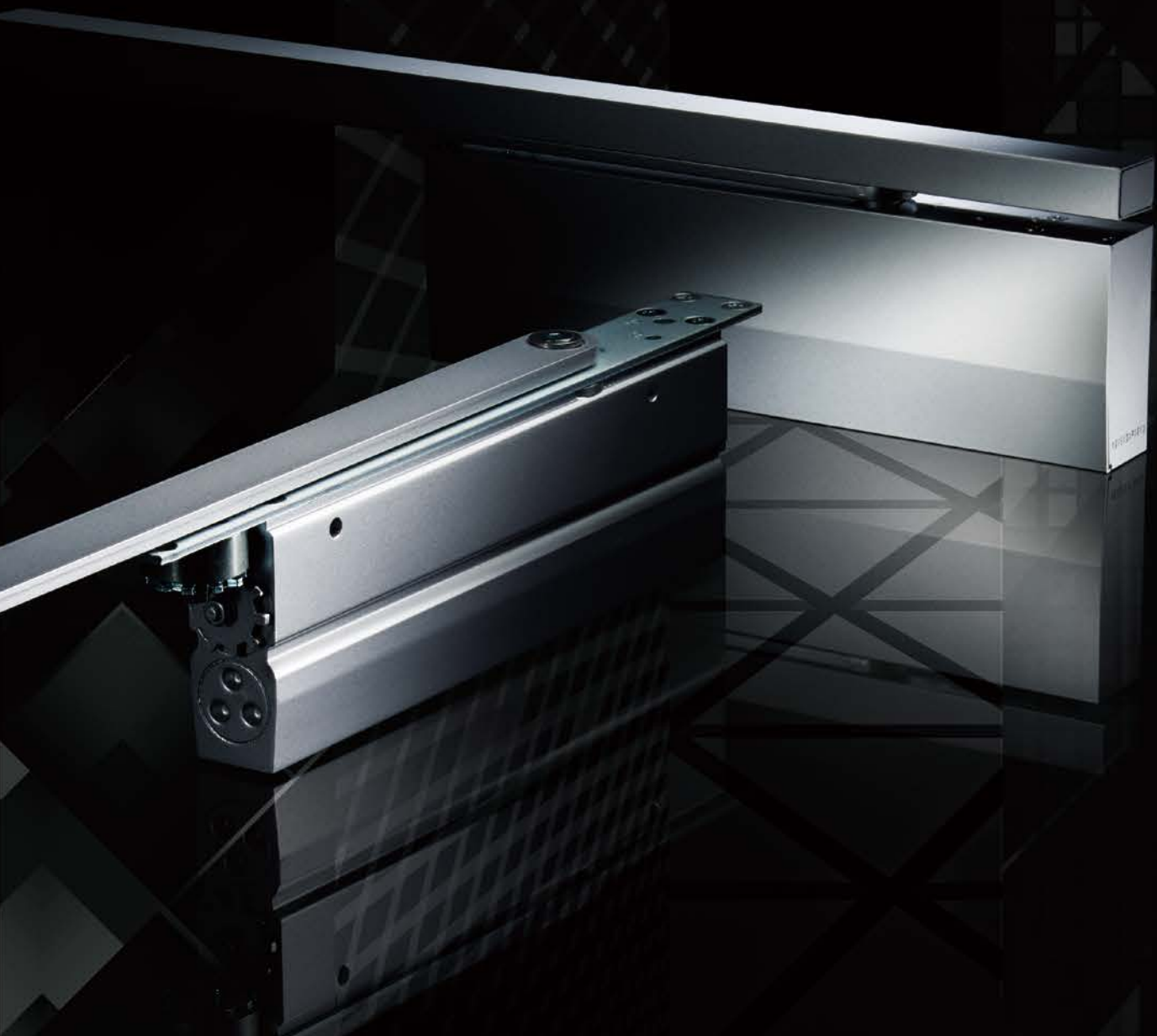


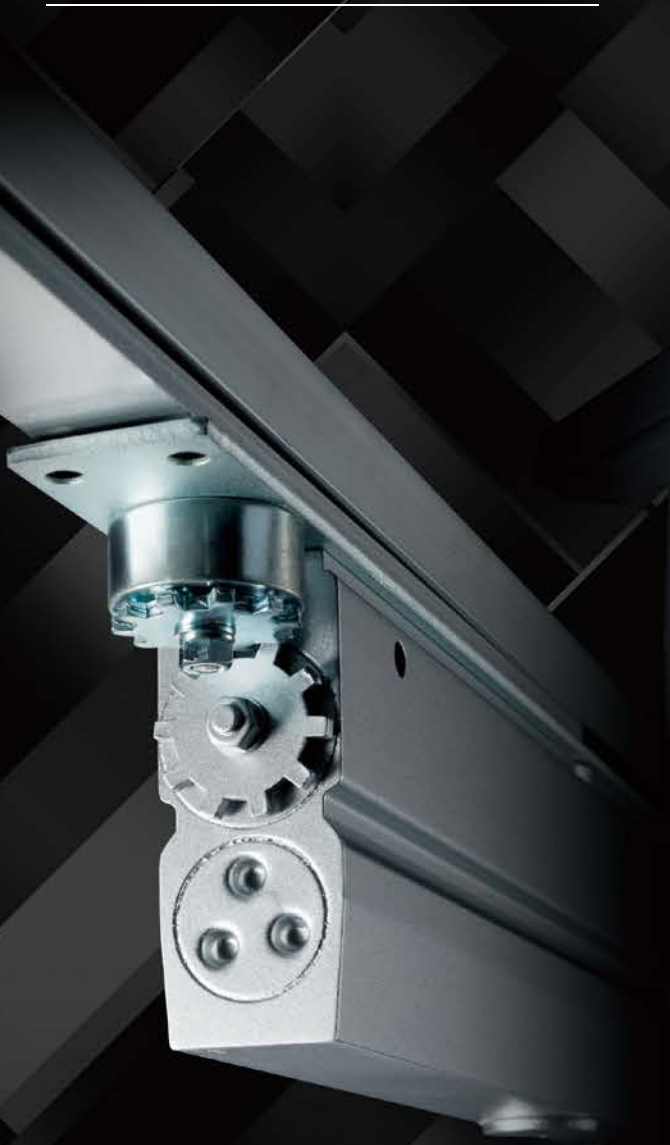
RYOBI®



G E O P R O

DOOR CLOSER

CONCEALED



TRACK-RAIL

Advanced and sophisticated GEOPRO series.

In the ever-evolving world of architecture, the harmony of door closers whose beauty never changes.

The GEOPRO series has been launched from the perspective of rebuilding current architecture.

Simple design with precise control over speed and strong closing force.

This is a door closer for those who truly understand their value.



CONCEALED

Concealed design that fits into the space.



TRACK-RAIL

Slimmer and more simple.

Make doors more comfortable, High-spec door closer.

Stronger latching power

Stable closing speed

Exclusive unit
each for
right and left hand

Promising strong closing strength suitable for air-tight door.

The GEOPRO series provides the high-level functions required of door closers. The arm link type specifications have of course achieved 500,000 times durability performance equivalent to JIS Grade 1, even for the concealed specification. The strong closing force that closes any door completely can be used in a wide range of applications from electronic locks to air-tight doors.

We aim for stability that cares for everyone from children to senior citizens.

