

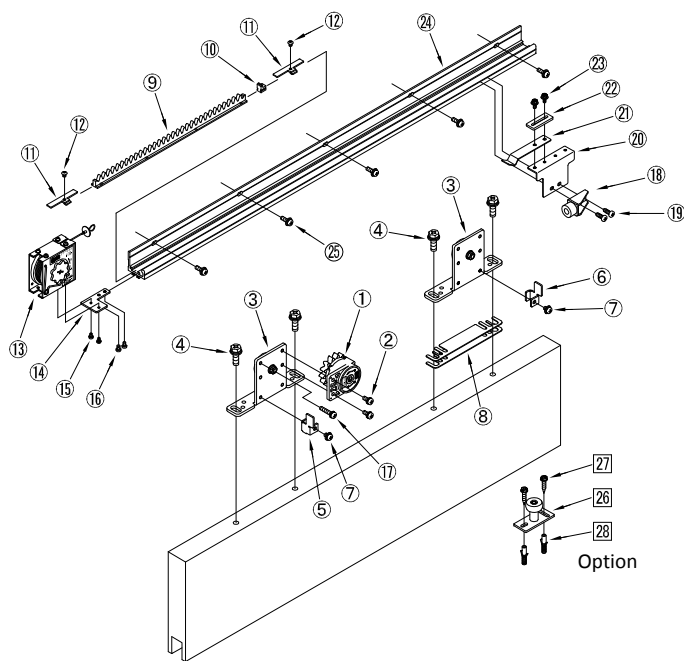
### Safety Precautions

Thank you for purchasing our product. Before using the product, please read this instruction manual carefully and abide by safety precautions. After reading, keep it on hand for quick reference.

#### 《Safety Precautions》

- Do not use the product for unspecified door dimensions or door weight.
  - If the 'Control Device' of the sliding door closer becomes ineffective, the door could close vigorously with possible risk of injury. Should there be any oil leakage, component damage or ineffective control could occur, despite speed adjustment. Replace the control promptly.
  - Guarantee and performance of the product cannot be upheld should the product be disassembled or remodeled in anyway.
  - Securely tighten the screws that mount the product. Failure to observe these precautions may cause product damage or accident.
  - Be sure to install the Door Retaining Fitting (part 5 below). Failure to observe this instruction may dismount the door with possible risk of injury.
  - Do not open the door strongly; Failure to observe this precaution may cause product damage or accident.
  - Be sure to install the door stopper on the door back end.
  - Do not drop or strike any of the components. Failure to follow this precaution may cause a breakdowns.
  - The closer incorporated in the product causes the door to close on its own. Therefore do not close the door with a strong force. Any such actions may cause the door to close vigorously, resulting in an unexpected accident or defect.
  - Take care not to let a child play with or bang the door.
- 《Precautions to be taken to ensure a long service life》
- Wipe off dust and dirt from the rail and door rollers.
  - Conduct periodic checks for lose screws and other anomalies.

### Parts details (The product can be converted between the right- and left-handed opening types. This drawing shown represent a right-handed opening type.)



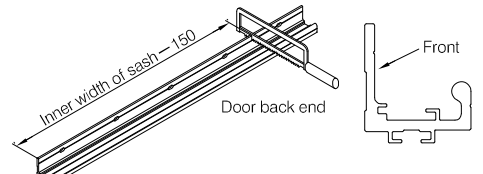
No.	Parts name	Quantity	Remarks
①	Control device	1	
②	Pan head screw M5X12	2	
③	Hanger	2	
④	Cross recessed hexagon head screw M8X25	4	
⑤	Door retaining fitting L	1	
⑥	Door retaining fitting R	1	
⑦	Pan head screw M5X8	2	
⑧	Height adjusting plate (t=1.0mm)	4	
⑨	Control rack	1	
⑩	Noise suppression rubber	1	
⑪	Control rack fitting	2	
⑫	Hexagon socket button head screw M4X5	2	
⑬	Pull spring	1	
⑭	Pull spring bracket	1	
⑮	Pan head screw M3X8	2	
⑯	Pan head screw M4X5	2	
⑰	Pan head screw M5X25	1	Pull spring wire bracket
⑱	Door stopper	1	
⑲	Pan head drill screw 5X16	2	
⑳	Plate spring bracket	1	
㉑	Plate spring	1	
㉒	Stop force adjusting plate	1	
㉓	Cross recessed hexagon head screw M4X10	2	
㉔	Rail L=2200[L=3100]	1	
㉕	Pan head screw M5X16	8[11]	
㉖	Guide roller	1	
㉗	Hexagon head tapping screw 5X25	2	Option Wood, For fisher plug
㉘	Hexagon head screw M5X12	2	Option For steel
㉙	Fisher plug 6X30	2	Option Concrete, for mortar

### Installation (These drawing shown represent a right-handed opening type. The left-hand opening type is a symmetrical with the type represented in these drawing.)

