

Thank you for selecting our product. Before starting installation, please read this manual thoroughly to ensure correct installation.

Product introduction

- Recessed type door damper completely concealed when the door is closed.
- When installed together with our HES3D concealed hinges, all the hardware is hidden for clean appearance.
- Damper unit will pull and close the door smoothly and firmly right before closing (within about 10°) and prevents slamming.

Specifications

| | |
|------------------------|-----------------------|
| Maximum door width | 900mm (36") |
| Minimum door thickness | 33mm (1-5/16") |
| Door weight range | 15-40kg (33.6-88lbs.) |

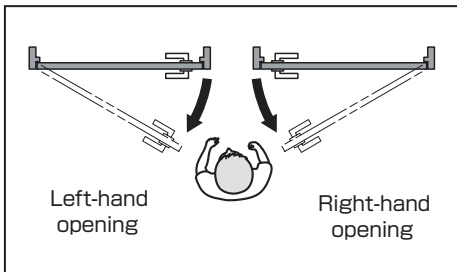
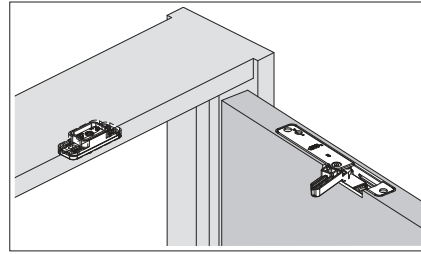
- Operating temperature is 0 to 40°C.

| Item No. | Type |
|----------|----------------------|
| LDD-V-R | Right handed opening |
| LDD-V-L | Left handed opening |

Instruction movies

With Jig

Without Jig



FOR YOUR SAFE WORK AND CORRECT INSTALLATION

- Warning Caution**
- Prohibited**
- Required**

! If these cautions are not followed, it may result in injury or damage.

- ⊘ This product is for indoor use only. Do not use outdoors where the item is exposed to the weather.
- ⊘ Do not use in a windy place as strong wind decreases the damper function.
- ⊘ Do not close the door with excessive force. It may cause damage or defect to soft close mechanism.
- !** Make sure to follow the designated measurements and specifications as well as horizontal and verticals angles. Make sure that the frame is not warped, since it may affect the movement of the door.
- !** Especially for the mortise cutting and cutout on the door, follow the specified dimensions. If the mortise is too deep, the arm may be caught in the mortise and the door cannot be opened.
- !** Make sure to test the screws for slack at regular intervals (one month from first usage, half year and then one time every year is recommended).

Parts List

[The following list indicate the right hand hinge for right side door hang. For left side door hang, a mirror image.]

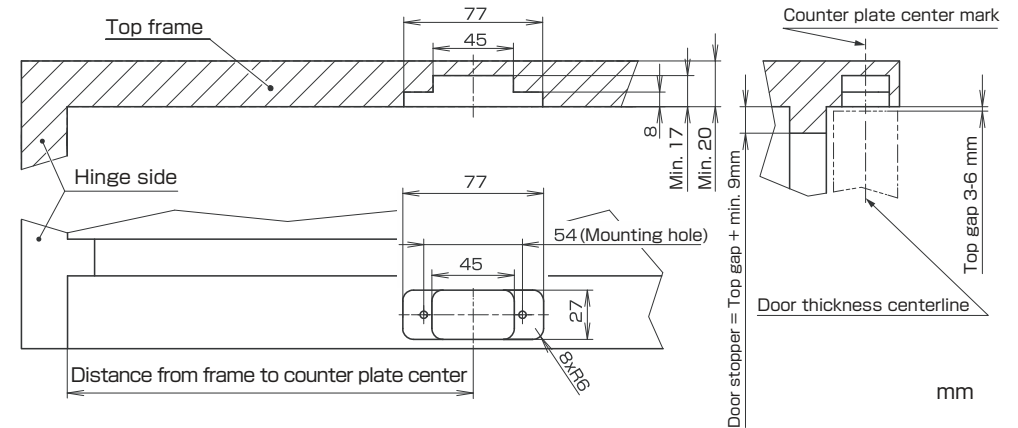
| No. | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|--------------|-----------------------|---------------|---------------------|---|---|---|---------------------------------------|
| Product name | Door damper main unit | Counter plate | Counter plate cover | Binding head tapping screw (nominal 3.5x20) | Binding head tapping screw (nominal 4x45) | Cutout template (door side, frame side) | Installation instructions (this book) |
| Parts | | | | | | | |
| Quantity | 1 | 1 | 1 | 2 | 2 | 1 | 1 |