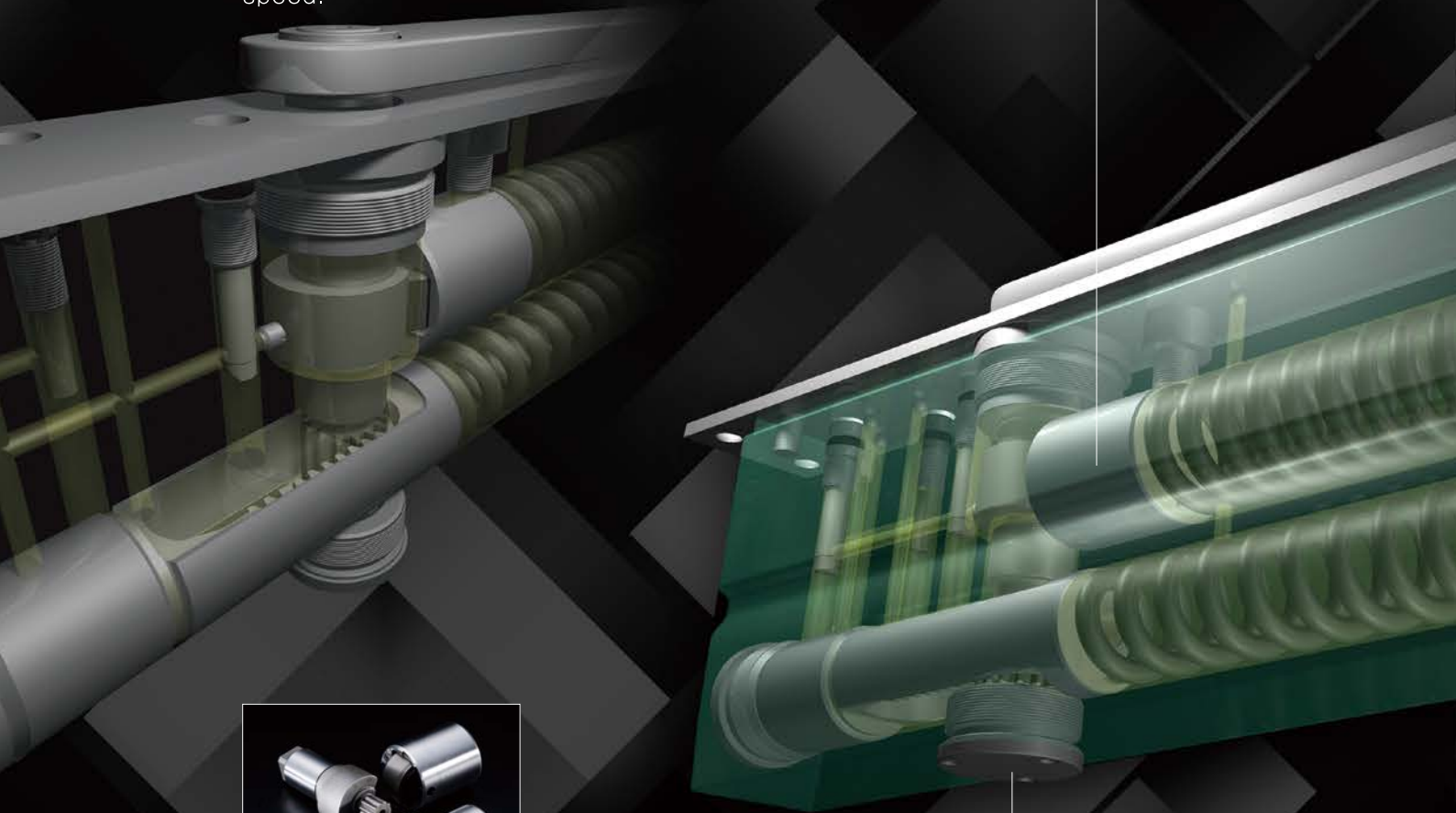
By using a rack & pinion mechanism that provides precise control, we make stable closing speed possible. The door closers always close with a stable speed, so anybody from children to senior citizens can safely pass through. GEOPRO series realizes a safe and comfortable office environment.

Function

Specification	Application	Concealed-in	Track-Rail	
			Pull side	Push side
	Mechanism	Double Cylinder		
	Handing	Right hand or Left hand		
	Material	Aluminum Alloy		
Max. opening angle		Offset hung: 105° Center hung: 110°	160°	140°
Durability		500,000 cycles		
Standard function	1st closing speed	○	○	○
	2nd closing speed	○	○	○
	Latching action	○	○	○
	Delayed action	-	-	-
	Backcheck	-	-	-
	Closing force adjustment	○	○	○

World's only double cylinder that changes conventional wisdom.

The GEOPRO series CONCEALED type and TRACK-RAIL type feature the world's only double cylinder. A unique fusion of cam action mechanism and rack & pinion mechanism that defies conventional industry wisdom. This is RYOBI's unique world-class double cylinder mechanism. By combining the best of two worlds, we have achieved both strong closing force and stable closing speed.



RACK & PINION MECHANISM

CAM ACTION MECHANISM

RACK & PINION MECHANISM

DOUBLE CYLINDERS TYPE CONCEALED CLOSER

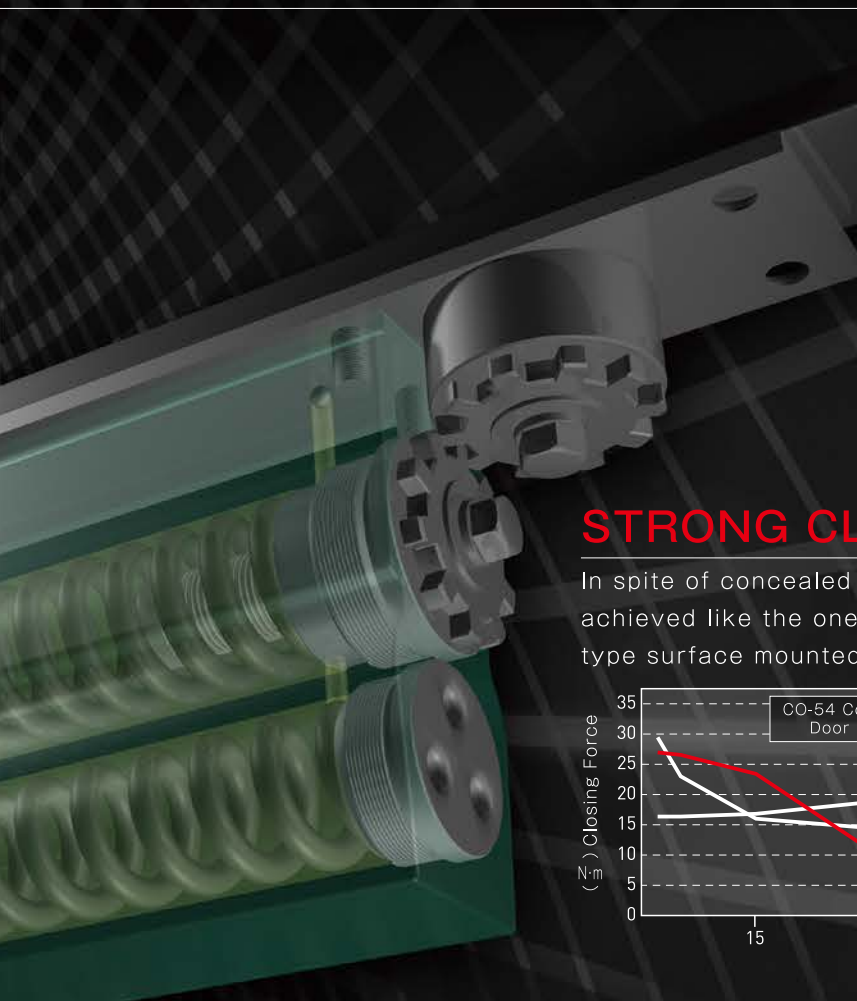
MERIT

Strong closing force can be achieved in spite of concealed door closer

MERIT

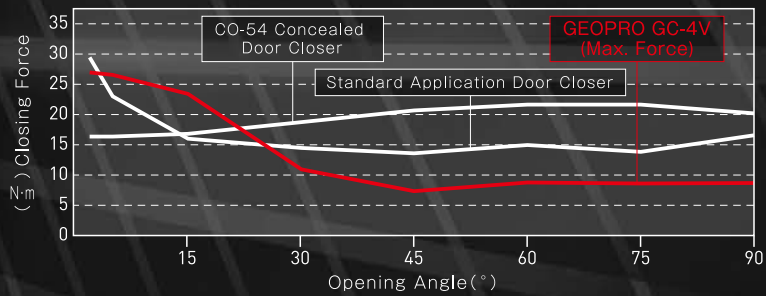
Stable closing speed
Better condition against overload

CAM ACTION MECHANISM



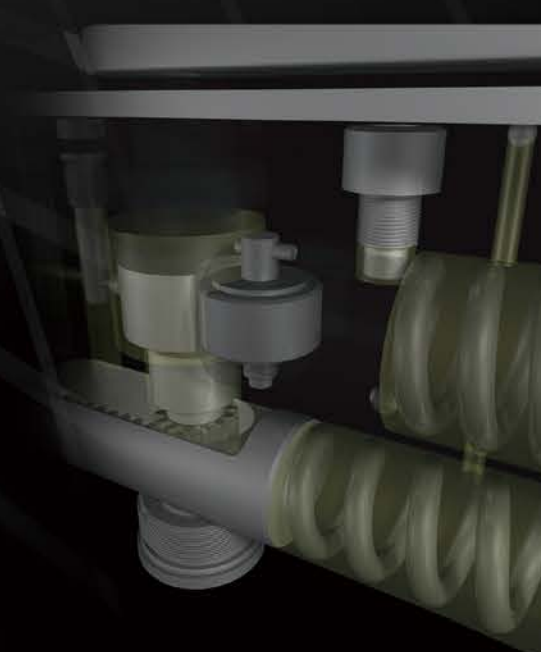
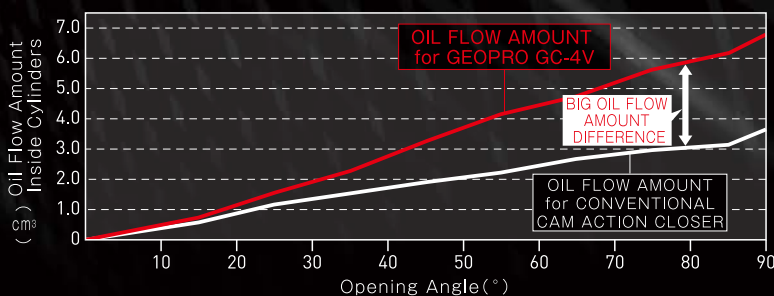
STRONG CLOSING FORCE

In spite of concealed closer, strong closing force are achieved like the one for the conventional arm and link type surface mounted door closer.



PLENTY OF OIL FLOW AMOUNT FOR PRECISE AND STABLE CLOSING SPEED

The below graph shows the comparison of oil flow amount. GC-4V controls the closing speed at Rack & Pinion mechanism section. As hydraulic control is done with plenty of oil, precise, smooth, and stable closing speed can be achieved. This greatly improves the unstable speed control, which is often happened on door closers only with cam action mechanism.



