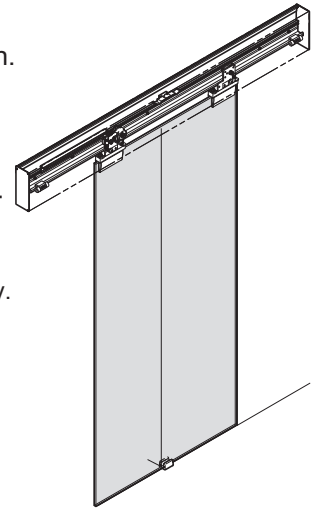


LAMP[®] LM-80G SELF-CLOSING SLIDING DOOR SYSTEM

Installation Manual

Part No:LM-80G

Thank you for selecting our product.
Before starting 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

Applicable door thickness	Applicable door weight	Applicable door width	Max. door travel	Closing drive system	Control time
8,10,12 mm	30 - 80 kg	700 - 1200 mm	1100mm (when door width 1200 mm)	Rail inclination (3.5/300)	7.0 to 11.0 sec

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.

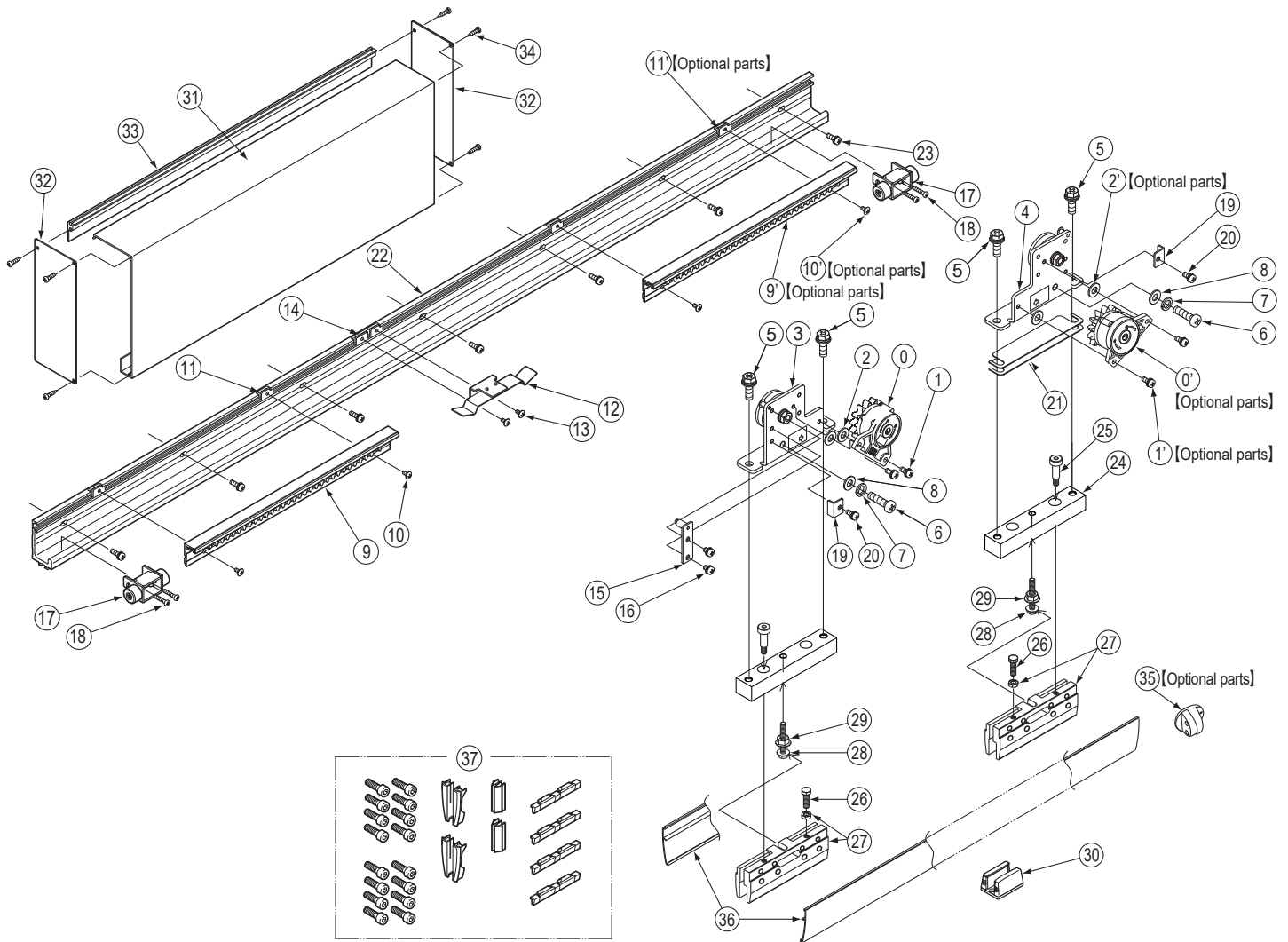
- ❗ This (sliding door system) should be installed by a qualified person. If the system is not installed correctly, the door may fall and cause injury.
- ⊘ Do not use this product for any purpose, or with doors that are outside the specifications of this manual.
- ⊘ Do not disassemble or modify any parts other than those described in this document.

