

**RYOBI**



REGISTERED TO  
ISO 9001  
CERTIFICATE  
NO.20002510 QM08

# FLOOR HINGE

600SERIES / 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	S-205K
	Without Hold-open	201N	202N	201Y	202Y	201K	202K	203K	204K	205K
Maximum Door Width		900mm	950mm	900mm	950mm	900mm	950mm	950mm	1050mm	1200mm
Maximum Door Weight		80kg	130kg	80kg	130kg	80kg	130kg	180kg	185kg	300kg
Maximum Opening Angle (degrees)		113°							108°	
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	1st speed adjustment	●	●	●	●	●	●	●	●	●
	2nd speed adjustment	●	●	●	●	●	●	●	●	●
	Closing position adjustment by body position	●	●	●	●	●	●	●	●	●
	Closing position adjustment by arm for N type	●	●							
	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.



## 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	1st speed adjustment	●	●	●	●	●
	2nd speed adjustment	●	●	●	●	●
	Closing position adjustment by body position	●	●	●	●	●
	Closing position adjustment by arm	●	●			
	Level 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.



## 500 SERIES NARROW TYPE

Model	With 90° Hold-open	S-500VK	S-500VDAK
	Without Hold-open	500VK	500VDAK
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	●	●
	Adjustable closing power	●	●
	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.



## 600 SERIES HEAVY DUTY TYPE

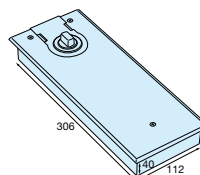
Model	With 90° Hold-open	S-606K (Center Hung)	S-606 O (Offset Hung)
	Without Hold-open	606K	606 O
Maximum door width	1400mm		
Maximum door weight	300kg		
Maximum opening angle (degrees)	175°		
Applicable door	Aluminum / Steel / Stainless Steel / Wood		
Cement case dimension (mm)	325 X 78 X 60		
Feature	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.

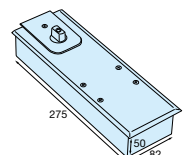
### Important notice

- 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.

- 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)

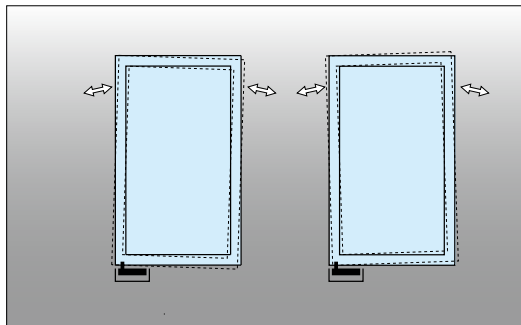
- Gap between door lower section and frame can be adjusted by the adjustment screw of the main body.
- Tighten all of the screws and their locknuts after adjustment.

### Adjustable Door Clearance Position by body position

	Door Clearance Position	
	① Vertical	
<b>200 Series</b>	7mm	
<b>400 Series</b>	9mm	
<b>500 Series</b>	10mm	
<b>600 Series</b>	6mm	

Adjust clearance between door and vertical frame by vertical adjusting screws

#### ① Vertical

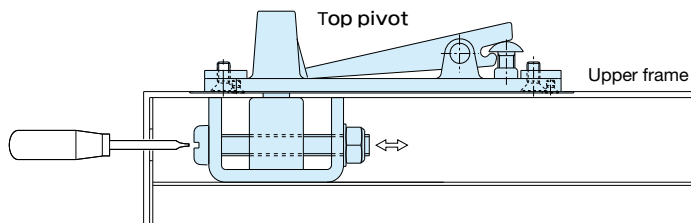
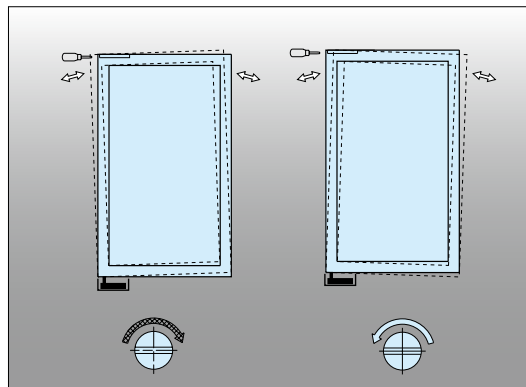


### Adjustable Door Clearance Position by top pivot

	Door Clearance Position	
	Vertical	
<b>S201Y/201Y S-202Y/202Y</b>	± 10mm	

Adjust clearance between door and vertical frame by vertical adjusting screws

#### Vertical

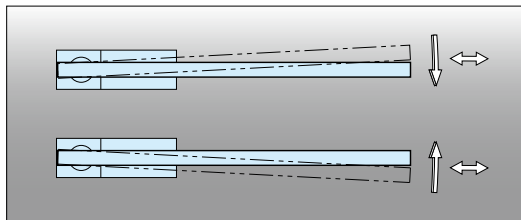


### Adjustable Door Closing Position by body position

	Door Closing Position	
	② Lateral	
<b>200 Series</b>	10mm	
<b>400 Series</b>	4.5mm	
<b>500 Series</b>	10mm	
<b>600 Series</b>	6mm	

Door closing position adjustable by lateral adjusting screws

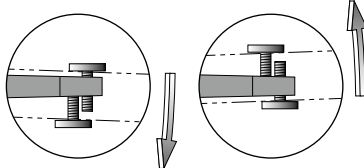
#### ② Lateral



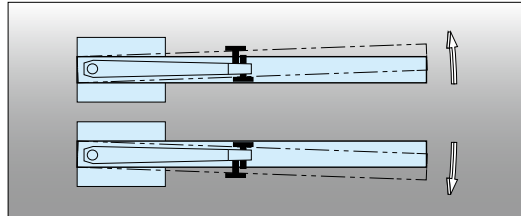
### Adjustable Door Closing Position by arm for N type

	Door Closing Position	
	Lateral	
<b>S201N/201N S-202N/202N</b>	DT	Adjustment fee
	40mm	± 50mm
	45mm	± 40mm
<b>S401N/401N S-402N/402N</b>	50mm	± 25mm
	55mm	± 15mm

Door closing position adjustable by adjusting screw (N type only)



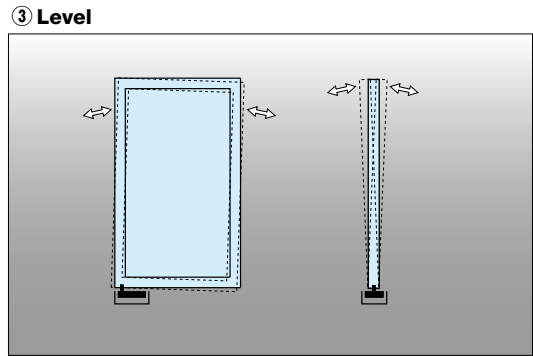
#### Lateral



# Adjustment of floor hinge body position (all series)

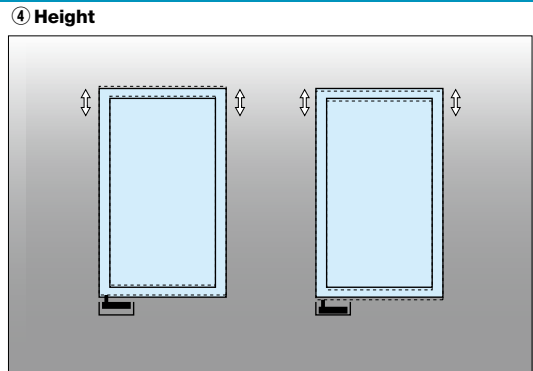
## Adjustable Door Clearance Position by body position

	Clearance Position	Adjust clearance between door and vertical frame by Level adjusting screws
	③ Level	
<b>400 Series</b>	6mm	

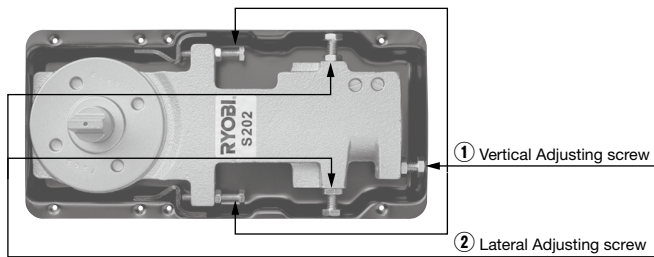


## Adjustable Door Clearance Position by body position

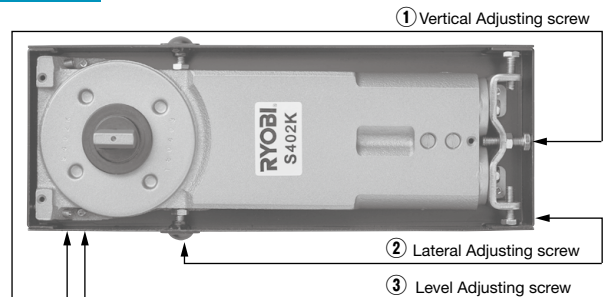
	Clearance Position	Adjust clearance between door and vertical frame by height adjusting screws
	④ Height	
<b>200Y Series</b>	7mm	
<b>500 Series</b>	4mm	
<b>600 Series</b>	4mm	



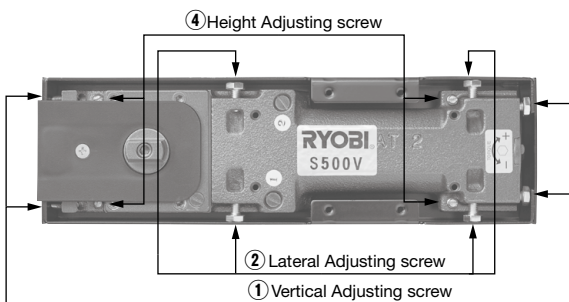
### 200 Series



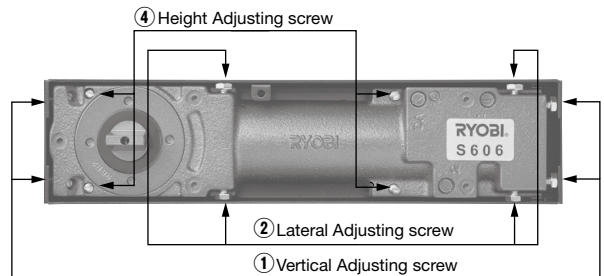
### 400 Series



### 500 Series

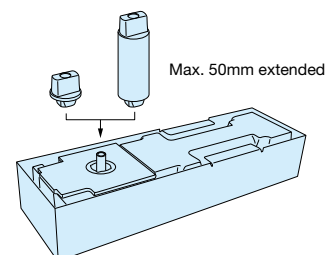


### 600 Series



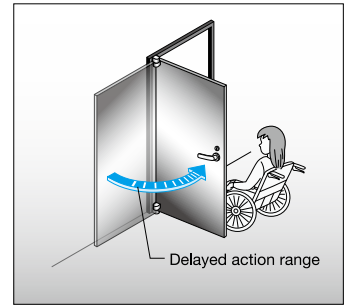
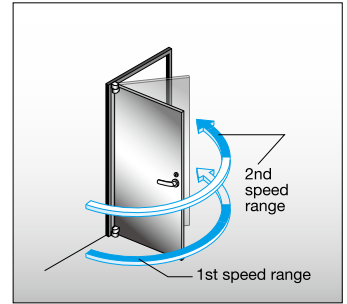
## Additional feature (500 series)

- 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.



