

**RYOBI**



REGISTERED TO  
ISO 9001  
CERTIFICATE  
NO.20002510 QM08

# FLOOR HINGE

500SERIES / 400SERIES / 200SERIES

# Patch Fitting

# FLOOR HINGE

## Model chart

### 200 SERIES CLASSICAL TYPE

Model	With 90° Hold-open	S-201N	S-202N	S-201Y	S-202Y	S-201K	S-202K	S-203K	S-204K
	Without Hold-open	201N	202N	201Y	202Y	201K	202K	203K	204K
Maximum Door Width		900mm	950mm	900mm	950mm	900mm	950mm	950mm	1050mm
Maximum Door Weight		80kg	130kg	80kg	130kg	80kg	130kg	180kg	185kg
Maximum Opening Angle (degrees)		113°							
Applicable Door		Aluminum Steel Stainless Steel Wood							
Cement Case Dimension (mm)		280 X 132 X 47.5		284 X 130 X 54.5		280 X 132 X 47.5		298 X 146 X 47	
Feature	General Speed Adjustment	●	●	●	●	●	●	●	●
	2nd Speed Adjustment	●	●	●	●	●	●	●	●
	Closing Position Adjustment	●	●	●	●	●	●	●	●
	Height Position Adjustment			●	●				
	Double Action	●	●	●	●	●	●	●	●

★ : Please consult with Ryobi authorized distributor to select tapping screw when installing floor hinge with wooden door.

### 400 SERIES THIN TYPE

Model	With 90° Hold-open	S-401N	S-402N	S-401K	S-402K	S-403K
	Without Hold-open	401N	402N	401K	402K	403K
Maximum Door Width		900mm	950mm	900mm	950mm	950mm
Maximum Door Weight		80kg	120kg	80kg	120kg	150kg
Maximum Opening Angle (degrees)		108°				
Applicable Door		Aluminum Steel Stainless Steel Wood				
Cement Case Dimension (mm)		306 X 112 X 40				
Feature	General Speed Adjustment	●	●	●	●	●
	2nd Speed Adjustment	●	●	●	●	●
	Closing Position Adjustment	●	●	●	●	●
	Double Action	●	●	●	●	●

★ : Please consult with Ryobi authorized distributor to select tapping screw when installing floor hinge with wooden door.

## Model chart

### 500 SERIES NARROW TYPE

Model	With 90° Hold-open	S-500V	S-500VDA
	Without Hold-open	500V	500VDA
Maximum door width		1100mm	
Maximum door weight		120kg	
Maximum opening angle (degrees)		175°	
Applicable door		Aluminum Steel Stainless Steel Wood	
Cement case dimension (mm)		275 X 82 X 50	
Feature	1st speed adjustment	●	●
	2nd speed adjustment	●	●
	Closing position adjustment	●	●
	Height position adjustment	●	●
	Mechanical backcheck	●	●
	Delayed action		●
	Double action	●	●
	Tested To CE EN1154	●	●
	Tested To CE EN1634-1	●	●

★ : Please consult with Ryobi authorized distributor to select tapping screw when installing floor hinge with wooden door.

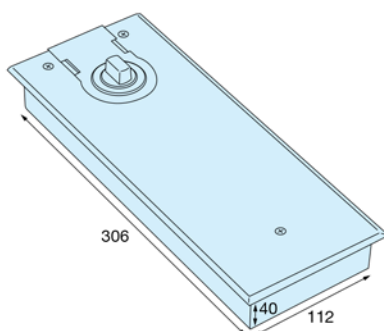
## Important notice

- Firmly tighten the top pivot shaft.
- Firmly tighten the mounting screws.
- Do not use chemicals when cleaning in order to prevent corrosion.
- Do not hit the main body or grind it.
- Completely fill the outer circumference of the cement case with mortar in order to reliably secure the main body.
- Use a door stopper together in order to prevent failure and breakage of the main body.

## Important notice

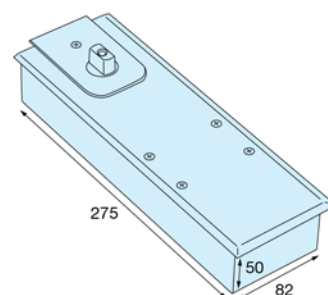
### • The Profile 400 Series

40mm depth is suitable for earlier and easier installation on 2nd, 3rd ... floor..



### • The Profile 500 Series

Narrow style perfectly matches with modern design profile.



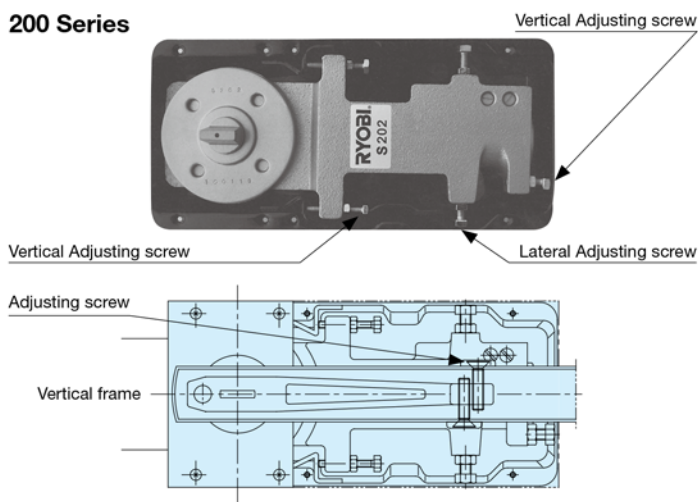


# Model list

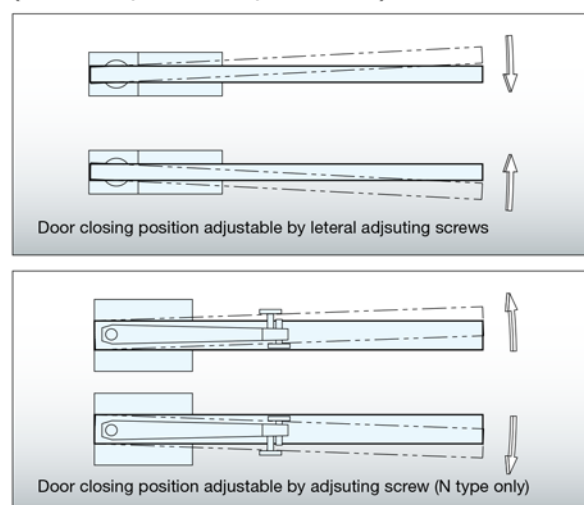
## Adjustment of floor hinge body position (all series)

- Gap between door lower section and frame can be adjusted by the adjustment screw of the main body.
- Tighten all of the screws and their locknuts after adjustment.

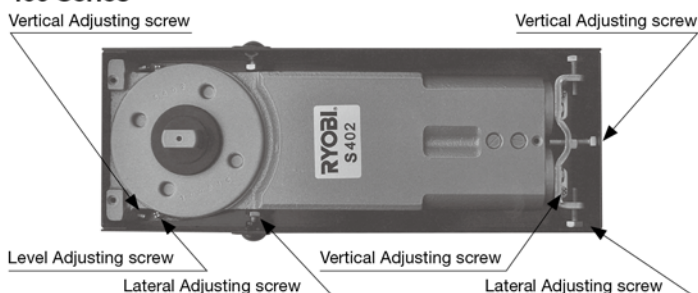
### 200 Series



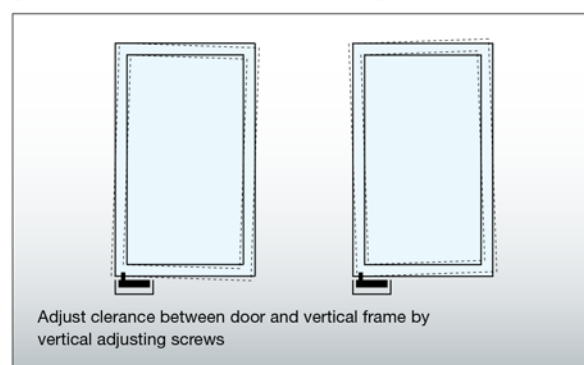
### Adjustable Door Closing Position (200 Series, 400 Series, 500 Series)



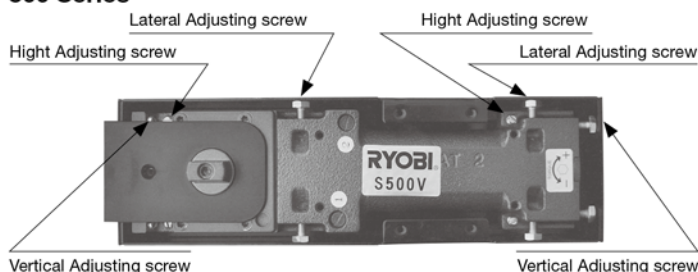
### 400 Series



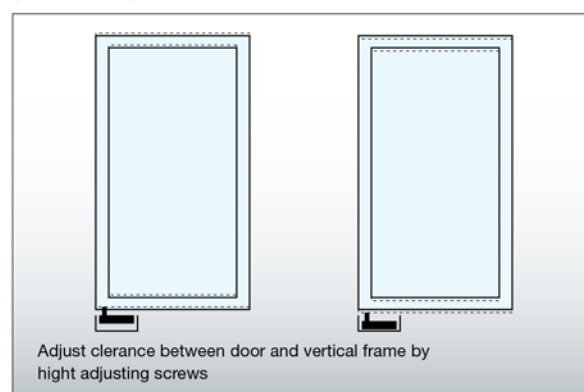
### Adjustable Door Clearance (200 Series, 400 Series, 500 Series)



### 500 Series



### (500 Series)

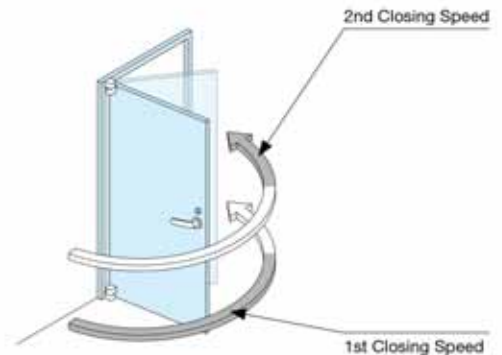


### Adjustable range for closing position and clearance

	Vertical	Lateral	Level	Height
<b>200 Series</b>	7mm	10mm		
<b>400 Series</b>	9mm	4.5mm	6mm	
<b>500 Series</b>	10mm	10mm		4mm

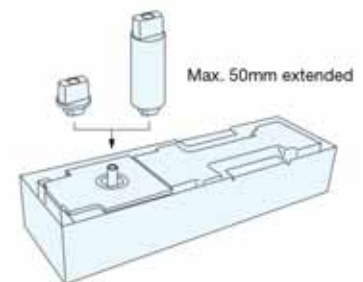
## Adjust Closing Speed (All Series)

- There are two speed ranges for door closing speed.
- Those ranges are classified into two stages of the 1st speed range which controls overall door closing speed and the 2nd speed range which controls latching speed.
- The latching speed cannot be set to be faster than the closing speed.
  - Adjust the closing speed by the closing speed adjustment valve.
  - Adjust the latching speed by the latching speed adjustment valve.
- The latching speed is the speed to store the door into the frame.
- Adjust to a speed which does not cause fingers to be caught.  
(It is appropriate for a door to take 5 to 8 seconds to completely close from a door opening angle of approximately 90 degrees.)
- Adjustment is easily made if the latching speed is adjusted in advance.



