

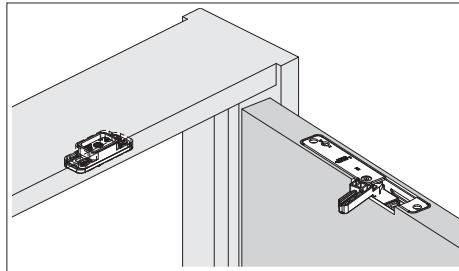
Thank you for selecting our product. Before starting installation, please read this manual thoroughly to ensure correct installation.

Check our movie.



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.

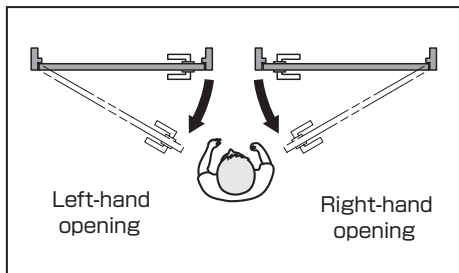


Specifications

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



FOR YOUR SAFE WORK AND CORRECT INSTALLATION

- ⊘ This symbol denotes prohibited actions.
- ⚠ This symbol denotes what must be done.

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

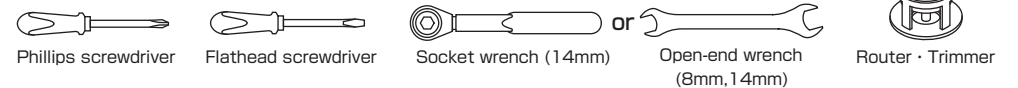
- ⊘ This product is for indoor use only. Do not use outdoors where the item is exposed to the weather.
- ⊘ Do not use in a windy place as strong wind decreases the damper function.
- ⊘ Do not close the door with excessive force. It may cause damage or defect to soft close mechanism.
- ⚠ Make sure to 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.
- ⚠ 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.]

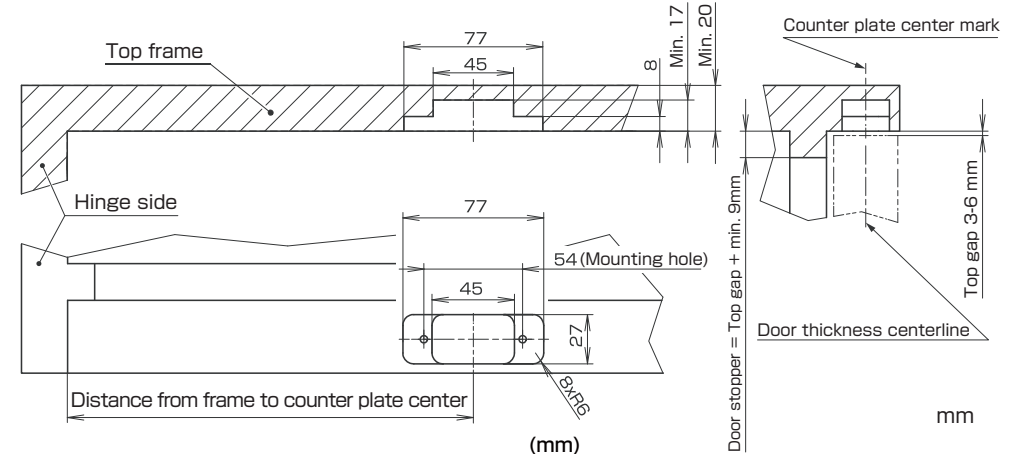
No.	①	②	③	④	⑤	⑥	⑦
Product name	Door damper main unit	Counter plate	Counter plate cover	Binding head tapping screw (nominal 3.5x20)	Binding head tapping screw (nominal 4x45)	Cutout template (door side, frame side)	Installation instructions (this book)
Parts							
Quantity	1	1	1	2	2	1	1

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.



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.]