| No. | ① | ② |
|--------------------------------------|--|--|
| Product name | Mortise jig (template) | Adjustment jig L / R (figure shown is for R) |
| Parts | | |
| Optional Accessory (Sold separately) | ※ Provides easy mortise cutting by router. | ※ Provides easy adjustment. |

-
-
-
- or
-
-

Preparation of frame

[The following dimensions and procedures indicate the right hand hinge for right side door hang. For left side door hang, a mirror image.]



(mm)

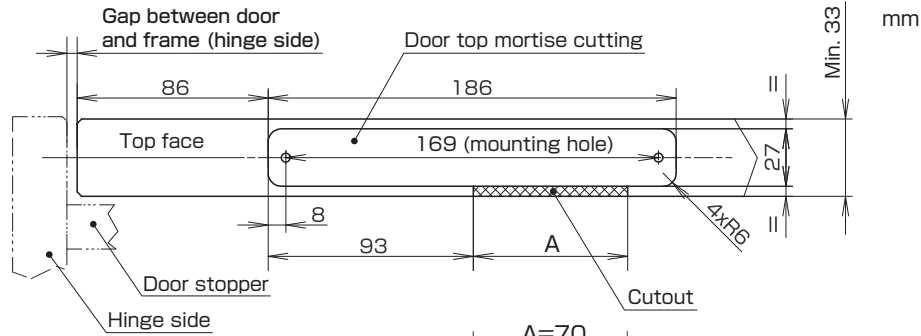
| | Gap between hinge side door and frame | | | | |
|----------------------------|---------------------------------------|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 |
| HES3D-120 HES3D-H120-36 | 220 | 221 | 222 | 223 | 224 |
| HES3D-160 HES3D-190 | 221 | 222 | 223 | 224 | 225 |
| HES3D-V135 | 218 | 219 | 220 | 221 | 222 |
| Butt hinge | 224 | 225 | 226 | 227 | 228 |

※ When the gap between hinge side door and frame is over 5mm, refer to the chart below.

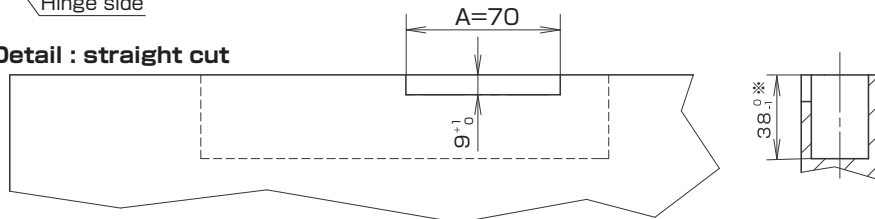
| Hinge | Distance from frame to counter plate center |
|----------------------------|---|
| HES3D-120 HES3D-H120-36 | 219 mm + gap size |
| HES3D-160 HES3D-190 | 220 mm + gap size |
| HES3D-V135 | 217 mm + gap size |
| Butt hinge | 223 mm + gap size |

Preparation for the door

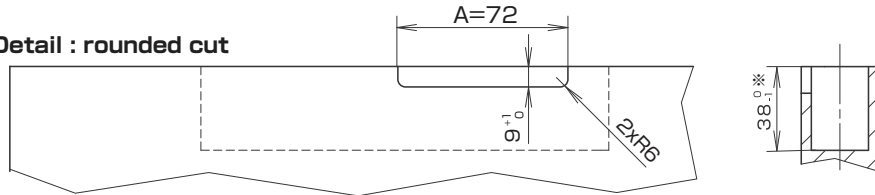
[The following dimensions and procedures indicate the right hand hinge for right side door hang. For left side door hang, a mirror image.]