## Additional feature (500 series)

- Inter changeable spindle.
- Height adjustment function is added.
- Spindle can be extended up to 50mm for extended floor clearance for threshold, carpeted or marble floor. Customs made spindle shape may be available.



### • Mechanical backcheck

When introduced the backcheck stalls the opening door between 65 and 90 degrees. When doors are violently opened by pedestrians or wind, the backcheck feature reduces the likelihood of damage should contact be made with an adjacent wall, obstacles, or pedestrian.

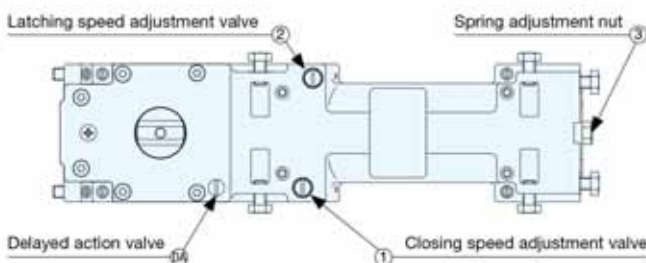
### • Delayed action

An optional delayed action feature adjusted by means of an independent valve. Once set, the door - when opened beyond 65 degrees enters into a delayed mode allowing additional time before the closing. Delayed time can be adjusted. The delayed action is an advantage to Nursing staff assisting patients, Domestic staff pushing meals or maintenance trolleys, handicapped person, elderly or infirm walking with sticks or frames under medical supervision.

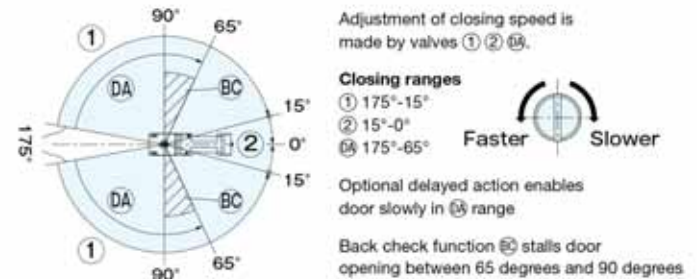
### • Adjustable closing power

Spring Power adjustable according to door weight and width EN 1 through EN 4. Factory preset size is 3.

### Position of valves



### Range of delayed action and back check



### How to adjust closing power



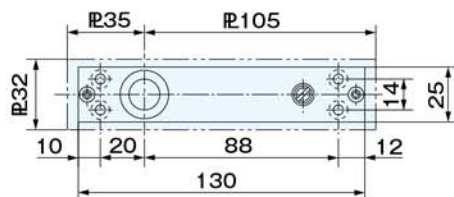
Turn of adjustment nut	Torque	0°- 4°
0 turn	Minimum	-
4 turn	Size 1	11±2 [Nm]
10.5 turn	Size 3 (Preset)	27±5 [Nm]
13.5 turn	Size 4 (Max)	32±5 [Nm]

Factory preset is 11.5 turns.

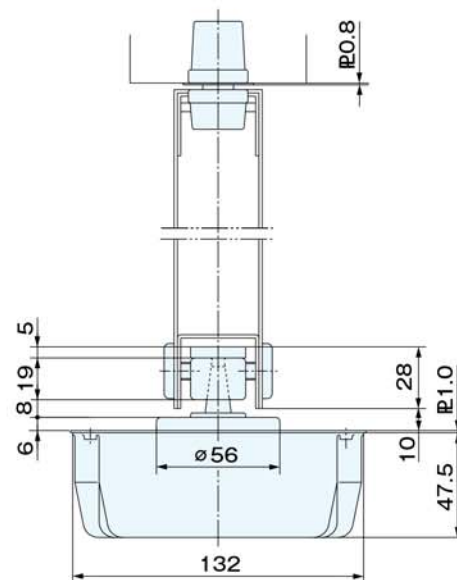
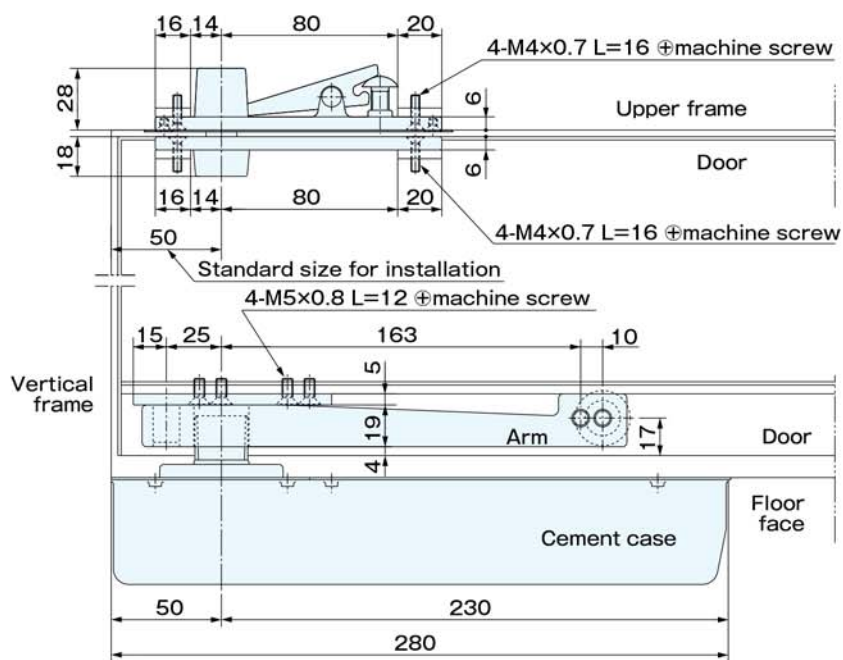
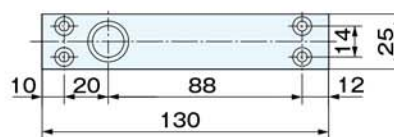
# S-201N / 201N · S-202N / 202N

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT (mm)	DOOR WEIGHT (Kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°</p>	<b>S-201N</b>	<b>90° HOLD</b>	900X2100	80
	<b>201N</b>	<b>NON-HOLD</b>		
	<b>S-202N</b>	<b>90° HOLD</b>	950X2100	130
	<b>202N</b>	<b>NON-HOLD</b>		

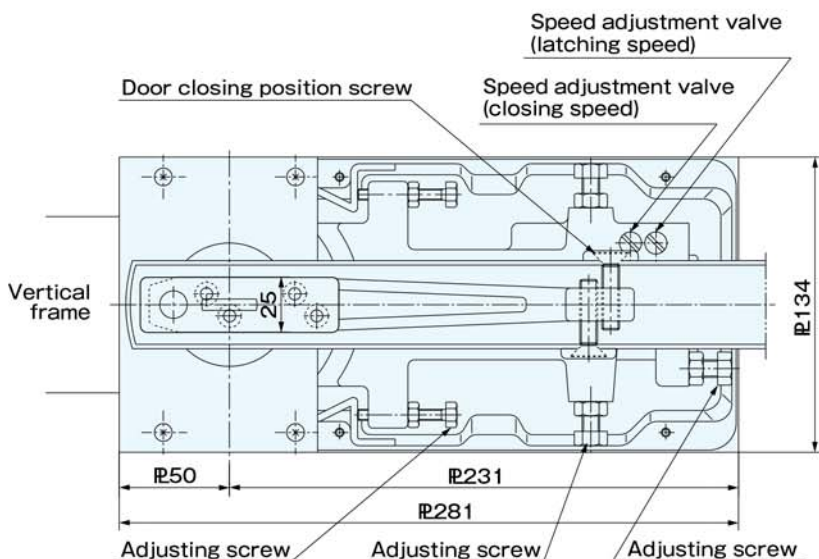
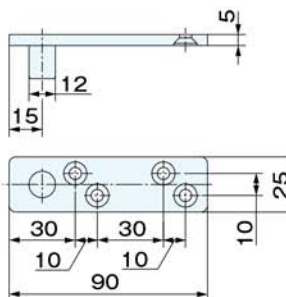
## Top pivot(upper frame side)



