



LID SUPPORTS

SOFT-DOWN STAYS

VERTICAL SWING LIFT-UP MECHANISM

HORIZONTAL BI-FOLD DOOR MECHANISM

SOFT CLOSING SYSTEM

LID STAYS

SPRING LOADED LID STAYS

MULTI ANGLE LID STAYS

DOOR HOLDERS

LAPCON/SOFT CLOSING STAYS

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

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

LID STAYS

| Picture | Item No. | Torque (in-lbs) or Door weight (lbs) | Page |
|---------|----------------------|--------------------------------------|------|
| | F-100, 150, 200, 250 | - | 360 |
| | F-300 | - | 360 |
| | S-6, S-16 | - | 361 |
| | S-20 | - | 361 |
| | S-21 | - | 362 |

LID STAYS

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

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

SPRING LOADED LID STAYS

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

DOOR CLOSERS / DOOR HOLDERS

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



= Soft & Smooth Movement

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

LID SUPPORTS



Downward-Opening Lids

Secretary Desks * Keyboard Trays * Media Cabinets

With catch in closed position:

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

Without catch in closed position:

- SDS-100, SDS-100TV

Use with:

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



Upward-Opening Lids

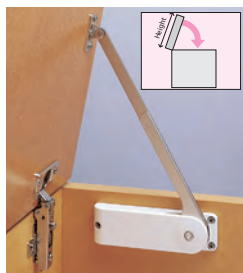
Upper Kitchen & Bath Cabinets * Display Boxes

With catch in open position:

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

Use with:

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



Top-Opening Lids

Toy Boxes & Chests * Display Cases * Access Panels

With catch in open position:

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

Use with:

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

Torque Rating

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

Approximate lid weight can be calculated as follows

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

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

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

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

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

LAPCON

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

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

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

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

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

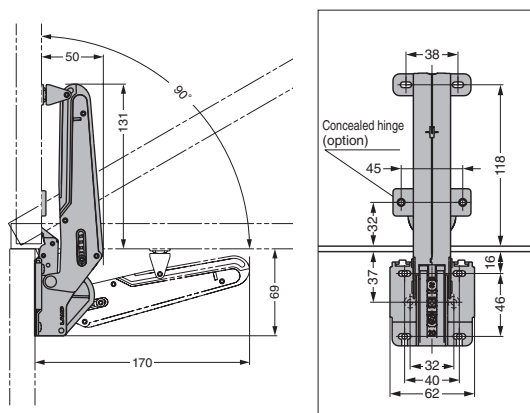
- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19).
- The lift-assist function allows for light opening of doors.
- The free-stop function enables doors to hold in position (30°-Max.).
- The soft-close function makes doors close gently (0°-30° degrees).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



| Components for a single door | | | |
|------------------------------|----------------------------|-----------|--------|
| | Aileron | 1 | |
| | Mounting plate for Aileron | 1 | |
| | Olympia Concealed Hinge | 2 | |
| | Mounting plate for Olympia | 1 | |
| | | | Screws |
| Olympia 8 | Aileron 6 | Aileron 2 | 16 |

| | | |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <p>Lift-assist Allows for light opening of doors</p> <p>Light opening</p> | <p>Free stop Enables doors to hold in position (30°-Max.).</p> <p>Holds in position</p> | <p>Soft close Built-in damper makes doors close slowly.</p> <p>Gently closing</p> |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|

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



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



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

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

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



ARN-3

LID SUPPORTS

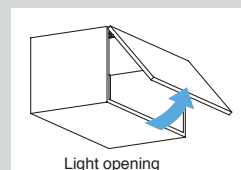
LID STAYS



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

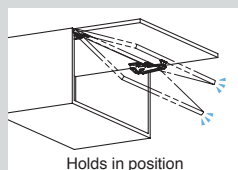
Lift-assist

Allows for light opening of doors



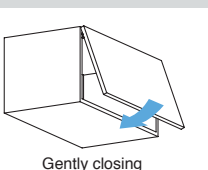
Free stop

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



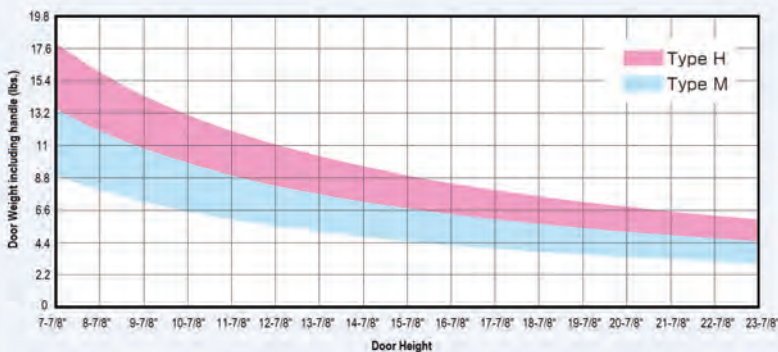
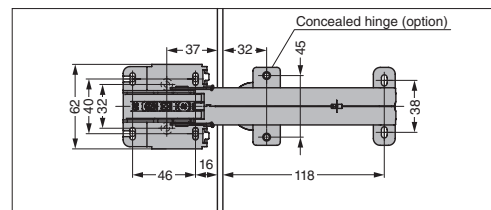
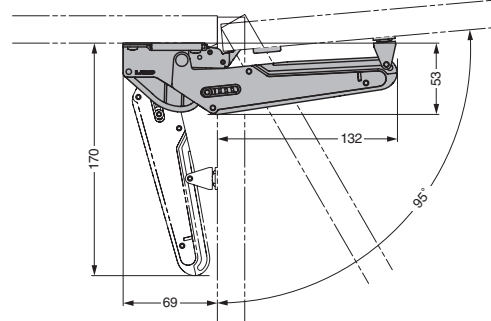
Soft close

Built-in damper makes doors close slowly.



Components for a single door

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



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

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

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

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

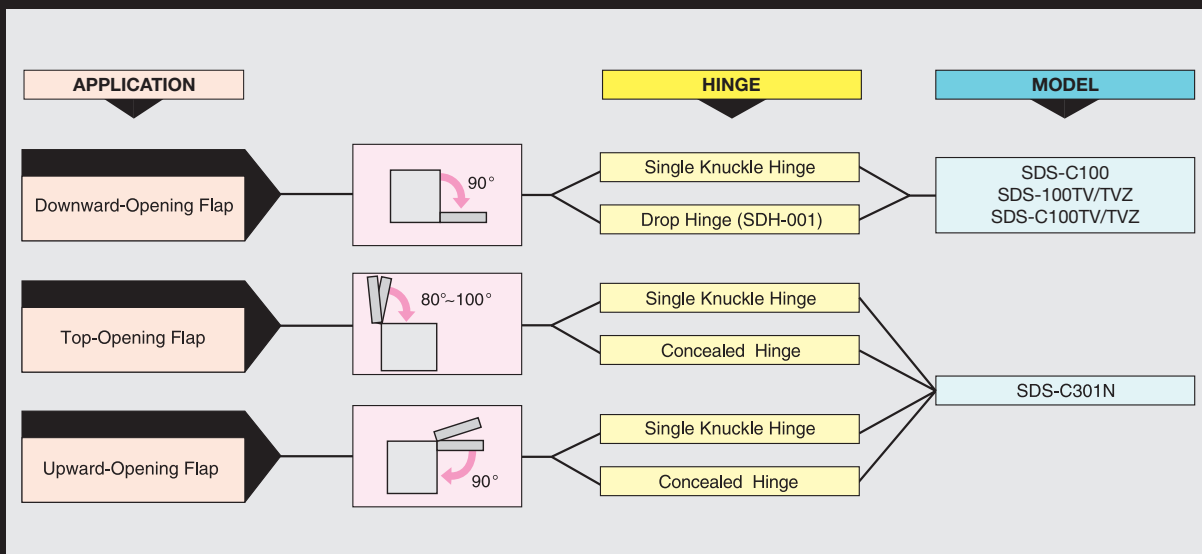
SDS

SOFT-DOWN STAY



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

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



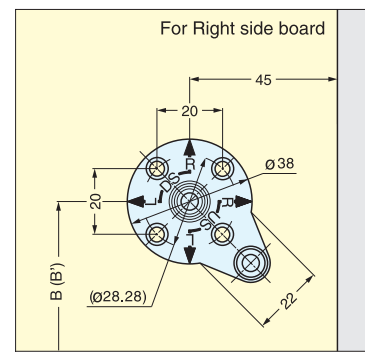
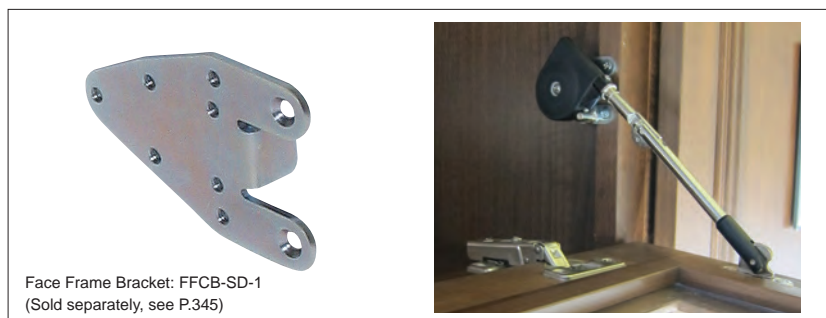
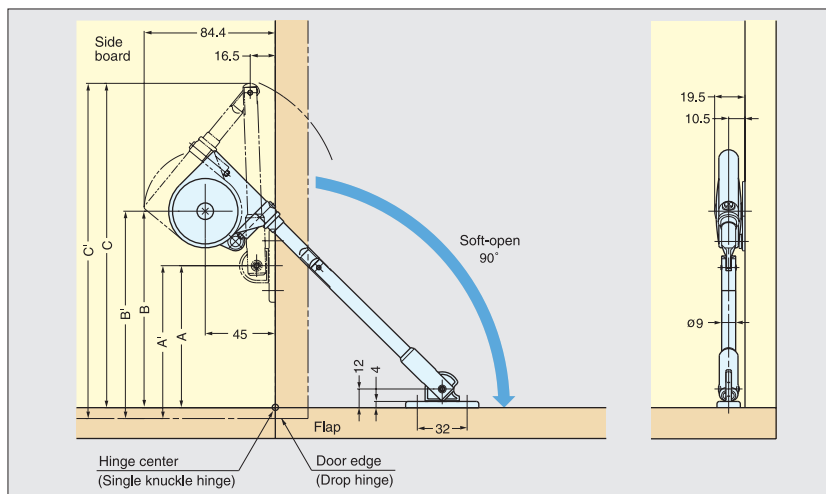
SOFT-DOWN STAY



SDS-C100



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



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

*Overlay: 16 mm (5/8")

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

SOFT-DOWN STAY



SDS-C301N



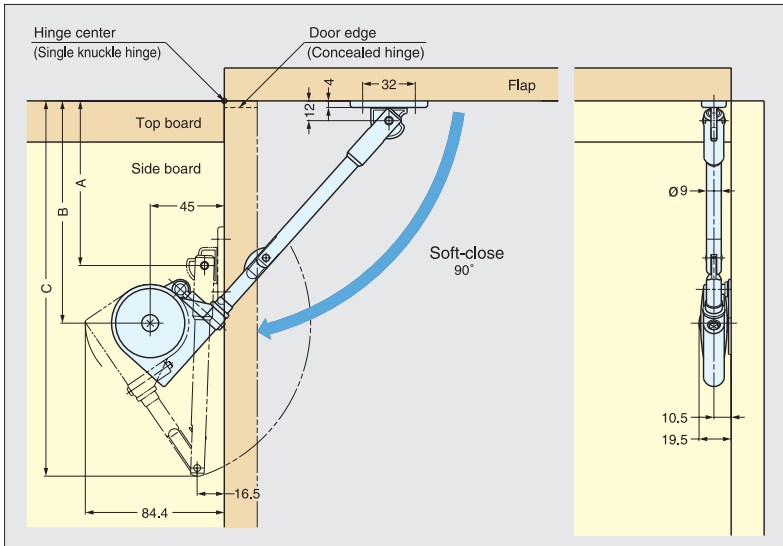
- For UPWARD-OPENING FLAP DOOR used with concealed, piano or butt hinges.
- SDS-C301N is designed to hold door in closed and opened position.
- Non-handed.
- Torque Calculation:
 Torque = Door Height × 1/2 × Door Weight
 Per Piece: 40~70 kg·cm (35~60 lbs·inch)
 Per Pair: 80~140 kg·cm (70~120 lbs·inch)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



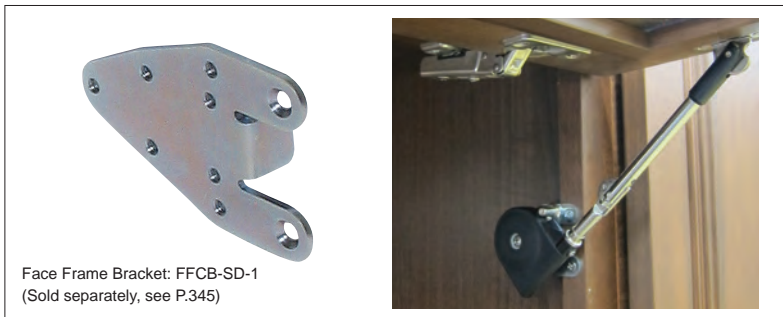
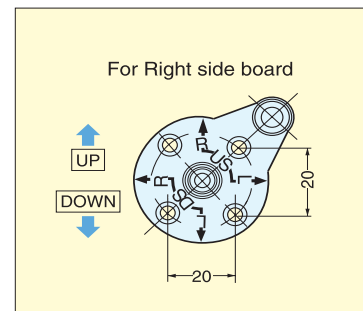
White



Black



Mounting Plate SDS-A (Included)



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

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

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

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

SOFT-DOWN STAY

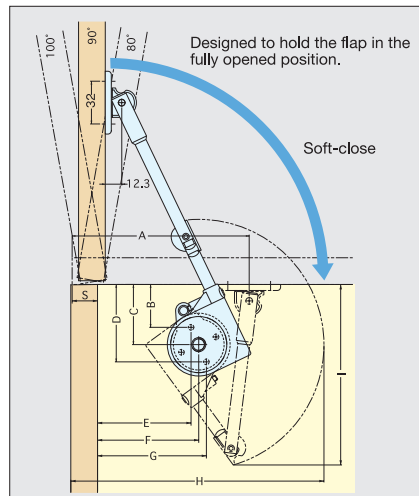


SDS-C301N

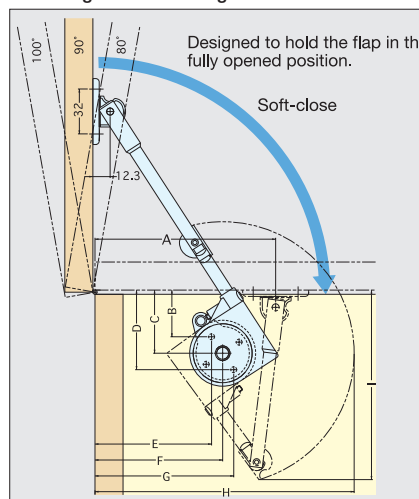


- For TOP-OPENING FLAP DOOR used with concealed, piano or butt hinges.
- Designed to hold door in fully opened position.
- Non-handed.
- Available in black or white.

With Concealed Hinge



With Single Knuckle Hinge



Concealed Hinge

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

Single Knuckle Hinge/Overlay Type

| Opening angle | A | B | C | D | E | F | G | H | I |
|---------------|-------|------|------|------|----|------|-----|---|---|
| | | | | | | | | | |
| 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

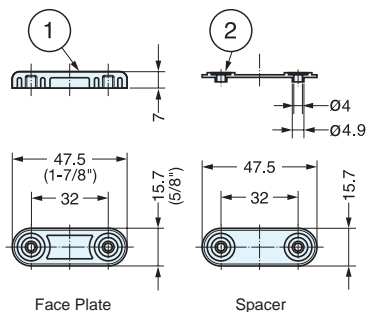
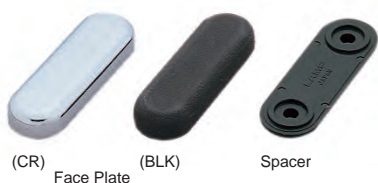
| Opening angle | A | B | C | D | E | F | G | H | I |
|---------------|-------|------|------|------|------|------|-------|---|---|
| | | | | | | | | | |
| 90° | 118.5 | 32.0 | 58.0 | 75.3 | 81.0 | 86.7 | 175.0 | | |
| 100° | 111.0 | 32.5 | 57.5 | 67.0 | 73.5 | 80.0 | 167.5 | | |

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

SDS FACE PLATE



SDS-50G



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

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

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



SOFT-DOWN STAY (SHORT-ARM)

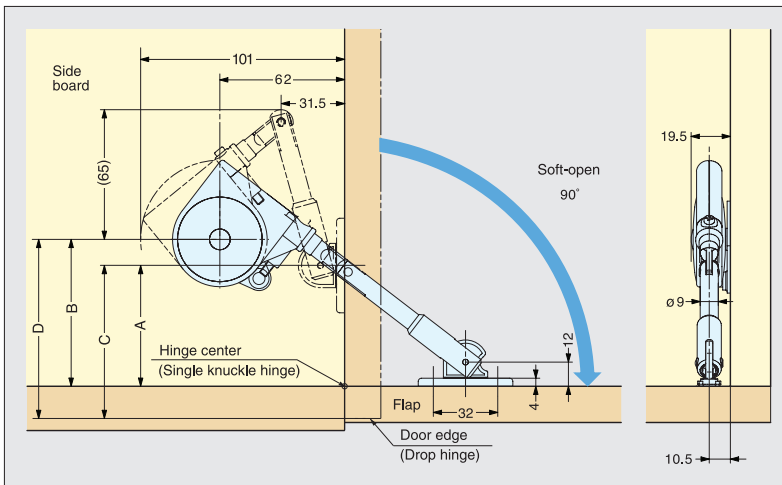
SDS-100-TV/TVZ

LID SUPPORTS

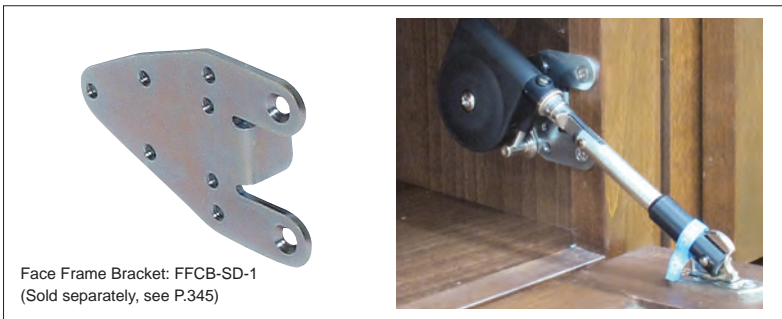
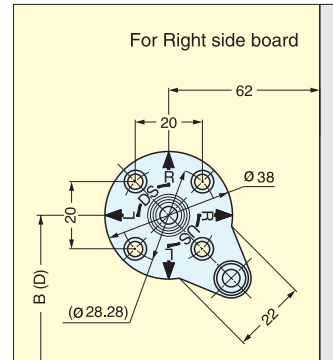
SOFT-DOWN STAYS



- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- Short arm type designed for short door applications.
- SDS-C100TV has a catch to hold the lid in closed position.
- SDS-100TV does not have catch feature. Designed to be used with magnetic catch or touch latch.
- Non-handed.
- Torque Calculation :
Torque = Door Height × 1/2 × Door Weight



Mounting Plate SDS-A (Included)



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

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

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

S=Overlay Coverage in case of drop hinge

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

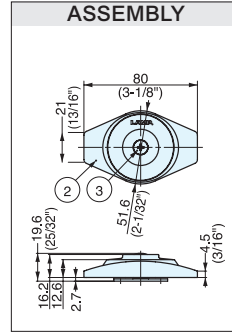
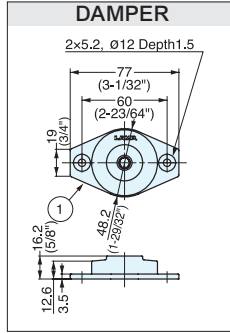
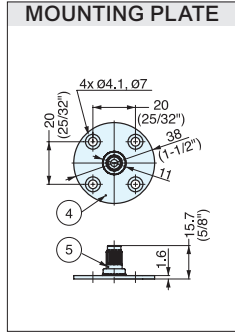
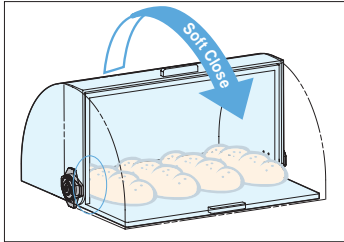
DISK DAMPER



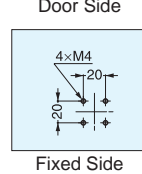
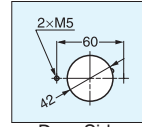
UDD



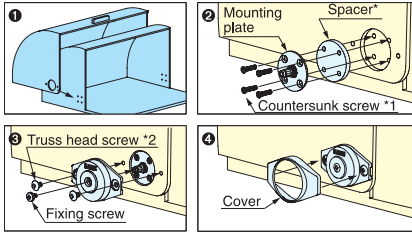
- Disc-shaped damper gently closes lid without slamming shut.
- Narrow profile for unobtrusive installation.
- Suitable for food service environments.
- Successfully passed 30,000 open/close private cycle test.
- Operating temperature: 5-35 °C (41-95°F)
- Spacer and installation screws are not included,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



Cut-Out Dimension

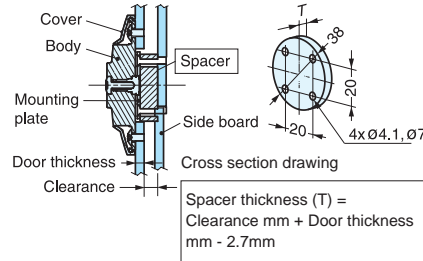


How to Install

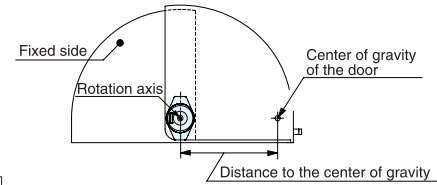


*1, *2 screws and Spacer are not included.

Spacer



Damper Selection



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

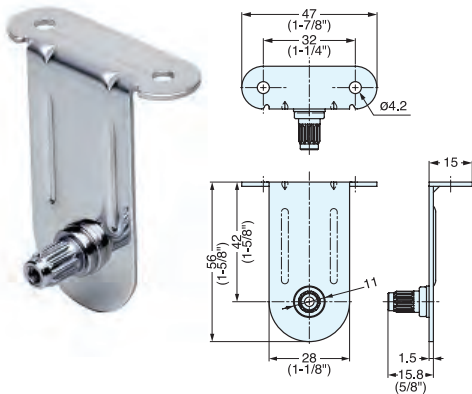
| Item No. | Handing | Torque (kgf·cm) | Weight (g) | Box Qty (pcs) |
|----------|---------|-----------------------------------|------------|---------------|
| UDD-S-L | Left | 5.1~10.2 (4.4~8.9 lbs·in) | 90 | 20 |
| UDD-S-R | Right | | | |
| UDD-M-L | Left | 10.2~20.4 (8.9~17.7 lbs·in) | | |
| UDD-M-R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

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

UDD DISK DAMPER BRACKET

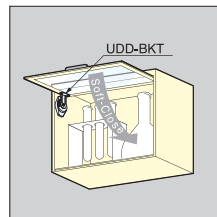


UDD-BKT

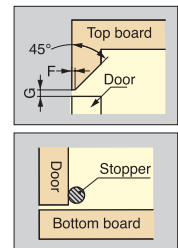
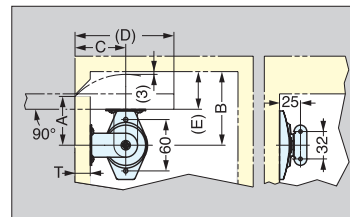


- Bracket for disk damper UDD for upward-opening door.
- Catch is needed for holding door in opened position (not included).
- Use SDS-50G face plate for glass/acrylic door.
- Stop required to prevent over rotation (not included).

