

LAMP® SELF-CLOSING SLIDING DOOR SYSTEM

LM-80 Installation Manual

Thank you for using 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 self close hardware unit for sliding doors. This unit can be used in applications such as entrances, examination rooms, etc.
- A one way clutch mechanism (damper) provides the braking force that causes the door to close softly.
- An inclined rail system enables the door to close automatically without the use of a motor.
- Equipped with a catch mechanism that holds the door open.
- By rearranging the included parts, it is possible to use the door for both left and right opening doors.

SPECIFICATIONS

	Solid melamine door	Wood door
Door thickness	13 mm	28 - 40 mm ^{※1}
Door weight	30 - 80 kg (per door) ^{※2}	
Door width	700 - 1200 mm	
Max. door travel	1100 mm (door width 1200 mm)	
Closing drive system	Upper rail inclination (3.5/300)	
Damper	Fluid friction resistance type	
Control time	7 - 11 seconds (when stroke length is 900 mm)	
Initial operating power	5.4 - 12.5 N	
Ambient temperature	-10°C to +40°C	

※¹ When door thickness exceeds 32 mm, prepare another cover as the door will interfere against the cover.

※² Determine the door size by giving priority to the door weight.

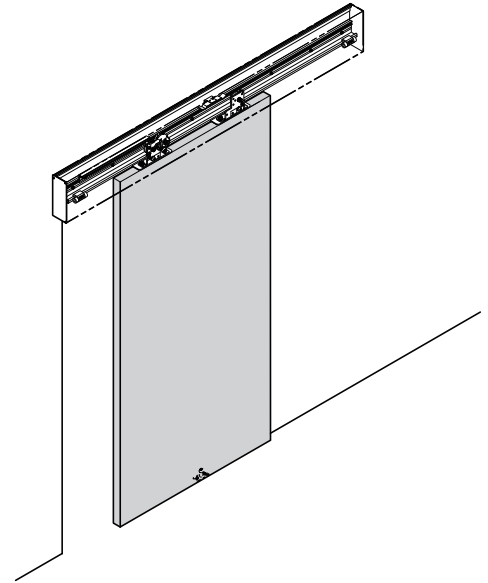


TABLE OF CONTENTS

About the product, Specifications, For your safety and correct installation	P.1
Component parts	P.2
Installation drawing	P.3

INSTALLATION PROCEDURE

1. Cutting and Drilling of Upper Rail	P.4	9. Hanging Door	P.6
2. Cutting of Upper Rail Cover and Mounting Rail (if needed)	P.4	10. Mounting of Derail-protection screws	P.6
3. Inserting Plate Nuts and Mounting Gear rack	P.4	11. Mounting of Door stopper	P.7
4. Mounting the Roller	P.5	12. Installation of the Damper	P.7
5. Drilling Holes for Upper Rail Mounting	P.5	13. Mounting of Catch at Opened Position	P.8
6. Mounting of Upper Rail	P.6	14. Adjusting Open/Close Speed	P.8
7. Fastening of the Mounting Rail (when Using Rail Cover)	P.6	15. Mounting the Rail Cover (when using)	P.8
8. Mounting the Bottom Roller Guide	P.6		

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.

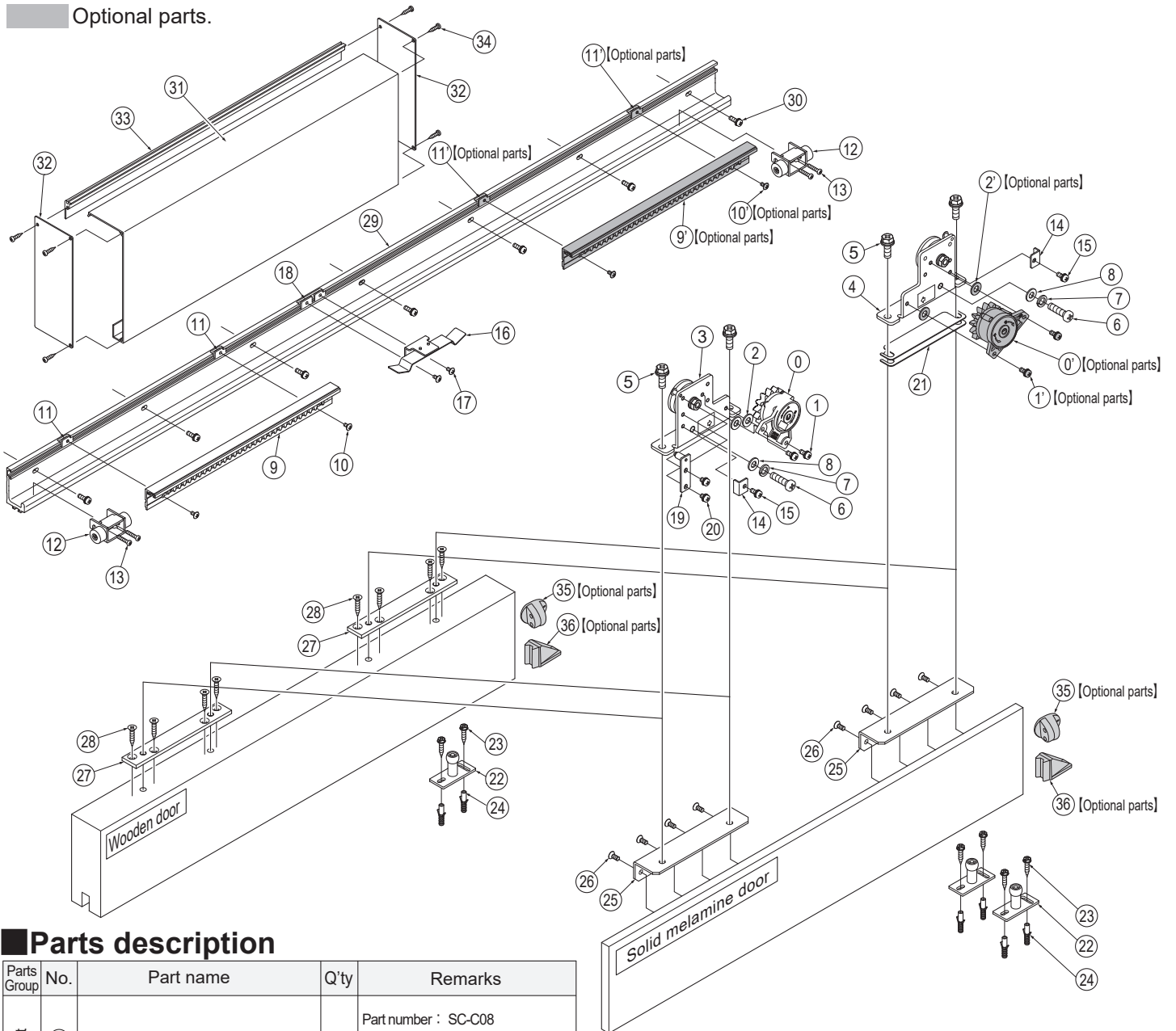
Caution: If not followed, injury or damage may result.