## Top pivot(door side)



## Arm plate

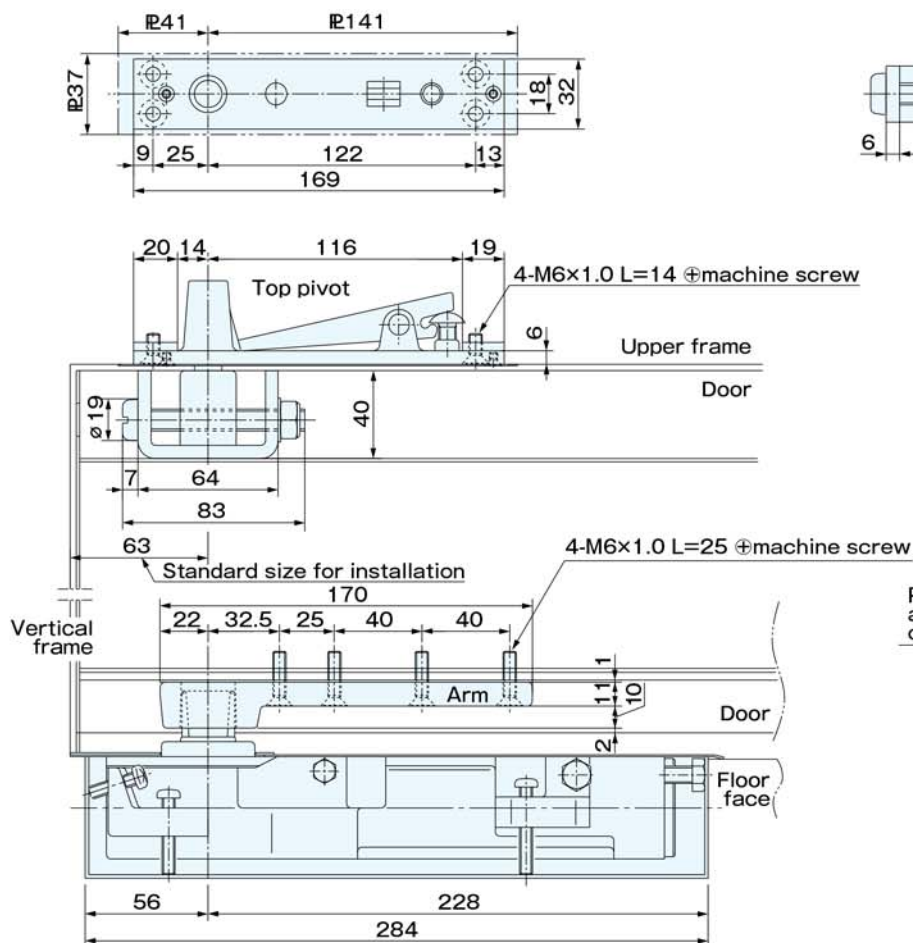


Dimension is indicated by m/m unit

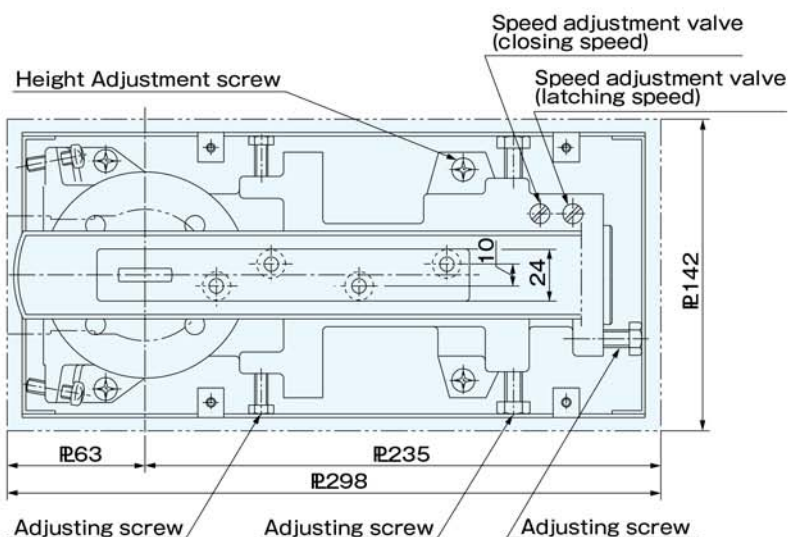
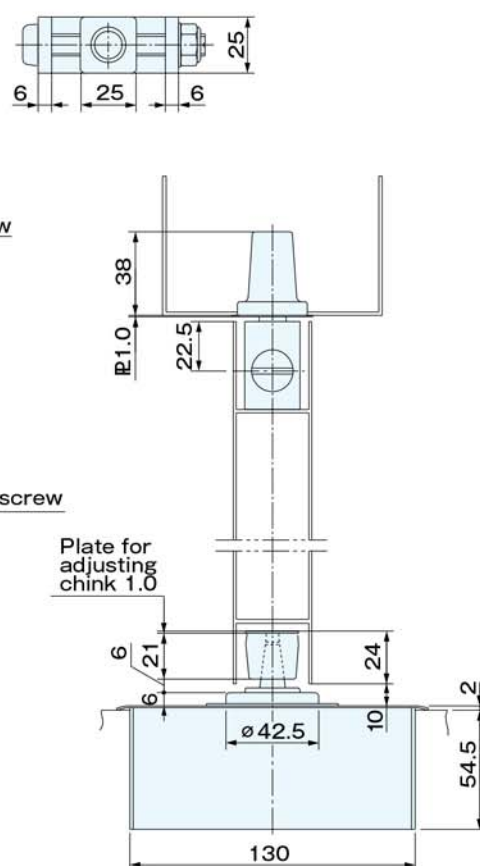


OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°</p>	<b>S-201Y</b>	<b>90° HOLD</b>	900X2100	80
	<b>201Y</b>	<b>NON-HOLD</b>		
	<b>S-202Y</b>	<b>90° HOLD</b>	950X2100	130
	<b>202Y</b>	<b>NON-HOLD</b>		

■ Top pivot(upper frame side)



■ Top pivot(door side)

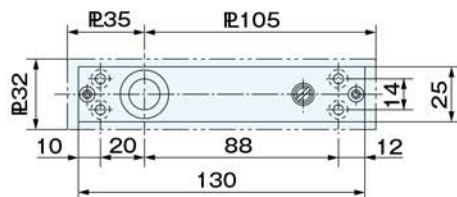


Dimension is indicated by m/m unit

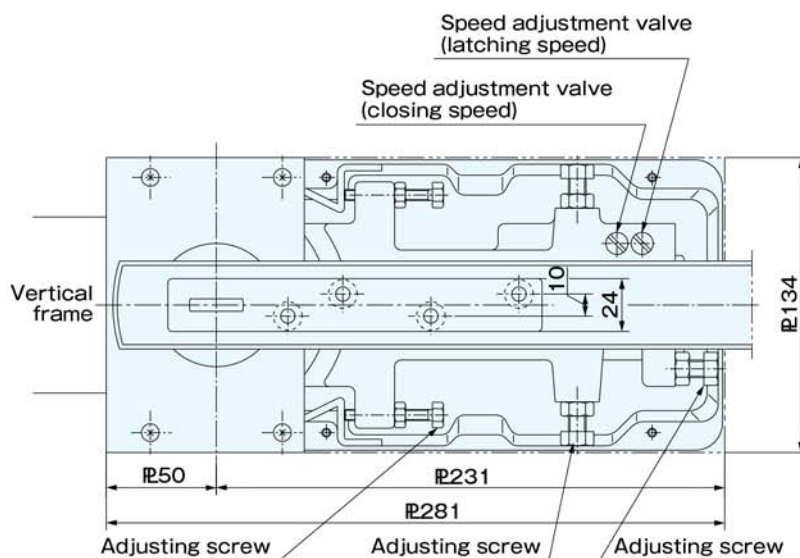
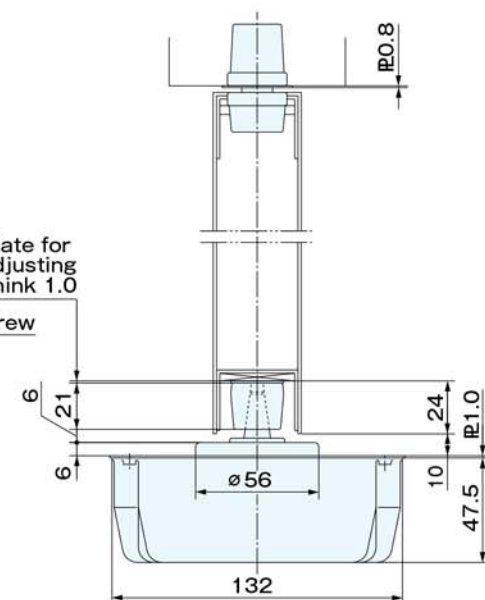
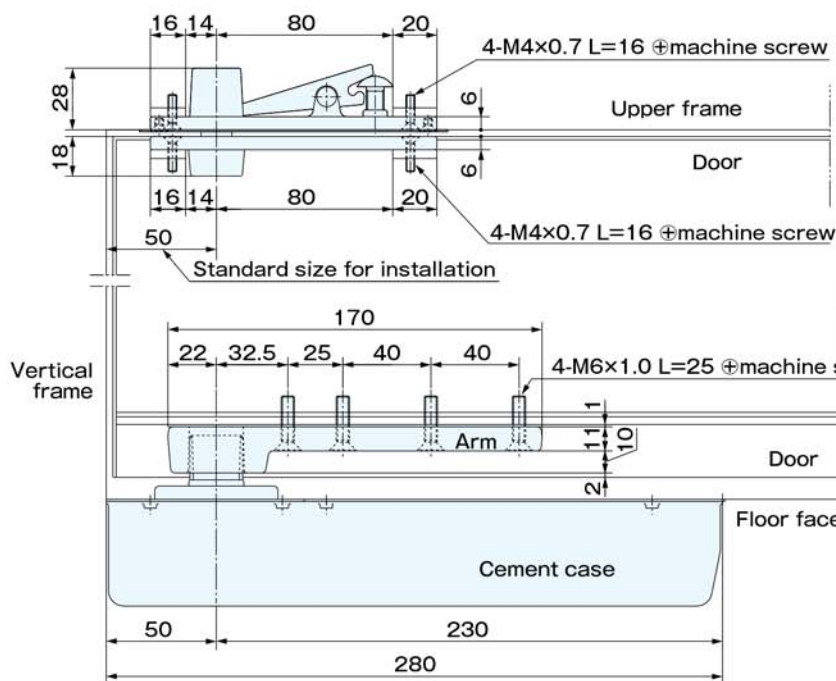
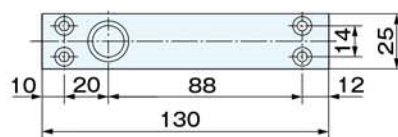
# S-201K / 201K · S-202K / 202K

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°</p>	<b>S-201K</b>	<b>90° HOLD</b>	900X2100	80
	<b>201K</b>	<b>NON-HOLD</b>		
	<b>S-202K</b>	<b>90° HOLD</b>	950X2100	130
	<b>202K</b>	<b>NON-HOLD</b>		