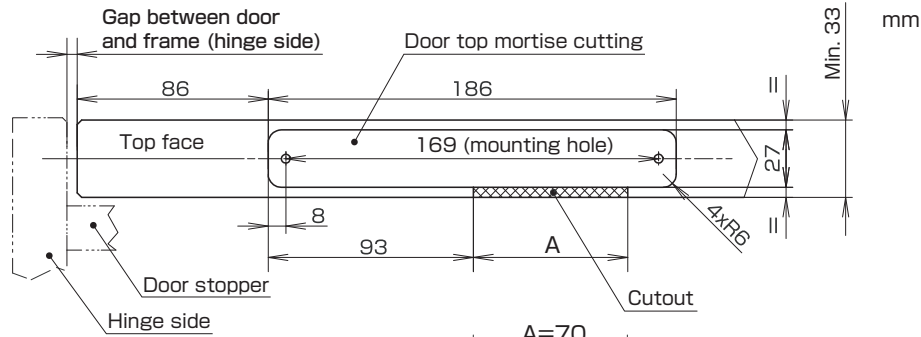
	Gap between hinge side door and frame (mm)				
	1	2	3	4	5
HES3D-120	220	221	222	223	224
HES3D-160 HES3D-190	221	222	223	224	225
HES3D-V135	218	219	220	221	222
Butt hinge	224	225	226	227	228

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

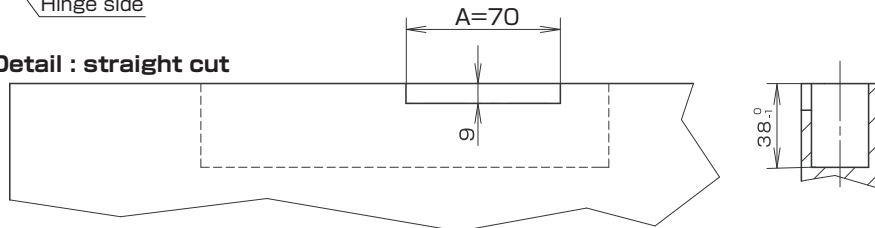
Hinge	Distance from frame to counter plate center
HES3D-120	219 mm + gap size
HES3D-160 HES3D-190	220 mm + gap size
HES3D-V135	217 mm + gap size
Butt hinge	223 mm + gap size

Preparation for the door

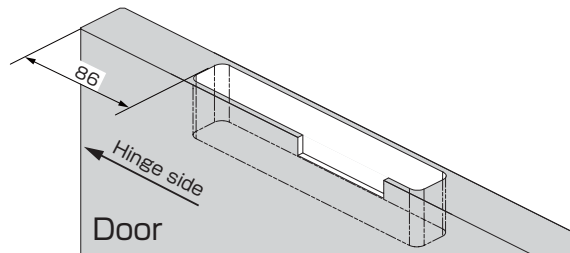
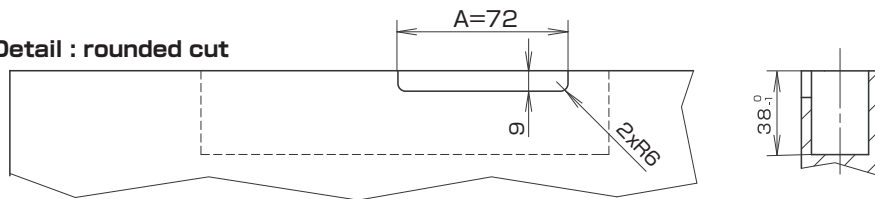
[The following dimensions and procedures indicate the right hand hinge for right side door hang. For left side door hang, a mirror image.]



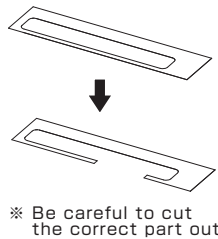
Cutout Detail : straight cut



Cutout Detail : rounded cut

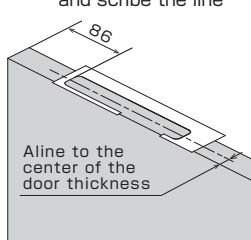


1 Processing of template

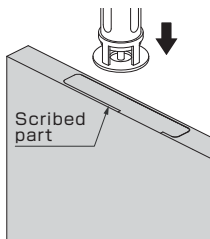


※ Be careful to cut the correct part out

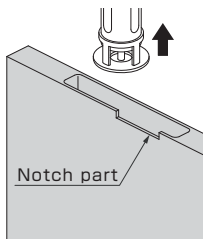
2 Place the template to the specified position and scribe the line