FUNCTION OF THE DOUBLE CYLINDER

High quality features and benefits that make stable closing speed possible

Spring Power Adjustment

1st Closing Speed Control Valve

Latching Action Control Valve

CONCEALED TYPE
GC-4V

2nd Closing Speed Control Valve

One Touch Joint Function

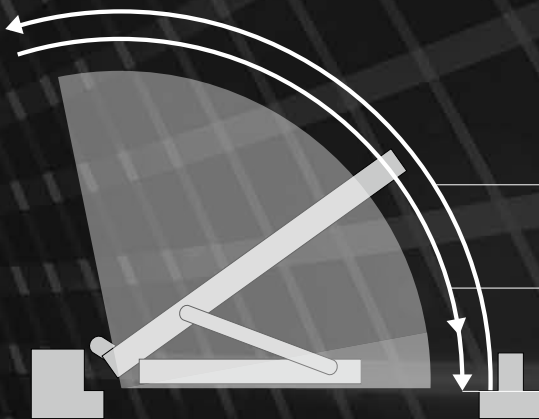
One Touch Joint Function

Arm and Slider can be jointed by hand without tool. This shortens the installation time.



Latching Action

This ensure to close the door firmly by increasing the closing speed at 2 degree before closed position.



Spring Power Adjustment

By this function, you can set the best closing power according to the usage circumstances.

1st and 2nd Speed Control Valves

These independent valves enable you to adjust the closing speed according to the usage circumstances.

The door can be opened with small force, and can be surely closed with ideal and stable closing speed.

Light opening Force

Stable closing speed

Reliable Latching Action

TRACK-RAIL TYPE
GT-4V



**“Concealed” - the ultimate in design.
Concealed door closer***

In order to achieve the ultimate concealed design, we upgraded the form and function to a level higher than ever before.

* As of April 2015 according to in-house investigations. The GEOPRO series achieves excellent durable performance and opening/closing torques and efficiency conforming to JIS grade 1.





▣ “Concealed” - the ultimate in design

▣ “Strong closing force”
and “Stable closing speed”

▣ Safe and comfortable
barrier-free design



GC-4V



Slimmer and more simple.
TRACK-RAIL type
door closer

Beautiful form with a limited protrusion from the door and frame. Equipped with design and functionality to adapt to various types of modern architecture.





- ▣ Produces a flat appearance you will never tire of looking at
- ▣ “Strong closing force” and “Stable closing speed”
- ▣ Safe and comfortable barrier-free design
- ▣ Three color variations



CONCEALED TYPE

Model Chart

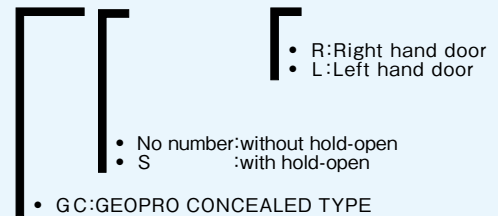
Standard Application

Model No.				Applicable door size		Thickness of applicable door (mm)			
Without hold-open		With hold-open				Steel door		Wooden door	
Right hand	Left hand	Right hand	Left hand	Width (mm)	Weight (kg)	Standard installation	Top Jamb installation	Standard installation	Top Jamb installation
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L	800 to 1050	15 to 100	40 or more	40 or more	45 or more	40 or more

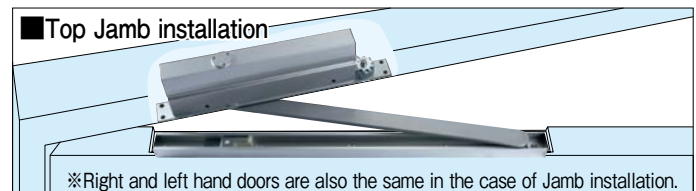
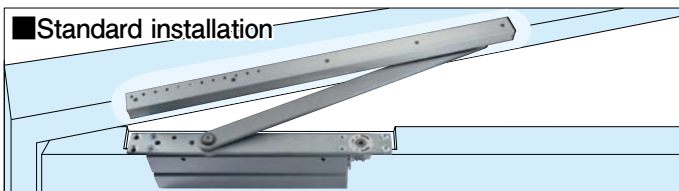
Function

Specification	Installation		Standard	Top Jamb
	Handing		Select handing, Right hand or Left hand.	
	Material		Aluminum Alloy	
Adjustable range of Max. opening angle	Offset hung	case: 18mm offset	75° – 105°	68° – 105°
			75° – 105°	68° – 104°
			75° – 105°	68° – 105°
	Center hung		73° – 109°	73° – 109°
Offset hung (180° opening)		98° – 180°	92° – 180°	
Performance	Durability		500,000 cycles	
Standard function		1st speed Adjustment 2nd speed Adjustment Latching action Closing Force adjustment		

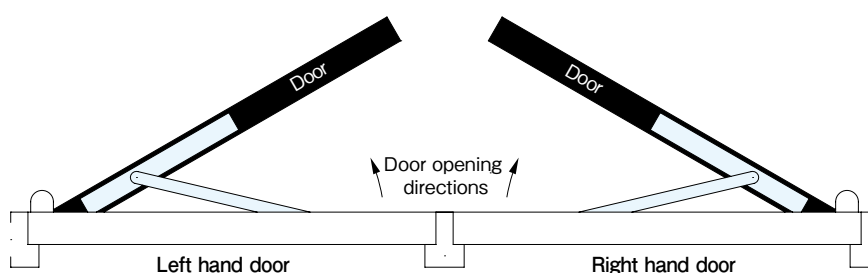
No. GCS-4V-L



Standard installation and Top Jamb installation



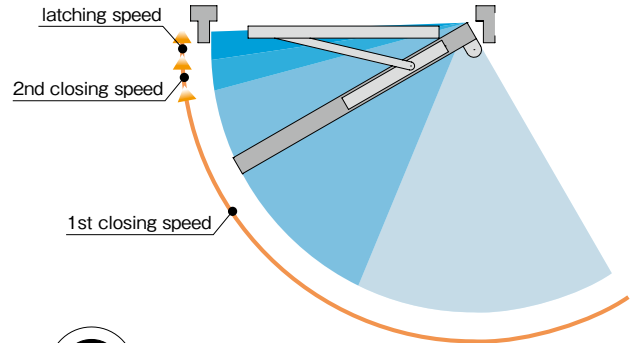
Left hand or Right hand



Specification and Adjustment

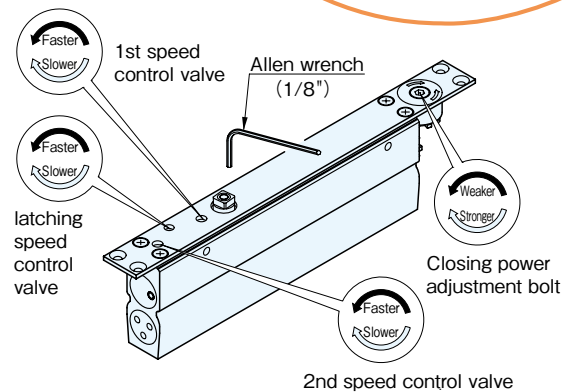
1st and 2nd speed control valves

- These independent valves enable you to adjust the closing speed according to the usage circumstances.



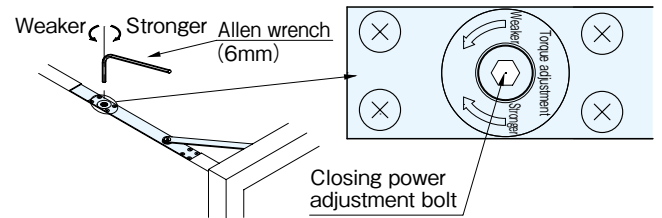
Latching action

- This ensure to close the door firmly by increasing the closing speed at 2 degree before closed position.



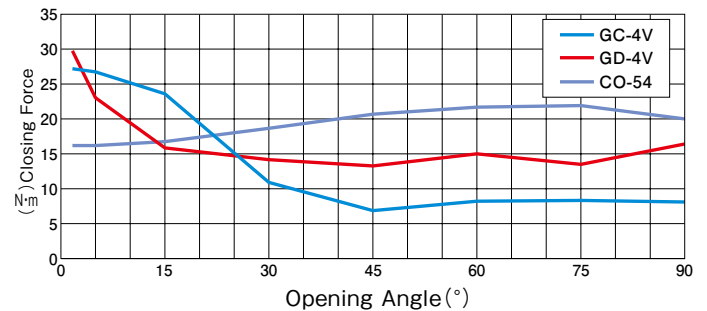
Torque Adjustment Function

- Closing force appropriate to size, weight and environment of the door is obtained by this function.
- This function is operated only by turning the torque adjustment nut.
- Factory preset torque has been adjusted for door size of 950 x 2100 (mm).
- When increasing the closing force, turn the torque adjustment nut clockwise, and when decreasing the force, turn the nut counterclockwise.



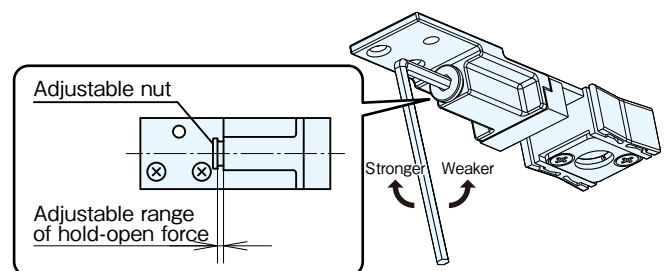
- Adjusting closing power according to table.