## ■ Top pivot(upper frame side)

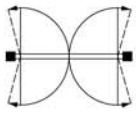


## ■ Top pivot(door side)

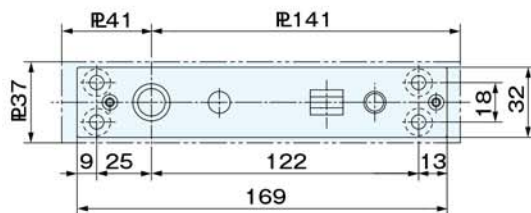


Dimension is indicated by m/m unit

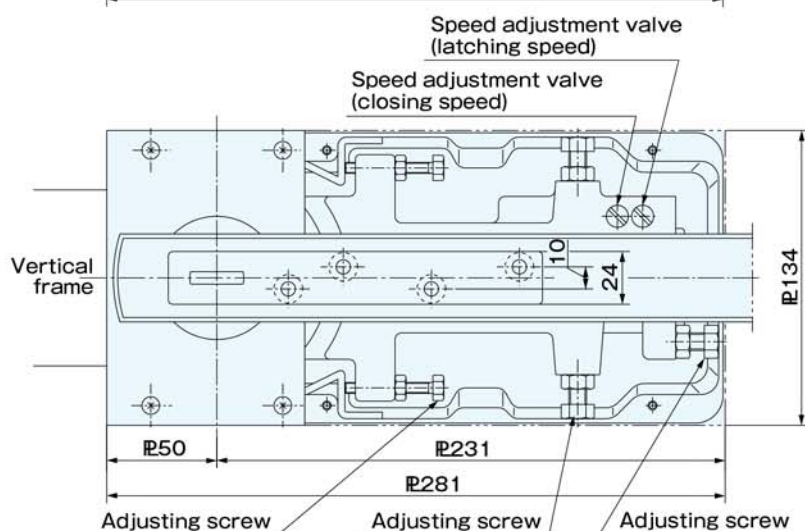
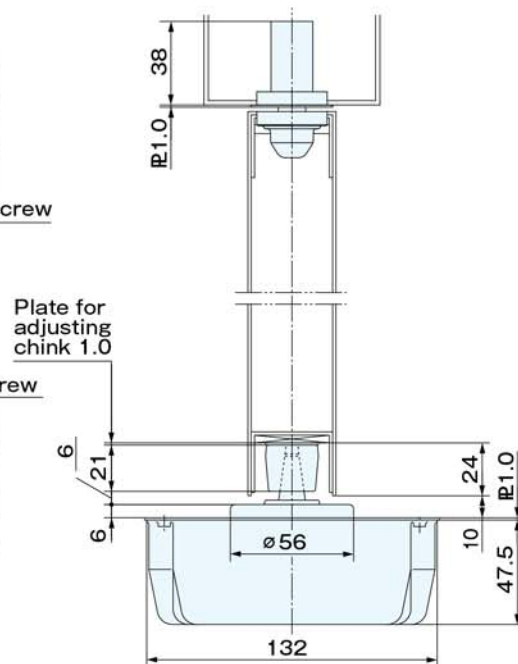
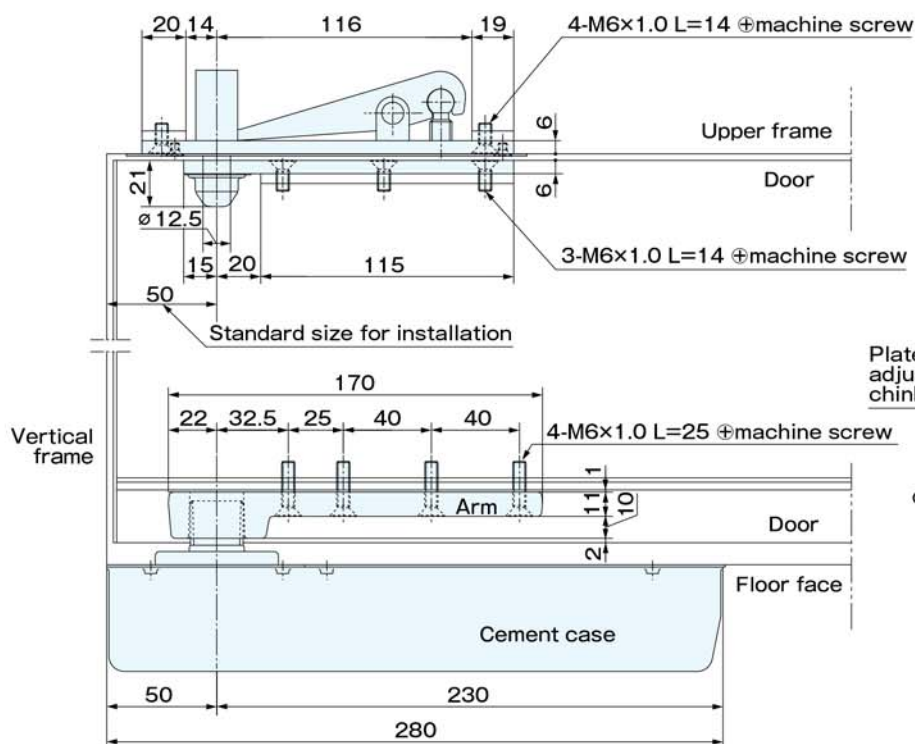
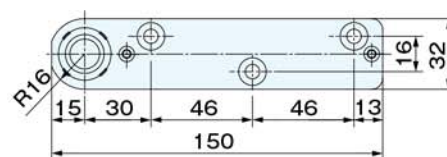


OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°</p>	<b>S-203K</b>	<b>90° HOLD</b>	950X2100	180
	<b>203K</b>	<b>NON-HOLD</b>		

### Top pivot (upper frame side)

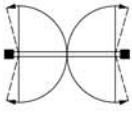


### Top pivot (door side)

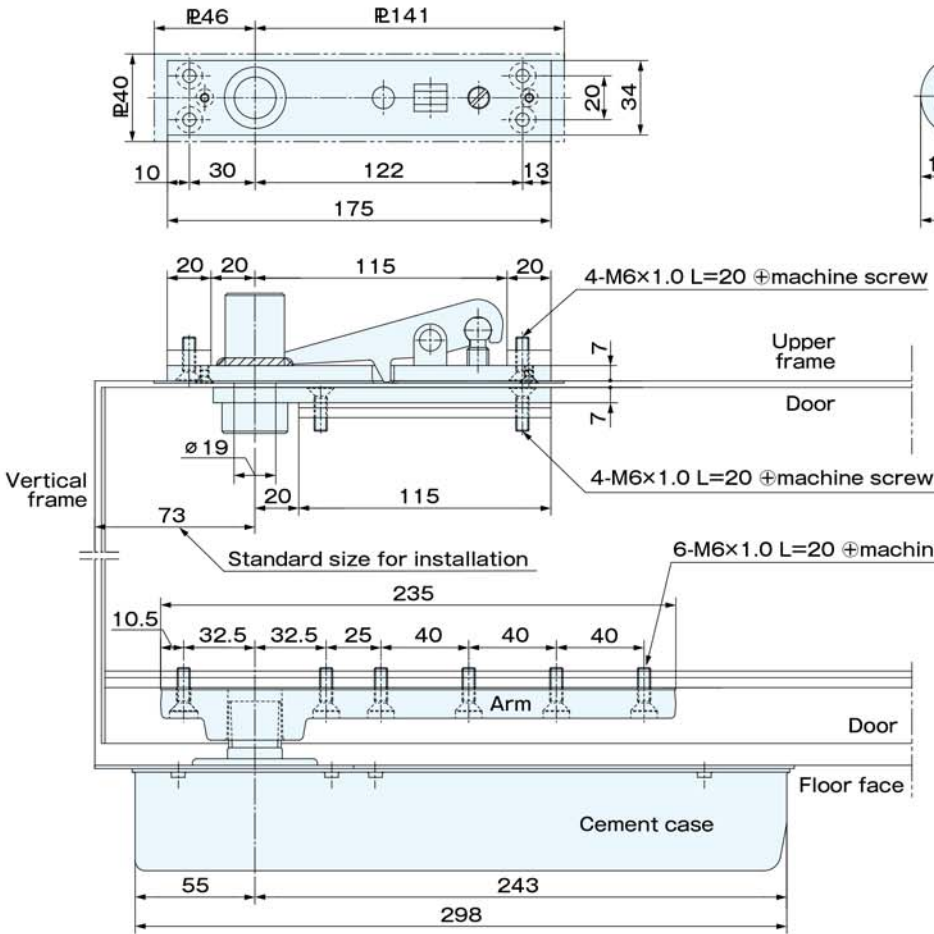


Dimension is indicated by m/m unit

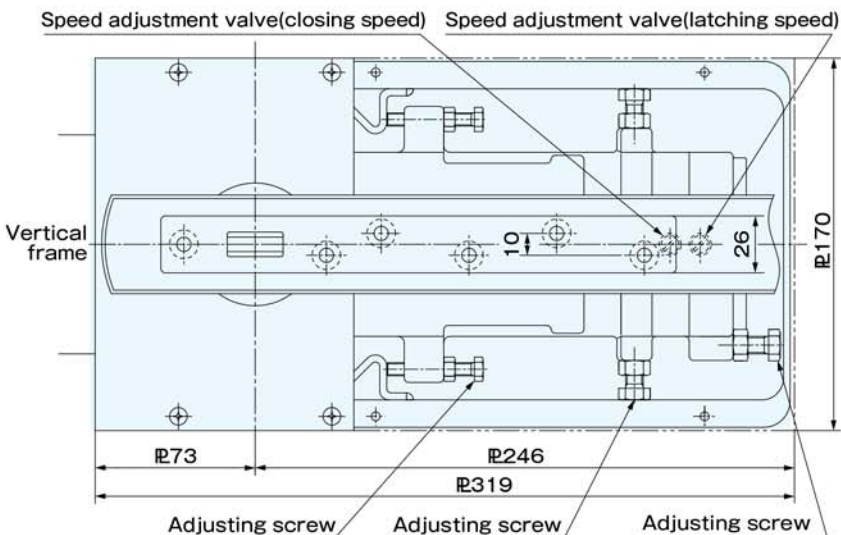
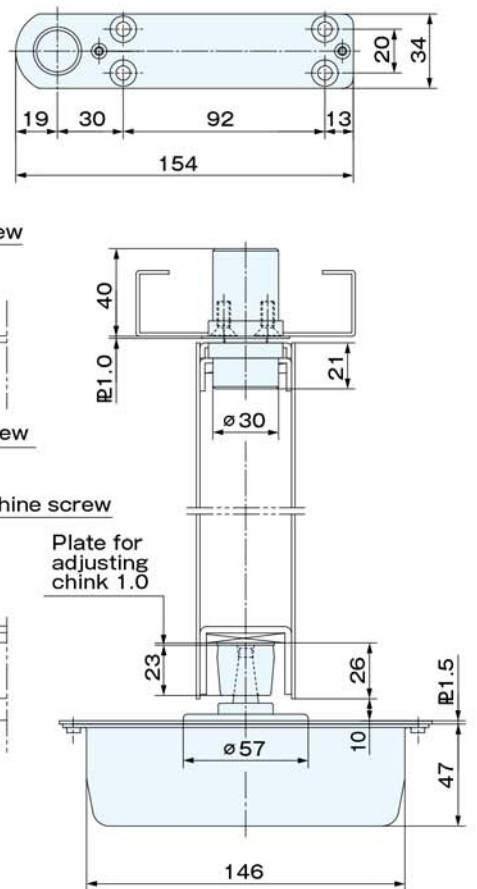
# S-204K / 204K

