

AUTO-HINGE Flag Type

Wooden door, Aluminum door
Lightweight steel door

300 series
1000 series
2000 series

Wooden door, Aluminum door
Lightweight steel door, Steel door

100 series

Heavyweight wooden door
Aluminum door, Steel door

200 series

Aluminum door, Stainless steel door
Steel door

700 series

Wooden door, Aluminum door
Lightweight steel door, Steel door

PC series

Glass door

NK series



311S



1221



112



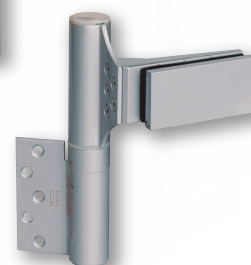
244-T



113-PC



733



NK153



AUTO-HINGE Flag Type

Door closer + hinge, All-In-One. The hydraulic pressure mechanism and advanced spring technology allow for quiet and smooth operation. Simple design with fully adjustable self-closing feature offers aesthetic appearance and refined functionality to the door.

Butterfly Type 300 series

P.3

- Small and slim, ideal for lightweight doors (indoor use).
- The butterfly design makes installation highly efficient.
- Non handed - Can be used for both right and left hand opening doors.



Flag Type 1000 / 2000 / 100 / 200 series

P.3

- Designed with cutting edge technology from Nitto Kohki. Easy to install on all kinds of swing doors (regular rectangle doors, arch doors, etc).
- Variety of models available for different sizes and types of doors (wooden, aluminum, lightweight steel, steel and glass doors).



INDEX

Flag type series (Table of models with specifications)

Indoor use

Model Number			Type of door	Applicable Door Size (mm)			Applicable Door Weight (kg) (Max)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color	Page			
	Right hand opening [DIN L]	Left hand opening [DIN R]		W (Max)	H (Max)	D (Min)										
300 Series	311S (Available for both right and left)		Wooden door Aluminum door Lightweight steel door	800	2000	30	30	5.0	○	85°~180° (Free stop)	180° Left or right one-side opening	Silver Bronze Ivory Gold	4			
	Empty hinge	310 (Available for both right and left)						—	—	—						
1000 Series	1111R		Wooden door Aluminum door Lightweight steel door	850	2000	30	35	7.9	—	—	180° Left or right one-side opening	Silver	5			
	1111SR								○	85°				Bronze		
	1121R								—	—		Silver				
	1121SR								○	85°				Bronze		
	1111FR								○	85°~180° (Free stop)		Silver				
	1121FR								○	85°				Bronze		
	1211R								—	—		Silver				
	1211SR								○	85°			Bronze			
	1221R								—	—		Silver				
	1221SR								○	85°			Bronze			
	1211FR								○	85°~180° (Free stop)		Silver				
	1221FR								○	85°~180° (Free stop)			Bronze			
	Empty hinge	1110R		1110L	1120L	1210L	1220L	—	—	—	Silver	5				
		1120R											Bronze			
		1210R										Silver		6		
		1220R											Bronze			
2211R		2211L		Wooden door Aluminum door Lightweight steel door	800	2000	30	30	5.0	—	—	180° Left or right one-side opening		Silver	7	
2211WR		2211WL											—			
Empty hinge	2210R		2210L		2210WR	2210WL										
	2210WR		2210WL													
100 Series	112R		112L		Wooden door Aluminum door Lightweight steel door (122T for steel frame)	900	2100	40	10.0	—	—	Silver or Bronze	8			
	112SR		112SL							○	85° and 150°			9		
	122R-T		122L-T							—	—				10	
	122SR-T		122SL-T							○	85° and 150°					
	113R		113L		Wooden door Aluminum door Lightweight steel door	1000	2200	60	15.0	—	—	Silver	11			
	113SR		113SL							○	85° and 150°			12		
	113R TRISET		113L TRISET							—	—				13	
	113SR TRISET		113SL TRISET							○	85° and 150°					
	122R-AT		122L-AT		Wooden door Aluminum door Lightweight steel door (For steel frame)	900	2100	40	10.0	—	—	Silver	14			
	122SR-AT		122SL-AT							○	85° and 150°					
	132R		132L		Aluminum door Lightweight steel door Partition door	900	2100	60	15.0	—	—	Silver	15			
	132SR		132SL							○	85° and 150°					
	143R-T		143L-T		Steel door	900	2100	60	15.0	—	—	Silver or Bronze	8•10			
	143SR-T		143SL-T							○	85° and 150°			9		
	143R-AT		143L-AT							—	—				12	
	143SR-AT		143SL-AT							○	85° and 150°					
	Empty hinge	110R		110L		Wooden door Aluminum door Lightweight steel door (120T for steel frame)	40	—	—	—	—	Silver	13			
		120R-T		120L-T												
120R-AT		120L-AT														
130R		130L		Aluminum door Lightweight steel door Partition door												
140R-T		140L-T			Steel door											
140R-AT		140L-AT														
200 Series	234R		234L		Heavyweight wooden door Aluminum door Steel door	1200	2100	40	120	22.6	—	—	180° Left or right one-side opening	Silver	16	
	234SR		234SL													Steel door
	244R-T		244L-T		Heavyweight wooden door Aluminum door Steel door											
	244SR-T		244SL-T													Steel door
	Empty hinge	230R		230L						Heavyweight wooden door Aluminum door Steel door	—	—	—	180° Left or right one-side opening	Silver	
		240R-T		240L-T												



Outdoor Type (drip-proof)

700 series P18

- Made of durable stainless steel with special sealing mechanism.
- Commercial grade, widely applicable at various locations including bathrooms, seashores etc.



Outdoor Type (drip-proof)

PC series P20

- Drip-proof design, suitable for use outdoors or in humid places.
- An actuator with unique temperature sensor ensures constant door closing speed all year round.