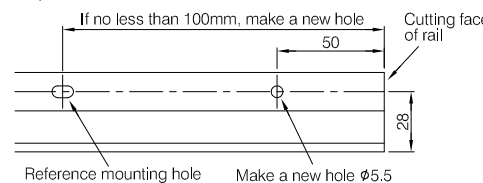
#### 1 Installing a rail

##### ① Cutting the rail, making a mounting hole

- Cut the rail to the inner width of the sash less 150mm.
- Cut off the door end according to the instructions.
- For the right hand opening type, cut off the right end as viewed from the front.
- For the left hand opening type, cut off the left end as viewed from the front.



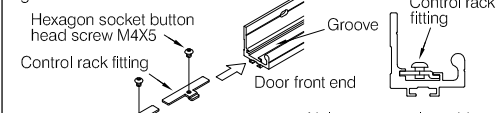
- If the distance between the cutting face of the rail and the reference mounting hole is no less than 100mm, make a new hole at the position 50mm from the rail end.



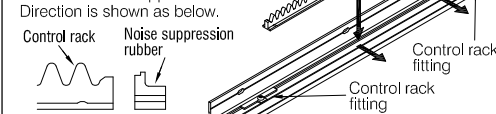
- When making any change in the rail, take care not to scratch the runway.

##### ② Installing a control rack

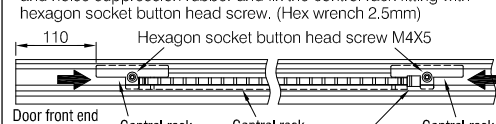
- Temporary tightening the control rack fitting with hexagon socket button head screw M4X5. Insert two sets of rack fittings in the groove of the rail.



- Insert the control rack and noise suppression rubber into the rail groove and attach it front location in the rail.
- Attached noise suppression rubber. Direction is shown as below.



- Slide the control rack fitting on the rail, sandwiching the control rack and noise suppression rubber and fix the control rack fitting with hexagon socket button head screw. (Hex wrench 2.5mm)



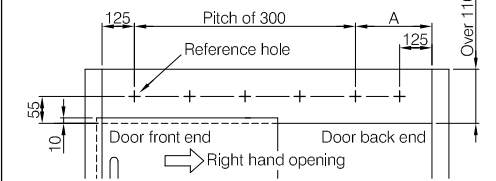
- Be sure to tighten the screw correctly. To avoid an unusual sound and unusual control speed.
- Be sure to fix the control rack and noise suppression rubber without rattling. Failure to make an unusual sound.

##### ③ Setting rail mounting holes

- Tap holes (M5 pitch 0.8) horizontally at intervals of 300 with the hole specified below, as the reference hole.

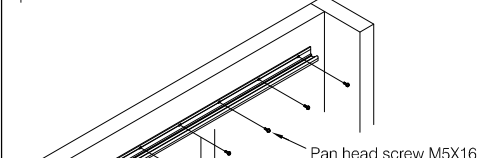
- Dimension from the inside of the sash on the door front end = 125mm
- Dimension from the bottom of the top frame of the sash = 55mm
- (When the cover between the top frame and door is 10mm)

- If the dimension A in the drawing below (The dimension from the final hole at a pitch of 300 to the inside of the sash on the door back end) is no less than 175mm, tap a hole at 125mm from the inside of the sash.



##### ④ Installing the rail

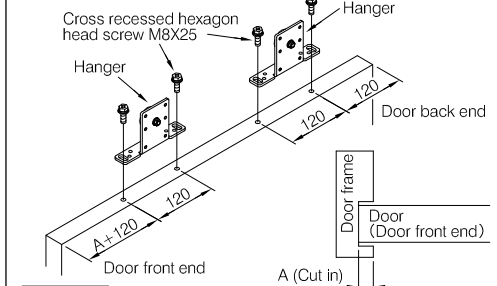
- Install the rail with screw (Pan head screw M5X16) furnished with product.



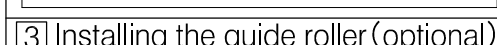
- When installing a rail, take care not to scratch the runway.

#### 2 Installing the hanger

- As shown in the drawing, install the hanger.
- The hanger is interchangeable with right and left, door front and door end.

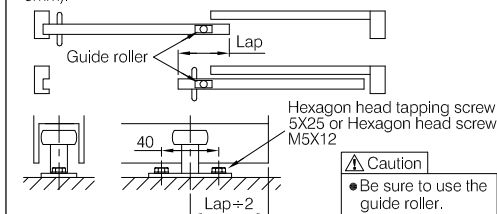


- Install the hanger on the centerline of the door.



