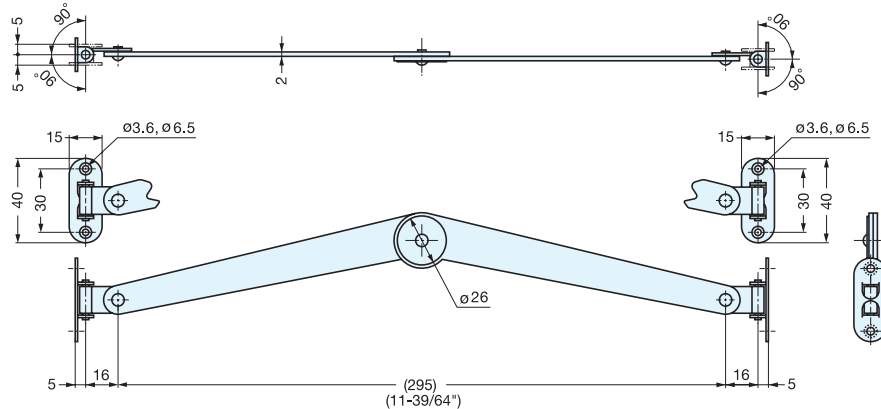
LID STAY



F-300



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



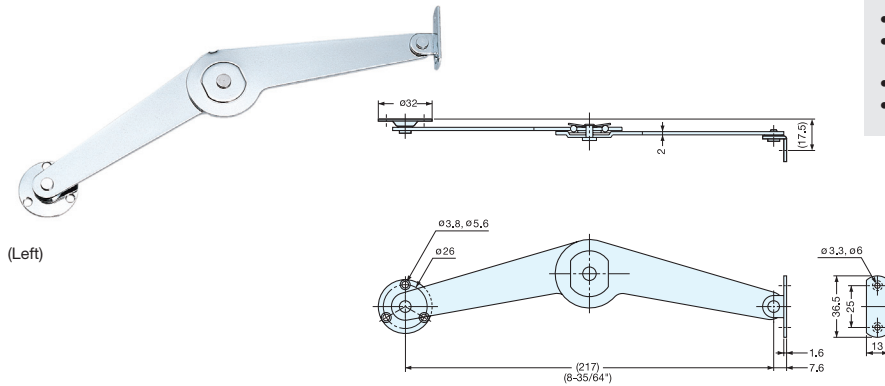
| Item No. | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|------------|-----------|--------------|
| F-300 | 113 | 10 | 100 |

| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

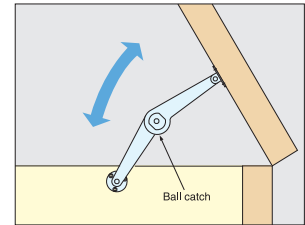
LID STAY (W/CATCH)



S-20



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



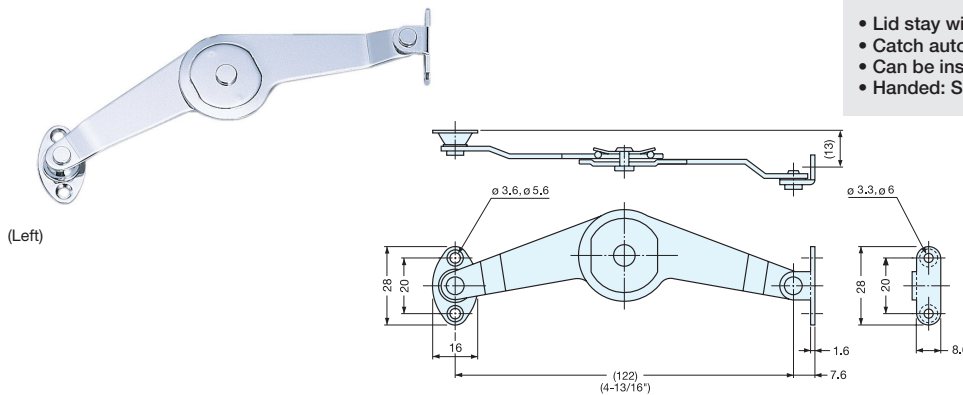
| Item No. | | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|-------|------------|-----------|--------------|
| Left | Right | | | |
| S-20L | S-20R | 125 | 40 | 160 |

| Material | Finish |
|------------------------------|--------|
| Steel, Brass, Nylon (washer) | Chrome |

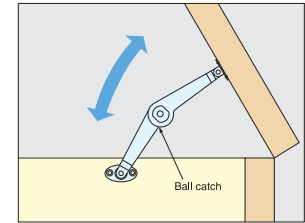
LID STAY (W/CATCH)



S-21



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



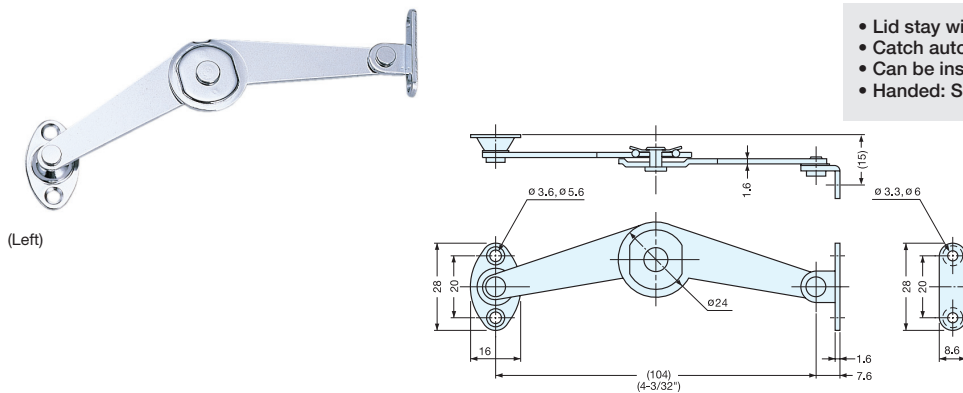
| Item No. | | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|-------|------------|-----------|--------------|
| Left | Right | | | |
| S-21L | S-21R | 49 | 50 | 500 |

| Material | Finish |
|------------------------------|--------|
| Steel, Brass, Nylon (washer) | Chrome |

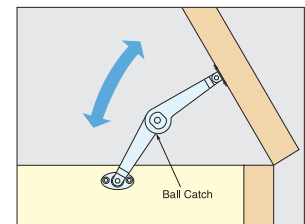
LID STAY (W/CATCH)



S-23



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



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

| Material | Finish |
|------------------------------|--------|
| Steel, Brass, Nylon (washer) | Chrome |

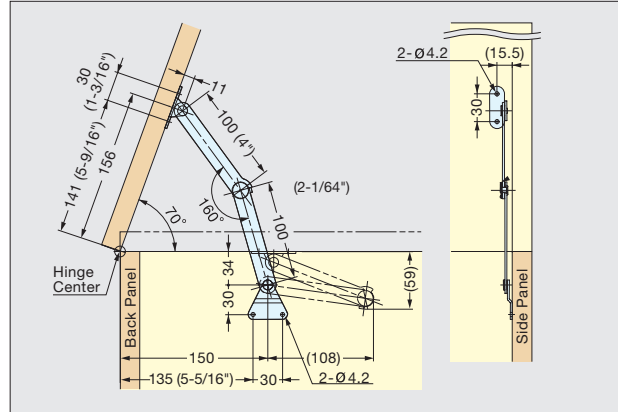
TORQUE LID STAY (FREE STOP)



S-100T30



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



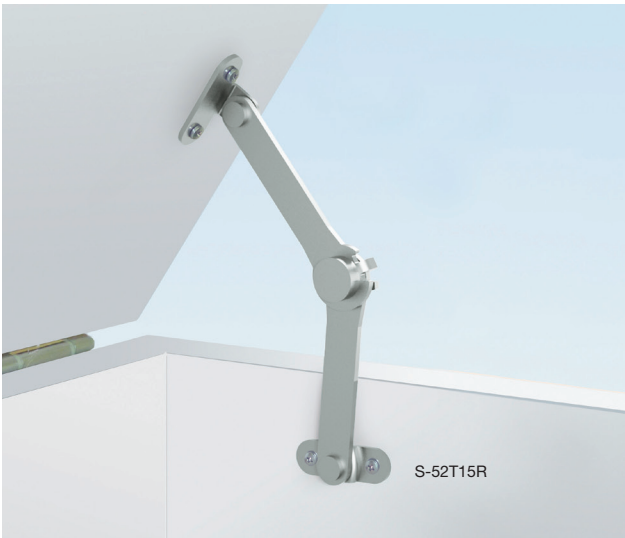
| Item No. | Handing | Torque per piece | Weight (g) | Box (pcs) | Carton (pcs) |
|-----------|---------|---------------------------------------|------------|-----------|--------------|
| S-100T30R | Right | 30.6 kg·cm ±20% (26.5 lbs·in ±20%) | 100 | 30 | 120 |
| S-100T30L | Left | | | | |