For glass doors

NK series P26

- Suitable for glass doors 8 to 12 mm thick



- Freely adjustable closing speed

- Available with or without stop mechanism

Outdoor use

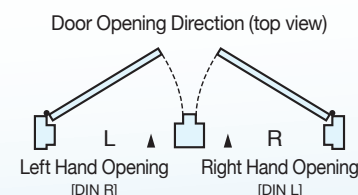
Model Number				Type of door	Applicable Door Size (mm)			Applicable Door Weight (kg) (Max)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color	Page		
	Right hand opening [DIN L]	Left hand opening [DIN R]	W (Max)		H (Max)	D (Min)										
700 Series		733R	733L	Aluminum door Stainless steel door Steel door	900	2100	40	120	15.0	—	—	180° Left or right one-side opening	Shine gray	19		
		733SR	733SL							○	85° and 150°					
	Empty hinge	730R	730L							—	—					
100PC Series		113R-PC	113L-PC	Wooden door Aluminum door Lightweight steel door	900	2100	30	40	15.0	—	—	180° Left or right one-side opening	Silver	21		
		113SR-PC	113SL-PC							○	85° and 150°					
		133R-PC	133L-PC							Aluminum door Lightweight steel door	—				—	
		133SR-PC	133SL-PC	○							85° and 150°					
		143R-T-PC	143L-T-PC	Steel door				60		—	—			22		
		143SR-T-PC	143SL-T-PC							○	85° and 150°					
	Empty hinge	110R-PC	110L-PC	Wooden door Lightweight steel door				40	—	—	—				21	
		130R-PC	130L-PC	Aluminum door Lightweight steel door										60		22
		140R-T-PC	140L-T-PC	Steel door												
	200PC Series		234R-PC	234L-PC				Heavyweight wooden door Aluminum door Steel door	1200	2100	40			120	22.6	—
		234SR-PC	234SL-PC	○	85° and 150°											
		244R-T-PC	244L-T-PC	Steel door	—	—										
		244SR-T-PC	244SL-T-PC		○	85° and 150°	25									
Empty hinge		230R-PC	230L-PC	Heavyweight wooden door Aluminum door Steel door	—	—		—				24				
		240R-T-PC	240L-T-PC	Steel door									25			

Glass door hinge

Indoor use

NK Series	NK153R-SC	NK153L-SC	Glass door	900	2100	8 10 12	60	15.0	—	—	180° Left or right one-side opening	Shine gray	26
	NK153SR-SC	NK153SL-SC							○	85° and 150°			
	NK153R TRISET-SC	NK153L TRISET-SC		1000	2200	8 10 12	80	20.0	—	—			
	NK153SR TRISET-SC	NK153SL TRISET-SC							○	85° and 150°			
	Empty hinge	NK150R-SC	NK150L-SC					—	—	—			

- Each item is a combination of one spring hinge and one damper hinge (excluding empty hinge).
- Models with "R" in their model number are for right hand opening doors, and those with "L" are for left hand opening doors.
- The 300 series is non handed, can be used for both right hand and left hand opening doors.
- Select either left hand or right hand opening type when ordering.
- Models with "S" in their model number have a built-in stop mechanism.
- The models with "T" or "AT" at the end of the model number have tapped holes (M6) on the hinge leaf.
- Same models are also available without tapped holes (Example: 143R-T with tapped holes, 143R without tapped holes)
- The empty hinges of the 300, 1000 and 2000 series are packaged in 2 pieces per box, the empty hinges of the 100, 200, 700 and PC series are packaged in 1 piece per box.



Installation procedure

300 series - P. 27, 1000 series - P. 28, 1000F series - P. 30, 100/200/NK series - P. 31, 700 series - P. 32, PC series - P. 33

Mounting position / Precautions for handling - P. 34

Extending comfort across many different scenes.

AUTO-HINGE Flag Type

Offers an aesthetic appearance while being suitable for all kinds of swing doors.

Flag Type

300, 1000, 2000, 100, and 200 series

Simple design

AUTO-HINGE also functions as a door closer, giving the exterior of the door a neater look. The simple and beautiful design matches various door styles.

Wide range of applications

AUTO-HINGE can also be used on arched doors or doors without upper frames, which are difficult to use with other door closers.

Sufficient door closing power

The 100 and 200 series are able to have sufficient door closing power despite its slim body through the use of two different springs (weak and strong) and a clutch switching mechanism.

Built-in stop mechanism

The "S" models come with an automatic mechanism that stops and holds the door. The 300 series can stop the door at any position between 85° and 180° (Free Stop). The 1000 series can stop the door at any position from 85° to 180° (Free Stop) or at 85°. The 100 and 200 series can stop the door at 85° or 150°.

Simple adjustment for closing speed

The door closing speed can be easily adjusted with a screwdriver.

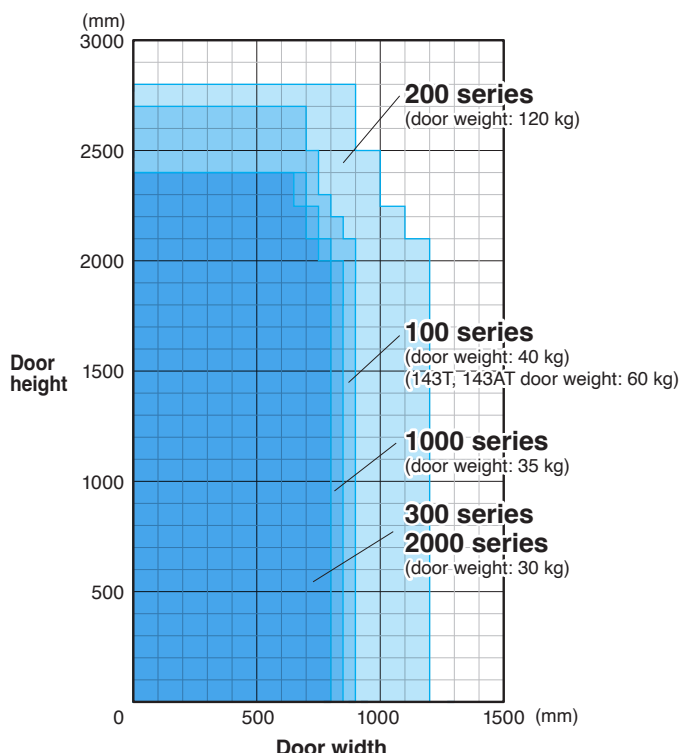
Easy to install

AUTO-HINGE is installed exactly in the same manner as conventional flag type hinges. Installation can be done easily with minimal time and labor.

Outstanding durability

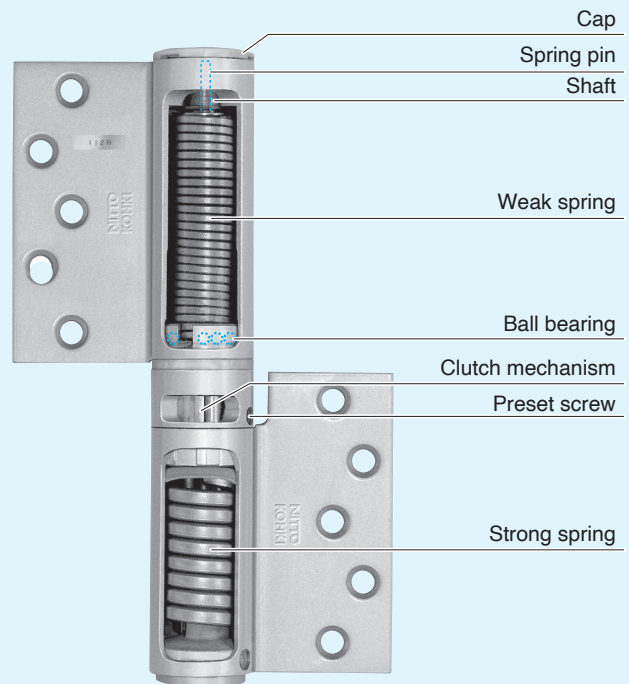
AUTO-HINGE is designed and constructed to minimize friction, resulting in superior durability and longer life.