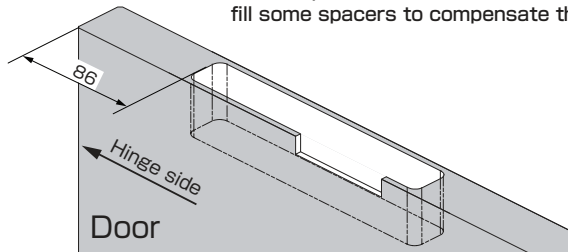
Cutout Detail : straight cut



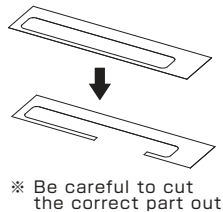
Cutout Detail : rounded cut



※If the depth of the mortise becomes deeper than the specification, fill some spacers to compensate the deviation.

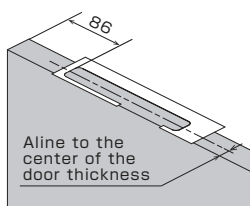


1 Processing of template

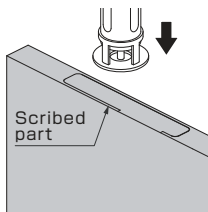


※ Be careful to cut the correct part out

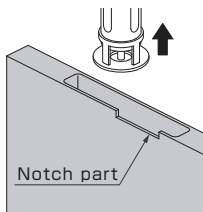
2 Place the template to the specified position and scribe the line



3 Process the door according to the line and scribe the line



4 Process the notch part



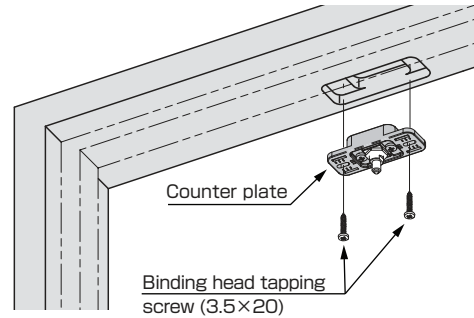
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Installation

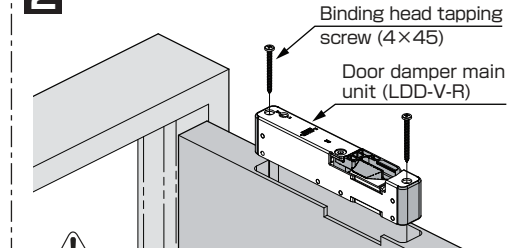
[Install the unit after completing the adjustment of hinge and case lock.]

! Do not open or close the door before adjusting the installed counter plate. Operating the door without counter plate adjustment may result in malfunction, causing damage to the damper, door or frame.

1 Installing the Counter Plate



2 Installing the Door Damper



! Before mounting, double check that the dimensions of the mortise and cutout are correct (See the cautions of page 1).

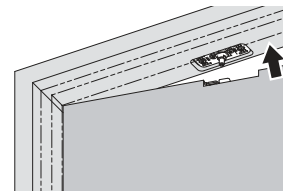
Adjustment Procedure (Without adjustment jig)

[When using Adjustment Jig (sold separately), the procedure will change. (See P14-15)]

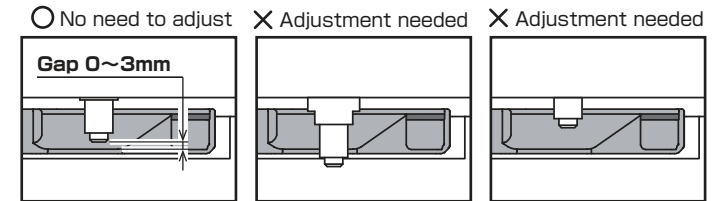
■ Without adjustment jig Vertical adjustment → Depth adjustment → Horizontal adjustment