Application Example



Cut-Out Dimension

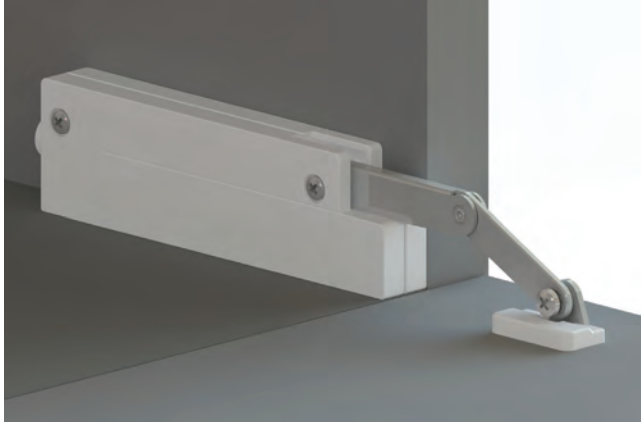


| Item No. | Material | Finish | T: Door Thickness | A | B | C | D | E | F | G |
|----------|---------------------|--------|-------------------|----|----|----|-----|----|---|---|
| UDD-BKT | 304 Stainless Steel | Plain | 5 | 46 | 70 | 49 | 95 | 26 | 1 | 3 |
| | | | 15 | 54 | 82 | 57 | 111 | 40 | 2 |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

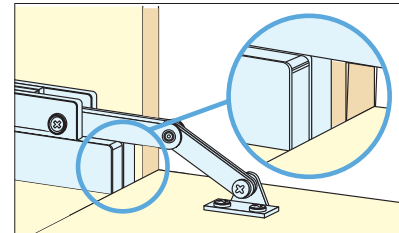
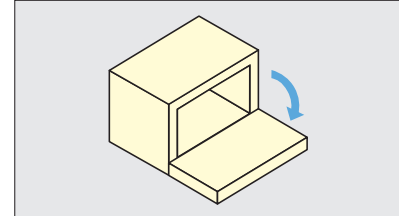
COMPACT SOFT-DOWN STAY

LID SUPPORTS

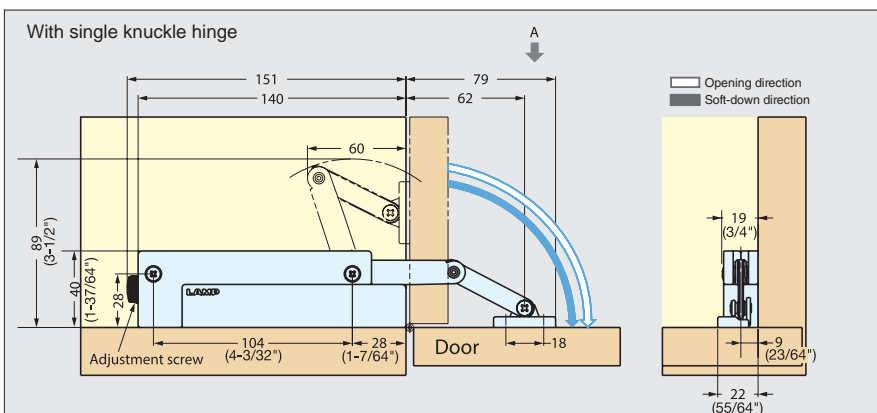
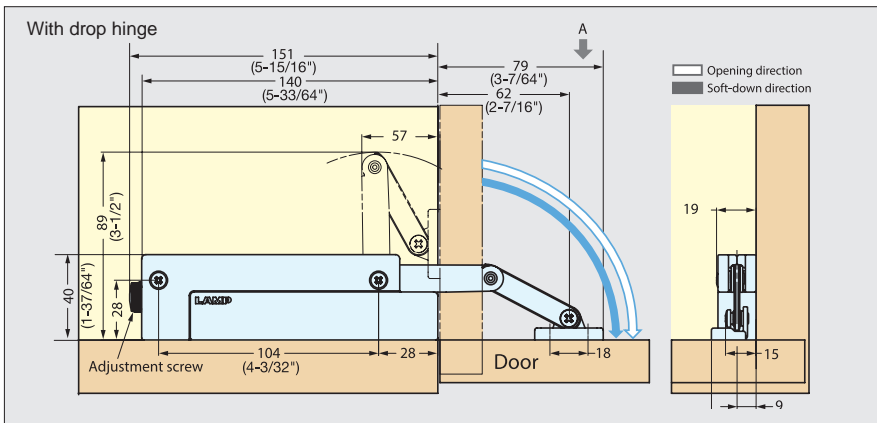
COMPACT SOFT-DOWN STAYS



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

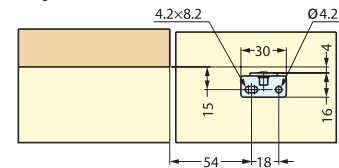


Installation

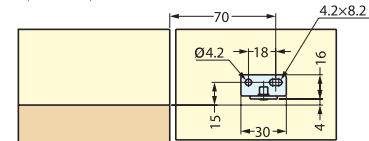


Installation of Mounting Plate

A-view (Right hand)



A-view (Left hand)



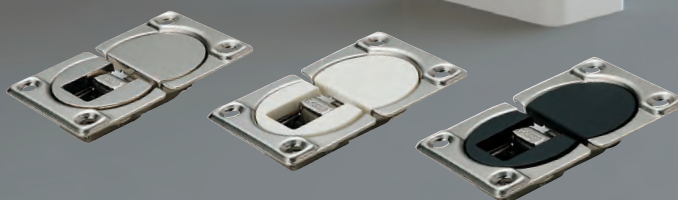
| Item No. | Type | Torque (kg·cm) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------------|-------------|---------------------------------|------------|-----------|--------------|
| CSD-10-TV-L-WT | Light Duty | 10.2~20.4 (8.8~17.7 lbs-in) | 125 | 10 | 100 |
| CSD-10-TV-L-BL | | | | | |
| CSD-10-TV-M-WT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

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

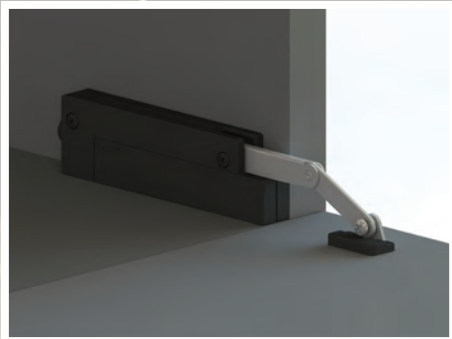
Soft-Down Lid Stay

CSD-10TV

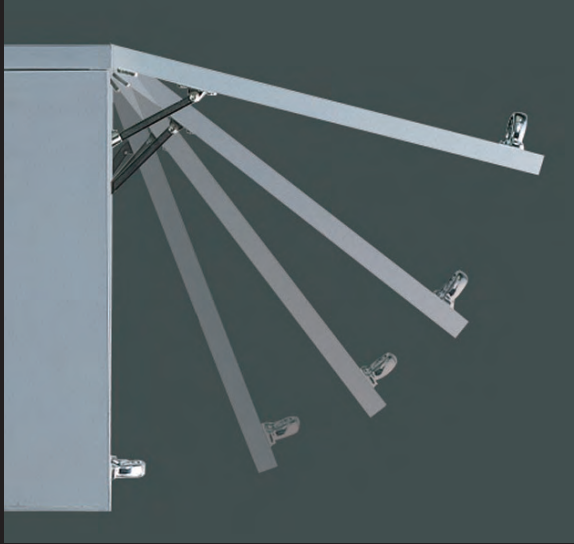
Smooth, soft-closing movement for downward opening flap doors. Available for light, medium or heavyweight cabinet doors.



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



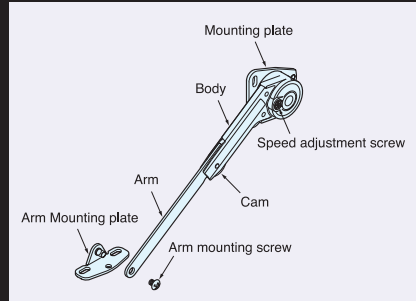
NSDX



ADJUSTABLE SOFT-DOWN STAY

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

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



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

Arm Mounting Plates

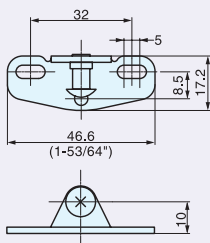
All NSDX series lid stays include the standard model for wooden doors (NSDX-SZ).

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

NSDX-SZ

(Included)

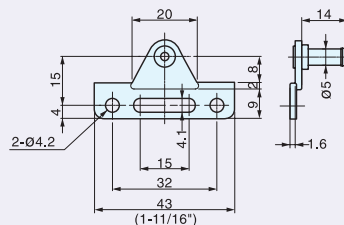
Mounting Plate for wooden door, screw-on type.



NSDX-AZ

(Sold separately)

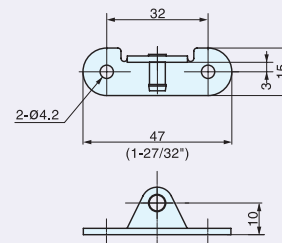
Mounting Plate for aluminum frame door, clip-on type.



NSDX-GZ

(Sold separately)

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



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

ADJUSTABLE SOFT-DOWN STAY



NSDX-10

LID SUPPORTS

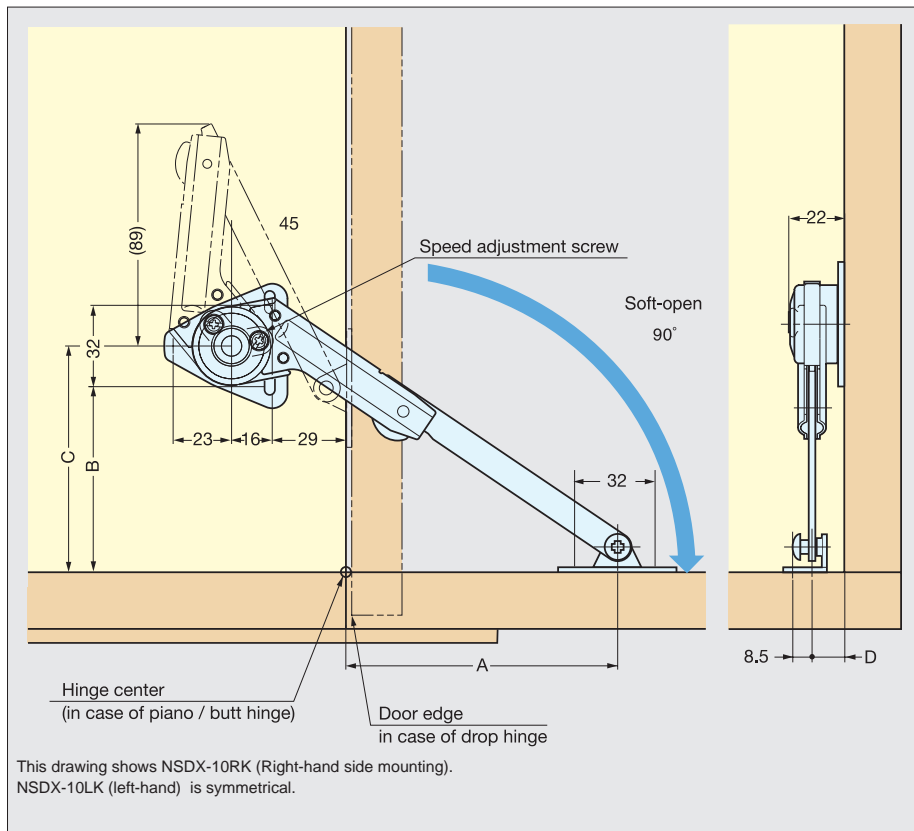
ADJUSTABLE SOFT-DOWN STAYS



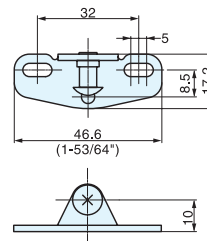
- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop Hinges (SDH-001, SDH-P, P.238).
- NSDX-10 is designed to hold door in closed position.
- Speed adjustment screw located on front for easy adjustment.
- Torque Calculation:
 $\text{Torque} = \text{Door Height} \times 1/2 \times \text{Door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



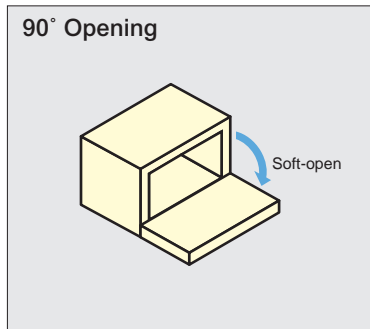
Face Frame Bracket: FFCB-SD-1
(Sold separately, see P.345)



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



Arm Mounting Plate



| 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 | |

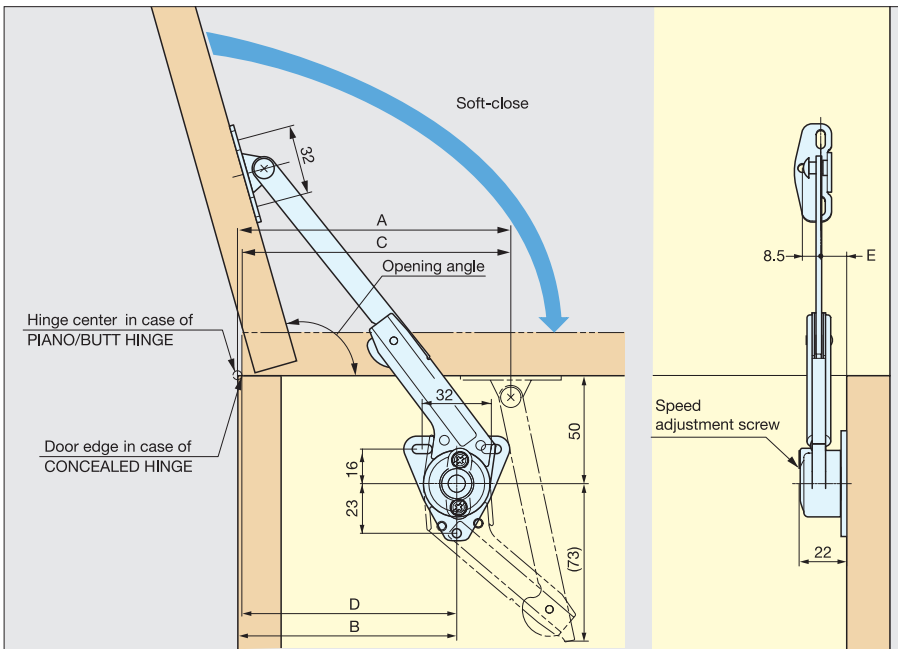
ADJUSTABLE SOFT-DOWN STAY



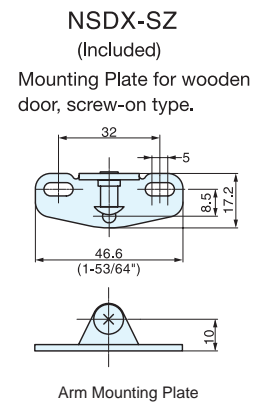
NSDX-20



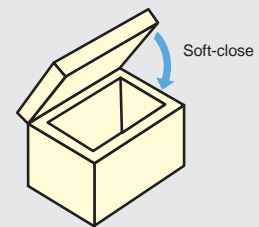
- For TOP-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- Opening angle 70° or 105°.
- NSDX-20 is designed to hold door in fully opened position.
- Speed adjustment screw located on front for easy adjustment.
- Torque Calculation :
Torque = Door Height × 1/2 × Door Weight
Per Piece : 20~70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



This drawing shows NSDX-20RK (Right-hand side mounting).
NSDX-20LK (Left-hand) is symmetrical.



70° or 105° Opening



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

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

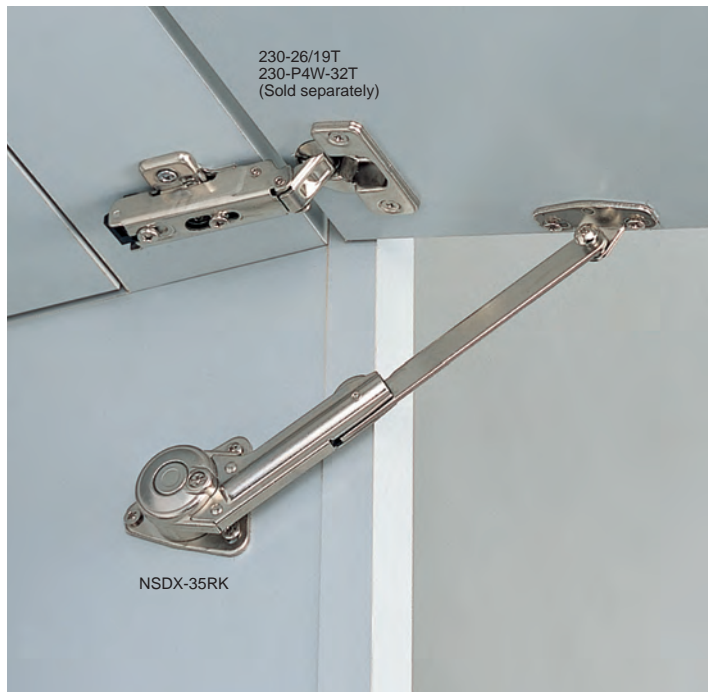
ADJUSTABLE SOFT-DOWN STAY



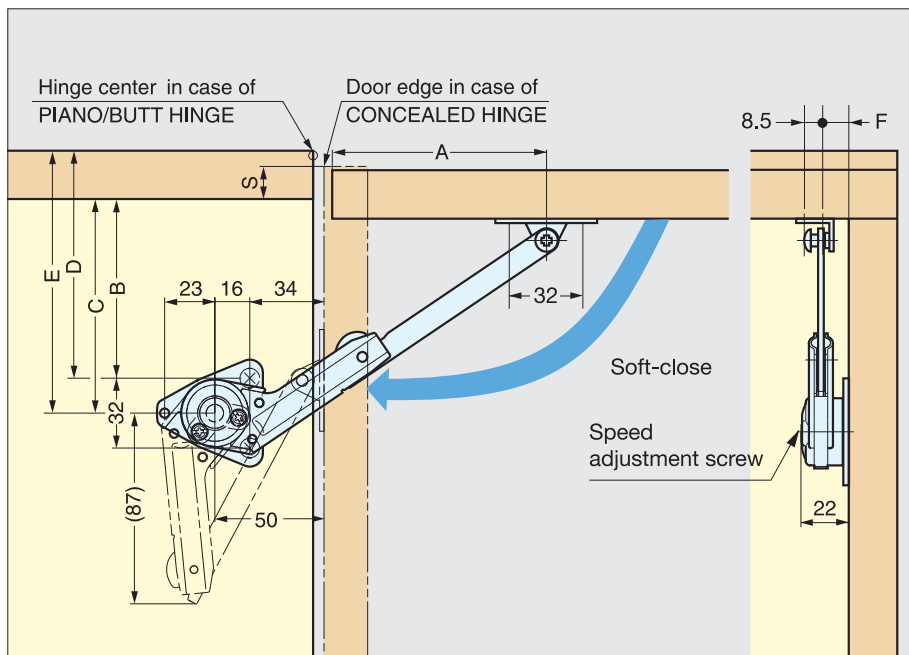
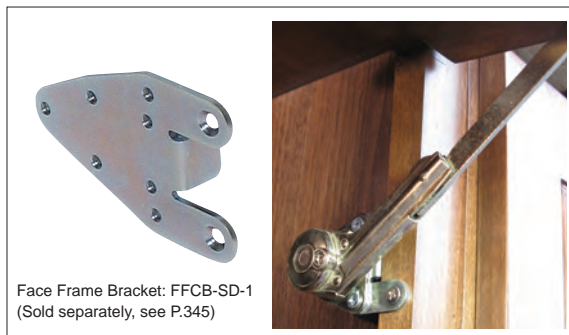
NSDX-35

LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAYS

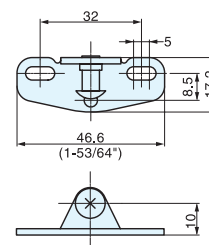


- For UPWARD-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- Opening angle 80°, 90° or 100°.
- NSDX-35 is designed to hold door in fully opened position.
- Speed adjustment screw located on front for easy adjustment.
- Two stop version (holds door at 65° and 90°) is also available.
- Torque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



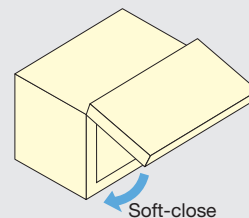
This drawing shows NSDX-35RK (right-hand side mounting).
NSDX-35LK (left-hand) is symmetrical.

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



Arm Mounting Plate

80°~100° Opening



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

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

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



ADJUSTABLE SOFT-DOWN STAY (SHORT-ARM)

NSDX-10(R/L)K/TV

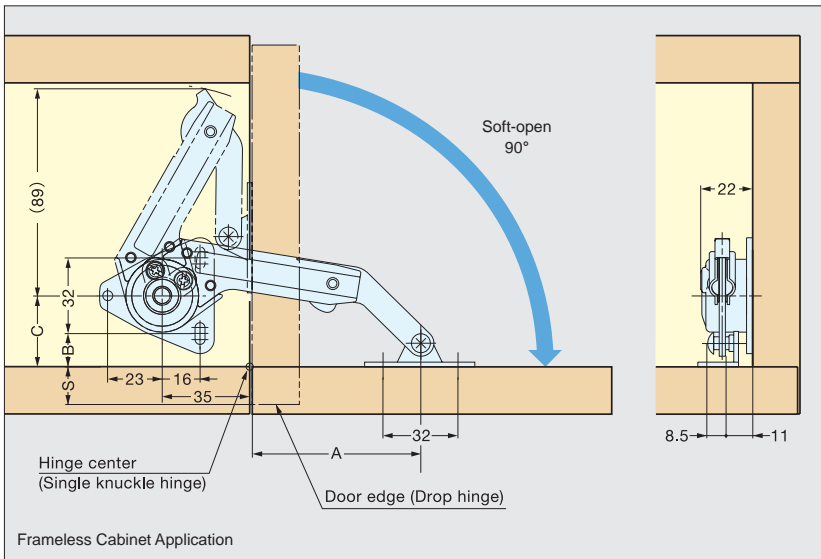
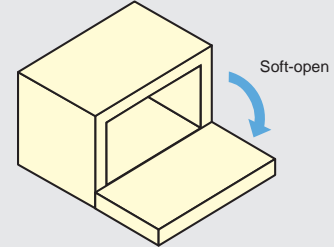
LID SUPPORTS

ADJUSTABLE SOFT-DOWN STAYS



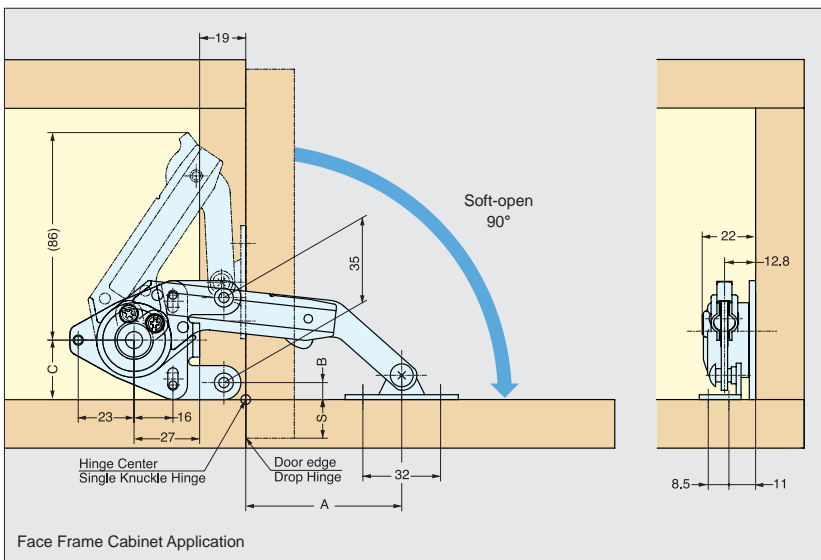
- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- Short arm type designed for small door application.
- Torque Calculation :
Torque = Door Height × 1/2 × Door Weight
Per Piece : 10~20 kgf·cm (8.7~17.4 lbs·in)
Per Pair : 20~40 kgf·cm (17.4~34.7 lbs·in)

90° Opening



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

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



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



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

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

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

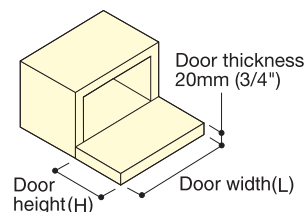
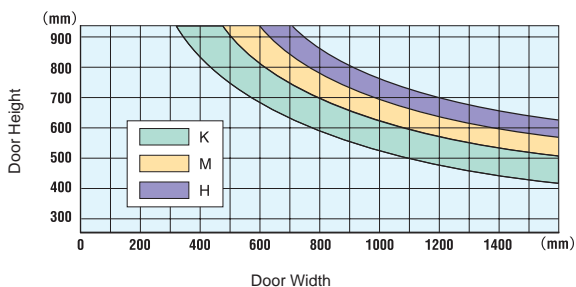
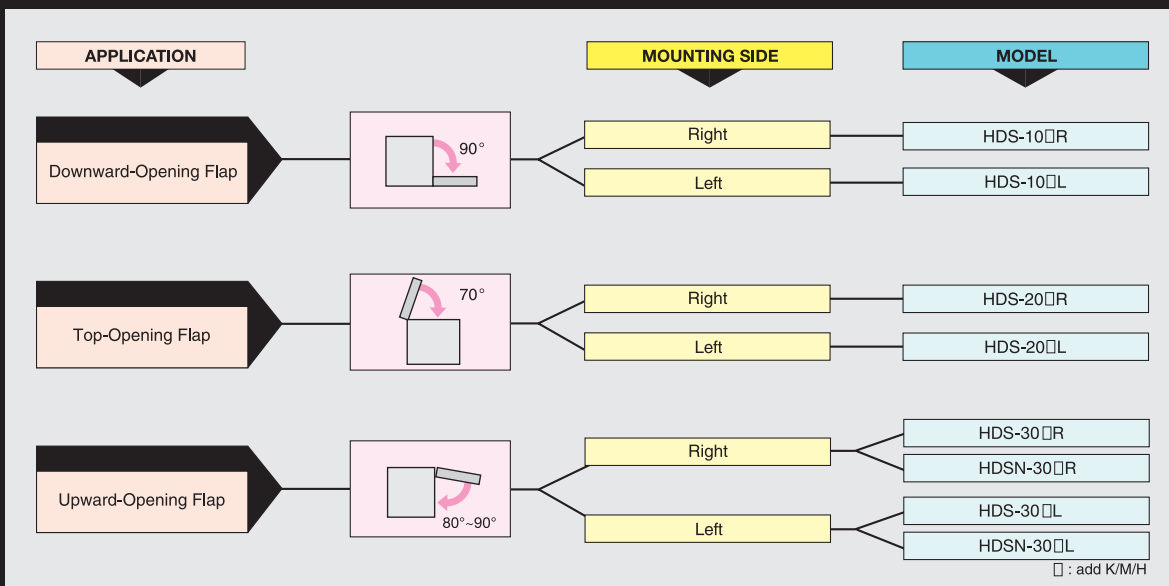
HDS/HDSN



HEAVY DUTY SOFT-DOWN STAY

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

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



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

HEAVY DUTY SOFT-DOWN STAY



HDS-10

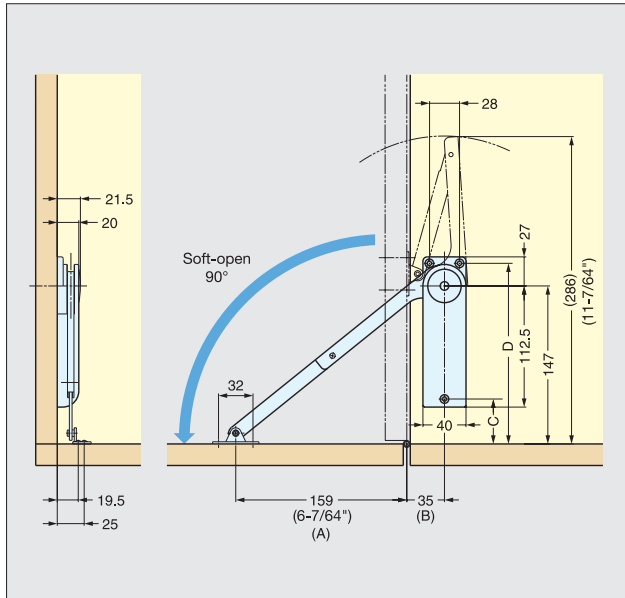
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS

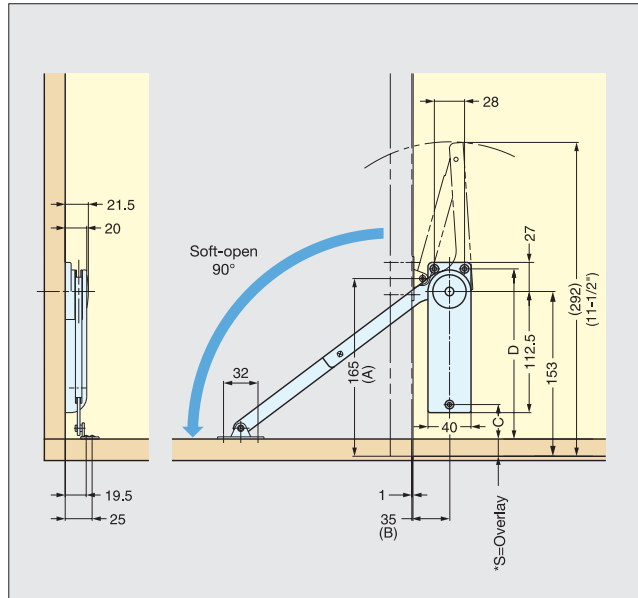


- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- HDS-10 is designed to hold door in closed and opened position.
- Used in pairs
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):
140~200 kg·cm (121~173 lbs·inch)/pair
-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

With Piano/Butt Hinge



With Drop Hinge (SDH-001)



*S=Overlay coverage in case of drop hinge

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

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

SELF CLOSE STAY

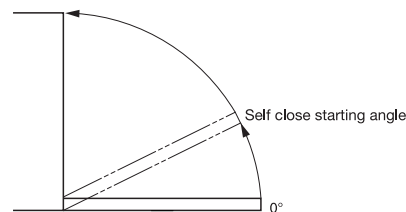


HDS-10S



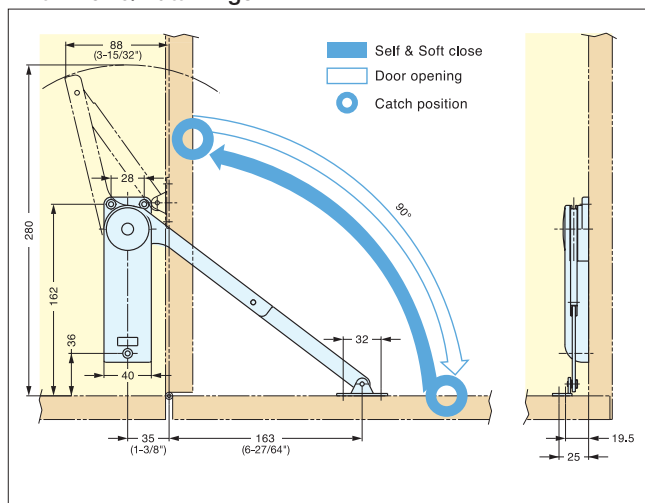
- For DOWNWARD-OPENING FLAP DOOR used with piano, butt or drop hinges (SDH-001, SDH-P, P.238).
- When pushed to close, HDS-10S is designed to self close and soft close
- Used in pairs
- Torque Calculation:
 $\text{Torque} = \text{Door Height} \times 1/2 \times \text{Door Weight}$
 K-Type: 60~95 kgf.cm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

