

Installation Manual

LAMP®

FD80-AFH ALUMINUM FRAME SLIDING DOOR

Surface Mounted Roller

Part No. FD80HMP-AF

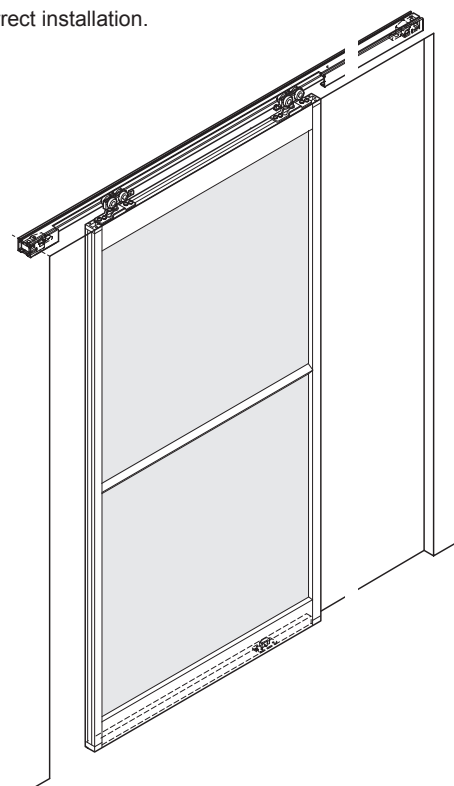
Thank you for selecting our product. Before installation, please read this manual thoroughly to ensure correct installation. Please keep this manual at hand for future reference.

ABOUT THE PRODUCT

- This is a parts set for a heavy duty aluminum frame sliding door system for stores, public facilities and residences.
- There are two types of horizontal frame designs: the standard type and the slim type.

SPECIFICATIONS

Required number of intermediate supports (14)	0 (Without Intermediate support)	1	2	3
Door height	Max. 2200 mm			2201 – 2700 mm
Door width	804 – 900 mm		901 – 1500 mm	
Glass thickness	5 mm or 6 mm			
Max. Door weight	80 kg/door			
Vertical adjustment	4 mm upward, 4 mm downward			



FOR YOUR SAFETY AND CORRECT INSTALLATION

Meaning of symbols

 Warning Caution	 Prohibited	 Required
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Warning : If not followed, death or serious injury may result.

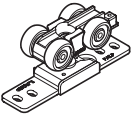
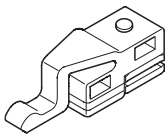
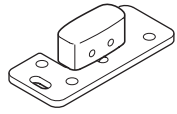
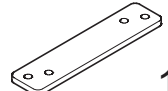
- ❗ This product should be installed by a qualified person in accordance with this manual. If it is not installed correctly, the door may fall and cause injury.
- ❗ Provide a frame that can withstand the weight and impact of opening and closing the door. Be sure to use the specified screws and tighten them securely. If the mounting strength is insufficient, the door may fall and cause injury.
- ⊘ Do not use this product for any other purpose, or with doors that are outside the specifications of this manual.
- ⊘ Do not disassemble or modify any parts other than those described in this document.

Caution : If not followed, injury or damage may result.

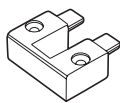
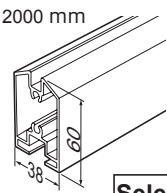
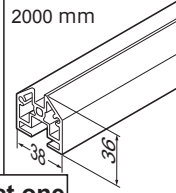
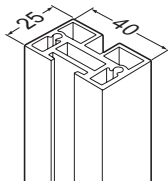
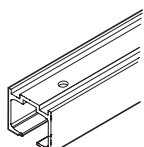
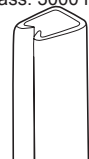
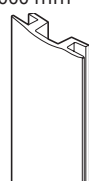
- ❗ Follow the specified dimensions, specifications, and alignment of the door and frame. Warping, tilting or twisting of the frame or door may cause failure.
- ❗ If cutting any parts, make sure to remove any burrs before installation. Also check the upper track for any left-over burrs or scraps and remove these.
- ❗ This product is a part for architectural fittings. After installation, please check the function and safety of the final product. Please inform the end user how to use the product safely.
- ❗ Make sure to check the screws for slack at regular intervals (one month from first usage, half a year, and then one time every year is recommended).
- ⚠ To avoid damaging of aluminum frame, carry out installation work on clean floor.
- ⚠ Please use the tempered glass. It is recommended to use shatter-proof film on the glass.
- ❗ When installing "pocket door" specification, make "easy-maintenance" structure. For example, use removable panel.

COMPONENT PARTS

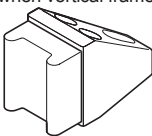
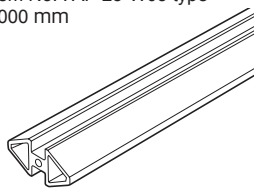
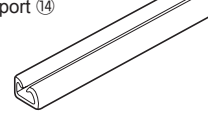

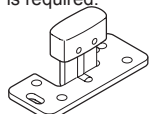
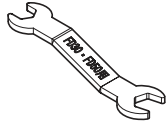
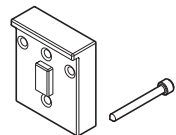
Parts set (FD80HMP-AF) per door

<p>① Upper roller Accessory : Pan head tapping screw 4 × 45 4 pcs (not needed for this set)</p>  <p style="text-align: right;">2 pcs</p>	<p>② Upper stopper</p>  <p style="text-align: right;">2 pcs</p>	<p>③ Floor guide S Accessory : Bind head tapping screw 4 × 16 5 pcs</p>  <p style="text-align: right;">1 pc</p>	<p>④ Plate nut Accessory : Hexagon socket button head screw M5 x 16 8 pcs Spring lock washer 5 8 pcs Plain washer 5 8 pcs</p>  <p style="text-align: right;">1 set</p>
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Required Parts

<p>⑤ Corner Part</p>  <p style="text-align: right;">4 pcs / door</p>	<p>⑥ Mounting screw set (for selection of frame type ⑦)</p> <ul style="list-style-type: none"> Hexagon socket head cap screw M6 × 30 8 pcs (for Frame ⑦⑨) Hexagon socket head cap screw M4 × 30 6 pcs (for Intermediate support ⑭) Hexagon socket countersunk head screw M4 × 25 (for corner parts ⑤) 8 pcs <p style="text-align: right;">1 set</p>	<p>⑥ Mounting screw set (for selection of frame type ⑧)</p> <ul style="list-style-type: none"> Hexagon socket head cap screw M6 × 30 4 pcs (for Frame ⑧⑨) Hexagon socket head cap screw M4 × 30 6 pcs (for Intermediate support ⑭) Hexagon socket countersunk head screw M4 × 25 (for corner parts ⑤) 8 pcs Grooved pins 4 × 20 10 pcs (including 2 spare pins) <p style="text-align: right;">1 set</p>	<p>⑦ Horizontal frame 2000 mm</p> 	<p>⑧ Horizontal frame (For slim type) 2000 mm</p>  <p style="text-align: center;">Select one</p>
<p>⑨ Vertical frame 2500 mm/3000 mm</p> 	<p>⑩ Upper track 2000 mm ~ 3640 mm (Various sizes) Accessory : Pan head tapping screw 5 × 40</p> 	<p>⑪ Gasket for 5 mm glass: 2500 mm for 6 mm glass: 3000 mm</p> 	<p>⑫ Edge cover 2500 mm/3000 mm</p> 	