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

- ❗ This product is a part for architectural fittings. After installation, make sure to test the finished product thoroughly to ensure that it is well-functioning and safe. Please inform the end user how to use the product safely.
- ❗ Make sure to follow the designated dimensions, specifications, and horizontal/vertical angles. Make sure that the frame and door are not warped, since it 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.
- ❗ 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.
- ❗ To prevent the door from falling, it is recommended to use a recessed mount type door together with a rail which has an embedded doorstop.
- ❗ Install the product with two people (in the case of one person, there is a risk of damaging components).
- ❗ The bracket cover may interfere with the side wall. Check the installation drawing on page 3 to avoid interference.
- ❗ Use a tempered glass. Using shatter-proof film is recommended. For areas where the glass brackets grip, it is recommended to remove the shatter-proof film before installing. If left unremoved, slippage due to the shatter proof film may affect the proper function of the door. Please consult with the glass and film suppliers before proceeding.

COMPONENT PARTS

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



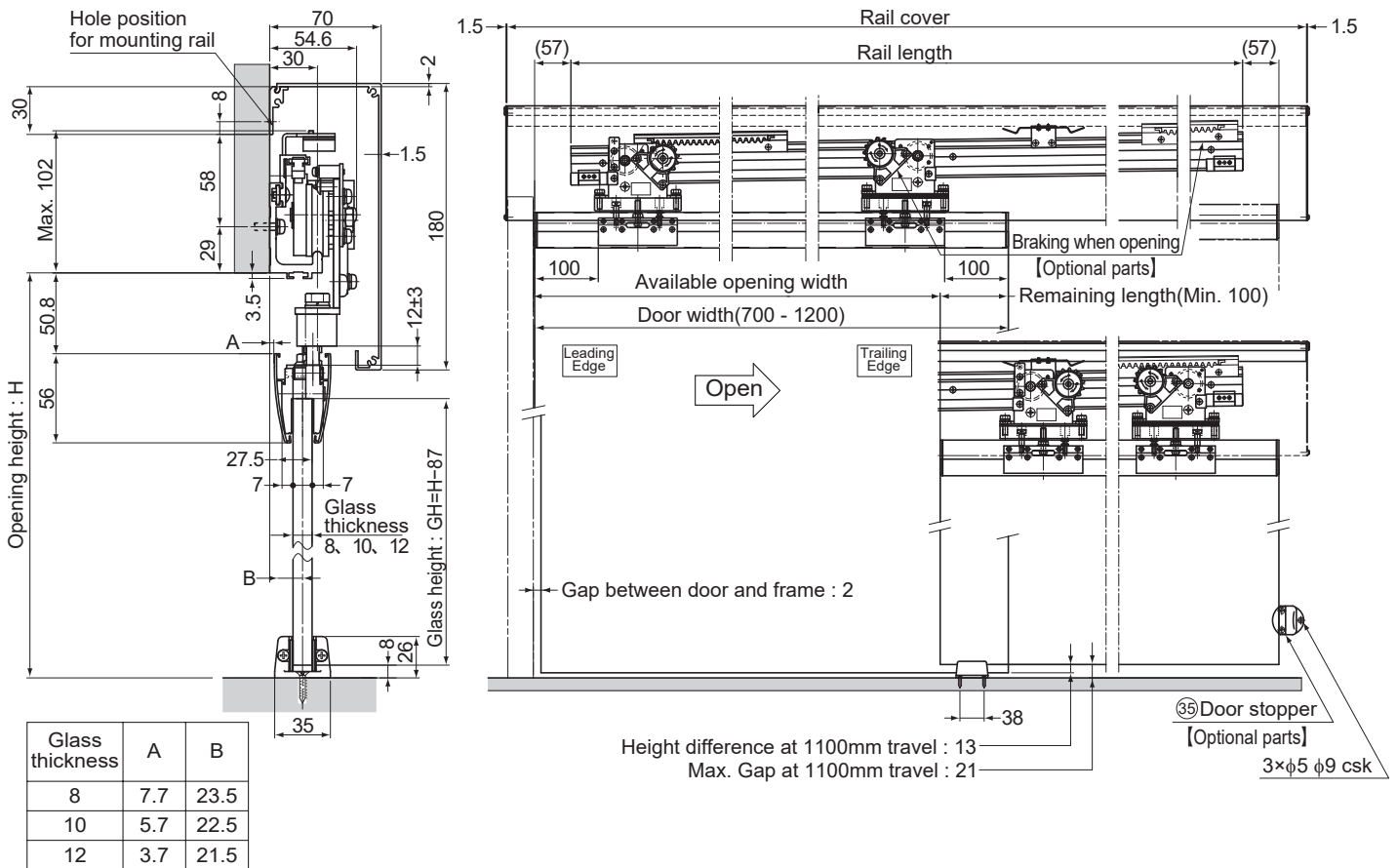
Parts description

There are some parts which are not needed for the glass door application.
See this manual on page 9.