#### 3 Installing the guide roller (optional)

- Install the guide roller in the middle of the door lap.
- Install the guide roller so that the door becomes vertical with the floor.
- If floor is concrete or mortar, use the fisher plug (prepared hole 6mm).

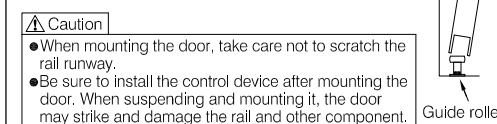


- Be sure to use the guide roller.

#### 4 Mounting the door

##### ① Mounting the door

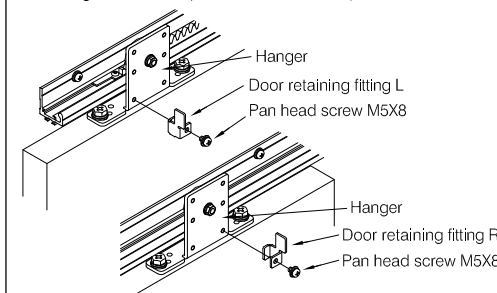
- Before mounting the door, wipe off the dirt from the rail runway.
- Match the door bottom to the guide roller, then suspend the door rollers and mount them onto the rail runway.
- Check that the door operates smoothly.
- Adjust the clearance between the door and jamb by varying the number of height adjusting plates used.



- When mounting the door, take care not to scratch the rail runway.
- Be sure to install the control device after mounting the door. When suspending and mounting it, the door may strike and damage the rail and other component.

##### ② Installing the door retaining fitting

- Install the door retaining fitting in the door front hanger and door end hanger with screw (Pan head screw M5X8).

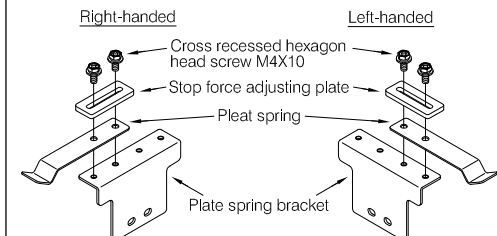


- Be sure to install the door retaining fitting, the door may come off.

#### 5 Installing door stopper and stop device

##### ① Assembly the stop device

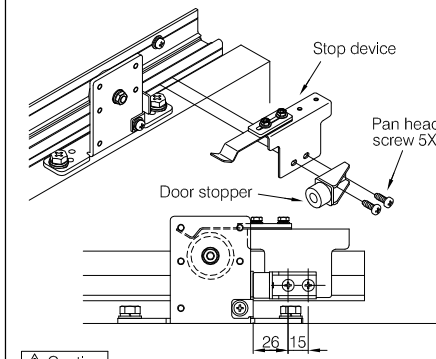
- Assembly the stop device, below the drawing.



- Check the orientation of the control device (right- or left-handed). Be sure to orient it correctly, or the control will not work.
- Be sure to install the control device after mounting the door. When suspending and mounting it, the door may strike and damage the rail or other component.

#### 2 Installing door stopper and stop device

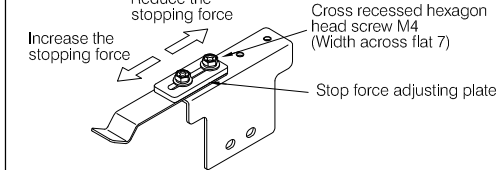
- Install the door stopper at the door stop position with screw (Pan head drill screw 5X16).
- Tighten screw together with stop device and door stopper.



- Be sure to tighten screw, door stopper may come out of place.
- In case of the door open strongly, install the door stopper in center of the door.

##### ③ Adjusting the stopping force

- Adjusting position of the stop force adjusting plate with the hexagon screw.

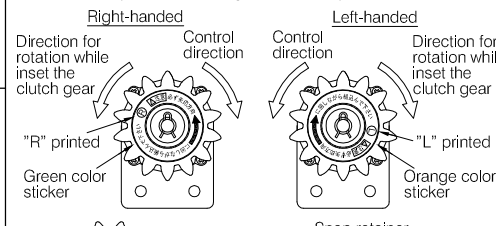


#### 6 Installing the control device

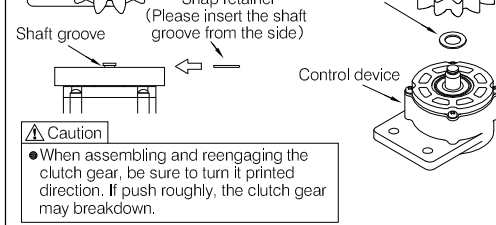
The control device is interchangeable with right hand operation and left hand operation. The orientation of the clutch gear determines whether it is right or left hand.