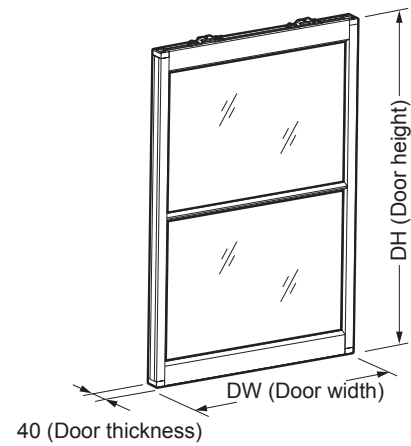
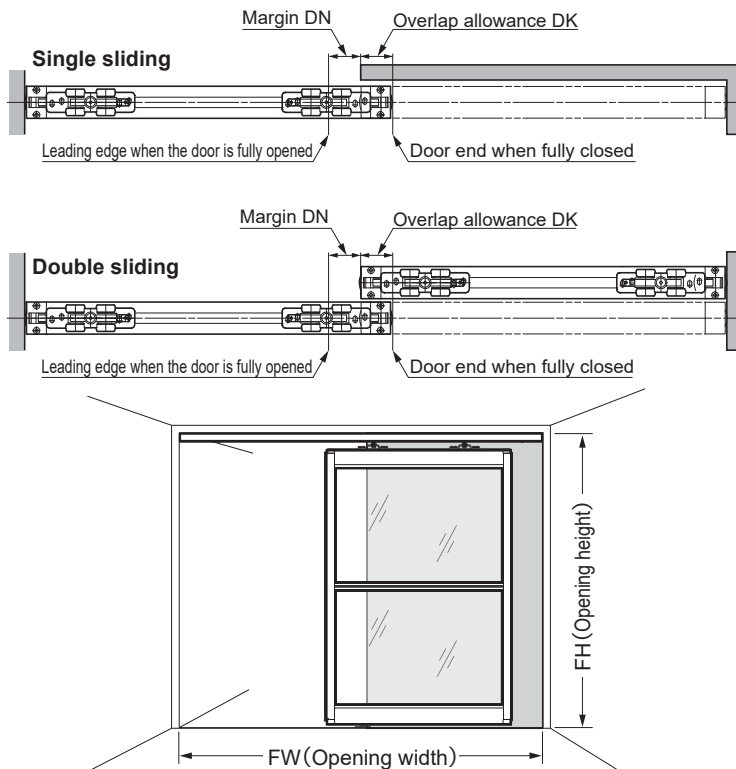
Optional parts

<p>⑬ Door stopper (floor mounted) Item No. : FD30-HTKY Accessory : Bind head tapping screw 4 × 30 3 pcs Needed when vertical frame is not used.</p> 	<p>⑭ Intermediate support Item No. : AF-25-W03 type 2000 mm</p> 	<p>⑮ Gasket for Intermediate support Item No. : for 5 mm glass AF-25-P03 type for 6 mm glass AF-25-P16 type 2500 mm Used as a set with the Intermediate support ⑭</p> 	<p>⑯ Handle Item No. : MN799Z160E type It is adhered after drilling two 7 mm dia. holes.</p> 
<p>⑰ Floor guide L Item No. : FD50-BG32 Accessory : Bind head tapping screw 4 × 16 5 pcs This is used when larger space below the door is required.</p> 	<p>⑱ Spanner Item No. : FD30-FSP</p>  <p style="text-align: center;">Nominal designation 10, 12</p>	<p>⑲ Jig set for punches Item No. : AF-25-JIG-SET</p>  <p>Horizontal frame (slim) recommends the use of punch jigs and pins</p>	

DIMENSIONS OF DOORS

(Round down the decimal point for the divided dimensions.)

■ Drawing of installed door



⑦ When using the horizontal frame [Dimension] is when ⑰ Lower guide L is used.

$$DH(\text{opening height}) = FH - 64 \quad [78]$$

$$\text{Single DW}(\text{Door width}) = \frac{FW + \text{Door residual DN} + 40 \text{ or more (Overlap allowance DK)}}{2}$$

$$\text{Binding DW}(\text{Door width}) = \frac{FW + 40 \text{ or more (overlapping allowance DK)}}{2}$$

$$GH(\text{glass height}) = \frac{DH - 104 - (\text{Number of Intermediate support } \textcircled{14} \times 11)}{\text{Number of glass panels}}$$

$$GW(\text{glass width}) = DW - 38$$

⑧ When using the horizontal frame (slim)

$$DH(\text{opening height}) = FH - 64 \quad [78]$$

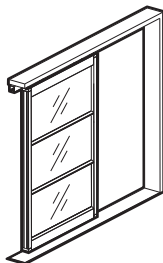
$$\text{Single DW}(\text{Door width}) = \frac{FW + \text{Door residual DN} + 40 \text{ or more (Overlap allowance DK)}}{2}$$

$$\text{Binding DW (Door width)} = \frac{FW + 40 \text{ or more (overlapping allowance DK)}}{2}$$

$$GH(\text{glass height}) = \frac{DH - 56 - (\text{Number of Intermediate support } \textcircled{14} \times 11)}{\text{Number of glass panels}}$$

$$GW(\text{glass width}) = DW - 38$$

Example 1



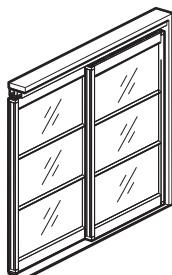
Ex: 1 door on single track

Size per Door when opening width is 1800 mm, opening height is 2400 mm, Door residue is 80 mm, and overlapping allowance is 40 mm

$$DH = 2400 - 64 \\ = 2336 \text{ mm}$$

$$DW = \frac{1800 + 80 + 40}{2} \\ = 960 \text{ mm}$$

Example 2



Ex: 2 door on double track

Size of each door with Opening width 1800 mm, Opening height 2400 mm and Overlap 40 mm.

$$DH = 2400 - 64 \\ = 2336 \text{ mm}$$

$$DW = \frac{1800 + 40(\text{Overlap allowance DK})}{2} \\ = 920 \text{ mm}$$

1 Cutting and Drilling Components

⚠ Caution

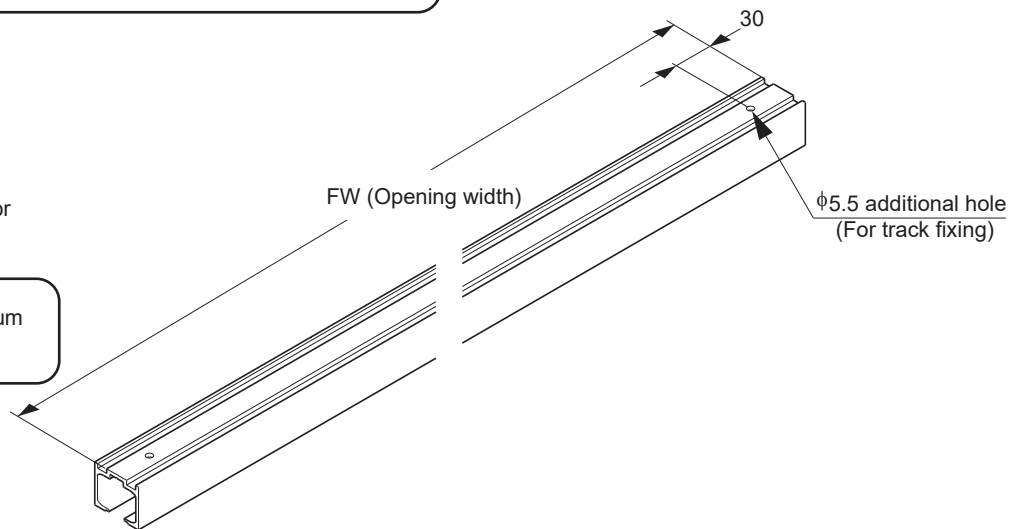
- ❗ Cut carefully so the cut edge is square to avoid bias and skewing.
- ❗ When cutting, reinforce the track to prevent deformation at the cut section.

[1] Processing of Upper track ⑩

- (1) Length = FW (Opening width)
- (2) Refer to the figure on the right for cutting and drilling holes.

⚠ Caution

- ❗ Remove any dirt or aluminum chips from the track.