Self close starting angle

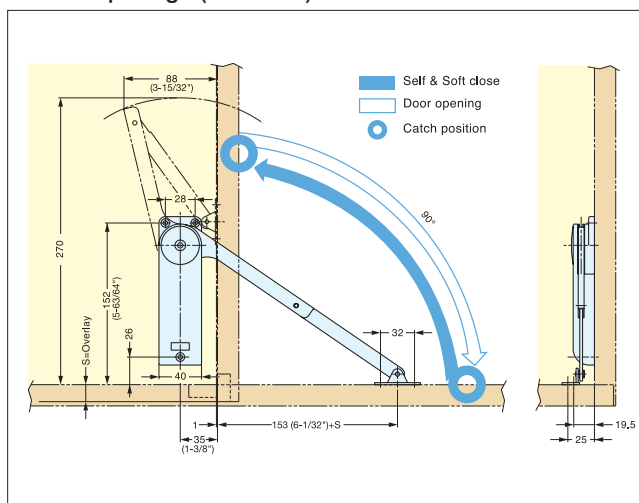


| Type | Self close starting angle |
|------|---------------------------|
| K | 5°~35° |
| M | 5°~20° |
| H | |
| S | 5°~15° |

With Piano/Butt Hinge



With Drop Hinge (SDH-001)



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

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

SELF OPENING STAY



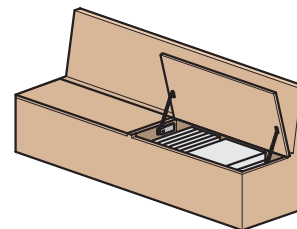
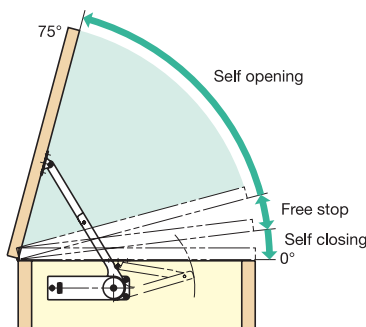
HDS-20S

LID SUPPORTS

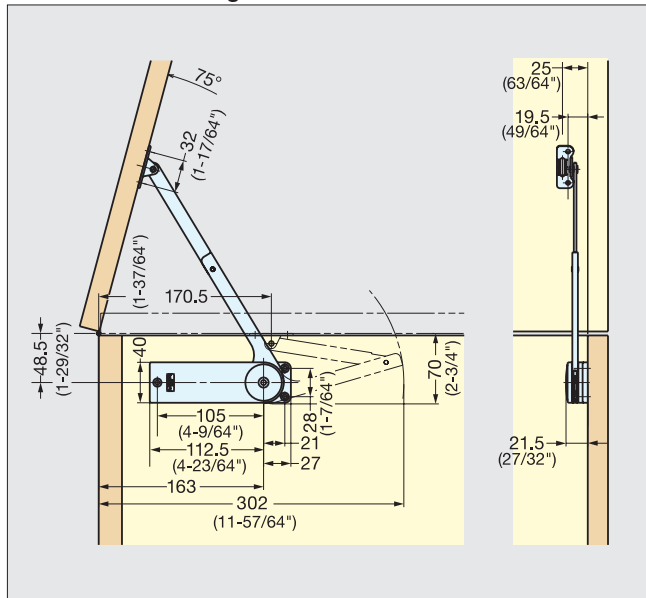
SELF OPENING STAYS



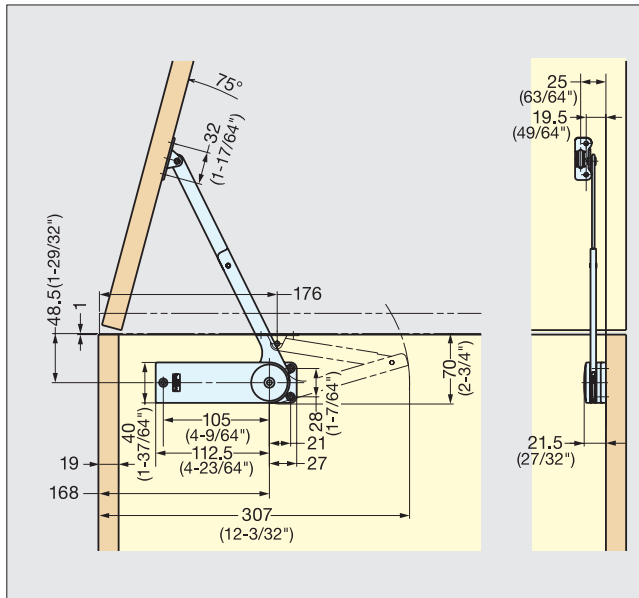
- Lid will self open past the free stop angle.
- For TOP-OPENING FLAP DOOR used with piano, butt or concealed hinges.
- HDS-20S is designed to hold door in fully opened position.
- Used in pairs.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
H-Type : 70~110 kg·cm (61~95 lbs-in)/pair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



With Piano/Butt Hinge



With Concealed Hinge



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

HEAVY DUTY SOFT-DOWN STAY



HDS-30

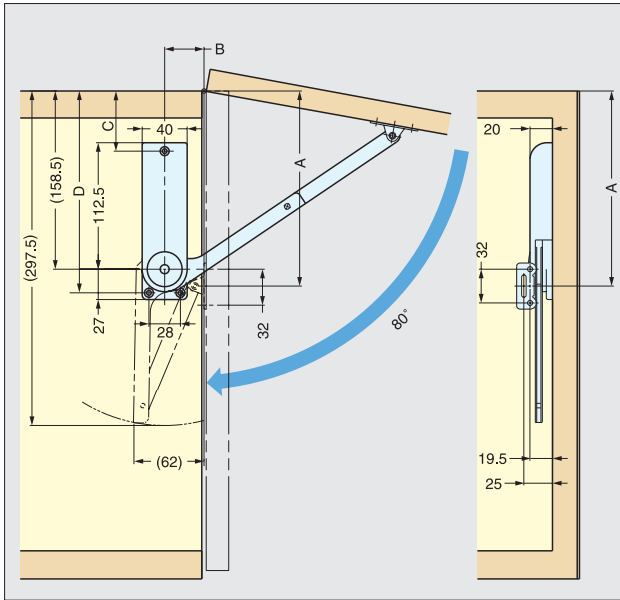
LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS

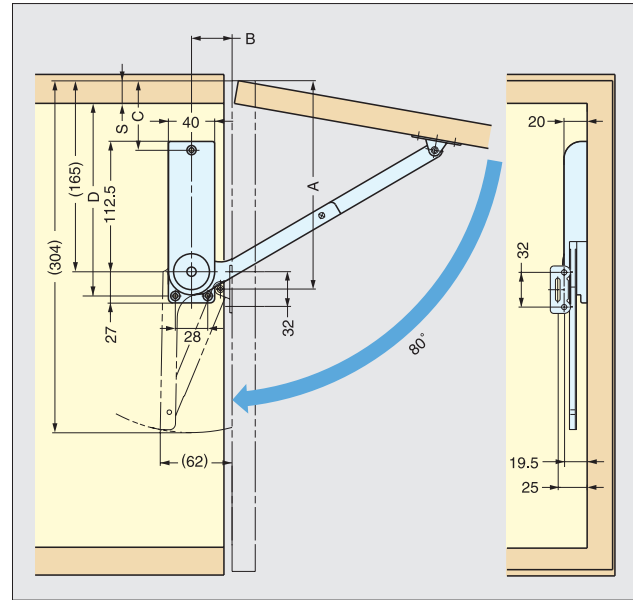


- For UPWARD-OPENING FLAP DOOR used with piano, butt or concealed Hinges.
- Used in pairs.
- HDS-30 is designed to securely latch a flap closed and hold it in the fully opened position.
- Torque Calculation:
Torque = Door Height × 1/2 × Door Weight
- K-Type (Light Duty):
140~200 kg·cm (121~173 lbs·inch)/pair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

With Single Knuckle Hinge



With Concealed Hinge



Overlay Use

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

S=Overlay coverage by concealed hinge

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

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

HEAVY DUTY SOFT-DOWN STAY



HDSN-30

LID SUPPORTS

HEAVY DUTY SOFT-DOWN STAYS



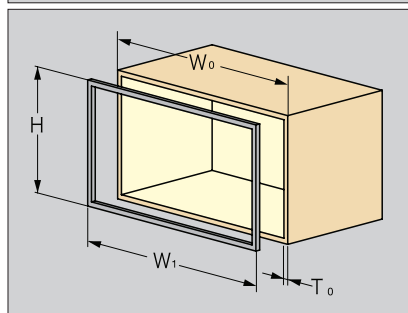
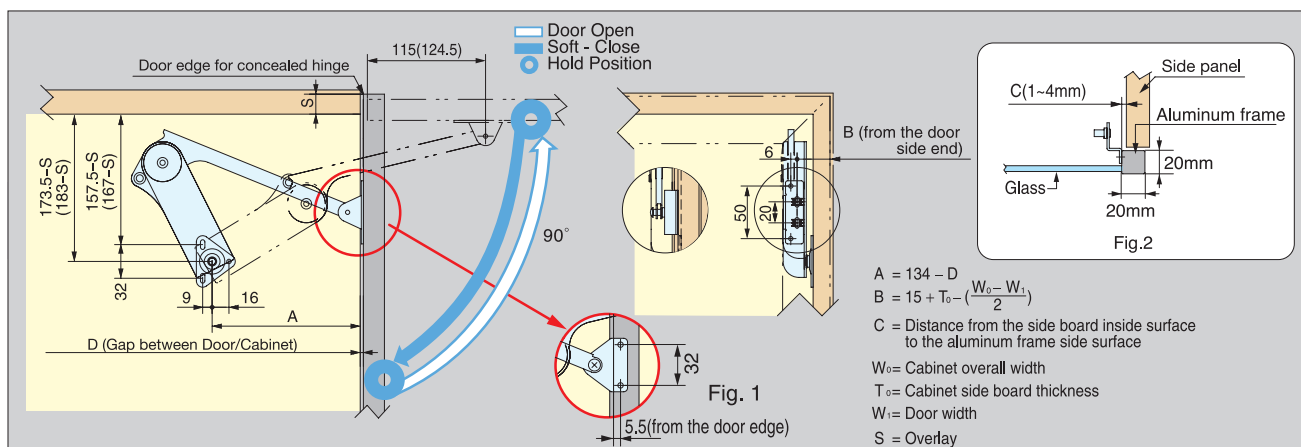
230-26/19T
230-P4W-32T
(Sold separately)

HDSN-30KR/WHT

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

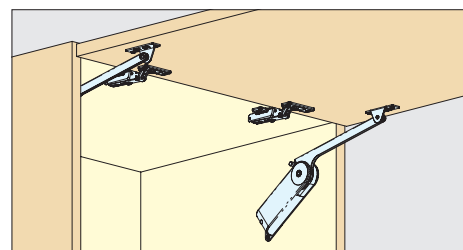
| Material | Finish/Color |
|----------|--------------|
| Steel | Nickel |
| Plastic | Light Grey |

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



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

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



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

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

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

SLS-ELAN

EASY LIFT-UP STAY

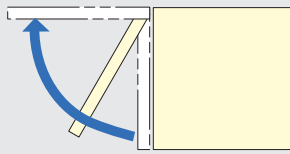
- Lift-assist mechanism for extra light-opening with free stop feature.
- Offers smooth and soft downward movement preventing lids or doors from slamming shut.
- Easy to install by aligning the body to the edge of cabinet.
- Recognized by LGA for 40,000 cycles.



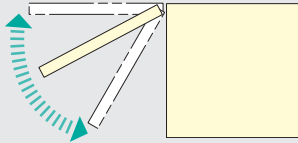
Designed to operate at room temperature 0°~40°C (32°~104°F).

■ 3 functions on 1 stay

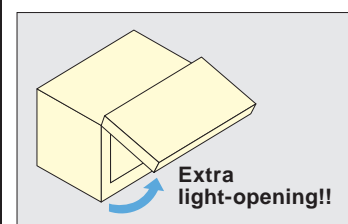
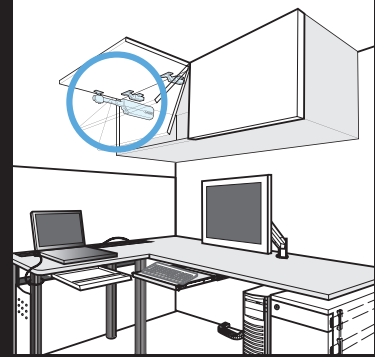
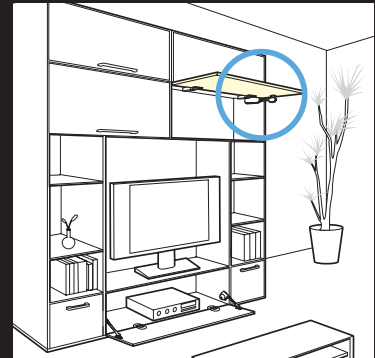
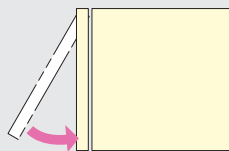
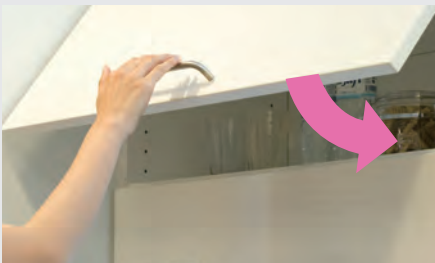
1. Lift-assist



2. Free stop



3. Soft-close



Slim design & installed location maximizes space inside of cabinet

EASY LIFT-UP STAY



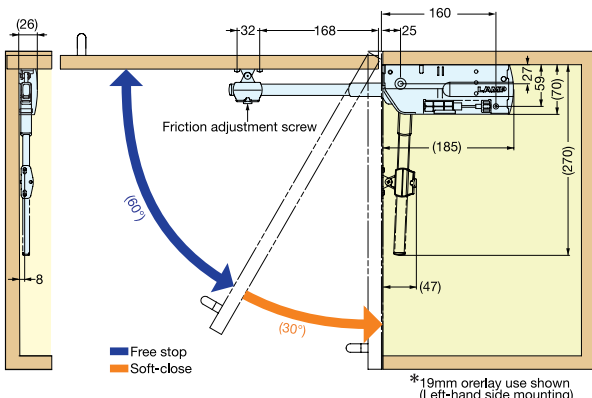
SLS-ELAN

LID SUPPORTS

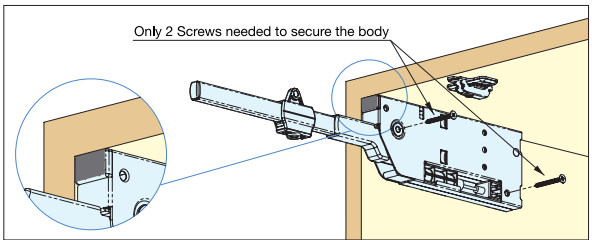
EASY LIFT-UP STAYS



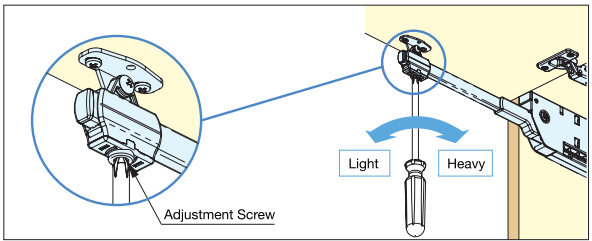
- For UPWARD-OPENING FLAP DOOR used with concealed, piano, butt, or drop hinges.
- Designed to provide effortless opening and hold door in closed and opened position.
- Damper equipped for soft & silent closing.
- Optional bracket for aluminum frame door available.
- Single or pair use allows wide range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



Easy Installation



Adjustment



Door Weight Range Table (lbs.)

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

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



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

LIFT ASSIST MECHANISM

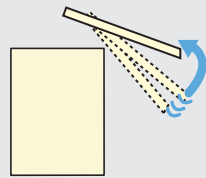
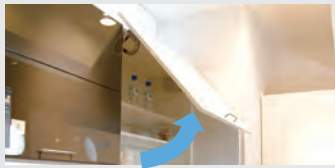


- Lapcon stay for UPWARD-OPENING FLAP DOORS.
- Door opens over the cabinet.
(Space of 4-5/16" is required over cabinet)
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Slim design and installed location maximizes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

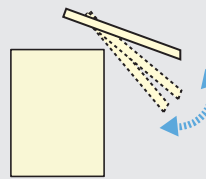


3 functions on 1 stay

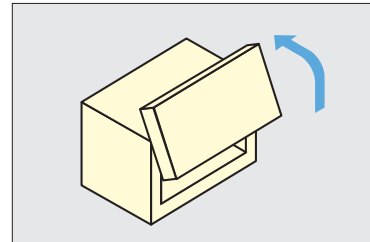
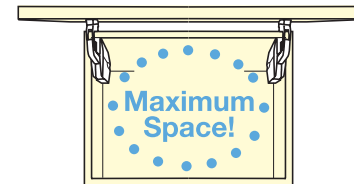
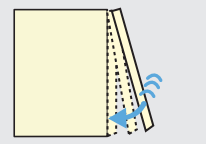
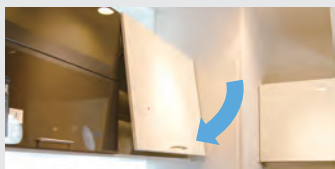
1. Lift-assist



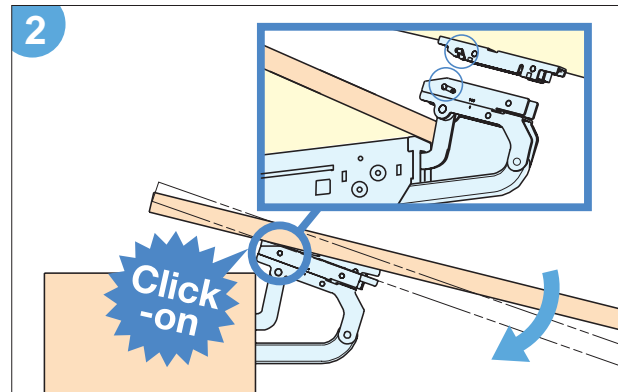
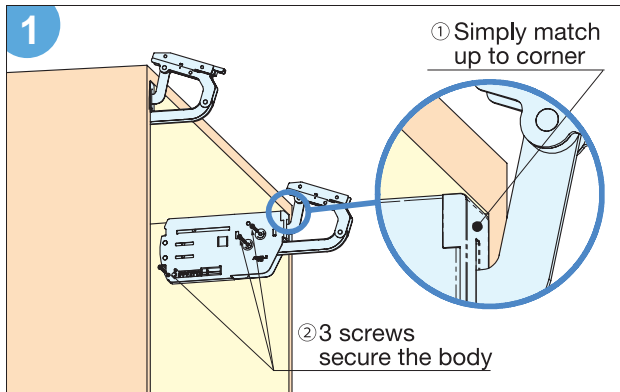
2. Free stop

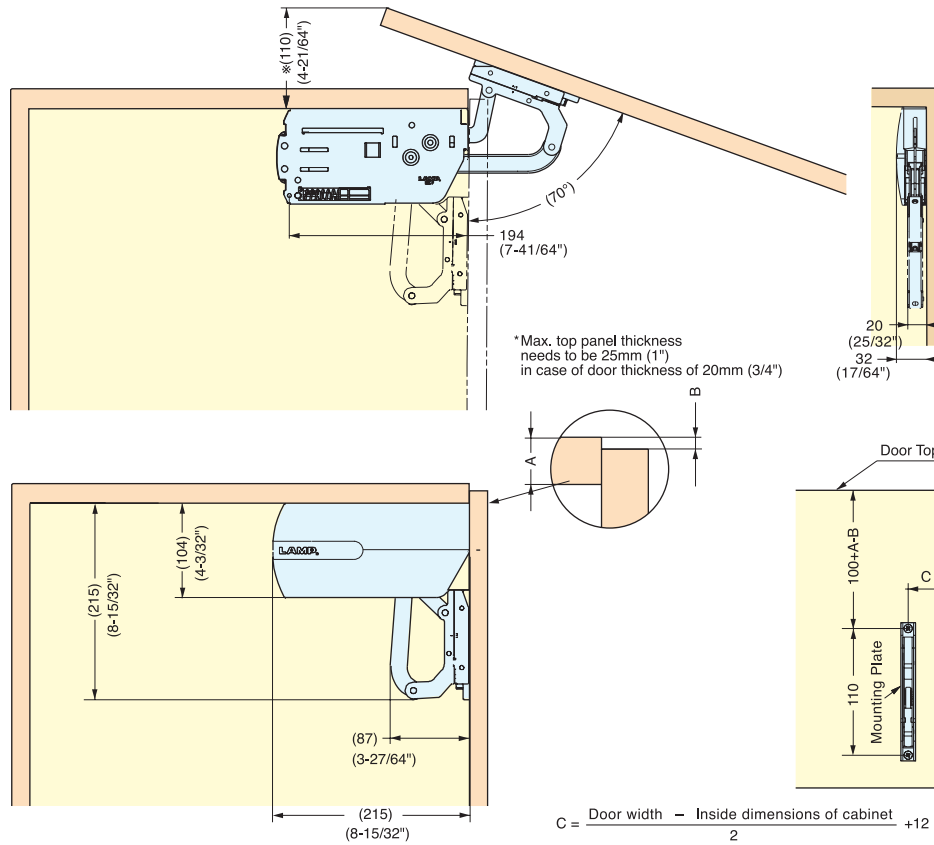


3. Soft-close



Easy Installation





■ Door Weight Range Table (lbs.) Per Pair

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

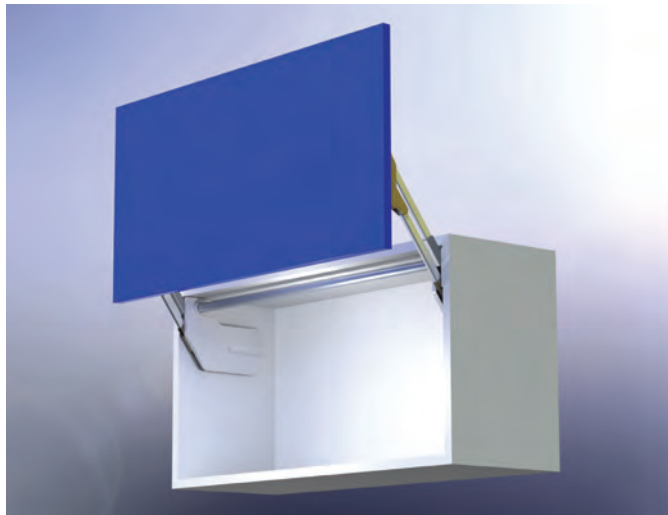
| Item No. | Weight (g) | Box (pcs) |
|-------------|-----------------|-----------|
| EZS-ELAN-LL | 2245 (4.9 lbs) | 5 |
| EZS-ELAN-ML | 2316 (5.0 lbs) | |
| EZS-ELAN-MM | 2387 (5.25 lbs) | |
| EZS-ELAN-HM | 2431 (5.35 lbs) | |
| EZS-ELAN-HH | 2475 (5.45 lbs) | |

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

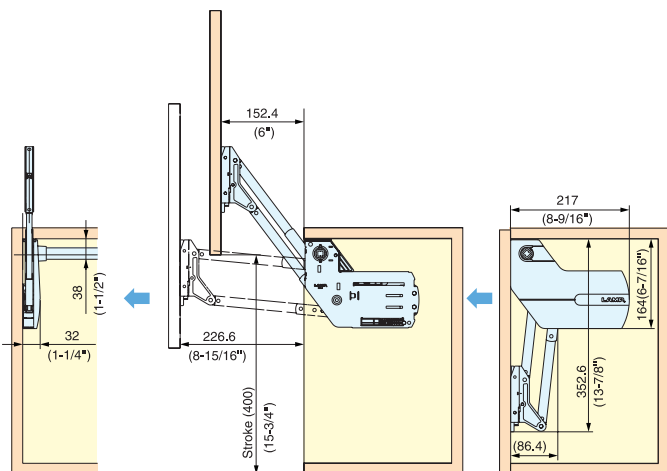
SWING LIFT-UP STAY



SLU-ELAN



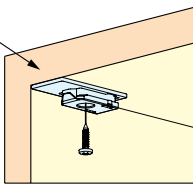
- Lapcon stay for SWING LIFT-UP DOORS.
- Lift-assist mechanism for extra light-opening.
- Door stays in any desired position.
- Damper equipped for soft & silent closing at the end.
- Simple installation by mounting guide plate and slide in main body.
- No hinges are required.
- Connecting bar stays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



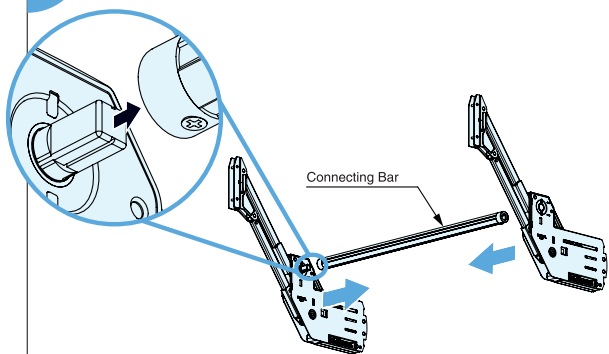
Simple Installation

1 Guide plate installation

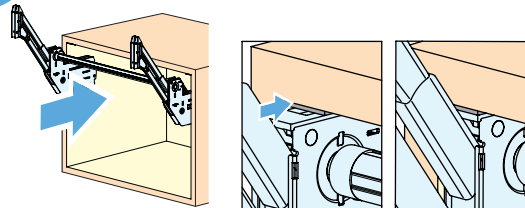
Simply match up to corner



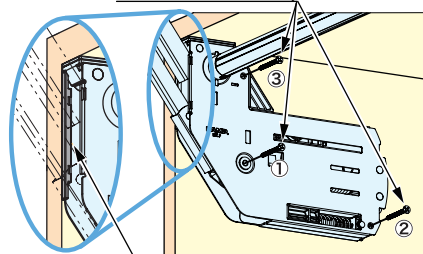
2 Connection bar installation



3 Body installation



3 screws secure the body



Simply match up to corner.