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

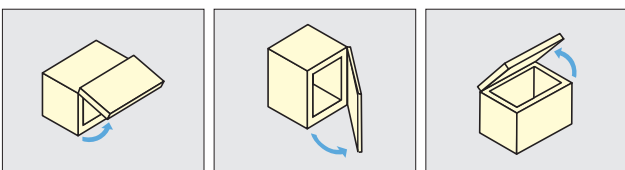
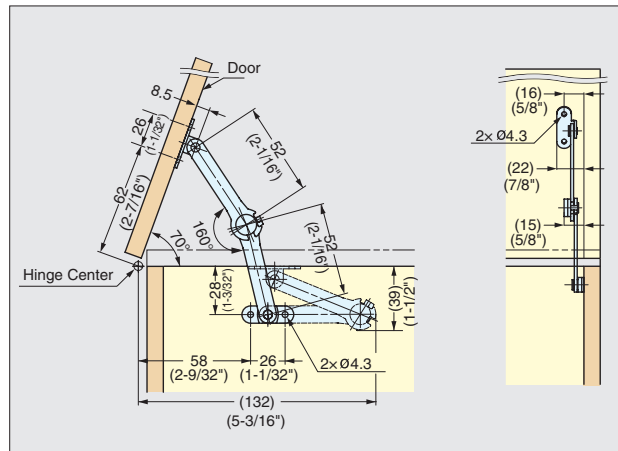
TORQUE LID STAY (FREE STOP)



S-52T15



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



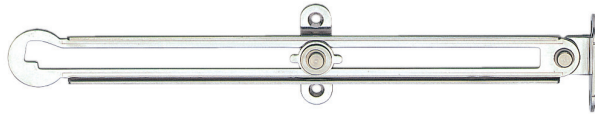
| Item No. | Handing | Torque per piece | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|---------|---------------------------------------|------------|-----------|--------------|
| S-52T15R | Right | 15.3 kg·cm ±20% (13.3 lbs·in ±20%) | 40 | 25 | 250 |
| S-52T15L | Left | | | | |

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

LID STAY

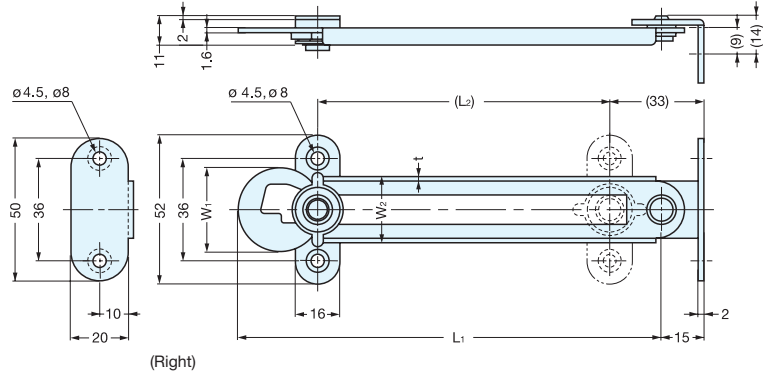
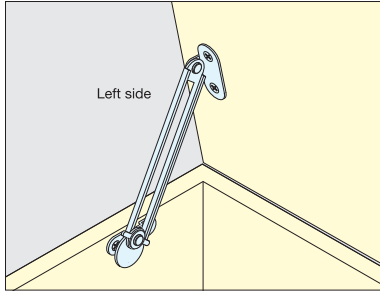


S-91, 92, 93



(Right)

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



| Material | Finish |
|---------------------|----------|
| 304 Stainless Steel | Polished |

| Item No. | | L ₁ | (L ₂) | W ₁ | W ₂ | t | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|-------|-------------------|-------------------|----------------|----------------|-----|--------------------|------------|-----------|--------------|
| Left | Right | | | | | | 40 (88 lbs) | 120 | 100 | 1000 |
| S-91L | S-91R | 277 (10-29/32") | 230 | 30 | 24 | 2 | | 85 | 30 | 180 |
| S-92L | S-92R | 198 (7-51/64") | 152 | 28 | 23 | 1.5 | 30 (66 lbs) | 75 | 60 | 240 |
| S-93L | S-93R | 150 (5-29/32") | 105 | | | | | | | |

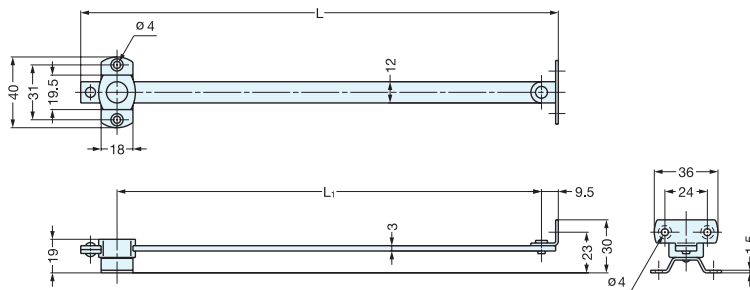
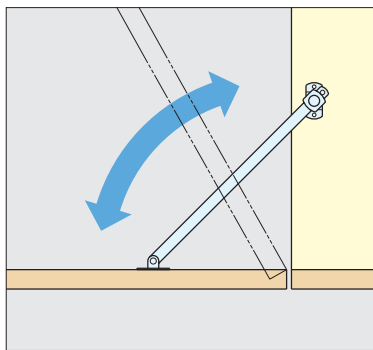
LID STAY



HS



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



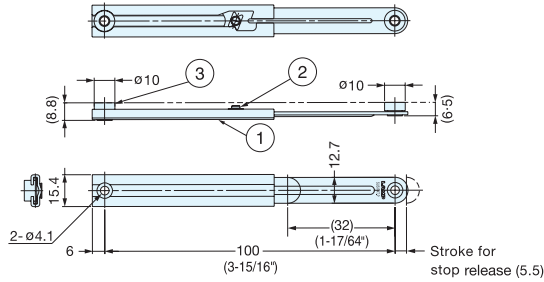
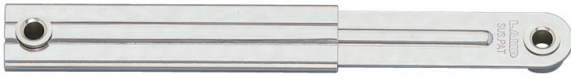
| Material | Finish/Color |
|---------------------|--------------|
| 304 Stainless Steel | Satin |
| Polyamide | White |

| Item No. | L | L ₁ | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|------------------|------------------|--------------------|------------|-----------|--------------|
| HS-180 | 210 (8-17/64") | 180 (7-3/32") | 10 (22 lbs) | 80 | 20 | 220 |
| HS-210 | 240 (9-29/64") | 210 (8-17/64") | 12 (26.5 lbs) | 90 | | |
| HS-240 | 270 (10-5/8") | 240 (9-29/64") | 13 (28.5 lbs) | 100 | | |

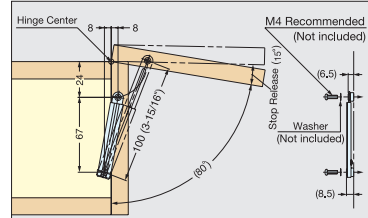
ULTRA MINI LID STAY



L-100S



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



*Lid stay must be installed parallel to the sidewall.

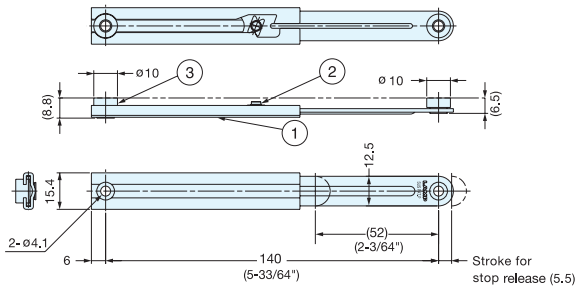
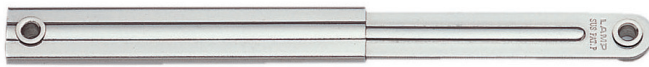
| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|--------------------|------------|-----------|--------------|
| L-100S | 6 (13.2 lbs) | 31 | 30 | 300 |

| No. | Part Name | Material | Finish |
|-----|-----------|---------------------|----------|
| ① | Housing | 304 Stainless Steel | Polished |
| ② | Washer | Polyamide | - |
| ③ | Bracket | 303 Stainless Steel | - |

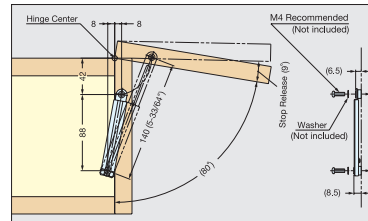
ULTRA MINI LID STAY



L-140S



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



*Lid stay must be installed parallel to the sidewall.