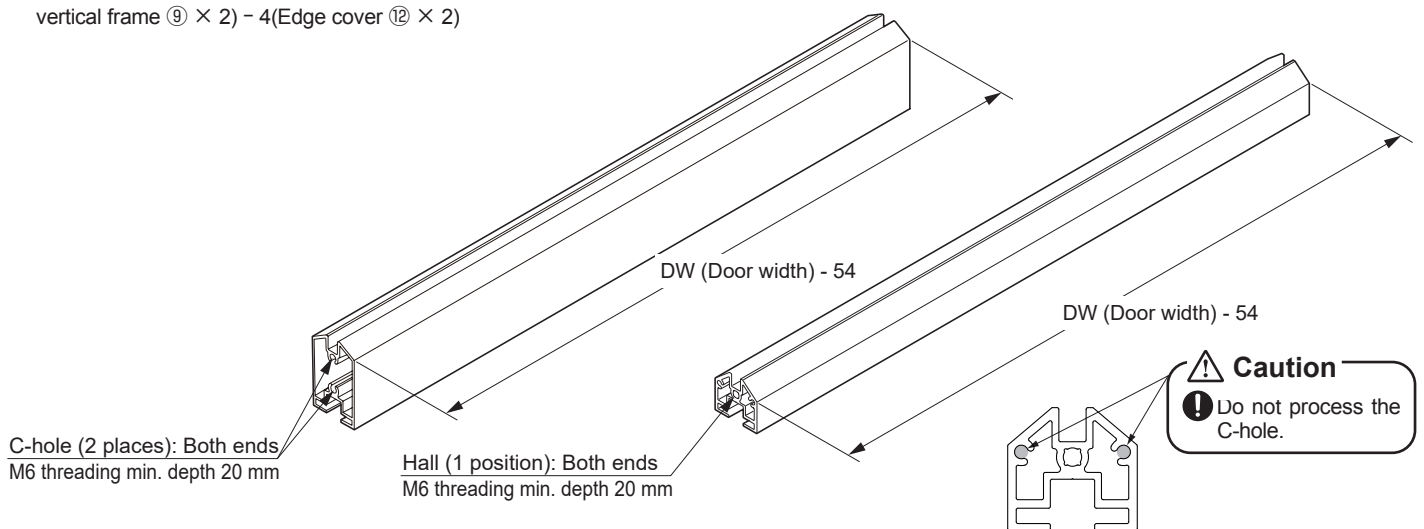


[2] Processing of Horizontal frame ⑦, ⑧

Length = DW(Door width) - 50(Thickness of vertical frame ⑨ × 2) - 4(Edge cover ⑫ × 2)

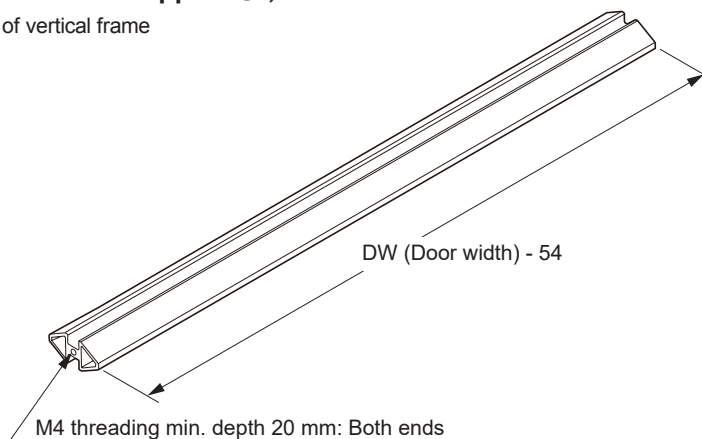
⑦ For horizontal frame

⑧ For horizontal frame (slim)

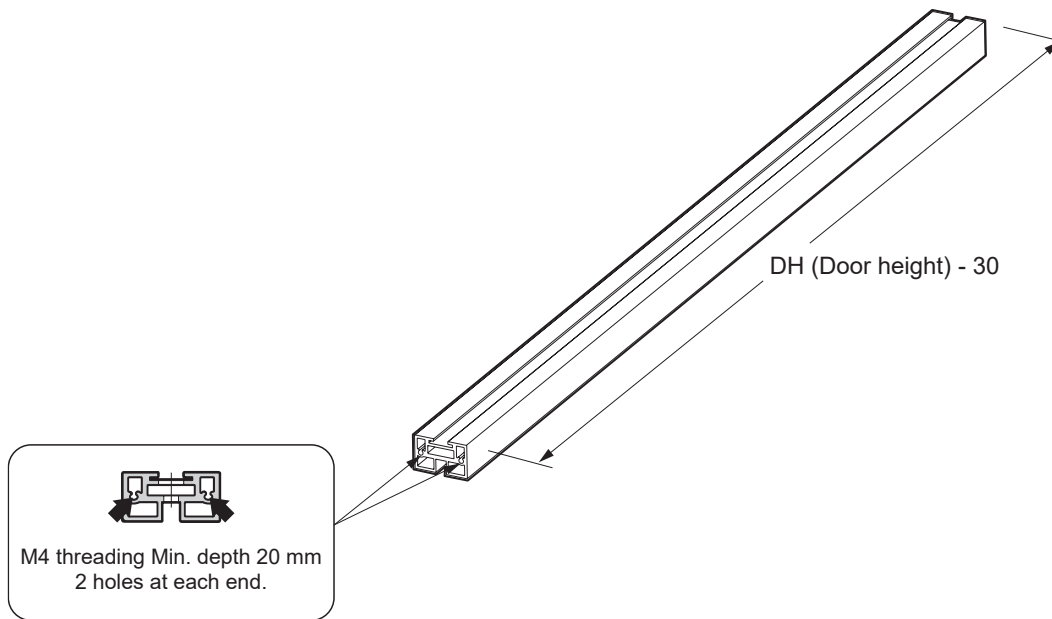


[3] Cutting and hole processing of Intermediate support ⑭, when used

Length = DW(Door width) - 50(Thickness of vertical frame ⑨ × 2) - 4(Edge cover ⑫ × 2)



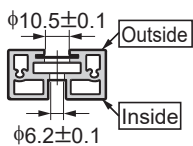
[4] Processing of Vertical frame ⑨ - Step 1



[5] Processing of Vertical frame ⑨ - Step 2 (for A-hole/C-hole machining)

Drill holes according to the quantity of intermediate support.

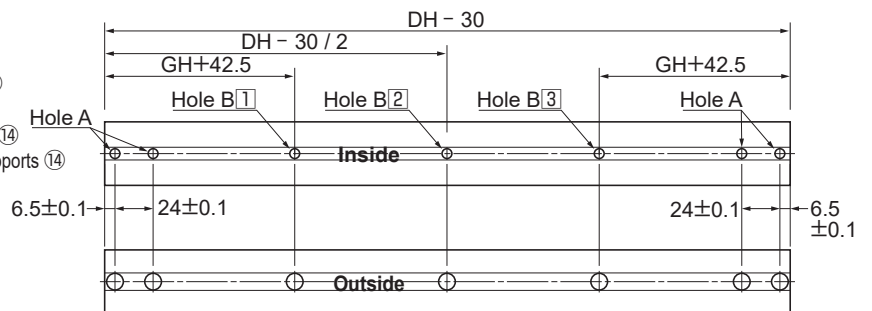
A hole drilling (⑦ only)



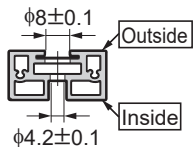
⑦ For horizontal frame

Hole A only if there is no intermediate support ⑭
Hole A + B[2] for 1 intermediate support ⑭
Hole A + B[1], B[3] for 2 intermediate supports ⑭
Hole A + B[1], B[2], B[3] for 3 intermediate supports ⑭

DH=Door height
GH=glass height



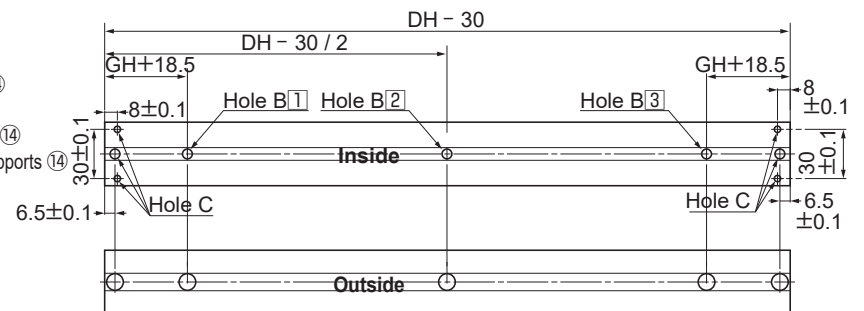
B Hole drilling



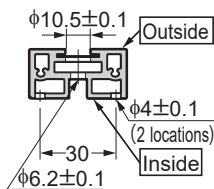
⑧ For horizontal frame (slim)

Hole C only if there is no intermediate support ⑭
Hole C + B[2] for 1 intermediate support ⑭
Hole C + B[1], B[3] for 2 intermediate supports ⑭
Hole C + B[1], B[2], B[3] for 3 intermediate supports ⑭

DH=Door height
GH=glass height

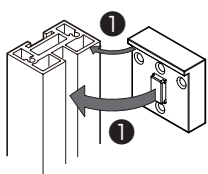


C hole drilling (⑧ only)

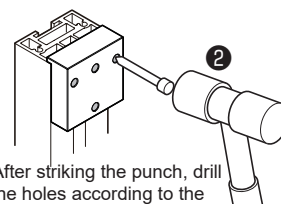
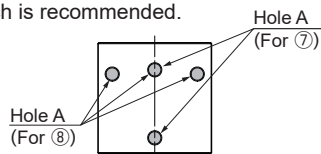


⑩ Hole machining using a punch jig (for A-hole/C-hole machining)

When using the horizontal frame (slim) ⑧, jig ⑩ for punch is recommended.