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°</p>	<b>S-204K</b>	<b>90° HOLD</b>	1050X2400	185
	<b>204K</b>	<b>NON-HOLD</b>		

## Top pivot (upper frame side)




## Top pivot (door side)

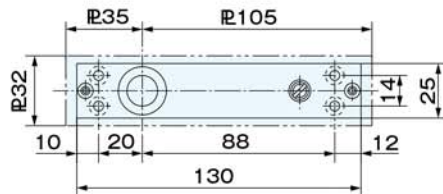


Dimension is indicated by m/m unit

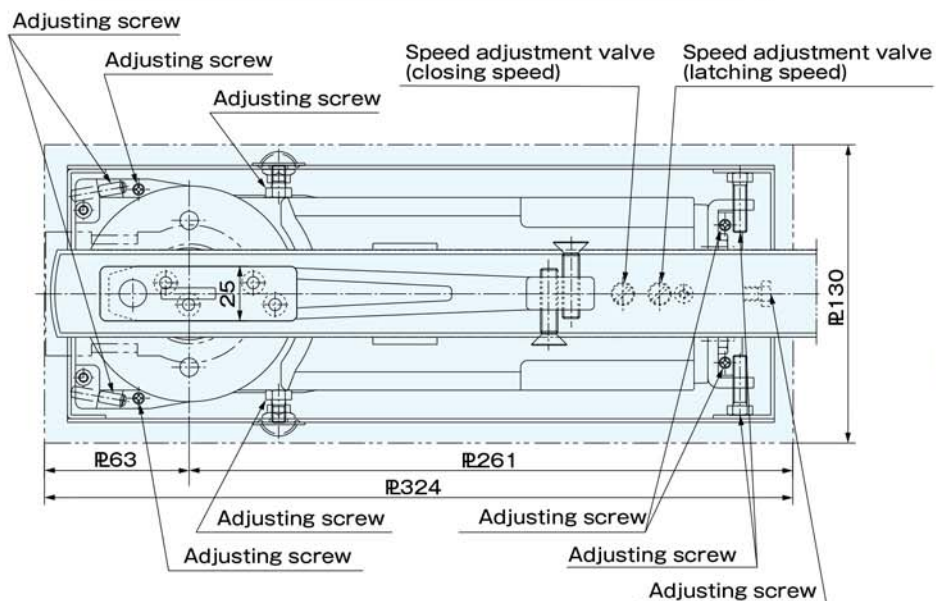
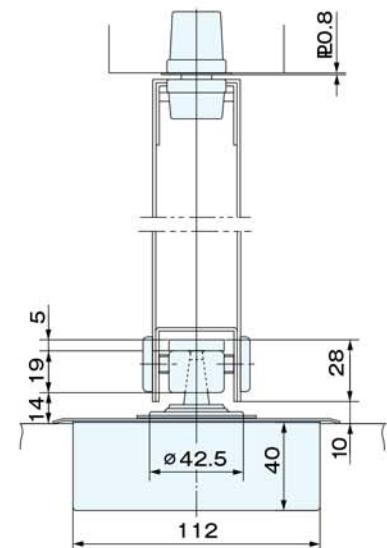
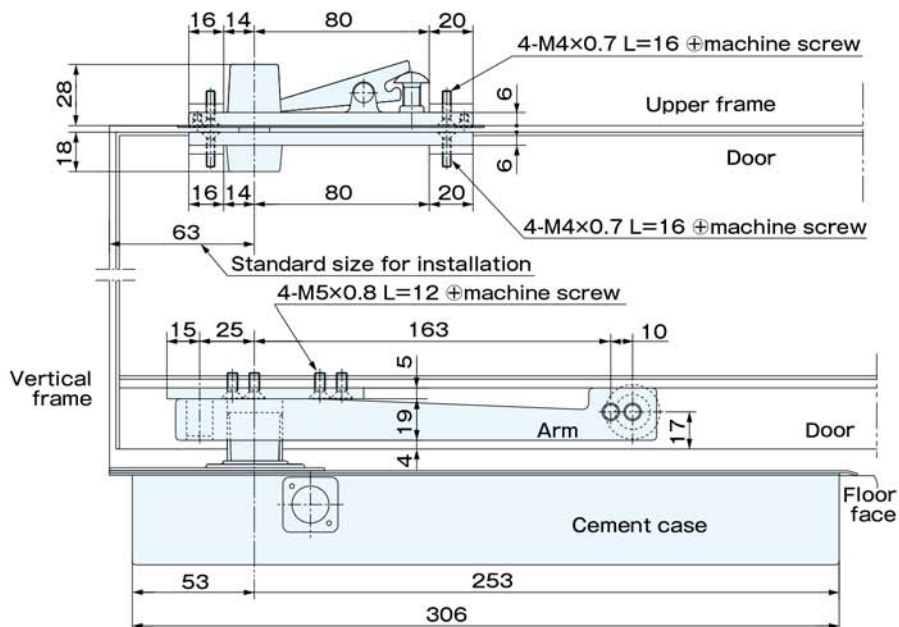
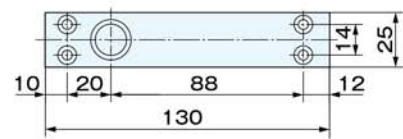
**S-401N / 401N · S-402N / 402N**

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 108° HOLD-OPEN ANGLE 90°	<b>S-401N</b>	<b>90° HOLD</b>	900X2100	80
	<b>401N</b>	<b>NON-HOLD</b>		
	<b>S-402N</b>	<b>90° HOLD</b>	950X2100	120
	<b>402N</b>	<b>NON-HOLD</b>		

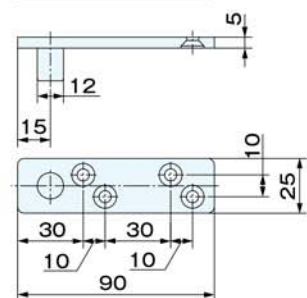
■ Top pivot (upper frame side)



■ **Top pivot(door side)**



■ **Arm plate**



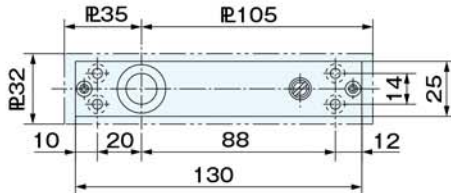
Dimension is indicated by m/m unit



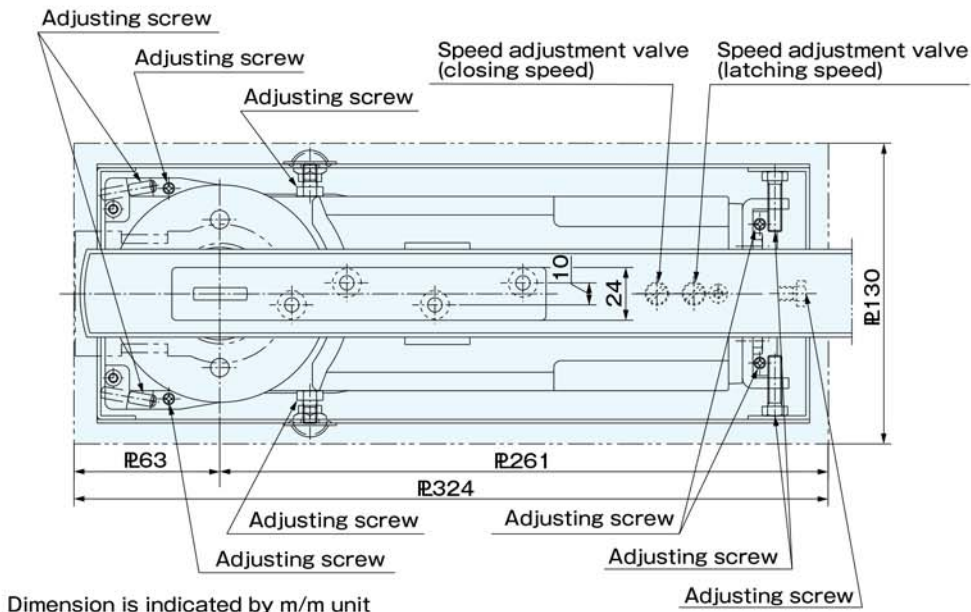
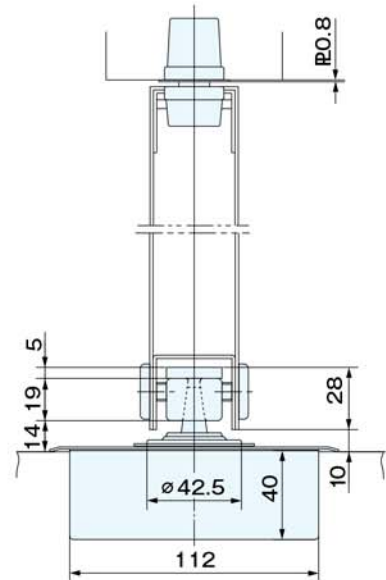
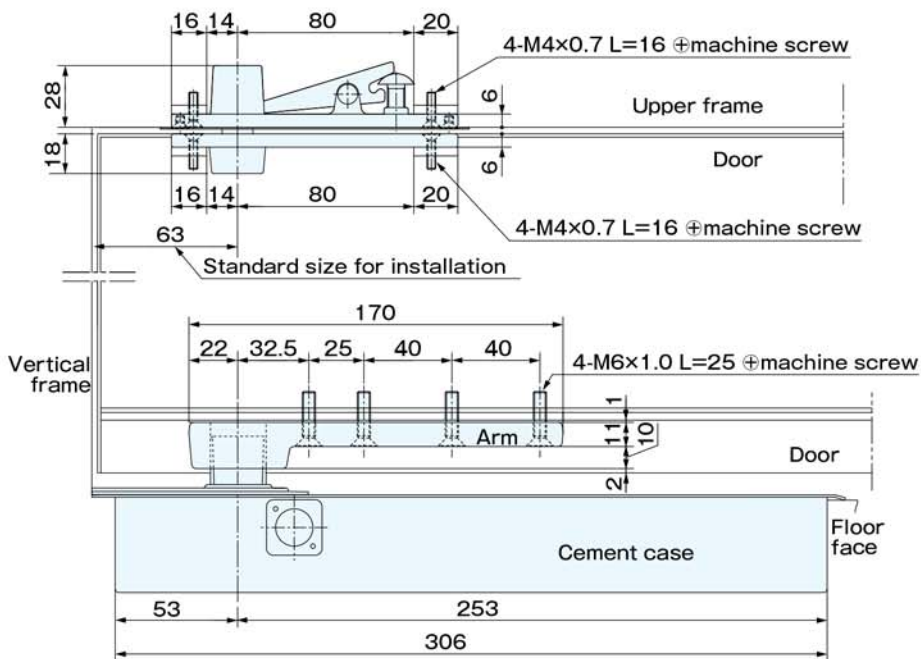
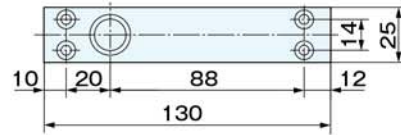
**S-401K / 401K • S-402K / 402K**