3 Process the door according to the line



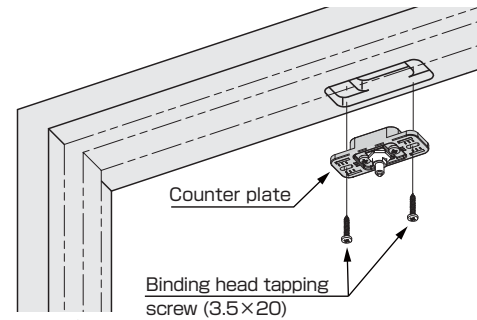
4 Process the notch part



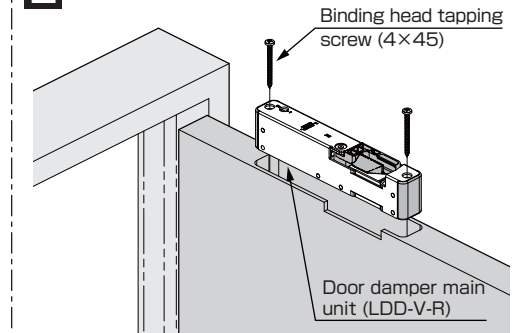
Installation

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

1 Installing the Counter Plate



2 Installing the Door Damper



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.

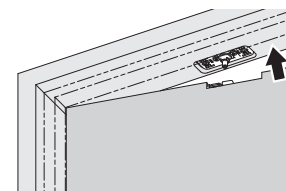
Adjustment Procedure (Without adjustment jig)

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

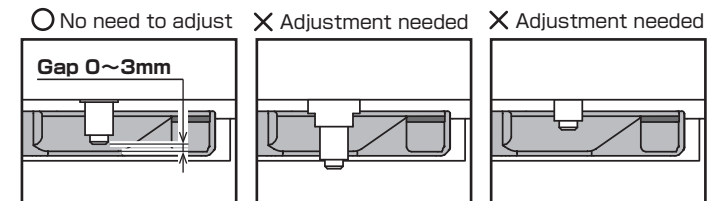
■ Without adjustment jig Vertical adjustment → Depth adjustment → Horizontal adjustment

Vertical adjustment Vertical adjustment range : ±2mm

1 Stop the door right before closing

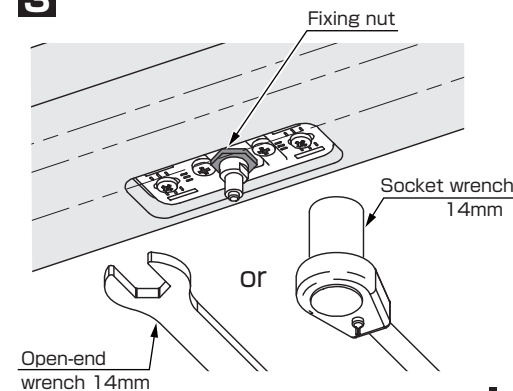


2 Position of the Shaft

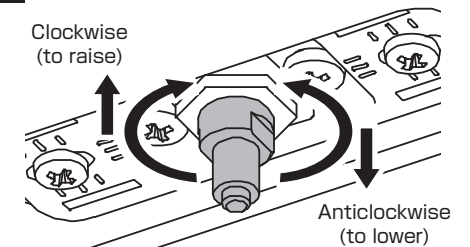


Adjustment method ←

3 Loosen the fixing nut of the shaft

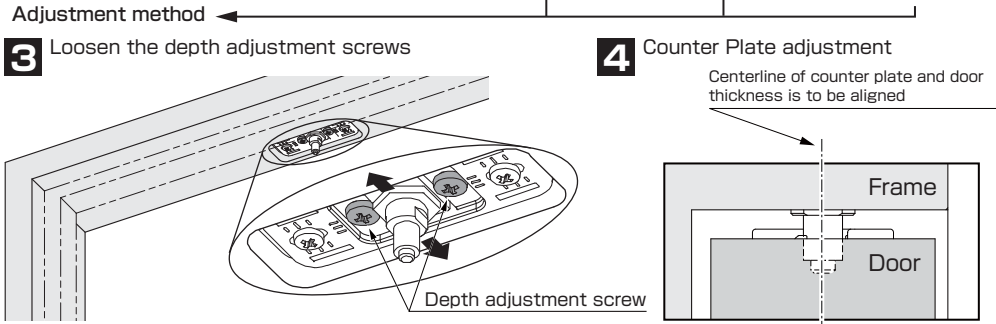
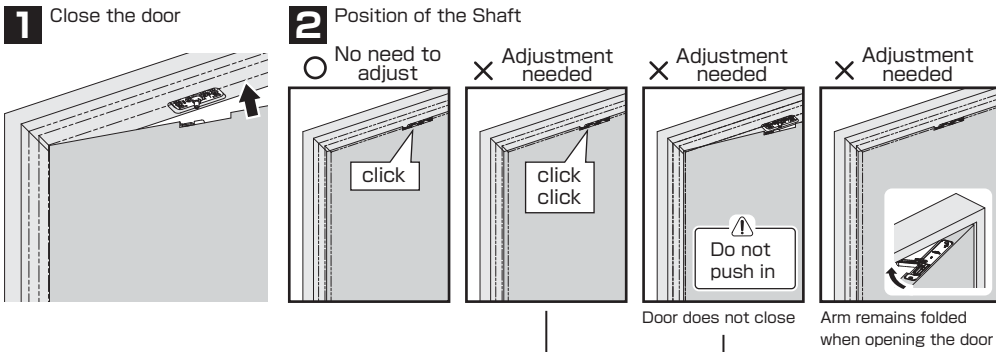