Max. Door Width (mm)	Max. Door Weight (kg)	Turns of closing power adjustment bolt	
		from Preset	from Min.
800	30	-6	0
900	45	-4	+2
950	65	0	+6
1050	100	+6	+12



Hold-open device

- Adjustable range of hold-open force is between 50 and 90N·m in case of 950 x 2100mm (W X H). Turn the adjustable nut clockwise to increase hold-open force, counterclockwise to decrease the force.

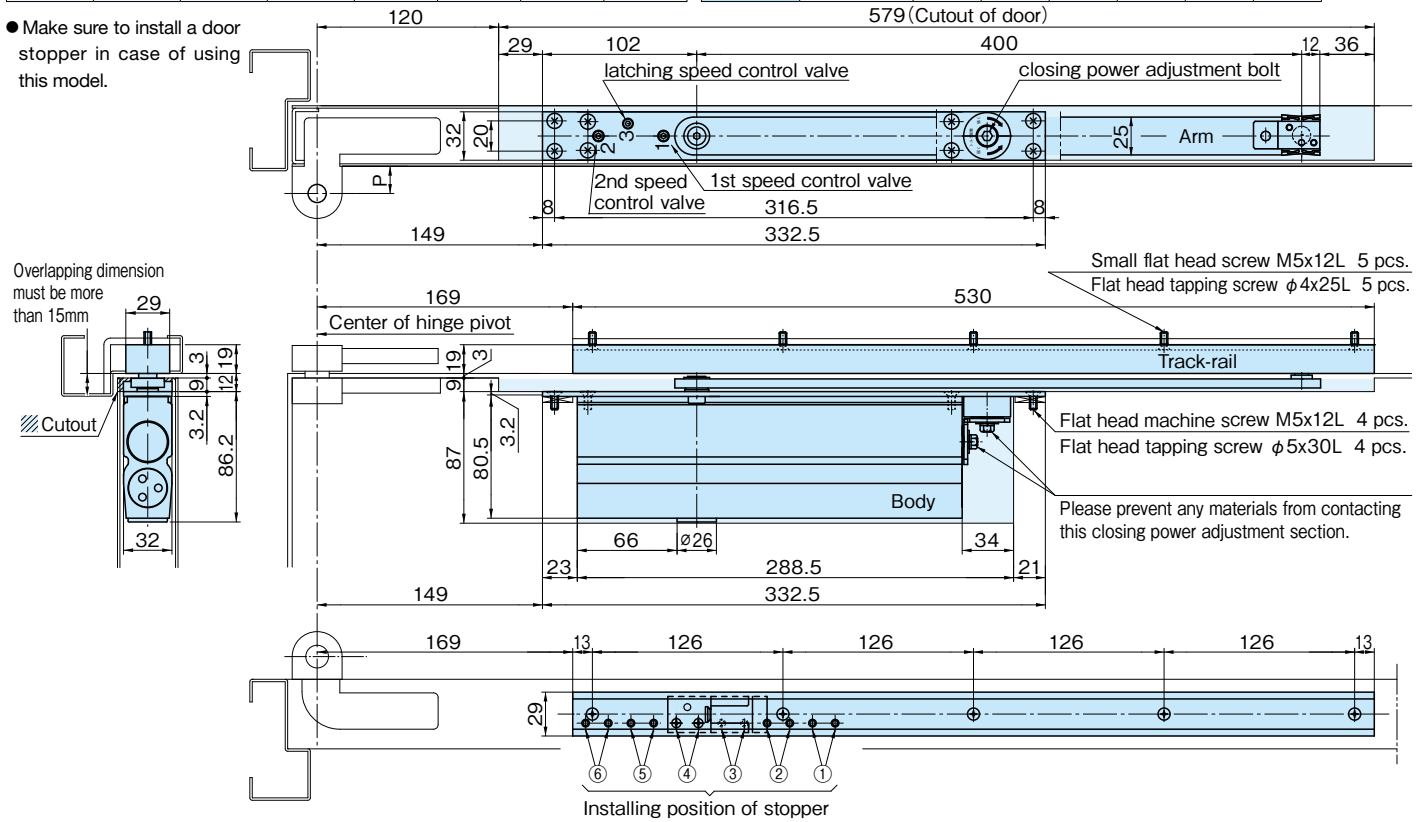


Offset hung (105° opening)

Standard installation

Model No.				Applicable door size		Applicable door thickness (mm)		Type	*P* dimension (offset dimension)	Hold-open device, stopper device installation position					
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door			①	②	③	④	⑤	⑥
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	45 or more	Maximum Opening angle	18	75°	80°	86°	91°	98°	105°
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L						25	75°	81°	86°	92°	98°	105°
									20	75°	81°	86°	91°	98°	105°

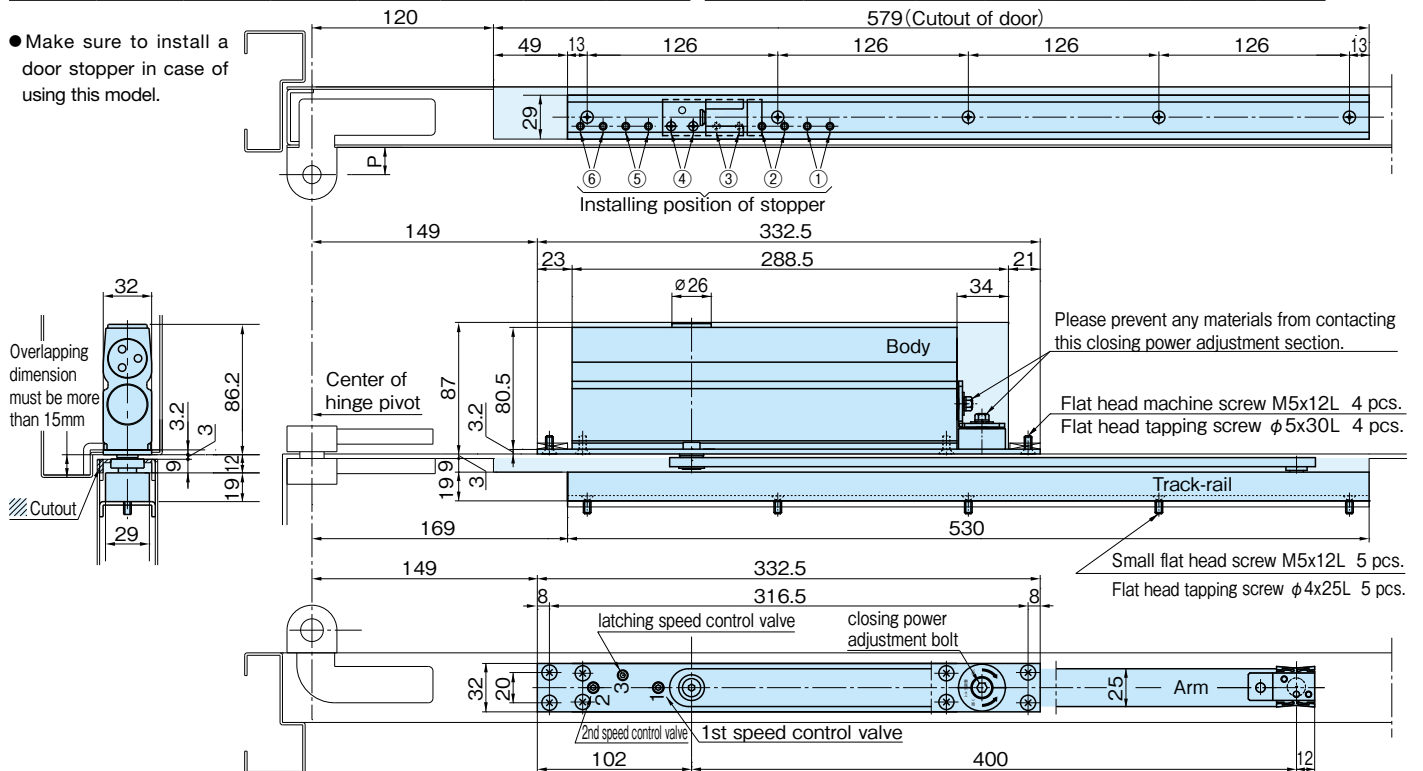
- Make sure to install a door stopper in case of using this model.



Top Jamb installation

Model No.				Applicable door size		Applicable door thickness (mm)		Type	*P* dimension (offset dimension)	Hold-open device, stopper device installation position					
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door			①	②	③	④	⑤	⑥
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	40 or more	Maximum Opening angle	18	68°	74°	81°	88°	96°	105°
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L						25	68°	74°	80°	87°	95°	104°
									20	68°	74°	81°	88°	96°	105°

- Make sure to install a door stopper in case of using this model.