- 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 rail 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).
- If the brake is damaged, there is danger of injury when the door slams shut. Replace the brake if it does not work properly even after adjusting the speed.
- Do not use excessive force to open or close the door. Doing so may cause damage.
- When vertical frame is not used, use the door stopper to prevent the door falling.
- Install the product with two people (in the case of one person, there is a risk of damaging components).

PARTS LIST

The parts can be used for both right and left opening doors. This drawing shows the right opening type.

Optional parts.

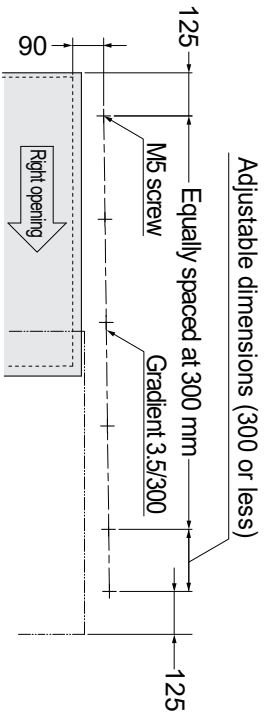


Parts description

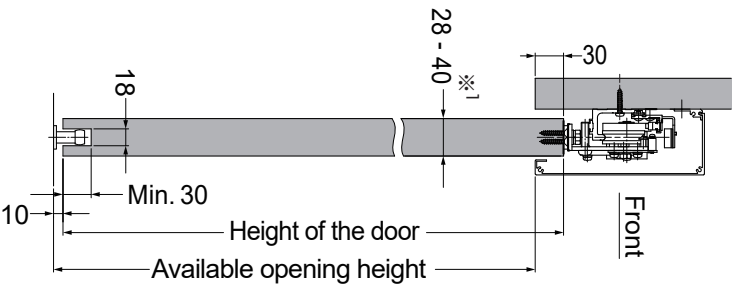
Parts Group	No.	Part name	Q'ty	Remarks
Damper set	①	Damper	1	Part number : SC-C08 Leading edge: Braking when closing Trailing edge: Braking when opening 【Optional parts】
	①	Pan head screw with captive washer M5×14	2	※Be sure to install after hanging the door, since it might be damaged when hanging the door.
②	Plain washers M5×D10×t1.6	2		
Roller set	③	Roller A	1	
	④	Roller B	1	
	⑤	Hexagon head bolt with captive washer M8×25	2	For the roller on the leading edge
	⑤	Hexagon head bolt with captive washer M8×30	2	For the roller on the trailing edge
	⑥	Pan head screw M8×30	2	Derail protection screw
	⑦	Spring lock washers 8	2	For derail protection screw
	⑧	Plain washers 8	2	For derail protection screw
	Gear rack set	⑨	Gear rack	1
⑩		Truss head screw M4×8	2	Leading edge: Braking when closing Trailing edge: Braking when opening
⑪		Plate nut	2	【Optional parts】
Door stopper set	⑫	Door stopper	2	
	⑬	Pan head tapping screw 5×16	4	Door stopper for fixing and reinforcing
	⑭	Stopper plate	2	
	⑮	Pan head screw with captive washer M5×8	2	
Fully open stop device set	⑯	Spring	1	
	⑰	Truss head screw M4×8	2	For mounting spring ⑯
	⑱	Plate nut	2	For mounting spring ⑯
	⑲	Stop roller	1	
	⑳	Pan head screw with captive washer M5×8	2	

Parts Group	No.	Part name	Q'ty	Remarks
Height adjustment spacer set	⑳	Height adjustment spacer (t = 1)	15	
	㉑	Height adjustment spacer (t = 0.5)	1	
Bottom roller guide set	㉒	Bottom roller guide φ16	2	
	㉓	Hexagon flange head tapping screw 5×25	4	When wood or plugging ㉔ is used on the floor
	㉓	Hexagon head bolt with captive washer M5×12	4	When the floor is steel
	㉔	Anchor 6×30	4	When the floor is concrete or mortar
Angled bracket set	㉕	Angled bracket	2	Solid melamine door
	㉖	Hexagon socket countersunk head screw M5×12	8	Solid melamine door
Bracket set	㉗	Roller Bracket	2	For wood doors
	㉘	Countersunk head tapping screw 5×30	8	For wood doors
	㉙	Upper rail (L=2200)	1	
	㉚	Pan head screw with captive washer M5×16	8	When upper rail mounting surface is solid melamine board
	㉚	Truss head tapping screw 5×30	8	When upper rail mounting surface is wood
	㉛	Rail cover (L=2350)	1	
	㉜	Side cover	2	
	㉝	Mounting rail (L=2350)	1	
	㉞	Pan head tapping screw 4×12	6	
	㉟	Door stopper		Part number: 162-811, 【Optional parts】 Used in conjunction with ㉚ when the door is not in contact with the vertical frame. Provided screws: countersunk head wood screw 4.1×32
	㊱	Door stopper (floor mounted)		Part number: 20773, 【Optional parts】 Used when not available ㉟

