

# LAMP® FD30/50 HRP SLIDING DOOR SYSTEM

## Installation Manual(Multiple Synchronized Sliding Door)

Part No.FD30HRP-2

FD30HRP-3

FD50HRP-2

FD50HRP-3

Thank you very much for selecting FD30/50 HRP SLIDING DOOR SYSTEM. Before starting installation, please read this installation manual thoroughly to install the door correctly. Improper installation may result in injury. To prevent such accident, please follow instructions described in this manual. After installing the door, leave this manual to the owner so that the owner is able to use this manual to check the door any time. The door system may be upgraded/improved without announcement, for change in dimensions or specifications, please confirm with delivered door system parts.

### ■ FOR YOUR SAFETY WORK AND OPERATION

⚠ symbol denotes "warning" and "caution" during work or operation. ⊘ symbol denotes the item which should be avoided to keep safety. ⊙ symbol denotes item which should be followed to avoid injury. If this item is not followed, injury may be resulted.

#### ⚠ Warning: If this warning is not followed, it may result in injury or damage.

⚠ This sliding door system should be installed by experienced person who has correct knowledge. If the system is not installed correctly, the door will not operate smoothly, and or may cause injury.

⊘ Do not try to use this product for any other purposes other than originally intended for. Do not disassemble the components for any modifications. Do not use the system for applications that are out of specification. Any improper use might result in accident or injury. We do not take any responsibility for any damage, accident or injury occurring from an improper use, application or wrong installation.

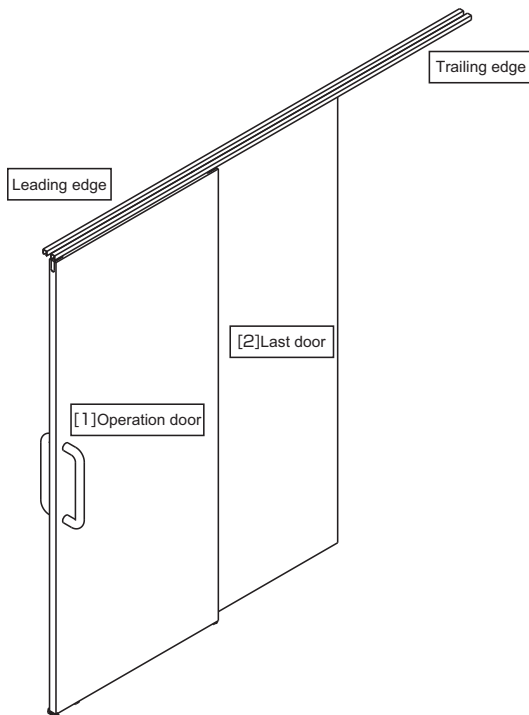
⚠ It is necessary to manufacture the frame with sufficient strength to endure the weight of door and impact shocks upon opening/closing the door. A frame with poor strength might result in improper and slower movement of the door. In the worst case, the door might drop down causing injury.

#### IMPORTANT:

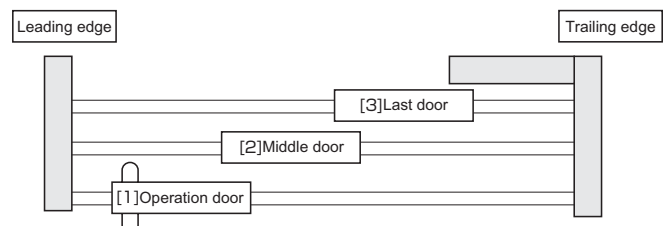
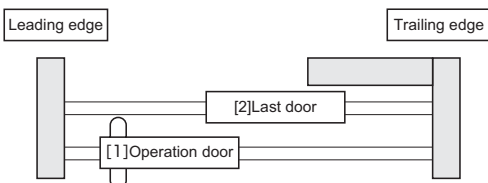
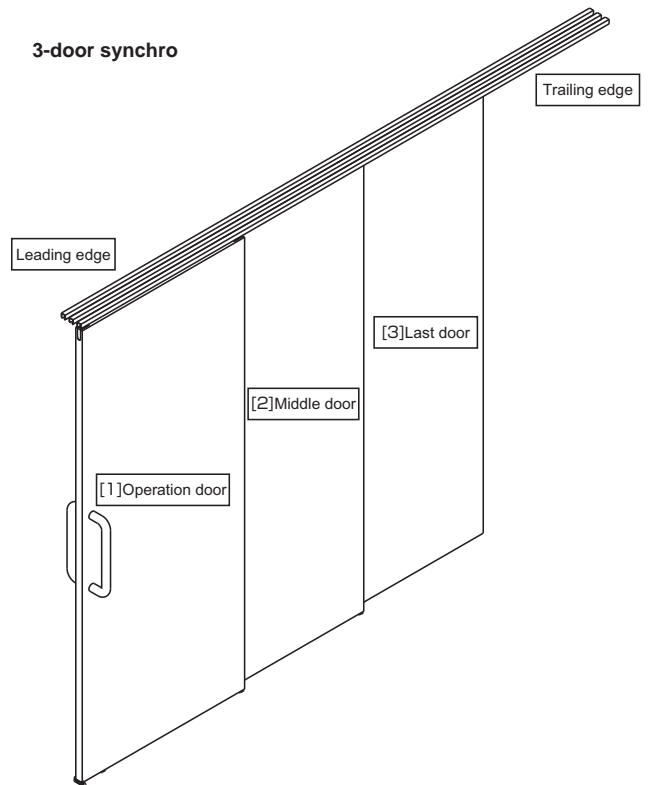
· This manual describes the installation methods considered most safe and effective to set up and install the sliding door system. The installation procedures or methods can be changed to meet your working conditions or environments.

· In this manual, the dimensions are not considering margin of error or deformation of material. Therefore, please carry out each process such as cutting, taking care of deformation or other changes.