##### ① Procedure for clutch gear

- Insert the washer into the shaft of the control devices.
- Insert the clutch gear follow the below instructions.
- (If right-handed opening) Make the green color sticker (R printed) face upwards, and then insert it while turning (follow the printed direction on the sticker) it.
- (If left-handed opening) Make the orange color sticker (L printed) face upwards, and then insert it while turning (follow the printed direction on the sticker) it.
- Be sure to confirm the direction of clutch gear correctly, or control device will not work. Refer to control direction is below the drawing.
- Install the snap retainer in the groove at the tip of the shaft.

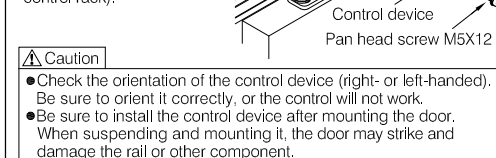


- When assembling and reengaging the clutch gear, be sure to turn it printed direction. If push roughly, the clutch gear may breakdown.



##### ② Installing the control device

- Install the control device on the hanger on the door front end with screws (Pan head screw M5X12) furnished with the product.
- Install it with the door open by at least 60cm (where it does not engage with the control rack).

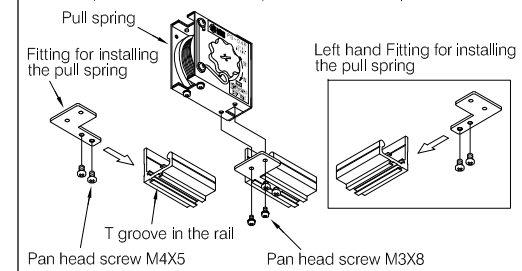


- Turn the speed adjusting screw lightly. Otherwise an imperfect control may result. After turning it all the way home, do not turn it with overstrain.
- A change in the ambient temperature varies the closing speed somewhat. As the temperature rises, the speed increases. As the temperature declines, the speed decreases.

#### 7 Installing a pull spring

##### ① Installing a pull spring

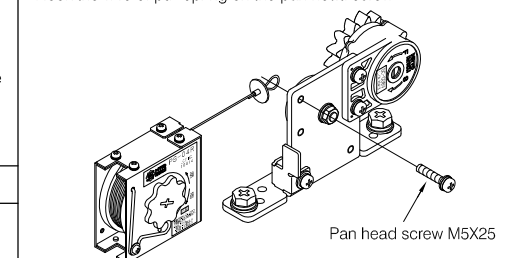
- Temporarily tighten the screws (Pan head screws M4X5) furnished with the product, on the fittings for installing the pull spring. Then insert them into the T groove in the bottom of the rail.
- Tighten the screws to fix the fittings.
- Install the pull spring on the fittings for installing the pull spring, with screws (Pan head screws M3X8) furnished with the product.



- Do not draw the wire with the pull spring alone (before the installation). Any such practice might scratch the wire.

##### ② Setting the wire

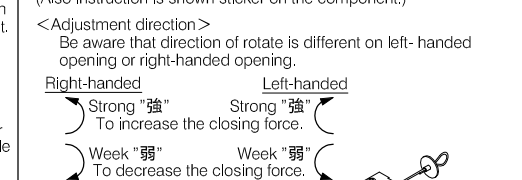
- Attach the pan head screw (M5 X 25) on door front end hanger. Hook the wire of pull spring on the pan head screw.



#### 8 Adjusting the closing force and closing speed

##### ① Adjusting the closing force

- If the closing force needs adjustment, turn the gear shaft with a screwdriver for adjustment.
- Be sure to make an adjustment as following instruction. (Also instruction is shown sticker on the component.)



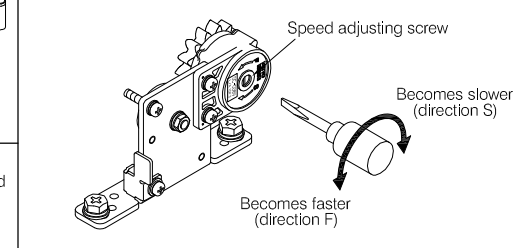
- Adjustment range > Be sure to adjustment within the limits of following instructions.

Model	PS-04
Strong	5 turn from factory setting
Week	3 turn from factory setting

- Over winding it in the direction of "strong" will cause a breakdown. Be sure to set it to a value not exceeding the number of windings indicated on the sticker on the component.

##### ② Adjusting the closing speed

- Turn the speed adjusting screw of the control device with a screwdriver to adjust the closing speed.



- If faster closing speed is required, move the control rack to door front end side and readjust a control speed.

- Turn the speed adjusting screw lightly. Otherwise an imperfect control may result. After turning it all the way home, do not turn it with overstrain.
- A change in the ambient temperature varies the closing speed somewhat. As the temperature rises, the speed increases. As the temperature declines, the speed decreases.

Installation is completely.