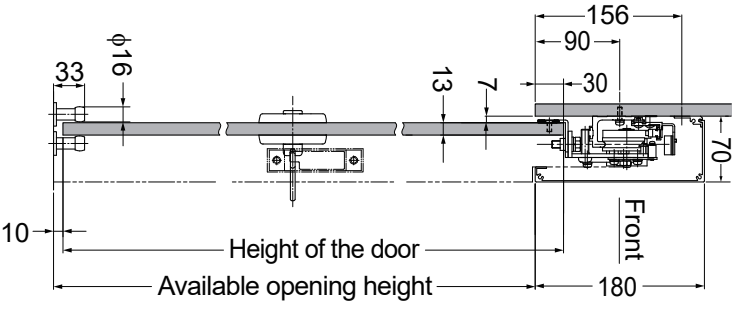
The rail mount process drawing



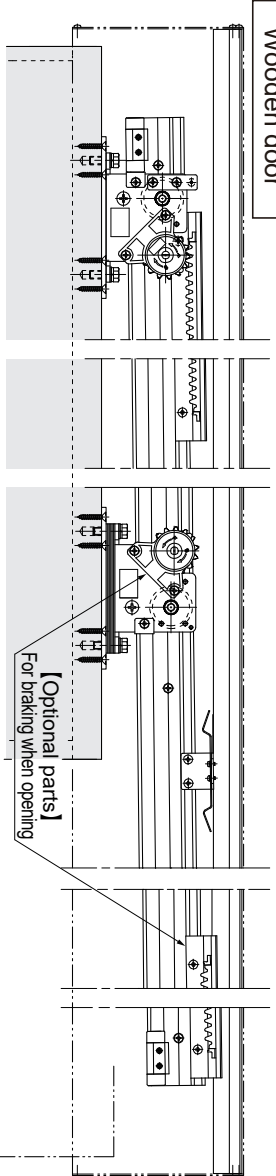
Wooden door



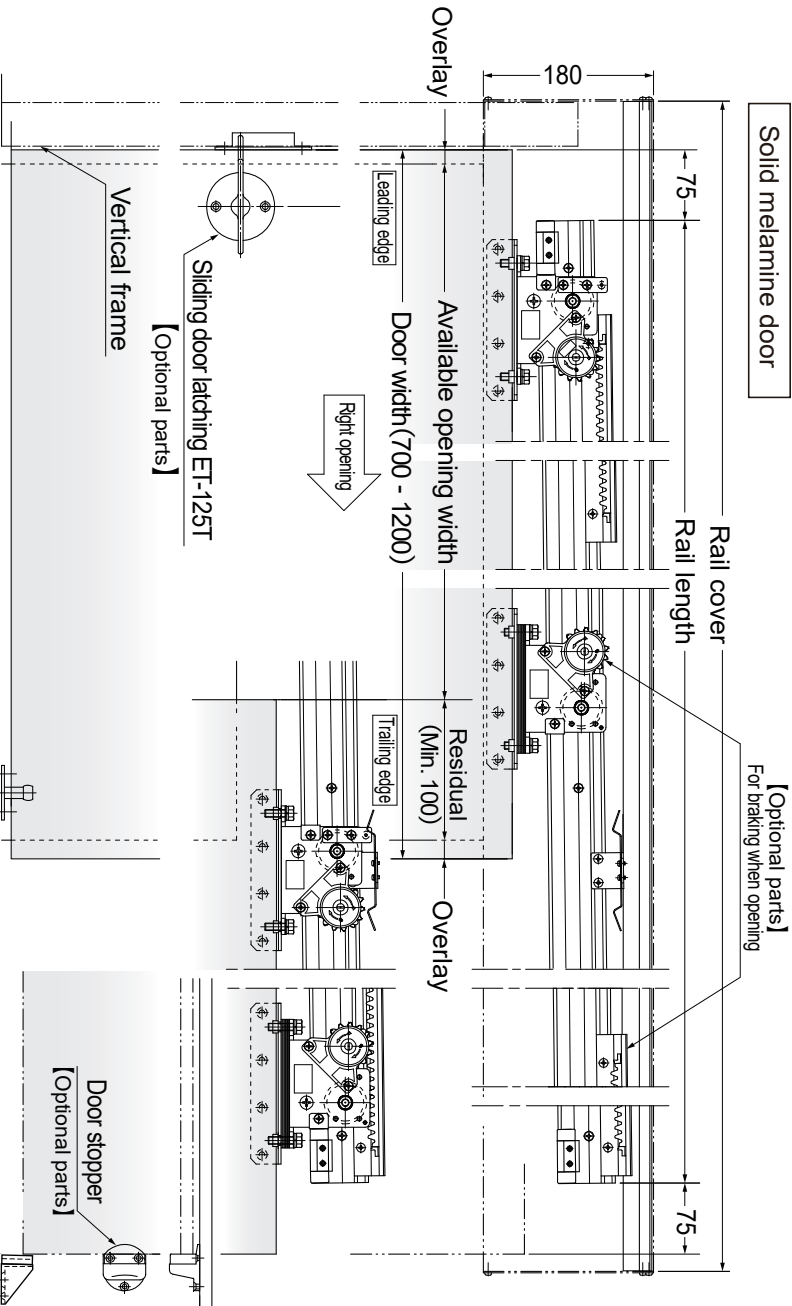
Solid melamine door



Wooden door



Solid melamine door



※] When door thickness exceeds 32 mm, prepare another cover as the door will interfere against the cover.

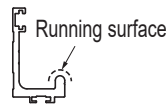
INSTALLATION PROCEDURE

The procedure describes a right opening setup. The left opening setup is installed in the opposite positions.