2-door synchro



3-door synchro

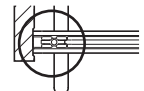


# [FD30-H Synchro Type]

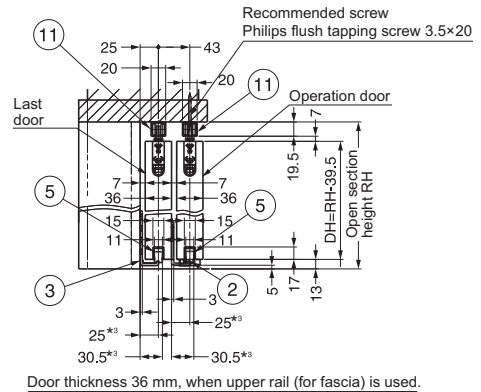
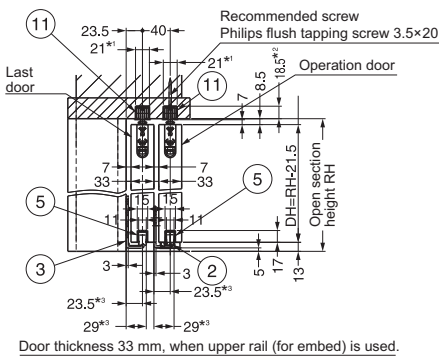
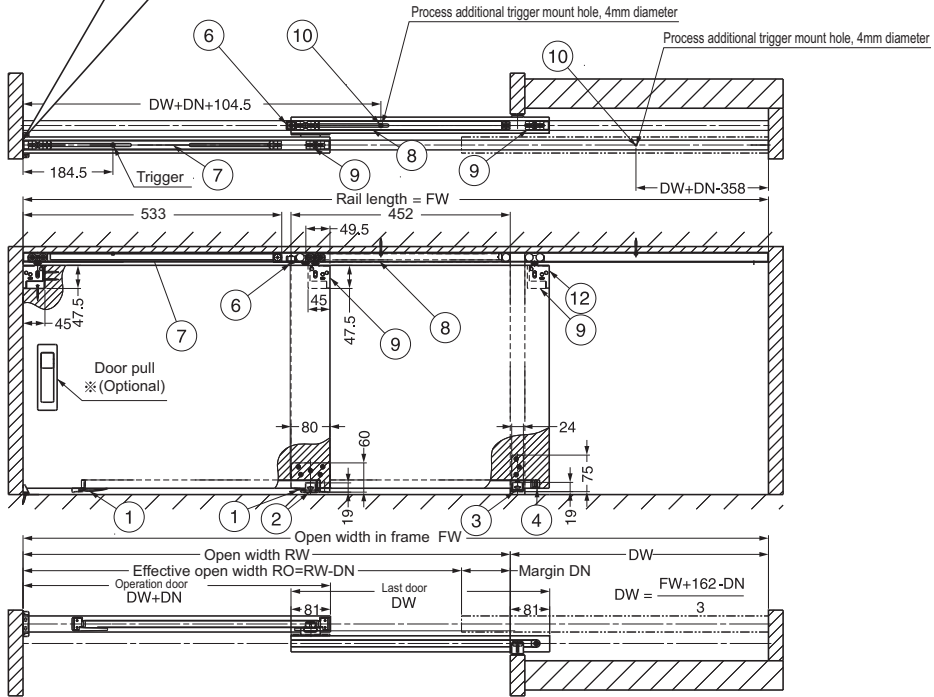
## ■ INSTALLATION DRAWING (EXAMPLE)

### {2-door synchro}

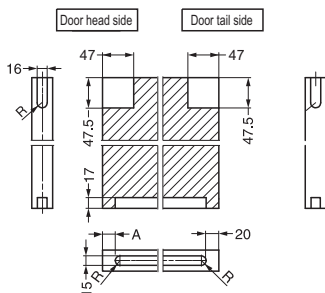
⚠ In order to prevent excessive movement at door top end, provide a space to install steady rest.



- \*1 Recessed router dimension is 21 (reference). When applying cross or the like, add necessary dimension.
- \*2 Dimension is 18.5 +0 -0.5 (reference).
- \*3 Dimension may be adjusted by reassembling the guide block for the lower guide (2) under last door, and for lower guide (3).

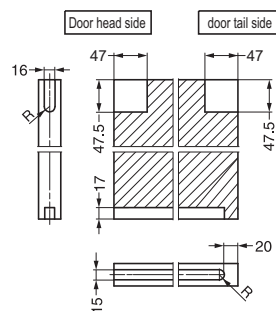


#### ■ Process dimension for operation door and middle door (3-door synchro)



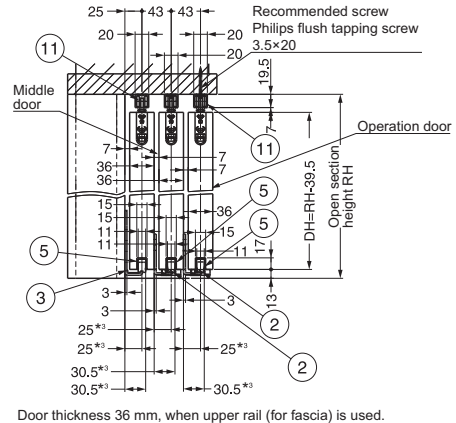
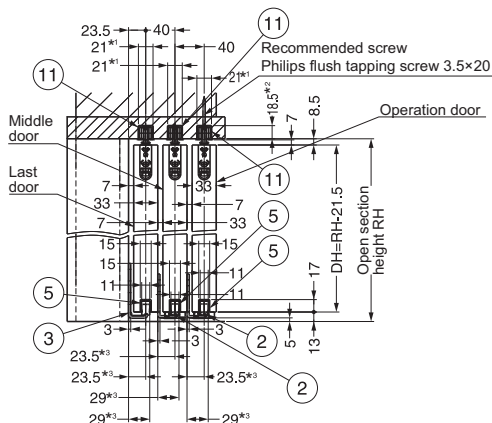
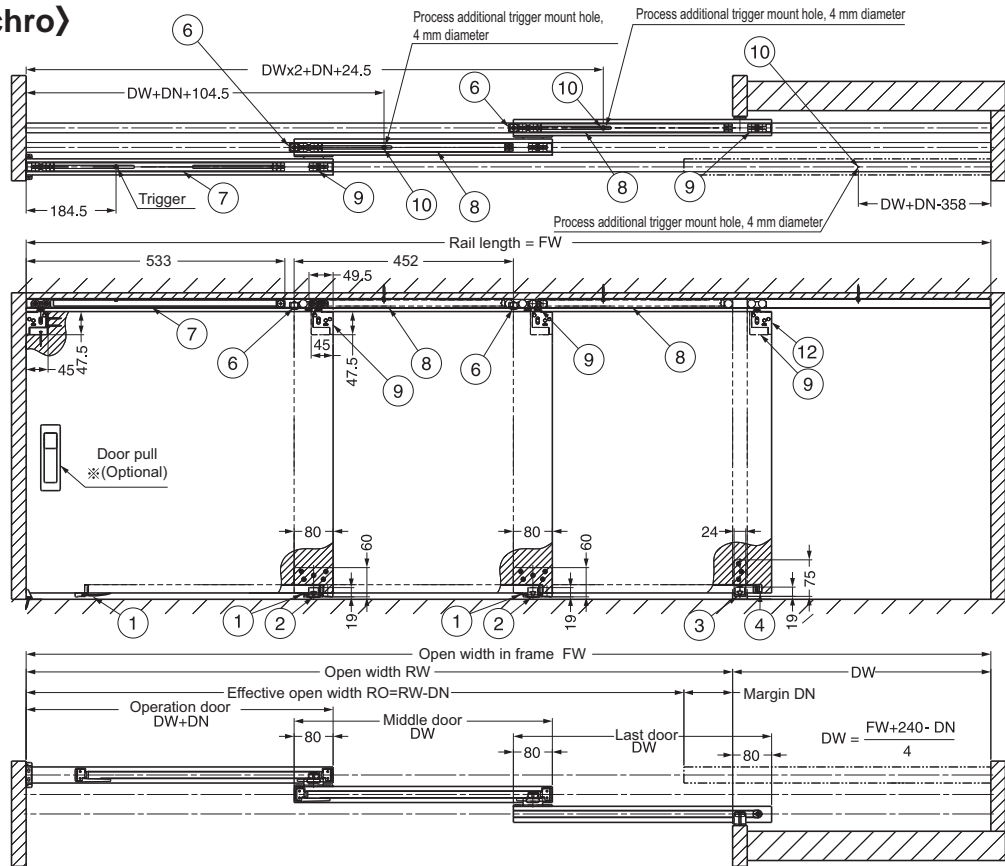
SPECIFICATIONS	A
2-door synchro	Operation door : DN+20
3-door synchro	Operation door : DN+20 Middle door : 20

#### ■ Last door process dimension



The dimension in ( ) denotes dimension when installing face cap on upper roller.