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 108° HOLD-OPEN ANGLE 90°	<b>S-401K</b>	<b>90°HOLD</b>	900X2100	80
	<b>401K</b>	<b>NON-HOLD</b>		
	<b>S-402K</b>	<b>90°HOLD</b>	950X2100	120
	<b>402K</b>	<b>NON-HOLD</b>		

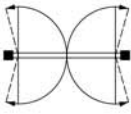
■ **Top pivot (upper frame side)**



■ **Top pivot (door side)**

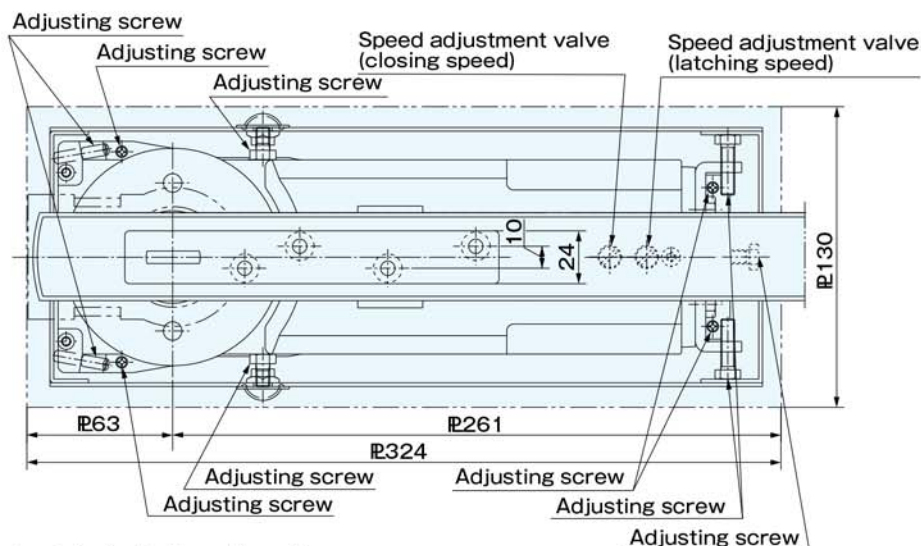
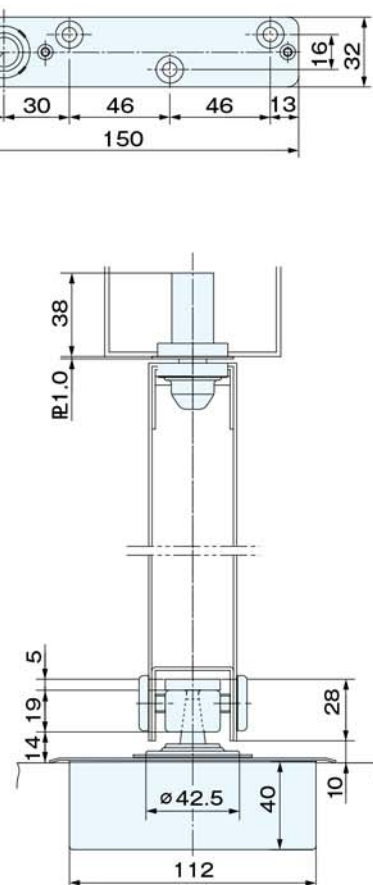
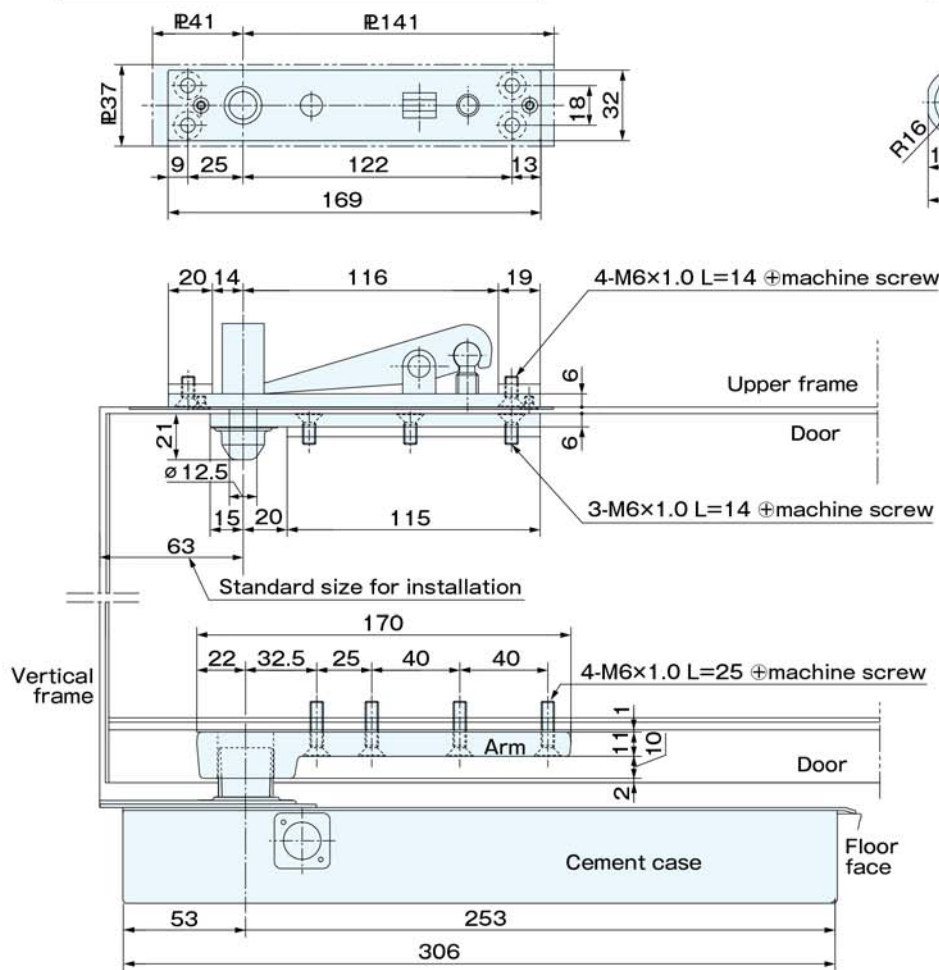


Dimension is indicated by m/m unit

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(Kg)
<p>CENTER HUNG DOUBLE ACTION</p>  <p>MAXIMUM OPENING ANGLE 108° HOLD-OPEN ANGLE 90°</p>	<b>S-403K</b>	<b>90°HOLD</b>	950X2100	150
	<b>403K</b>	<b>NON-HOLD</b>		

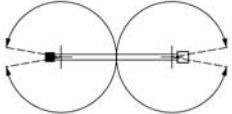
## ■ Top pivot (upper frame side)

## ■ Top pivot (door side)

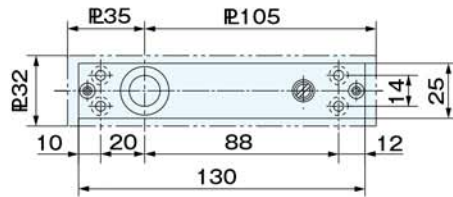


Dimension is indicated by m/m unit

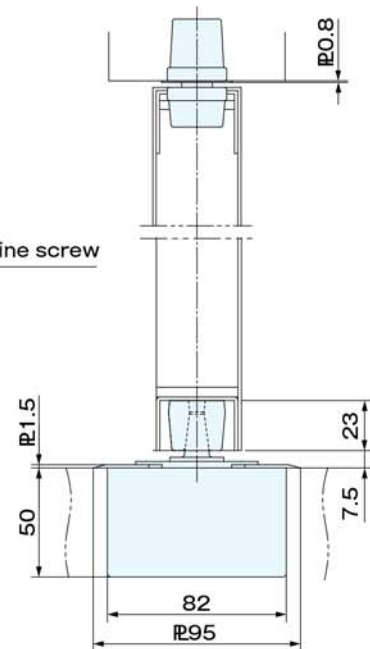
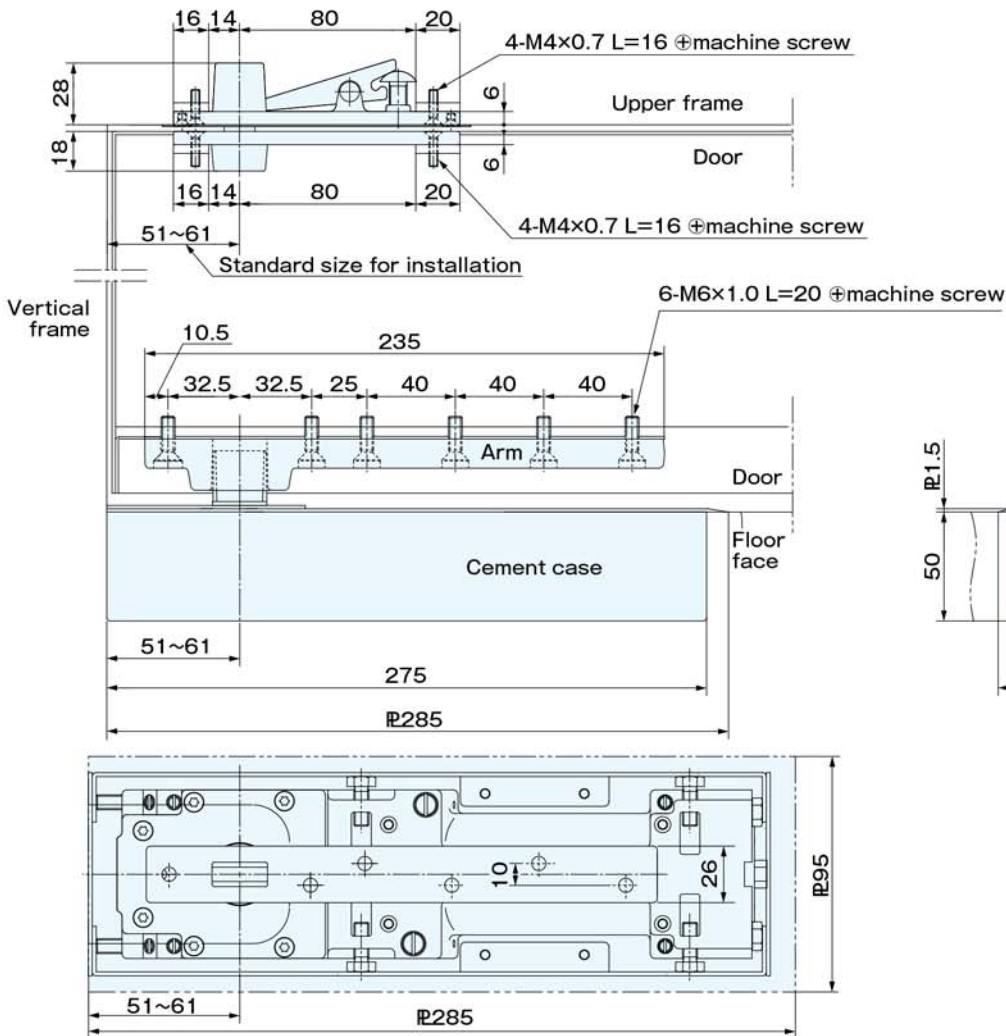
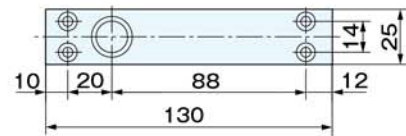
# S-500V / 500V · S-500VDA / 500VDA