① Hook the jig on the upper edge of the vertical frame and the groove.

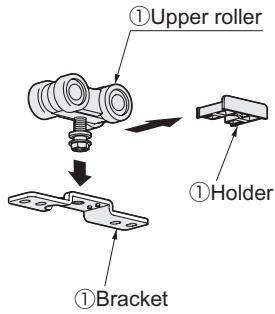


② After striking the punch, drill the holes according to the figure on the left.

2 Assembling Parts

[1] Disassembling Upper rollers ①

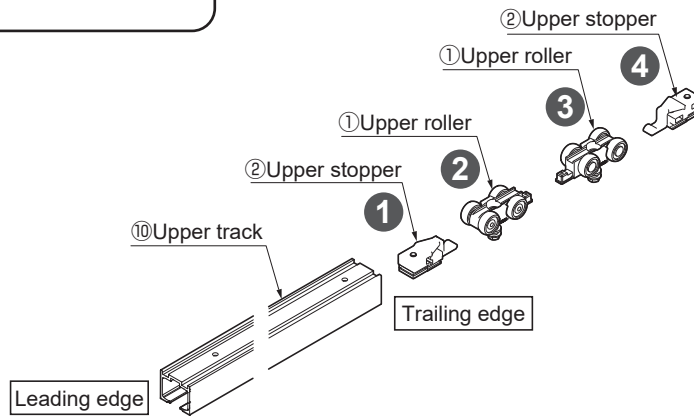
Remove upper roller bracket and holder



[2] Inserting Parts into Upper Track

Insert the parts in order from ① to ④.

Caution
 ⚠ Tape around rollers and upper track to prevent inserted parts from falling.

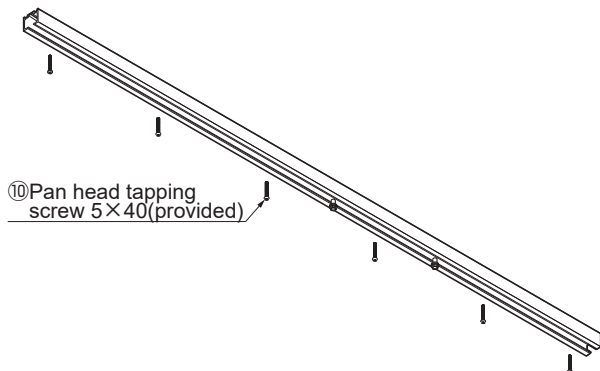


3 Mounting the Upper Track ⑩ and Floor Guide

[1] Mounting the Upper track ⑩

Fasten the upper track with provided screws.

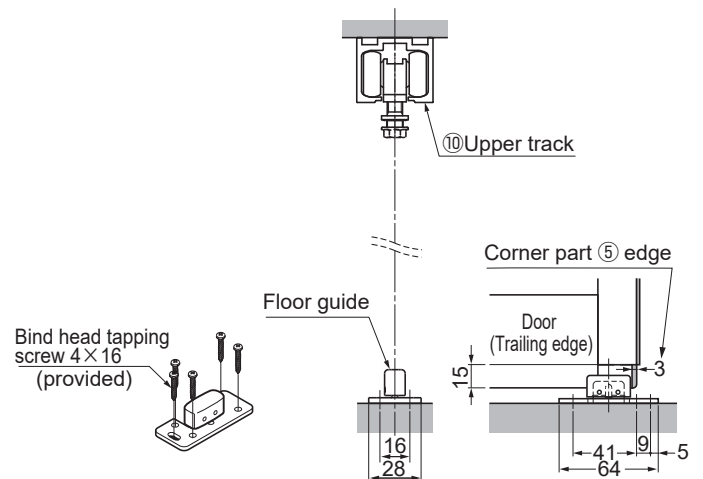
Caution
 ⚠ Remove any dirt or aluminum chips from the track.



[2] Mounting the Floor guide ③

(1) Position floor guide just below the center of upper track ⑩.

(2) With the door closed, adjust the floor guide position so that the protruding part does not come into contact with the edge of the corner part ⑤. Then fit with supplied screws.



4 Assembling Door

Caution

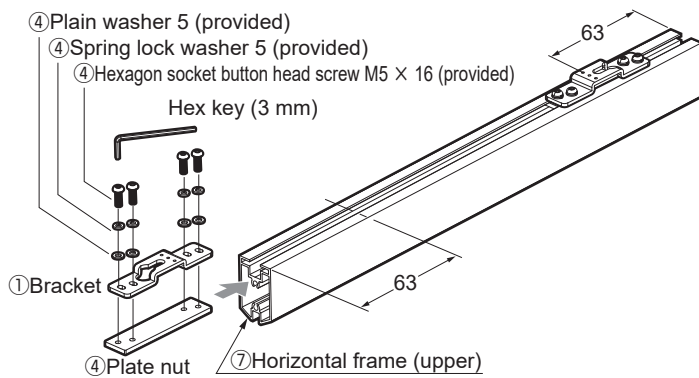
- Coat screw threads with an anti-backoff material such as "thread locking".
- During door installation, handle the glass carefully to prevent injury.

[1] Preparation of Horizontal frame ⑦, ⑧ - Upper

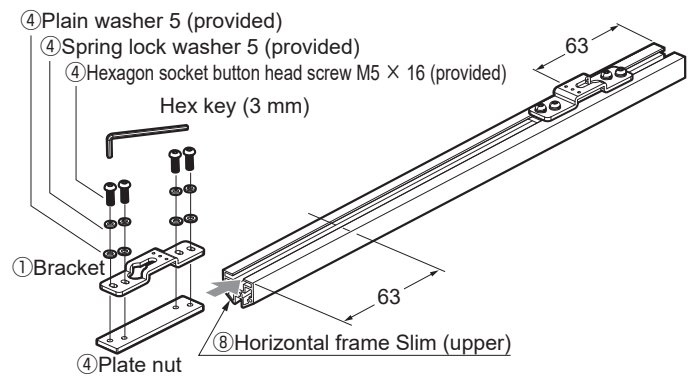
Caution

- Pay attention to the direction of the brackets.
- The open part of the bracket should face in the outside direction.

⑦ For horizontal frame



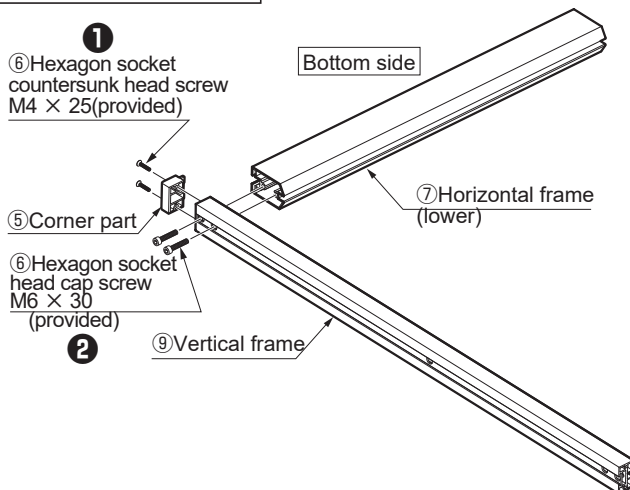
⑧ For horizontal frame (slim)



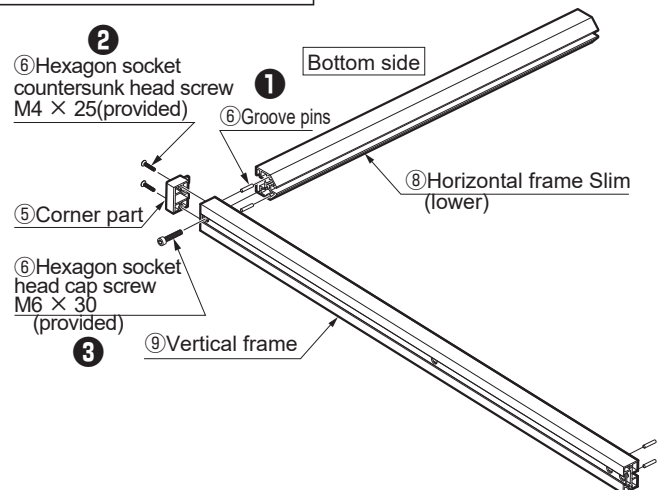
Fasten the bracket to upper horizontal frame ⑦, ⑧, using plate nut ④.
The distance from the edge and bracket center should be 63 mm.