# <3-door synchro>



Door thickness 33 mm, when upper rail (for embed) is used.

## SPECIFICATIONS

	Effective open width(RO)	Door width (DW1)	Middle door width (DWC)	Last door width (DW2)	Max. Door height (DH)	Min. Door thickness (Dt)	Max. Door weight	Vertical adjustment	Right-and-left adjustment
FD30-H 2-door synchro	1020 - 1840 mm(When door is fully closed, with no DN) 940 - 1760 mm(When door is not fully closed, with DN 80 mm)	590 - 1000 mm		510 - 1000 mm	2400 mm	30 - 38 mm	30 kg/door	-3 - +4 mm	±2 mm
FD30-H 3-door synchro	1450 - 2760 mm(When door is fully closed, with no DN) 1370 - 2680 mm(When door is not fully closed, with DN 80 mm)	590 - 1000 mm		510 - 1000 mm					

- The closing speed of the soft closing type door may change due to ambient temperature, operating method or installation quality.
- Recommended ambient temperature range is 5 to 40 degrees centigrade.

## COMPONENT PARTS

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
	for FD30-HRGU End stopper	for FD30-HRDG Door guide (door mount)	FD30-HBGF Door guide (wall mount)	FD30-HRDB Brook for bottom guide	FD30-HBDR1000 Guide track	FD30-HBB bumper block	FD30-WRH-DSC Dual soft closer	FD30H-WRH-SC soft closer	FC30-WRH-N upper roller for dual soft closer	FD30-TRG additional trigger *	FD30 upper rail exclusive for door closer (for fascia or embed type)	Cover cap
FD30 2-door synchro												
	2	1	1	1	2	1	1	1	2	1	2	4
FD30 3-door synchro												
	2x2	2	1	1	3	2	1	2	3	2	3	6

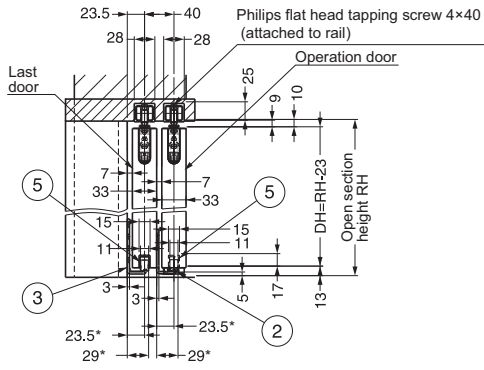
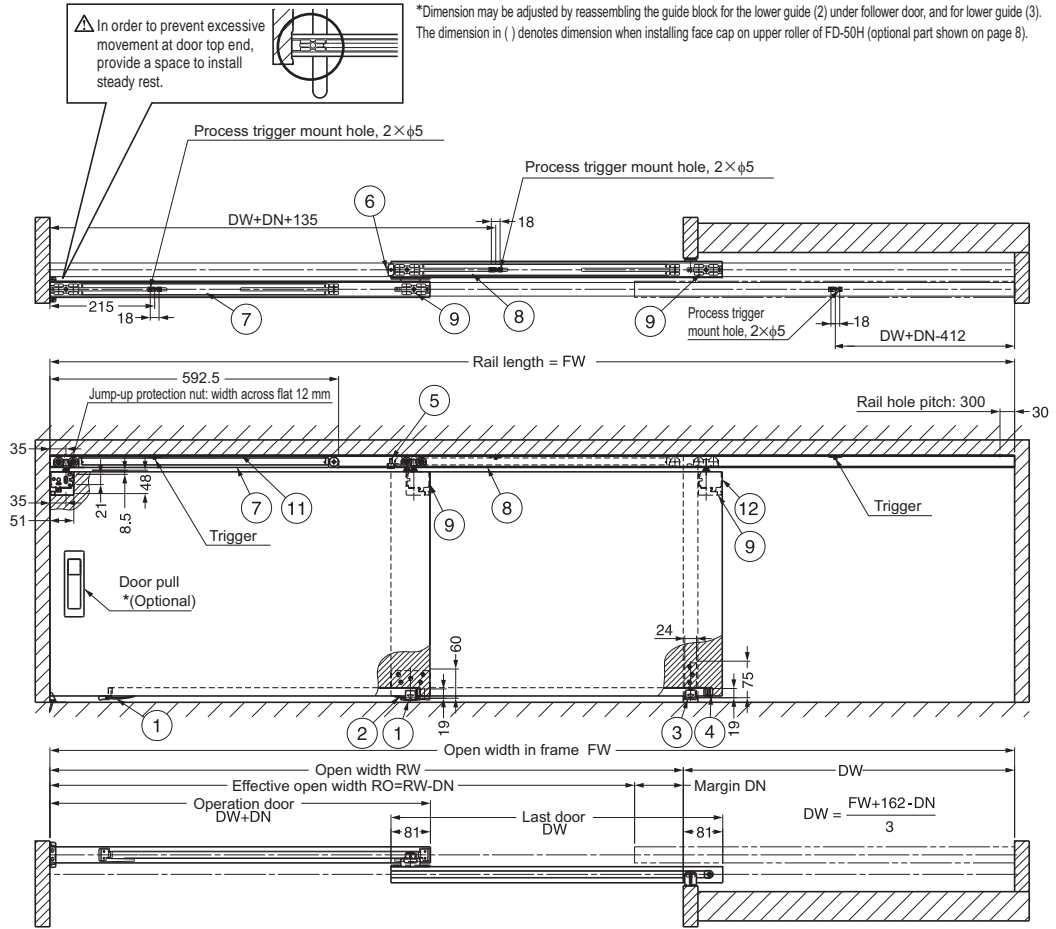
As optional parts are offered. Please refer Page 8 for detail.

\* ⑦ FD30-WRH-DSC includes a set of trigger with mount jig.

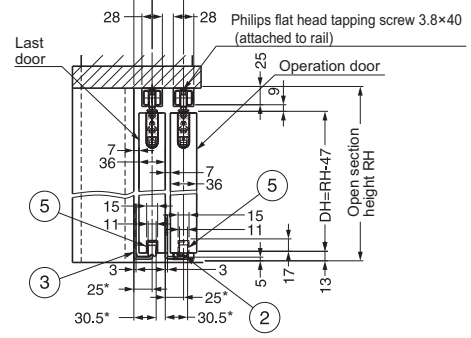
# [FD50-H Synchro Type]

## ■ INSTALLATION DRAWING (EXAMPLE)

### {2-door synchro}

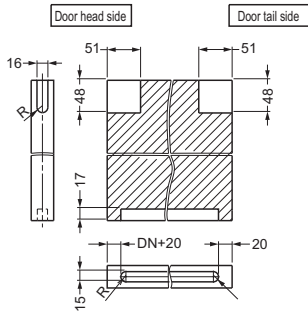


Door thickness 33 mm, when upper rail (for embed) is used.

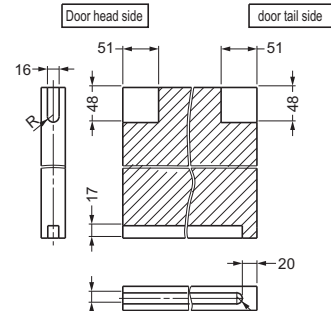


Door thickness 36 mm, when upper rail (for fascia) is used.