Vertical adjustment Vertical adjustment range : ±2mm

1 Stop the door right before closing

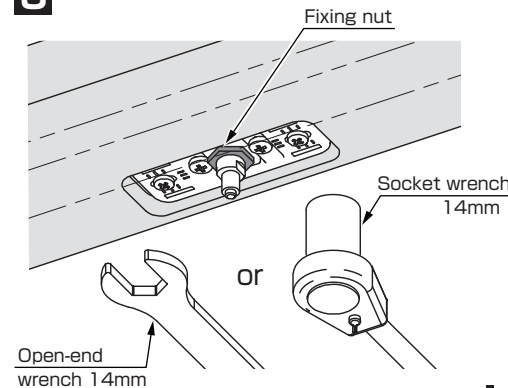


2 Position of the Shaft

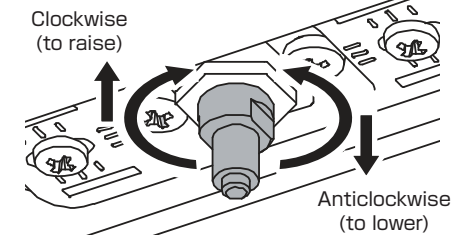


Adjustment method ←

3 Loosen the fixing nut of the shaft



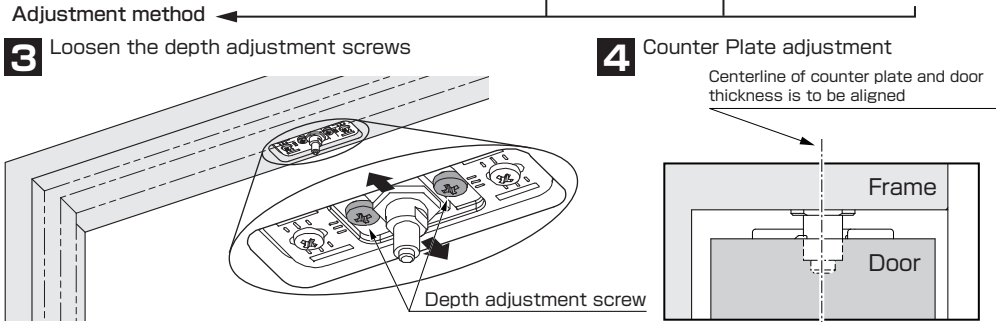
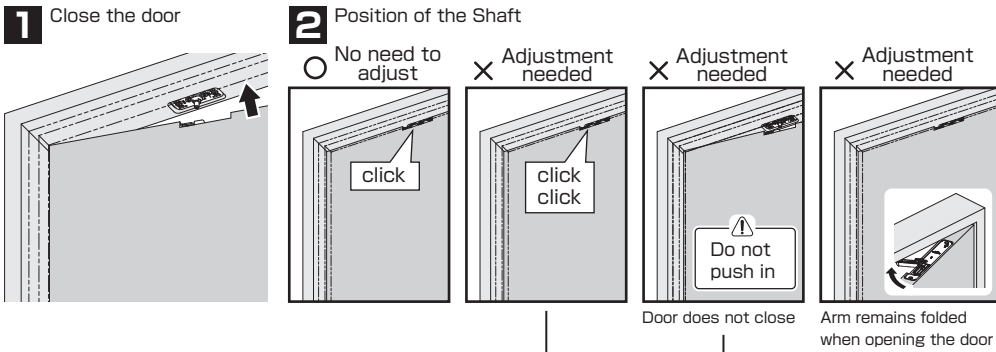
4 Counter Plate adjustment