4 Counter Plate adjustment

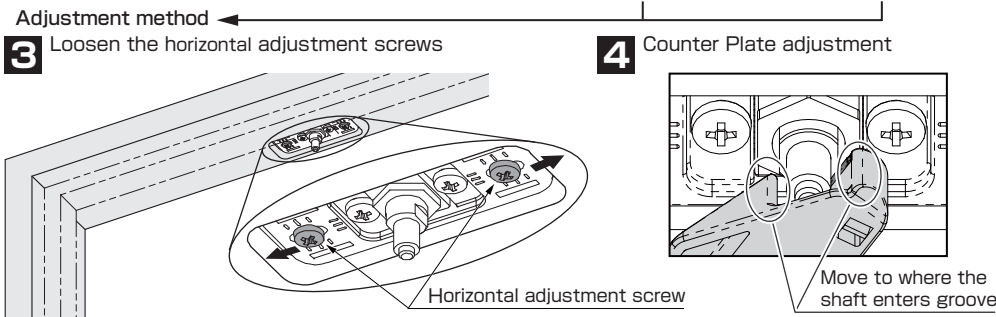
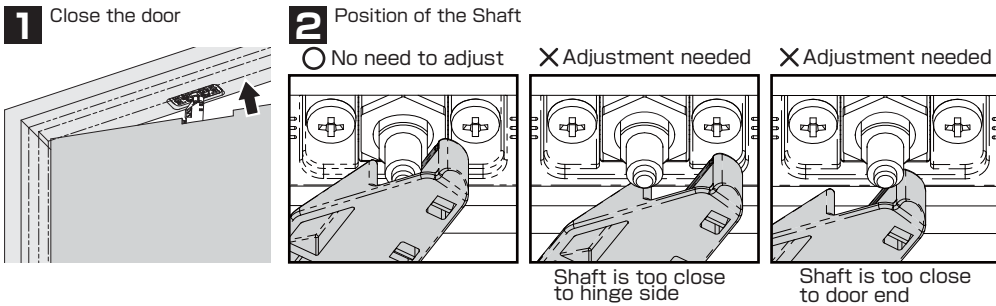


Adjust to the position "O No need to adjust" shown in Step 2

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



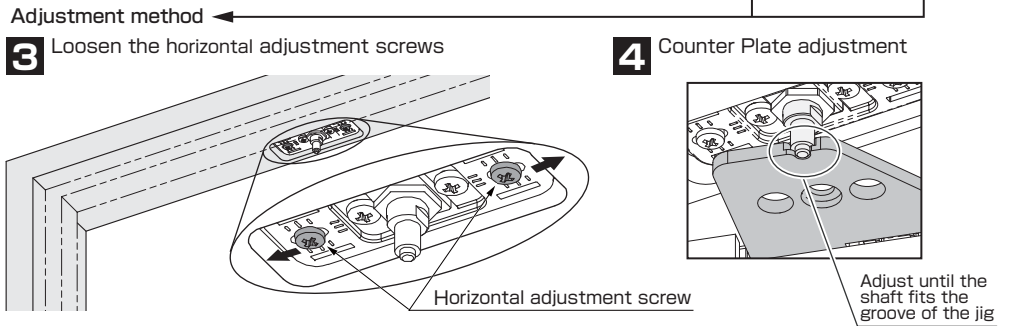
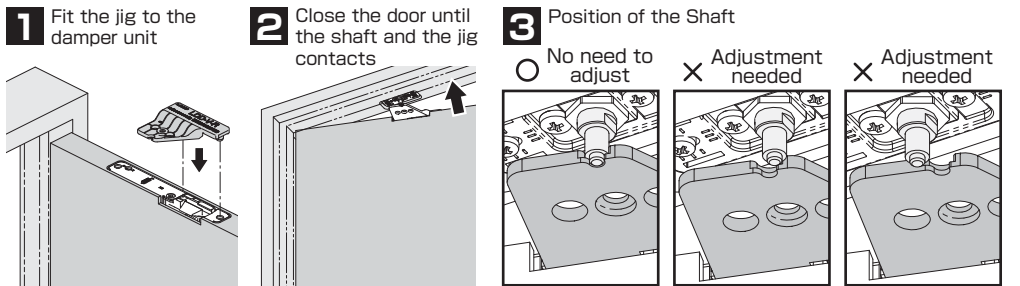
Horizontal adjustment Horizontal adjustment range : $\pm 3\text{mm}$