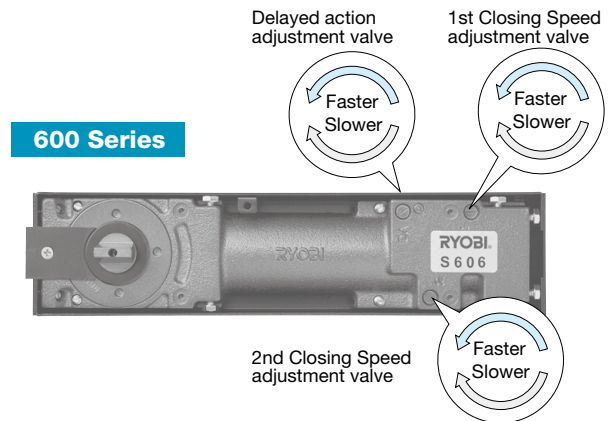
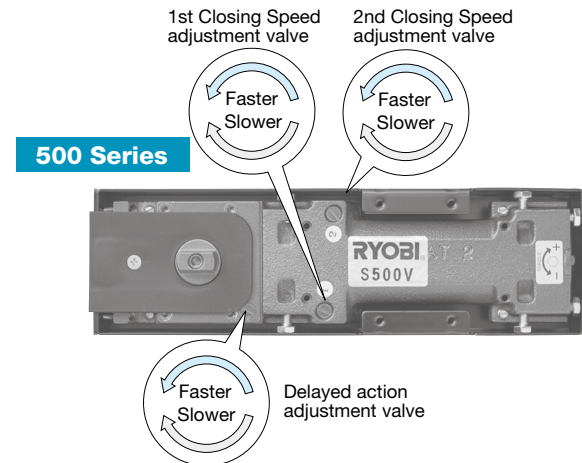
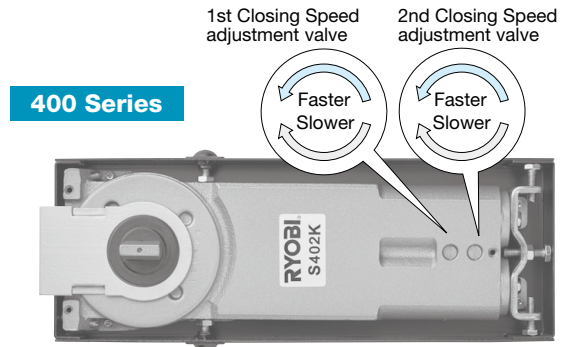
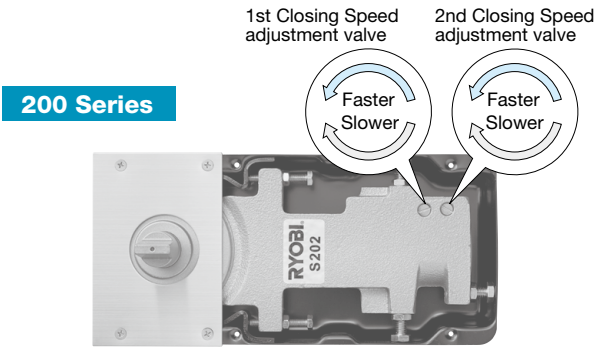
# Adjust Closing Speed (All Series)

- 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.



### 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.

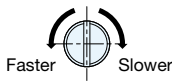


### Range of delayed action and back check

Adjustment of closing speed is made by valves ① ② DA

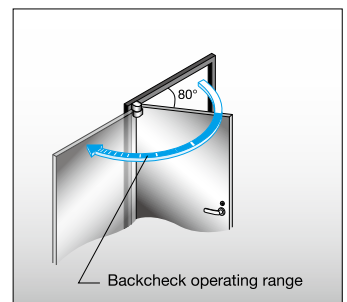
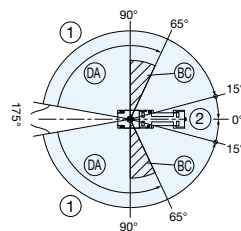
#### Closing ranges

- ① 175°-15°
- ② 15°-0°
- DA 175°-65°



Optional delayed action enables door slowly in DA range

Back check function BC stalls door opening between 65 degrees and 90 degrees



# Model chart

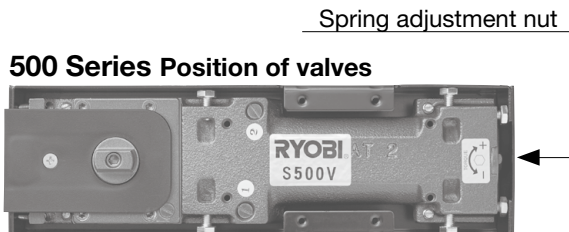
Maximum Door Width / Maximum Door Weight									
Maximum Door Width	900mm	950mm	950mm	950mm	950mm	1050mm		1200mm	
Maximum Door Weight	80kg	120kg	130kg	150kg	180kg	185kg		300kg	
Model	<b>200 Series</b>	S-201N 201N S-201Y 201Y S-201K 201K		S-202N 202N S-202Y 202Y S-202K 202K		S-203K 203K	S-204K 204K		S-205K 205K
	<b>400 Series</b>	S-401N 401N S-401K 401K	S-402N 402N S-402K 402K		S-403K 403K				

Maximum Door Width		1100mm	1400mm
Maximum Door Weight		120kg	300kg
Model	<b>500 Series</b>	S-500VK S-500VDAK 500VK 500VDAK Spring Power adjustable according to door weight and width EN 1 through EN 4. Factory preset size is 3.	
	<b>600 Series</b>	S-606K 606K S-606 O 606 O	

## Additional feature (500 series)

- Adjustable closing power

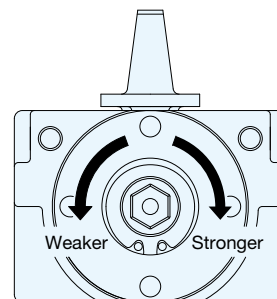
Spring Power adjustable according to door weight and width EN 1 through EN 4. Factory preset size is 3.



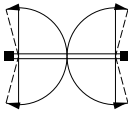
### How to adjust closing power

Turn of adjustment nut	Torque	0°- 4°
0 turn	Minimum	-
4 turn	Size 1	9~13 [Nm]
7 turn	Size 2	13~18 [Nm]
10.5 turn	Size 3 (Preset)	18~26 [Nm]
13.5 turn	Size 4 (Max)	26~37 [Nm]

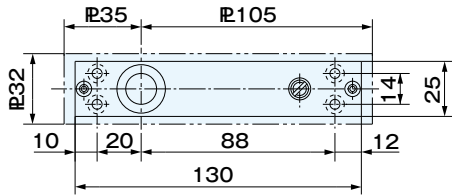
Factory preset is 11.5 turns.



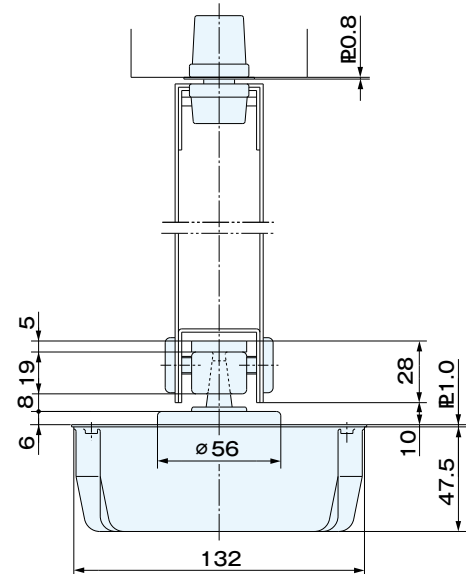
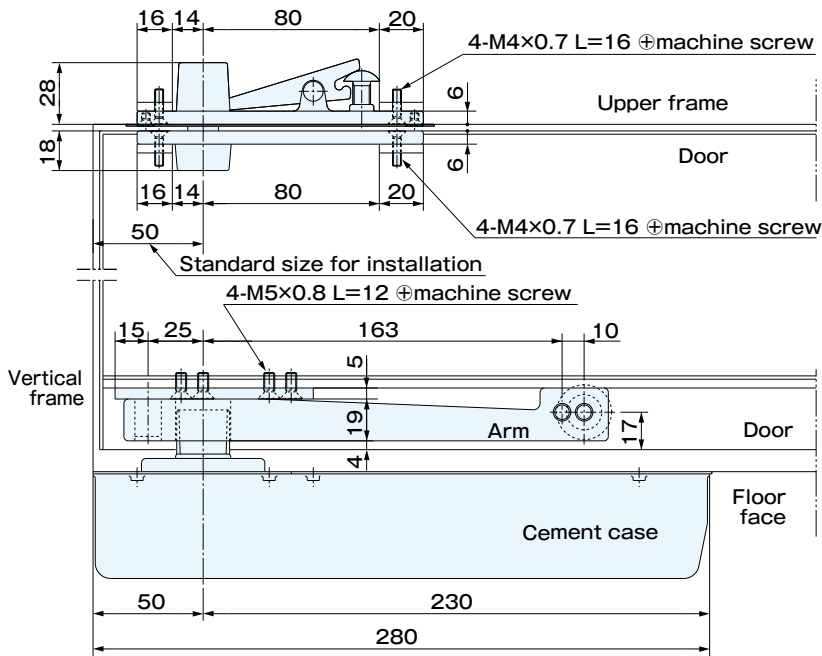
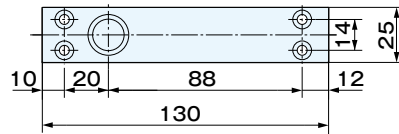
# S-201N / 201N · S-202N / 202N

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 113° HOLD OPEN ANGLE 90°	<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>		