No.	Part name	Q'ty	Description	No.	Part name	Q'ty	Description
①	Damper	1	SC-C08 Optional for soft open.	②①	Height adjustment spacer (t=1.0)	15	
①	Pan head screw with captive washer M5x14	2	To be install after hanging the door.	②②	Height adjustment spacer (t=0.5)	1	
②	Plain washer, 5 mm nominal	2		②②	Rail L = 2200	1	
③	Roller A	1		②③	Pan head screw with captive washer M5x16	8	Use either one.
④	Roller B	1		②④	Truss head tapping screw 5x30	8	
⑤	Hexagon head bolt with captive washer M8x25	2	For the leading edge	②⑤	Hanging bracket	2	Parts set LM-80GB
⑤	Hexagon head bolt with captive washer M8x30	2	For the trailing edge	②⑥	Hexagon socket special screw	2	
⑥	Pan head screw M8x30	2	Derail-protection screw	②⑦	Hexagon head bolt M6x20	2	
⑦	Spring lock washer, 8 mm nominal	2	For fall-prevention screws	②⑧	Glass bracket	2	800-0012-031
⑧	Plain washer, 8 mm nominal	2	For fall-prevention screws	②⑨	Hanger bolt (Hexagon flange hanger head bolt M8x35)	2	HFB8-35
⑨	Gear rack	1		②⑩	Serrated flange lock nut M8	2	FNS8
⑩	Truss head screw M4x8	2	Optional for soft open. To be installed after hanging the door.	③①	Bottom guide	1	57-3030-071
⑪	Plate nut	2			③②	Rail cover (L=2350 mm)	1
⑫	Spring	1		③③	Side cover	2	
⑬	Truss head screw M4x8	2		③④	Mounting rail (for railcover) (L=2350 mm)	1	
⑭	Plate nut	2		③⑤	Pan head tapping screw 4x12	6	
⑮	Stopper roller	1		③⑥	Door stopper (Side mount)		162-811 [Optional parts] Be sure to use this together with ⑰.
⑯	Pan head screw with captive washer M5x8	2		③⑦	Bracket cover	1 - 2	57-3039-250
⑰	Door stopper	2		③⑧	End cap set	1 set	20773 [Optional parts] 57-3061-071
⑱	Pan head tapping screw 5x16	4	For door stopper fastening and reinforcement				
⑲	Stopper plate	2					
⑳	Pan head screw with captive washer M5x8	2					

INSTALLATION DRAWING (EXAMPLE)

This drawing shows a right opening setup.

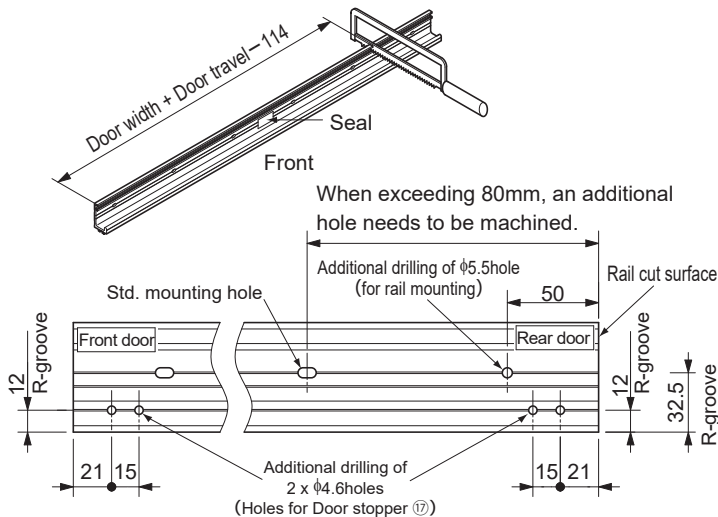


INSTALLATION PROCEDURE

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

1 Installation of Rail and Cover

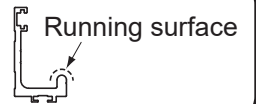
[1] Cutting and Drilling the Rail



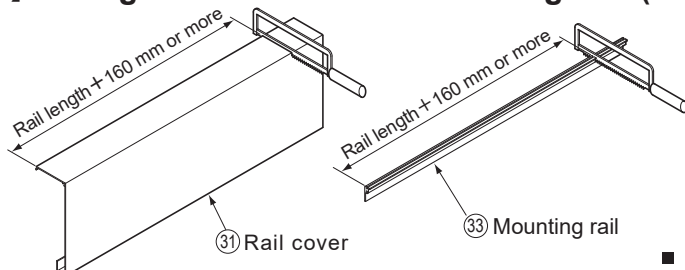
- Cut the rail to the required length shown in the left drawing.
- Cut in the direction indicated on the seal.
 - Right opening : cut the right side when viewed from the front.
 - Left opening : cut the left side when viewed from the front.
- When the distance from the cut end to the existing hole on the rail is 80 mm or more, drill another mounting hole (φ5.5) at 50 mm from the cut end.
- Drill the holes (φ4.6) for the stopper, 50 mm from both ends as shown in the drawing.

⚠ Caution

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

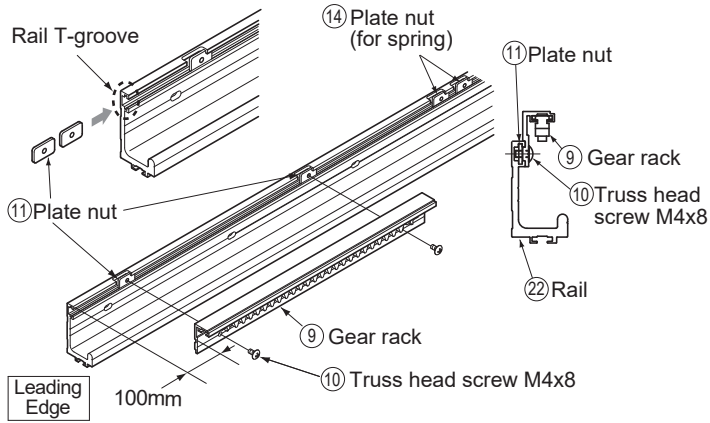


[2] Cutting of Rail Cover and Mounting Rail (If needed)



- Cut rail cover and the mounting rail as shown in the left drawing.