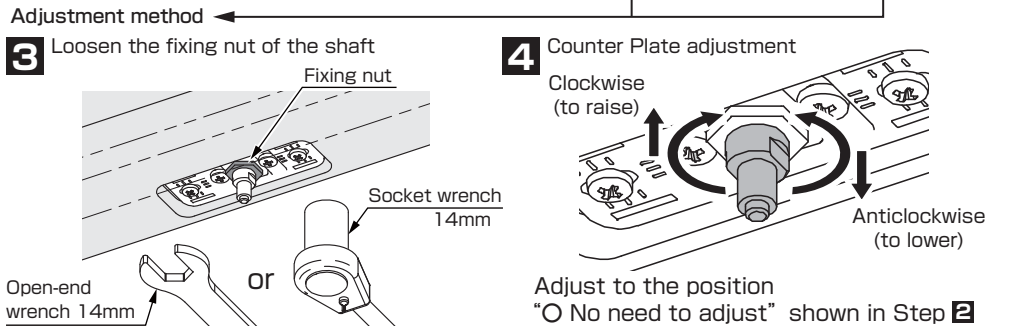
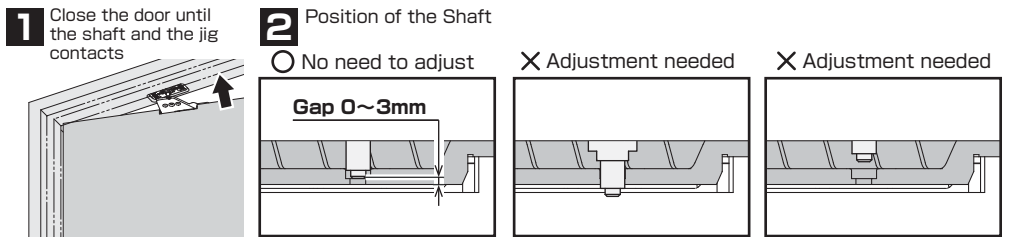
Adjustment Procedure (With adjustment jig) [When not using the adjustment Jig (sold separately), the procedure will change. (See P.12-13)]

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

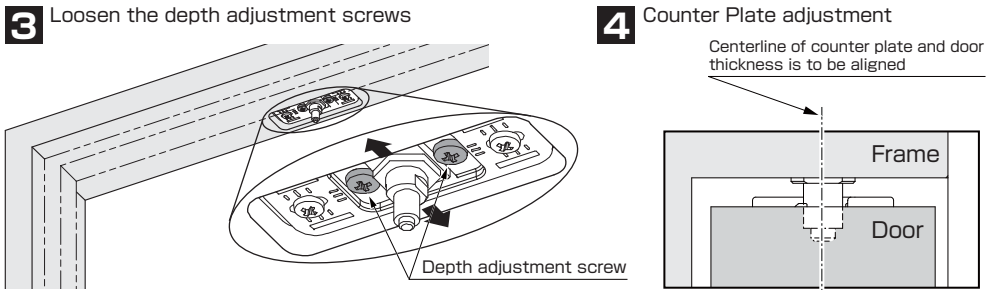
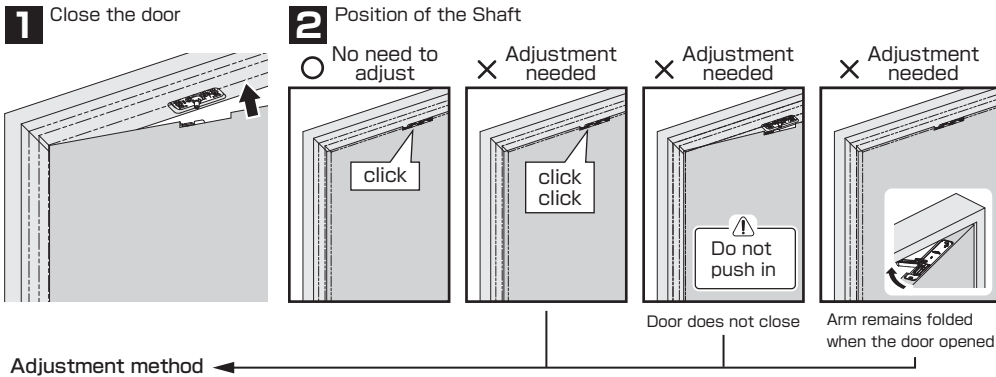
Horizontal adjustment Horizontal adjustment range : $\pm 2\text{mm}$