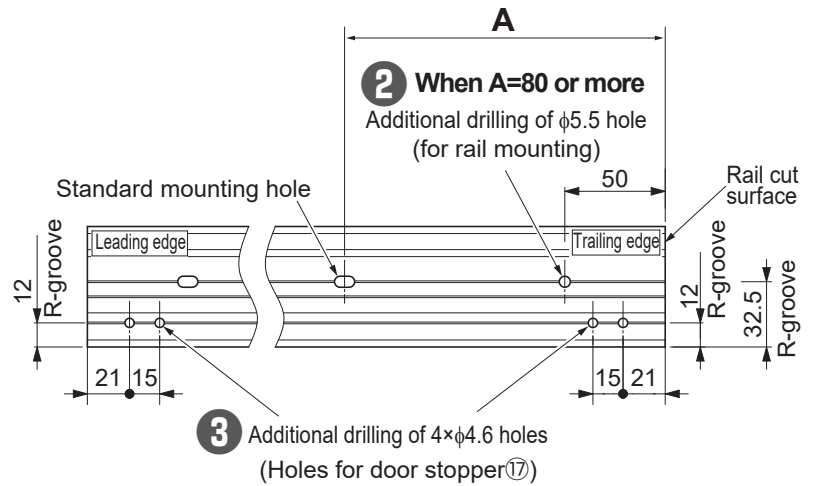
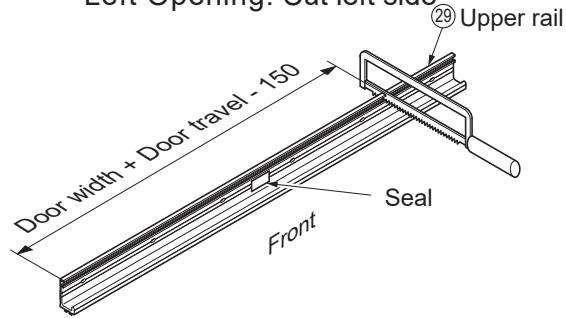
1 Cutting and Drilling of Upper Rail

⚠ Caution

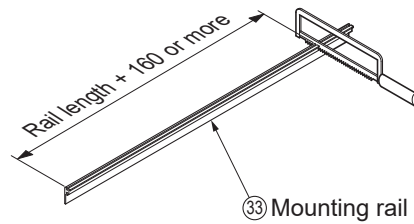
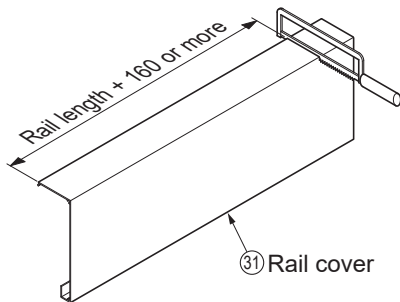
- ⊘ Be careful not to damage the running surface, when processing the upper rail.



- 1 Cut in the direction indicated on the seal. (Front view)
Right opening: Cut right side
Left Opening: Cut left side



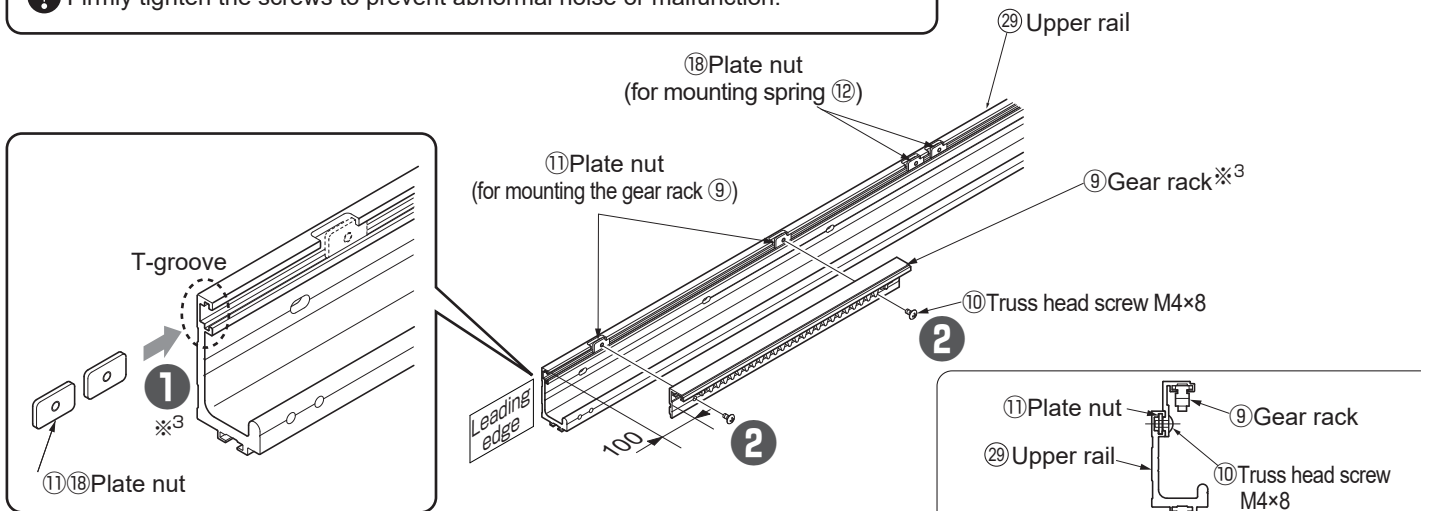
2 Cutting of Upper Rail Cover and Mounting Rail



3 Inserting Plate Nuts and Mounting of Gear Racks

⚠ Caution

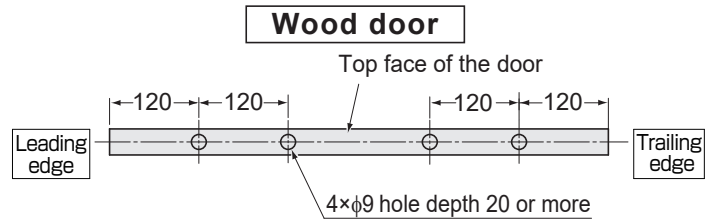
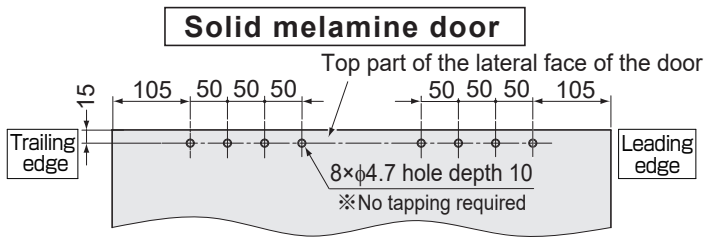
- ⚠ Use provided screws to prevent interference with the clutch gear of the damper.
- ⚠ Firmly tighten the screws to prevent abnormal noise or malfunction.