OPENING SYSTEM OF DOOR	MODEL NUMBER		DELAYED ACTION	FITTING SIZE AND WEIGHT	
				MAXIMUM WIDTH(mm)	MAXIMUM WEIGHT(Kg)
CENTER HUNG IN DOUBLE ACTION  MAXIMUM OPENING ANGLE 175° HOLD-OPEN ANGLE 90°	<b>S-500V</b>	<b>90°HOLD</b>	<b>NO</b>	1100	120
	<b>500V</b>	<b>NON-HOLD</b>	<b>NO</b>		
	<b>S-500V DA</b>	<b>90°HOLD</b>	<b>YES</b>		
	<b>500V DA</b>	<b>NON-HOLD</b>	<b>YES</b>		

## ■ Top pivot(upper frame side)



## ■ Top pivot(door side)



Dimension is indicated by m/m unit

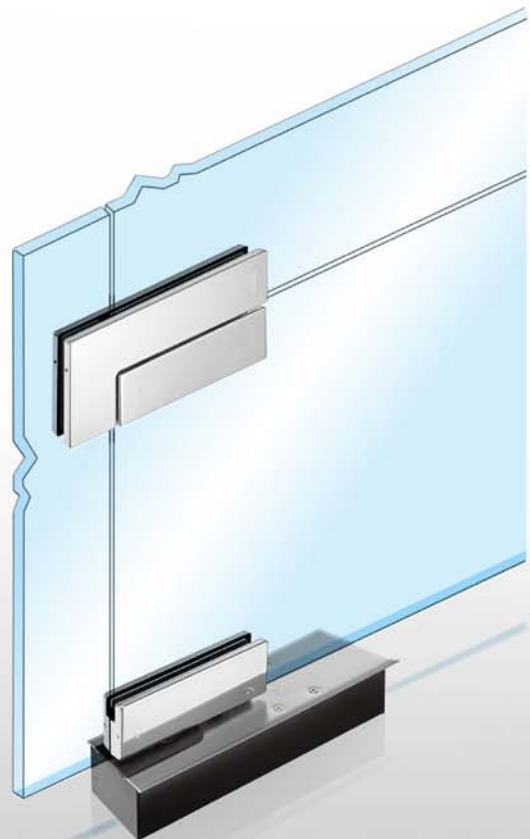


Patch Fitting

# RP Series



※ All glass clamping areas are to be cleaned with standard glass cleaner prior to installation.



※ All glass clamping areas are to be cleaned with standard glass cleaner prior to installation.

## Type Selection

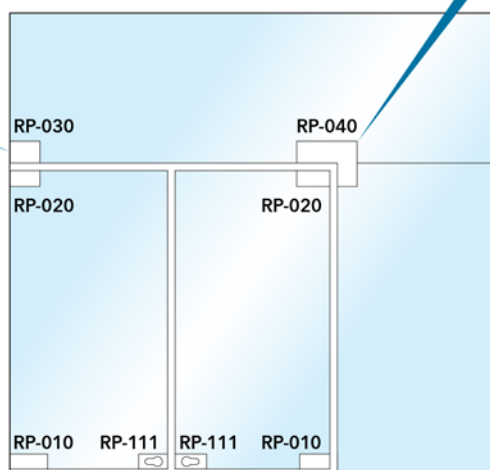


Top Patch Fitting  
Upper Patch Fitting



Corner Transom Patch Fitting  
Upper Patch Fitting

Bottom Patch Fitting

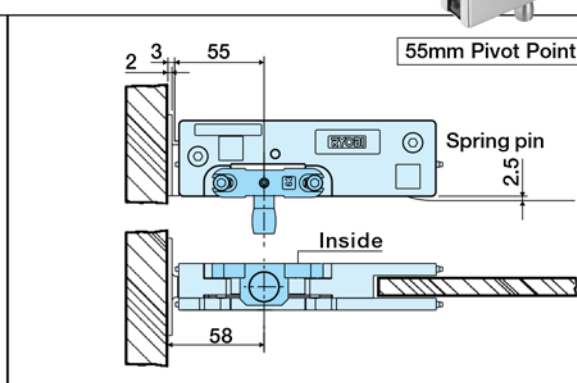
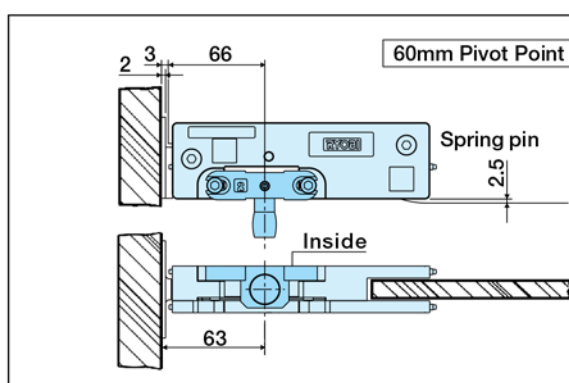