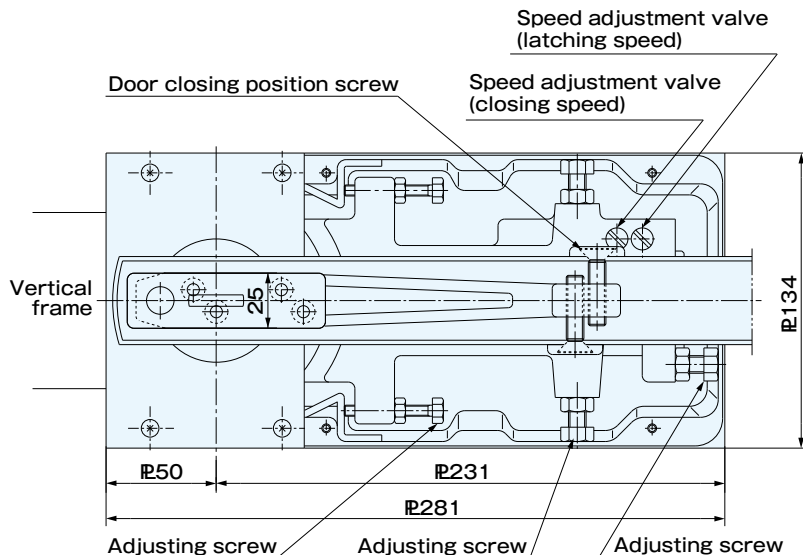
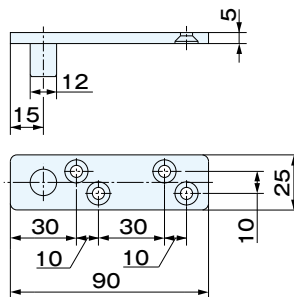
## Top pivot(upper frame side)



## Top pivot(door side)



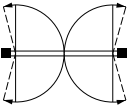
## Arm plate



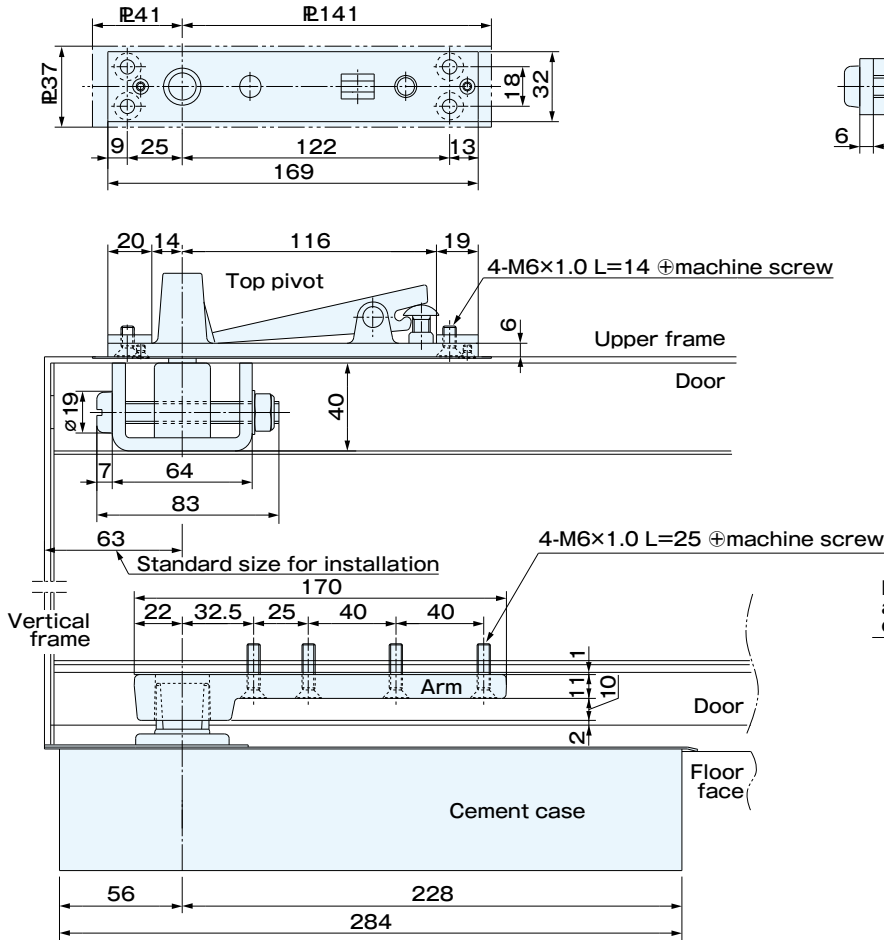
Dimension is indicated by m/m unit



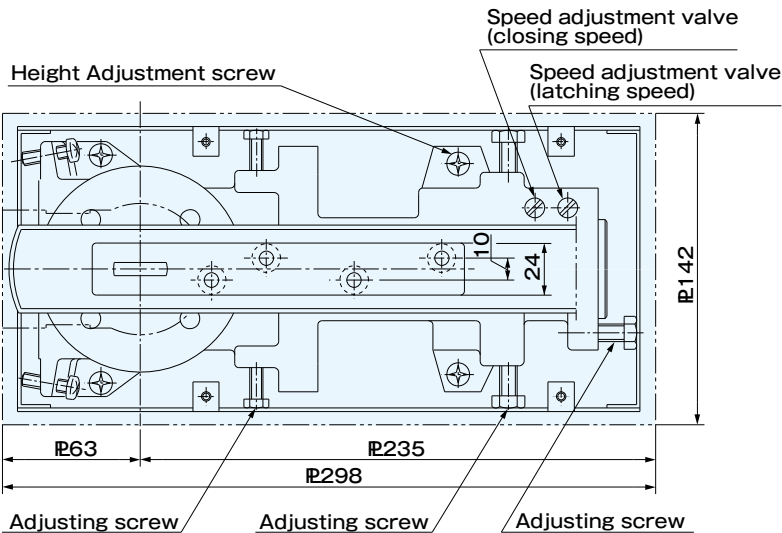
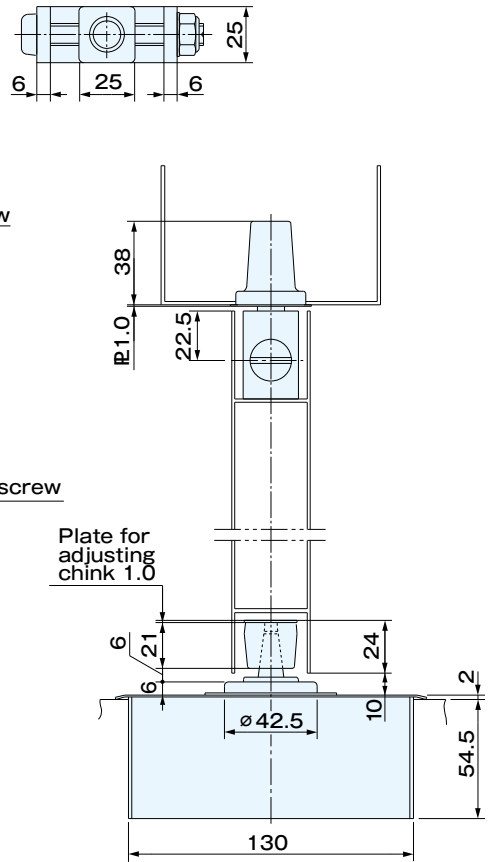
**S-201Y / 201Y · S-202Y / 202Y**

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°	<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)**

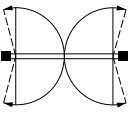


■ **Top pivot(door side)**

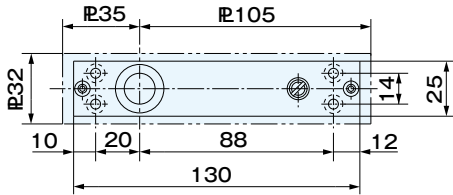


Dimension is indicated by m/m unit

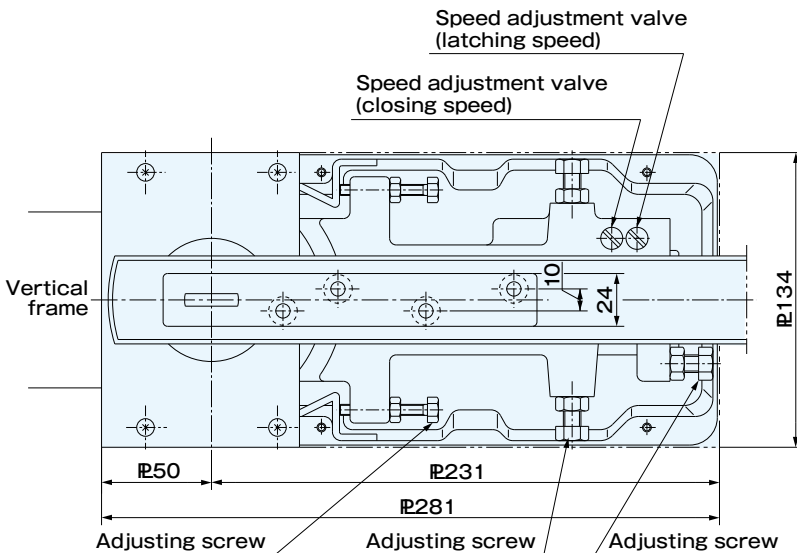
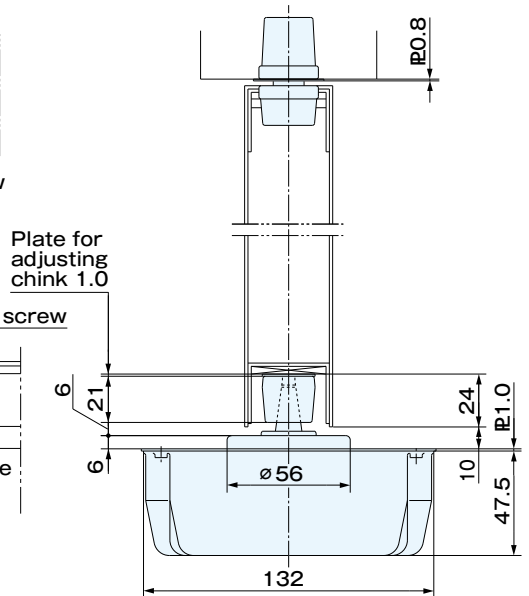
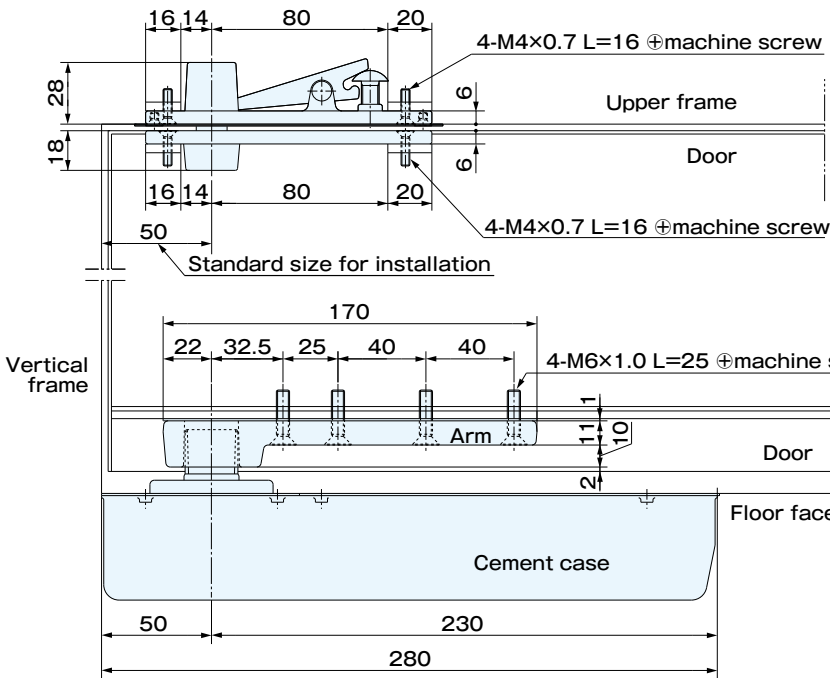
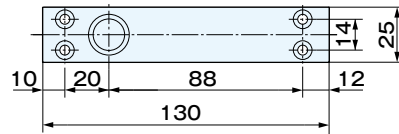
# S-201K / 201K · S-202K / 202K