※³ If you want to brake when opening, mount the optional gear rack set on the trailing edge.

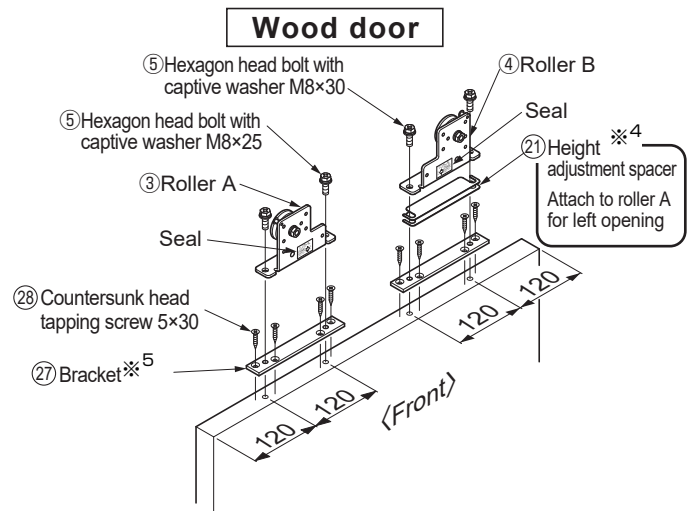
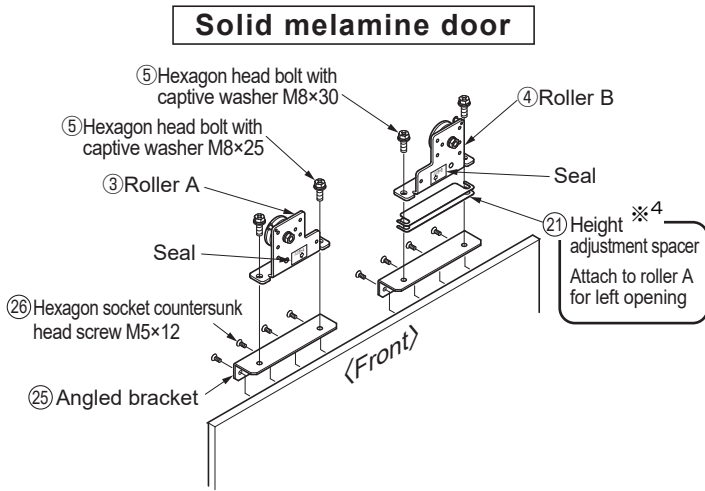
4 Mounting the Roller

[1] Hole Drilling on the Door



[2] Mounting Parts on the Door

Mount the seal affixed to the roller so that it faces the front (common to right-opening and left-opening).



※4 The number of height adjustment spacers varies according to the door width.

Number of height adjustment spacers (reference)

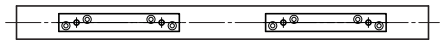
Door width (mm)	Number of spacers
700 - 800 or less	6 pcs
800 - 900 or less	7 pcs
900 - 1000 or less	8 pcs
1000 - 1100 or less	9 pcs
1100 - 1200 or less	10 pcs

※5

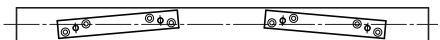
⚠ Caution

Mount the brackets ㉗ on the center line of the door.

OK



X



5 Drilling Holes for Upper Rail Mounting

⚠ Caution

Make sure to mount to a structure that can endure the door weight and impact when opening/closing the door.

※6 When dimension **B** in the right figure (dimension from the final hole position at 300 mm pitch to the tail position at full opening) is 155 mm or more, drill the lower hole at a position 125 mm from the tail position at full opening.

Number of holes from reference hole (Excluding reference hole)	Horizontal distance from ref. hole (mm)	Height difference from ref. hole (mm)
1 pc	300	3.5
2 pcs	600	7.0
3 pcs	900	10.5
4 pcs	1200	14.0
5 pcs	1500	17.5
6 pcs	1800	21.0
7 pcs	2100	24.5

1 Drill the reference hole.

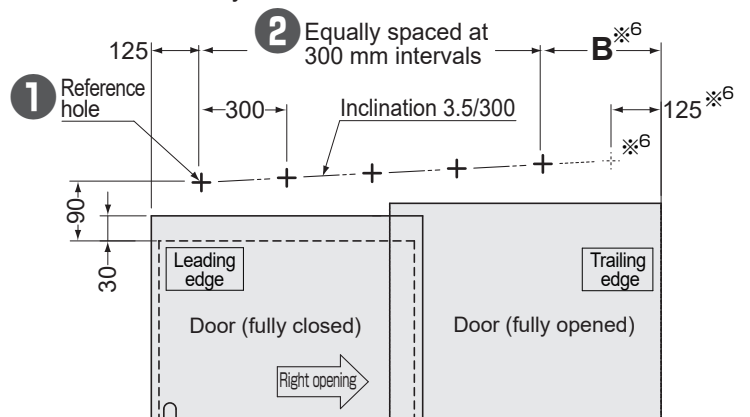
When mounting on solid melamine board

ϕ 4.7 hole depth 10 (no tapping required)