[3] Mounting of Gear Rack

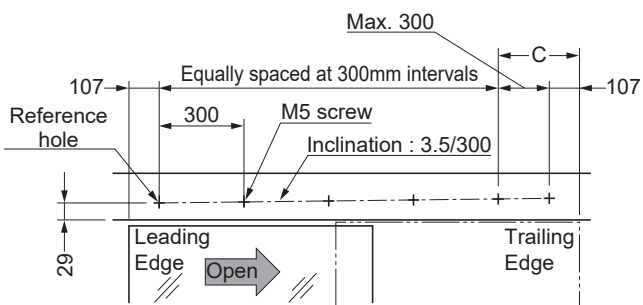


- Insert 4 plate nuts in the T-groove on rail.
- Mount the gear rack on rail, with provided screws ⑩ as shown.
- Install additional dampers on the trailing edge side for damping against opening force.

⚠ Caution

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

[4] Preparation of Mounting Holes on Rail



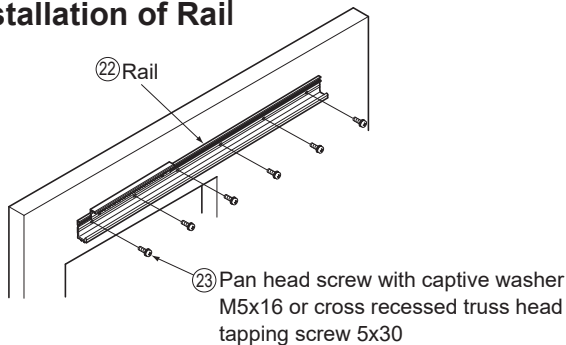
⚠ Caution

- ❗ Make sure to mount to a structure that can endure the door weight and impact shocks upon opening/closing the door.

- Prepare holes as shown in the left drawing and the table below.
- If measurement C is 137 mm or more, drill another hole at 107 mm from the trailing edge when the door is fully opened.

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

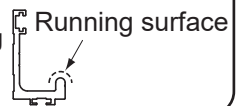
[5] Installation of Rail



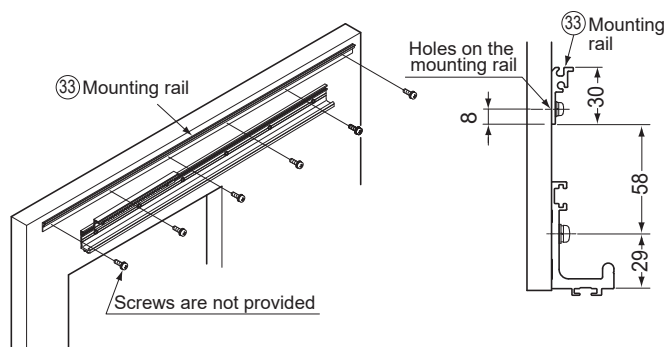
- Mount rail with provided screws ②③

⚠ Caution

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



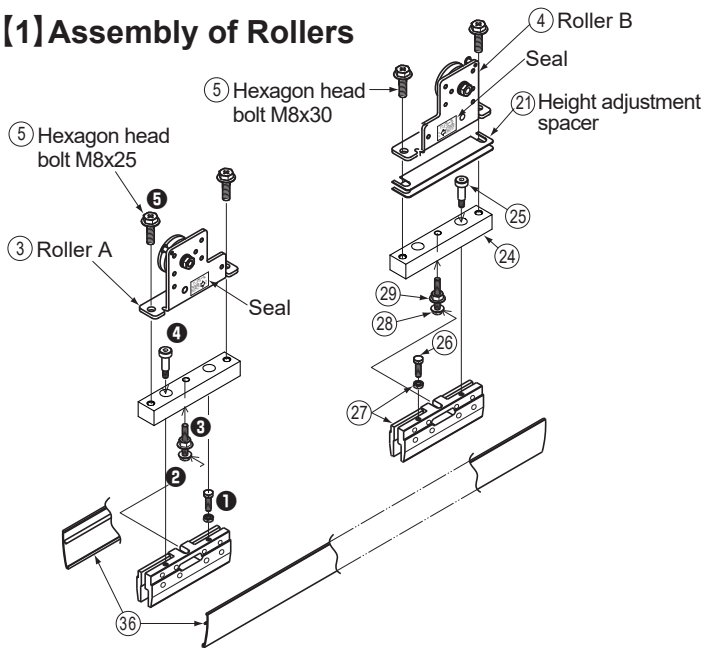
[6] Installation of Mounting Rail for Rail Cover (If needed)



- Drill holes on the mounting rail, and fix the rail as shown in the left drawing.

2 Installation of Rollers

[1] Assembly of Rollers



● In order to attach roller A and B properly, first make sure that the seal on their hangers is facing forwards, then follow the instructions in the left figure for both left and right opening.

● Assemble the parts in order of ① to ⑤.