Table of applicable door size:



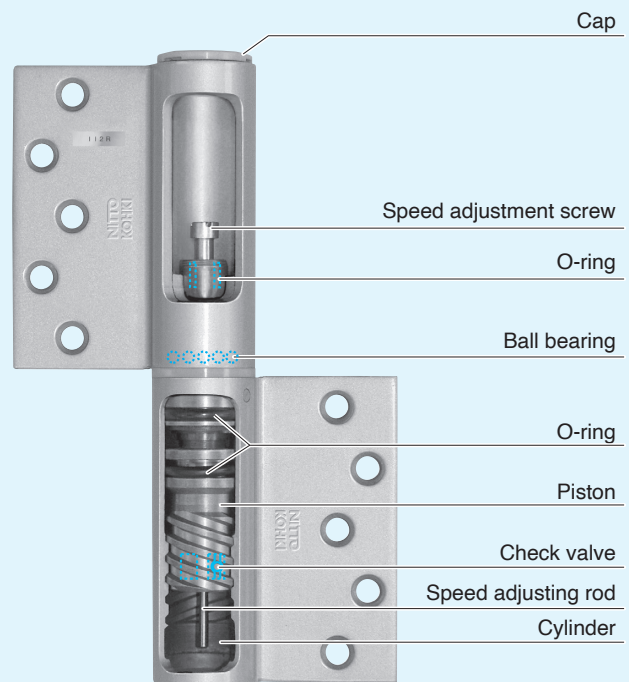
Spring hinge

(with built-in self closing and stop mechanism)



Damper hinge

(with built-in closing speed control mechanism)



- Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.
- This diagram shows the structure of the 100 series.

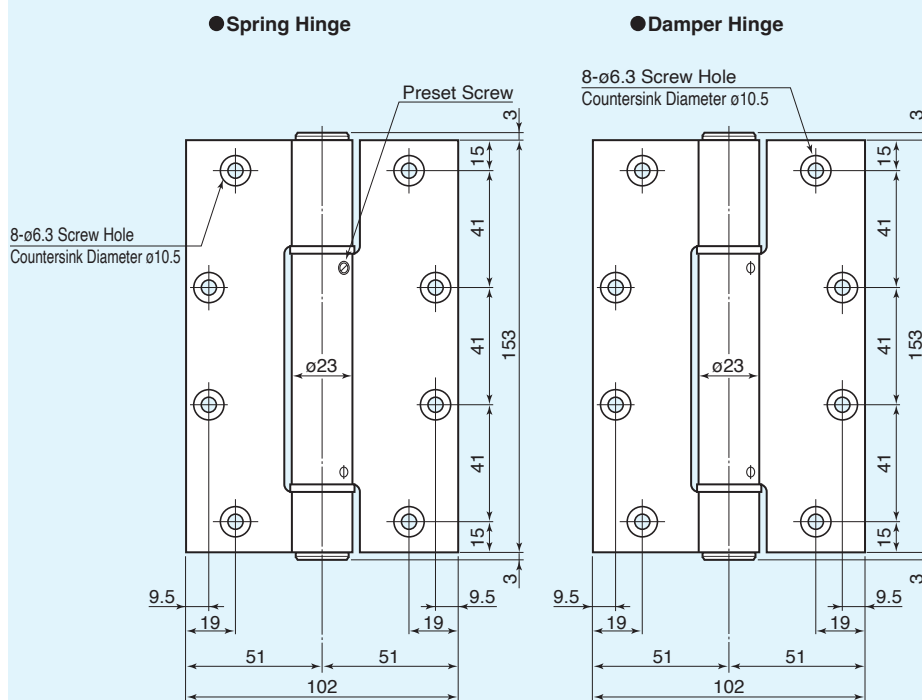
Model Number		Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
		W	H	D						
311S		800(Max)	2000(Max)	30(Min)	30(Max)	5.0	○	85°-180° (Free stop)	180° Left or Right One-side Opening	Silver Bronze Ivory Gold
Empty Hinge	310					—	—	—		

● This product can be used for both right hand opening and left hand opening doors.

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



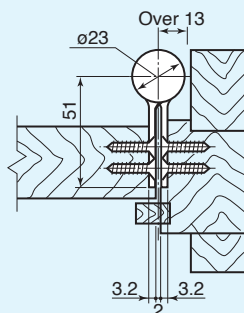
External Dimensions (Unit: mm)



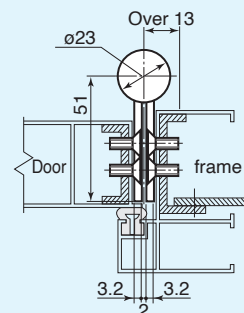
Remarks

1. Surface treatment: By baked coating of melamine resin.
2. When using for wooden doors or frames, use hardwood that is as hard or harder than Lauan for the material of the mounting part.
3. The tapping screws supplied with the products for installation are 25 mm long. When using the hinge on wooden frames, the thickness of the frame must be 25 mm or more.
4. When using on aluminum or lightweight steel doors, attach a reinforcing plate at least 300 mm long to the back plate. Use M5 countersunk screws. (Not supplied)
5. Leave a gap of at least 3 mm between the outer edge of door and the frame.
6. Read the cautions on page 34 before use.

Installation Diagrams



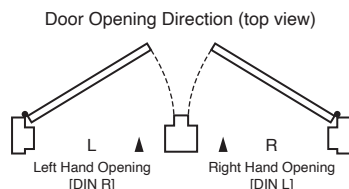
For Wooden Doors



For Aluminum Doors

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening	W	H	D							
1111R		1111L	850(Max)	2000(Max)	30(Min)	35(Max)	7.9	—	—	180° Left or Right One-side Opening	Silver
1111SR		1111SL						○	85°		
1121R		1121L						—	—		Bronze
1121SR		1121SL						○	85°		
1111FR		1111FL						○	85°~180° (Free stop)		Silver
1121FR		1121FL					Bronze				
Empty Hinge	1110R	1110L									
	1120R	1120L	Bronze								

- Models with "FR" or "FL" at the end of their model number have the "Free Stop" function.
- Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



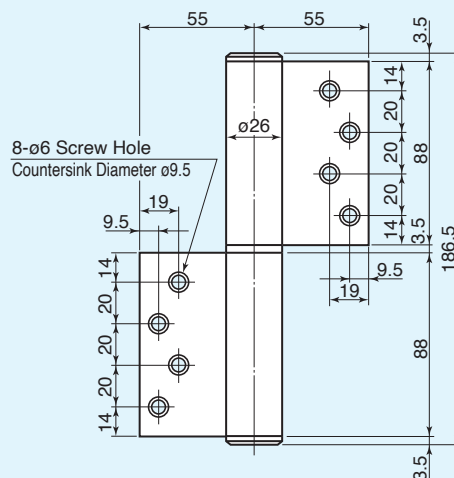
Remarks

1. Body material: Aluminum
Surface treatment:
Silver (anodic oxide coating)
Bronze (baked epoxy resin coating)
2. When using for wooden doors or frames, use hardwood that is as hard or harder than Lauan for the material of the mounting part.
3. The tapping screws supplied with the products for installation are 25 mm long. When using the hinge on wooden frames, the thickness of the frame must be 25 mm or more.
4. When using on aluminum or lightweight steel doors, attach a reinforcing plate at least 300 mm long to the back plate. Use the dedicated M5 countersunk screws for sash. (Not supplied)
5. Leave a gap of at least 5 mm between the outer edge of door and the frame.
6. Read the cautions on page 34 before use.