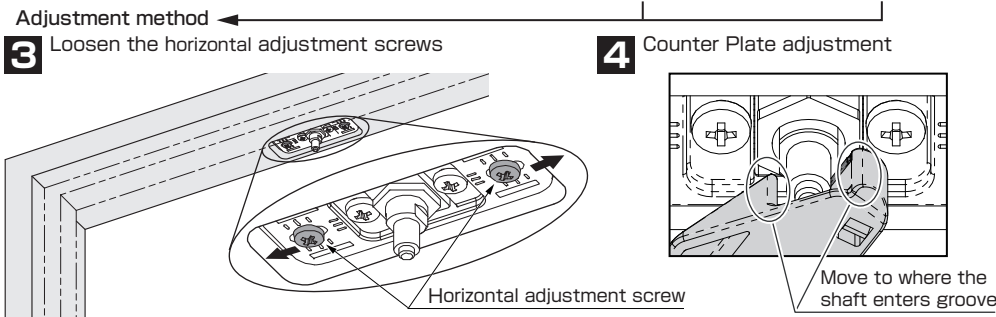
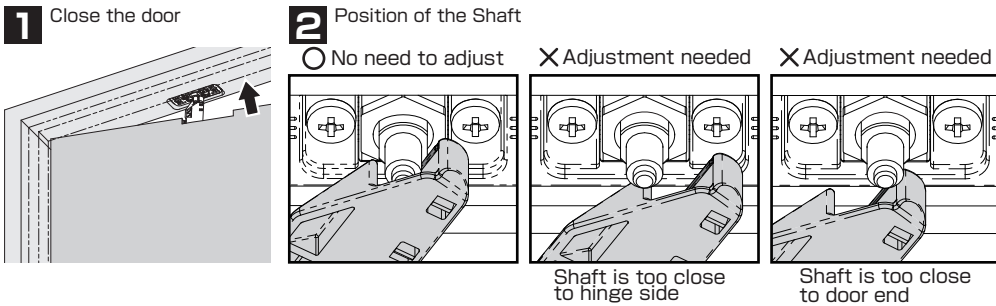
Adjust to the position "O No need to adjust" shown in Step 2

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Depth adjustment Depth adjustment range : $\pm 2\text{mm}$



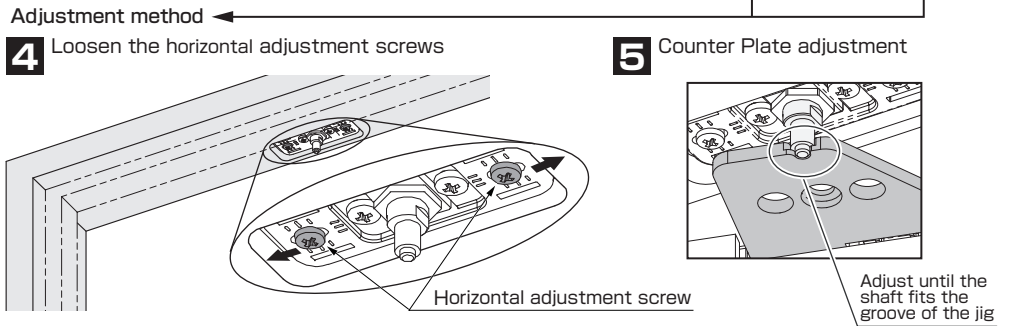
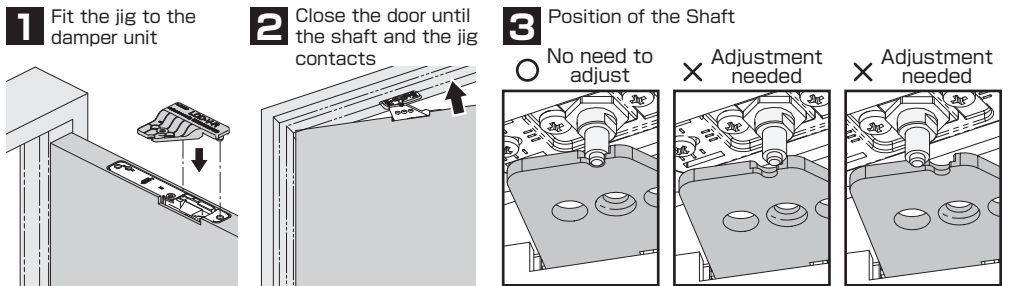
Horizontal adjustment Horizontal adjustment range : $\pm 3\text{mm}$