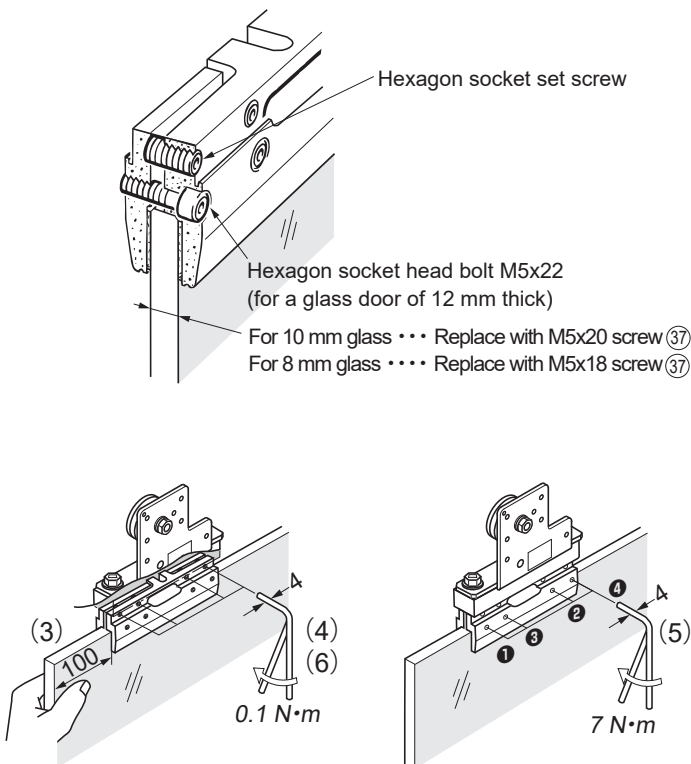
● The number of height adjustment spacers varies according to the door width.

Height adjustment spacers

(For left opening, insert the plates under Roller A.)

Door Width (mm)	Spacers
700 - 800 or less	6
800 - 900 or less	7
900 - 1000 or less	8
1000 - 1100 or less	9
1100 - 1200 or less	10

[2] Installation of Rollers



(1) Glass brackets are assembled with the screws for a glass door of 12 mm thick.

When using a 10 mm or 8 mm thick glass door, replace the 4 screws on the lower part of the bracket according to the instructions in the left figure.

(2) Clean the clamping surfaces on both the glass door and the glass brackets with a clean dry cloth.

(3) Mount the glass brackets 100 mm from the edge of the glass door.

Clamp the glass door with the glass bracket firmly so that no gap is left between the glass door and the glass bracket.

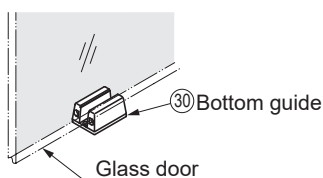
(4) Turn the upper 4 screws until they touch the surface of the other half of the glass bracket.

Do not tighten the screws at this stage.

(5) Tighten the lower 4 screws with 7 to 8 N·m of torque in order of ① to ④ as shown in the left drawing.

(6) Tighten the upper 4 screws in the same manner as step (5).

3 Installation of Bottom Guide

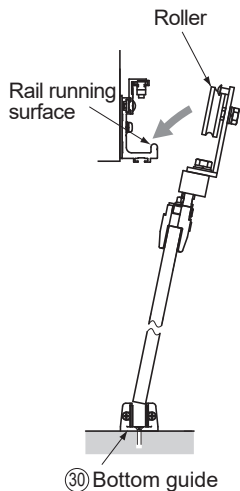


● Install on the “remaining length” of the door.
(Ref. “Installation Drawing” on page 3.)

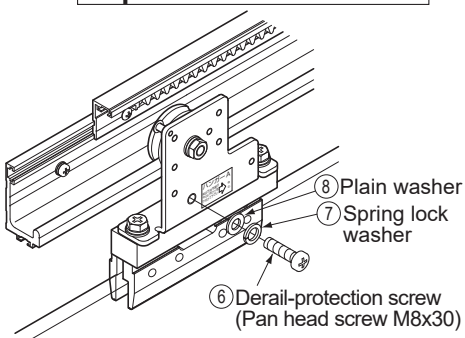
● The bottom guide must be installed so that the door is upright.

4 Door Hanging

Door Hanging



Mounting of Derail-protection screw



Caution

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

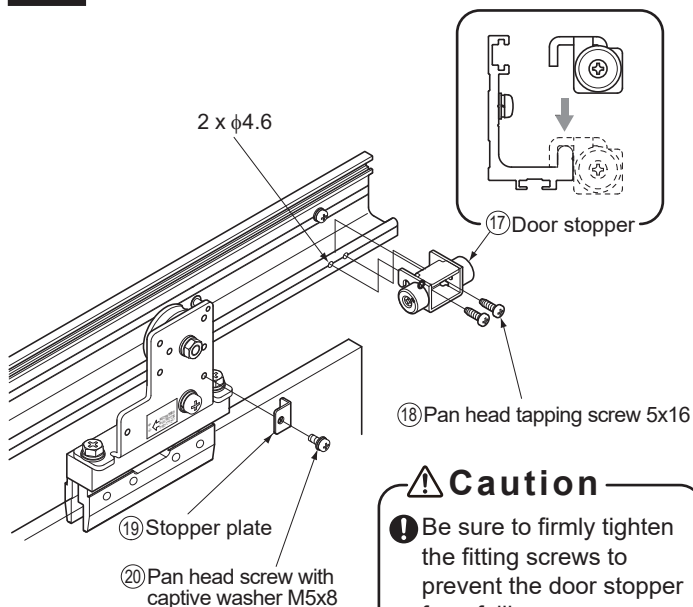
- Before hanging door, wipe off the dirt on the running surface of rail.
- While inserting the bottom of the door into bottom guide, hang the rollers on the running surface of the rail.
- Adjust the height of the door with the height adjustment spacers.