[2] Assembly of Horizontal frame ⑦, ⑧ (lower) and Vertical frame ⑨. (① to ③ indicate the installation steps.)

⑦ For horizontal frame



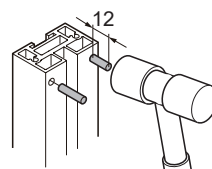
⑧ For horizontal frame (slim)



Placement of grooved pins

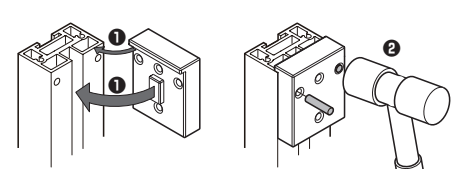
The grooved pins of other parts should be driven prior to assembly.

When not using a jig



Implement up to 12 mm
(top and bottom 4 pcs.)

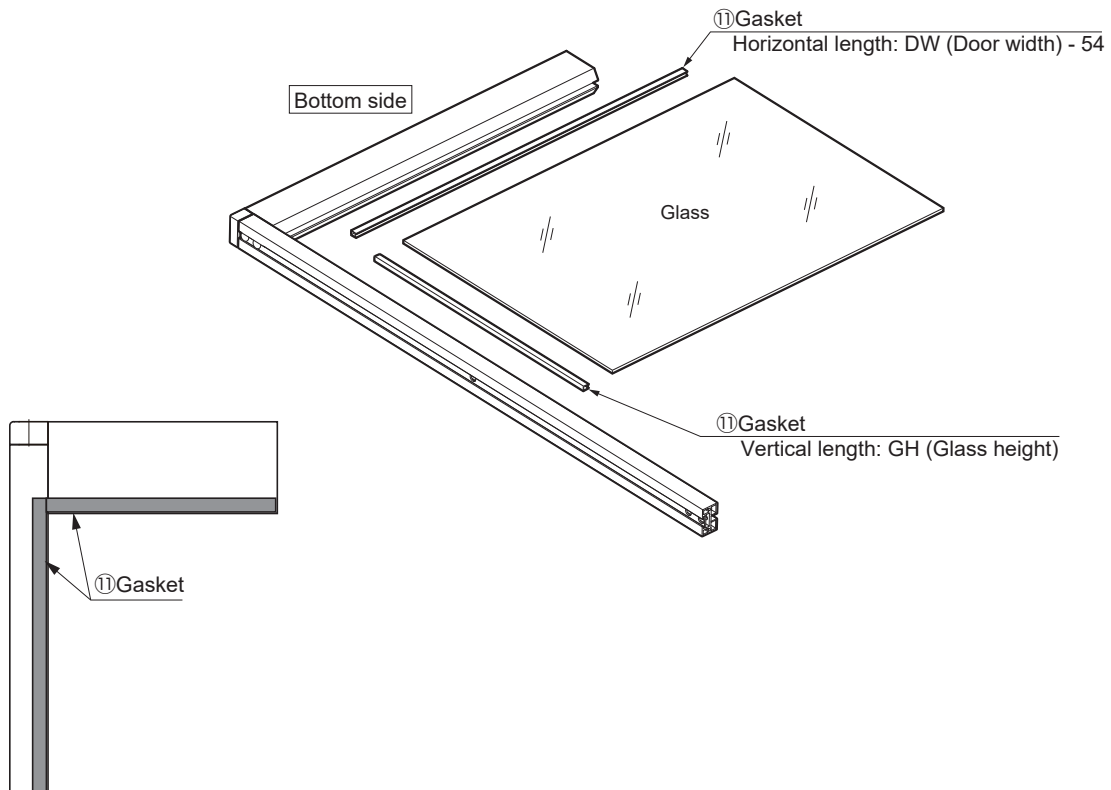
When using a jig



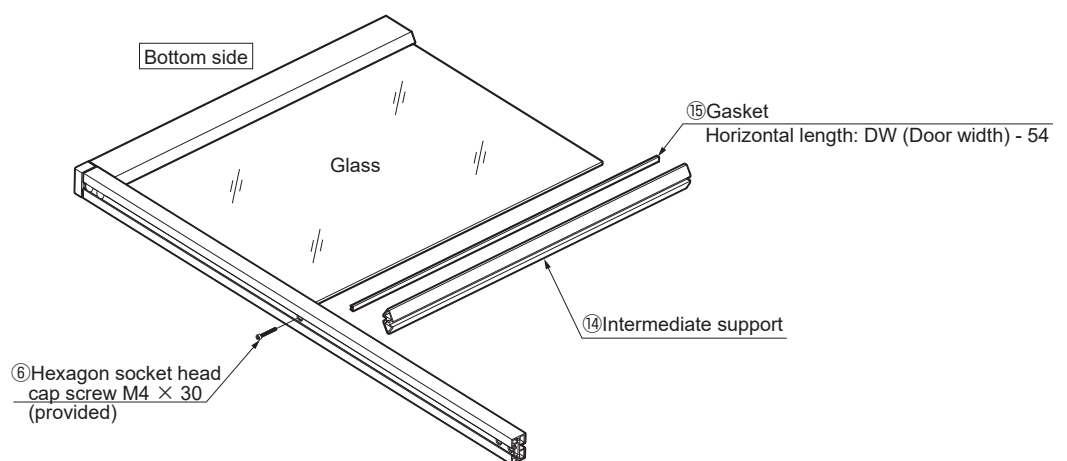
① Hook the jig on the upper edge of the vertical frame and the groove.
② Drive the jig until it is flush with the surface (top and bottom 4 pcs.)

[3] Insertion of glass - Step 1

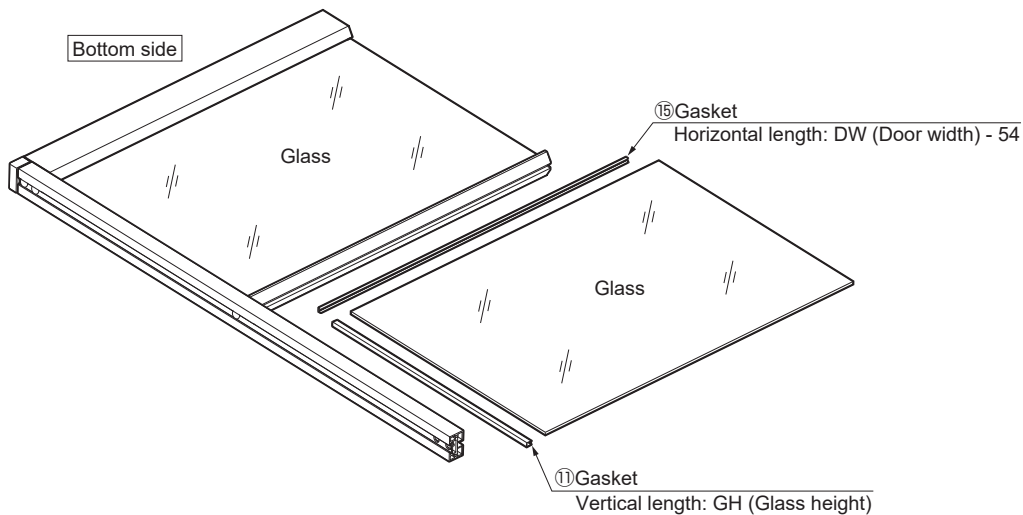
(The following mounting, adjustment and door removal procedures are explained using the horizontal frame ⑦.)