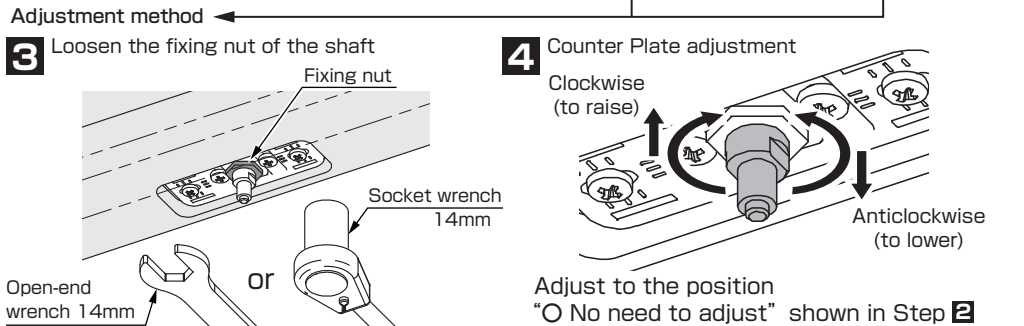
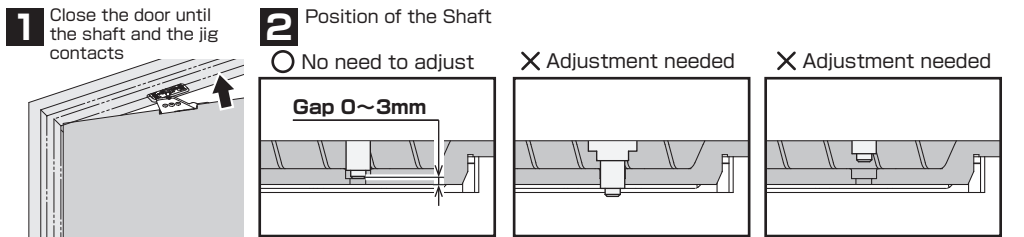
Adjustment Procedure (With adjustment jig) [When not using the adjustment Jig (sold separately), the procedure will change. (See P.12-13)]

■ With adjustment jig Horizontal adjustment → Vertical adjustment → Depth adjustment