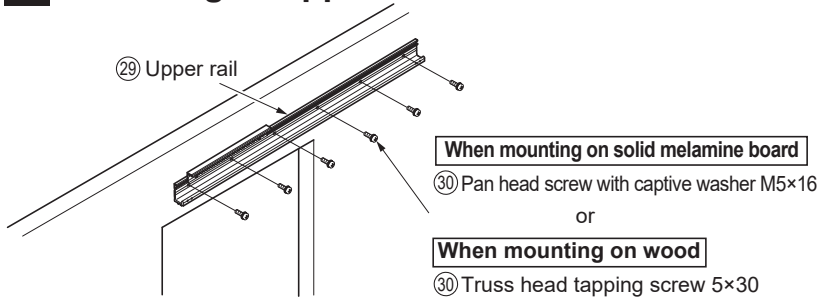
When mounting on wood

ϕ 3.5 hole depth 26

2 The subsequent holes are drilled with a height difference of 3.5 mm every 300 mm.

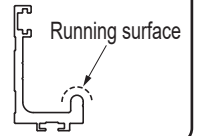


6 Mounting of Upper Rail



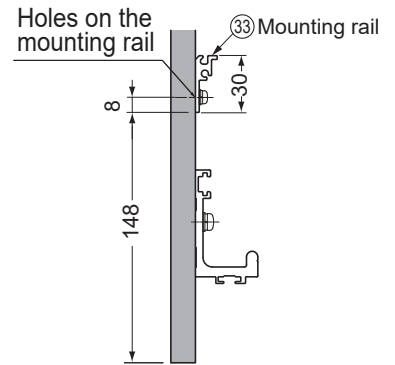
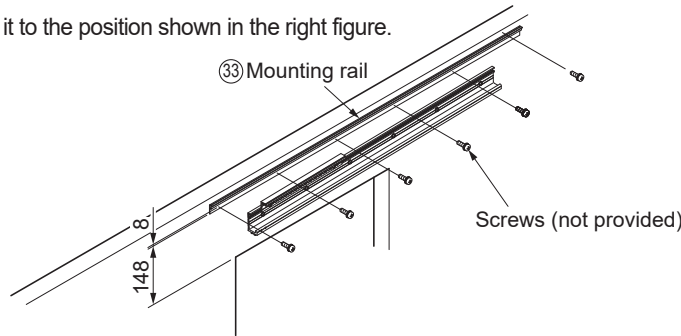
⚠ Caution

⚠ Be careful not to damage the rail running surface when processing.



7 Fastening of the Mounting Rail (when Using Rail Cover)

Drill the mounting rail and fasten it to the position shown in the right figure.



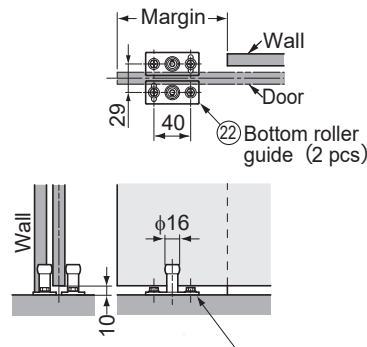
8 Mounting the Bottom Roller Guide

⚠ Caution

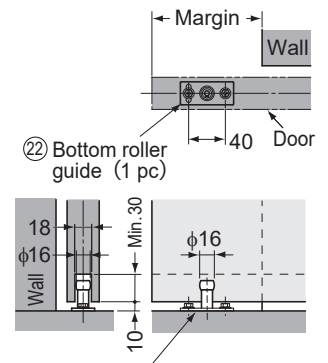
⚠ Be sure to use the bottom roller guide ②②.

- Mount it in the part of margin.
- Mount it so that the door is vertical.
- If the floor is concrete, mortar, etc., use the provided plug to fasten it (drill diameter $\phi 6$).

Solid melamine door



Wood door



Wood floor or floor using plugs: ②③ Hexagon flange head tapping screw 5 × 25
Steel floor: ②③ Hexagon head bolt with captive washer M5 × 12

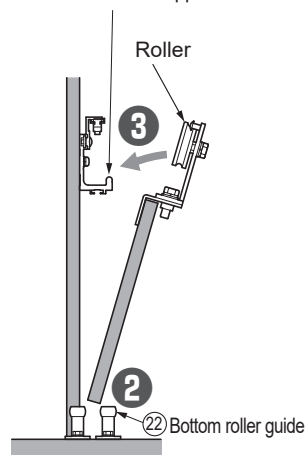
9 Hanging Door

⚠ Caution

⚠ Be careful not to damage the gear rack or running surface of the rail when hanging the door.

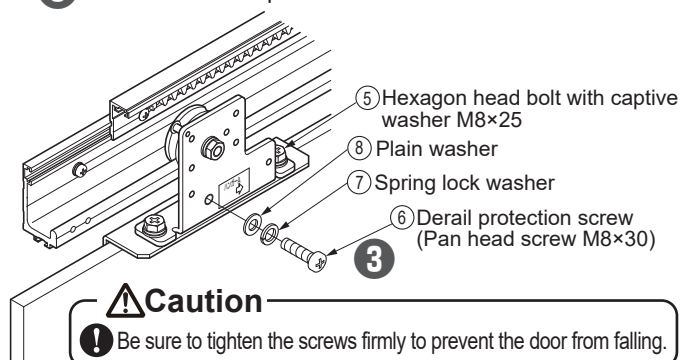
⚠ Mount the damper after hanging the door, since it might be damaged when hanging the door.

① Wipe off any dirt on the running surface of the upper rail.



10 Attaching Derail Protection Screw

- ① Make sure that the door can be opened and closed smoothly.
- ② Adjust the gap between the door and the vertical frame. (Loosen the bolt ⑤, then insert or remove the height adjustment spacer ②①.)
- ③ Attach the derail protection screws to rollers A and B.