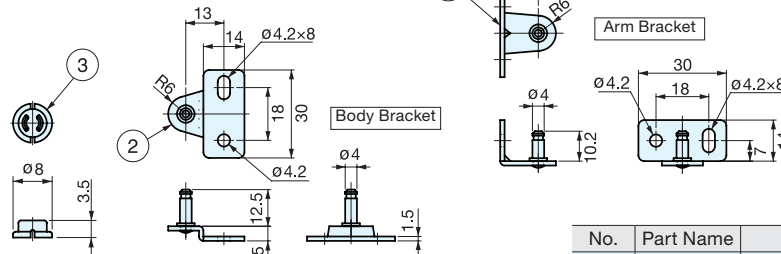
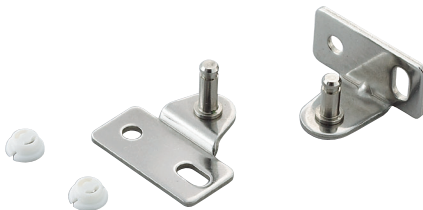
| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|--------------------|------------|-----------|--------------|
| L-140S | 6 (13.2 lbs) | 38 | 30 | 300 |

| No. | Part Name | Material | Finish |
|-----|-----------|---------------------|----------|
| ① | Housing | 304 Stainless Steel | Polished |
| ② | Washer | Polyamide | - |
| ③ | Bracket | 303 Stainless Steel | - |

MOUNTING BRACKET



L-S-BT



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

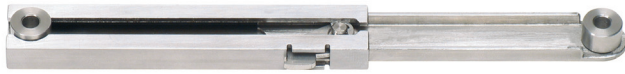
| Item No. | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|------------|-----------|--------------|
| L-S-BT | 20 | 30 | 300 |

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

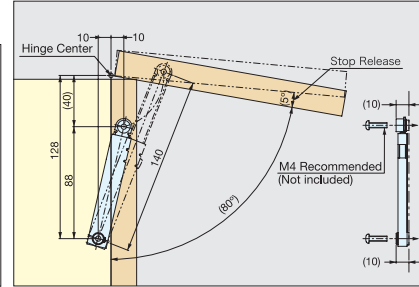
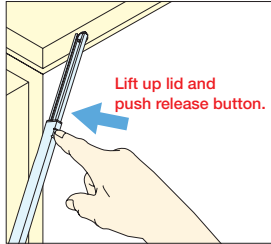
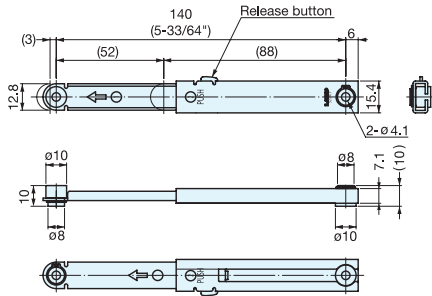
MINI LID STAY (W/LOCK)



L-SL140



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



*Lid stay must be installed parallel to the sidewall.

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

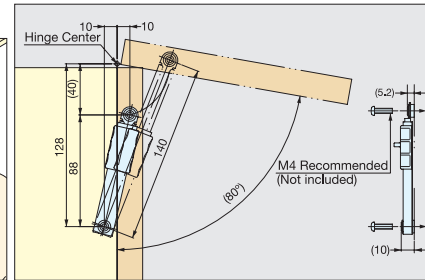
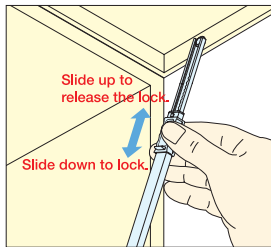
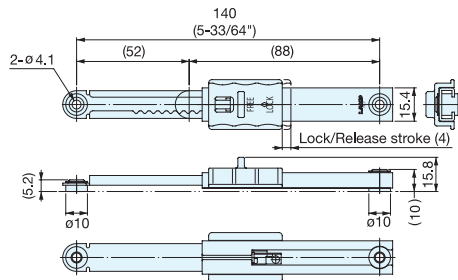
MINI LID STAY (W/LOCK)



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.



*Lid stay must be installed parallel to the sidewall.

| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) | Material | Finish |
|----------|--------------------|------------|-----------|--------------|-----------------------------------|-----------------------|
| L-FS140 | 6 (13.2 lbs) | 50 | 20 | 200 | 304 Stainless Steel Polyacetal | Polished Dark Grey |

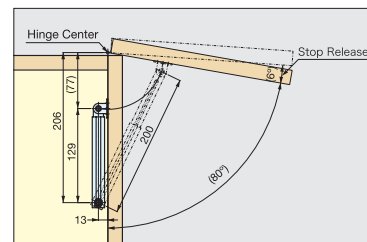
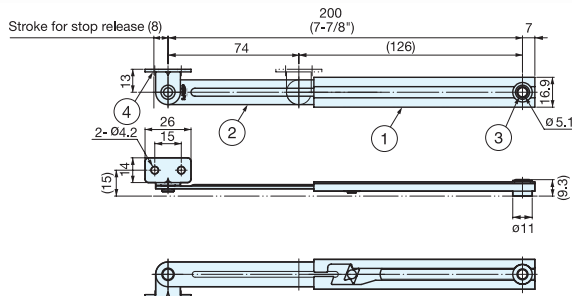
LOW PROFILE LID STAY



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.



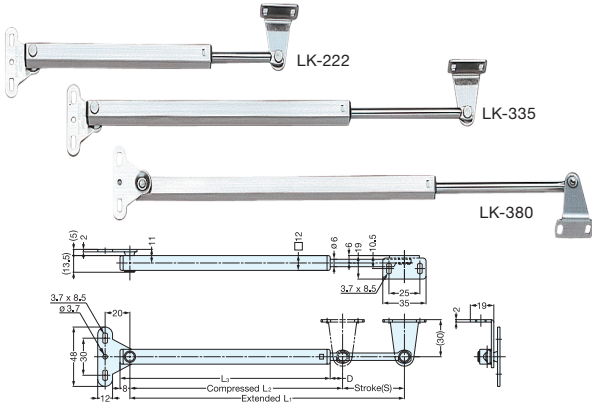
*Lid stay must be installed parallel to the sidewall.

| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) | No. | Part Name | Material | Finish |
|----------|--------------------|------------|-----------|--------------|-----|----------------|---------------------|----------|
| L-200P | 15 (33 lbs) | 65 | 30 | 300 | ① | Housing | 304 Stainless Steel | Plain |
| | | | | | ② | Arm | 304 Stainless Steel | Plain |
| | | | | | ③ | Hosing Bracket | 303 Stainless Steel | Plain |
| | | | | | ④ | Arm Bracket | 304 Stainless Steel | Polished |

LID STAY

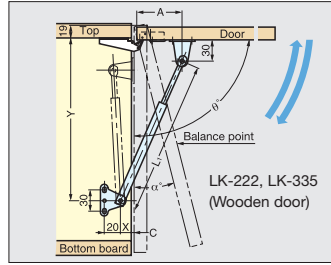


LK

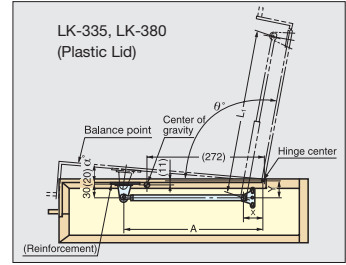


- Spring mechanism assists lifting door and holds in open position.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.

Mounting Example (1)



Mounting Example (2)



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

| Material | Finish |
|--------------------------|--------|
| 303, 304 Stainless Steel | Satin |

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

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

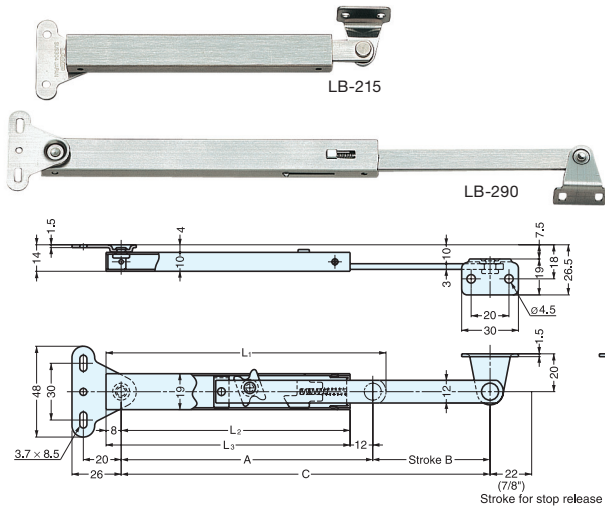
| Item No. | Max. Door Weight (kg) | Door Opening (θ°) | - (α°) | L ₁ | A | X | Y |
|----------------|-----------------------|-------------------|--------|-----------------|-----------------|---------------|---------------|
| LK-335 (2 pcs) | 2.5 (5.5 lbs) | 90 | 0.5 | 335 (13-3/16") | 295 (11-39/64") | 45 (1-25/32") | 38 (1-1/2") |
| | 3 (6.6 lbs) | 90 | 14 | 335 (13-3/16") | 295 (11-39/64") | 45 (1-25/32") | 38 (1-1/2") |
| | 3.3 (7.2 lbs) | 85 | 12 | 335 (13-3/16") | 295 (11-39/64") | 45 (1-25/32") | 44 (1-47/64") |
| LK-380 (2 pcs) | 2.5 (5.5 lbs) | 110 | 8 | 380 (14-31/32") | 330 (13") | 40 (1-37/64") | 36 (1-27/64") |
| | 3 (6.6 lbs) | 90 | 3.5 | 380 (14-31/32") | 335 (13-3/16") | 55 (2-5/32") | 44 (1-47/64") |
| | 4 (8.8 lbs) | 90 | 4 | 380 (14-31/32") | 320 (12-19/32") | 41 (1-39/64") | 59 (2-21/64") |
| | 4.3 (9.4 lbs) | 80 | 7.5 | 380 (14-31/32") | 335 (13-3/16") | 56 (2-13/64") | 60 (2-23/64") |

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

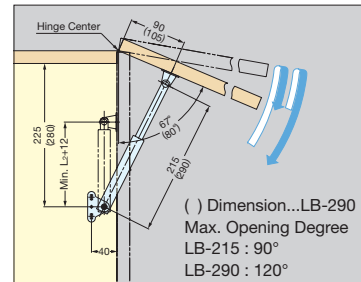
LID STAY



LB-215, 290



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



*Lid stay must be installed parallel to the sidewall.