#### ■ Process dimension for Operation door and middle door (3-door synchro)

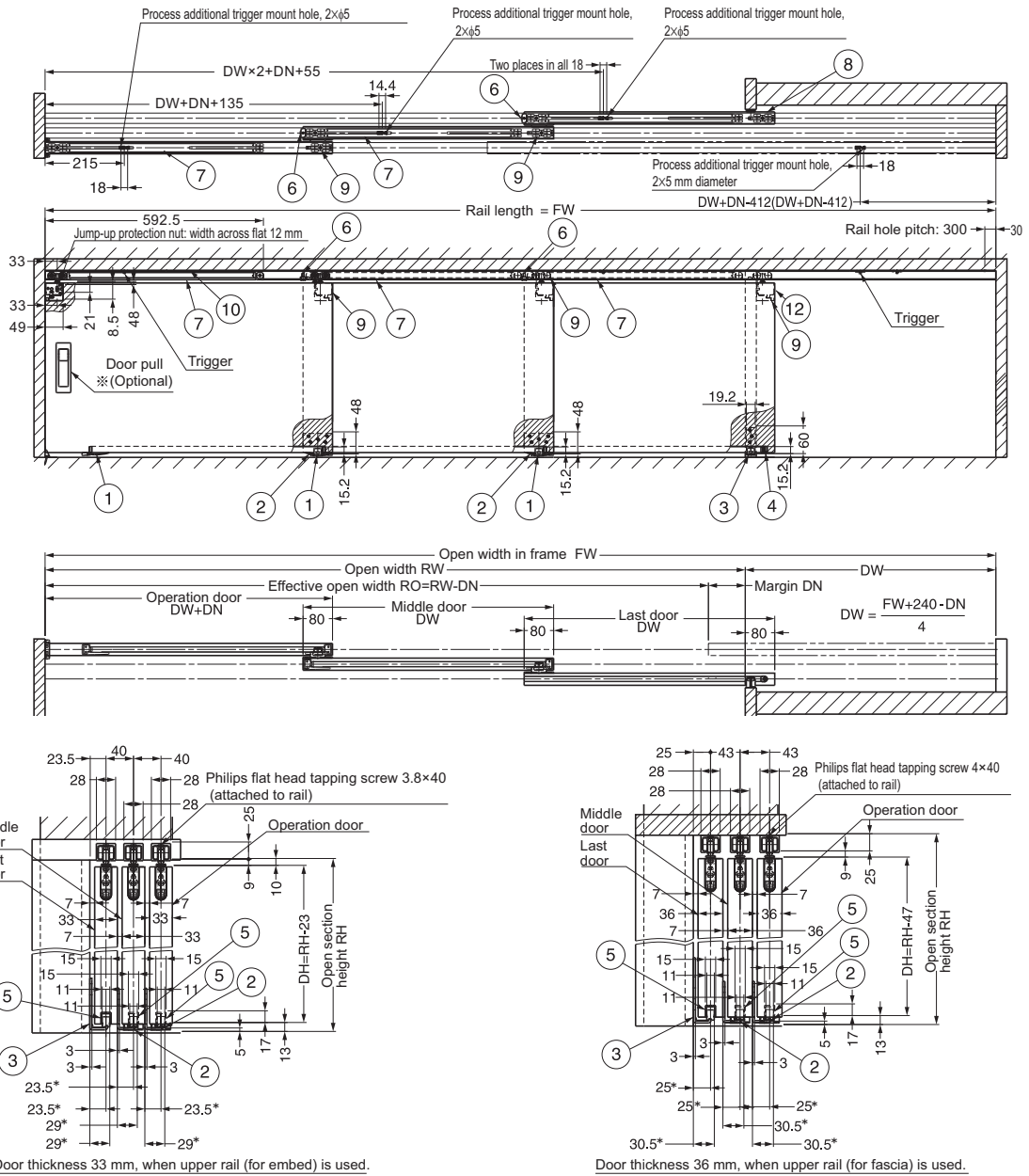


#### ■ Last door process dimension



The dimension in ( ) denotes dimension when installing face cap on upper roller.

## <3-door synchro>



## SPECIFICATIONS

	Effective open width(RO)	Door width (DW1,DWC,DW2)	Max. Door height (DH)	Min. Door thickness (Dt)	Max. Door weight	Vertical adjustment	Right-and-left adjustment
FD50 2-door synchro	1020 - 1840 mm (When door is fully closed, with no DN) 940 - 1760 mm (When door is not fully closed, with DN 80 mm)	680 - 1200 mm	2400 mm	30 - 38 mm	50 kg/door	-3 - +4 mm	±2 mm
FD50 3-door synchro	1450 - 2760 mm (When door is fully closed, with no DN) 1370 - 2680 mm (When door is not fully closed, with DN 80 mm)	680 - 1200 mm					

- The closing speed of the soft closing type door may change due to ambient temperature, operating method or installation quality.
- Recommended ambient temperature range is 5 to 40 degrees centigrade.

## COMPONENT PARTS

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
	for FD30-HRUGU End stopper	for FD30-HRDG Door guide (door mount)	FD30-HBGF Door guide (wall mount)	FD30-HRDB Brook for bottom guide	FD30-HBRT1500SIL Guide track	FD30-HBB stopper block	FD50-WRH-DSC Dual soft closer	FD50H-WRH-SC Dual soft closer	FD50-WRH upper roller	FD50-TRG additional trigger	FD50 TRM upper rail	Cover cap
FD50 2-door synchro	1x2	1	1	1	2	1	1	1	2	3	2	4
FD50 3-door synchro	2x2	2	1	1	3	2	1	2	3	4	3	6

As optional parts are offered. Please refer Page 8 for detail.

# PARTS LIST

As for ⑦ to ⑪, please refer to instruction manual attached to each part.

No.	Name	Dimensional drawing	Specification	No.	Name	Dimensional drawing	Specification
①	End stopper		<ul style="list-style-type: none"> <li>Material Polyacetal(POM)</li> <li>Finish Gray</li> </ul>		<FD30> Guide track		<ul style="list-style-type: none"> <li>Material ABSresin</li> <li>Finish Black</li> </ul>
②	Door guide		<ul style="list-style-type: none"> <li>Material Stainless steel(SUS304)</li> <li>Finish Gray</li> </ul>	⑤	<FD50> Guide track		<ul style="list-style-type: none"> <li>Material Aluminium alloy(A6063)</li> <li>Finish Anodized aluminum</li> </ul>
③	Lower guide		<ul style="list-style-type: none"> <li>Material Stainless steel(SUS304)</li> <li>Finish Natural</li> </ul>		<FD30> Bumper block		<ul style="list-style-type: none"> <li>Material Steel(SPCC)</li> <li>Finish Chromating</li> </ul>
④	Block for bottom guide		<ul style="list-style-type: none"> <li>Material Rubber(EPDM)</li> <li>Finish Black</li> </ul>	⑥	<FD50> Stopper block		<ul style="list-style-type: none"> <li>Material Steel(SPCC)</li> <li>Finish Chromating</li> </ul>

## ASSEMBLY

(This manual explains assembly procedures for single side sliding system.)