Horizontal adjustment Horizontal adjustment range : $\pm 2\text{mm}$

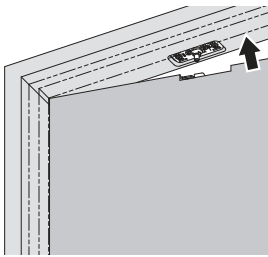


Vertical adjustment Vertical adjustment range : $\pm 2\text{mm}$

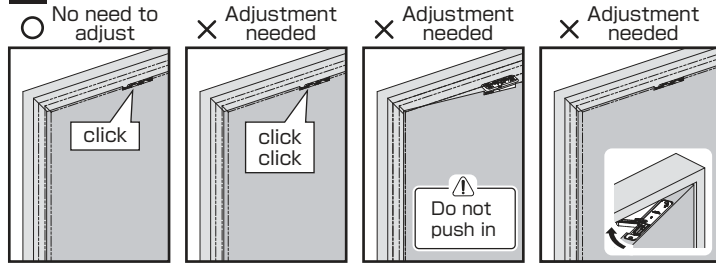


Depth adjustment Depth adjustment range : $\pm 2\text{mm}$

1 Close the door

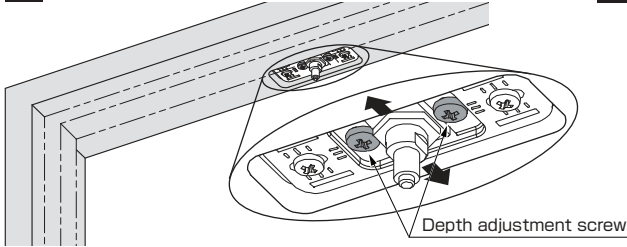


2 Position of the Shaft

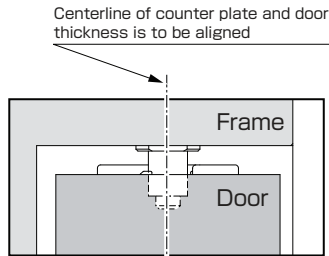


Adjustment method ←

3 Loosen the depth adjustment screws



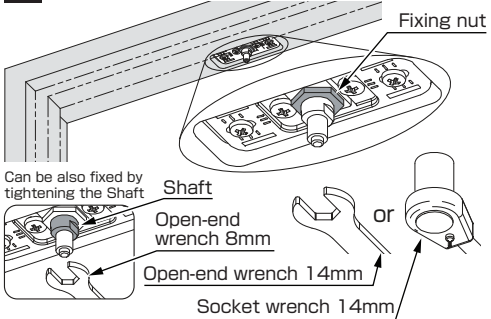
4 Counter Plate adjustment



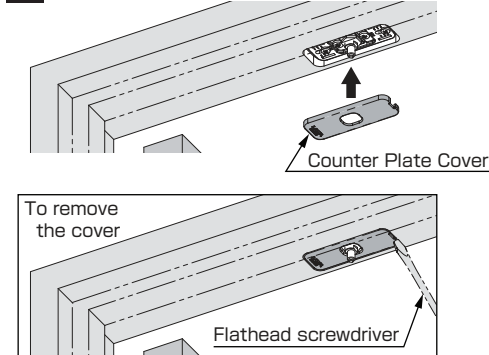
Working after adjustment completed

(The following procedure should be carried out AFTER the shaft adjustment with jig (P.14-15) or without jig (P.12-13) is completed.)

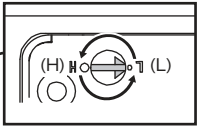
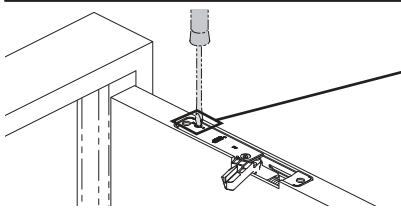
1 Retighten the fixing nut of the shaft



2 Installation of Counter Plate Cover



Setting of Damper Force



When setting the damper force, do not stop turning the shaft at any halfway point other than at L (weak) or H (strong).

L (weak): Setting at the time of shipment
H (strong): To slow the closing speed down

Trouble shooting

| Problem | Cause | Solution |
|--|---|---|
| Unusual noise | Mounting position is not correct | Check the mounting position and make adjustments. See P. 2-3. |
| | Mortise measures are not correct | Check the mortise dimension and make adjustments. See P. 2-3. |
| | Incomplete adjustment | Re-adjust the Vertical/Horizontal /Depth/Damper Force. See P.4-5,7 (without jig) / P.6-7 (with jig). |
| | Counter plate fixation or/and Shaft fixing nut loose | Final tighten the shaft fixing nut after adjustment completed. See P.7 and tighten the nut securely. |
| 2 times click sound heard when closing | Improper depth adjustment | Depth adjustment of Shaft is needed. Depth adjustment range : $\pm 2\text{mm}$ See P.5 (without jig) or P.7 (with jig). |
| Shaft does not enter the groove of the Arm | Improper vertical adjustment (too low) | Vertical adjustment of Shaft is needed. Vertical adjustment range : $\pm 2\text{mm}$ See P.4 (without jig) or P.6 (with jig). |
| | Improper horizontal adjustment (one-sided) | Horizontal adjustment of Shaft is needed. Horizontal adjustment range : $\pm 3\text{mm}$ See P.5 (without jig) or P.6 (with jig). |
| Arm remains folded | Centerline of counter plate and door thickness is not aligned | Depth adjustment of Shaft is needed. Depth adjustment range : $\pm 2\text{mm}$ See P.5 (without jig) or P.7 (with jig). |
| | Improper depth adjustment | |
| Door will not close completely | Centerline of counter plate and door thickness is not aligned | Use a suitable door. See P. 1. |
| | Improper door size | |

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