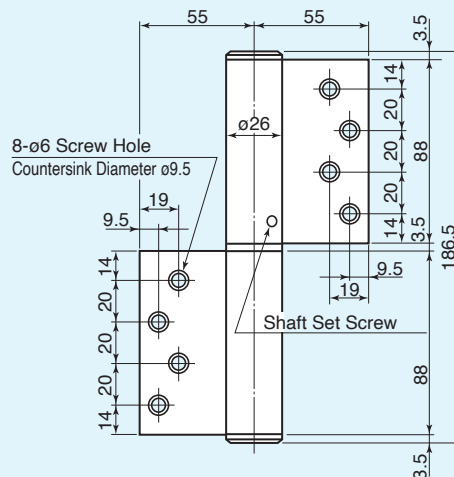
External Dimensions (Unit: mm)

Left hand opening

● Spring Hinge

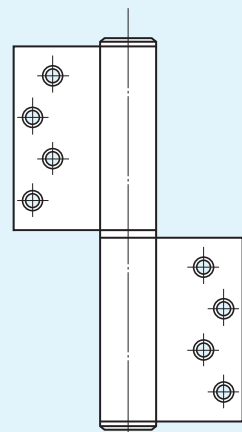


● Damper Hinge

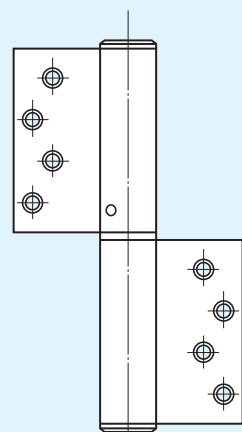


Right hand opening

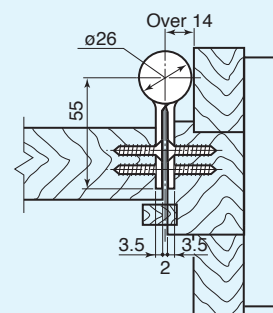
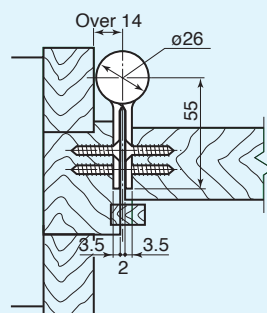
● Spring Hinge



● Damper Hinge



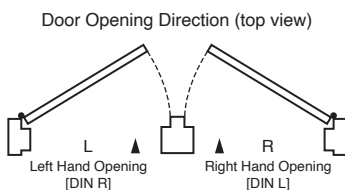
Installation Diagrams



Model Number		Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening	W	H	D						
1211R	1211L	850(Max)	2000(Max)	30(Min)	35(Max)	7.9	—	—	180° Left or Right One-side Opening	Silver
1211SR	1211SL						○	85°		Bronze
1221R	1221L						—	—		
1221SR	1221SL						○	85°		Silver
1211FR	1211FL						○	85°-180° (Free stop)		Bronze
1221FR	1221FL						—	—		Silver
Empty Hinge	1210R	850(Max)	2000(Max)	30(Min)	35(Max)	—	—	—	180° Left or Right One-side Opening	Bronze
	1220R									Silver

● Models with "FR" or "FL" at the end of their model number have the "Free Stop" function.

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



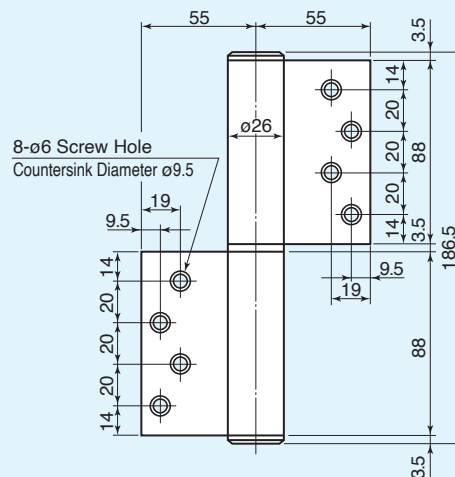
Remarks

- Body material: Aluminum
Surface treatment:
Silver (anodic oxide coating)
Bronze (baked epoxy resin coating)
- For reinforcement purposes, be sure to use steel plates at least 2.3 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
- Use the dedicated countersunk screws (M5 x 15L SUS) supplied with the product for leaf installation. When using on wooden frames/doors, prepare tapping screws 5 x 25 mm or longer. (Not supplied)
- When using on aluminum or lightweight steel doors, attach a reinforcing plate at least 300 mm long to the back plate.
- Leave a gap of at least 5 mm between the outer edge of door and the frame.
- Read the cautions on page 34 before use.

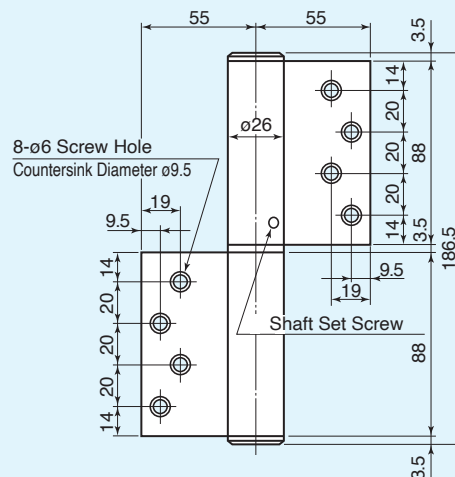
External Dimensions (Unit: mm)