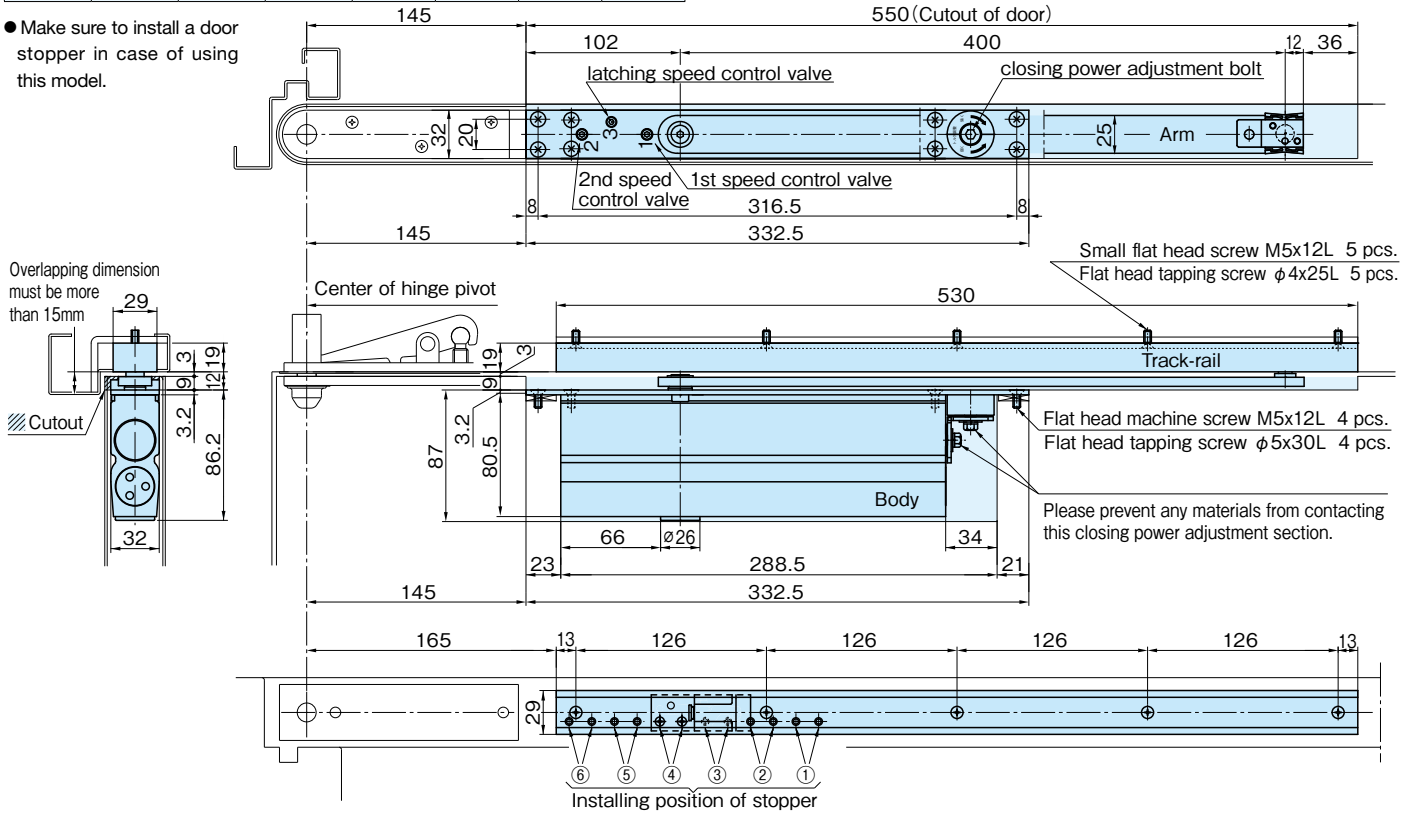
Center hung (110° opening)

Standard installation

Model No.				Applicable door size		Applicable door thickness (mm)	
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	45 or more
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L				

Type	Hold-open device, stopper device installation position					
	①	②	③	④	⑤	⑥
Maximum Opening angle	73°	79°	86°	93°	100°	109°

- Make sure to install a door stopper in case of using this model.

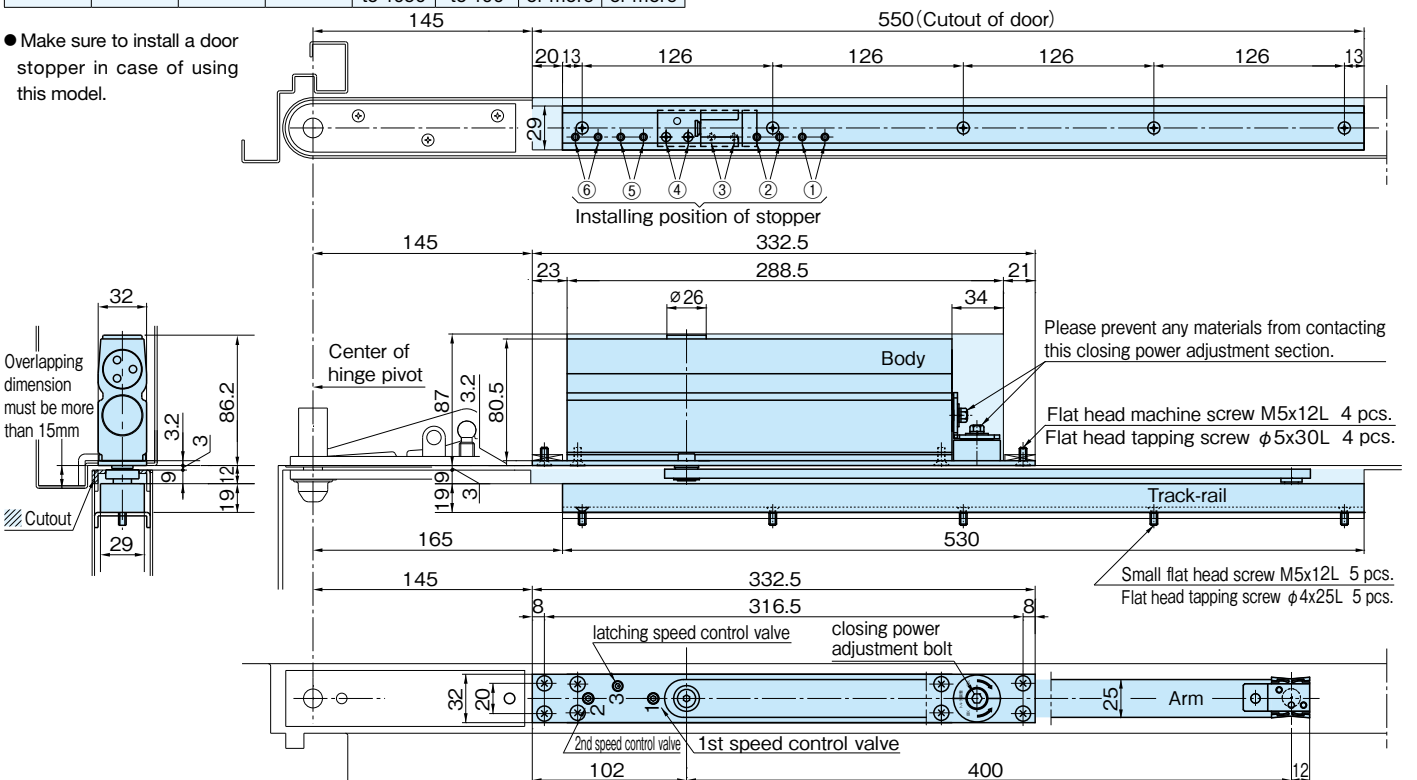


Top Jamb installation

Model No.				Applicable door size		Applicable door thickness (mm)	
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	40 or more
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L				

Type	Hold-open device, stopper device installation position					
	①	②	③	④	⑤	⑥
Maximum Opening angle	73°	79°	86°	93°	100°	109°

- Make sure to install a door stopper in case of using this model.