Lock Patch Fitting

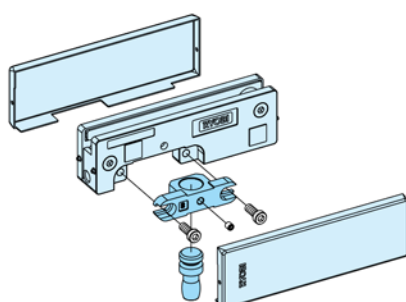


## Standard application

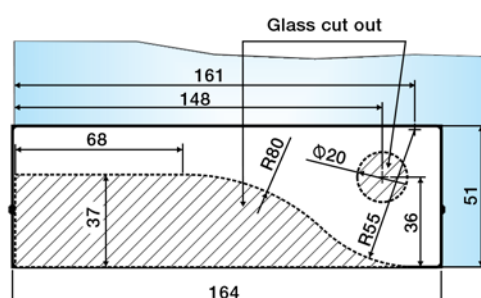
RP-030 • Top Patch Fitting

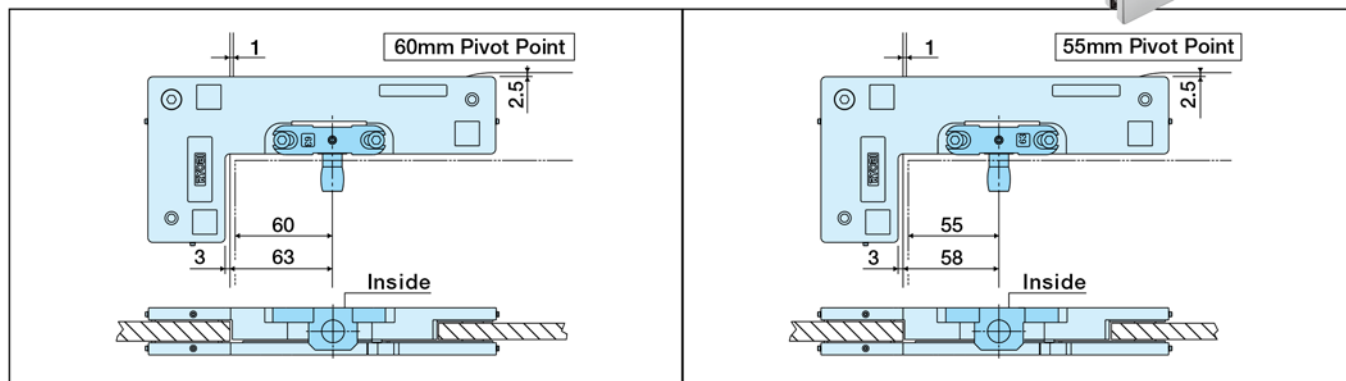
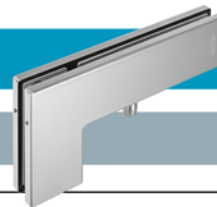
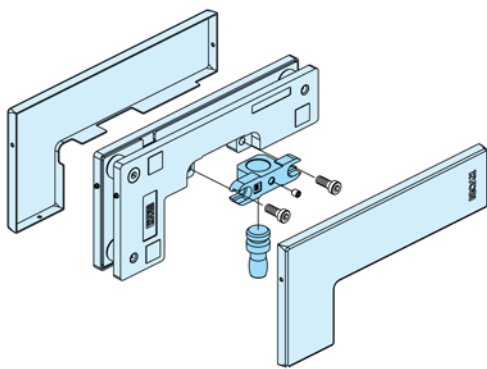
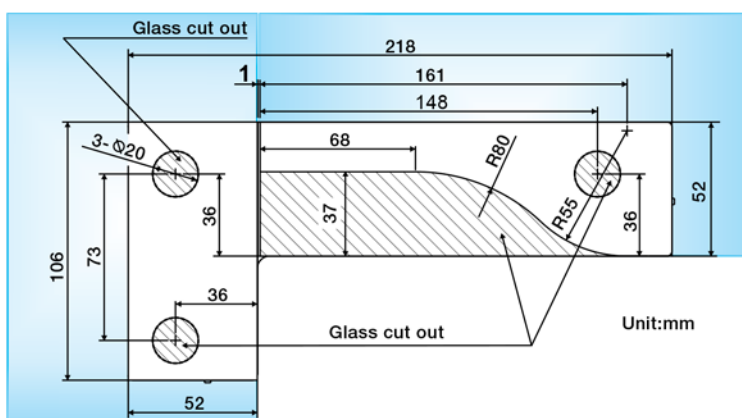
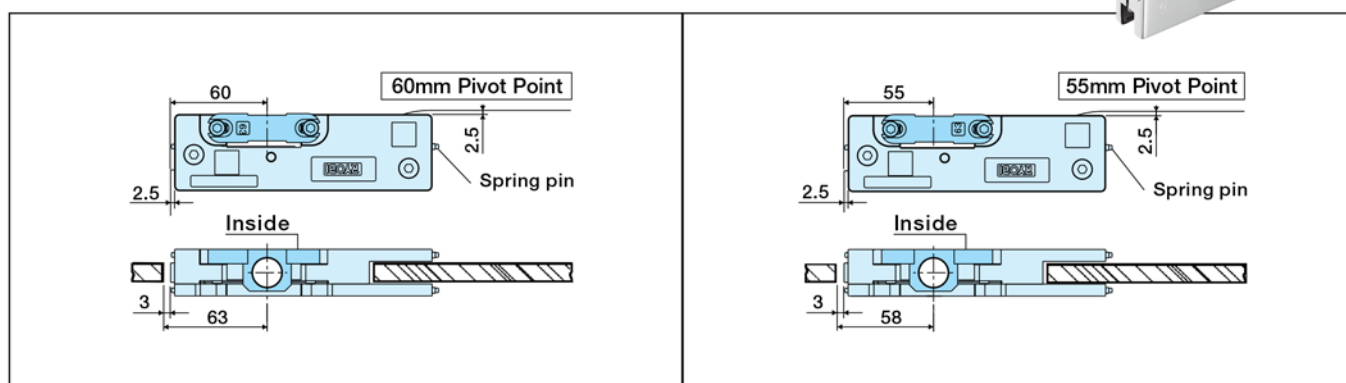
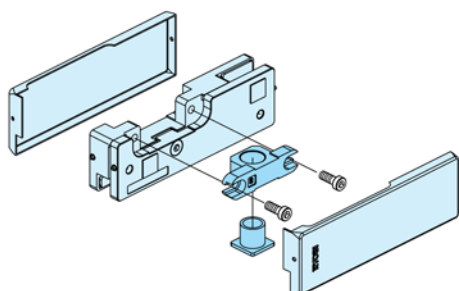
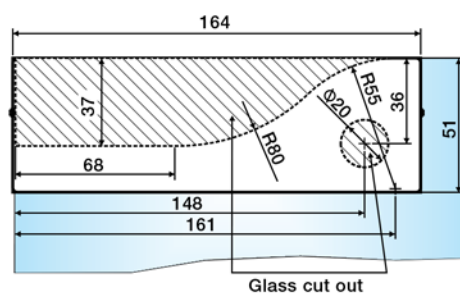


### • Installation Instruction



### • Glass Cutting Dimensions

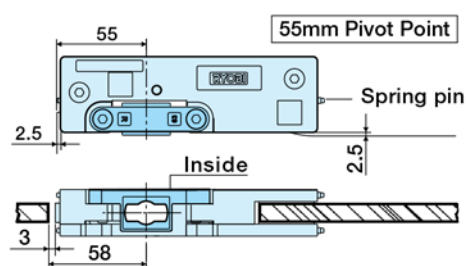
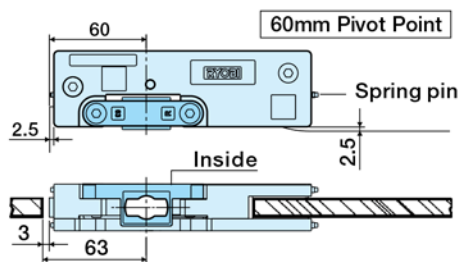


**Standard application****RP-040 • Corner Transom Patch Fitting****• Installation Instruction****• Glass Cutting Dimensions****RP-020 • Upper Patch Fitting****• Installation Instruction****• Glass Cutting Dimensions**

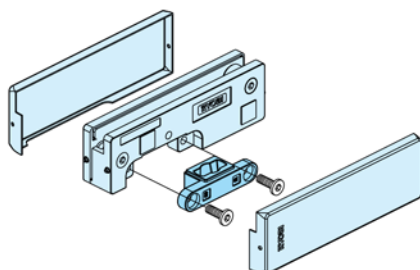


## Standard application

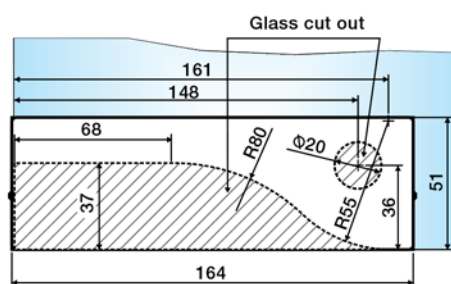
### RP-010 • Bottom Patch Fitting



#### • Installation Instruction



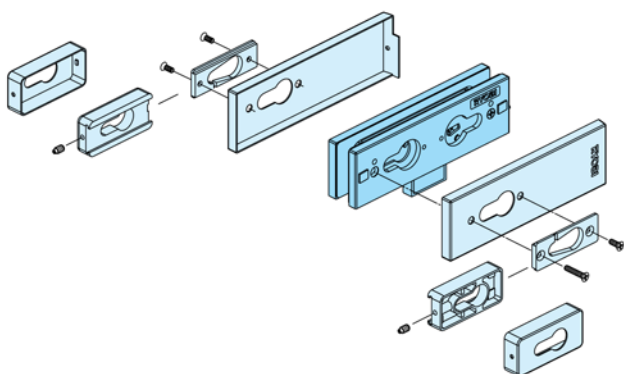
#### • Glass Cutting Dimensions



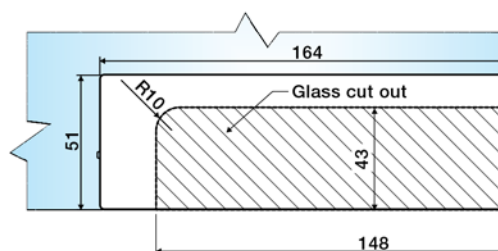
### RP-111 • Lock Patch Fitting



#### • Installation Instruction

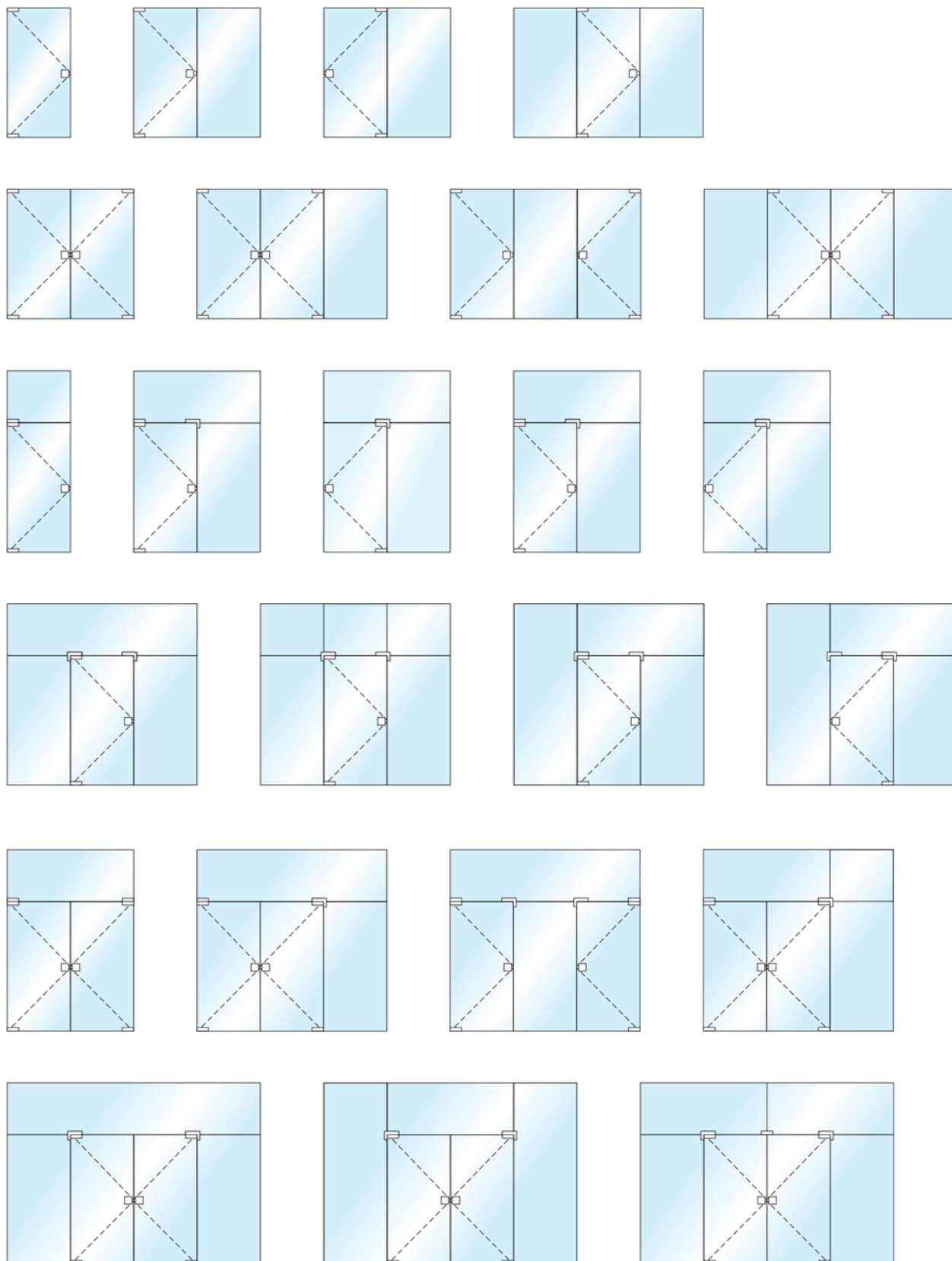


#### • Glass Cutting Dimensions



## Diagram example

### Typical glass assemblies with Patch Fitting



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