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°	<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)

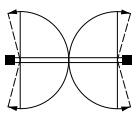


## ■ Top pivot(door side)

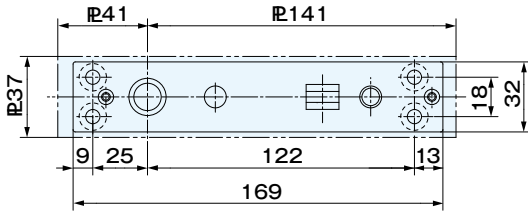


Dimension is indicated by m/m unit

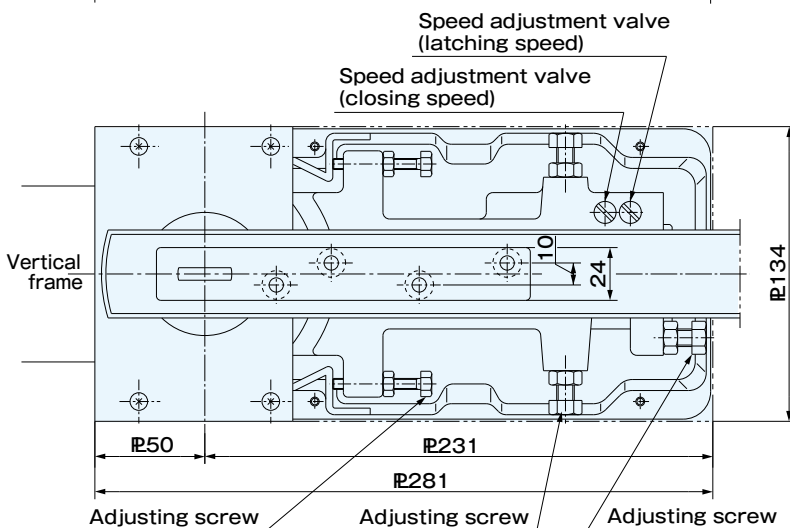
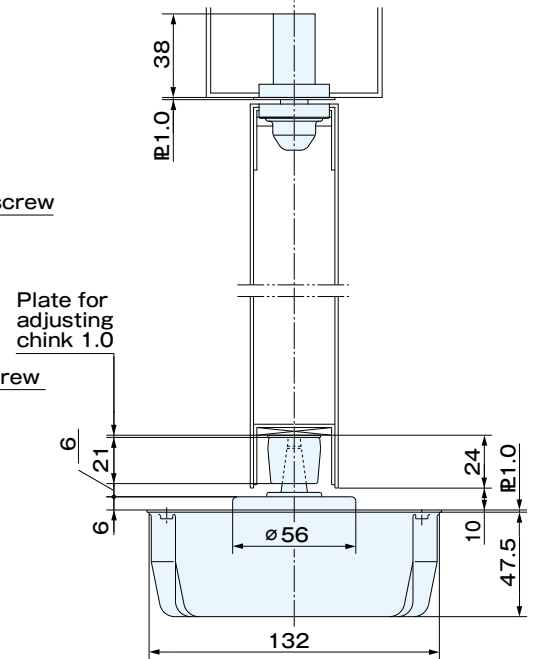
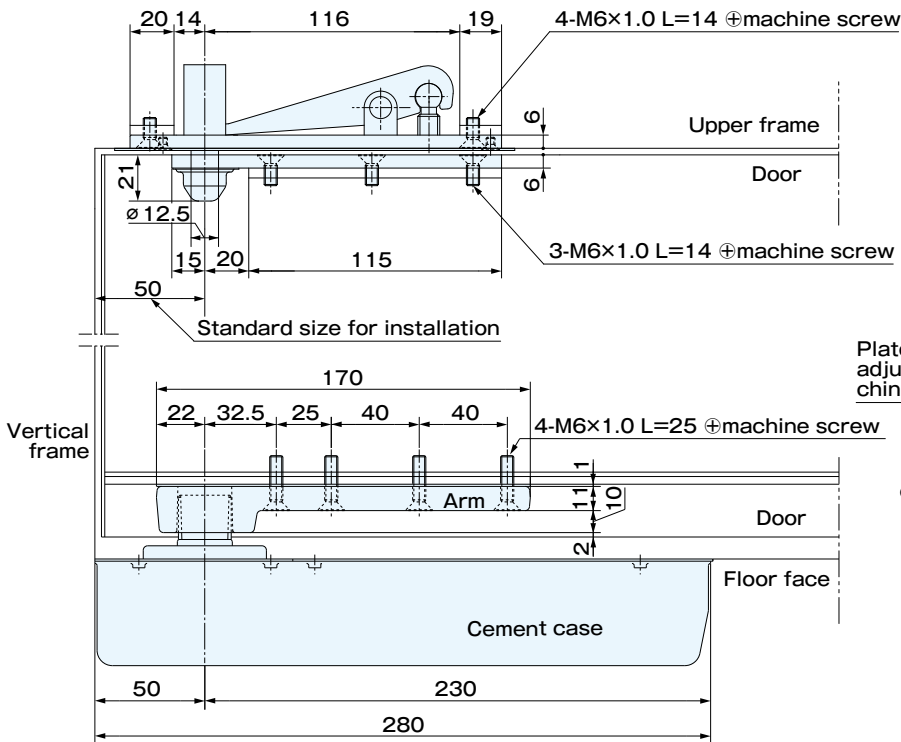
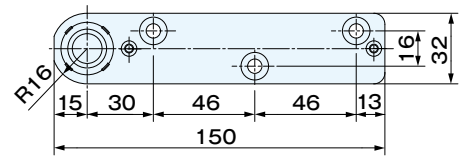
# S-203K / 203K

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	DOOR WEIGHT(Kg)
CENTER HUNG DOUBLE ACTION  MAXIMUM OPENING ANGLE 113° HOLD-OPEN ANGLE 90°	<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)

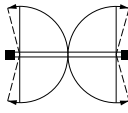


Dimension is indicated by m/m unit

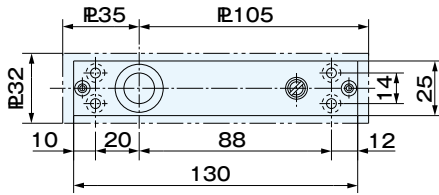




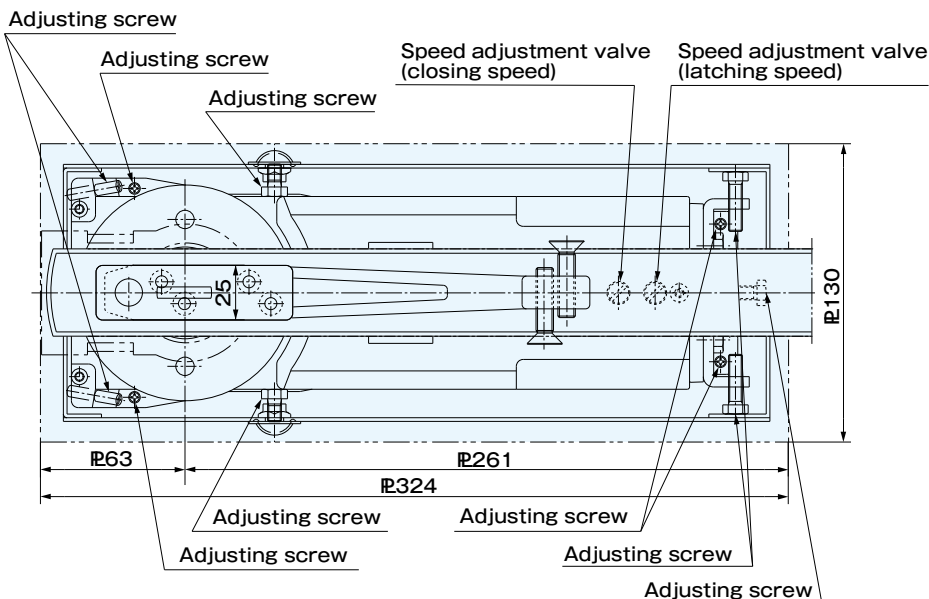
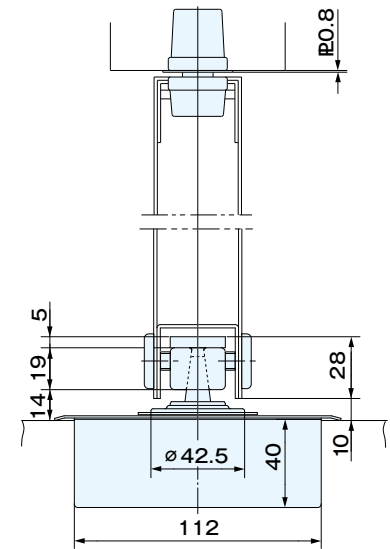
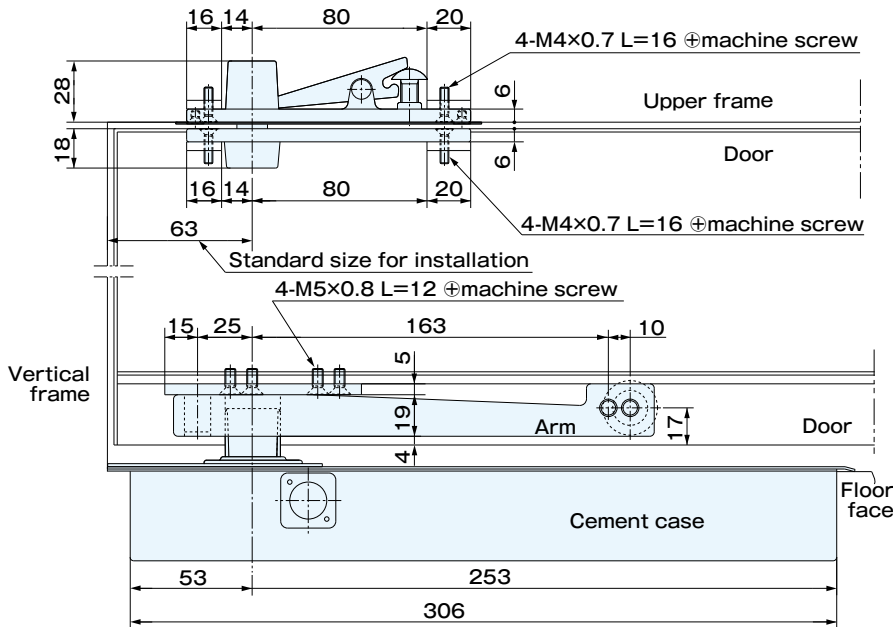
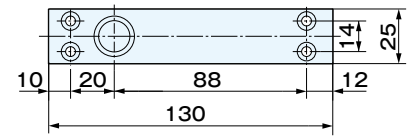
# S-401N / 401N · S-402N / 402N