Caution

- Be careful not to damage the gear rack or running surface of the rail when hanging the door.
- Do not assemble the damper before hanging the door, as this could lead to the damper being damaged.

- Tighten the derail-protection screws ⑥ (pan head screws M8x30) into the rollers A and B.

5 Installation of Door Stopper



Caution

- Be sure to firmly tighten the fitting screws to prevent the door stopper from falling.

- Mount the stopper plates with the provided screws ⑳ onto the rollers, both the leading and trailing edges.

Insert door stopper on the running surface of the rail. Fit the holes of door stopper to the $\phi 4.6$ holes, which were prepared in advance, then fasten the stopper with the provided screws ⑱.

- As for the position of the stopper, refer to **1**-[1]. Cutting of rail, additional processing of mounting holes

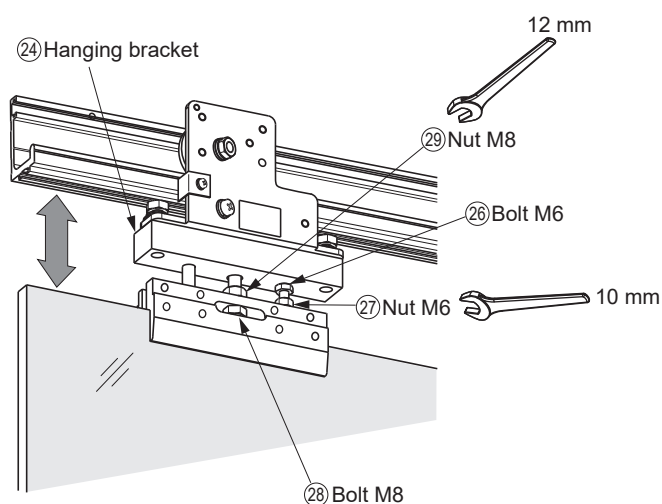
Caution

- Be sure to fasten the door stopper ⑰ and door stopper ⑳ (side mount) [Optional parts] together.



⑳ Door stopper (Side mount) [Optional parts]

6 Adjustment of door height



(1) Loosen nut M8 ⑳, and nut M6 ㉓.

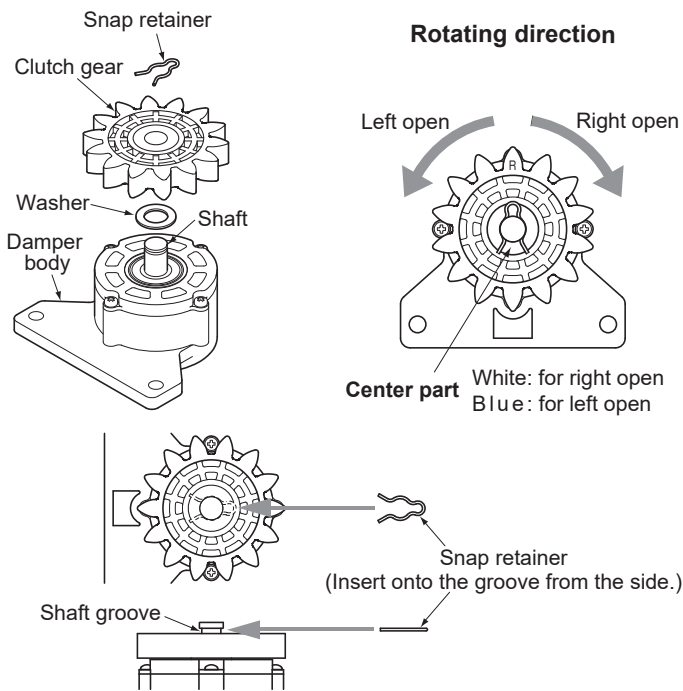
(2) Adjust the height with bolt ㉔.
 • The door goes up when tightening the bolt.
 • Adjust the gap between the door and floor
 - 8 mm at a closed position.
 - 21 mm at a full opened position.

(3) Adjust the height of the other glass bracket so that the door is hanged horizontally, then tighten the nut M8 ㉓ on both brackets.

(4) Turn bolt M6 ㉔ so that the heads go into the holes of the hanging bracket ㉒, then tighten the nut M6 ㉓.

7 Installation of the Damper

[1] Installation and Removal of Clutch Gear



Damper is non-handed.
Right and Left-opening is changed by the rotation direction of clutch gear.

(1) Mounting of Clutch Gear

Insert the clutch gear and washer to the shaft portion of the braking device body.

	Color of the center portion of the clutch gear	
	Braking when closing	Braking when opening 【Optional parts】
Right open	white	blue
Left open	blue	white

- Set snap retainer to the shaft groove from the side.

(2) Removal of Clutch Gear

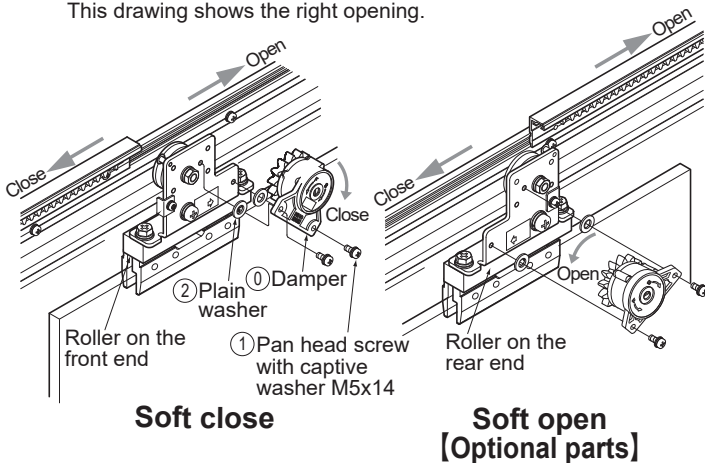
Detach the clutch gear according to the reverse procedure of installation. (Detach it by rotating to the same direction as the time of installation.)