[4] Assembly of Intermediate support ⑭, when used



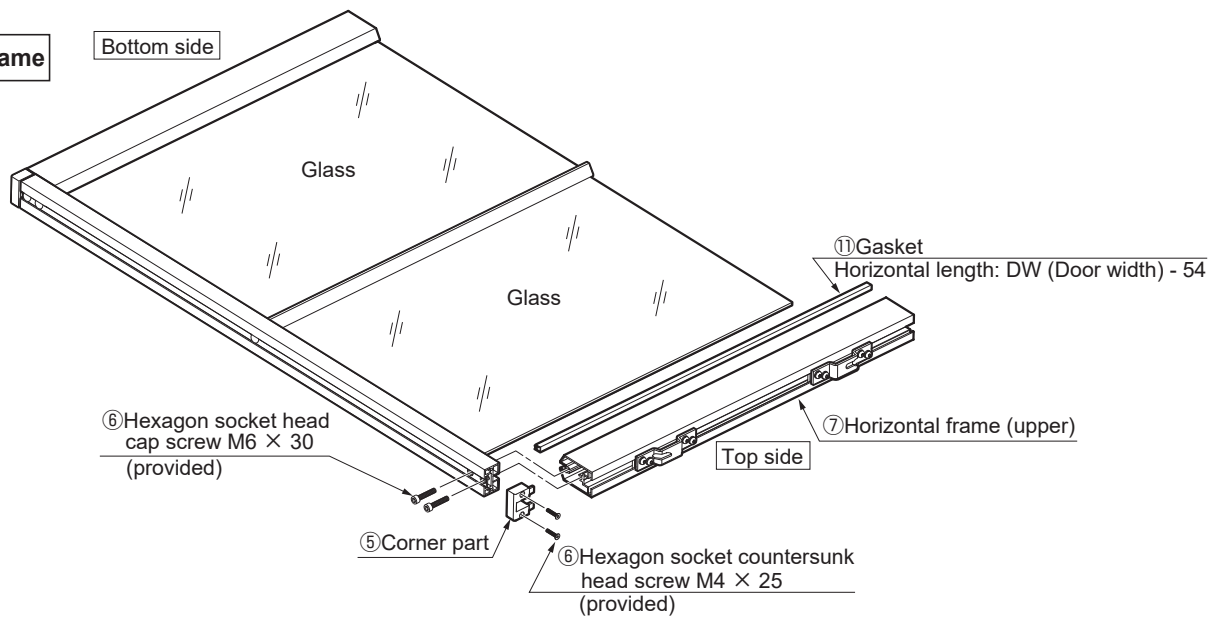
[5] Insertion of glass - Step 2, when Intermediate support is used.



When using more than two Intermediate supports, repeat procedures **4 - [4]** to **4 - [5]** .

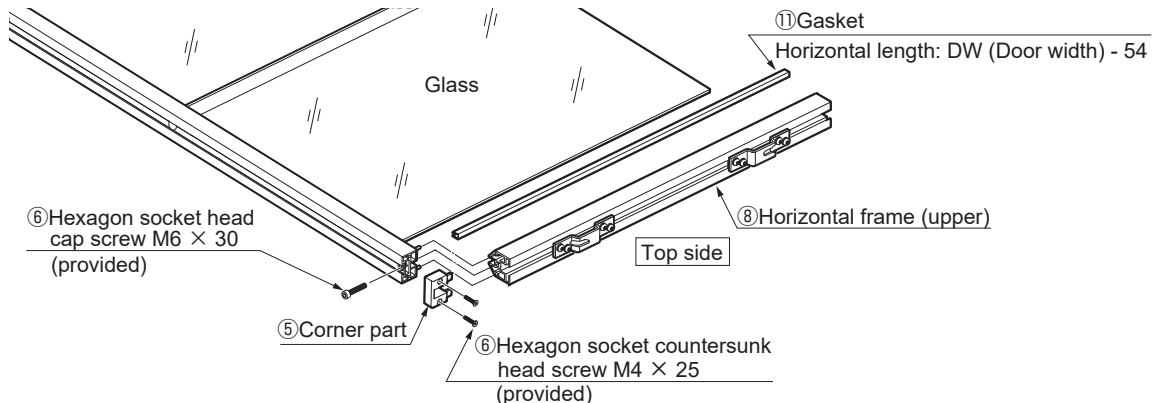
[6] Assembly of Horizontal frame 7,8 (upper)

7 For horizontal frame

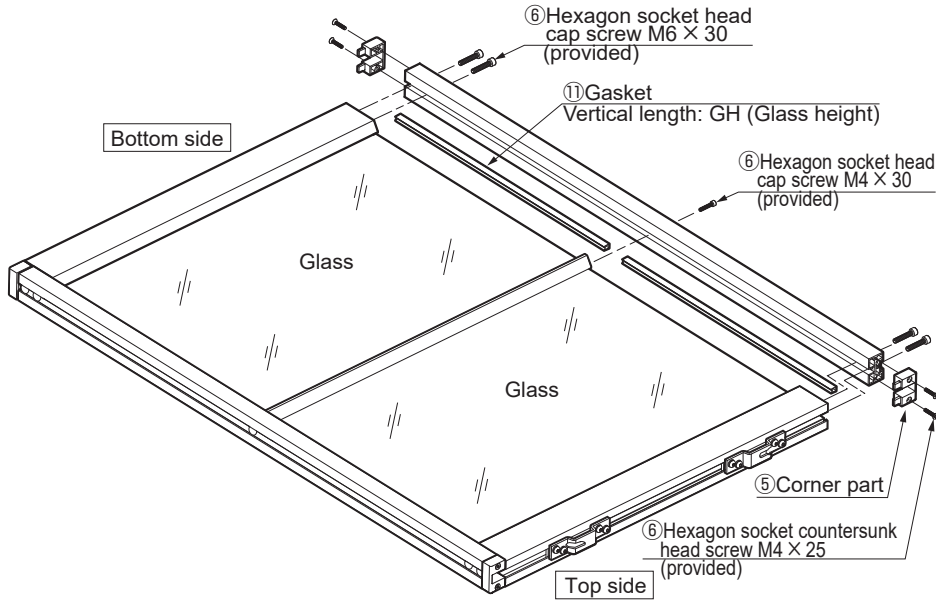


8 For horizontal frame (slim)

Refer to [2] on P.8 for the installation of grooved pins 6 .

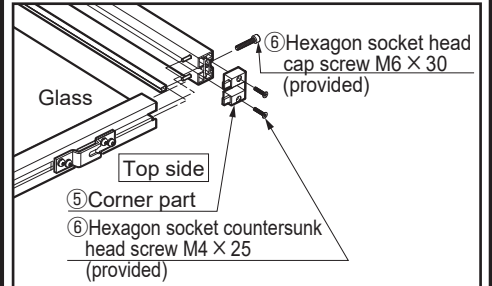
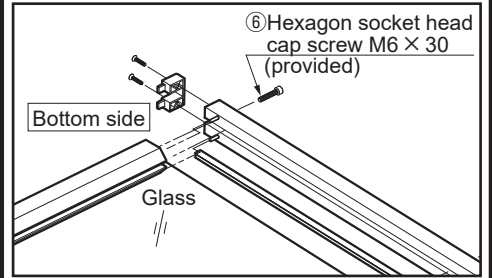


[7] Assembly of Vertical frame ⑨

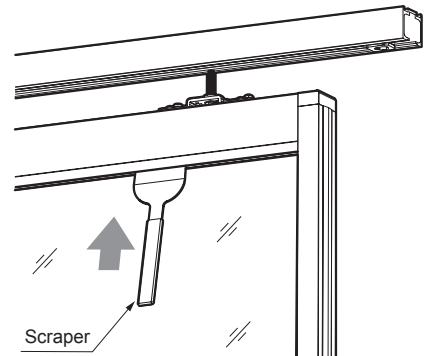


⑧ Horizontal Frame (Slim)