<b>Confirmation before assembly</b>	<ul style="list-style-type: none"> <li>Check that dimensions of frame, floor, door and rail are correct.</li> <li>Check that door is not warped.</li> <li>Check that frame and floor are not inclined.</li> <li>Check that all parts are prepared.</li> <li>Check that door is processed correctly.</li> </ul>
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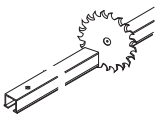
**!** If any foreign matter such as cutting chips remain in the rail may impact the performance of roller and guide, and cause abnormal sounds during door operation. Please carefully remove cutting chips or the like.

## PROCEDURE 1 PREPARATION AND INSTALLATION

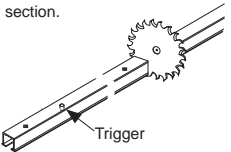
### 1. Cutting the rail

Cut the rail to required length, referring "Shop Drawing".

**!** Then, remove any cutting scrap from the rail.



**!** Cut the rail applying a reinforcer to prevent deformation of cut section.

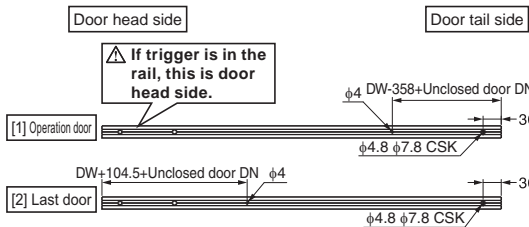


<FD30>

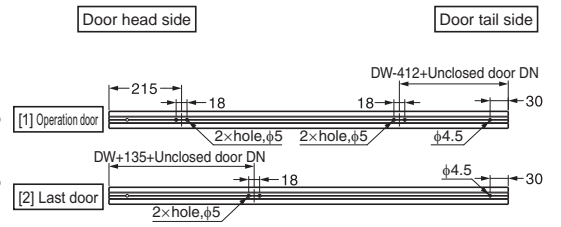
**!** Never cut trigger side of rail.

### 2. Hole processing

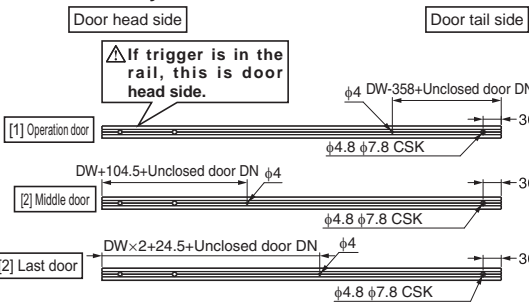
#### <FD30 2-door synchro>



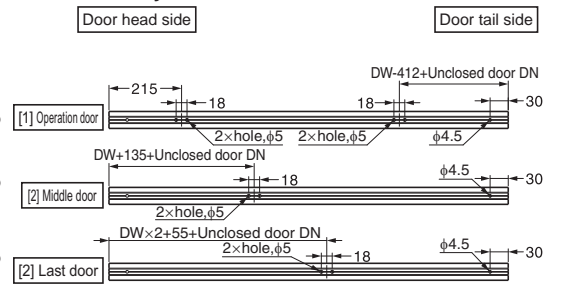
#### <FD50 2-door synchro>



#### <FD30 3-door synchro>

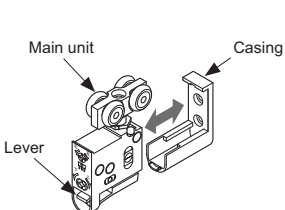


#### <FD50 3-door synchro>



### 3. Preparation of mounting parts

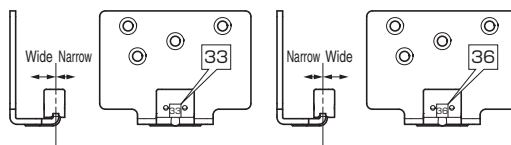
Pull up the lever of upper roller to separate main body from casing.



### 4. Assembling Door guide

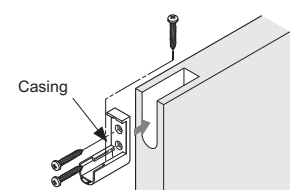
Install guide block to Door guide plate, referring the right table (marking).

Door thickness	Mark
30 - 34	33
35 - 38	36



### 5. Installing casing

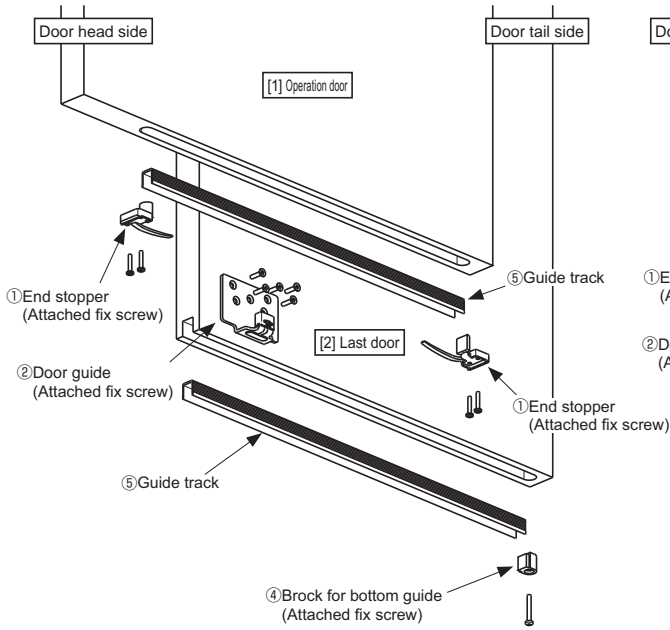
Firmly insert upper roller casing into the place as shown, fix it with attached screws.



## 6. Assembling Guide track

⚠ When door arrangement is different, reverse the positions shown in the figure.

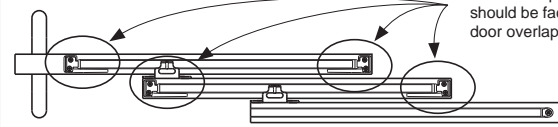
### <2-door synchro>



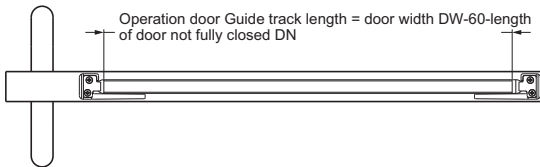
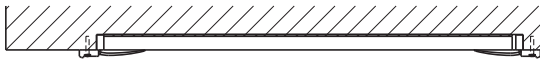
\*For installation of Guide track for FD50 door, please prepare screws separately.  
Recommended screw: Philips flush tapping screw 4x20

⚠ When installing End stoppers, take care for mounting direction. (Refer to the drawing.)