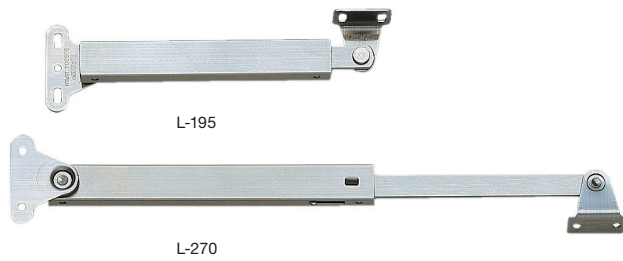
| Material | Finish |
|--------------------------------|--------------|
| Zinc Alloy/304 Stainless Steel | Chrome/Satin |

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

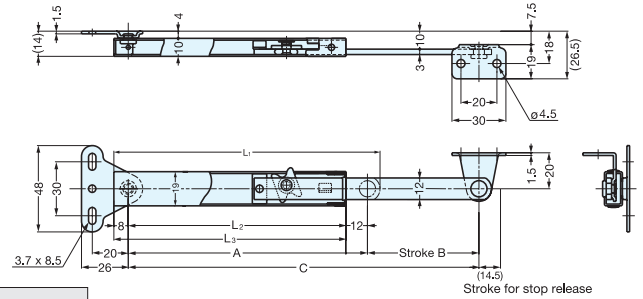
LID STAY



L

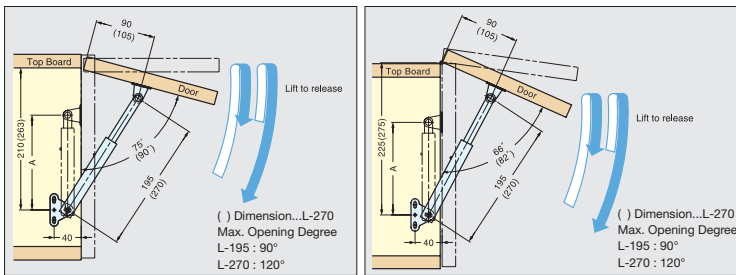


- Holds lid or panel in fully opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Load Capacity : 15 kg (33 lbs)/each.



With Concealed Hinge

With Piano/Butt Hinge



*Lid stay must be installed parallel to the sidewall.

| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

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

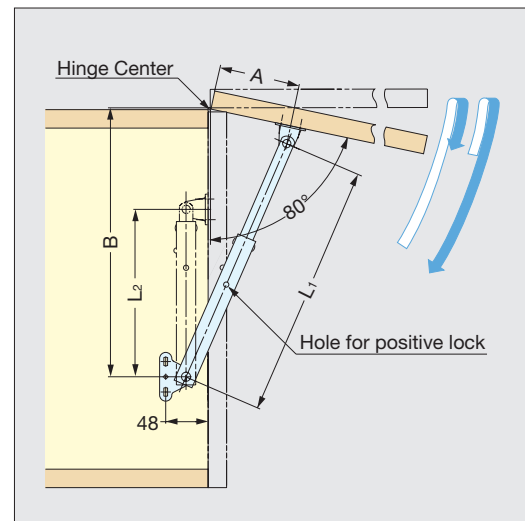
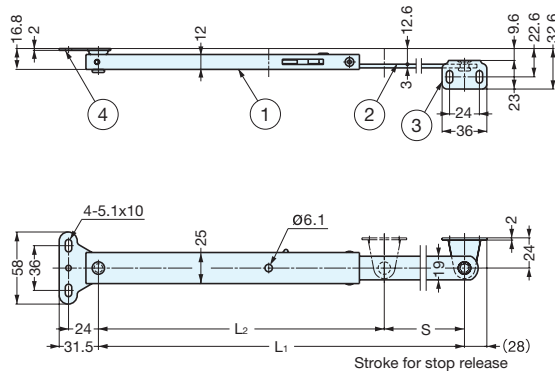
LID STAY



LB



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



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

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

LID STAY (CLEAN ROOM)

LOAD CAPACITY
15 kg
33 lbs

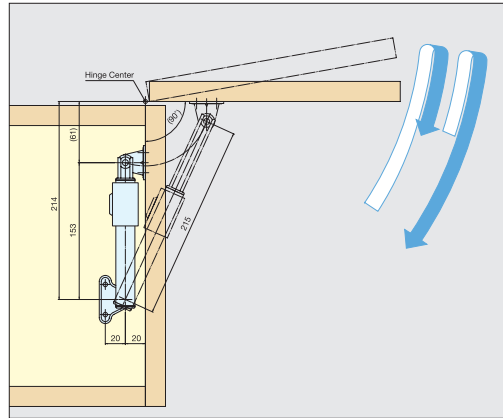
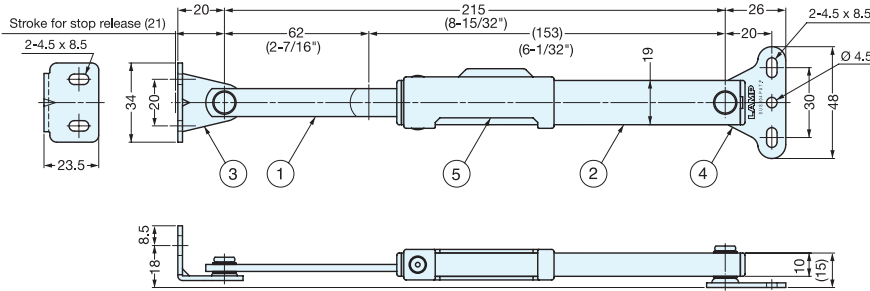
NO SCREW

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 clean room, semiconductor and food industry applications.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.



*Lid stay must be installed parallel to the sidewall.

| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) | Material | Finish/Color |
|-----------|--------------------|------------|-----------|--------------|---------------------|--------------|
| LB-CV215A | 15 (33 lbs) | 150 | 10 | 100 | 304 Stainless Steel | Plain |
| | | | | | ABS | White |

CLEAN ROOM HARDWARE



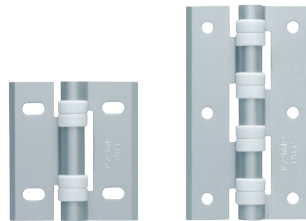
MC-JM45WT

Please see page 106 for details



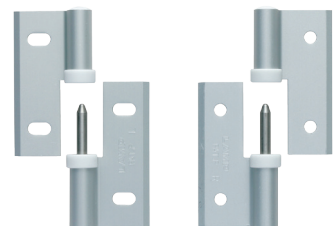
MC-JM63G

Please see page 106 for details



HG-CV

Please see page 224 for details



HG-CV-65N

Please see page 227 for details

HEAVY DUTY LID STAY

LOAD CAPACITY
97-133 kg
214-293 lbs

NO SCREW

STAINLESS 304 STEEL

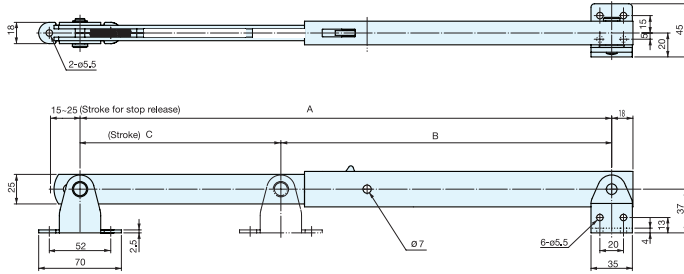
LB-S



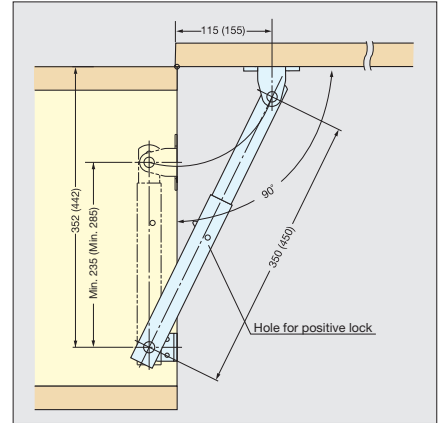
LB-S350



LB-S450



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



Measurements above in () are for LB-S450.

*Lid stay must be installed parallel to the sidewall.

| | |
|---------------------|--------|
| Material | Finish |
| 304 Stainless Steel | Satin |

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

HEAVY DUTY MULTI-ANGLE LID STAY

RoHS

TEST 15
P.660

LOAD CAPACITY
70 kg
154 lbs

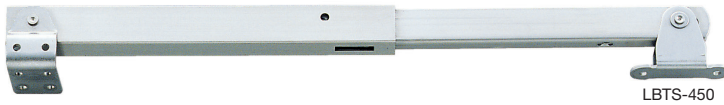
NO SCREW

STAINLESS 304 STEEL

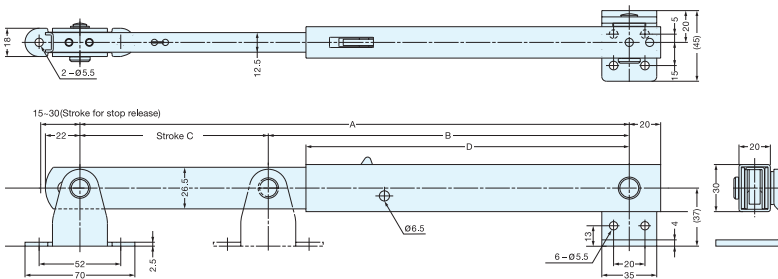
LBTS



LBTS-350

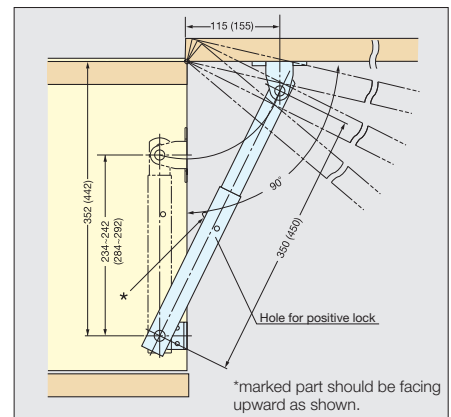


LBTS-450



Above drawing shows LBTS left-hand mounting.