Left hand opening

● Spring Hinge

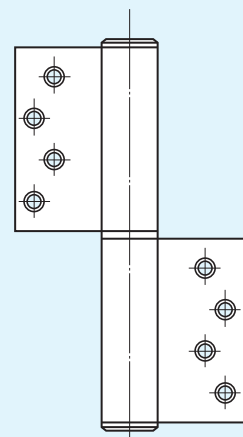


● Damper Hinge

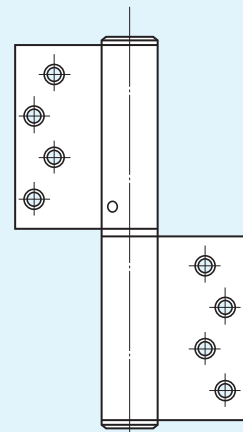


Right hand opening

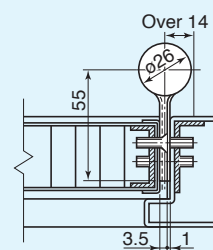
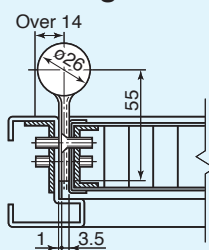
● Spring Hinge



● Damper Hinge



Installation Diagrams



Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
2211R		2211L	800(Max)	2000(Max)	30(Min)	30(Max)	5.0	—	—	180° Left or Right One-side Opening	Silver
2211WR		2211WL									
Empty Hinge	2210R	2210L									
	2210WR	2210WL									

● Models with "W" in their model number are for wooden doors. The models without "W" are for aluminum and lightweight steel doors.

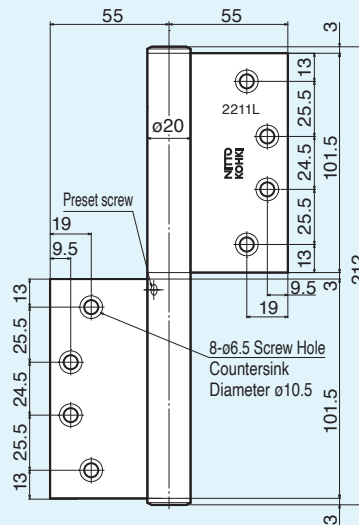
● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



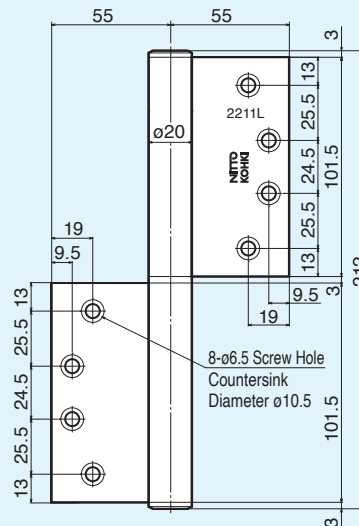
External Dimensions (Unit: mm)

Left hand opening

● Spring Hinge

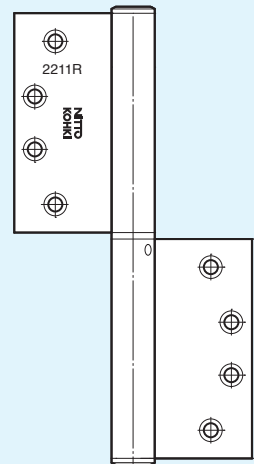


● Damper Hinge

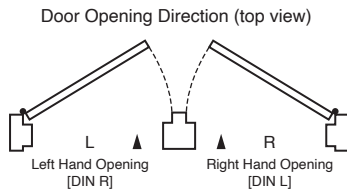
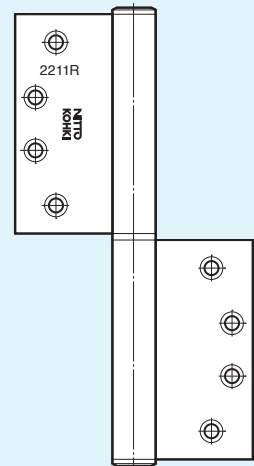


Right hand opening

● Spring Hinge



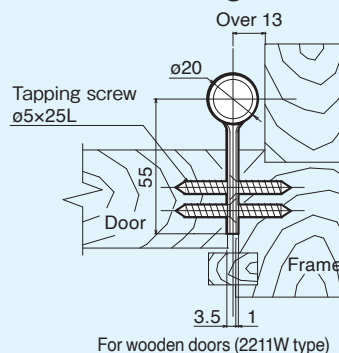
● Damper Hinge



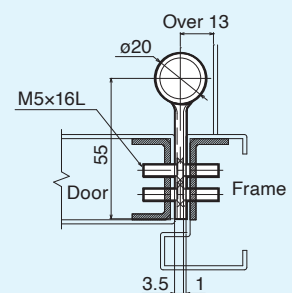
Remarks

1. Body material: Aluminum
Surface treatment:
Silver (anodic oxide coating)
Bronze (baked epoxy resin coating)
2. When using on aluminum or lightweight steel doors/frames, be sure to use steel plates at least 2.3 mm thick and 300 mm long on the leaf mounting part of the door/frame. Use the dedicated countersunk screws (M5 x 16L) supplied with the product for leaf installation.
3. When using for wooden doors or frames, use hardwood that is as hard or harder than Luan for the material of the mounting part. Also, the thickness of the frame must be 25 mm or more. Use the dedicated tapping screws (5 x 25L) supplied with the product for leaf installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Read the cautions on page 34 before use.

Installation Diagrams



For wooden doors (2211W type)



For aluminum and lightweight steel doors (2211 type)

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening		W	H	D						
112R	112L		900(Max)	2100(Max)	30(Min)	40(Max)	10.0	—	—	180° Left or Right One-side Opening	Silver Bronze Black*
112SR	112SL							○	85° & 150°		
Empty Hinge	110R	110L					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

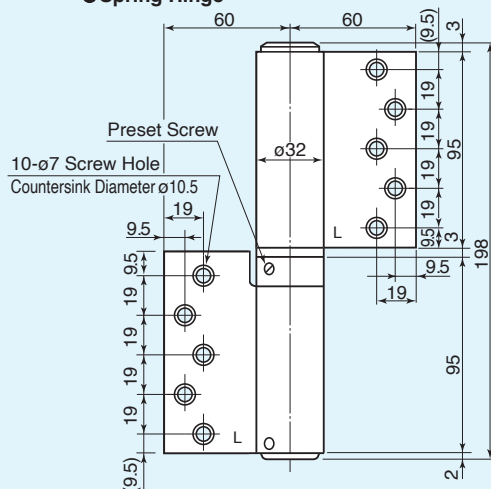
*Made-to-order item



External Dimensions (Unit: mm)