SWING LIFT-UP STAY



SLU-ELAN

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

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

■ Connecting Bar (Sold separately)

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

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

FACE FRAME BRACKETS

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



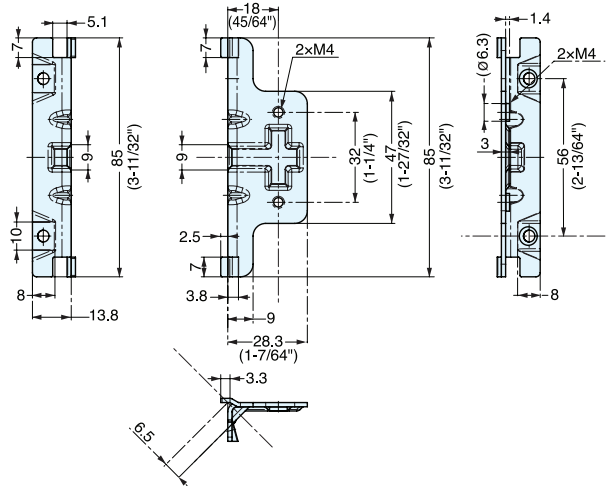
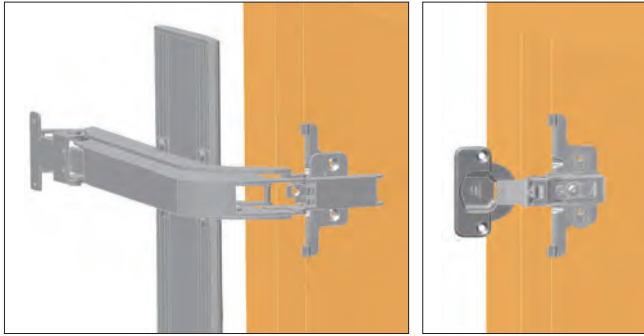
FACE FRAME BRACKET



FFCB-HG-1



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



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

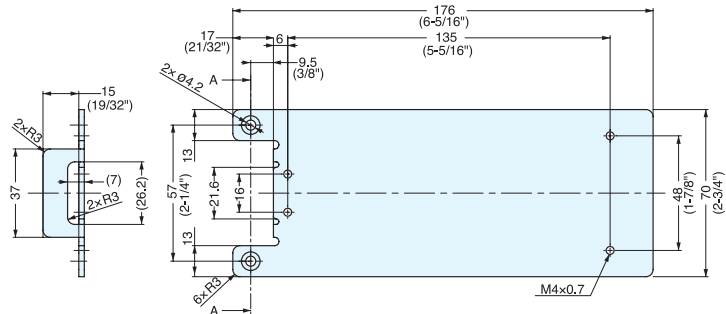
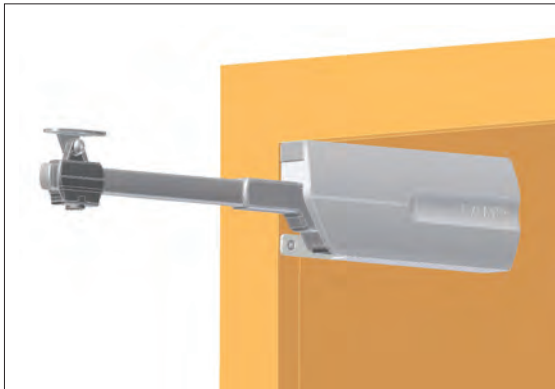
FACE FRAME BRACKET



FFCB-SLS



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

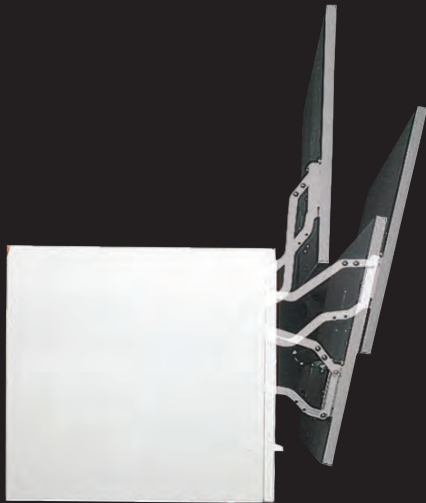


| | |
|----------|--------|
| Material | Finish |
| Steel | Chrome |

SLUN

VERTICAL SWING LIFT-UP MECHANISM

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



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



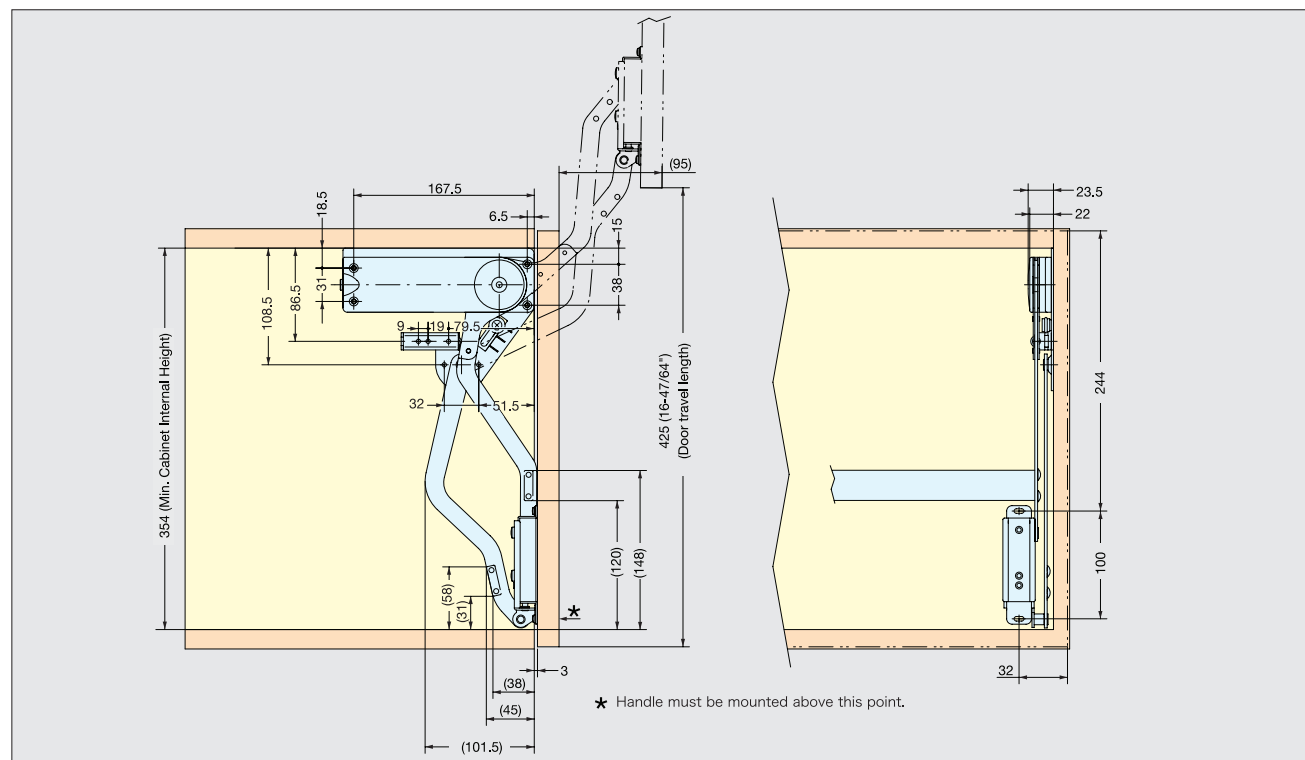
VERTICAL SWING LIFT-UP MECHANISM



SLUN



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



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

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

Guide Bar Length

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

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

SLD

VERTICAL SWING DOWN MECHANISM



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

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



VERTICAL SWING DOWN MECHANISM



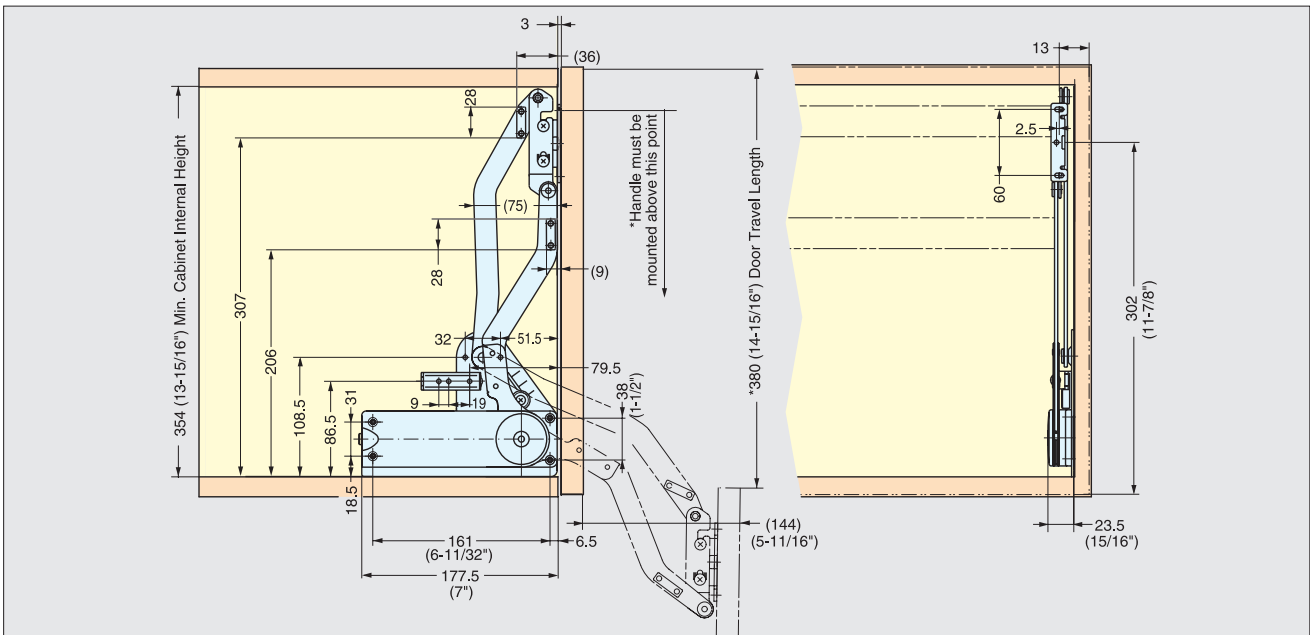
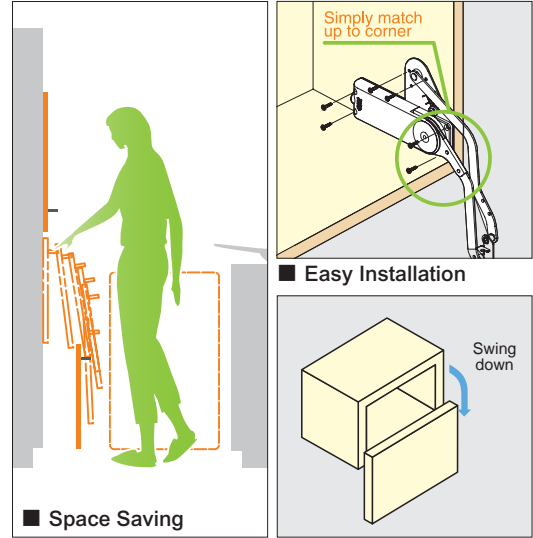
SLD

LID SUPPORTS

VERTICAL SWING DOWN MECHANISM



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



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

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

Guide Bar Length

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

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

HBFN

HORIZONTAL BI-FOLDING DOOR MECHANISM



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

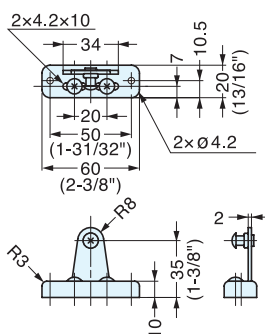


Designed to operate at room temperature
0°~40°C (32°~104°F).

MOUNTING PLATES FOR HBFN

HBFN-SZ

• Included with HBFN Series hardware.



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

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

HORIZONTAL BI-FOLDING DOOR MECHANISM



HBFN

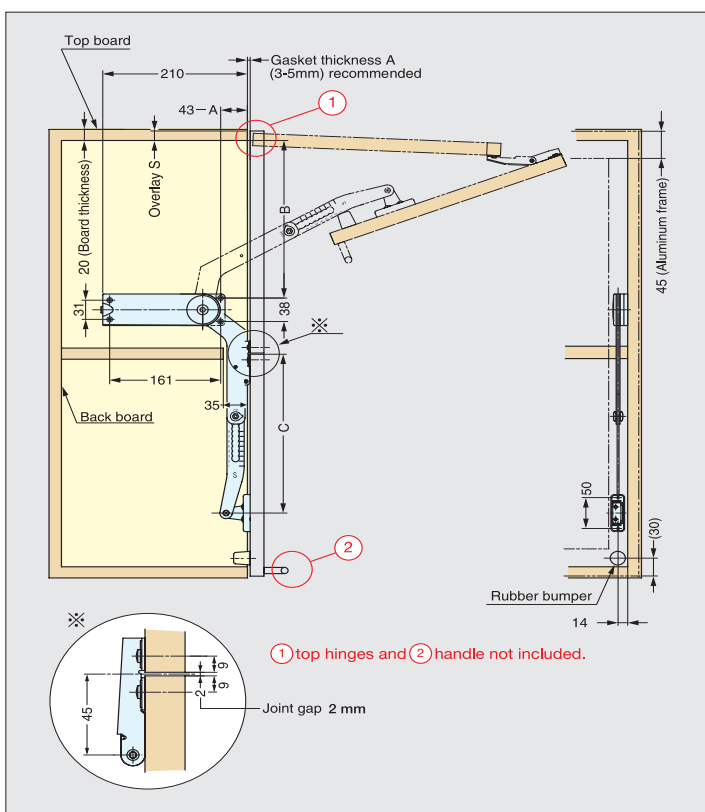
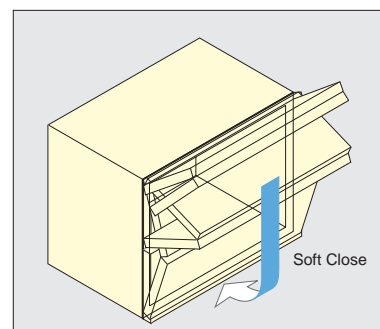
LID SUPPORTS

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 |

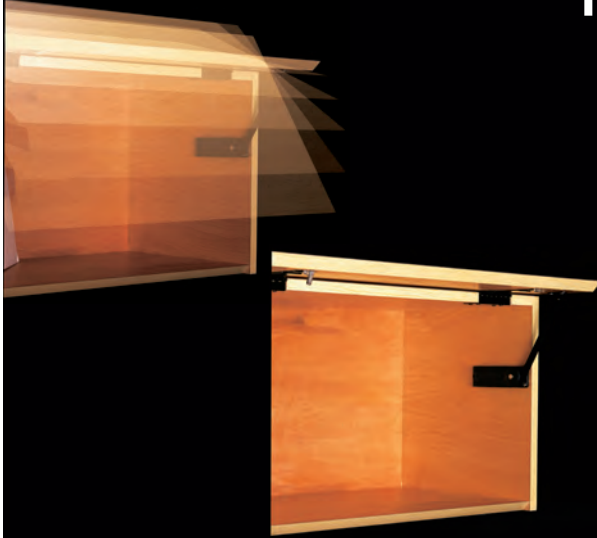


S = Overlay (Top Board)

| 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) | Material | Finish |
|---------|--------------------------------|--------------------------|-----------|--------------|----------|------------|
| HBFN-2M | 320~370 (12-19/32"~14-9/16") | 2.5~3.5 (5.5~7.7 lbs) | 10 | 100 | Steel | Nickel |
| HBFN-3M | | 3.6~4.5 (7.9~9.9 lbs) | | | Plastic | Light Grey |
| HBFN-4M | | 4.6~5.5 (9.9~12.1 lbs) | | | | |

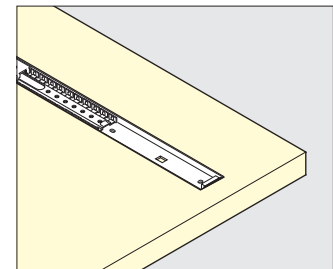
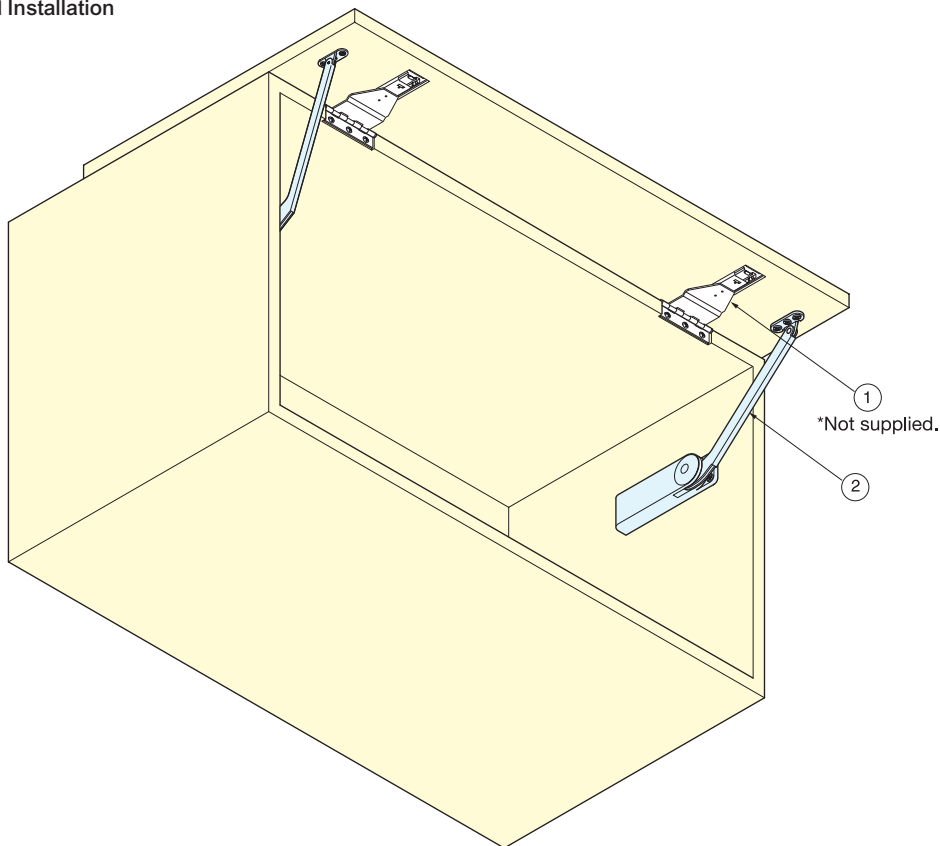
OV-EZ LIFT-ASSIST MECHANISM FOR OVER-THE-TOP FLIPPER DOORS



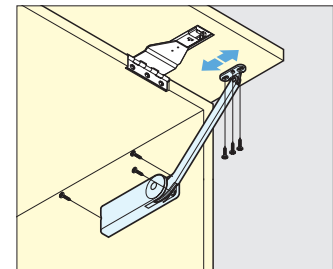
- Assists in opening of flipper doors with minimal resistance.
- Doors will not slam shut.
- Ideal for overhead binder bins, laboratory and kitchen cabinets, etc.
- Successfully passed 30,000 open/close private cycle tests.

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

■ Installation



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



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

Recommended Door Size and Weight

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

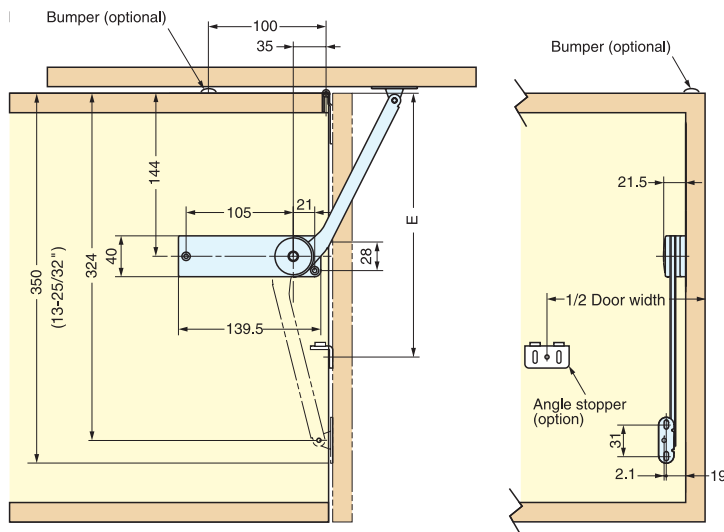
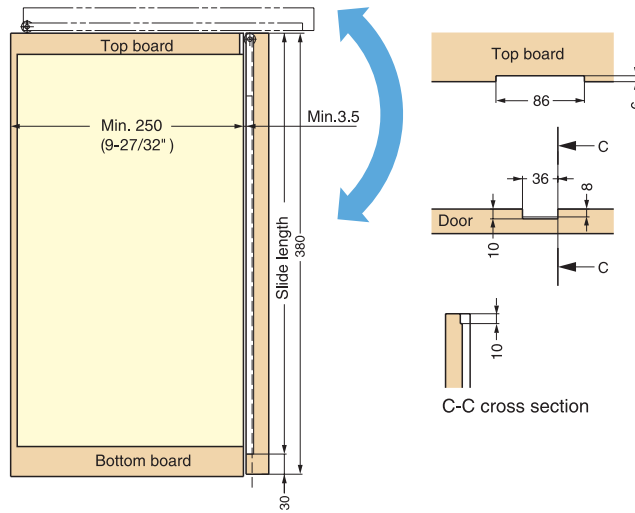
LIFT-ASSIST MECHANISM



OV-EZ



* Used in pairs



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

OVN

SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

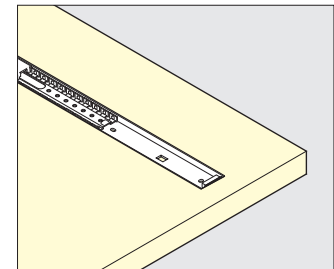
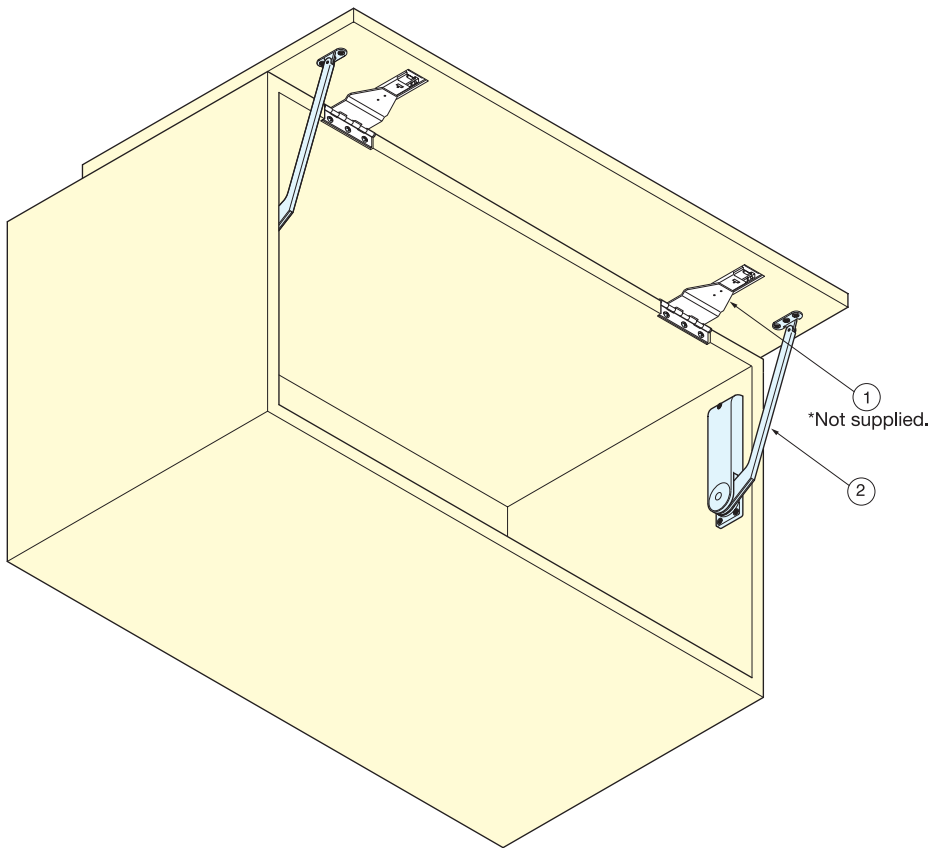


- Patented Lapcon technology offers smooth and quiet motion.
- Doors will not slam shut.
- Successfully passed 30,000 open/close private cycle tests.

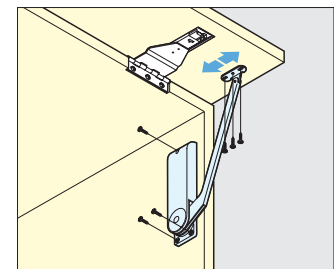
Designed to operate at room temperature 0°~40°C (32°~104°F).



■ Installation



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



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

Recommended Door Size and Weight

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

SOFT CLOSING MECHANISM



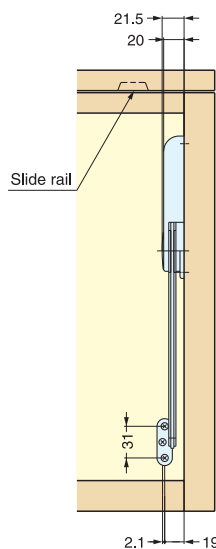
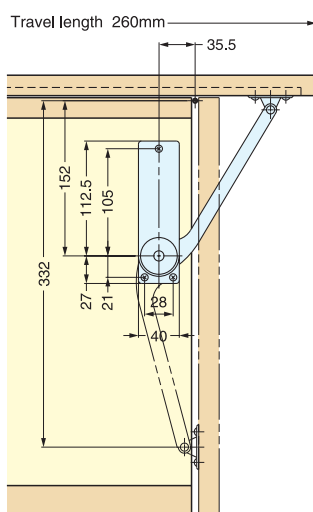
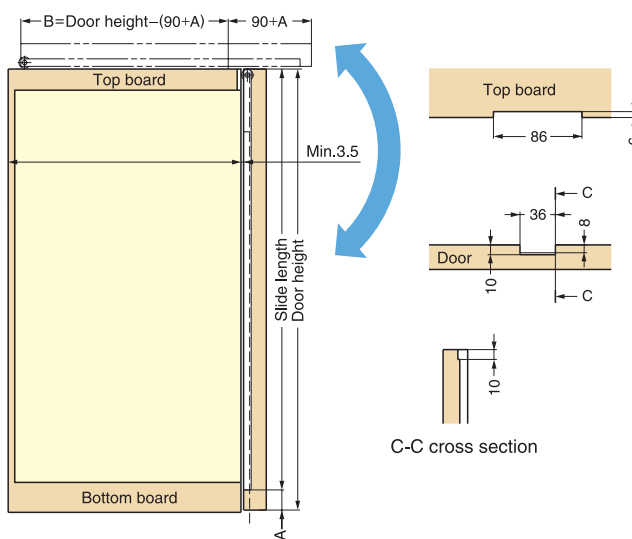
OVN

LID SUPPORTS



* Used in pairs

■ Cabinet Preparation



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

SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS



OV

SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

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



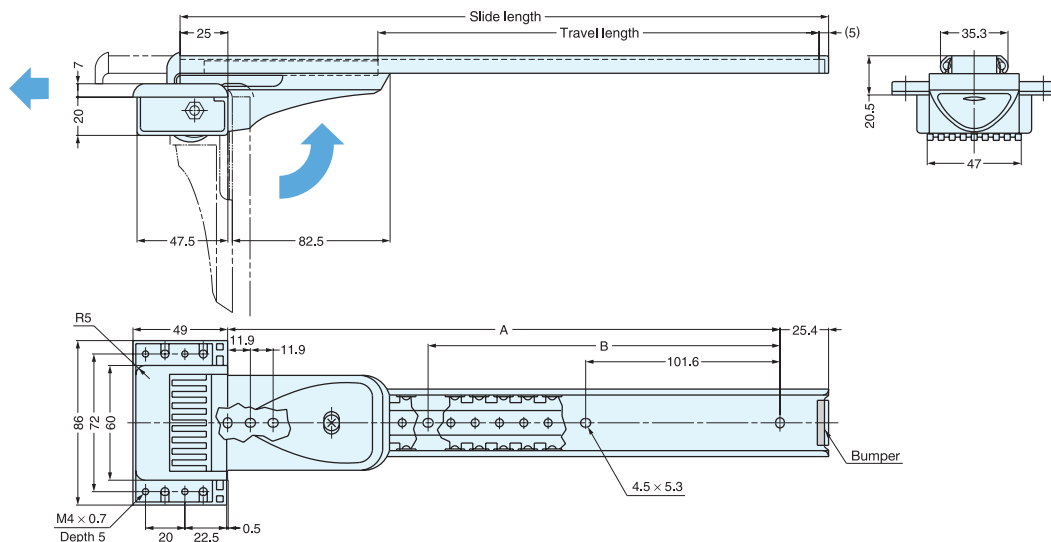
Used in pairs

Screws :

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

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

*Bulk pack available.