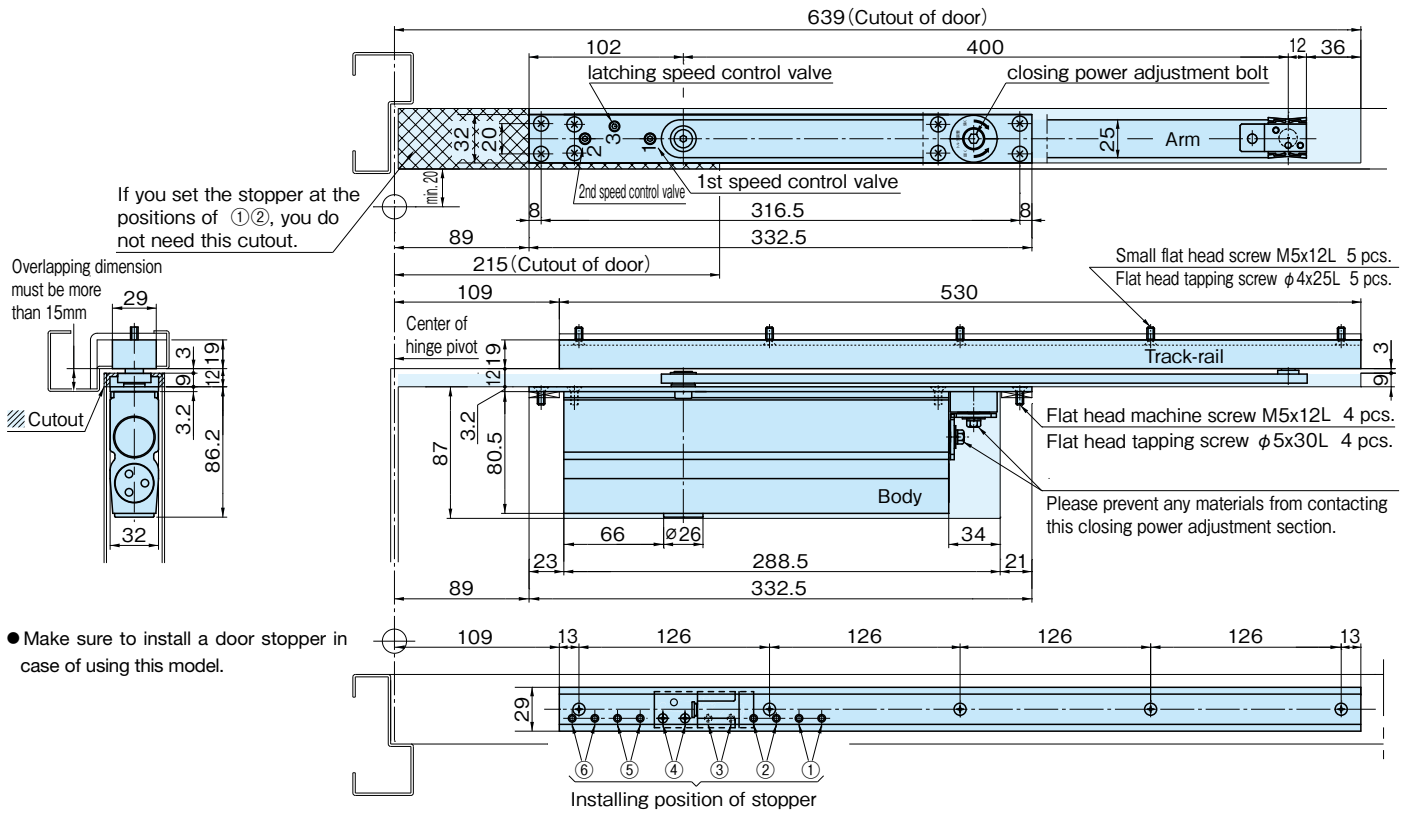


Offset hung (180° opening)

Standard installation

Model No.				Applicable door size		Applicable door thickness (mm)	
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	45 or more
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L				

Type	Hold-open device, stopper device installation position					
	①	②	③	④	⑤	⑥
Maximum Opening angle	98°	107°	117°	129°	147°	More than 180°

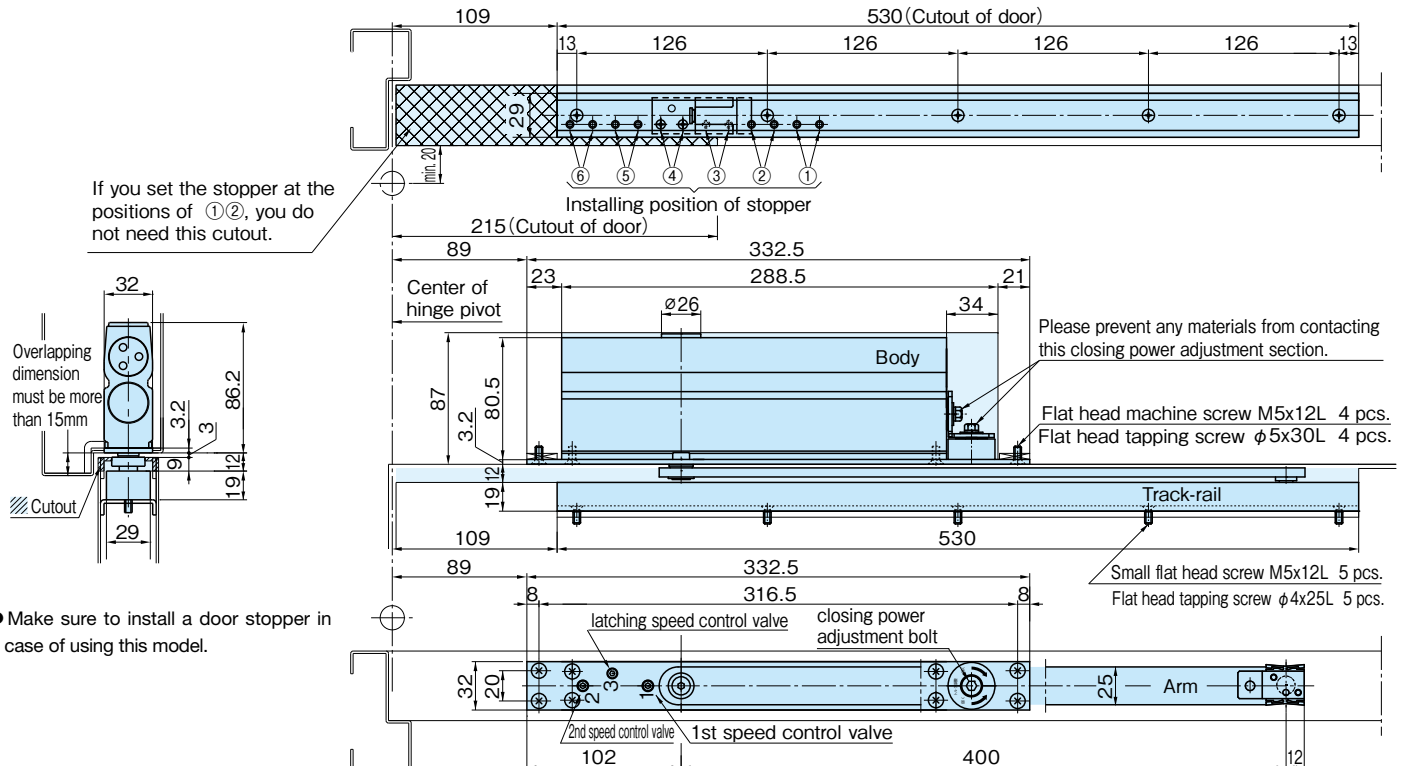


- Make sure to install a door stopper in case of using this model.

Top Jamb installation

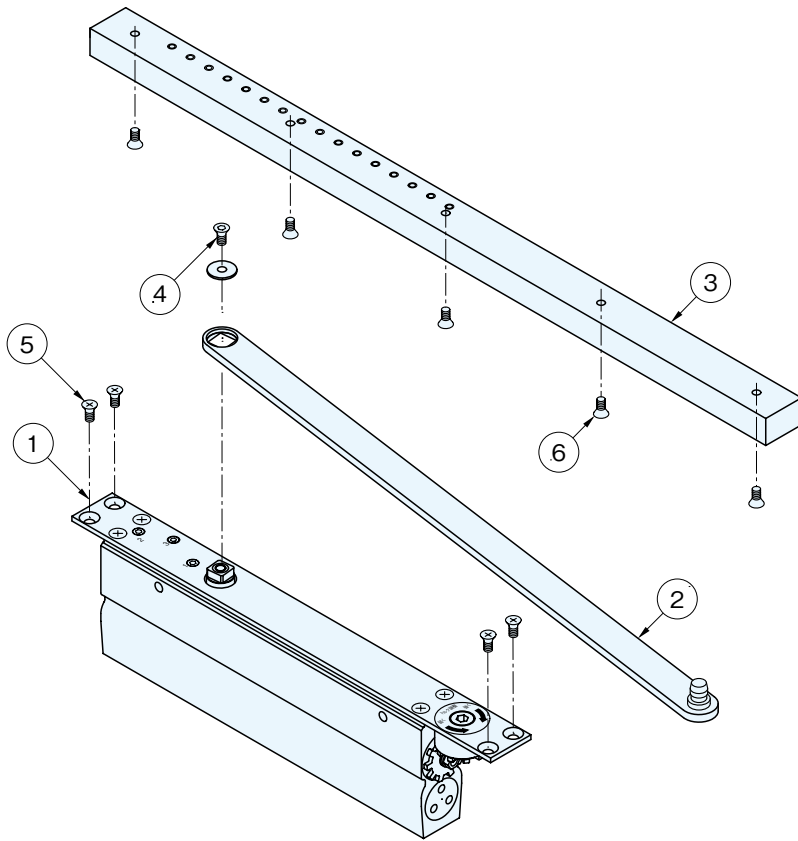
Model No.				Applicable door size		Applicable door thickness (mm)	
Without hold-open		With hold-open		Width (mm)	Weight (kg)	Steel door	Wooden door
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100	40 or more	40 or more
GC-4V-R	GC-4V-L	GCS-4V-R	GCS-4V-L				

Type	Hold-open device, stopper device installation position					
	①	②	③	④	⑤	⑥
Maximum Opening angle	92°	102°	113°	127°	147°	More than 180°



- Make sure to install a door stopper in case of using this model.

Components



①	Closer body
②	Arm
③	Track-rail
④	Hexagon socket head screw M6 x 16L
⑤	Flat head machine screw M5x12L 4 pcs.
	Flat head tapping screw φ 5x30L 4 pcs.
⑥	Small flat head screw M5x12L 5 pcs.
	Flat head tapping screw φ 4x25L 5 pcs.