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(Kg)
 <p>MAXIMUM OPENING ANGLE 108° HOLD-OPEN ANGLE 90°</p>	<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>		

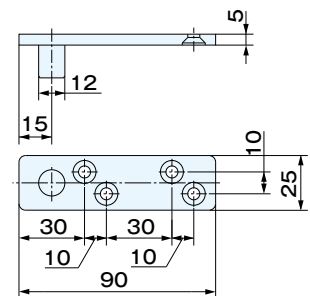
## ■ Top pivot (upper frame side)



## ■ Top pivot (door side)

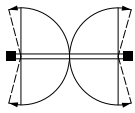


## ■ Arm plate

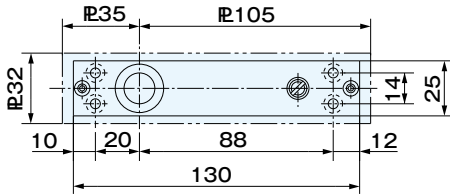


Dimension is indicated by m/m unit

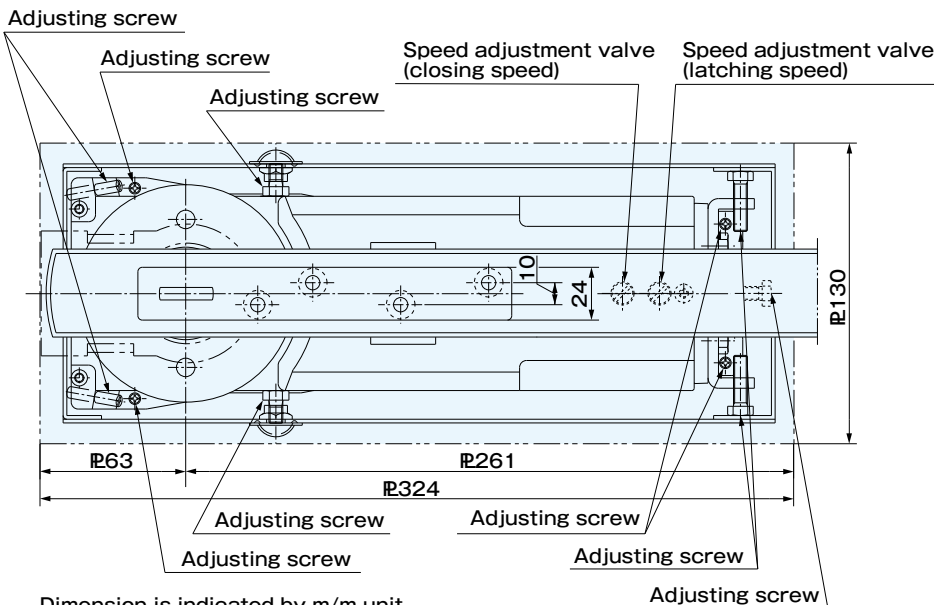
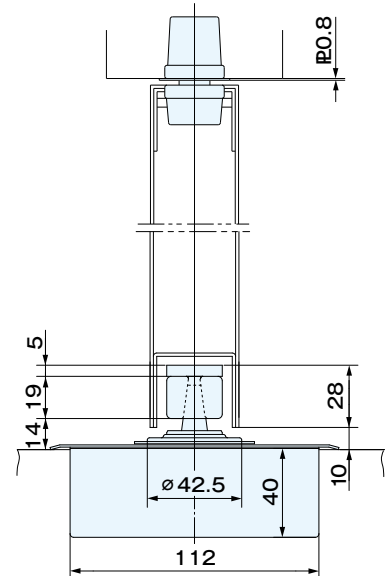
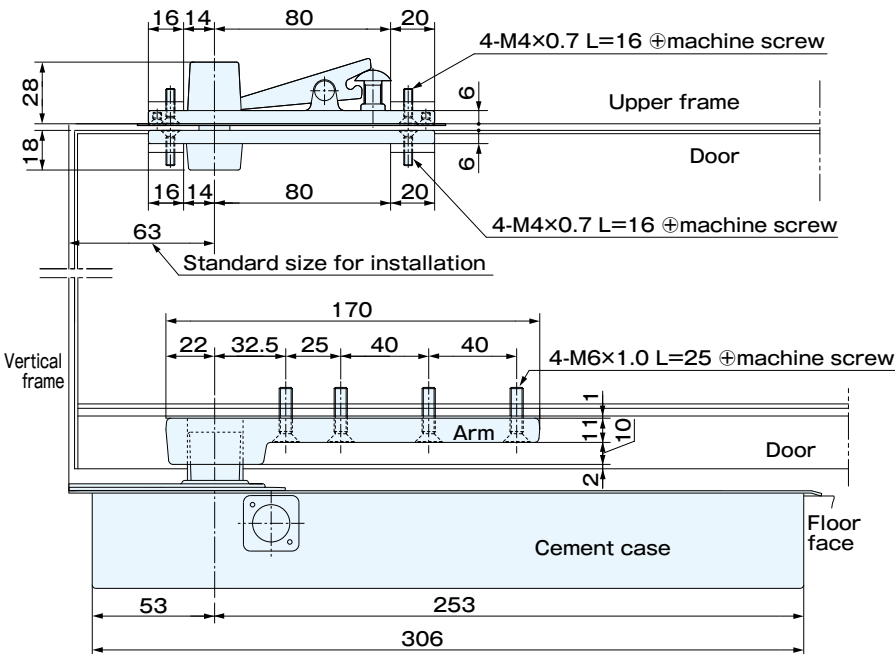
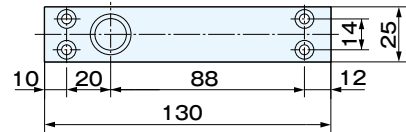
# S-401K / 401K · S-402K / 402K

OPENING SYSTEM OF DOOR	MODEL NUMBER		FITTING SIZE AND WEIGHT	
			WIDTH X HEIGHT(mm)	WEIGHT(Kg)
 <p>MAXIMUM OPENING ANGLE 108° HOLD-OPEN ANGLE 90°</p>	<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)

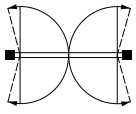


## ■ Top pivot (door side)

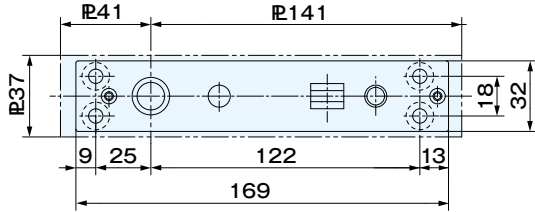


Dimension is indicated by m/m unit

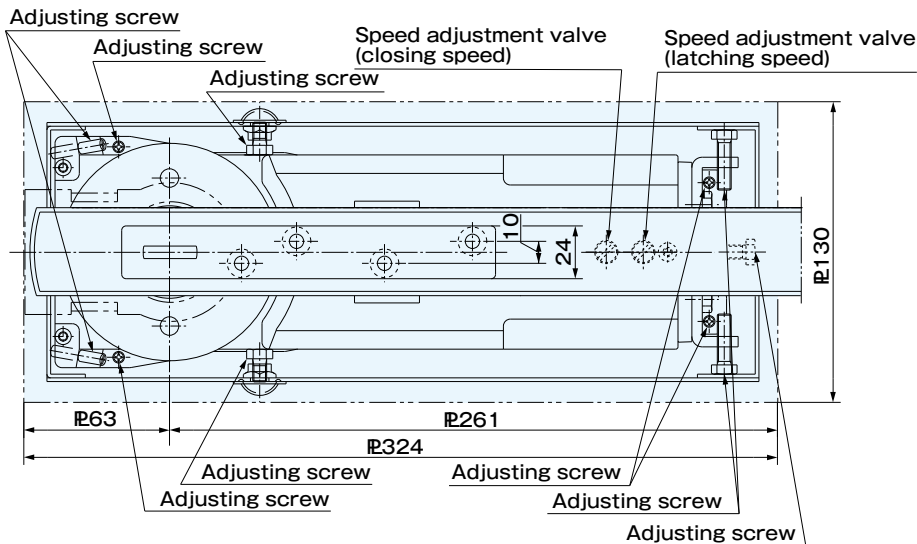
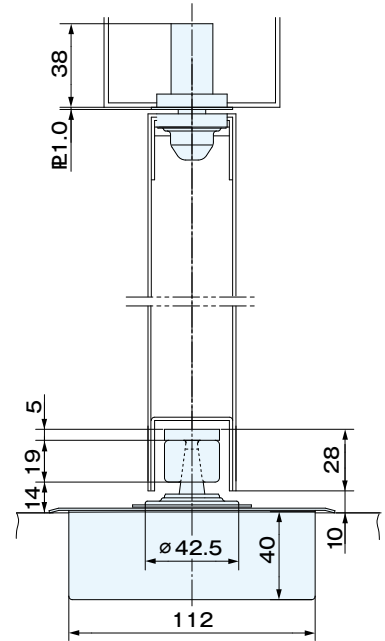
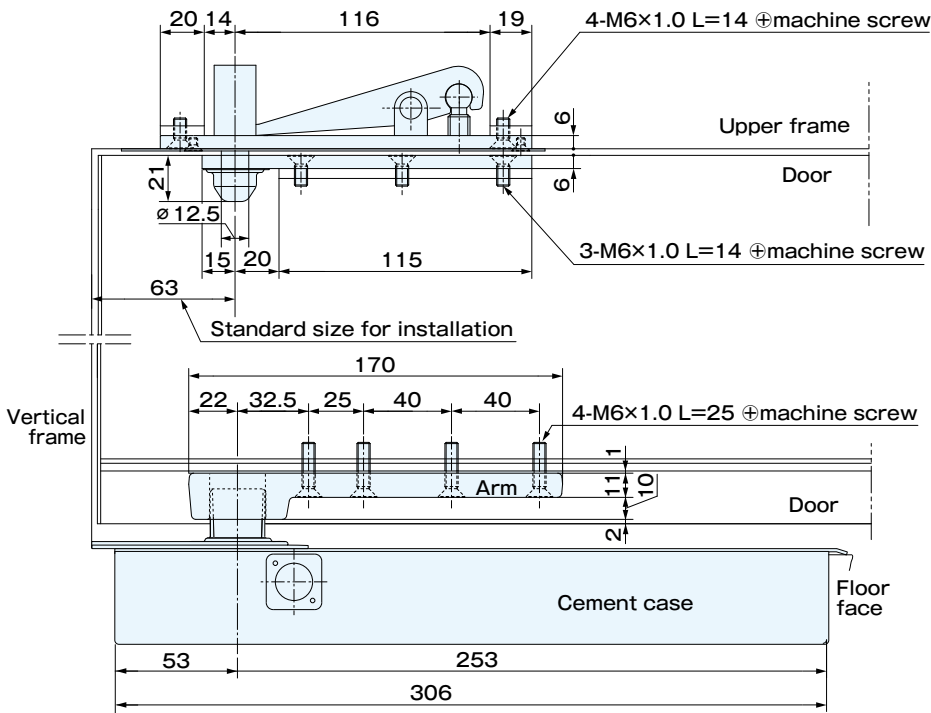
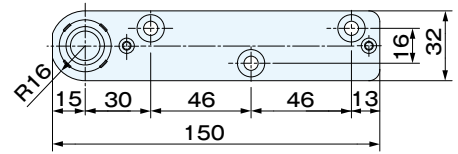
# S-403K / 403K