Flipper Door Weight and Size

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

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

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

SOFT CLOSING MECHANISM



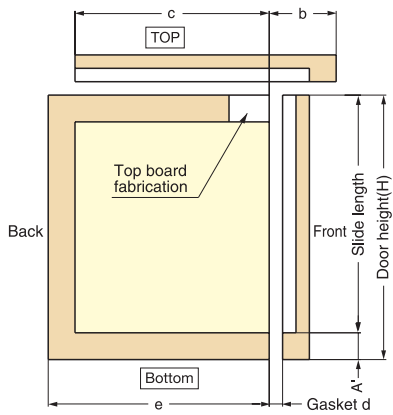
OV

LID SUPPORTS

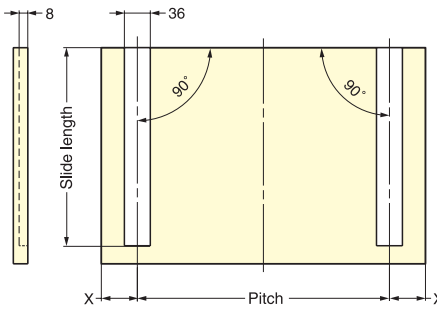
SOFT CLOSING MECHANISM FOR OVER-THE-TOP FLIPPER DOORS

■ Cabinet Preparation

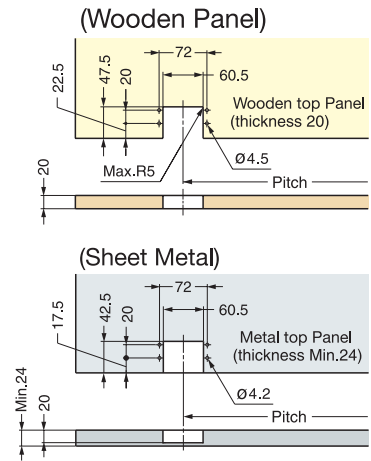
Cabinet Dimensions



Door Fabrication

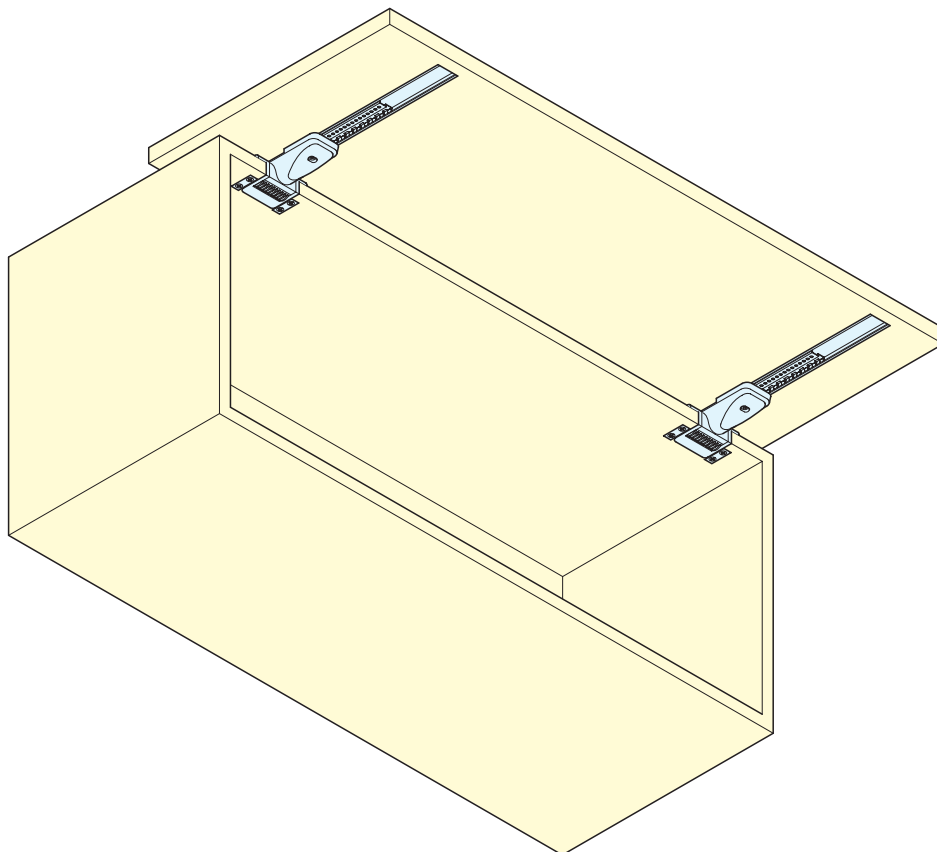
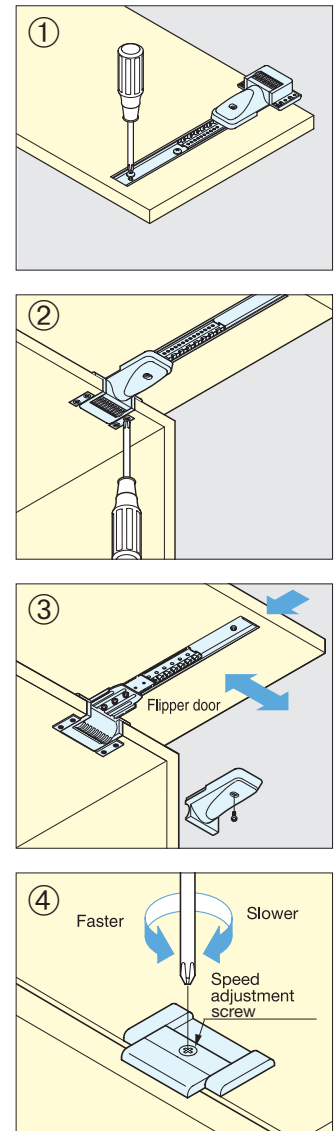


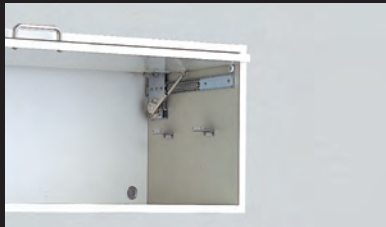
Top Panel Fabrication



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

■ Installation

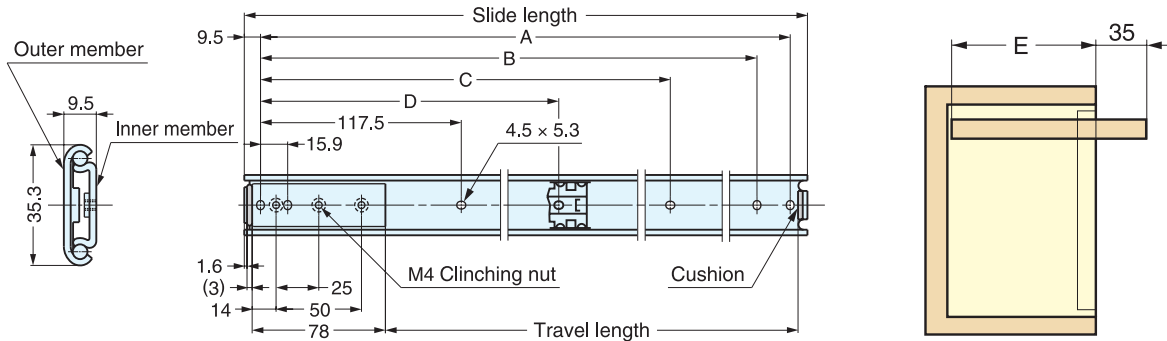




IF-102S (SINGLE TYPE) IF-102W (DOUBLE TYPE) SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

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

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



*Supplied with screws.

| 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) | 1.5~4.0 (3.3~8.8 lbs) | 1200 (47-1/4") | 300+T (11-13/16"+T) | 265+T (10-7/16"+T) | 15~20 (19/32"~51/64") |
| IF-102S-16 | | | | 350+T (13-3/4"+T) | 315+T (12-3/8"+T) | |
| IF-102S-19 | | | | 427+T (16-13/16"+T) | 392+T (15-7/16"+T) | |
| IF-102S-24 | | | | 554+T (21-13/16"+T) | 519+T (20-7/16"+T) | |
| IF-102W-14 | 50~140 (45~120 lbs-in) | 4.5~6.5 (9.9~14.3 lbs) | | 300+T (11-13/16"+T) | 265+T (10-7/16"+T) | |
| IF-102W-16 | | | | 350+T (13-3/4"+T) | 315+T (12-3/8"+T) | |
| IF-102W-19 | | | | 427+T (16-13/16"+T) | 392+T (15-7/16"+T) | |
| IF-102W-24 | | | | 554+T (21-13/16"+T) | 519+T (20-7/16"+T) | |

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

T = Door Thickness (mm)

SOFT CLOSING MECHANISM

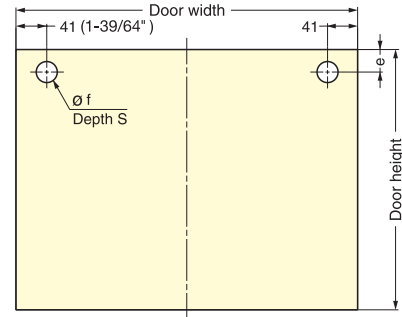
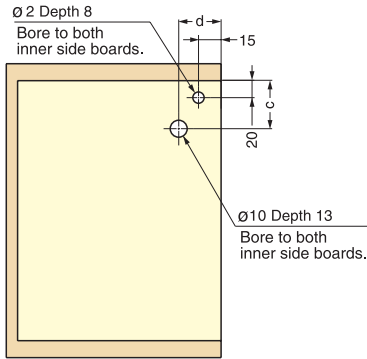
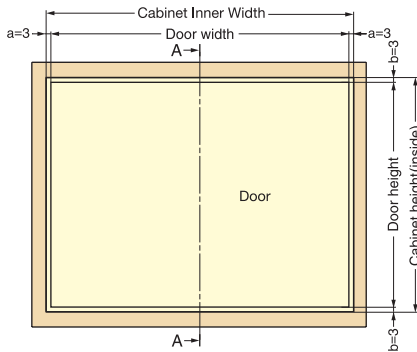


IF

LID SUPPORTS

SOFT CLOSING MECHANISM FOR INSET RECEDING DOORS

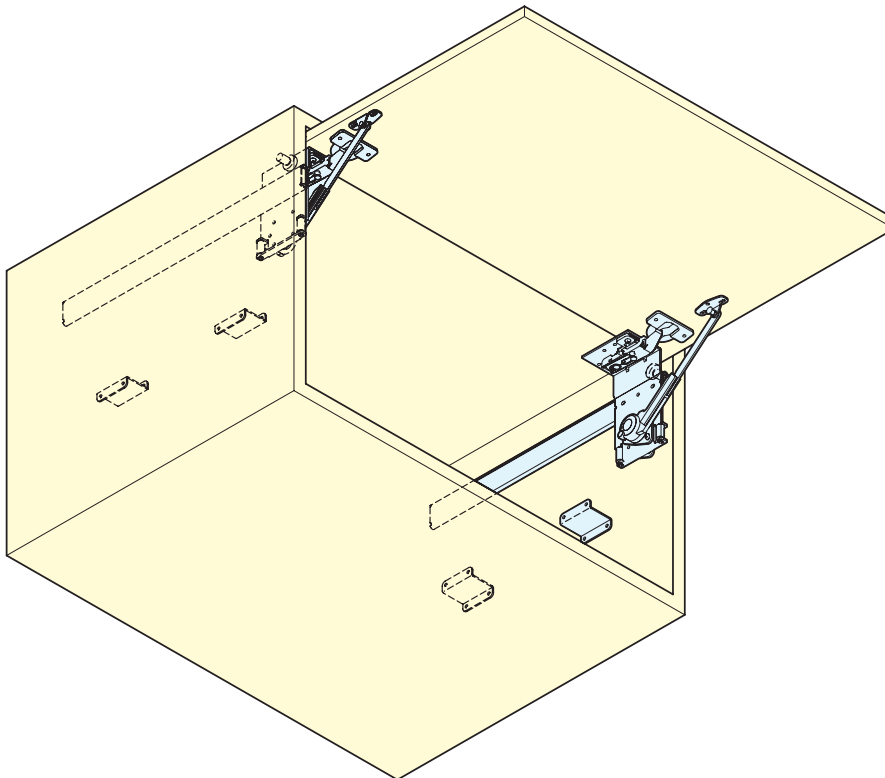
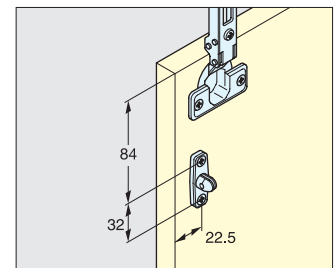
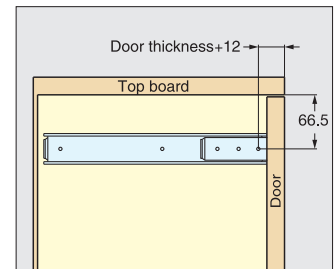
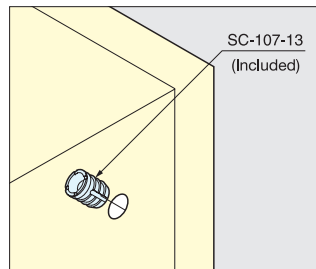
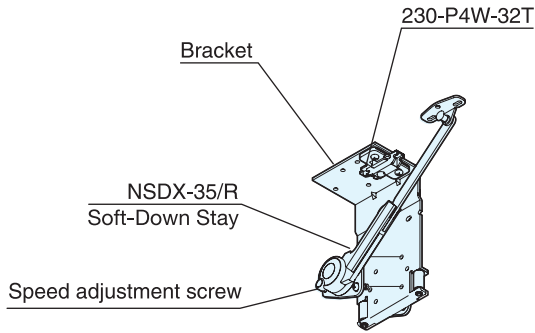
■ Cabinet Preparation



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

*t = Door Thickness

■ Installation



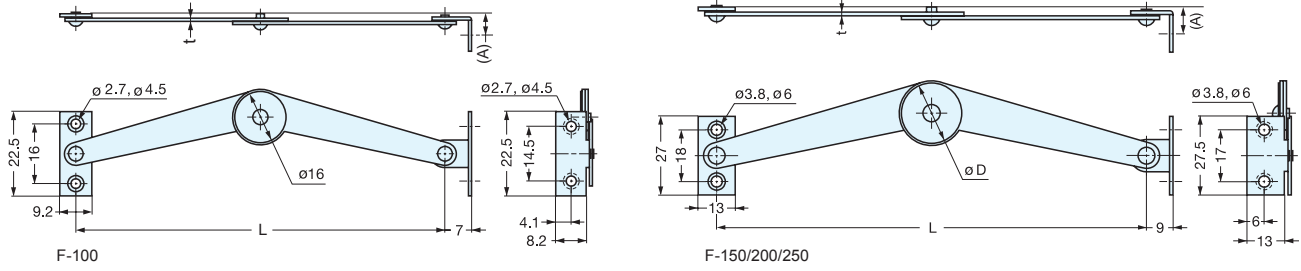
LID STAY (W/O CATCH)



F-100, 150, 200, 250



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



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

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

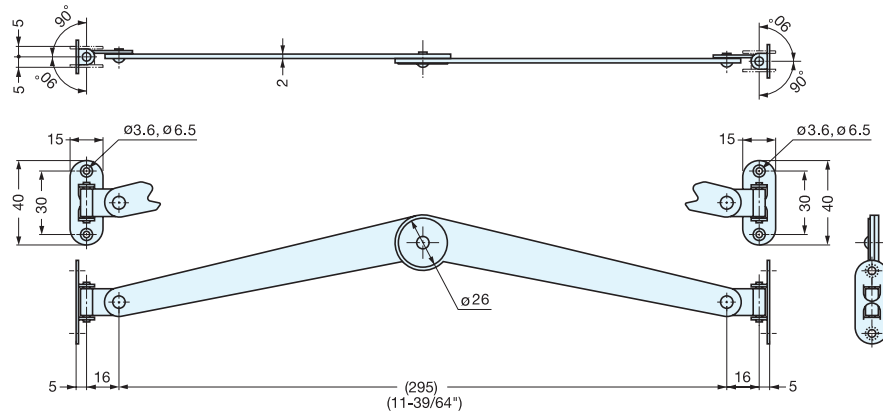
LID STAY (W/O CATCH)



F-300



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



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

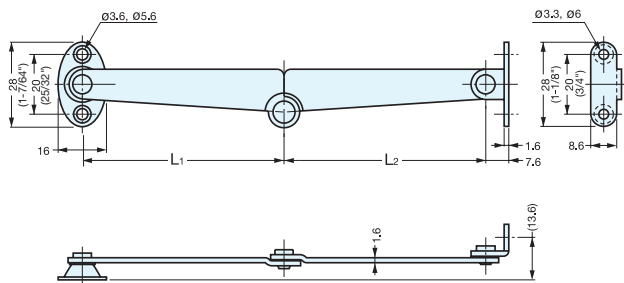
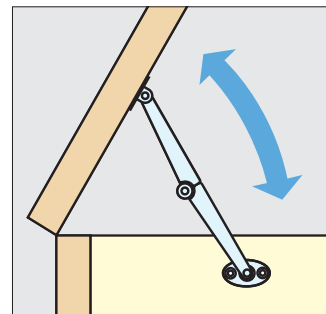
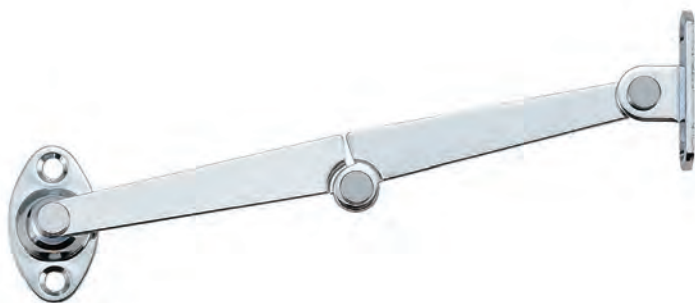
| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

LID STAY



S-6, S-16

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



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

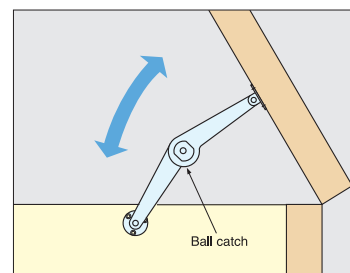
| Material | Finish |
|----------------------------|--------|
| Steel/Brass/Nylon (washer) | Chrome |

LID STAY (W/CATCH)

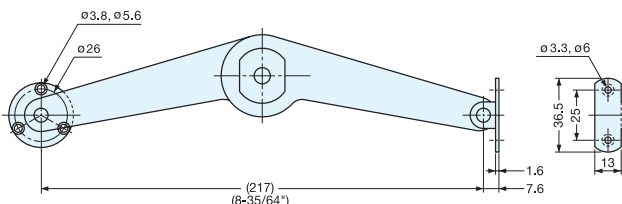
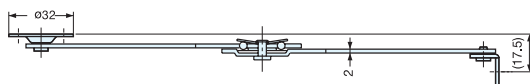


S-20

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



(Left)



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

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

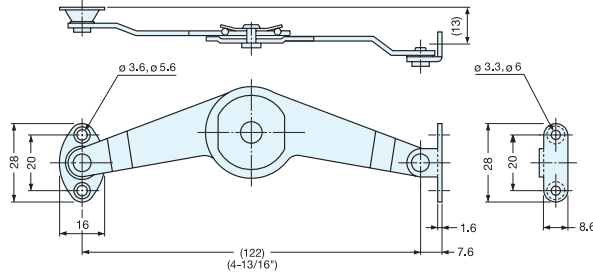
LID STAY (W/CATCH)



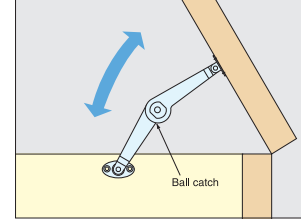
S-21



(Left)



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



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

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

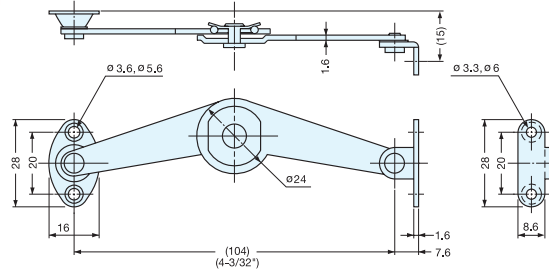
LID STAY (W/CATCH)



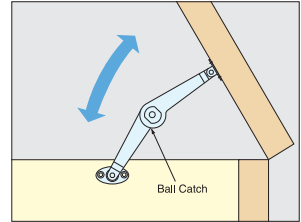
S-23



(Left)



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



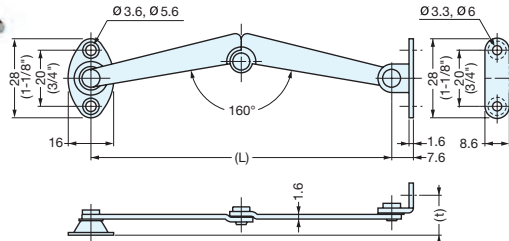
| Item No. | | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|-------|------------|-----------|--------------|
| Left | Right | | | |
| S-23L | S-23R | 33 | 50 | 500 |

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

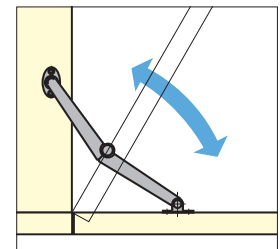
LID STAY



S-24, S-25, S-27



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



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

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

TORQUE LID STAY (FREE STOP)



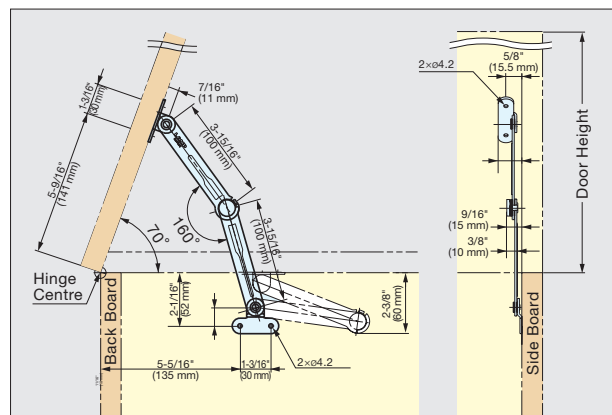
S-100T30

LID SUPPORTS

TORQUE LID STAYS (FREE STOP)



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



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

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

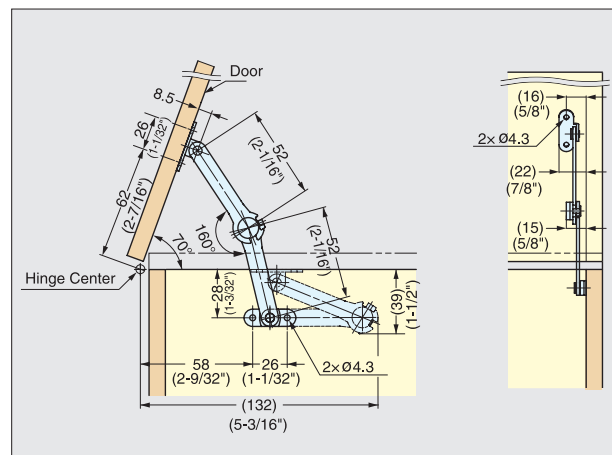
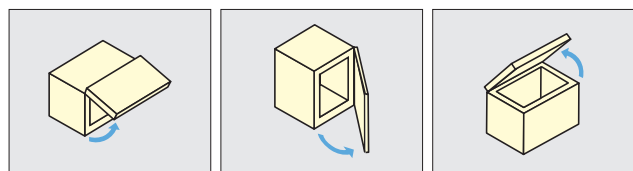
TORQUE LID STAY (FREE STOP)



S-52T15



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



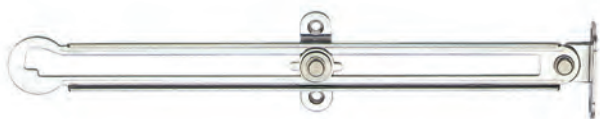
| Item No. | Handing | Torque per piece | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|---------|---------------------------------------|------------|-----------|--------------|
| S-52T15R | Right | 15.3 kg·cm ±20% (13.3 lbs·in ±20%) | 40 | 25 | 250 |
| S-52T15L | Left | | | | |

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

LID STAY

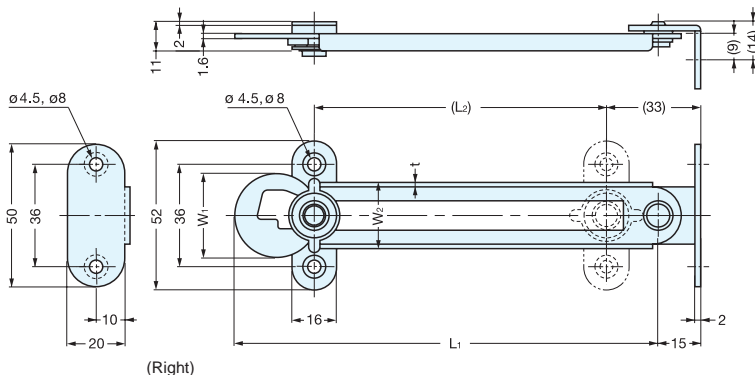
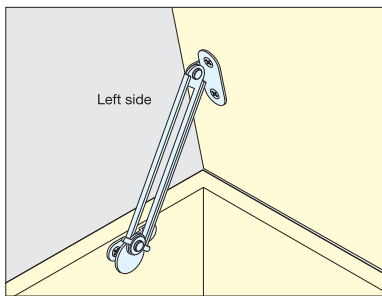


S-91, 92, 93



(Right)

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



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

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

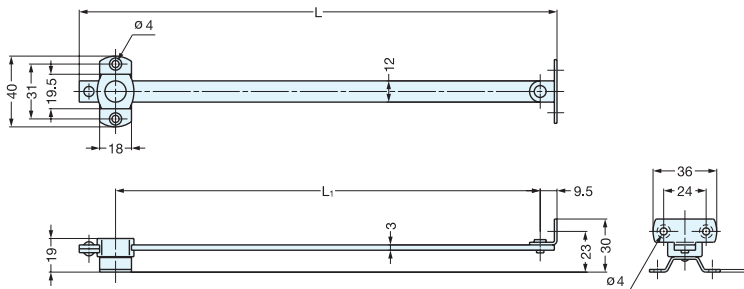
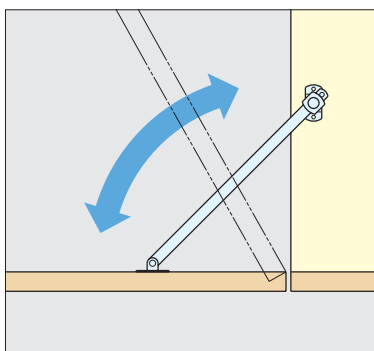
LID STAY