TRACK-RAIL TYPE

Model Chart

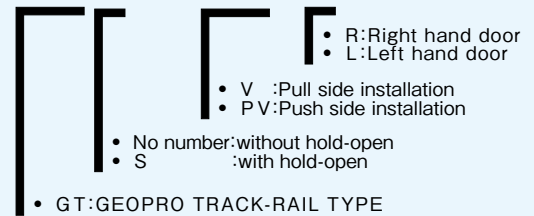
Standard Application

Model No.								Applicable door size	
Pull side installation				Push side installation					
Without hold-open		With hold-open		Without hold-open		With hold-open		Width (mm)	Weight (kg)
Right hand	Left hand	Right hand	Left hand	Right hand	Left hand	Right hand	Left hand		
GT-4V-R	GT-4V-L	GTS-4V-R	GTS-4V-L	GT-4PV-R	GT-4PV-L	GTS-4PV-R	GTS-4PV-L	800 to 1050	15 to 100

Function

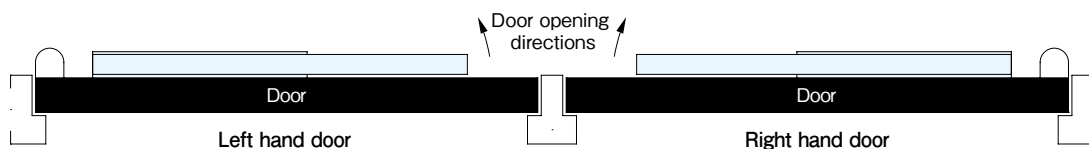
Specification	Installation		Pull side	Push side
	Handing		Select handing, Right hand or Left hand.	
	Material		Aluminum Alloy	
Adjustable range of Max. opening angle	Offset hung	case: 18mm offset	78° – 159°	81° – 141°
			79° – 159°	82° – 138°
			78° – 160°	81° – 140°
Performance	Durability		500,000 cycles	
Standard function		1st speed Adjustment 2nd speed Adjustment Latching action Closing Force adjustment		

No. GTS-4PV-L

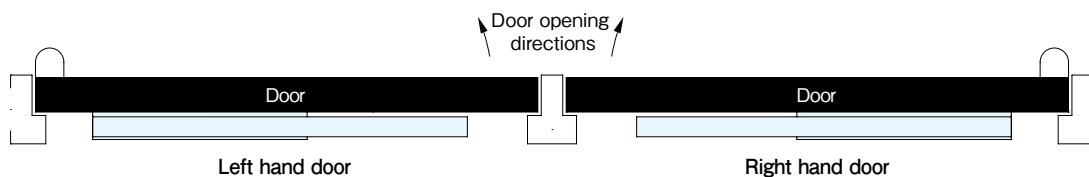


Door opening hand and installation method

• Pull side installation



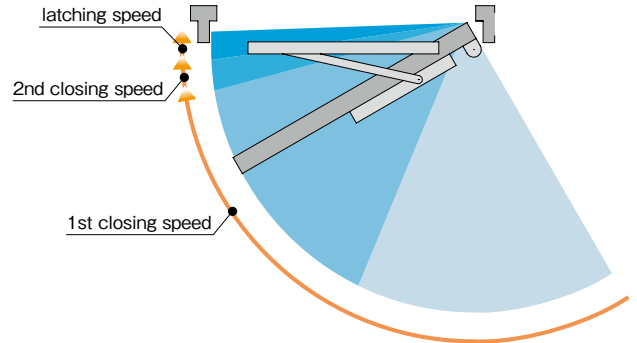
• Push side installation



Specification and Adjustment

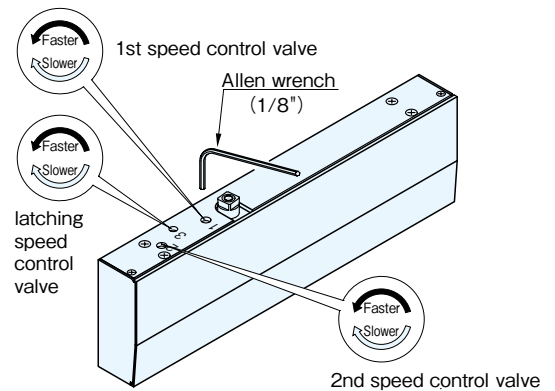
1st and 2nd speed control valves

- These independent valves enable you to adjust the closing speed according to the usage circumstances.



Latching action

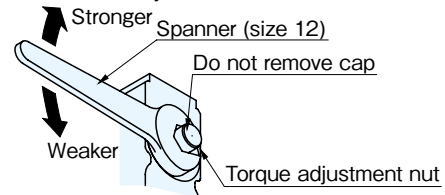
- This ensure to close the door firmly by increasing the closing speed at 2 degree before closed position.



Torque adjustment function

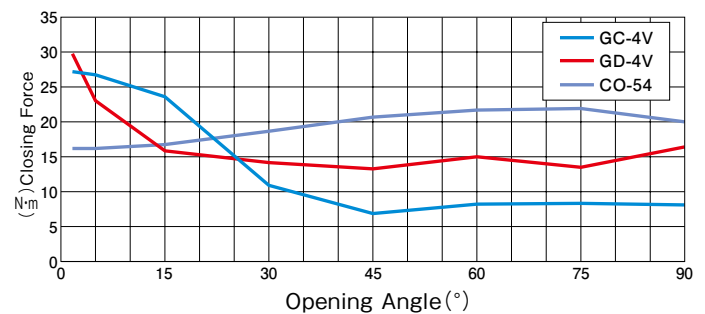
- Closing force appropriate to size, weight and environment of the door is obtained by this function.
- This function is operated only by turning the torque adjustment nut.
- Factory preset torque has been adjusted for door size of 950 x 2100 (mm).
- When increasing the closing force, turn the torque adjustment nut clockwise, and when decreasing the force, turn the nut counterclockwise.

- After removing or slide the closer cover, rotate closer power adjustment nut by spanner which is standard accessory.



- Adjusting closing power according to table.

Max. Door Width and Height (mm)	Max. Door Weight (kg)	Turns of closing power adjustment bolt	
		from Preset	from Min.
800 × 1800	30	-6	0
900 × 2100	45	-4	+2
950 × 2100	65	0	+6
1050 × 2400	100	+6	+12

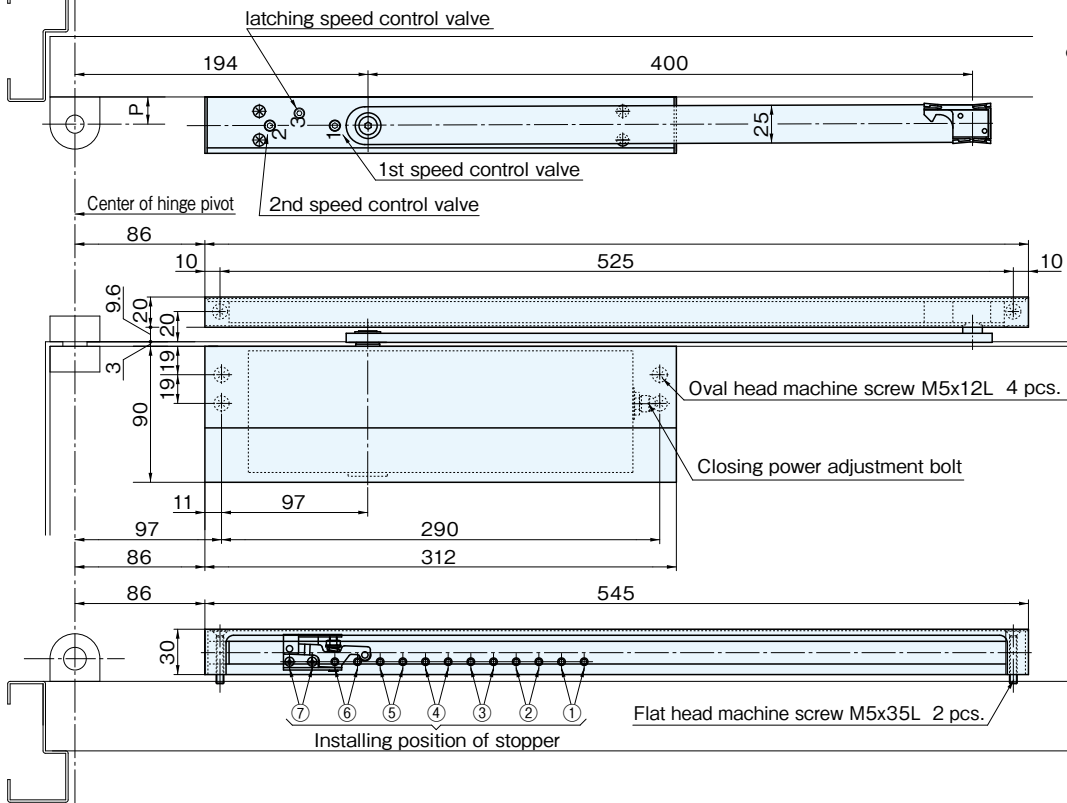


TRACK-RAIL TYPE

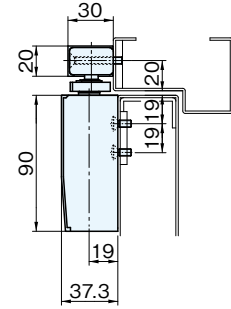
Pull side installation

Model No.				Applicable door size	
Pull side installation				Width (mm)	Weight (kg)
Without hold-open		With hold-open			
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100
GT-4V-R	GT-4V-L	GTS-4V-R	GTS-4V-L		