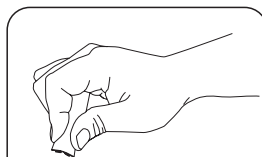
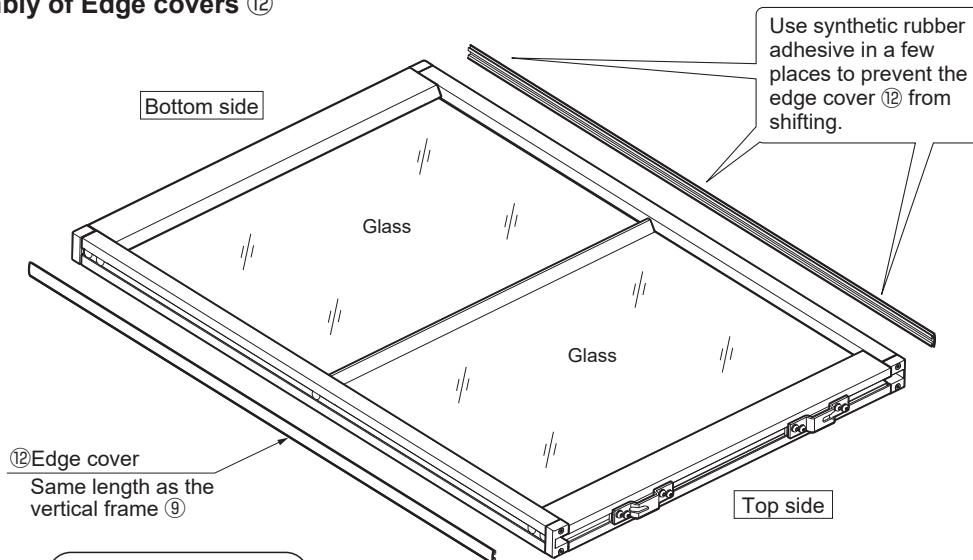
Refer to [2] on P.8 for the installation of ⑥ grooved pins.



You may find the gasket ① coming off from the frame. In such case, use a scraper or something to push it in and be careful not to scratch the glass.



[8] Assembly of Edge covers ⑫

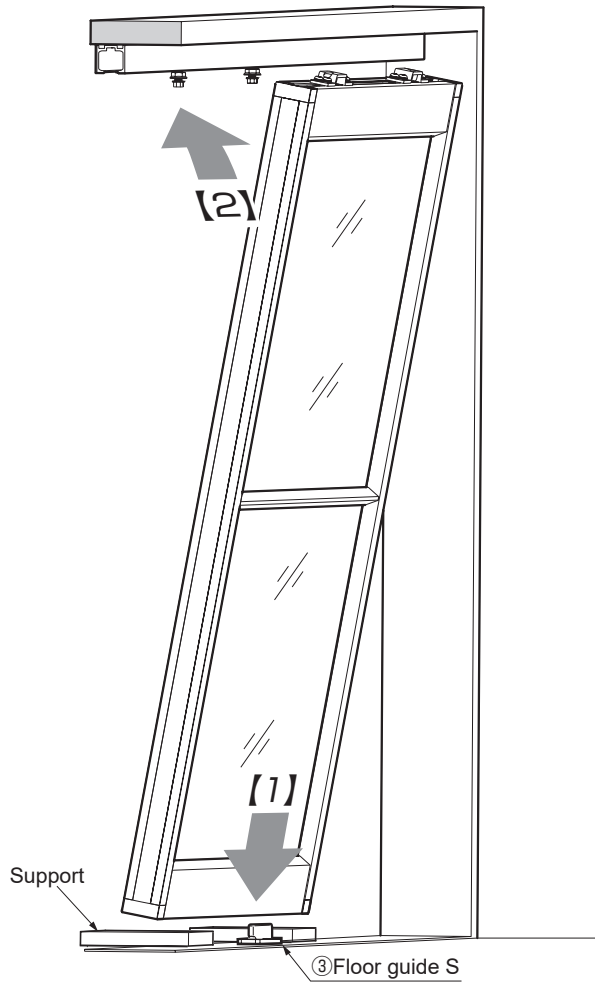


Bend the edge cover ⑫ between your fingers and press it into the side of the vertical frame ⑨.

⚠ Caution

- Before attaching the edge covers ⑫, make sure the frame is not biased or skewed, and that all bolts are tight. Make sure the parts are firmly assembled and there is no warping or skewing.

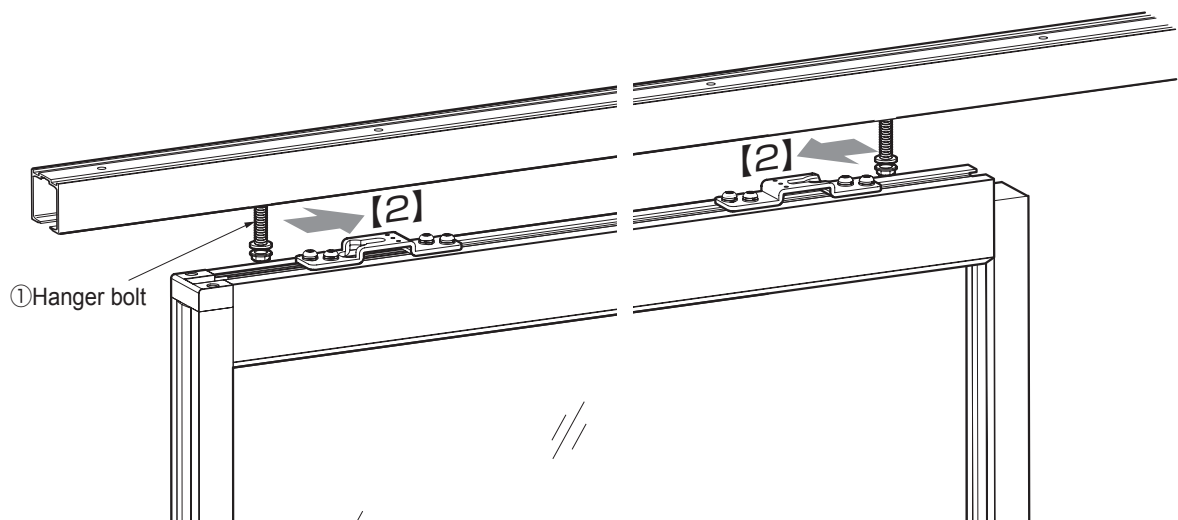
5 Hanging the Door



⚠ Caution

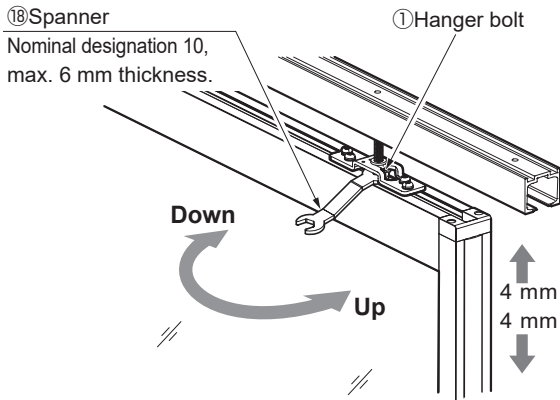
❗ Be sure to have someone with knowledge and experience assist you.

- [1]** Put a support below the door to be hung. Tilt the door as shown in the figure, and set the floor guide S ③ to the groove of the bottom horizontal frame ⑦,⑧.
- [2]** Push the door and set the hanger bolts as shown in the figure below.

