

- Please read this instruction sheet carefully for proper installation and operation. Incorrect installation and improper use of the product may damage the unit or cause injury.
- This damper is designed for furniture or lightweight door and is equipped with a damping function.
- Sugatsune guarantees the quality of this product as for all its parts. It cannot however guarantee the final assembly as a whole.
- This product was manufactured and delivered with our utmost care. Should you however find any defect, please contact your dealer immediately.
- Sugatsune warrants that this product is free from defect for a period of one(1) year from the date of shipment.
- Sugatsune liability is limited to the replacement of this product by a similar one free of charge. In no case does this extend to the replacement of the installation and/or the cabinet as a whole.
- Please keep these instructions at hand for future use.
- Sugatsune cannot be held liable for any damage or injury caused by improper use of this product or by use for purposes other than the one originally designed.
- To remove tough dirt, wipe it off using mild detergent diluted in water. Do not use alcohol or thinners as such volatiles may cause damage to the surface finish of the product.

⚠ CAUTIONS Any failure to observe the following precautions may result in personal injury or damage to the cabinet.

- Do not use the impact screwdriver. This may lead to malfunction and breakage of the product.
- Make sure that installation position and specifications are followed. Unsuitable installation position may damage the mechanism when in case two body are used together.
- Make sure that the damper is parallel with the side panel of the cabinet.
- Do not apply excessive force to open the door or push down the door to close it with a hand.
- This product is designed to operate at room temperatures between 5°C to 35°C.
- Do not disassemble the body.
- It is necessary to periodically check the fixing screws for looseness. Tighten the loose screws as required.

Parts list

① Body
② Cover
③ Mounting plate (Mt.P)
④ Fixing screw

⑤ Truss screw M5×8 (for main body) 2 pcs
⑥ Countersunk machine screw (small head) M4×L ※1 (for Mt.P) 4 pcs

fig.1
fig.2 In case of acrylic/ metal furniture

Parts that Customer should provide

⑦ Truss tapping screw 5×12 (for main body) 2 pcs
⑧ Countersunk tapping screw 3.5×L ※2 (for Mt.P) 4 pcs

fig.3 In case of wooden furniture

Cover
Body
Mt.P
Spacer
Cabinet
Thickness of door side panel
Clearance

fig.4 Spacer

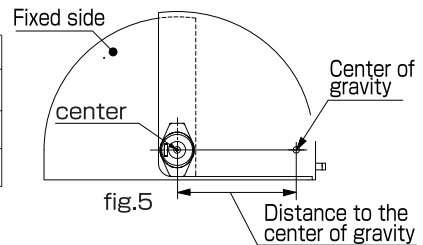
T (※3)
 $\phi 38$
20
20
4× $\phi 4.2$ hole

Model selection

- Select a model of this product according to the range as shown in the table.
- There are two directions of rotation that the damper operates: clockwise (R) and counterclockwise (L).
- Be sure to select the same model out of S, M, and H models for the right and left sides.
- The torque is different depending on the form and movable angle of doors. Select a model after making sure the torque according to the following formula (Fig 5). Measure the distance between the rotation center and the gravity center when the gravity center becomes level (or closest to level) with the rotation center (the maximum torque).

Specifications (L/R pair)

Model	Torque moment [N·m]
UDD - S - L (R)	1.0~2.0
UDD - M - L (R)	2.0~4.0
UDD - H - L (R)	4.0~6.0



$$\text{Torque moment} = \text{Door weight [kg]} \times 9.8 \times \text{Distance [m]}$$

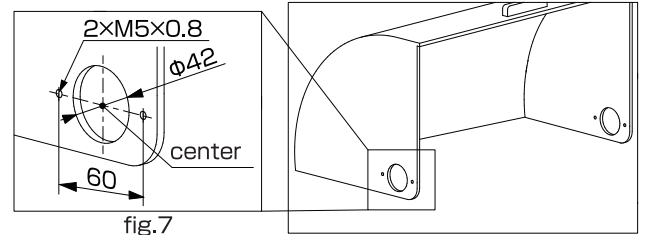
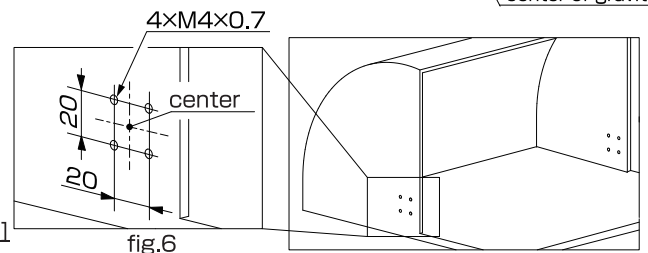
- ※1 Length of countersunk head machine screw (L) shall be at least: thickness of spacer (T) + 5 mm
- ※2 Length of countersunk tapping screw (L) shall be at least: thickness of spacer (T) + 14 mm. The thickness of side plate to fix the mounting plate shall be at least 15 mm.
- ※3 Thickness of spacer (T) shall be calculated according to the following formula (Fig 4, 9).

$$\text{Thickness of spacer (T)} = \text{Clearance [mm]} + \text{Door Side panel thickness [mm]} - 2.7 \text{ [mm]}$$

Installation

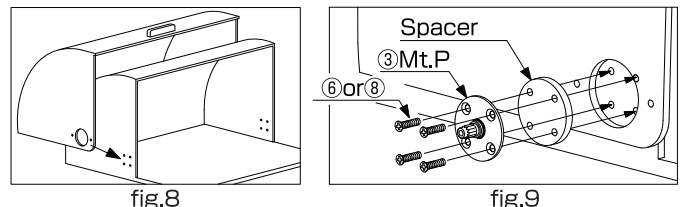
1. Design/processing of furniture (Preparation of installation)

- (1) Design
 - Design the furniture and determine the door's center of rotation before installation (Fig 6, 7).
- (2) Preparation of furniture main body
 - Based on the door's rotation center, drill 4 screw holes (M4 x 0.7) each on the right and left sides at the location where the mounting plate should be fixed (Fig6). In case of wooden furniture, drill 4 pilot holes each on both sides (Fig6).
- (3) Preparation of door
 - Based on the door's rotation center, bore a $\phi 42$ hole for a mounting plate on both sides (Fig7).
 - Based on the door's rotation center, drill 2 screw holes (M5x0.8) each on both sides (Fig7). In case of wooden furniture, drill 2 pilot holes respectively (Fig7).



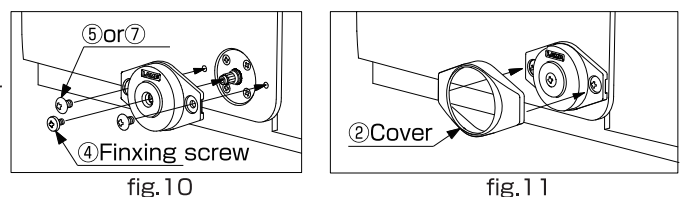
2. Attaching the mounting plate

- (1) Place the door on the furniture body with damper mounting locations aligned (Fig8).
- (2) Overlap the mounting plate and the spacer and fix them with fixing screws on both sides (Fig9).



3. Mount the main body and cover

- (1) Insert the axle of the mounting plate into the hole in the body of damper and fix it using the mounting screws (⑤ or ⑦) on both sides (Fig10).
- (2) Fix the damper body using fixing screw (Fig10).
- (3) Put the cover on the damper body and push it to fix (Fig11). Push the cover until tabs inside click into place.



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