⚠ Caution

- ❗ Detach with rotating in the same direction as when installed. Rotating with too much force or in reverse direction may damage the clutch gear.

[2] Installation of the Damper

This drawing shows the right opening.



- Use provided screws ① to mount damper and plain washers to door end roller.

Braking when closing

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

Braking when opening 【Optional parts】

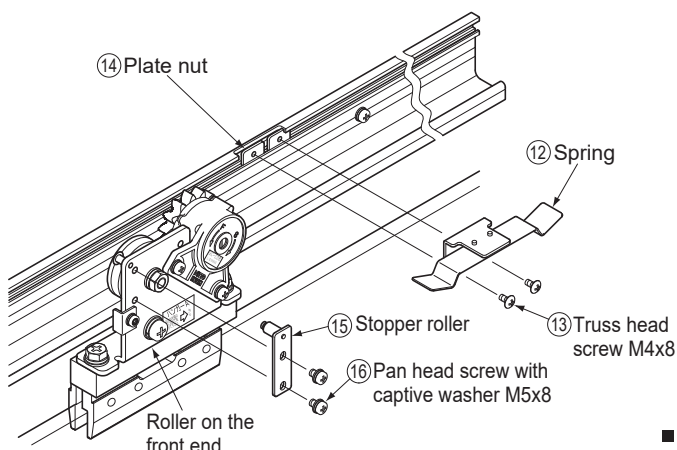
With the door closed, attach the damper in a position that does not touch the rack.

⚠ Caution

- ❗ If the damper is assembled in the reverse direction, the system doesn't work.

8 Installation of Catch at opened position

[1] Installation of Stopper Roller and Spring

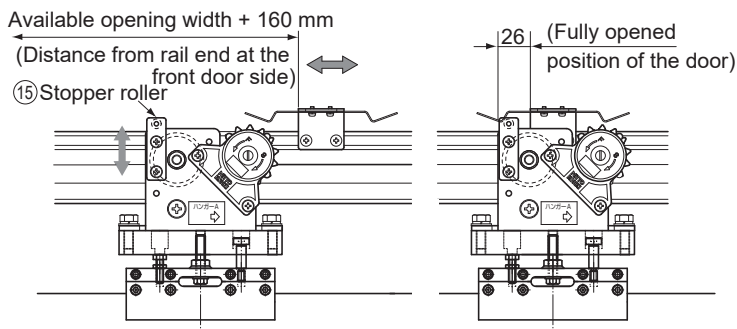


- Mount the stopper roller ⑮ on the roller of front end with the provided screws ⑯.
- Fix spring to the plate nuts with screw ⑬.

⚠ Caution

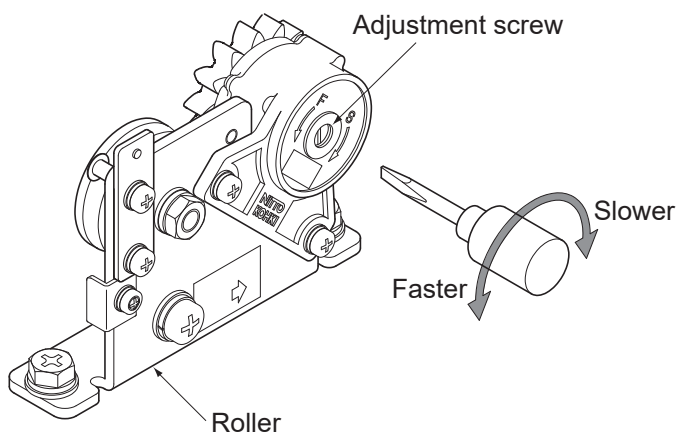
- ❗ Be sure to use the provided screws to avoid interference with other parts.

[2] Adjustment of Catch Position and Catching Force



- Adjust the position of the spring so that the door stops at the fully opened position. Determine the position by marking on the rail according to the measurement in the illustration.
- Adjust the catching force by moving the position of the stopper roller.
 - To increase the catching force → raise the stopper roller.
 - To reduce the catching force → lower the stopper roller.

9 Adjustment of Closing (Opening) 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.

● Adjustment of closing speed:

Let the door close automatically from a fully open position.

To make the closing speed slower

→ Turn the adjustment screw to right as shown in the left drawing.

To make the closing speed faster

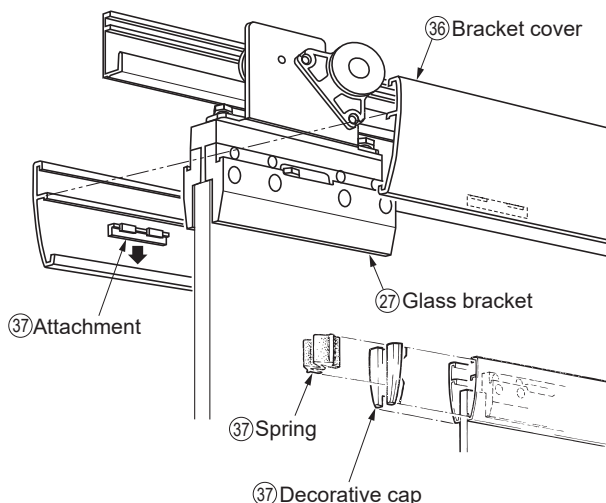
(Factory setting speed: the fastest condition)

→ Shorten the control zone (move gear rack ⑨ toward the leading edge).