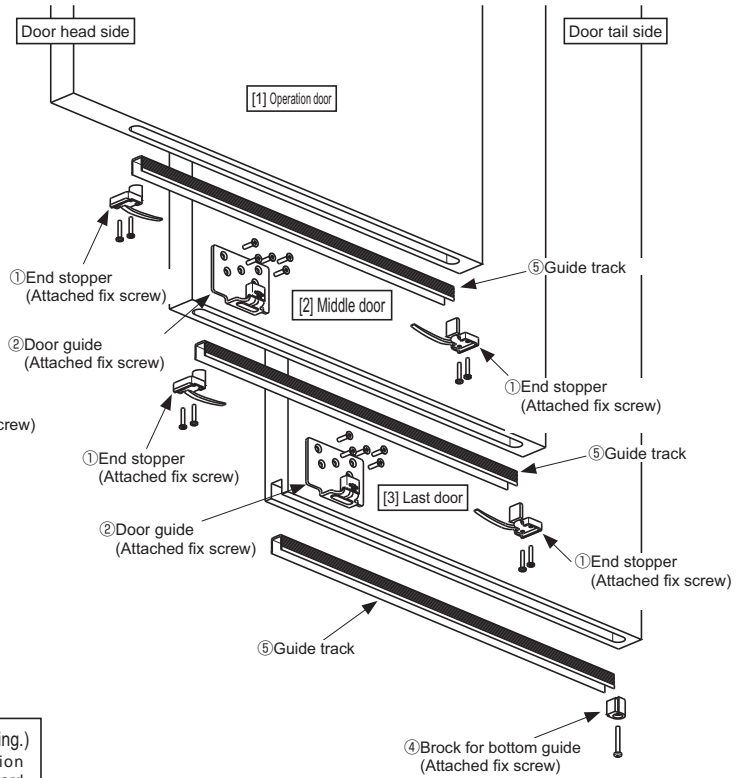
The thin protrusion should be faced toward door overlap.



### <2-door synchro: [1] Mounting parts on operation door>

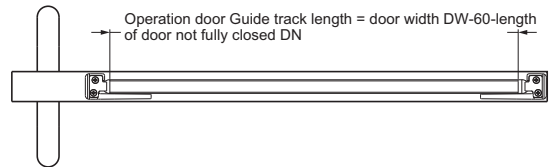
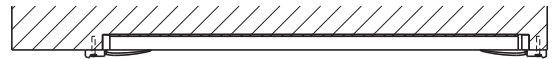


### <3-door synchro>

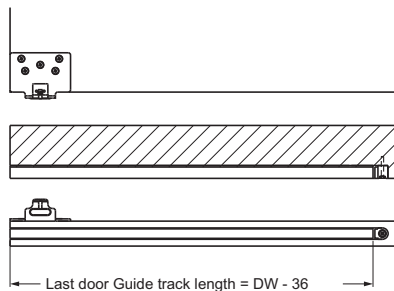


\*For installation of Guide track for FD50 door, please prepare screws separately.  
Recommended screw: Philips flush tapping screw 4x20.

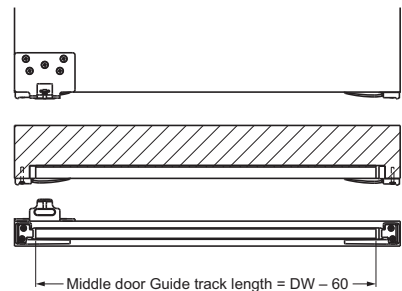
### <3-door synchro: [1] Mounting parts on operation door>



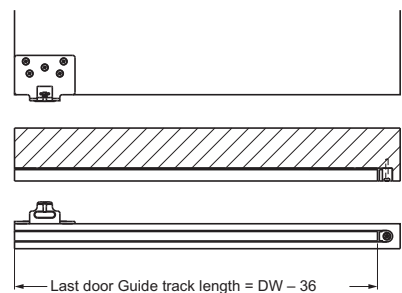
### <2-door synchro: [2] Mounting parts on last door>



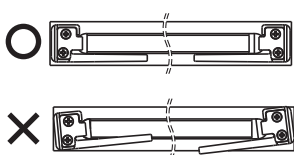
### <3-door synchro: [2] Mounting parts on middle door>



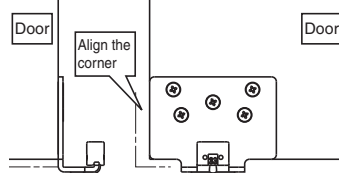
### <3-door synchro: [3] Mounting parts on last door>



⚠ When mounting End stopper, set the door and parts to be parallel.

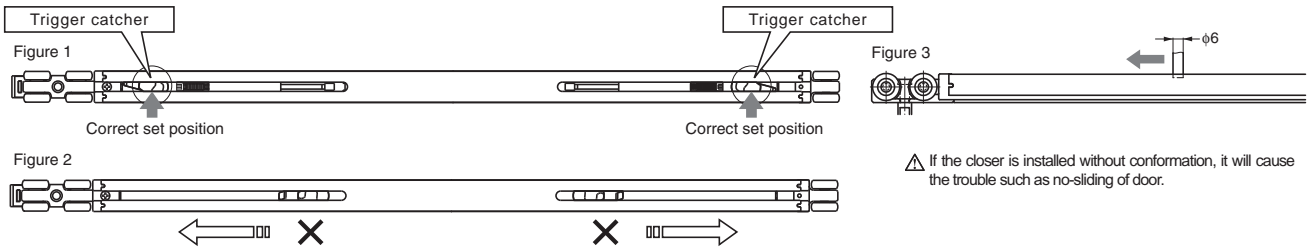


⚠ When mounting Door guide, align door corner with part corner.



## 7. CONFIRMATION BEFORE INSTALLING THE DUAL SOFT CLOSER

Confirm that the trigger catcher is at the position shown in Figure 1. If the trigger catcher is at the position shown in Figure 2, pull back the trigger catcher to position in Figure 1 using 6mm diameter hard bar.

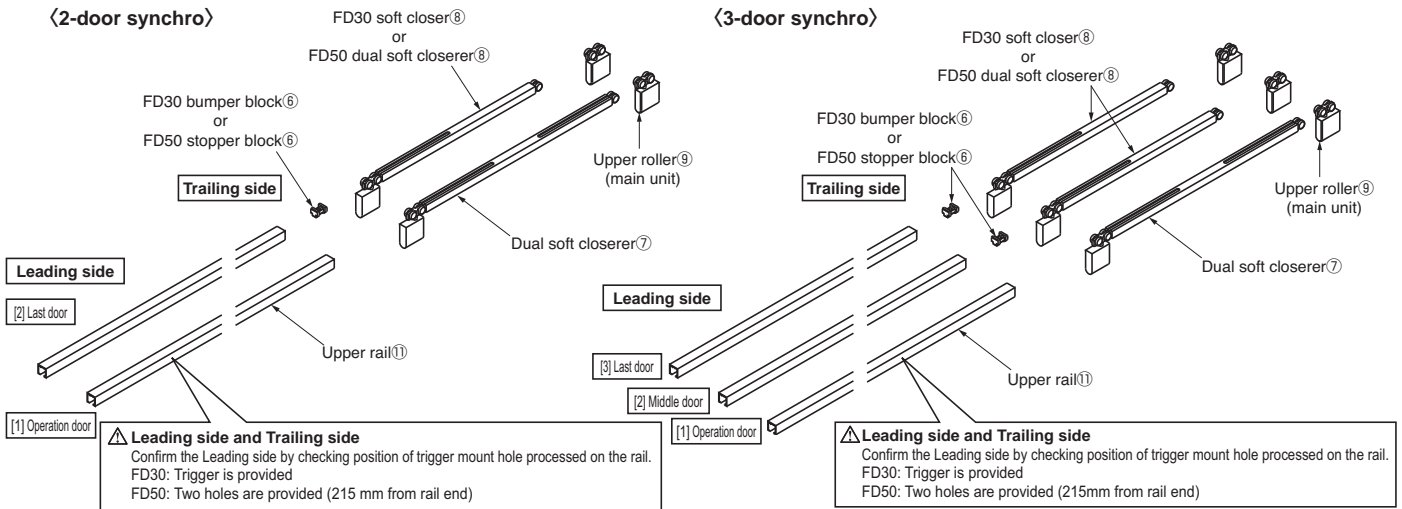


⚠ If the closer is installed without conformation, it will cause the trouble such as no-sliding of door.