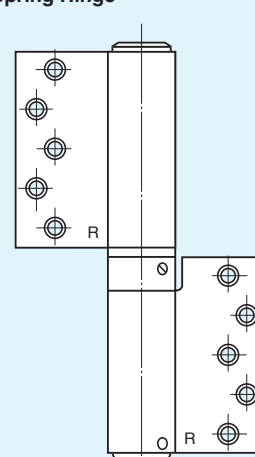
Left hand opening

● Spring Hinge

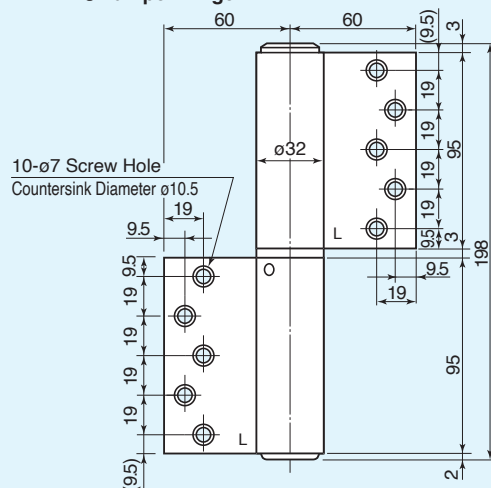


Right hand opening

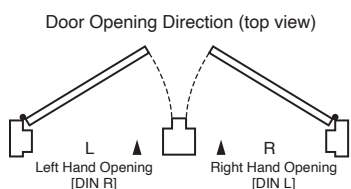
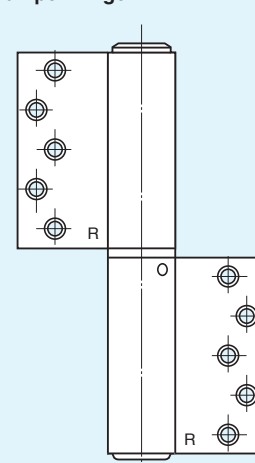
● Spring Hinge



● Damper Hinge



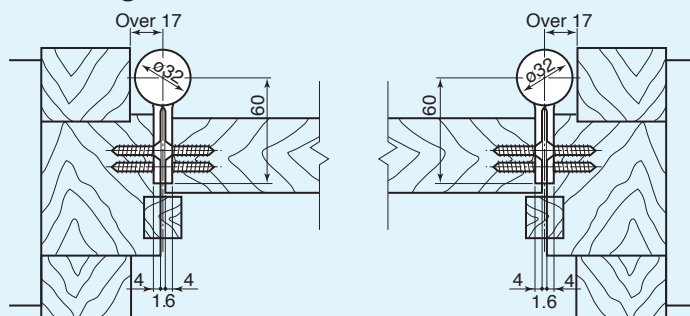
● Damper Hinge



Remarks

1. Surface treatment: By baked coating of melamine resin.
2. When using for wooden doors or frames, use hardwood that is as hard or harder than Lauan for the material of the mounting part.
3. The tapping screws supplied with the products for installation are 25 mm long. When using the hinge on wooden frames, the thickness of the frame must be 25 mm or more.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Read the cautions on page 34 before use.
7. Models with rounded corners are also available.

Installation Diagrams



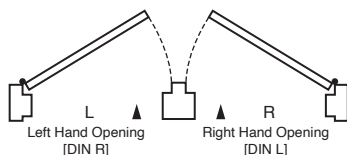
Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
122R-T		122L-T	900(Max)	2100(Max)	30(Min)	40(Max)	10.0	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
122SR-T		122SL-T						○	85° & 150°		
Empty Hinge	120R-T	120L-T					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



Door Opening Direction (top view)



Remarks

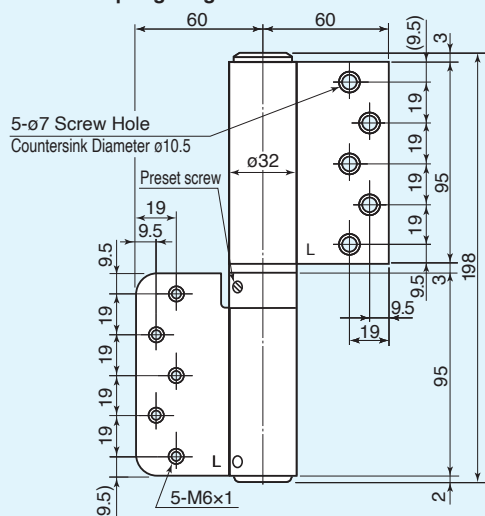
1. Surface treatment: By baked coating of melamine resin.
2. This product has tapped holes on the frame side leaf. Use five countersunk head screws M6 for installation.
3. For reinforcement purposes, put a steel plate at least 300 mm long to the leaf mounting part on the frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly to the frame.
4. The tapping screws $\varnothing 5 \times 25L$ for the door side leaf are included. Prepare mounting screws M6 separately, since they are not included.
5. Use hardwood that is as hard or harder than Lauan for the material of the mounting part of the door side leaf.
6. Leave a gap of at least 5 mm between the outer edge of door and the frame.
7. Always install a door stopper to prevent the door from opening more than 180° . When installing, the door stopper must touch the door front end.
8. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

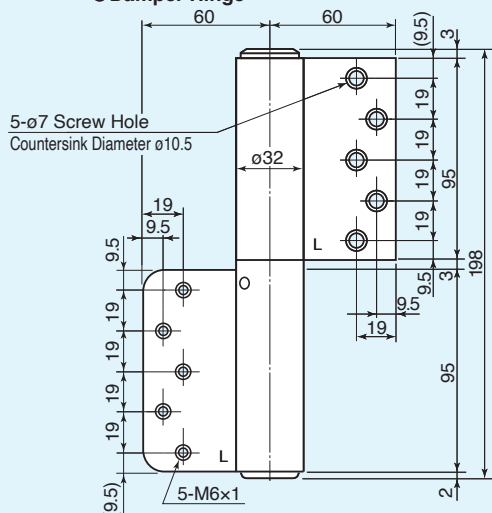
(Unit: mm)

Left hand opening

● Spring Hinge

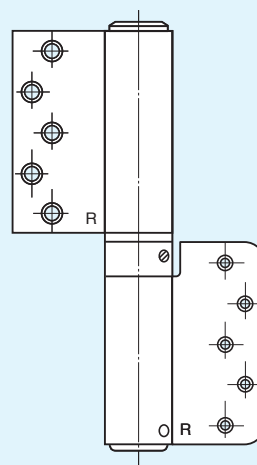


- Damper Hinge

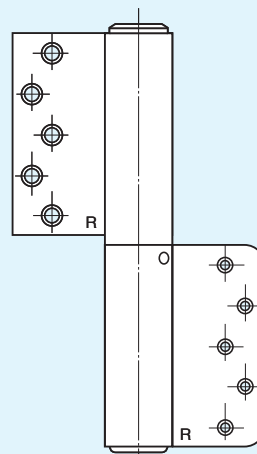


Right hand opening

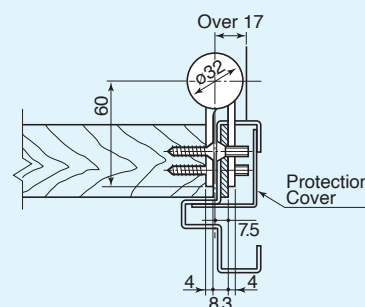
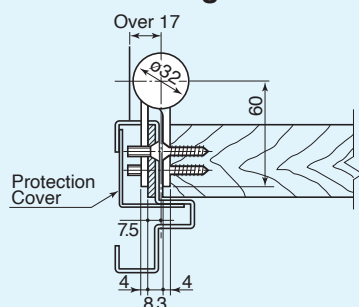
●Spring Hinge