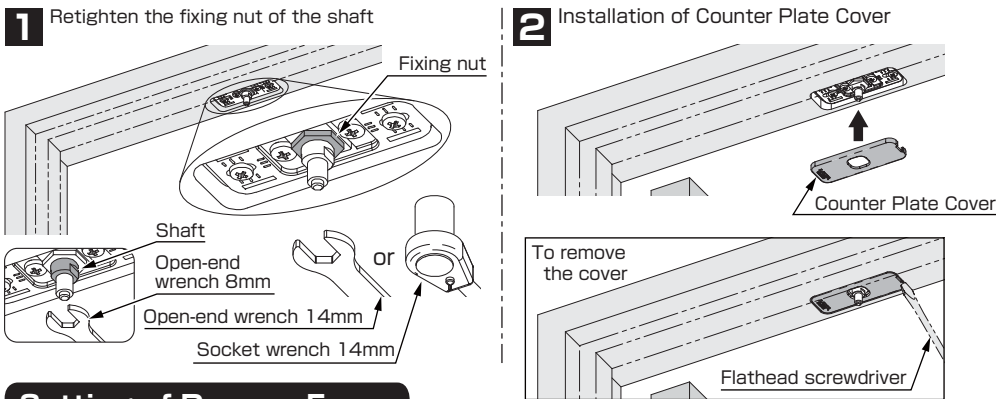
Vertical adjustment Vertical adjustment range : $\pm 2\text{mm}$



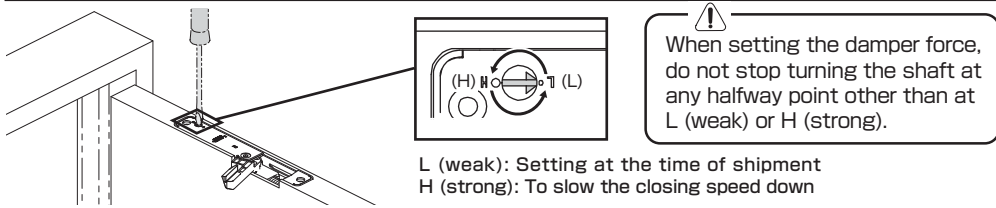
Depth adjustment | Depth adjustment range : $\pm 2\text{mm}$



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.)



Setting of Damper Force



Trouble shooting

Problem	Cause	Solution
Unusual noise	Mounting position is not correct	Check the mounting position and make adjustments. See P. 10-11.
	Mortise measures are not correct	Check the mortise dimension and make adjustments. See P. 10-11.
	Incomplete adjustment	Re-adjust the Vertical/Horizontal /Depth/Damper Force. See P.12-13,15(without jig) / P14-15 (with jig).
	Counter plate fixation or/and Shaft fixing nut loose	Final tighten the shaft fixing nut after adjustment completed. See P.15 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.13 (without jig) or P.15 (with jig).
Shaft contacting the Arm bottom Shaft contacting the Left/Right wall of the Arm groove	Improper vertical adjustment (too low)	Vertical adjustment of Shaft is needed. Vertical adjustment range : $\pm 2\text{mm}$ See P.12 (without jig) or P.14 (with jig).
	Improper horizontal adjustment (one-sided)	Horizontal adjustment of Shaft is needed. Horizontal adjustment range : $\pm 3\text{mm}$ See P.13 (without jig) or P.14 (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.13 (without jig) or P.15 (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. 9.
	Improper door size	

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