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)

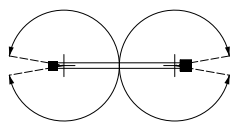


Dimension is indicated by m/m unit



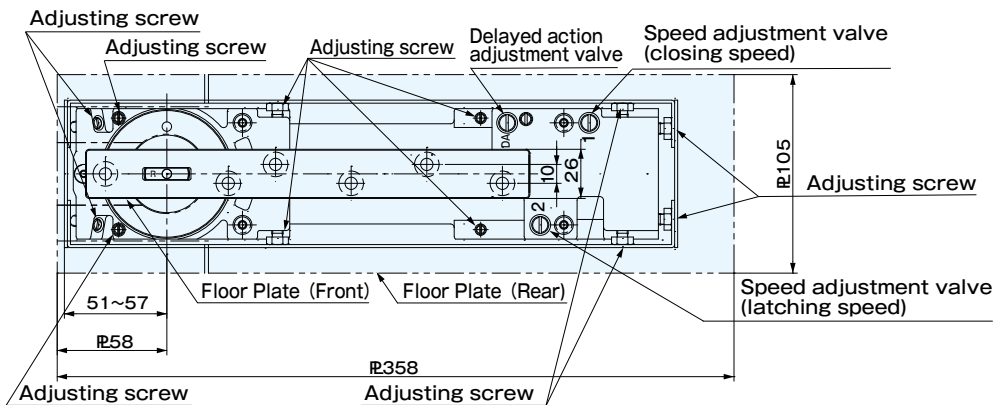
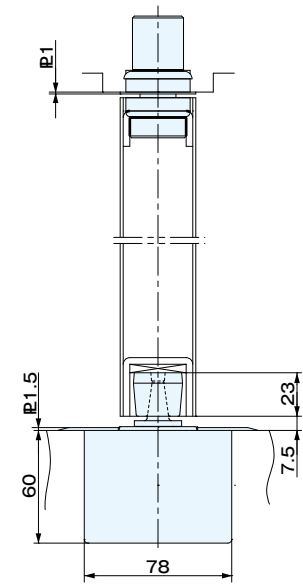
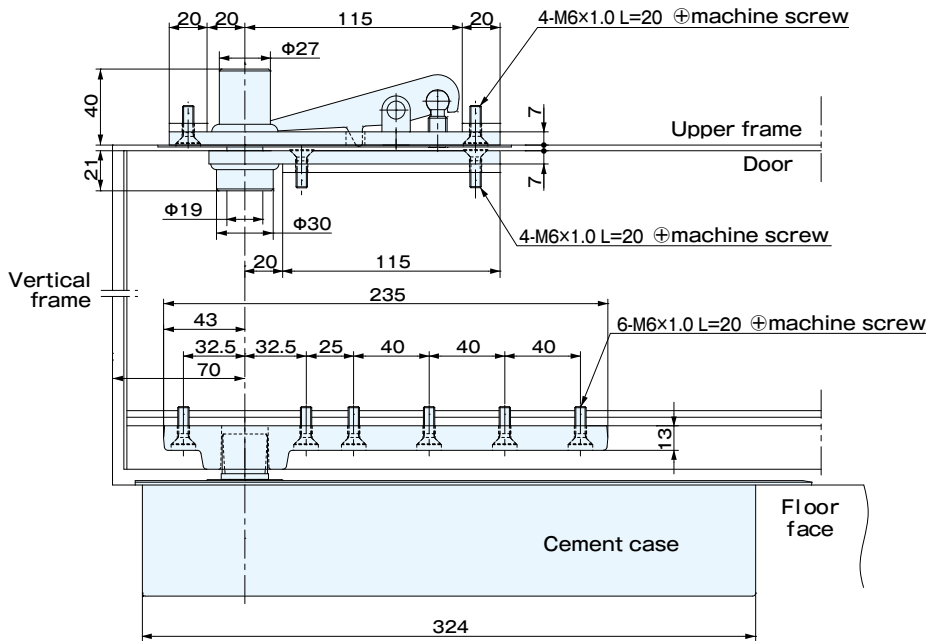
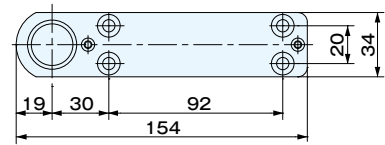
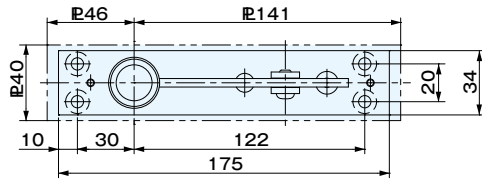


# S-600K / 600K

OPENING SYSTEM OF DOOR	MODEL NUMBER		DELAYED ACTION	FITTING SIZE AND WEIGHT	
				MAXIMUM WIDTH(mm)	MAXIMUM WEIGHT(Kg)
 <p>MAXIMUM OPENING ANGLE 175°</p>	<b>S-606K</b>	<b>90° HOLD</b>	<b>YES</b>	1400	300
	<b>606K</b>	<b>NON-HOLD</b>	<b>YES</b>		

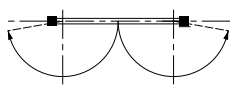
## Top pivot (upper frame side)

## Top pivot (door side)

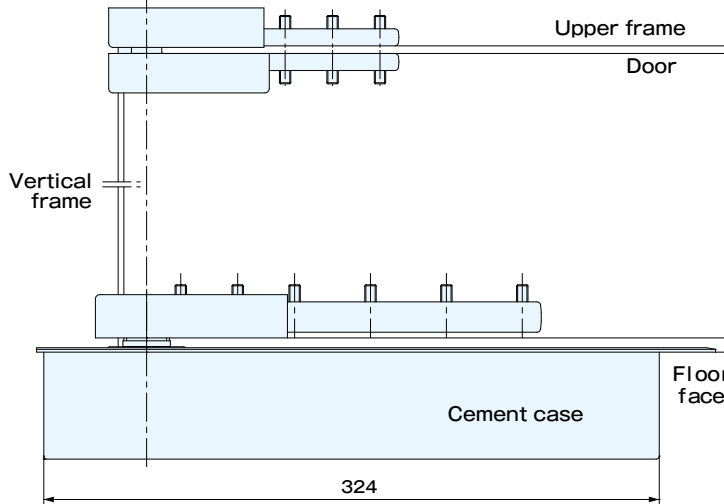
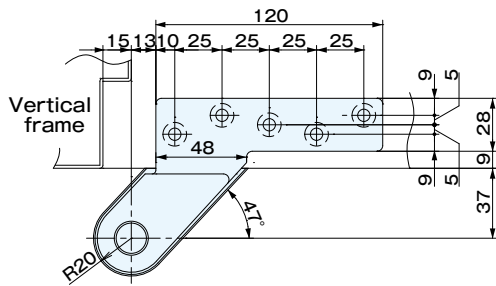


Dimension is indicated by m/m unit

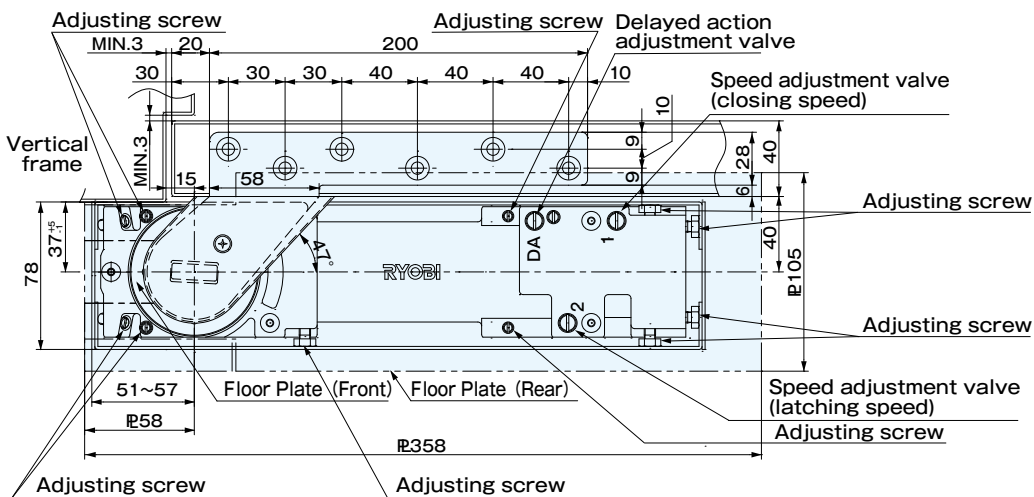
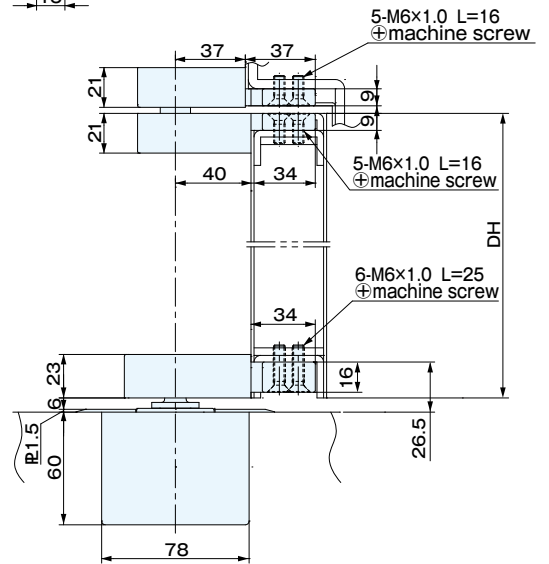
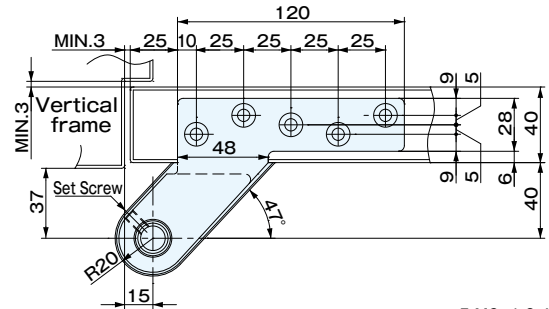
# S-600 O / 600 O