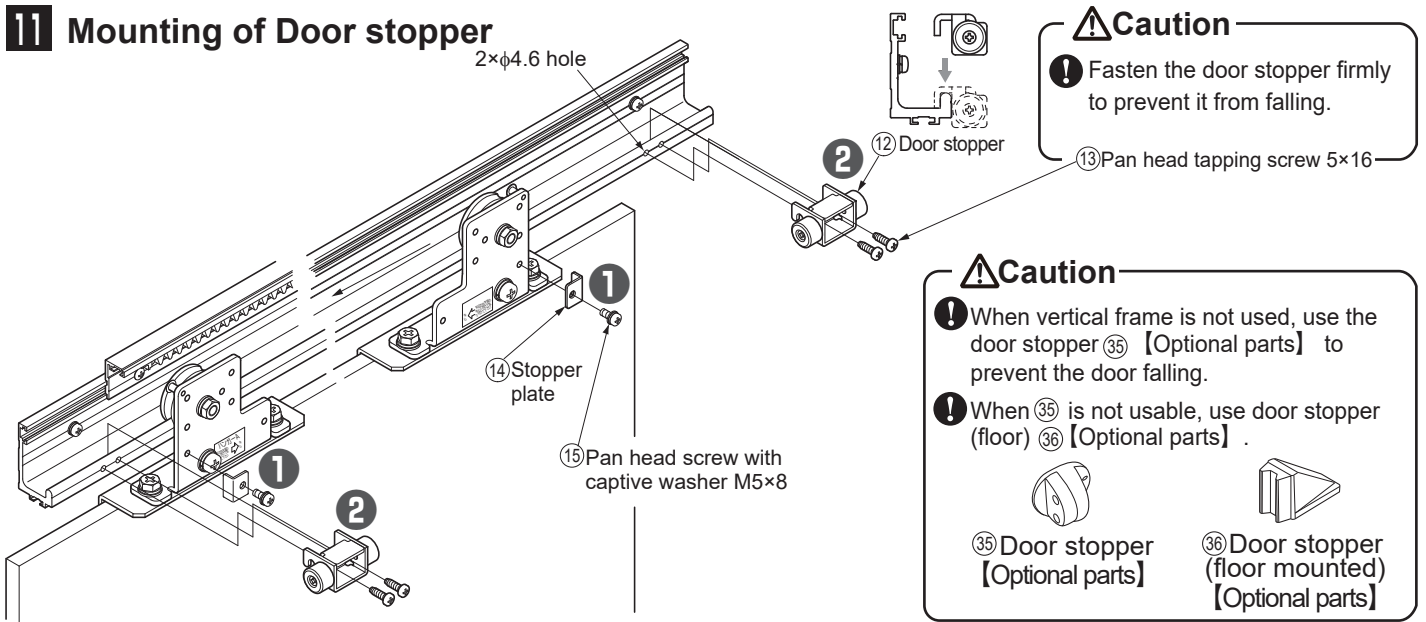


⚠ Caution

⚠ Be sure to tighten the screws firmly to prevent the door from falling.

The procedure describes a right opening setup. The left opening setup is installed in the opposite positions.

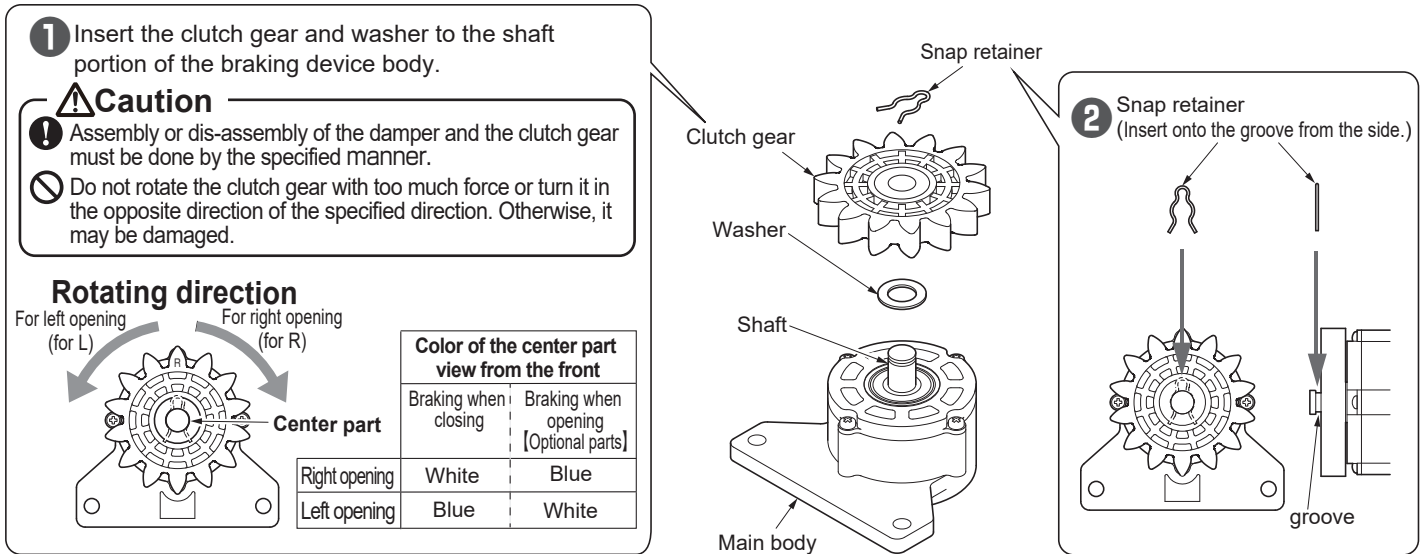
11 Mounting of Door stopper



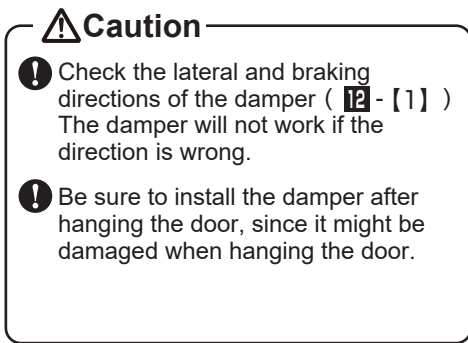
12 Installation of the Damper

[1] Assembly of Damper

Damper is non-handed. Right and Left-opening is alternative by the direction of clutch gear. The way to remove the clutch gear is the reverse of the installation procedure.

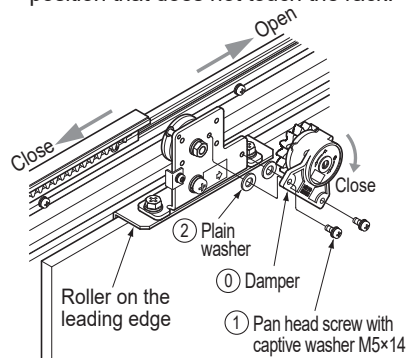


[2] Installation of the Damper



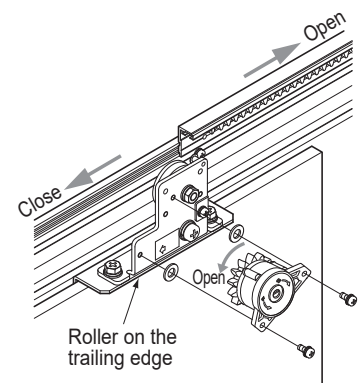
Braking when closing

With the door is opened more than 600 mm, attach the damper in a position that does not touch the rack.