HS



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



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

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

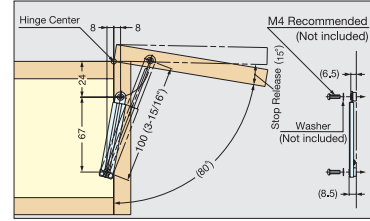
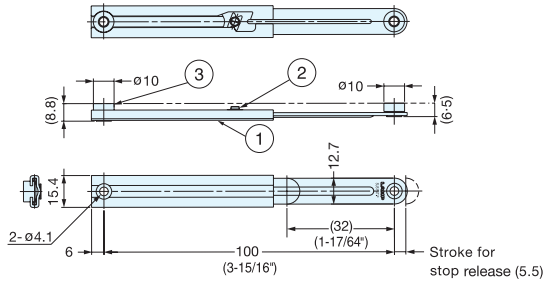
ULTRA MINI LID STAY



L-100S



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



*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 | 304 Stainless Steel | - |

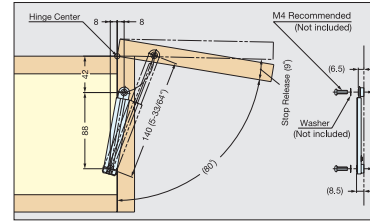
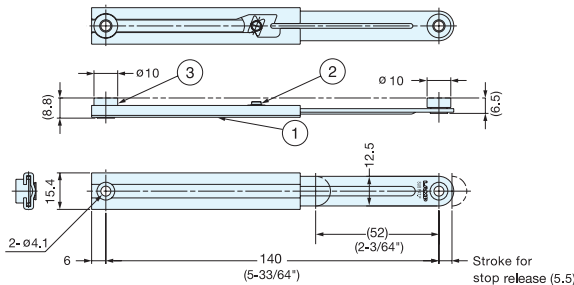
ULTRA MINI LID STAY



L-140S



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



*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 | 304 Stainless Steel | - |

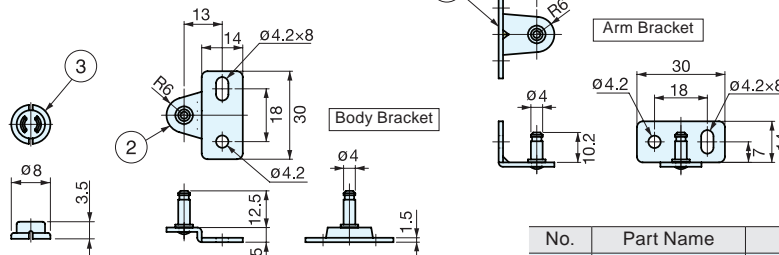
MOUNTING BRACKET



L-S-BT



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



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

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

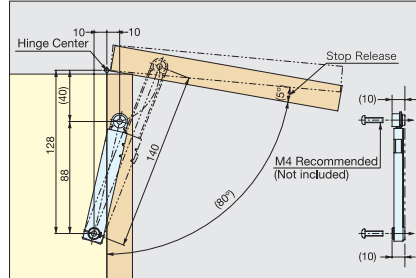
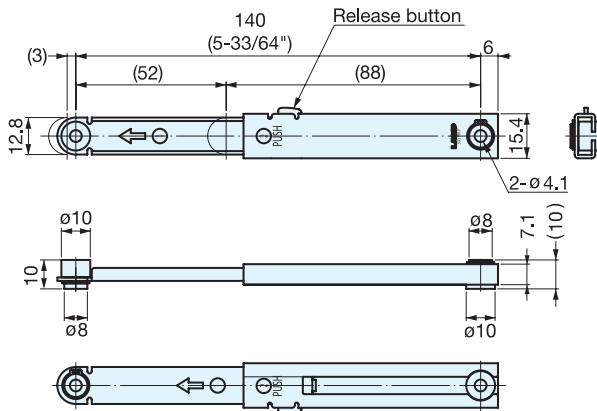
MINI LID STAY (W/LOCK)



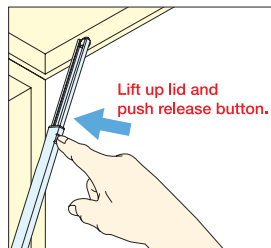
L-SL140



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



*Lid stay must be installed parallel to the sidewall.



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

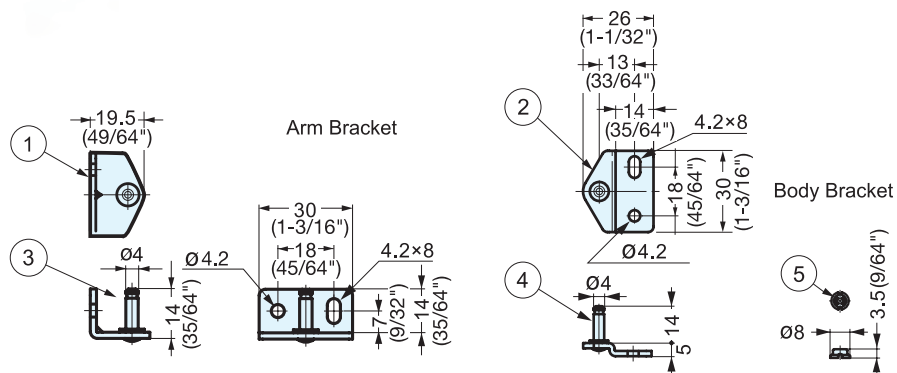
MOUNTING BRACKET



L-SL140-BT



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



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

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

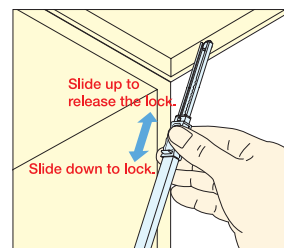
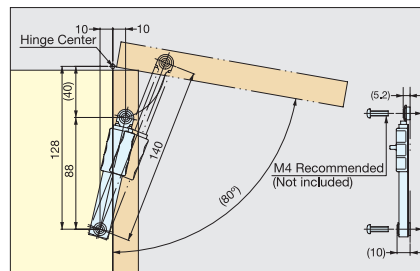
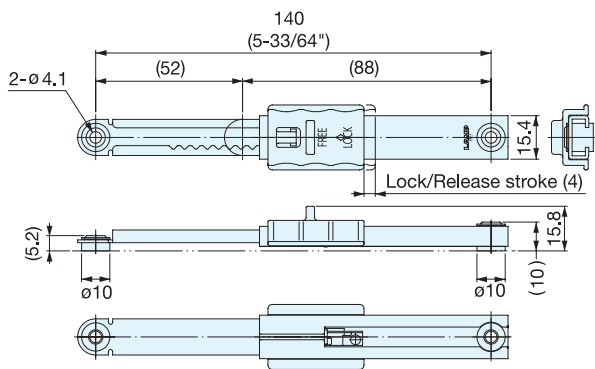
MINI LID STAY (W/LOCK)



L-FS140



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



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

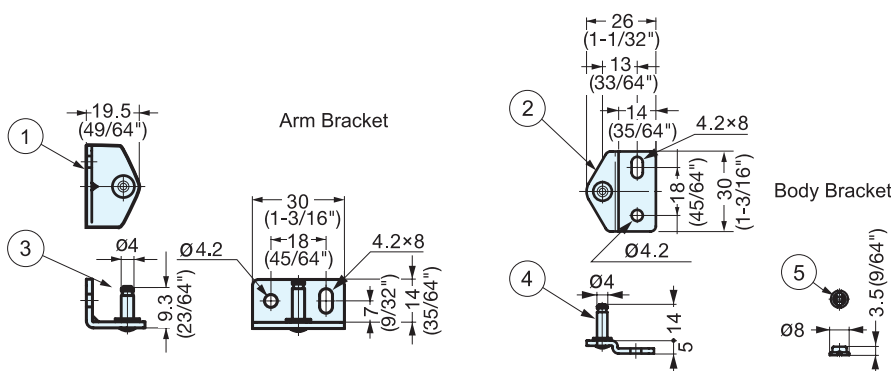
MOUNTING BRACKET



L-FS140-BT



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



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

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

LOW PROFILE LID STAY



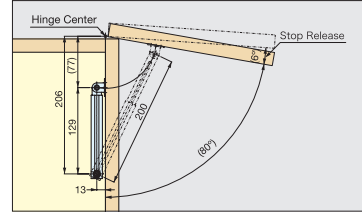
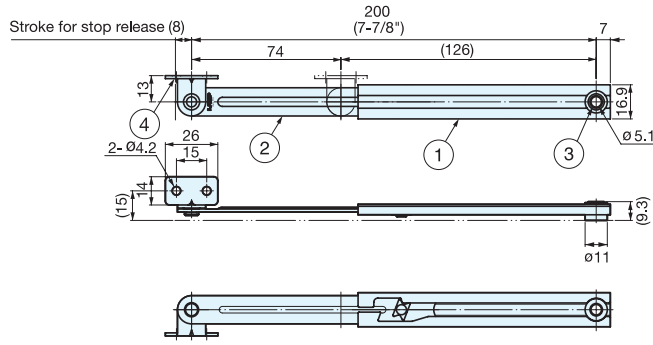
L-200P

LID SUPPORTS

LOW PROFILE LID STAYS / MOUNTING BRACKETS



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



*Lid stay must be installed parallel to the sidewall.

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

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

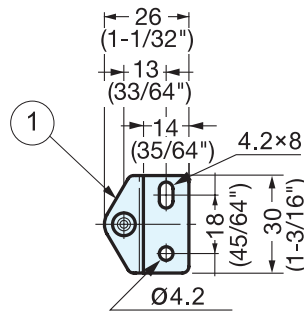
MOUNTING BRACKET



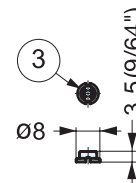
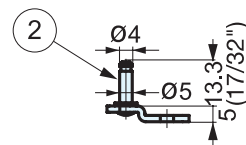
L-200P-BT



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



Body Bracket



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

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

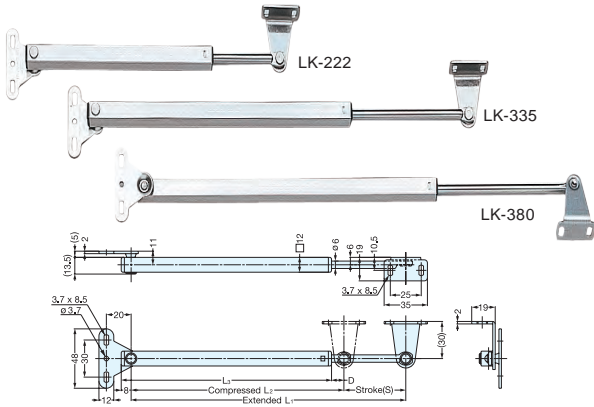
LID STAY



LK

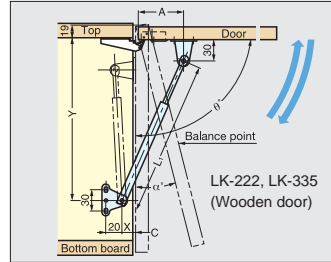
LID SUPPORTS

LID STAYS

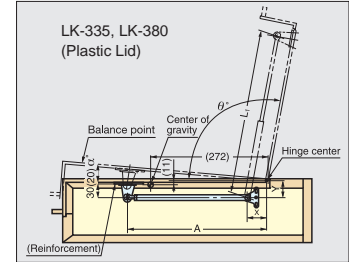


- Spring mechanism assists lifting door and holds in open position.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.

Mounting Example (1)



Mounting Example (2)



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

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

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

| Item No. | Max. Door Weight (kg) | Door Opening (θ°) | - (α°) | L 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") |
| | 3.0 (6.6 lbs) | 75 | 14 | 222 (8-47/64") | 85 (3-11/32") | 20 (25/32") | 251 (9-7/8") |
| LK-335 (2 pcs) | 3.1 (6.8 lbs) | 90 | 14 | 335 (13-3/16") | 104 (4-3/32") | 20 (25/32") | 344 (13-35/64") |
| | 3.3 (7.2 lbs) | 85 | 12 | 335 (13-3/16") | 112 (4-13/32") | 20 (25/32") | 351 (13-13/16") |
| | 3.8 (8.3 lbs) | 75 | 11 | 335 (13-3/16") | 127 (5-1/8") | 20 (25/32") | 368 (14-31/64") |

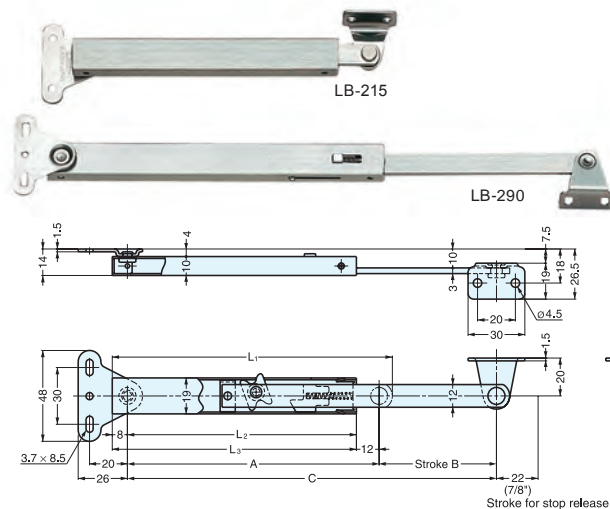
| Item No. | Max. Door Weight (kg) | Door Opening (θ°) | - (α°) | L ₁ | A | X | Y |
|----------------|-----------------------|-------------------|--------|-----------------|-----------------|---------------|---------------|
| LK-335 (2 pcs) | 2.5 (5.5 lbs) | 90 | 0.5 | 335 (13-3/16") | 295 (11-39/64")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

| Item No. | L 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 | 25 | 150 |
| LK-335 | 335 (13-3/16") | 250 (9-27/32") | 238 (9-3/8") | 85 (3-11/32") | 20 (25/32") | 3.8 | 8.5 | 185 | | |
| LK-380 | 380 (14-31/32") | 280 (11-1/32") | 269 (10-19/32") | 100 (3-15/16") | 19 (3/4") | 3.6 | 8.5 | 205 | | |

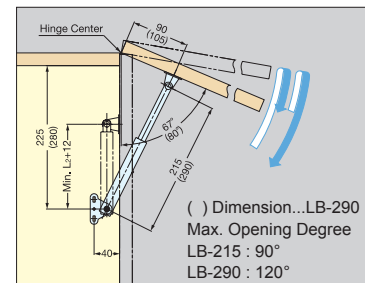
LID STAY



LB-215, 290



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



*Lid stay must be installed parallel to the sidewall.

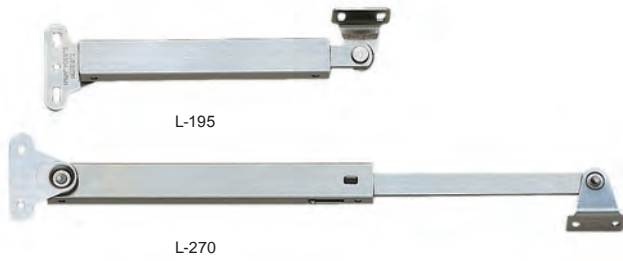
| Material | Finish |
|--------------------------------|--------------|
| Zinc Alloy/304 Stainless Steel | Chrome/Satin |

| Item No. | L 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 | | |

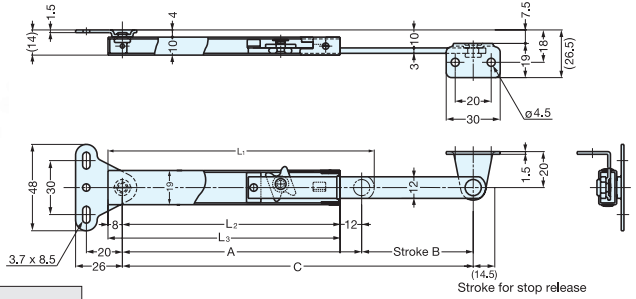
LID STAY



L

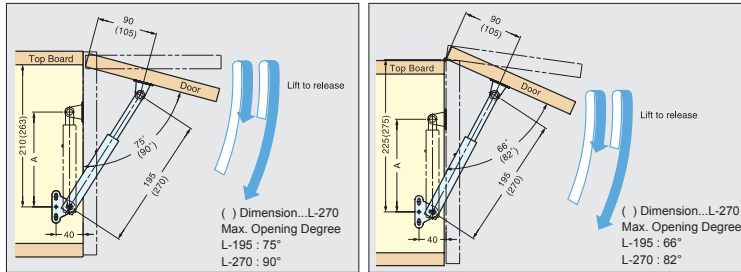


- Holds lid or panel in fully opened position.
- Lift up lid to release.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.
- Load Capacity : 15 kg (33 lbs)/each.



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 | | |

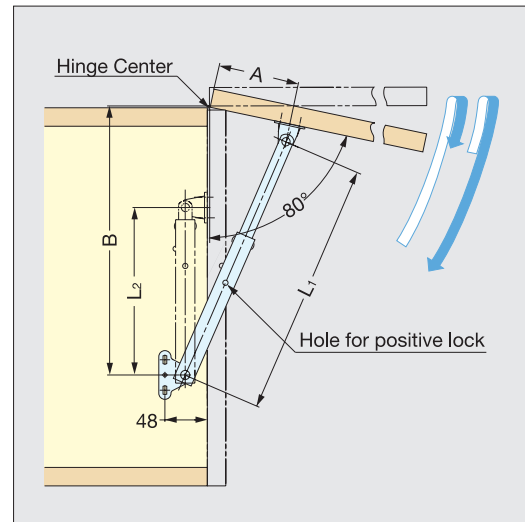
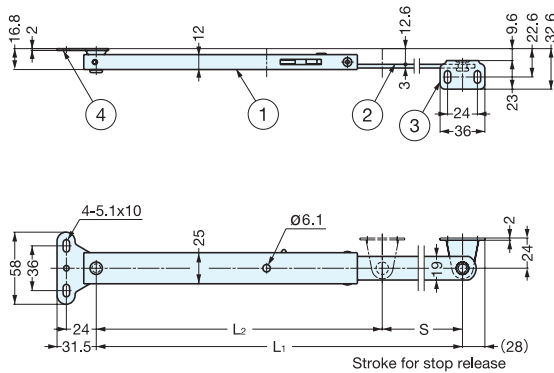
LID STAY



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) | | |

LID STAY (CLEAN ROOM)

STAINLESS
304
STEEL

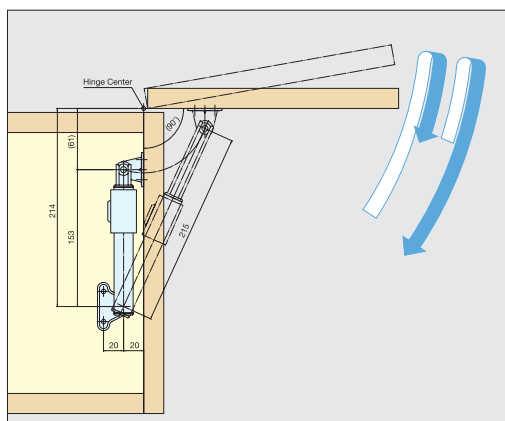
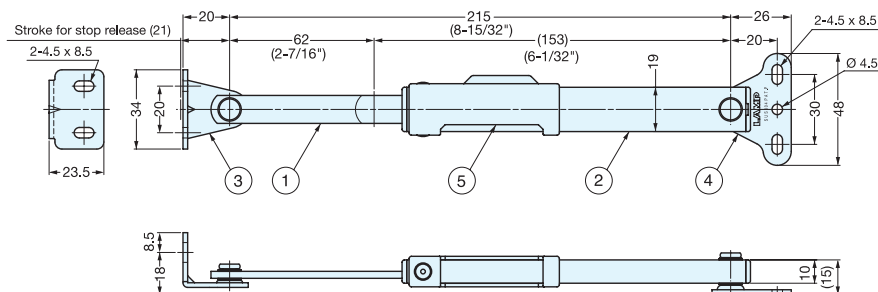
LOAD CAPACITY
15 kg
33 lbs

NO SCREW

LB-CV215A



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



*Lid stay must be installed parallel to the sidewall.

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

CLEAN ROOM HARDWARE



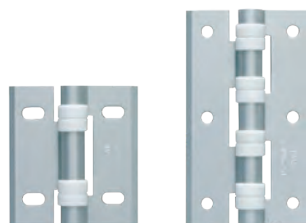
MC-JM45

Please see page 104 for details



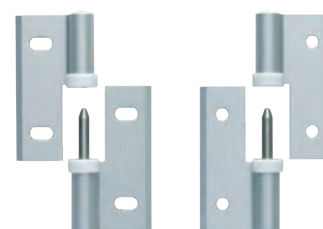
MC-JM63G

Please see page 104 for details



HG-CV

Please see page 228 for details



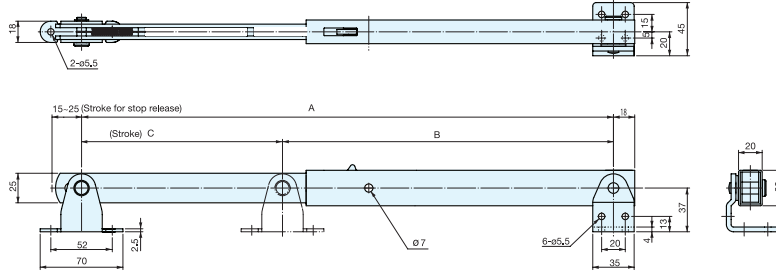
HG-CV-65N

Please see page 228 for details

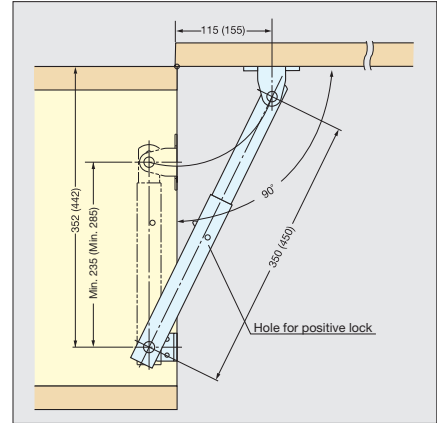
HEAVY DUTY LID STAY



LB-S



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



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

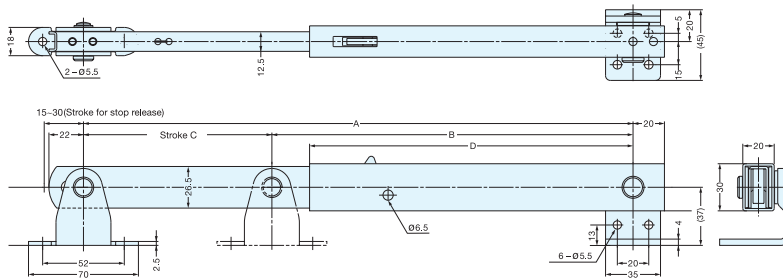
| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

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

HEAVY DUTY MULTI-ANGLE LID STAY

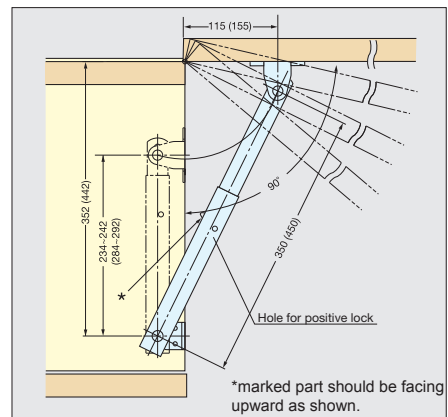


LBTS



Above drawing shows LBTS left-hand mounting.

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



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

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

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

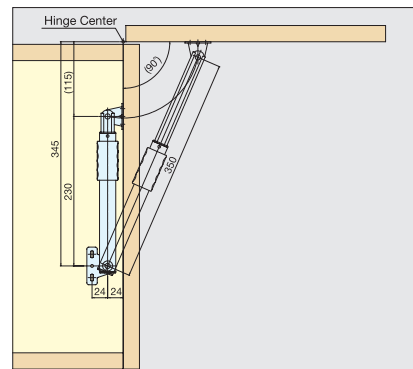
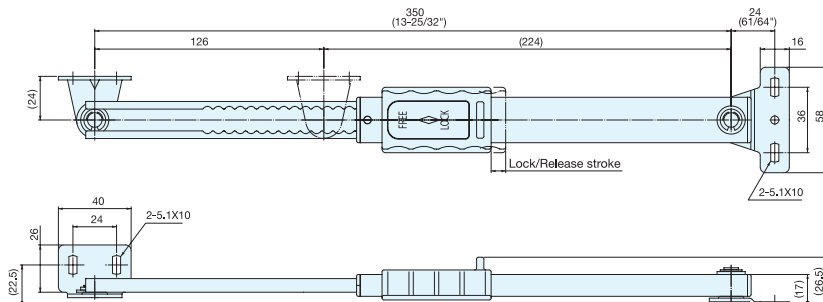
MULTI-ANGLE LID STAY (w/LOCK)



L-FS350A



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



*Lid stay must be installed parallel to the sidewall.