Type	"P" dimension (offset dimension)	Hold-open device, stopper device installation position						
		①	②	③	④	⑤	⑥	⑦
Maximum Opening angle	18	78°	86°	95°	105°	117°	132°	159°
	25	79°	87°	96°	106°	117°	132°	159°
	20	78°	86°	95°	105°	117°	132°	160°



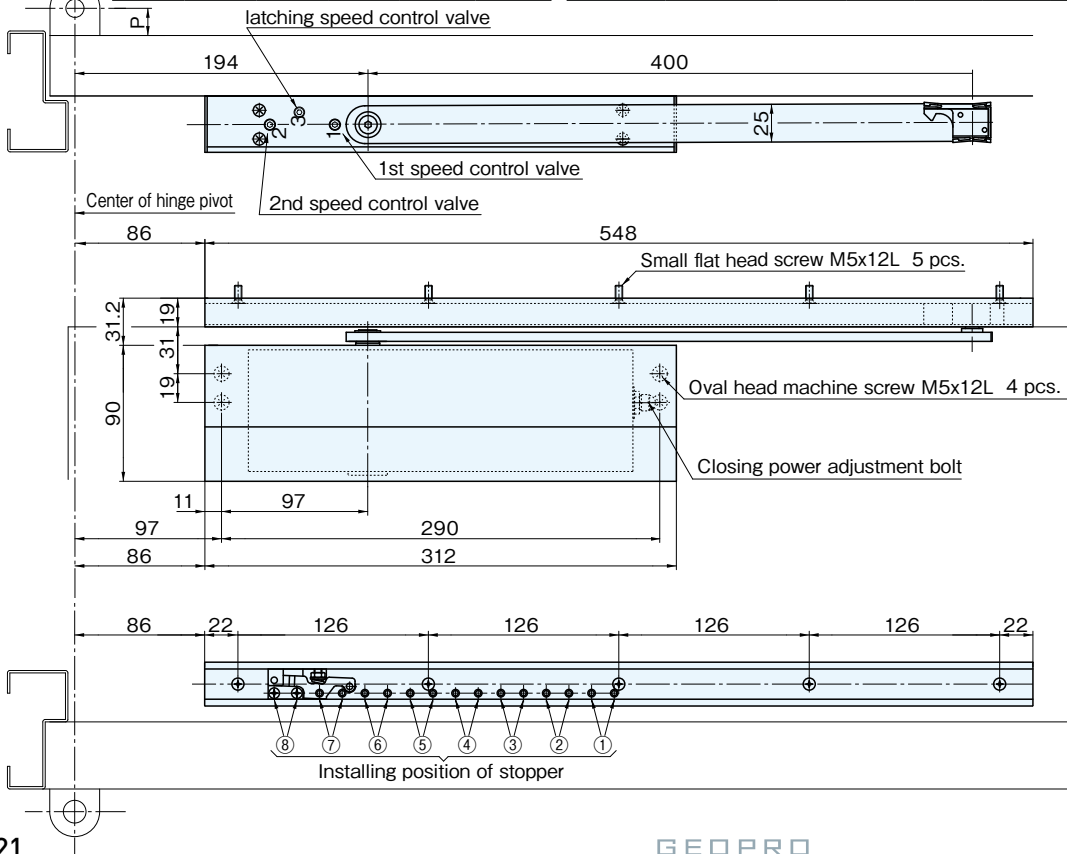
● Make sure to install a door stopper in case of using this model.



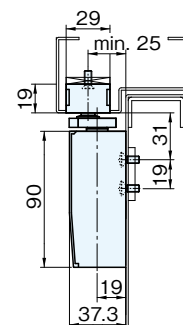
Push side installation

Model No.				Applicable door size	
Push side installation				Width (mm)	Weight (kg)
Without hold-open		With hold-open			
Right hand	Left hand	Right hand	Left hand	800 to 1050	15 to 100
GT-4PV-R	GT-4PV-L	GTS-4PV-R	GTS-4PV-L		

Type	"P" dimension (offset dimension)	Hold-open device, stopper device installation position							
		①	②	③	④	⑤	⑥	⑦	⑧
Maximum Opening angle	18	81°	88°	94°	101°	108°	117°	127°	141°
	25	82°	88°	94°	101°	108°	116°	125°	138°
	20	81°	88°	94°	101°	108°	116°	126°	140°

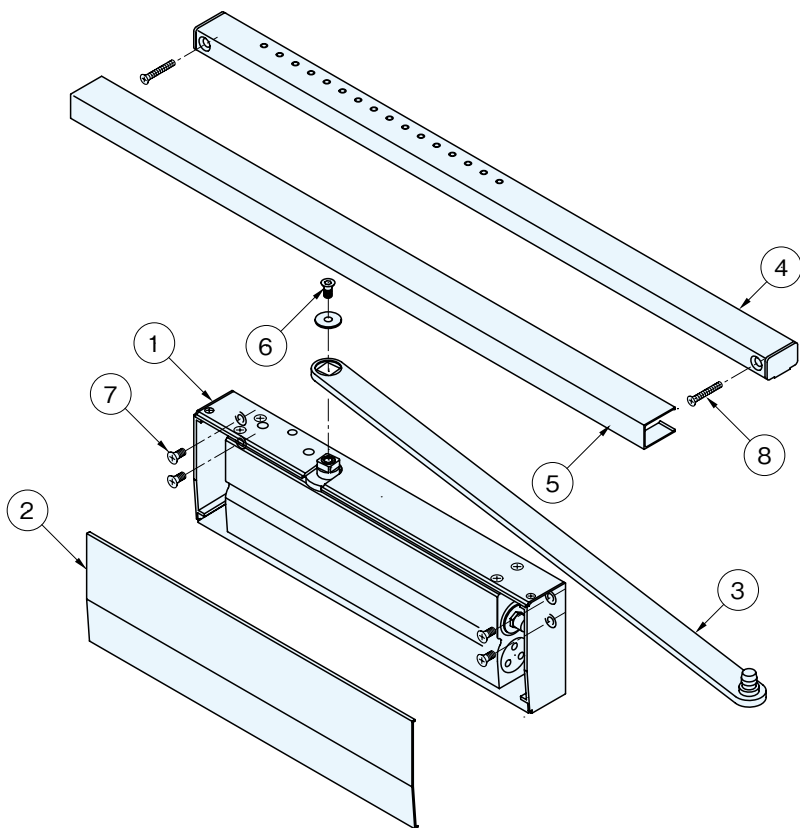


● Make sure to install a door stopper in case of using this model.



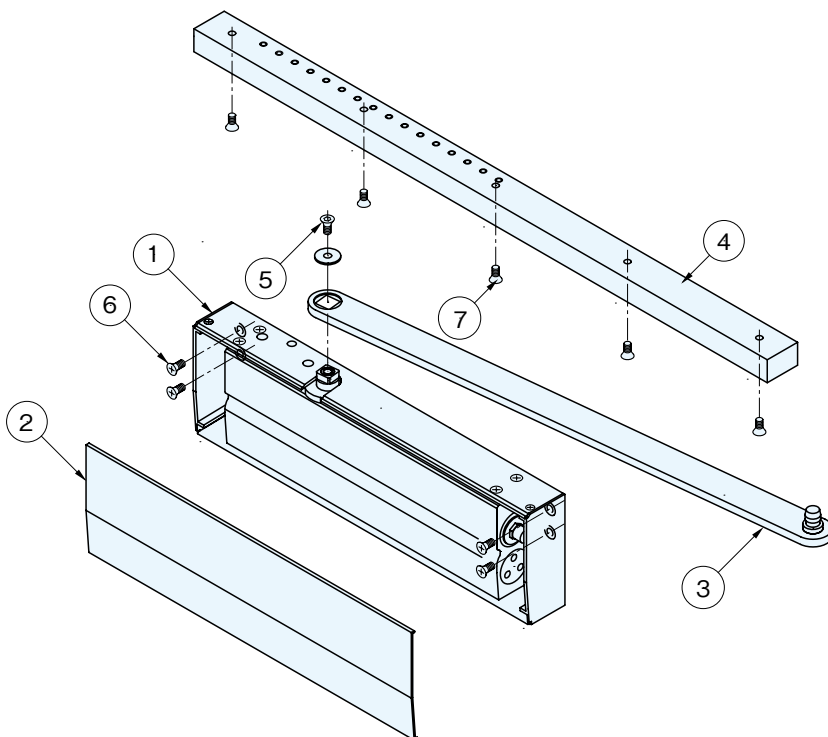
Components

Pull side



①	Closer body
②	Cover
③	Arm
④	Track-rail
⑤	Guide rail cover
⑥	Hexagon socket head screw M6 x 16L
⑦	Oval head machine screw M5x12L 4 pcs.
⑧	Flat head machine screw M5x35L 2 pcs.

Push side



①	Closer body
②	Cover
③	Arm
④	Track-rail
⑤	Hexagon socket head screw M6 x 16L
⑥	Oval head machine screw M5x12L 4 pcs.
⑦	Small flat head screw M5x12L 5 pcs.



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