OPENING SYSTEM OF DOOR	MODEL NUMBER	HAND OF DOORS	DELAYED ACTION	FITTING SIZE AND WEIGHT		
				MAXIMUM WIDTH(mm)	MAXIMUM WEIGHT(Kg)	
 SINGLE ACTION OFFSET HUNG DOORS RIGHT HAND DOOR LEFT HAND DOOR MAXIMUM OPENING ANGLE 175°	<b>S-606 O R</b>	<b>RIGHT HAND</b>	<b>90° HOLD</b>	<b>YES</b>	1400	300
	<b>S-606 O L</b>	<b>LEFT HAND</b>				
	<b>606 O R</b>	<b>RIGHT HAND</b>	<b>NON-HOLD</b>			
	<b>606 O L</b>	<b>LEFT HAND</b>				

## Top pivot (upper frame side)








## Top pivot (door side)



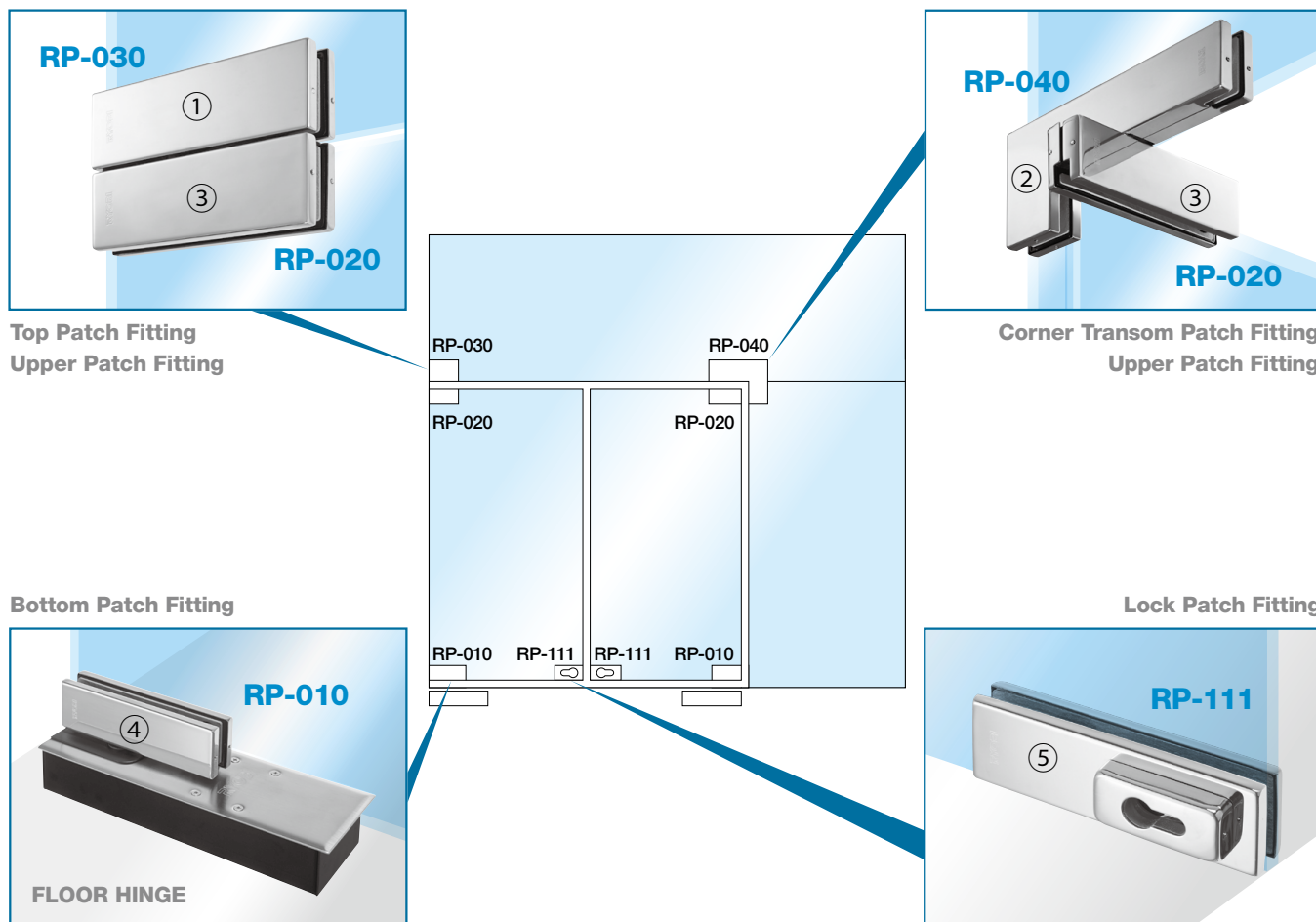
Dimension is indicated by m/m unit

# Patch Fitting RP Series

# Model chart

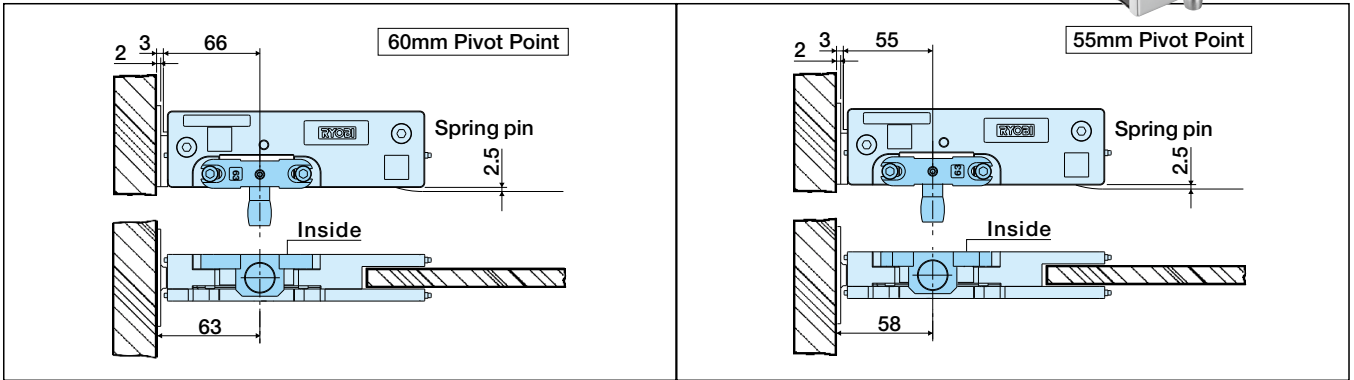
Standard application					
Model	①	②	③	④	⑤
	Top Patch Fitting	Corner Transom Patch Fitting	Upper Patch Fitting	Bottom Patch Fitting	Lock Patch Fitting
					
	RP-030	RP-040	RP-020	RP-010	RP-111
Maximum Door Width	1100mm				
Maximum Door Weight	120kg				
Glass thickness	10mm/12mm				
FLOOR HINGE	200 SERIES CLASSICAL TYPE / 400 SERIES THIN TYPE / 500 SERIES NARROW TYPE				

## Type Selection

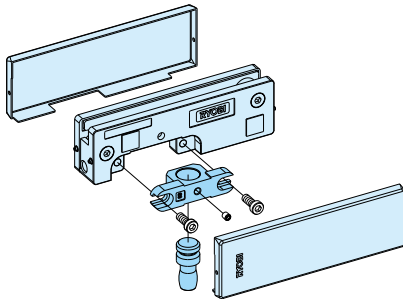


# Standard application

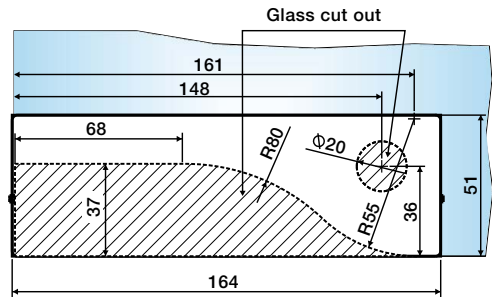
## RP-030 • Top Patch Fitting



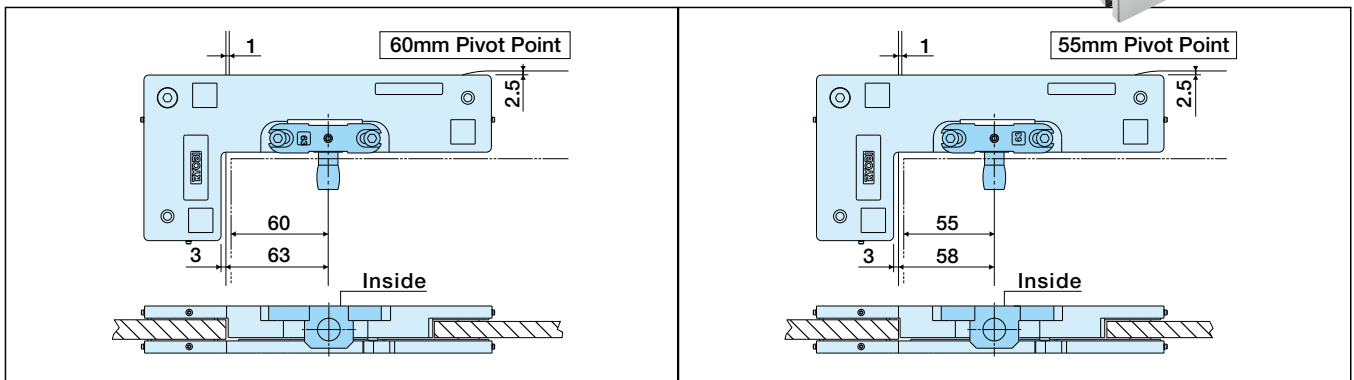
### • Installation Instruction



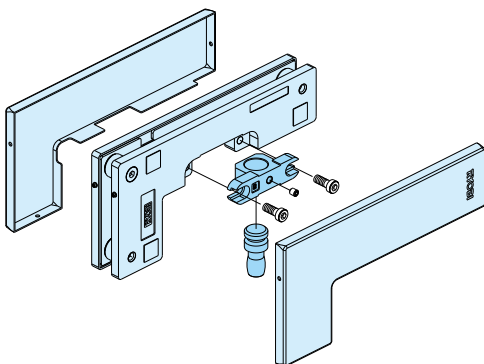
### • Glass Cutting Dimensions



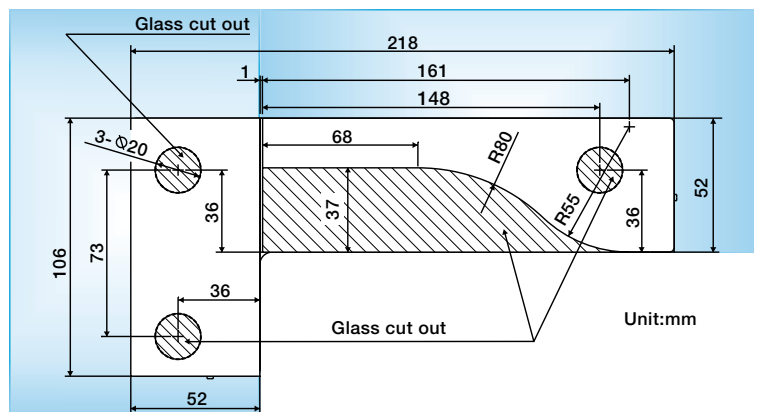
## RP-040 • Corner Transom Patch Fitting