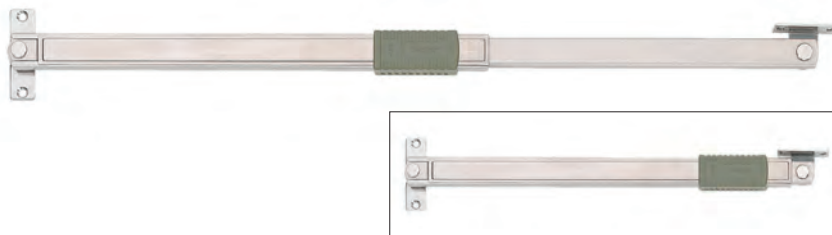
| Item No. | Load Capacity (kg) | Weight (g) | Box (pcs) | Carton (pcs) |
|----------|--------------------|------------|-----------|--------------|
| L-FS350A | 25 (55 lbs) | 325 | 5 | 50 |

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

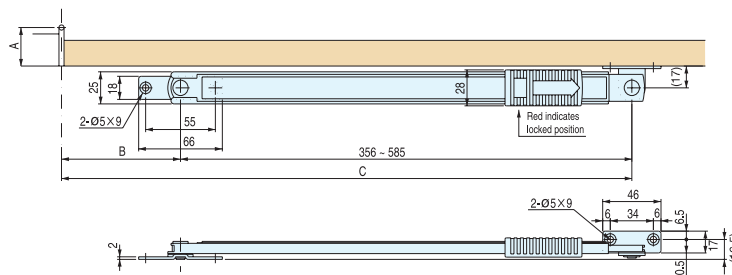
MULTI-ANGLE LID STAY



U-3005



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



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

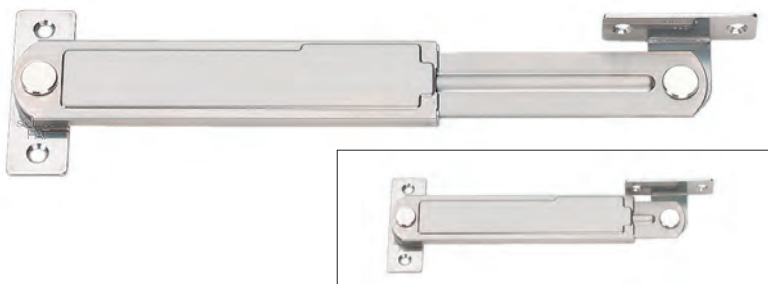
| | | | | | |
|---|-------------------|-------------------|------------------|------------------|-----------------|
| A | 30 (1-11/64") | 35 (1-3/8") | 40 (1-37/64") | 45 (1-49/64") | 50 (1-31/32") |
| B | 160 (6-19/64") | 160 (6-19/64") | 160 (6-19/64") | 160 (6-19/64") | 155 (6-3/32") |
| C | 525 (20-49/64")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

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

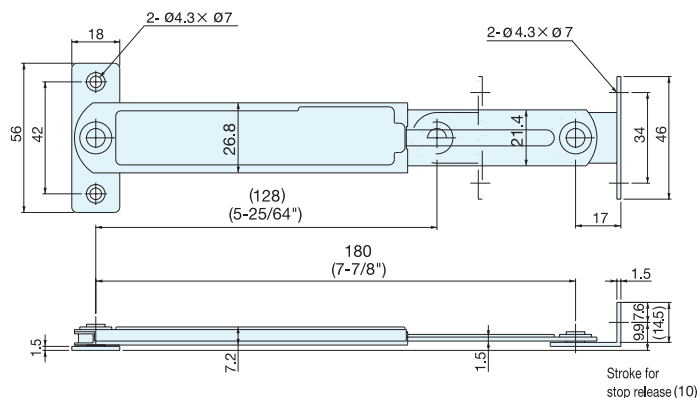
| Material | Finish/Color |
|---------------------|--------------|
| 304 Stainless Steel | Satin |
| Polyacetal | - |

MULTI-ANGLE LID STAY

STAINLESS
304
STEEL
LOAD CAPACITY
 7 kg
 15 lbs

STAINLESS
U-3031


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



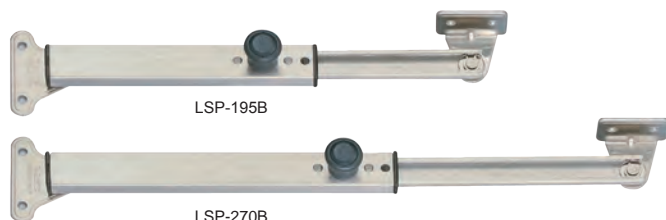
| Material | Finish |
|---------------------|--------|
| 304 Stainless Steel | Satin |

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

LID STAY (W/LOCK)

STAINLESS
304
STEEL
LOAD CAPACITY
 30 kg
 66 lbs

TEST 15
 P.698

NO SCREW
LSP


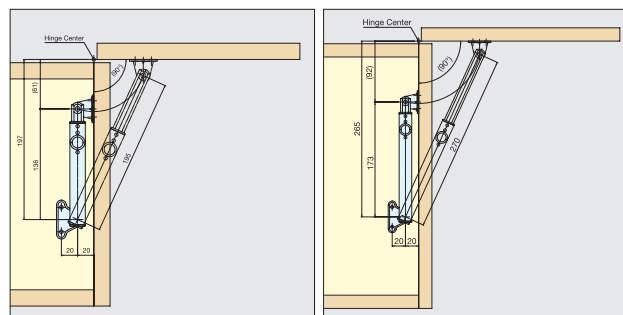
LSP-195B

LSP-270B

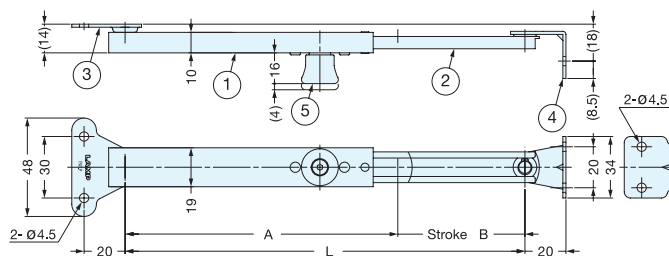
- Automatically locks lid when fully opened.
- Pull the locking knob to release lock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed : Can be installed on left or right side.

LSP-195B

LSP-270B



*Lid stay must be installed parallel to the sidewall.



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

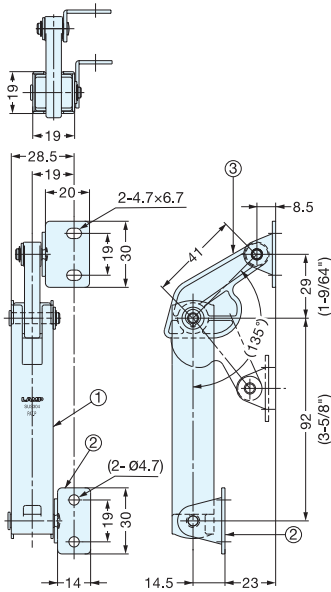
SPRING LOADED LID STAYS

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

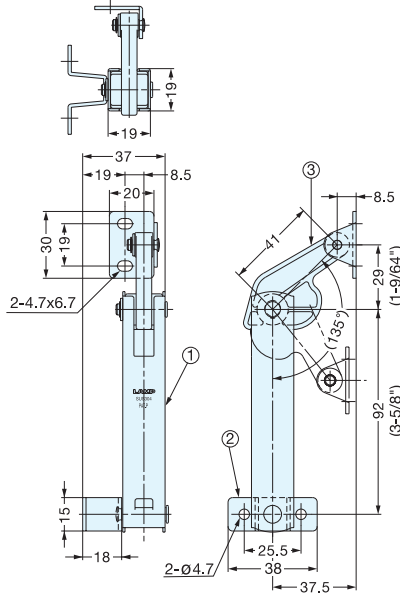
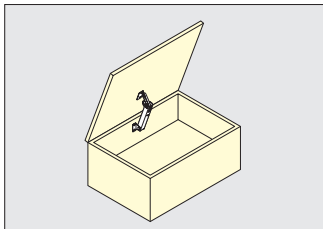


Back panel mount type

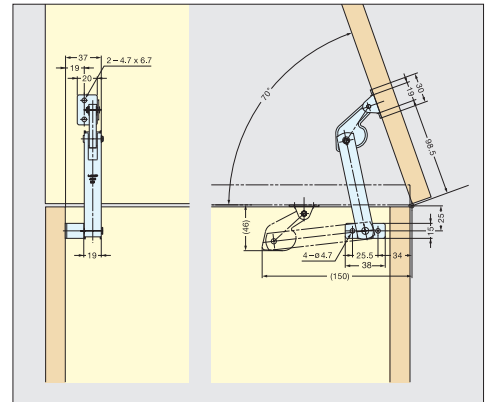
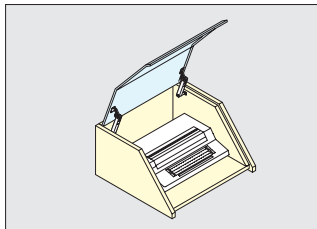
Side mount type
(Left handed shown)



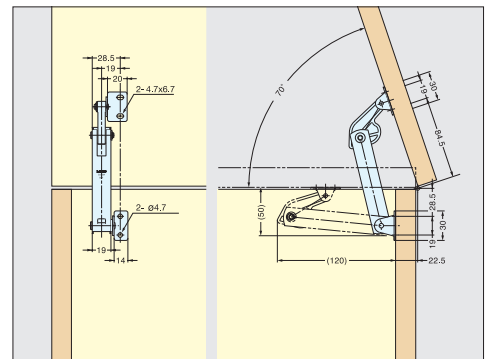
Back panel mount type



Side mount type



For side mount type



For back panel mount type

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

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

BALANCE ADJUSTABLE SPRING LOADED LID STAY



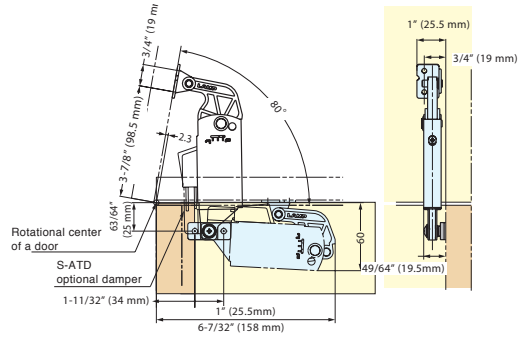
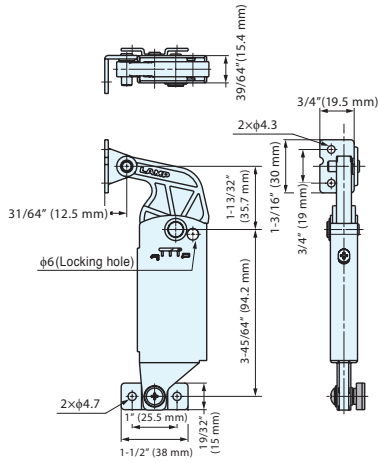
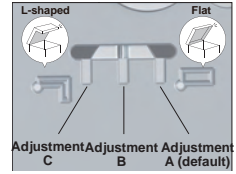
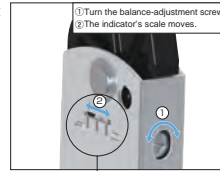
S-ATJ



(Shown with S-ATD damper)

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

Balance Adjustment



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

BALANCE ADJUSTABLE SPRING LOADED LID STAY



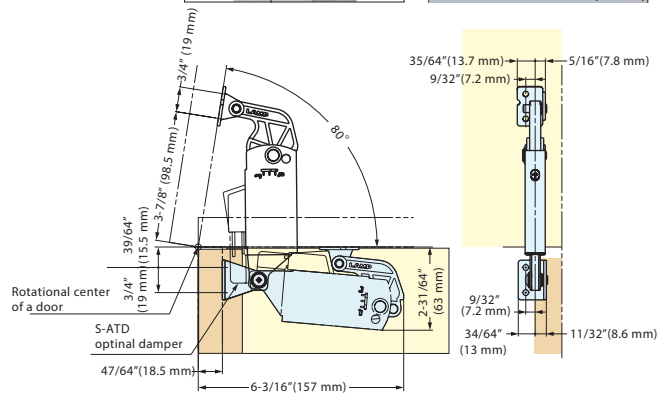
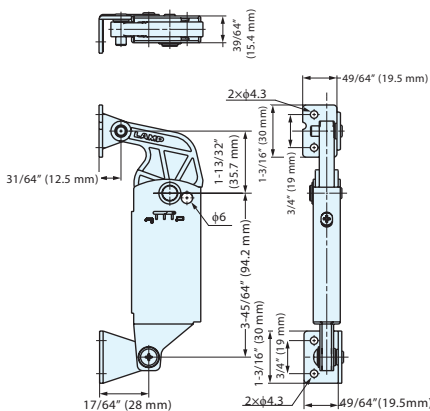
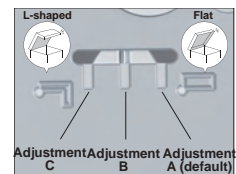
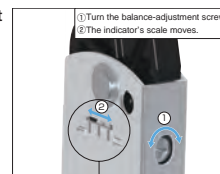
S-ATJD



(Shown with S-ATD damper)

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

Balance Adjustment



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

DAMPER FOR S-ATJ & S-ATJD

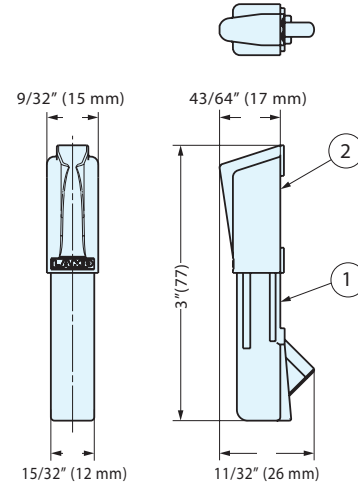
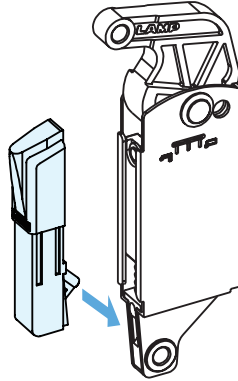


S-ATD

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



(When attached to S-ATJD)



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

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

BALANCE ADJUSTABLE SPRING LOADED LID STAY

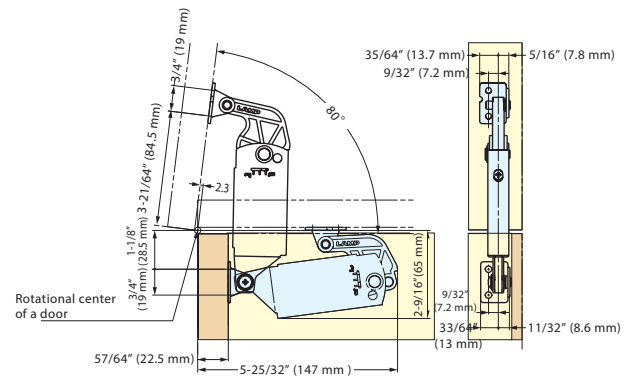
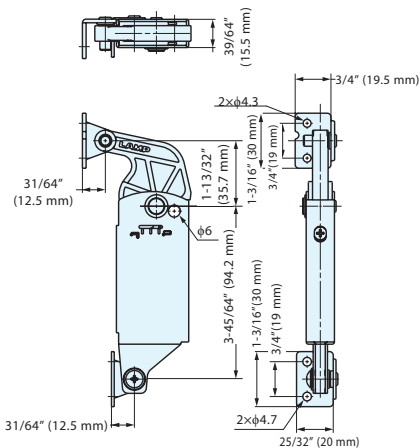
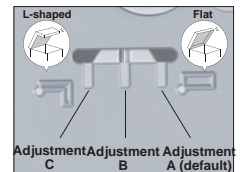
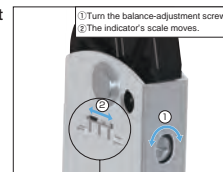


S-ATJS

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



Balance Adjustment



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

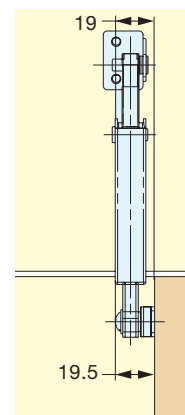
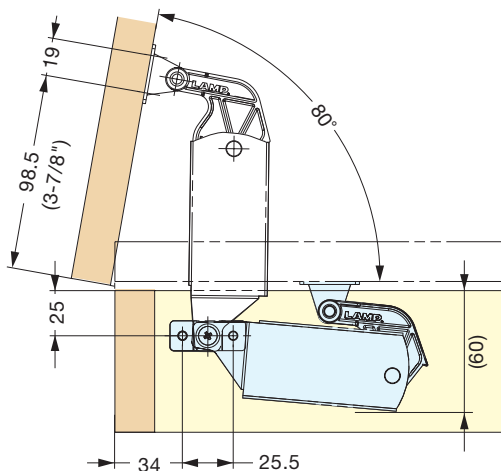
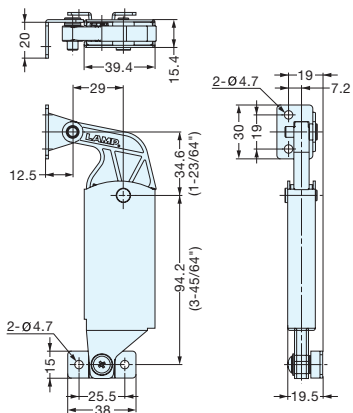
SPRING LOADED LID STAY



S-AT01, S-AT02



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



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

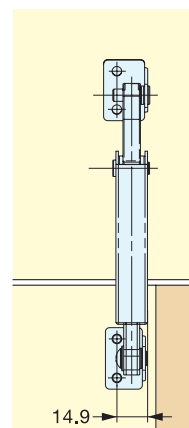
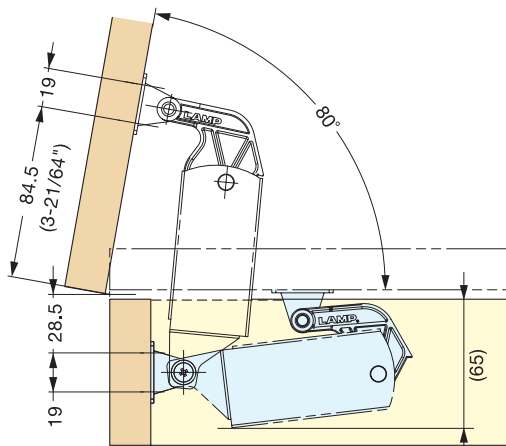
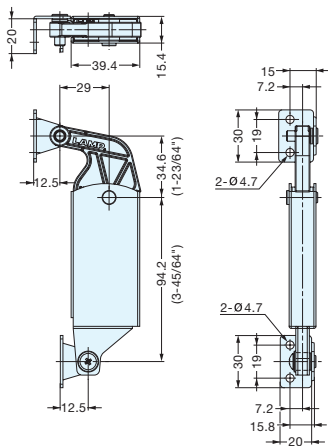
SPRING LOADED LID STAY



S-AT01S, S-AT02S



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



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

MINI-DOOR CLOSER (W/DAMPER)



YMC



YMC-R

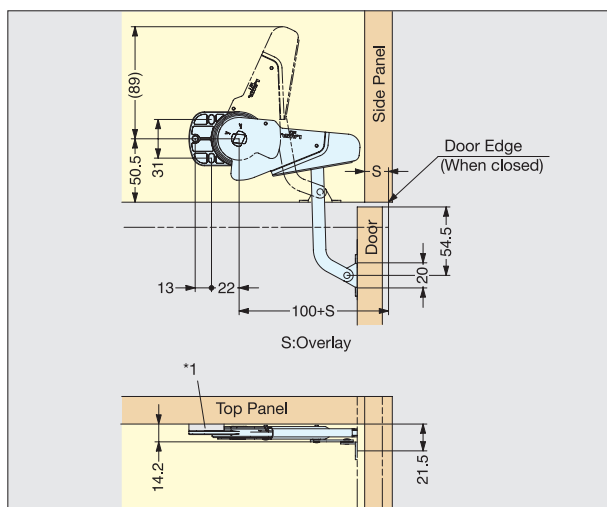
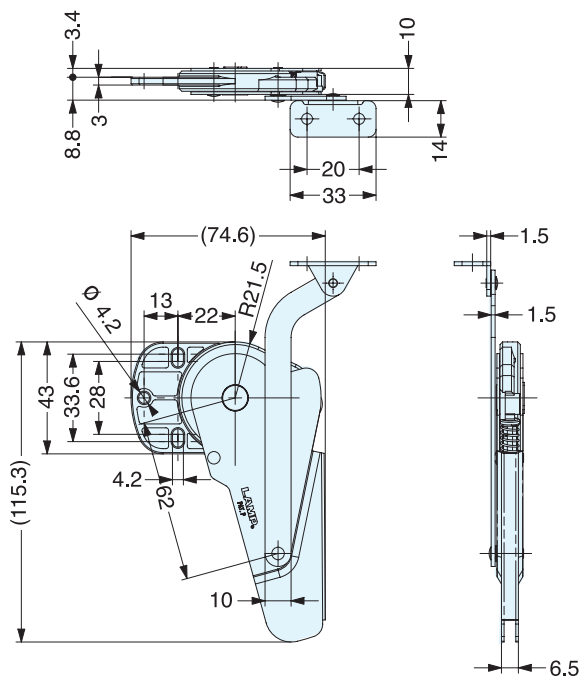
- Low profile door closer for small, horizontally swinging doors.
- Equipped with dampening mechanism for soft close.
- Stay will hold the door in 90° open position.
- Push the door to close. Once pushed, stay will gently pull the door and close.
- Thin body designed to be installed on top panel.
- Durable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

LID SUPPORTS

MINI-DOOR CLOSERS (W/DAMPER)

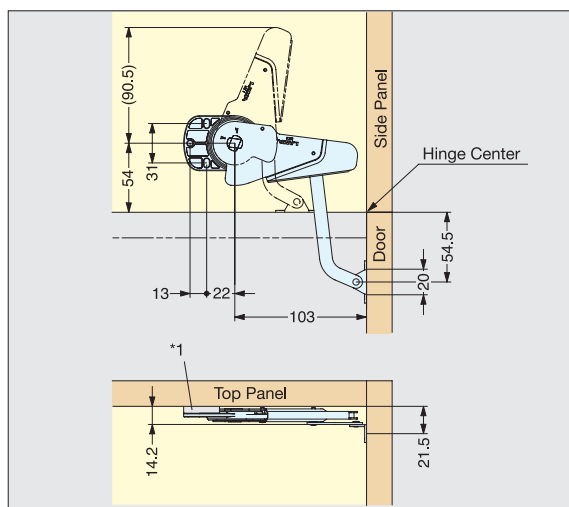


YMC-R model



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

Installation (With Concealed Hinge)



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

Installation (With Piano/Butt Hinge)

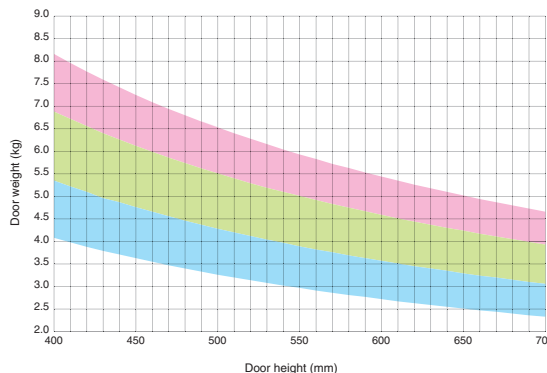
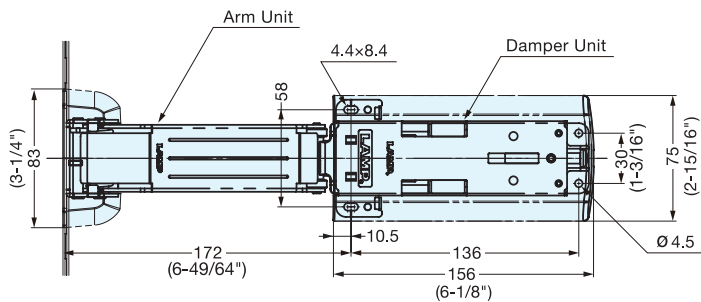
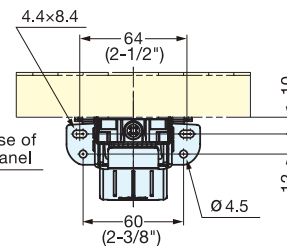
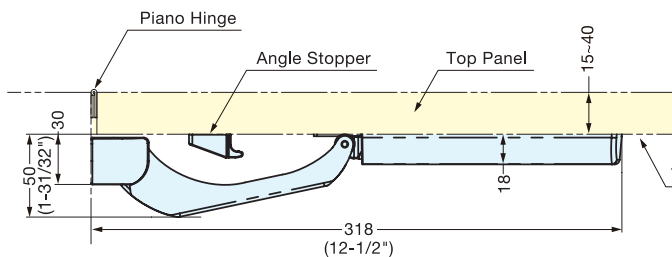
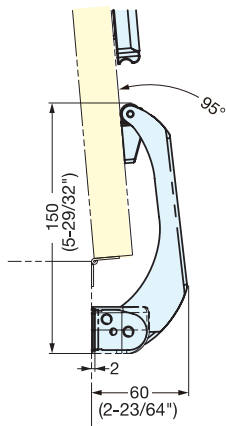
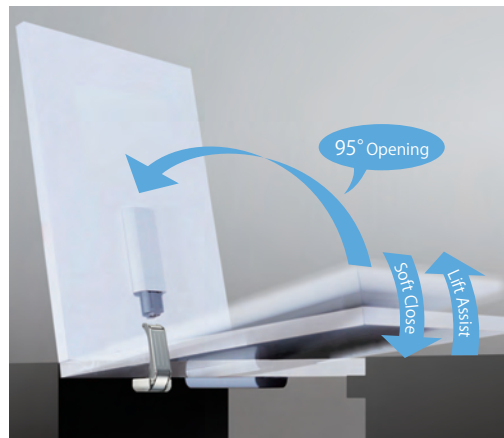
| Item No. | | Opening Angle | Door Weight (kg) (0.66~1.54 lbs) | Door Width (mm) (11-13/16") | Weight (g) | Box (pcs) | Carton (pcs) | Material | Finish/Color |
|----------|-------|---------------|-------------------------------------|--------------------------------|------------|-----------|--------------|--------------------------|--------------|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

LIFT ASSIST DAMPER (W/ANGLE STOPPER)

LID SUPPORTS

LIFT ASSIST DAMPERS (W/ANGLE STOPPER)

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



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

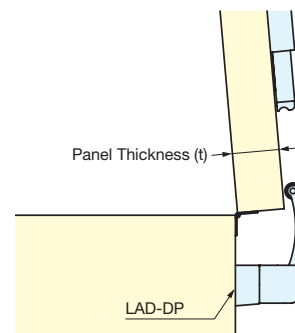
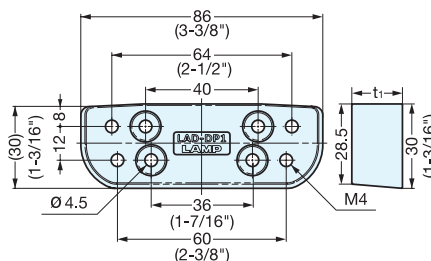
SPACER FOR THICKER PANEL



LAD-DP



• Optional spacer for LAD-ST.