Braking when opening [Optional parts]

With the door closed, attach the damper in a position that does not touch the rack.

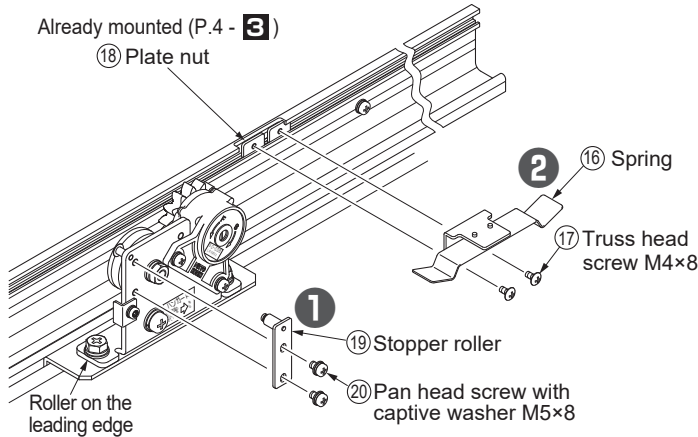


13 Mounting of Catch at Opened Position

1 Mounting of Stopper Roller and Spring

Caution

- Use the specified screws. Otherwise, it may come into contact with other parts.

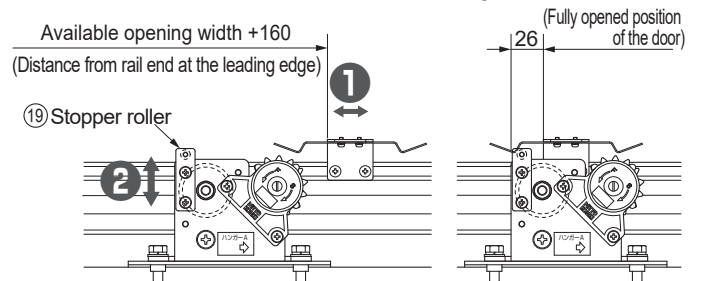


2 Adjustment of Catch Position and Catching Force

- Adjust the position of the spring so that the door stops at the fully opened position. Using the dimensions shown in the figure below as a guide, mark the rail to determine the position.
- Adjust the catch force by raising and lowering the position of the stop roller.

Strengthen: Raise the stop roller

Weaken: Lower the stop roller



3 Fastening stopper roller and spring

14 Adjusting Opening/Closing Speed

Caution

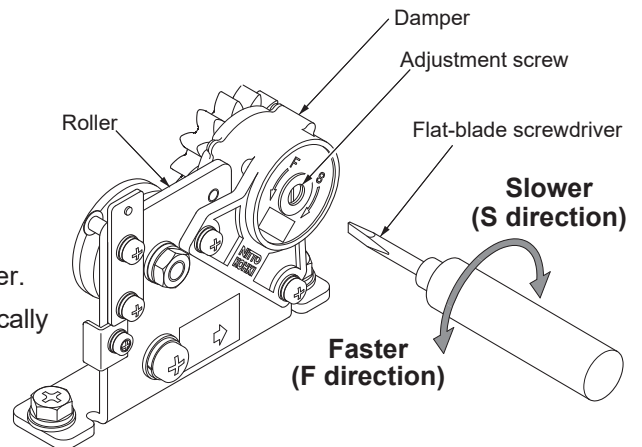
- Lightly turn the adjustment screw. When it has reached the end, do not turn any more.
- The closing speed varies by ambient temperature. When the temperature is high, the door closes fast; when it is low, the door closes slowly.

Turn the adjustment screw of the damper with a flat-blade screwdriver.

- Adjustment of closing speed:** Let the door close automatically from a fully open position.

To make it slower: Turn in the S direction
To make it faster: Turn in the F direction

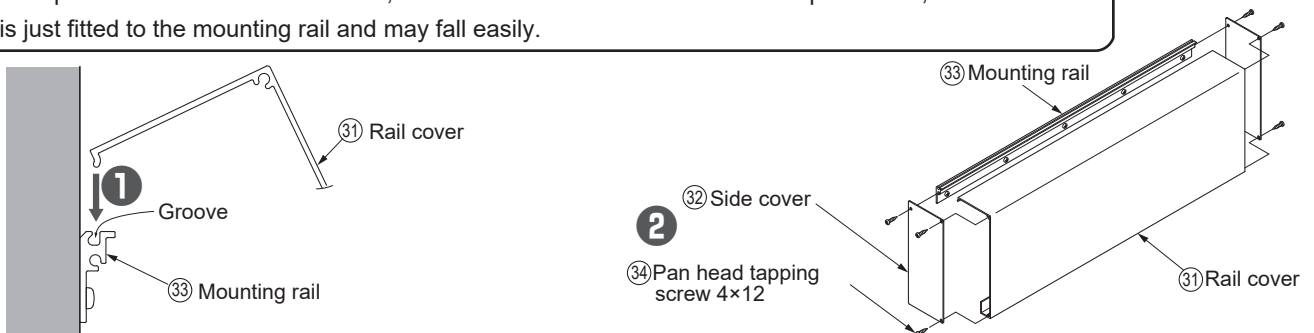
- Adjusting the opening speed:** Same as adjusting the closing speed



15 Mounting the Rail Cover

Caution

- When door thickness exceeds 32 mm, prepare a cover panel separately since the door may touch the provided rail cover.
- Side cover must be fastened with the provided screw. Or else, the side cover may fall and cause injury.
- Even if the provided screw cannot be used, be sure to fix the side cover with L-shaped fixture, since the side cover is just fitted to the mounting rail and may fall easily.



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