### • Installation Instruction

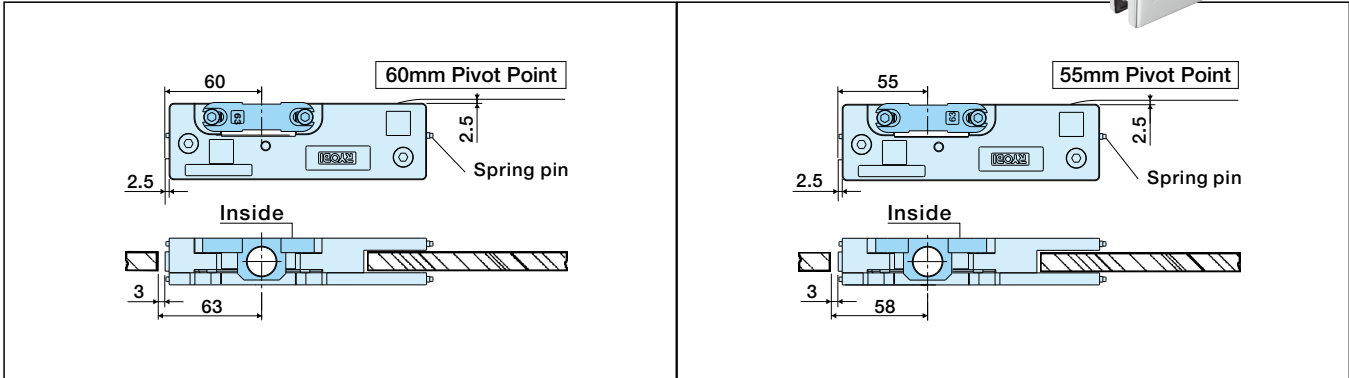


### • Glass Cutting Dimensions

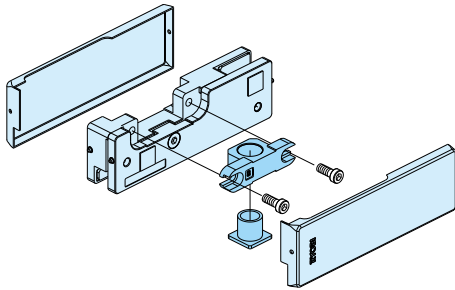


# Standard application

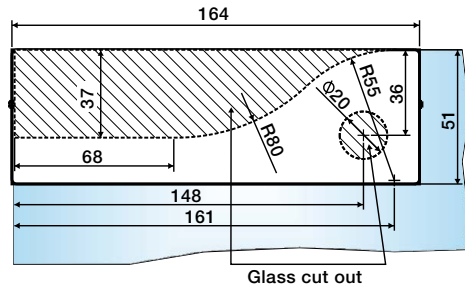
## RP-020 • Upper Patch Fitting



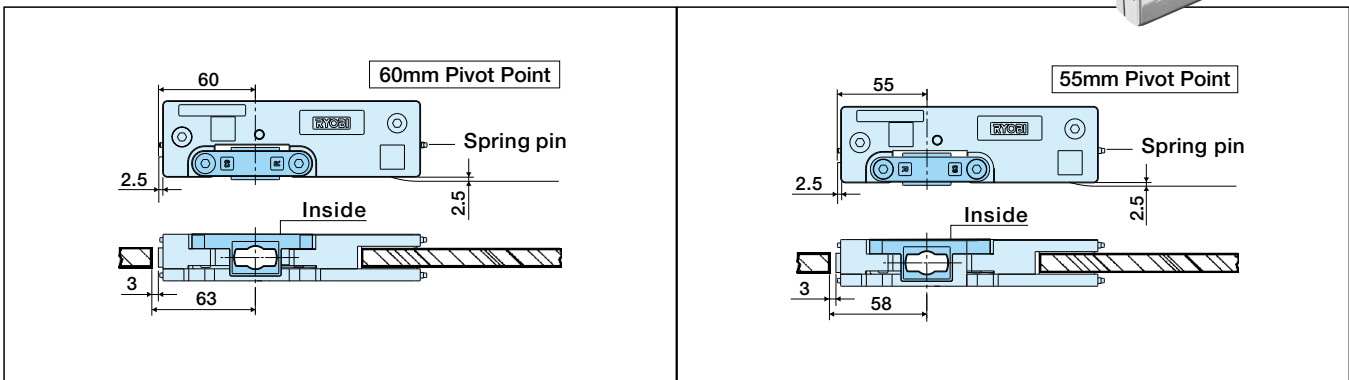
### • Installation Instruction



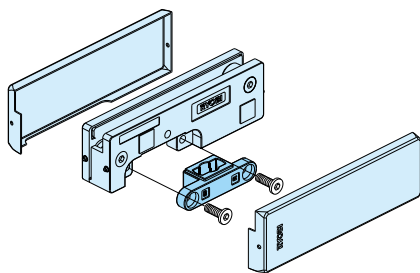
### • Glass Cutting Dimensions



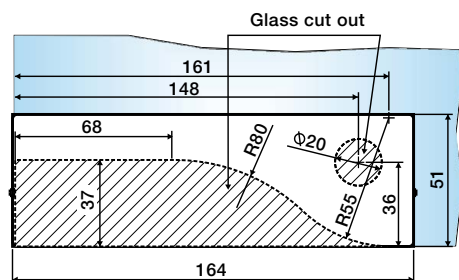
## RP-010 • Bottom Patch Fitting



### • Installation Instruction



### • Glass Cutting Dimensions

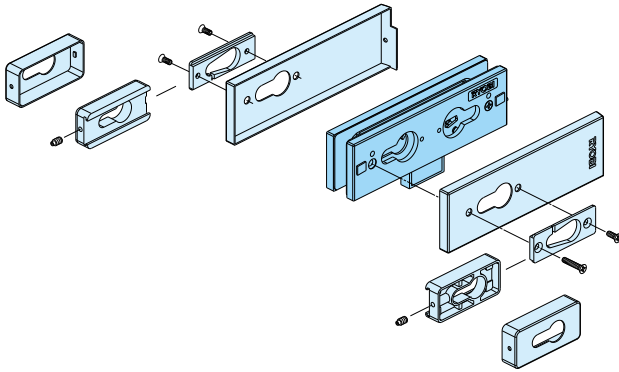


# Standard application

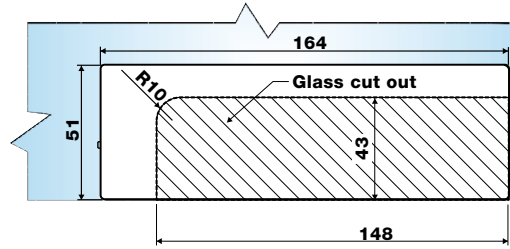
RP-111 • Lock Patch Fitting



## • Installation Instruction

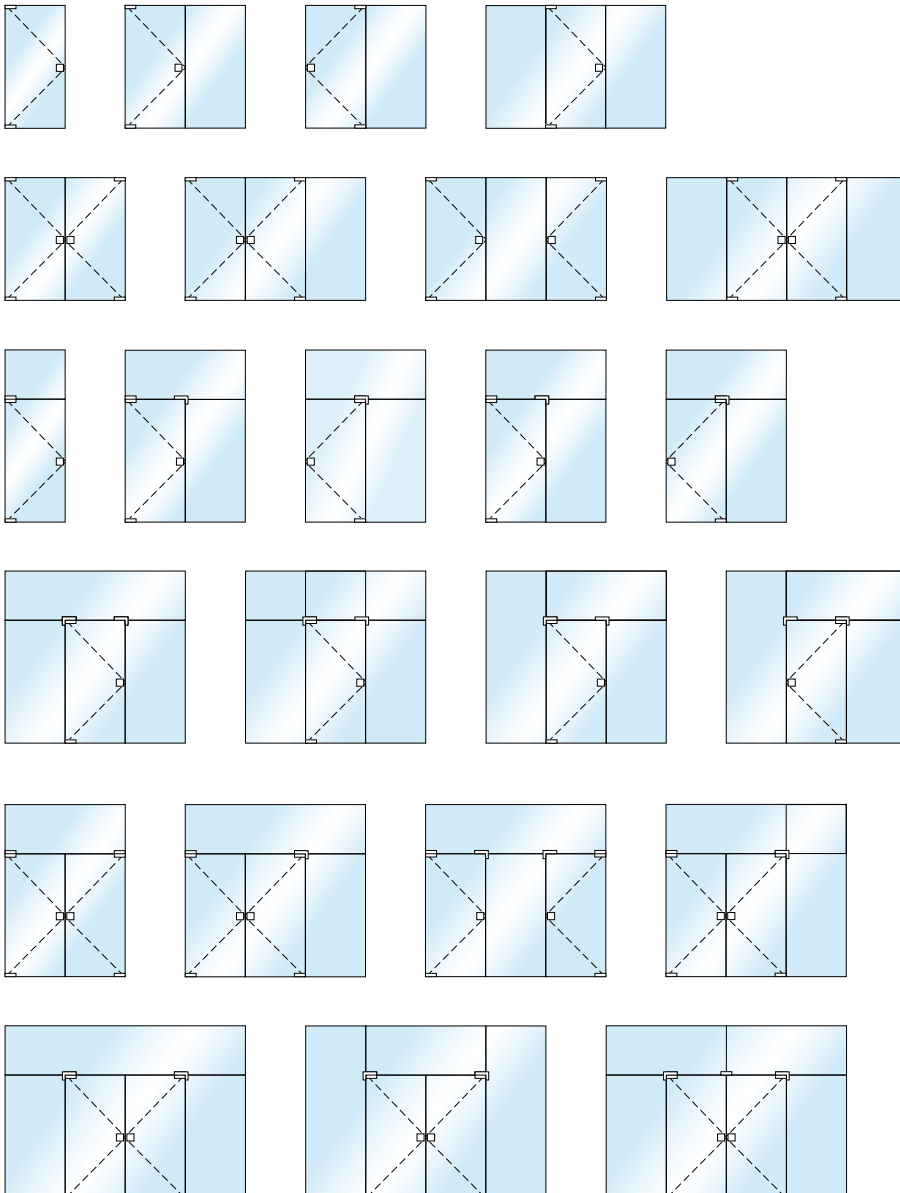


## • Glass Cutting Dimensions



## Diagram example

Typical glass assemblies with Patch Fitting



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