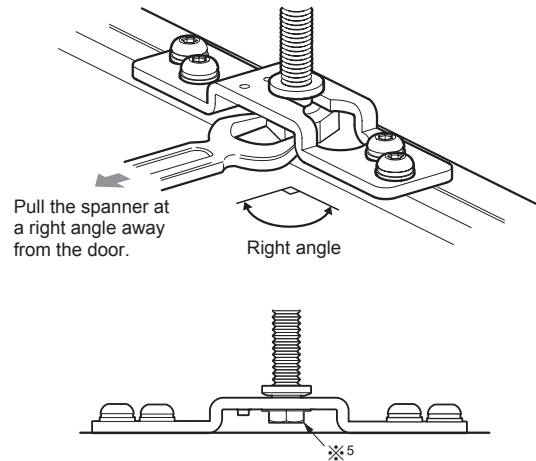


6 Adjustment of Door Height

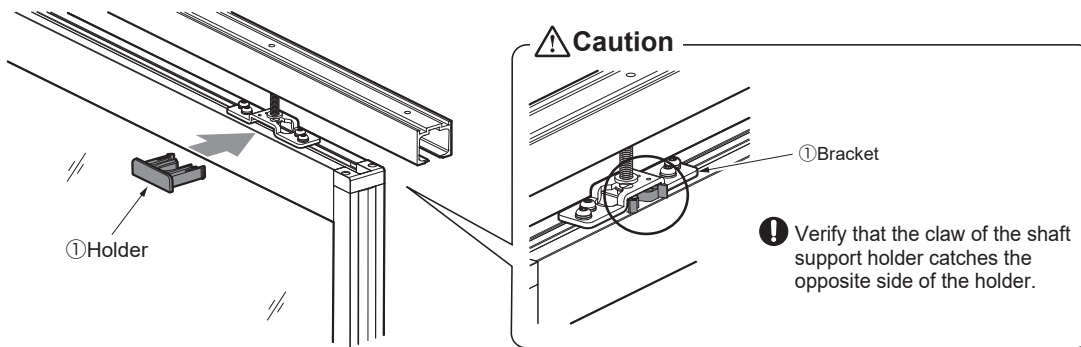
- [1] Remove the support under the door.
- [2] Adjust the door so that it is parallel to the upper track with 6-14 mm clearance between the door and floor.



- [3] After adjusting the door, pull the wrench at a right angle away from the door.
Make sure the width across flats of the bolt head is as shown in the figure ※5

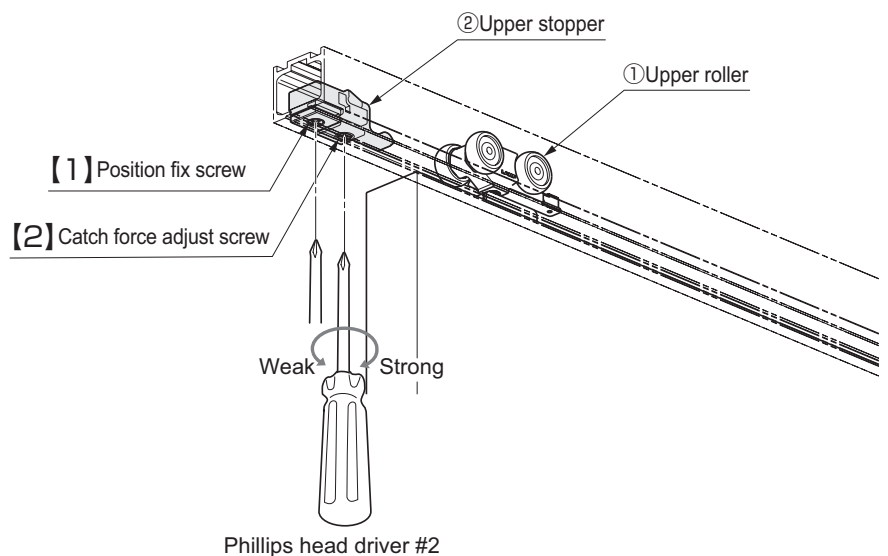


- [4] Insert the holder as shown below.



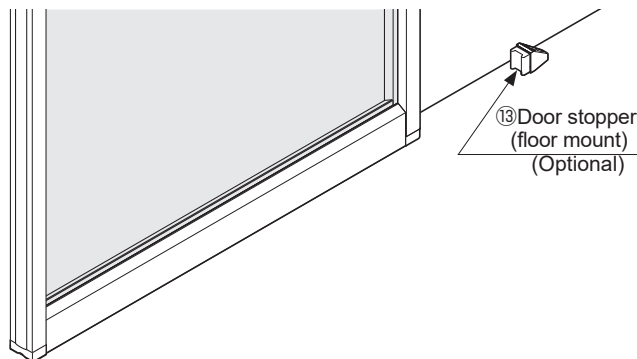
7 Fixing Upper Stopper and Adjustment

- [1] Fix upper stopper ② with the door fully closed.
Set the position of upper stopper such that upper roller in the track contacts with upper stopper, tighten position-set screw with Phillips head driver #2.
- [2] Using Phillips head driver #2, adjust door catch force by the adjust screw.
- [3] Fix another stopper and adjust it at opposite end in the similar manner.



8 Mounting the Door Stopper (Optional)

When a vertical frame is not used, use a door stopper¹³ of optional.



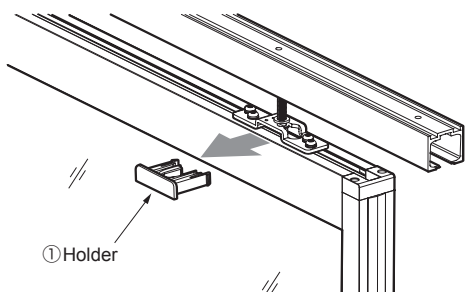
HOW TO REMOVE DOOR

Caution

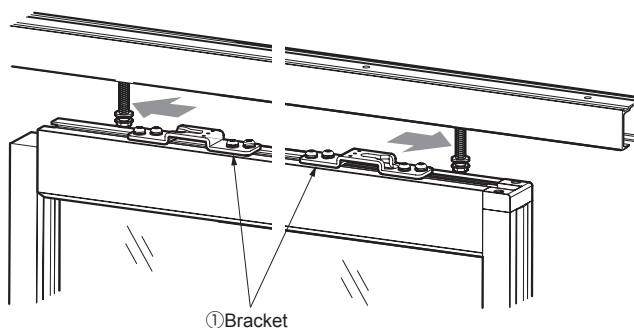
Be careful not to let the door fall.

[1] Put a 10 mm support under the door.

[2] Pull out the holder.



[3] Pull out the upper roller from the bracket.



[4] Remove the door from the floor guide.

PERIODICAL INSPECTION

- Clean inside of track.
- Check upper and lower gaps between the door and frame. If necessary, adjust the gaps.

TROUBLESHOOTING

Trouble	Checkpoint	Solution
Abnormal noise during operation	Check if door bottom contacts the floor or floor guide.	Verify that the track mounting screws are not loosened. Then, adjust the door height such that the clearance between the door bottom and floor is 6 - 14 mm.
	Check if door touches adjacent parts.	Adjust the position of floor guide to avoid contact with other objects.
	Check track rollers for aluminum dust.	Remove the track and pull out the roller. Then, clean the roller.
	Check the track mounting screws for looseness.	Retighten the screws to free the roller.
Heavy door operation	Check if door bottom contacts the floor or floor guide.	Verify that the track mounting screws are not loosened. Then, adjust the door height such that the clearance between the door bottom and floor is 6 - 14 mm.
	Check if door touches adjacent parts.	Adjust the position of floor guide to avoid contact with other objects.
Door does not move.	Check the track mounting screws for looseness.	Retighten the screws to free the roller.
Door starts to move.	Check if the upper track is set horizontally.	Using a level gauge, reset the upper track horizontally.

SUGATSUNE KOGYO CO.,LTD
Tokyo, JAPAN
Phone: +81 (0)3 3866 2260 E-mail:export@sugatsune.co.jp

SUGATSUNE KOGYO (UK) LTD
Reading, UK
Phone: +44 118 9272 955 E-mail:sales@sugatsune.co.uk

SUGATSUNE EUROPE GmbH
Düsseldorf, GERMANY
Phone: +49 211 53812900 E-mail:sales@sugatsune.eu

SUGATSUNE SHANGHAI Co., LTD
Shanghai, CHINA
Phone: +86 21 3632 1858 E-mail:lamp@sugatsune.com.cn

Guangzhou, CHINA
Phone: +86 20 6639 3552 E-mail:lamp@sugatsune.com.cn

SUGATSUNE KOGYO INDIA PRIVATE LIMITED
Mumbai, INDIA
Phone: +91 22 28314490/91 E-mail:sales@sugatsune.in

SUGATSUNE AMERICA, INC
California, USA
Phone: +1 310 329 6373 E-mail:sales@sugatsune.com

Chicago, USA
Phone: +1 630 317 7072 E-mail:sales@sugatsune.com

SUGATSUNE CANADA, INC.
Phone: +1 514 312 5267 E-mail:support@sugatsune.ca

ISO9001(Japan Offices and Sugatsune America) and ISO14001(Chiba Production division and Logistics center), certified.

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