● Adjustment of Opening Speed [Optional parts]

Same as above.

10 Installation of Bracket cover



(1) Cut the bracket cover to the required length.

- Door width - 8 mm : Full coverage
- 150 mm or more : Cover the bracket only

(2) Hook Attachment (included in end cap set ㉑) as shown in the left drawing, where the bracket cover fits the center of the glass bracket.

(3) Hook the tab of the attachment on the glass bracket, then fit the tab to the glass bracket.

(4) Insert decorative cap (included in the end cap set ㉑) to the ends of the bracket cover.

(5) Combine the decorative cap with the spring. The spring included in the end cap set ㉑.

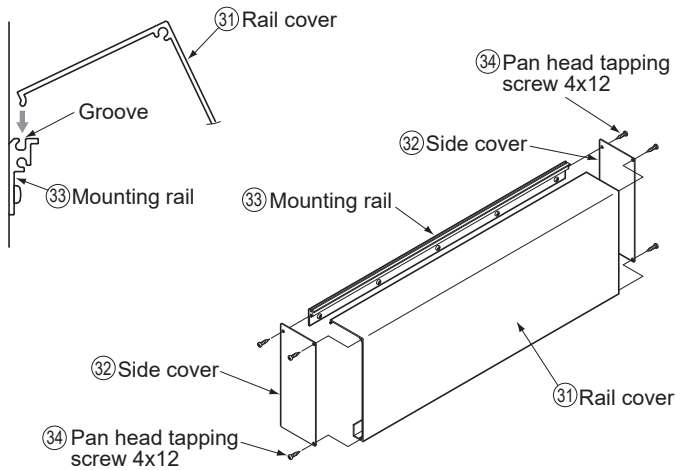
CHECKPOINTS

- All of the screws and nuts are securely tightened.
- The Bottom guide is properly installed on the "remaining length" of the door.
- The door is hung horizontally.
- The gap between the door and the floor at the closed position is correct.
- There is no dust on the rail and the rollers.
- The door moves smoothly without any trouble.
- Damper works to close the door slowly.
- The door does not hit the doorframe.

TROUBLESHOOTING

	Trouble	Possible Cause	Checkpoints	Solution	Page
1	Door does not fully close.	Roller is tilted	Is there a gap between the upper surface of Bolt M6 (26) and the hanging bracket (24)?	Adjust the position to the extent that the top surface of the bolt M6 (26) is tightened lightly on the hanging bracket (24).	P.6 6
2	Door does not fully close. The closing speed is slow.	A screw is loose.	Is Bolt M8 (28) or the nut M8 (29) loose?	Tighten bolt M8 (28) and the nut M8 (29).	—
3	The closing speed is slow / fast.	Adjustment of damper	Is the closing speed of the damper adjusted?	Adjust the closing speed by turning the adjustment screw of damper.	P.8 9
		Door weight	Is the door weight (including the assembled parts) within the Maximum door weight?	Please use a door with a weight of 30 - 80 kg.	P.1 Specifications
4	Door is tilted.	The number of height adjustment spacers in use.	Is Height adjustment spacer arranged according to the number on page 5?	Adjust the number of Height adjustment spacers.	P.5 2
5	Door touches the floor.	Height adjustment of the door.	Is the door installed with the specified gap (in a closed state 8 mm) between the floor and the underside of the door?	In a closed state, adjust the height of the door so that the gap between the floor and the bottom of the door is the specified dimension (8 mm).	P.3 Installation Drawing, P.6 6
6	Door moves out of Bottom guide.	Height adjustment of the door.	In a fully opened state, is there a gap of max. 21 mm between the floor and the underside of the door ?	Please adjust the height of the door.	P.3 Installation Drawing, P.6 6
		Distance between door side and bottom guide.	Is there a distance of Min. 100 mm between the door and bottom guide?	Make sure there is a distance of Min. 100 mm between the door side and bottom guide.	P.5 3
7	Door hits the doorframe.	Clamping position of the door.	Is the door clamped at the specified position?	Re-clamp the door at the specified position.	P.5 2

11 Installation of Rail Cover (If needed)

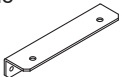

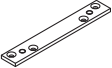










⚠ Caution

- ❗ Allow at least 60 mm of space on the top side of the mounting rail for mounting the rail cover by using the provided screws to prevent the cover from falling.
- ❗ Rail cover must be installed with the side cover. Improper installation may cause the door to fall, and serious damage or injury.

- Hook the edge of the rail cover onto the groove of the mounting rail.
- Fasten the side cover with the provided screws (34).

PARTS UNNECESSARY FOR THIS APPLICATION

Hanger angle  2 pcs	Hexagon socket countersunk head cap screw M5x12  8 pcs	Roller bracket  2 pcs	Countersunk head tapping screw 5x30  8 pcs
Bottom roller guide (φ16)  2 pcs	Hexagon flange head tapping screw 5x25  4 pcs	Hexagon head bolt with captive washer M5x12  4 pcs	Anchor 6x30  4 pcs
Mounting plate  2 pcs	Plastic cap  1 set	Plastic bolt  2 pcs	

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: +1 312 461 1081 E-mail:chicagoshowroom@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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