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



Measurements above in () are for LBTS-450R.

*Lid stay must be installed parallel to the sidewall.

| | |
|---------------------|--------|
| Material | Finish |
| 304 Stainless Steel | Satin |

| Item No. | | (A) | B | C | D | Stop Positions | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|-----------|-----------|-----------------|----------------|----------------|----------------|----------------|--------------------|------------|-----------|--------------|
| Left | Right | | | | | | | | | |
| LBTS-350L | LBTS-350R | 350 (13-25/32") | 230 (9-1/16") | 120 (4-23/32") | 206 (8-7/64") | 4 | 70 (154 lbs) | 715 | 5 | 20 |
| LBTS-450L | LBTS-450R | 450 (17-25/32") | 280 (11-1/32") | 170 (6-11/16") | 256 (10-5/64") | 6 | | 820 | | |

MULTI-ANGLE LID STAY (W/LOCK)

LOAD CAPACITY
25 kg
55 lbs

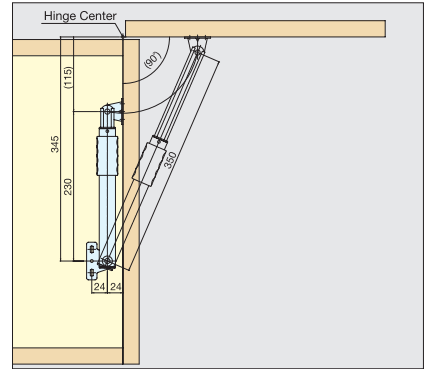
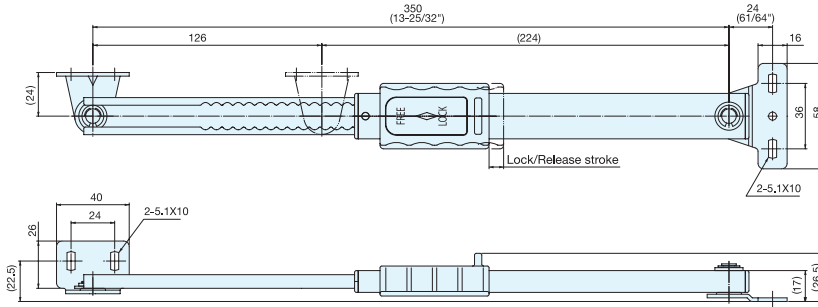
NO SCREW

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.



*Lid stay must be installed parallel to the sidewall.

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

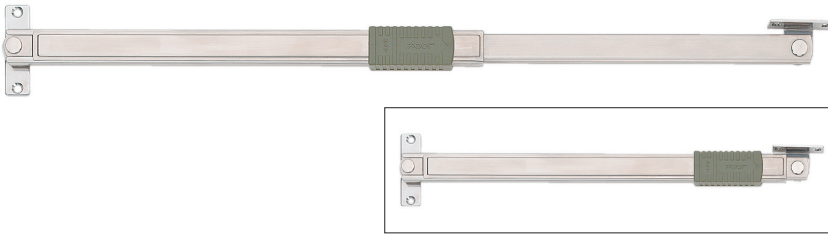
| Material | Finish/Color |
|---------------------|--------------|
| 304 Stainless Steel | Satin |
| Polyacetal | Dark Grey |

MULTI-ANGLE LID STAY

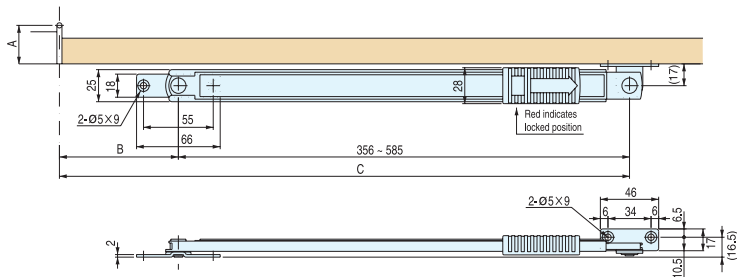
NO SCREW

STAINLESS 304 STEEL

U-3005



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



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

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

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

| Material | Finish/Color |
|---------------------|--------------|
| 304 Stainless Steel | Satin |
| Polyacetal | - |

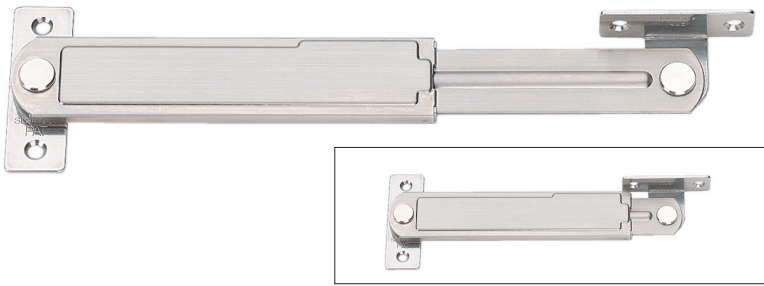
MULTI-ANGLE LID STAY

LOAD CAPACITY
7 kg
15 lbs

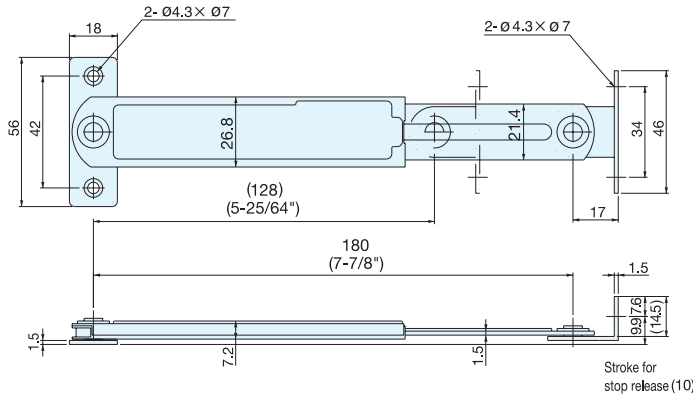
STAINLESS

STAINLESS 304 STEEL

U-3031



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



| | |
|---------------------|--------|
| Material | Finish |
| 304 Stainless Steel | Satin |

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

LID STAY (W/LOCK)

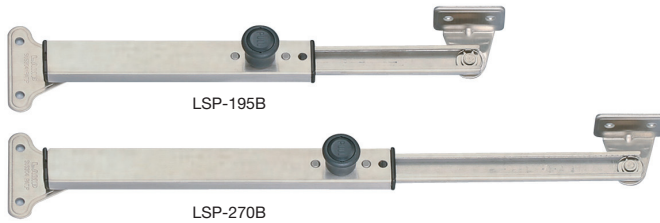
TEST 15
P.660

LOAD CAPACITY
30 kg
66 lbs

NO SCREW

STAINLESS 304 STEEL

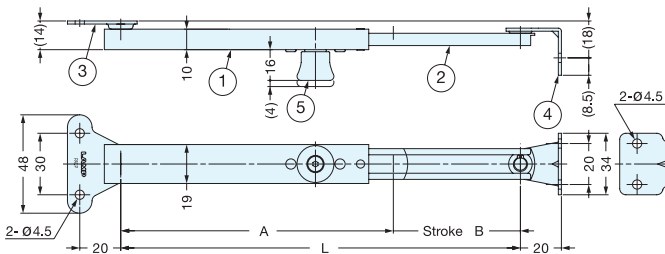
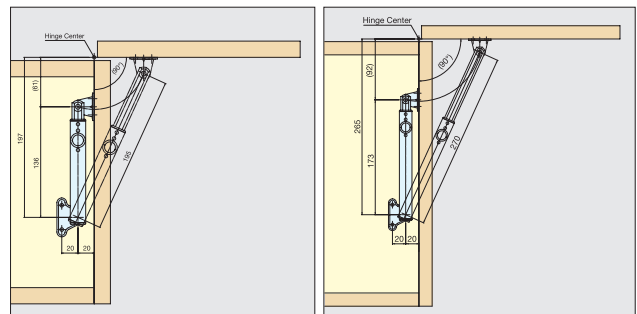
LSP