## 8. Installing parts and mounting upper rail

Insert upper roller of (dual) soft closer from the trailing side of the rail. Where there is no trigger (FD30) or without the hole at 215mm from the rail end (FD50). After setting the parts at correct position, hold them with tape.

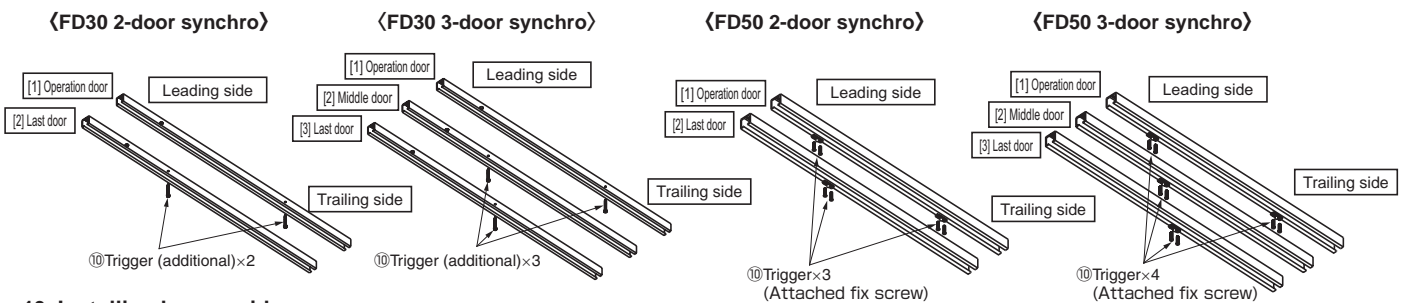
⚠ Fix upper rail to upper frame with fixing screws, taking care the door head side and door tail side. As FD30 has no rail fixing screws, please prepare fixing screws. (Recommended fixing screw for FD30 upper rail: Phillips flush tapping screw 3.5x20)



## 9. Mounting trigger

⚠ According to "Installation Drawing", mount trigger using trigger mount hole on the rail.

Fix the trigger on the rail with fixing screws vertically and fully tightening. If trigger is mounted slantwise, defective door operation will be resulted.



## 10. Installing lower guide

(2-door synchro)  
[2] Install under last door rail

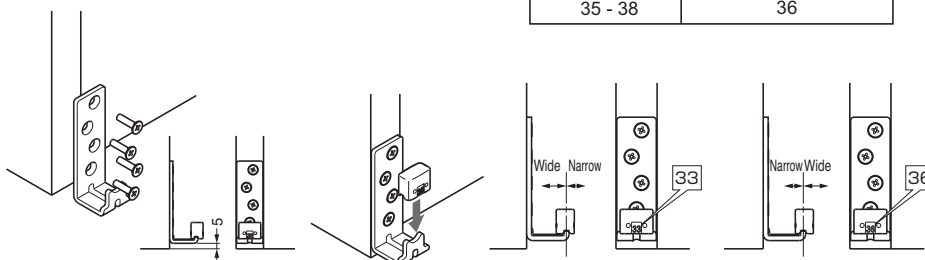
(3-door synchro)  
[3] Install under last door rail

(Door guide(wall mount))

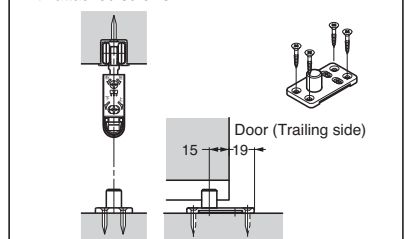
Referring "Installation Drawing", install base plate of Door guide, using attached mount screws.

Install guide block to guide plate to correct direction, as shown.

Door thickness	Mark on part
30 - 34	33
35 - 38	36



When floor guide is mount to floor. (Option)  
Align the center of floor guide with vertical line from upper rail center.  
With the door closed, set the convex part of floor guide to the position shown on the drawing. Fix it with attached screws.





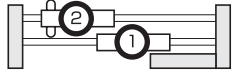
## PROCEDURE 2

## HANGING DOOR AND ADJUSTMENT

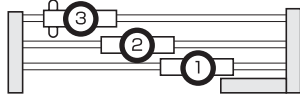
### 1. Installing doors

At first install the door ① as shown below.  
Put a 13 mm support under the door.  
Insert the door guide into the door bottom groove.  
Then, insert upper roller to the casing at both ends of upper part of door.

#### <2-door synchro>

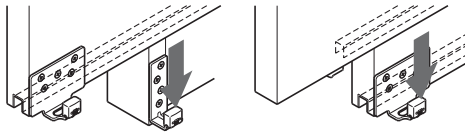


#### <3-door synchro>



#### ○ Inserting lower guide in door bottom groove

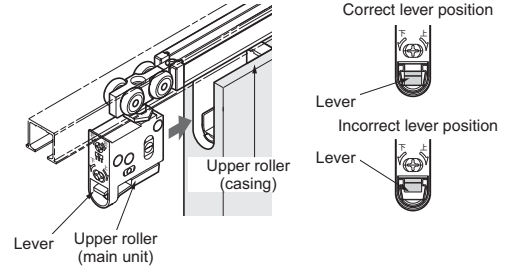
Hold the door with 13 mm support to take balance, match convex of lower guide with groove under door.



#### ○ Inserting upper roller (main unit) into door upper casing

Insert upper roller (main unit) into door side casing, push in lower side of upper roller until click sound is heard.  
Confirm that the lever is positioned at the mark on upper roller (main unit), as shown.

△ Confirm that upper roller (main unit) does not come off from casing. Check for both leading edge and trailing edge.



### 2. Confirming soft close movement and Fixing bumper block and stopper block.

Remove 13 mm support under the door.

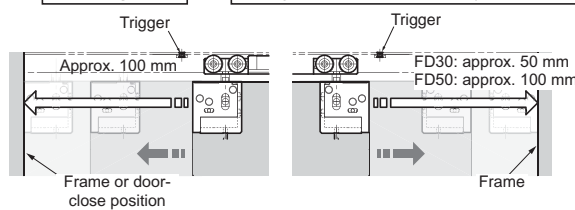
Slowly move the door toward door top to confirm that door closer starts its function at 100 mm before full-close position. Also confirm that door is fully closed.

[1] As for the operation door (dual soft closer), same operation confirmation as explained above.

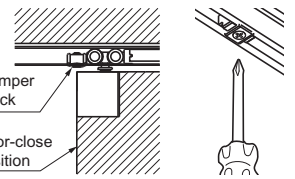
If necessary, adjust position of bumper block and stopper block in the rail so that the position is realized as shown in "Installation Drawing". Then fix them by tightening them with screws.