- Damper Hinge



■ Installation Diagrams



Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening		W	H	D						
113R	113L		900(Max)	2100(Max)	30(Min)	60(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver
113SR	113SL							○	85° & 150°		
Empty Hinge	110R	110L					—	—	—		

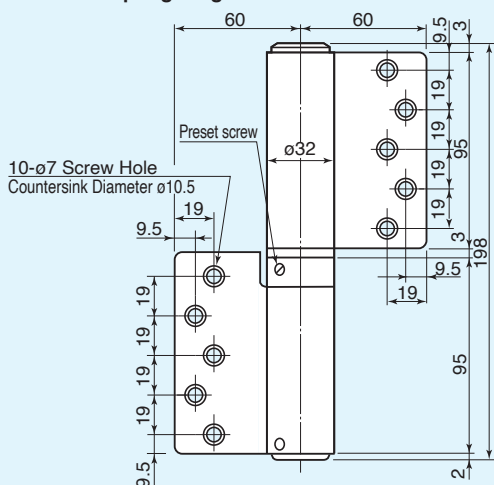
● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



External Dimensions (Unit: mm)

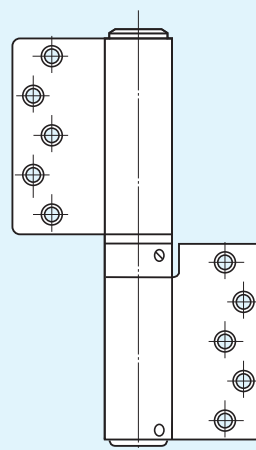
Left hand opening

● Spring Hinge

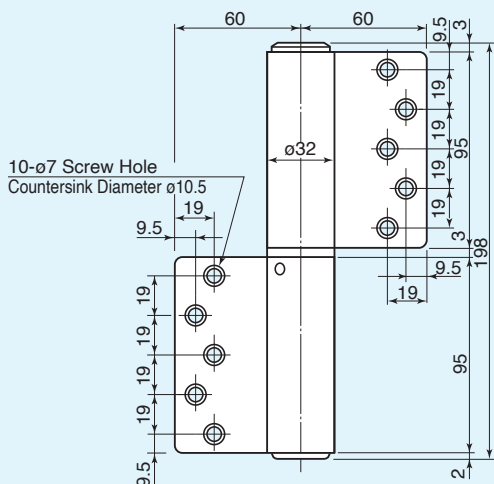


Right hand opening

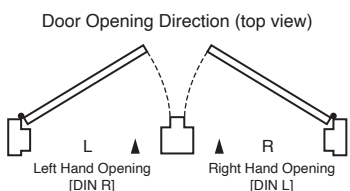
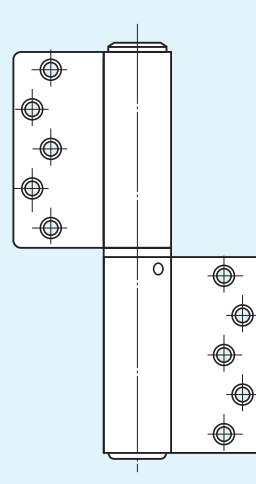
● Spring Hinge



● Damper Hinge



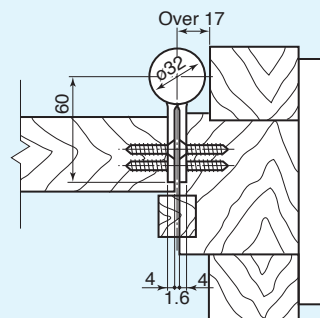
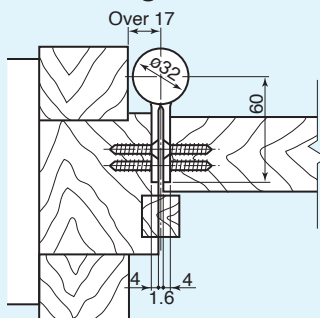
● Damper Hinge



Remarks

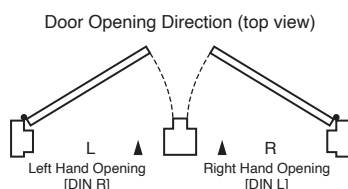
- When using for wooden doors or frames, use hardwood that is as hard or harder than Luan for the material of the mounting part.
- The tapping screws supplied with the products for installation are 25 mm long. When using the hinge on wooden frames, the thickness of the frame must be 25 mm or more.
- Leave a gap of at least 5 mm between the outer edge of door and the frame.
- Models with non-rounded corners are also available.
- Surface treatment: By baked coating of melamine resin.
- Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
- Read the cautions on page 34 before use.

Installation Diagrams



Model Number		Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening	W	H	D						
113R TRISET	113L TRISET	1000(Max)	2200(Max)	30(Min)	80(Max)	20.0	—	—	180° Left or Right One-side Opening	Silver
113SR TRISET	113SL TRISET						○	85° & 150°		
—						—	—	—		

● Each model consists of two spring hinges and one damper hinge.



Remarks

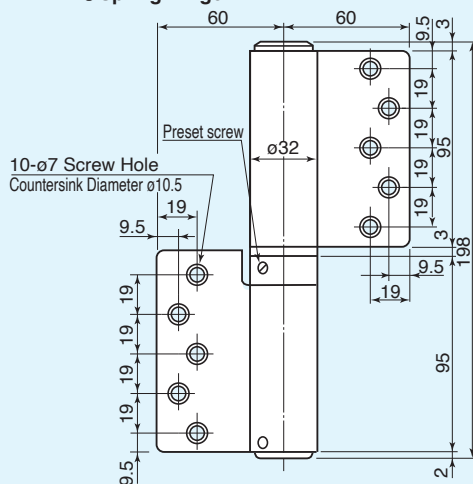
1. When using for wooden doors or frames, use hardwood that is as hard or harder than Lauan for the material of the mounting part.
2. The tapping screws supplied with the products for installation are 30 mm long. When using the hinge on wooden frames, the thickness of the frame must be 30 mm or more.
3. Leave a gap of at least 5 mm between the outer edge of door and the frame.
4. Models with non-rounded corners are also available.
5. Surface treatment: By baked coating of melamine resin.
6. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
7. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