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

LSP-195B

LSP-270B



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

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

SPRING LOADED LID STAY

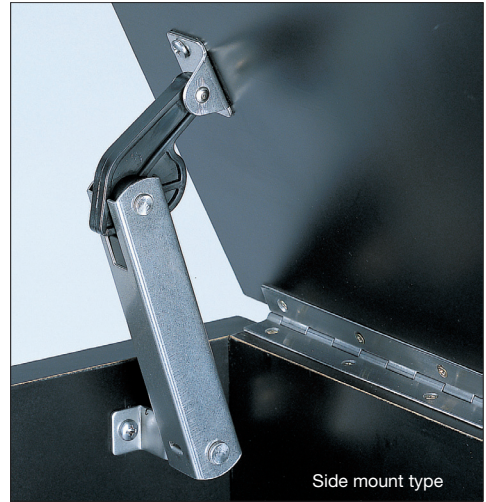


S-YT

LID SUPPORTS

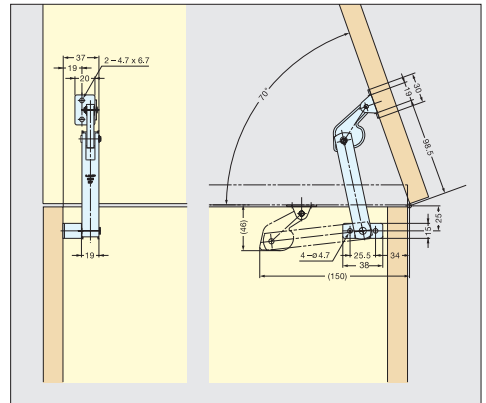
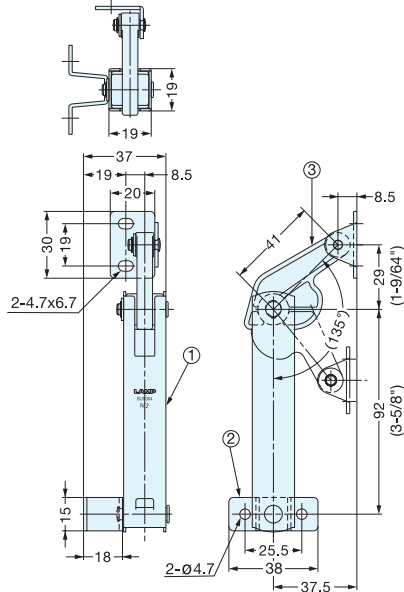
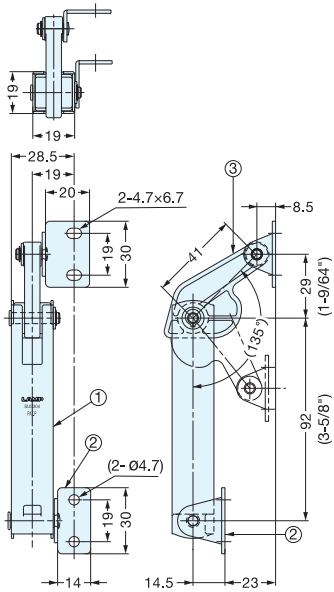
SPRING LOADED LID STAYS

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

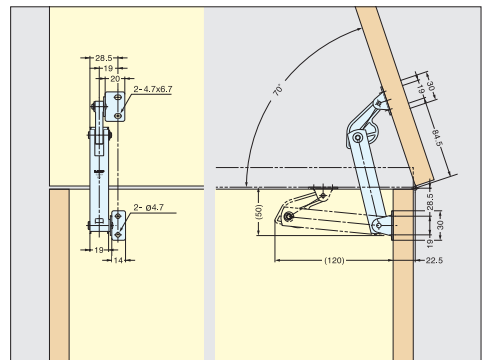


Back panel mount type

Side mount type
(Left handed shown)



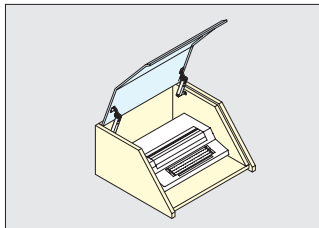
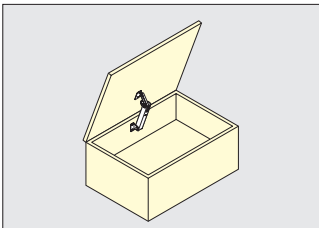
For side mount type



For back panel mount type

Back panel mount type

Side mount type



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

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

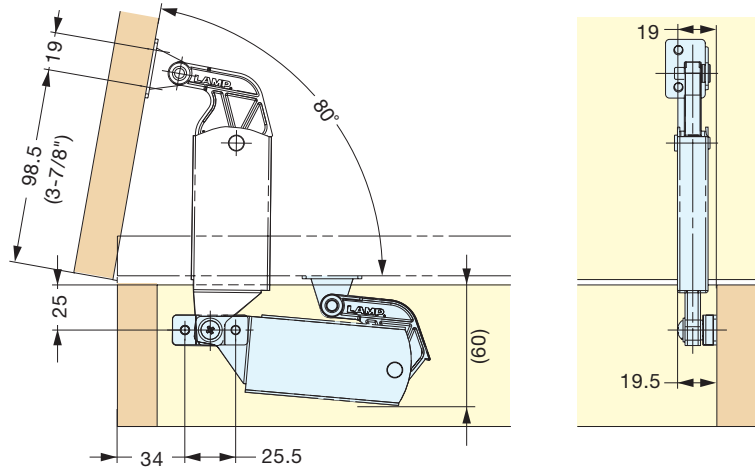
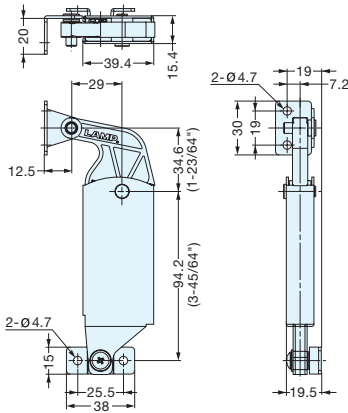
SPRING LOADED LID STAY



S-AT01, S-AT02



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



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

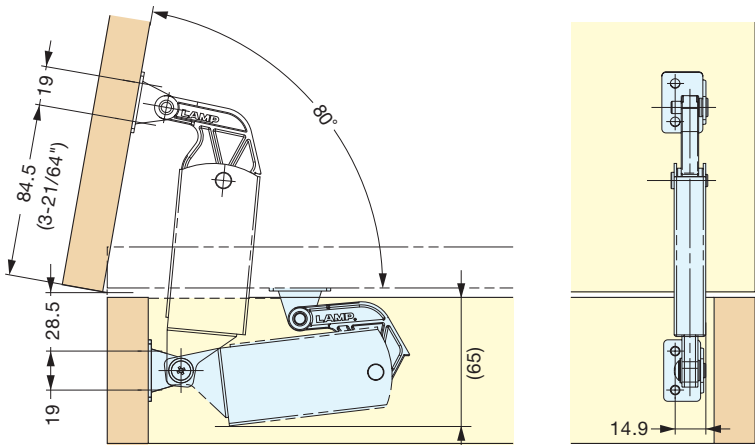
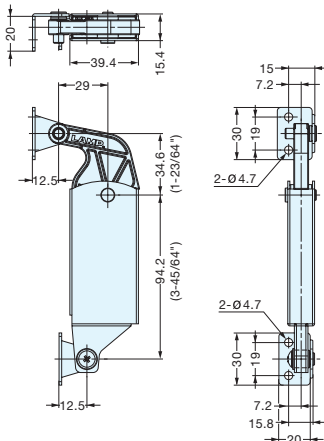
SPRING LOADED LID STAY



S-AT01S, S-AT02S



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



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

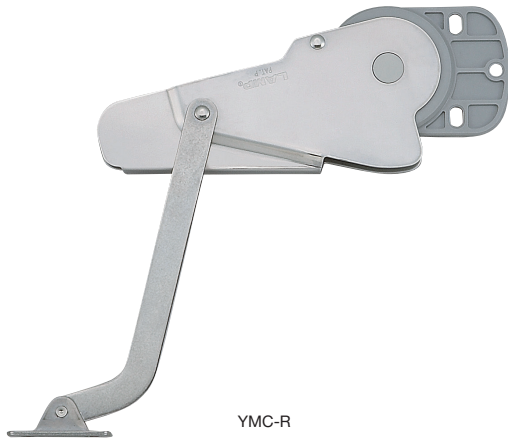
MINI-DOOR CLOSER (W/DAMPER)



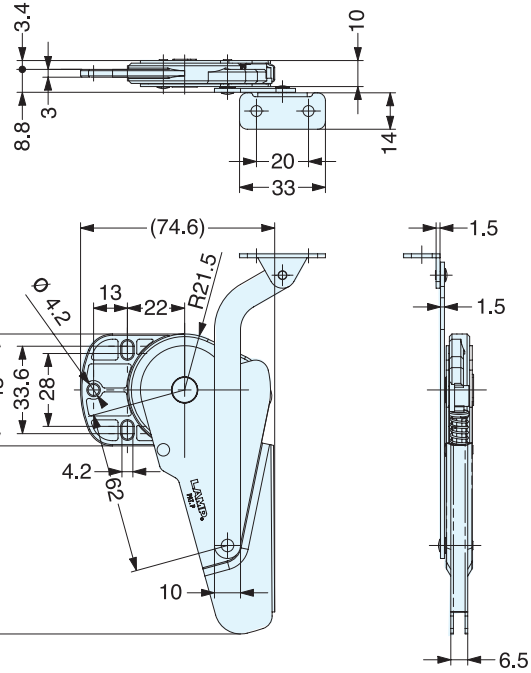
YMC

LID SUPPORTS

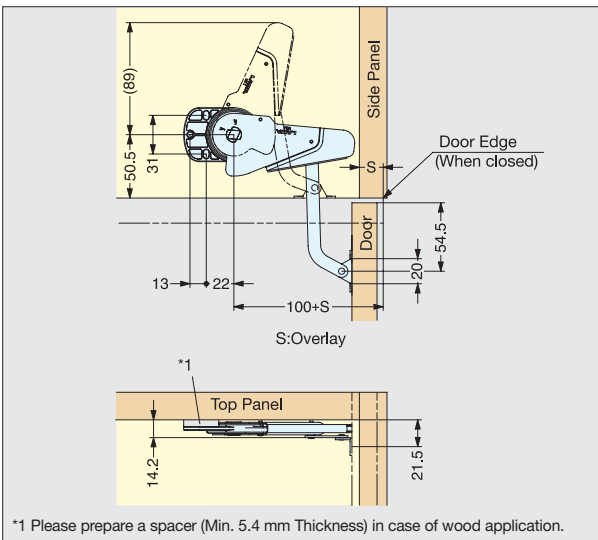
MINI-DOOR CLOSERS (W/DAMPER)