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

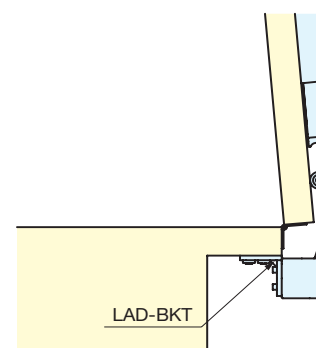
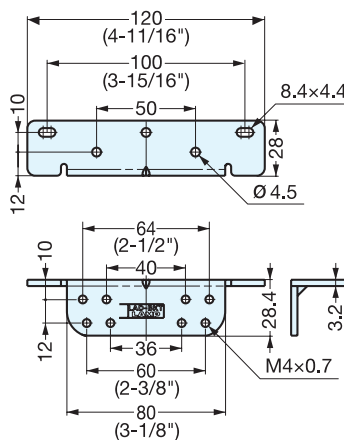
UNDER MOUNTING BRACKET



LAD-BKT



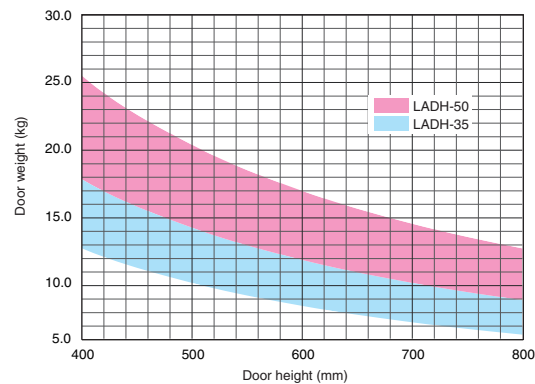
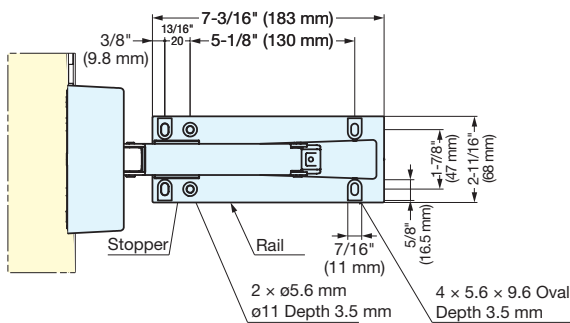
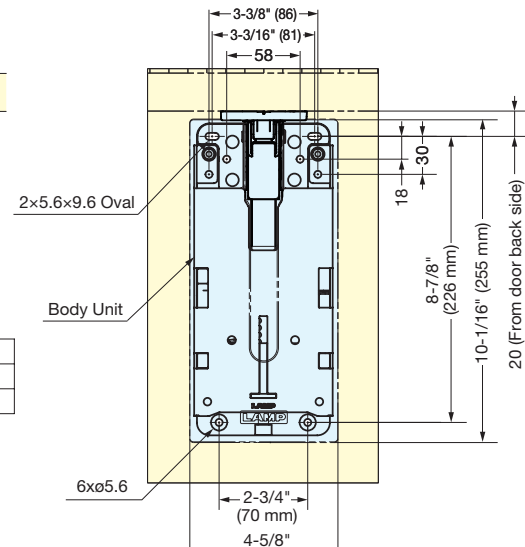
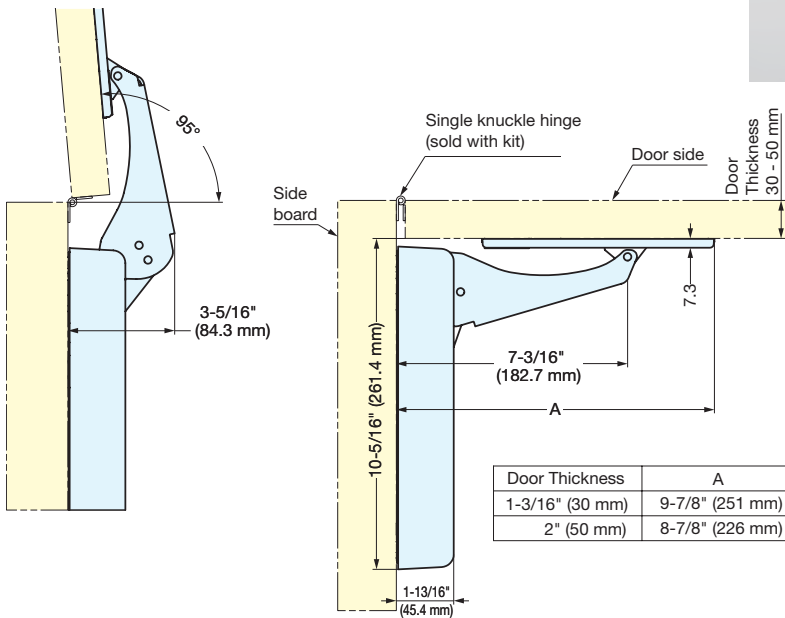
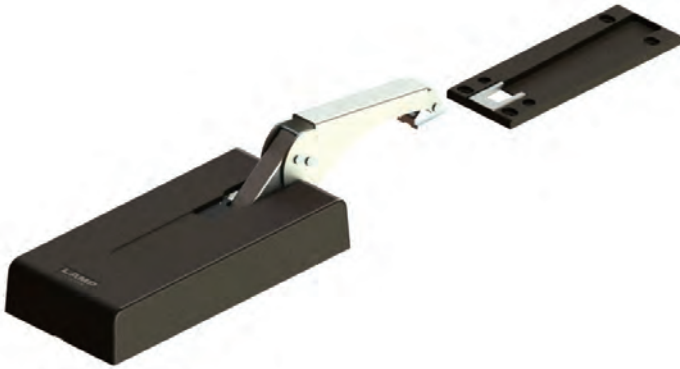
• Optional under mounting bracket for LAD-ST.



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

LIFT-ASSIST DAMPER (Heavy Duty)

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



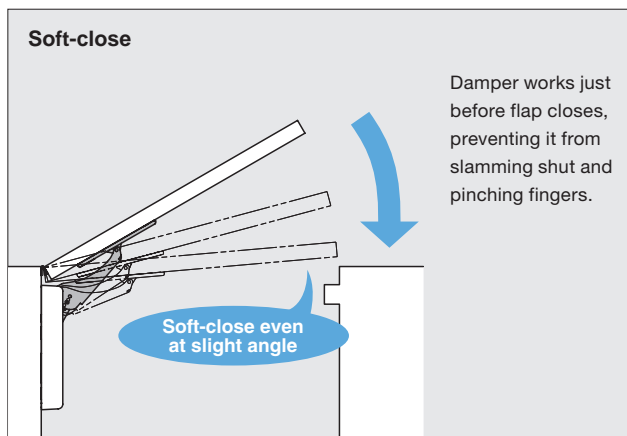
| Item No. | Max. Torque per piece (lbs-in) | Panel Thickness | Wt (g) | Box (pcs) | Material | Finish |
|----------|--------------------------------|--------------------------|--------|-----------|---------------------------------------|-----------------------------------------------------------------------|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

LIFT-ASSIST DAMPER (Heavy Duty)

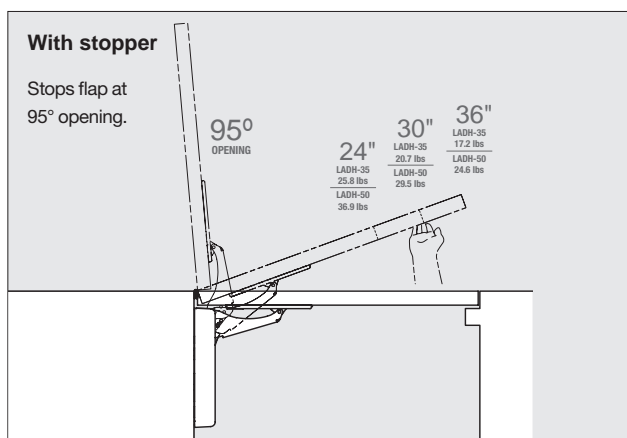
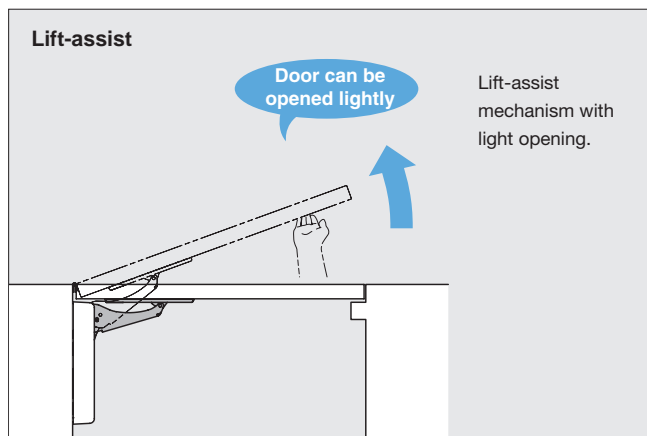


LADH

LID SUPPORTS

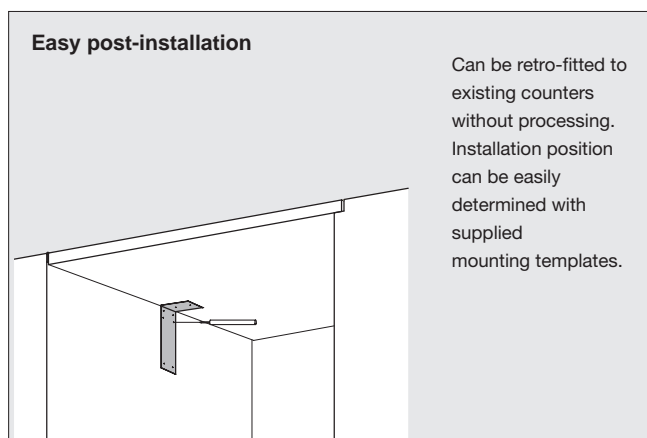


Damper works just before flap closes, preventing it from slamming shut and pinching fingers.



With stopper

Stops flap at 95° opening.



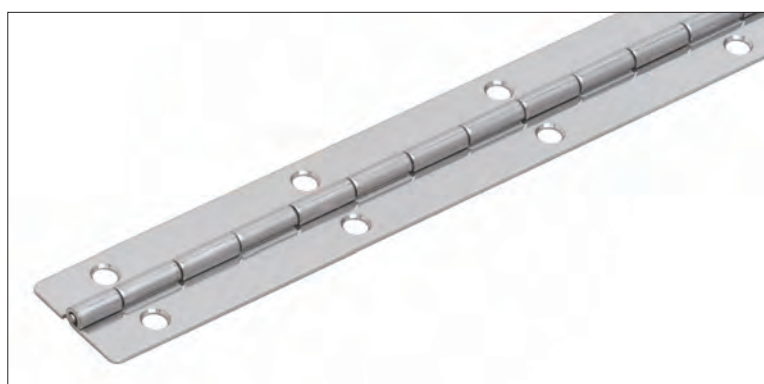
Easy post-installation

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

STAINLESS STEEL PIANO HINGE for LADH



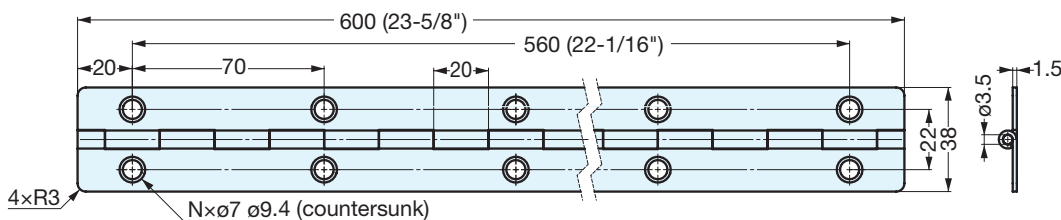
LSN-C



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

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

Other sizes available



ENCLOSURE DOOR STOPS



YFN



YFN-200



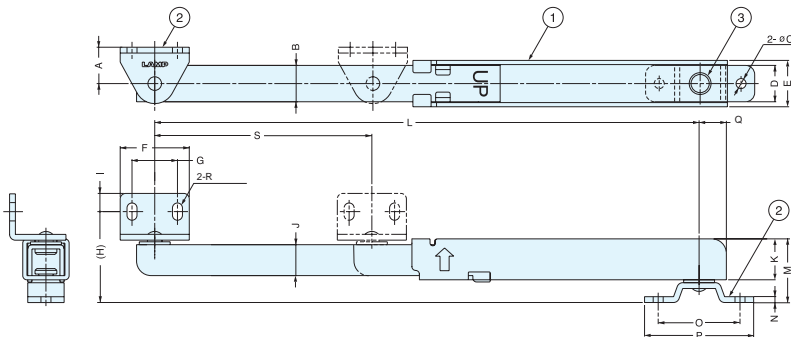
YFN-300



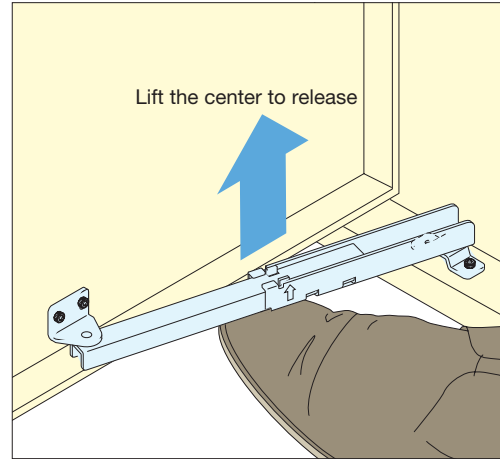
YFN-300-T50



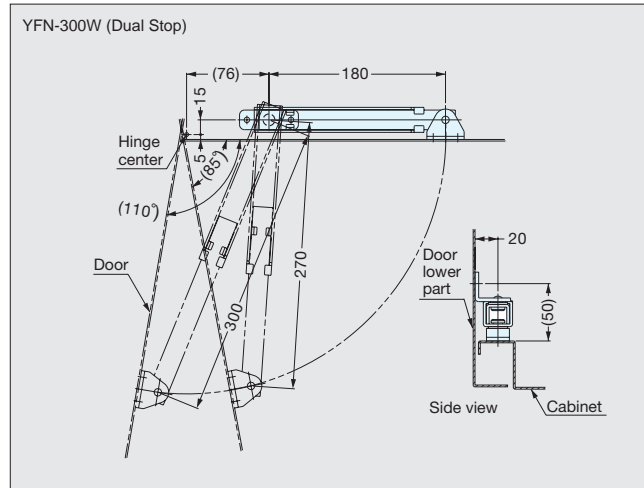
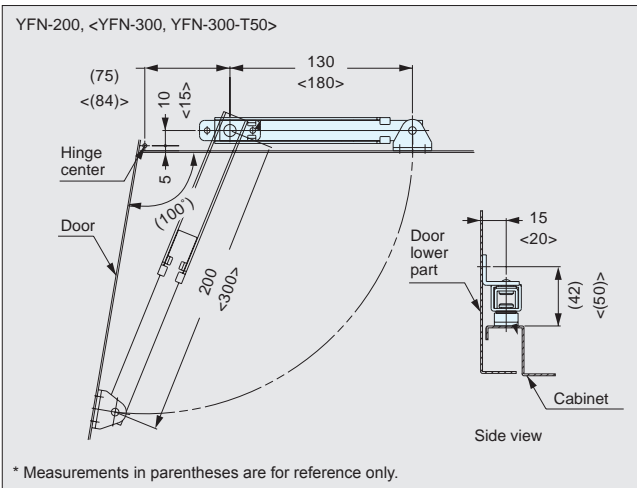
YFN-300W



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



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



| Item No. | L | S | A | B | C | D | E | F | G | (H) | I | J | K | M | N | O | P | Q | R |
|-------------|-----------------|----------------|----|------|-----|----|------|----|----|-----|----|------|------|----|-----|----|----|----|---------|
| YFN-200 | 200 (7-7/8") | 70 (2-3/4") | 15 | 15.9 | 5.5 | 17 | 20.0 | 33 | 20 | 42 | 8 | 15.7 | 20.0 | 30 | 2.3 | 35 | 50 | 10 | 5.5x8.0 |
| YFN-300 | 300 (11-13/16") | 120 (4-23/32") | 20 | 20.0 | 5.5 | 20 | 25.5 | 38 | 25 | 50 | 10 | 17.0 | 22.5 | 35 | 3.2 | 45 | 60 | 15 | 5.5x9.5 |
| YFN-300-T50 | | | | | 9.0 | | | | | | | | | | | 72 | | | |
| YFN-300W | | | | | 5.5 | | | | | | | | | | | 60 | | | |

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

STAINLESS STEEL FOOT STAY (TWO-ANGLE LOCK)



YFNS

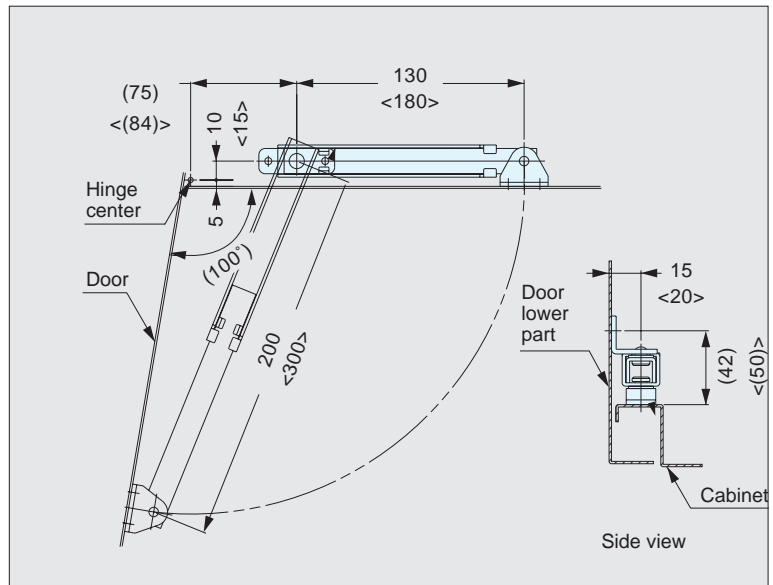
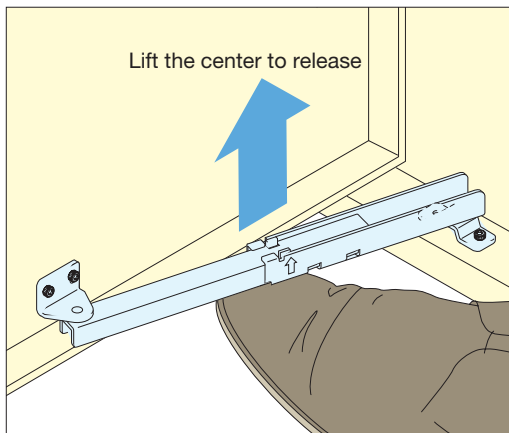
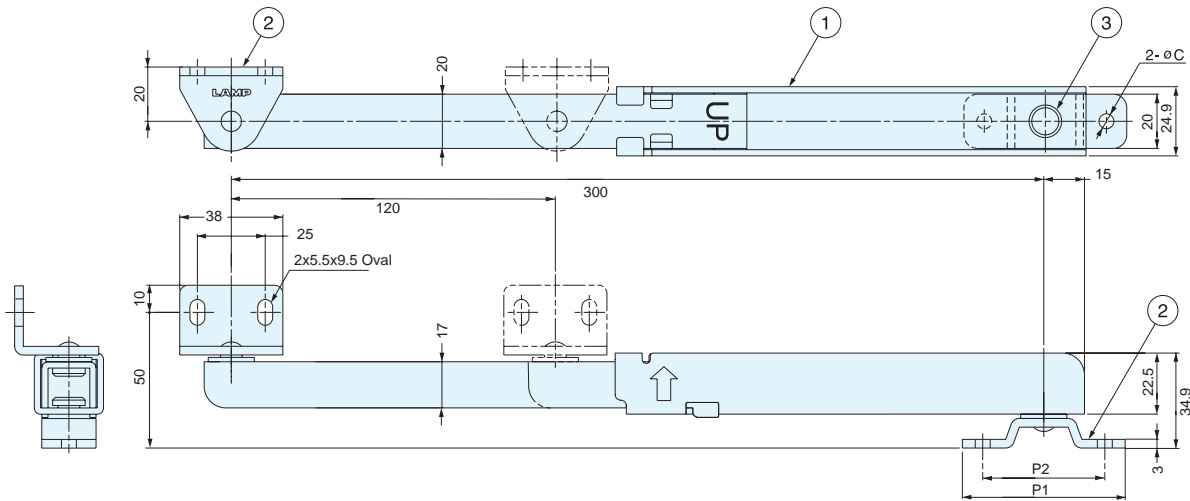
- For horizontally swinging doors.
- Mechanically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Designed for bottom mount (Not recommended for vertical use).
- Non-Handed: Can be installed on left or right side.



YFNS-300



YFNS-300-T50



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

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

STAINLESS STEEL FOOT STAYS

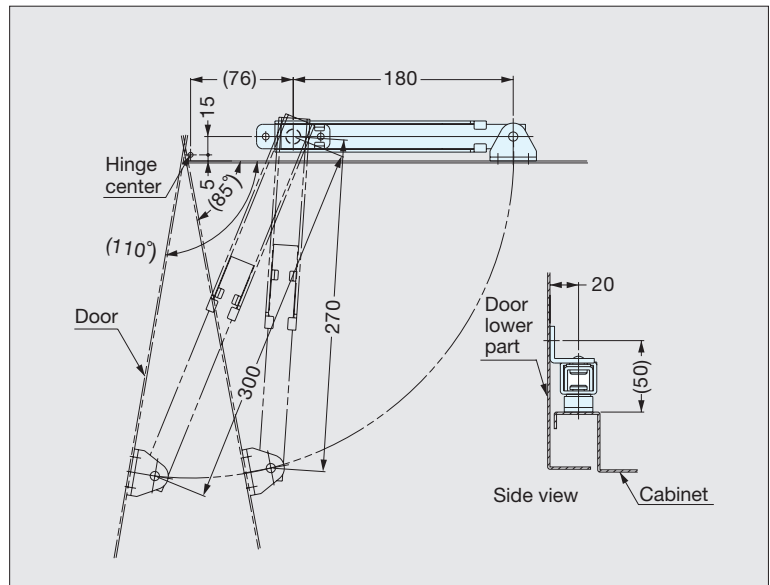
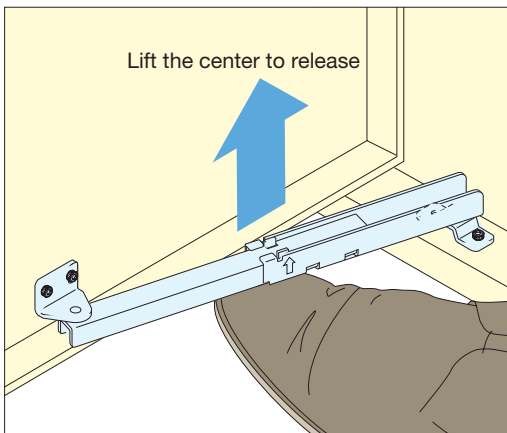
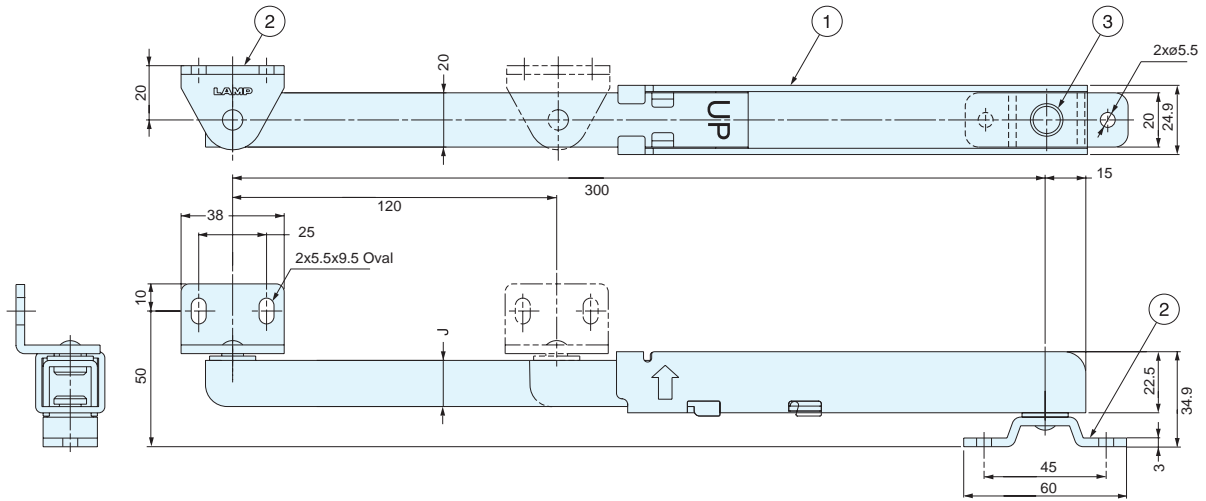


YFNS-300W

LID SUPPORTS

FOOT STAYS

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



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

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

DOOR HOLDER

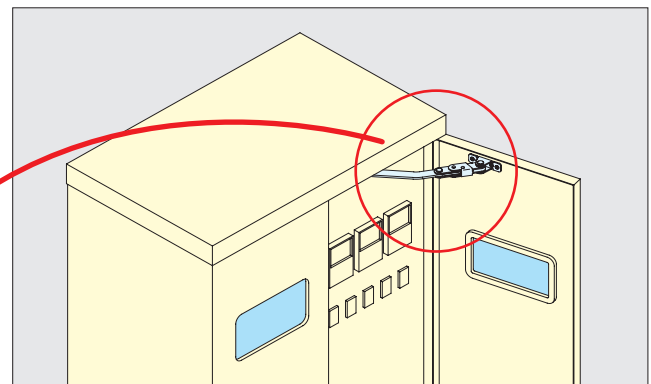
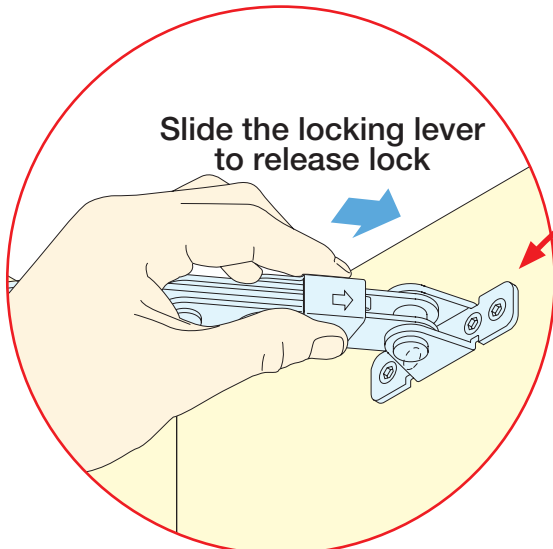
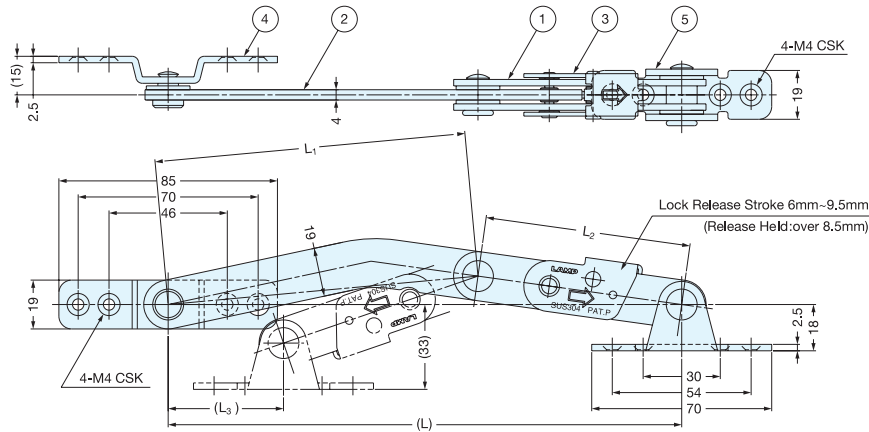
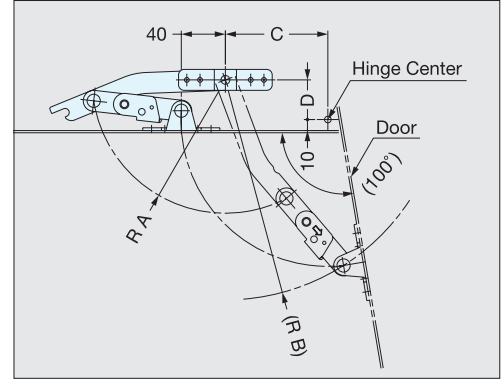
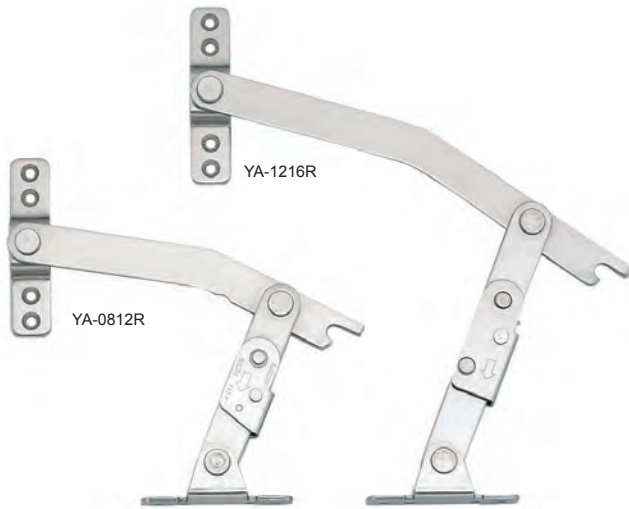


YA-0812, 1216

LID SUPPORTS

DOOR HOLDERS

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



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

| Item No. | Type | L | L 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") | | | | | | | | |