#### Leading side

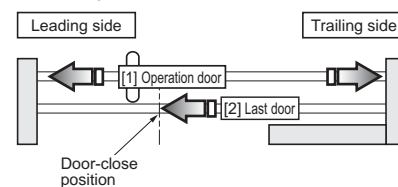
#### Trailing side: [1] Operation door (dual soft closer) only



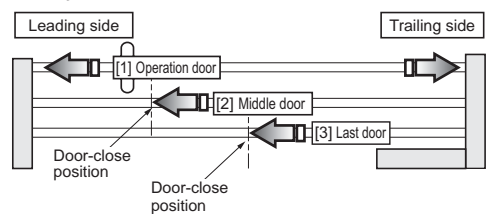
#### ○ Correct position of bumper block and stopper block



#### <2-door synchro>



#### <3-door synchro>



### 3. Door adjustment

Adjust door position with adjustment screw at upper roller (main unit)

At first, make vertical adjustment of the [1] operation door so that clearance between upper rail and floor becomes parallel with clearance of 13 mm.

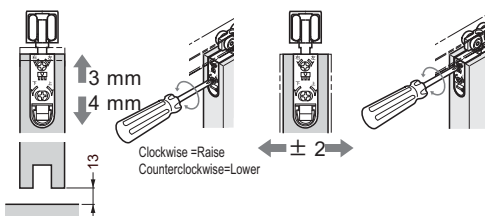
Then, adjust middle door and last door vertically so that clearance between door bottom and upper face of lower guide becomes 5 mm.

△ Do not turn adjustment screw more than adjustment range.

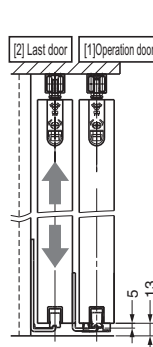
△ To avoid damage on the adjustment screw, do not use electric screwdriver.

#### Vertical adjustment: 7 mm

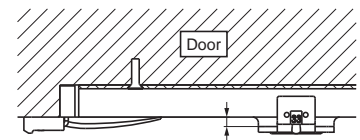
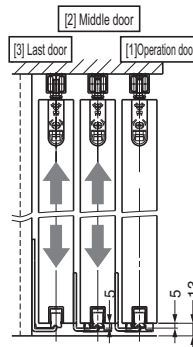
#### Left-to-right adjustment of door $\pm 2$ mm



#### <2-door synchro>



#### <3-door synchro>



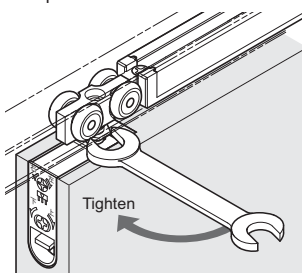
△ After finishing vertical adjustment of door, repeat confirmation of soft closer function. (Refer to "Procedure 2", 2. Confirming soft closer function)

When soft closer is not able to make full-closing, clearance between door bottom and upper face of lower guide may be less than 5 mm.

In this case, adjust middle door and last door height to lower the door slightly.

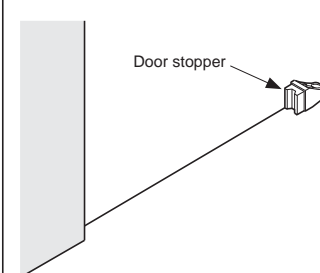
### 4. Fixing jump-up prevention nut

Tighten dual soft closer and upper roller jump-up prevention nut with spanner 12.



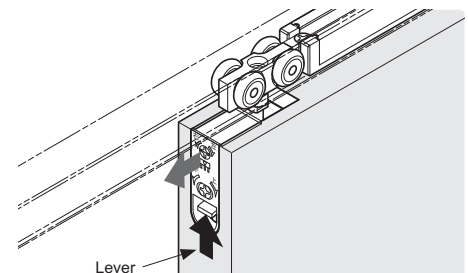
#### When vertical frame is not used

Install door stopper.  
Use the stopper offered as option 4.



#### When removing the door

Use a 10 mm support under the door. Then pull out the upper roller main unit from the door while raising the lever.



### Final confirmation

Confirm that all screws are securely tightened. And, confirm that all screws are used without mistake.

<b>PERIODICAL INSPECTION</b>	<ul style="list-style-type: none"> <li>• Clean inside of rail.</li> <li>• Check upper space and lower space of the door. If necessary, correct the space.</li> </ul>
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## TROUBLESHOOTING

Trouble	Check	Solution
Door stops during soft closing	Check if door bottom contacts with floor.	Confirm that rail fixing screws are not loosened. Then, adjust door height such that clearance between door bottom and floor becomes 13 mm.
	Check if clearance between the door and Door guide is less than 5 mm.	Slightly lower door position by adjusting vertical position of middle door and last door.
No soft closing	Check if door stops before door stopper.	Close the door completely. This will reset the function.
	Check if trigger is installed.	Install the trigger to correct position.
Abnormal noise during operation	Check if door touches other parts.	Provide necessary space between door and adjacent objects.
	Check inside of upper rail for foreign matter or aluminum dust.	Remove dust or foreign matter.
	Check rail rollers for aluminum dust.	Remove the rail and pull out the roller. Then, clean the roller.
	Check for loose screws retaining the upper rail.	Tighten the screw.
Heavy door operation	Check if door touches adjacent parts.	Correct door position to avoid contact to other objects. Adjust position of floor guide or stopper.
	Check if door is warped.	Use the door without warp.
Door does not move.	Check rail retaining screws for looseness.	Roller touches the screw. Retighten screws to free the roller.
Door starts to move.	Check if the upper rail is set horizontally.	Using a level gauge, reset upper rail horizontally.

## OPTIONAL PARTS (SOLD SEPARATELY)

No.	Part Name	Dimensional Drawing	Specifications
1	Door stopper metal		Door stopper to install for double sliding door Order code:250-017-150 Part No.:FD30-HTK ● Material Polyamide(PA)/Rubber ● Color Light brown ● Accessory screw: Phillips head blind tapping screw 3.2x25, 3 screws
2	Door stopper (floor)		When vertical frame is not used, install this part on the floor. Order code:250-018-497 Part No.:FD30-HTKY ● Material Zinc alloy(2DC)/Rubber ● Color Gray/Black ● Accessory screw: Phillips head blind tapping screw 4x30, 3 screws

No.	Part Name	Dimensional Drawing	Specifications
3	Floor guide S		Single Part order code:250-020-773 Part No.:FD50-BG18 ● Material Stainless steel(SUS304) / Polyacetal(POM) ● Finish Natural ● Accessory screw:Phillips head tapping screw(pan head) 4x16, 5 screws
4	Floor guide L		Floor guide (When space is required under door.) Order code:250-020-774 Part No.:FD50-BG32 ● Material Stainless steel (SUS304) / Polyacetal(POM) ● Finish Natural ● Attached screw:Phillips head tapping screw (pan head) 4x16, 5 screws
5	Guide for leading side		Order code:250-017-157 Part No.:FD30-HTF ● Material Polyamide(PA) ● Color Light brown ● Attached screw:Phillips head tapping screw (pan head) 4x16, 5 screws
6	Spanner		Spanner for fixing the jump-up protection nut of dual soft closer and upper roller. Order code:250-017-168 Part No.:FD30-FSP ● Material Steel ● Finish Colored Chromating (trivalent)

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