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

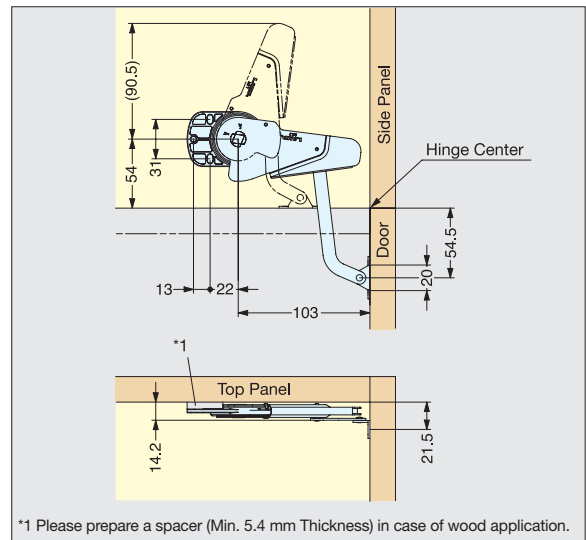


YMC-R model



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

Installation (With Concealed Hinge)



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

Installation (With Piano/Butt Hinge)

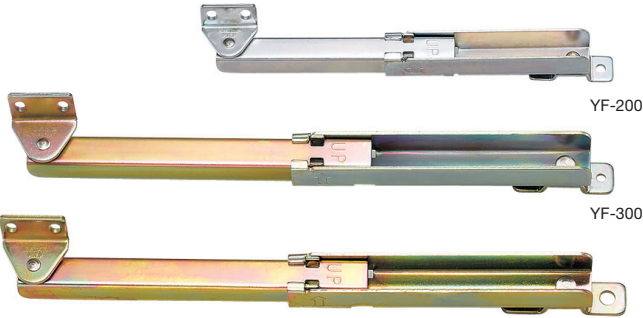
| Item No. | | Opening Angle | Door Weight (kg) (0.66~1.54 lbs) | Door Width (mm) (11-13/16") | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|-------|---------------|-------------------------------------|--------------------------------|------------|-----------|--------------|
| Left | Right | | | | | | |
| YMC-L | YMC-R | 0°~90° | | Max. 300 (11-13/16") | 103 | 50 | 500 |

| Material | Finish/Color |
|--------------------------|--------------|
| PBT, 304 Stainless Steel | Grey, Plain |

FOOT STAYS



YF

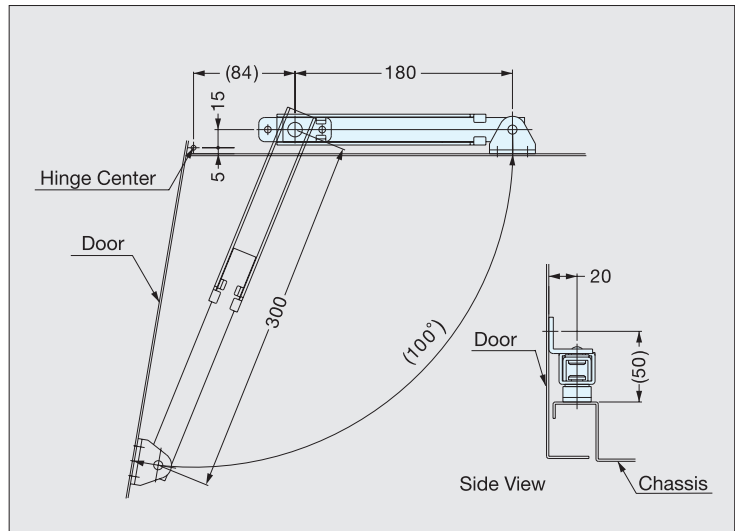
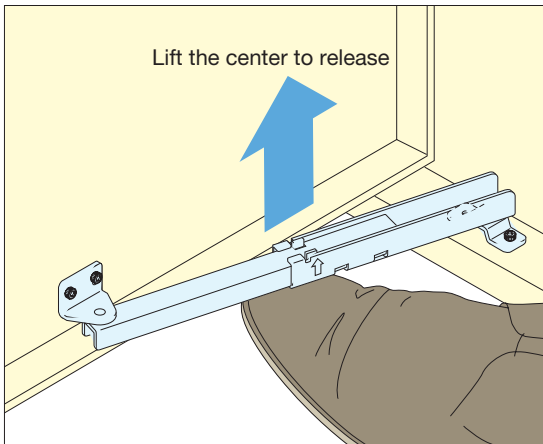
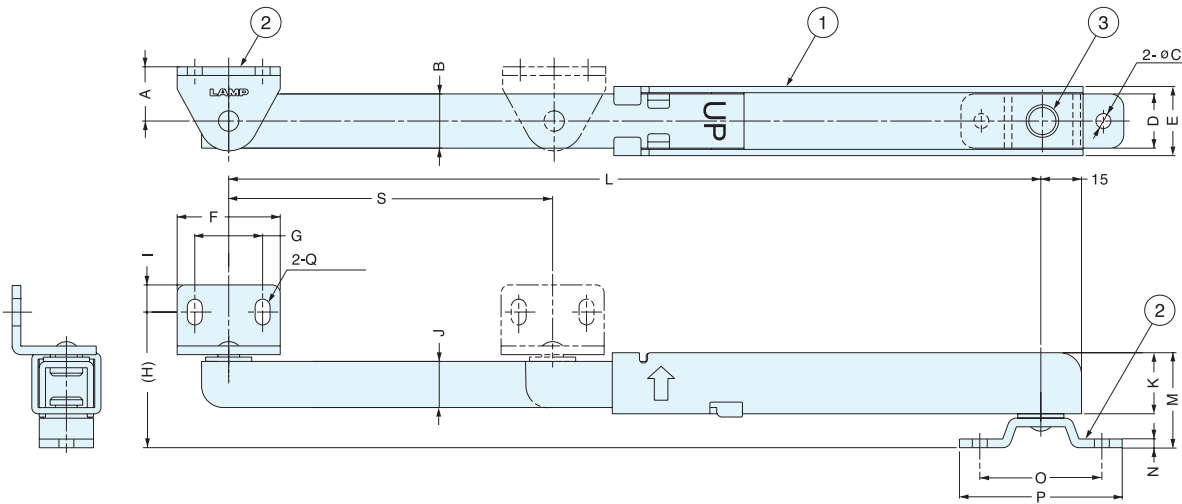


YF-200

YF-300

YF-300-T50

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



| Item No. | L | S | A | B | C | D | E | F | G | (H) | I | J | K | M | N | O | P | Q |
|------------|-----------------|----------------|----|------|-----|----|------|----|----|-----|----|------|------|----|-----|----|----|---------|
| YF-200 | 200 (7-7/8") | 70 (2-3/4") | 15 | 15.9 | 5.5 | 17 | 20 | 33 | 20 | 42 | 8 | 15.7 | 20 | 30 | 2.3 | 35 | 50 | 5.5 x 8 |
| YF-300 | 300 (11-13/16") | 120 (4-23/32") | 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 | | | | | 9 | | | | | | | | | | | 50 | 72 | |
| YF-300W | | | | | 5.5 | | | | | | | | | | | 45 | 60 | |

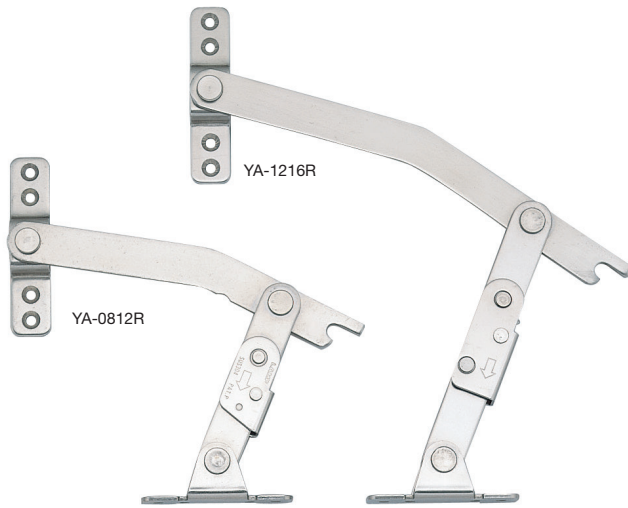
| Item No. | Tensile Force (kg) | Compression Load (kg) | Weight (kg) | Box (pcs) | Carton (pcs) | No. | Part Name | Material | Finish |
|------------|--------------------|-----------------------|-------------|-----------|--------------|-----|-----------|---------------------|----------------------|
| YF-200 | Max. 90 (198 lbs) | Max. 50 (110 lbs) | 205 | 10 | 100 | ① | Body | Steel | Yellow Zinc Chromate |
| YF-300 | Max.150(330 lbs) | Max. 60 (132 lbs) | 452 | 5 | 30 | ② | Bracket | | |
| YF-300-T50 | | | 460 | | | ③ | Pin | 304 Stainless Steel | - |
| *YF-300W | | | 452 | | | | | | |

*YF-300W : 2 stop (85°, 105°)

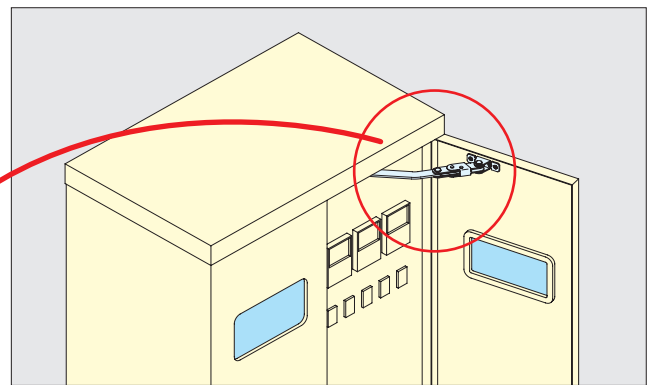
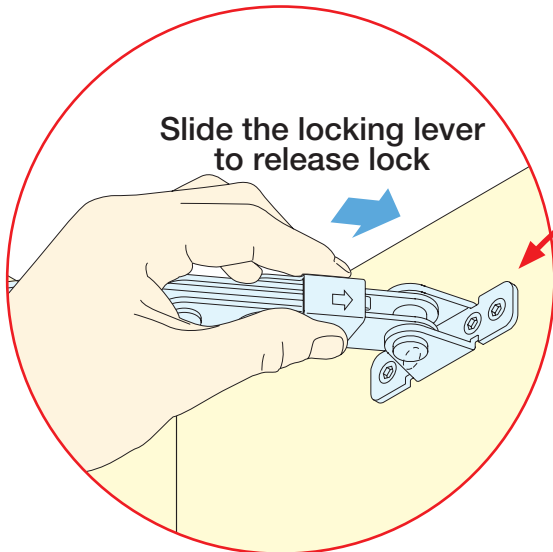
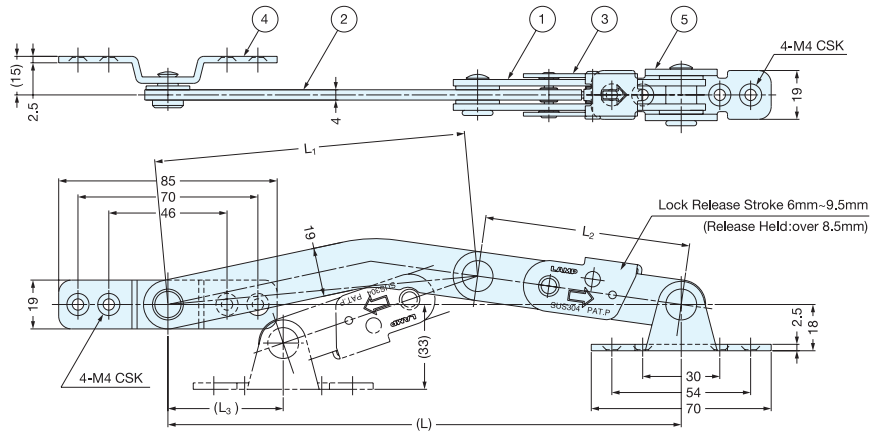
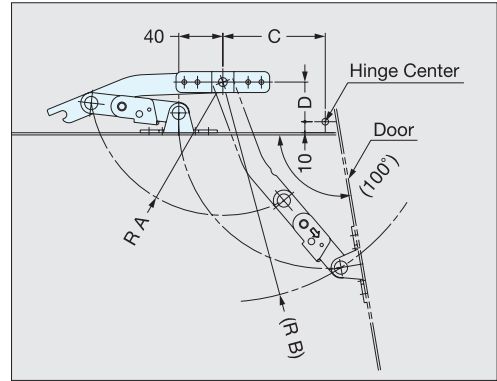
DOOR HOLDER



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-handed and Right-handed models available.



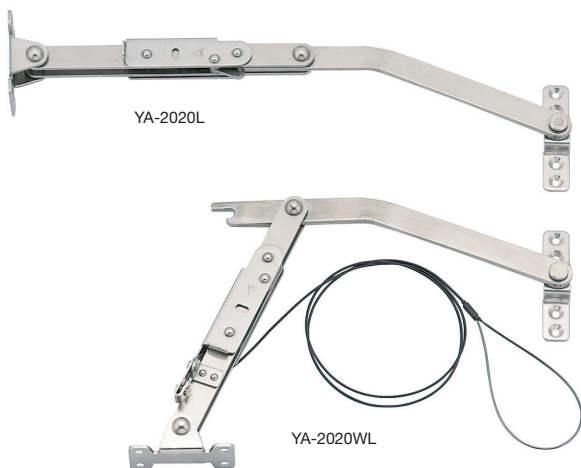
| No. | Part Name | Material | Finish |
|-----|--------------|---------------------|----------|
| ① | Outer Plate | 304 Stainless Steel | Polished |
| ② | Arm | | |
| ③ | Slide Grip | | |
| ④ | Arm Bracket | | |
| ⑤ | Base Bracket | | |

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

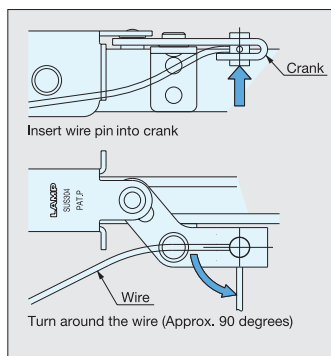
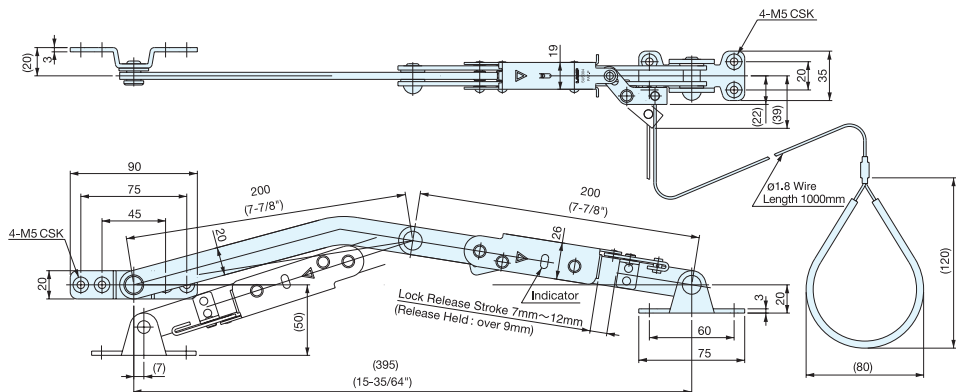
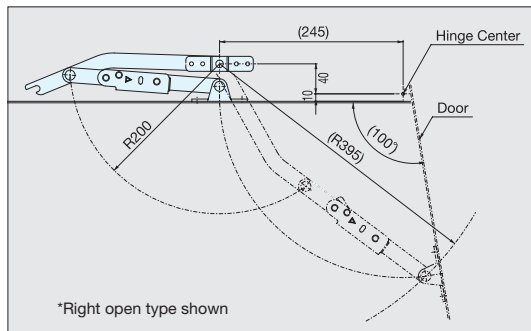
DOOR HOLDER



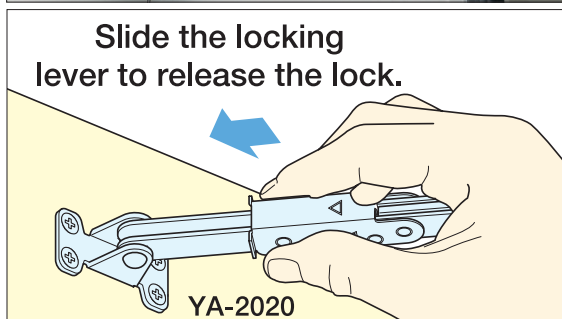
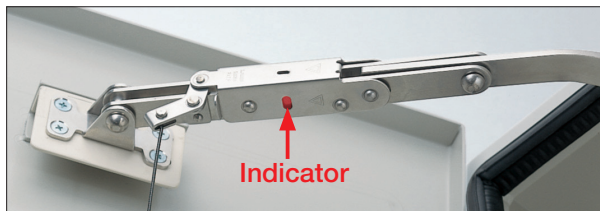
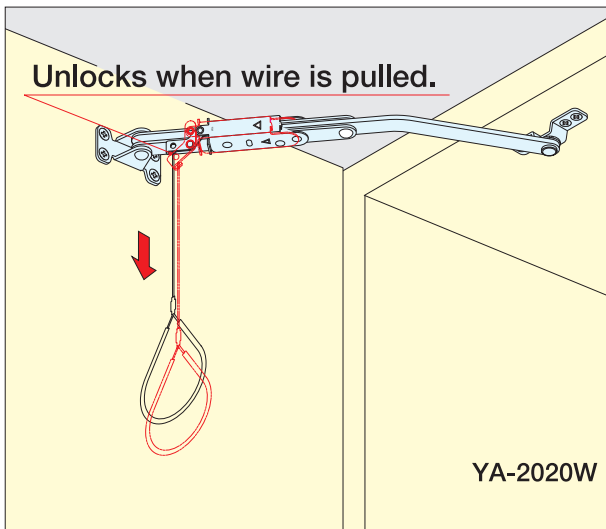
YA-2020, 2020W



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



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



| | |
|---------------------|----------|
| Material | Finish |
| 304 Stainless Steel | Polished |

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