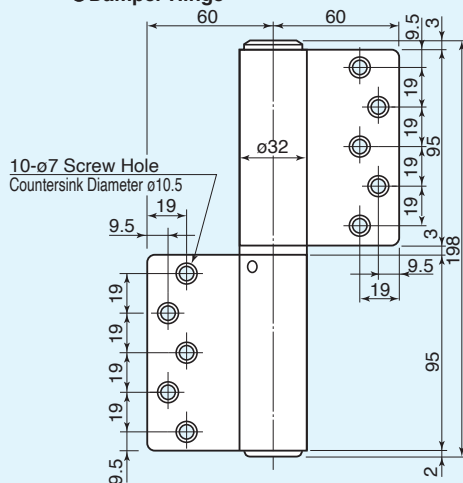
(Unit: mm)

Left hand opening

● Spring Hinge

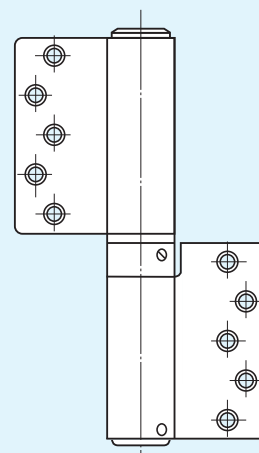


● Damper Hinge

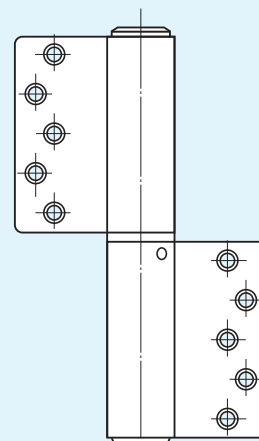


Right hand opening

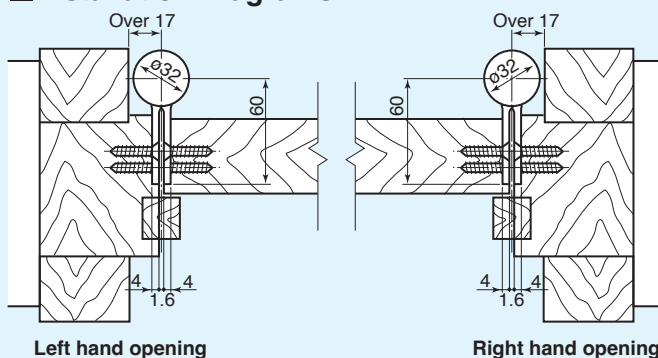
●Spring Hinge



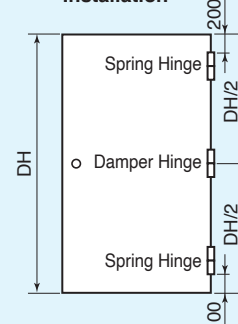
● **Damper Hinge**



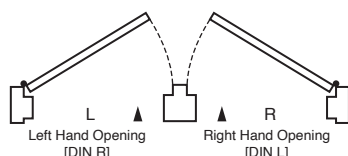
■ Installation Diagrams



Installation



● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



1. For reinforcement purposes, be sure to use steel plates at least 2.3 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
2. Use the countersunk head screws M6 for installation. (Screws not included.) Refer to the dimensions in the square (□) when cutting the leaf. (Do not weld.)
3. When using for wooden doors or frames, use hardwood that is as hard or harder than Lauan for the material of the mounting part.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Surface treatment: By baked coating of melamine resin.
6. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
7. Read the cautions on page 34 before use.

- Damper Hinge

*1 Cut the tip of the leaf as needed.

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
132R		132L	900(Max)	2100(Max)	30(Min)	40(Max)	10.0	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
132SR		132SL						○	85° & 150°		
Empty Hinge	130R	130L					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

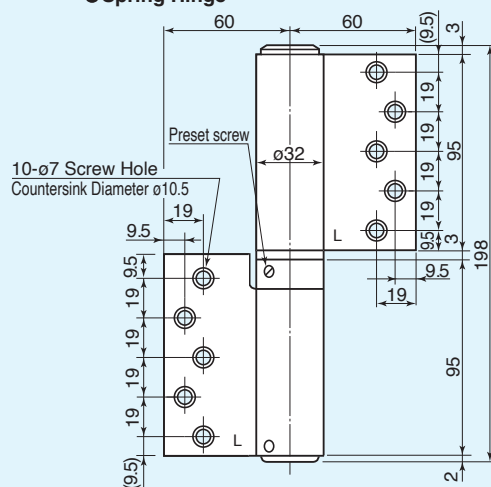
*Made-to-order item



■ External Dimensions (Unit: mm)

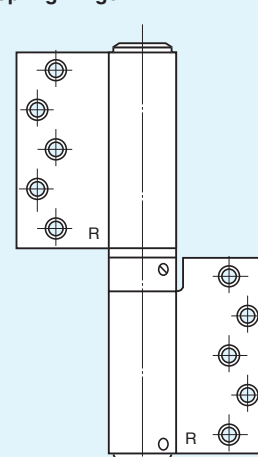
Left hand opening

● Spring Hinge

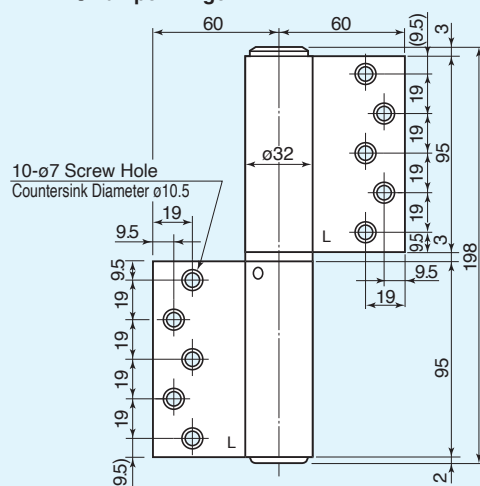


Right hand opening

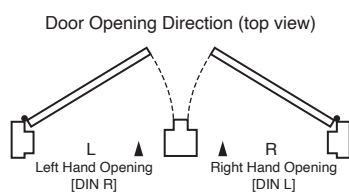
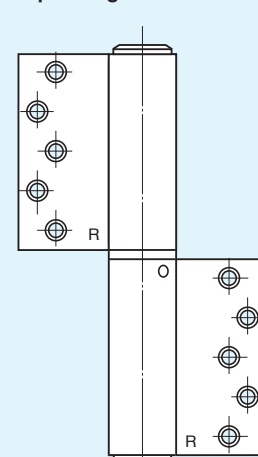
● Spring Hinge



- Damper Hinge



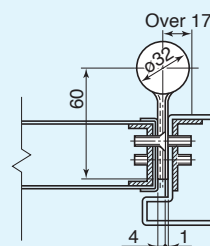
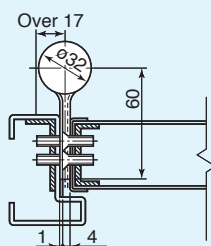
- Damper Hinge



Remarks

1. Surface treatment: By baked coating of melamine resin.
2. For reinforcement purposes, put a steel plate that is at least 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
3. The countersunk head screws M5 x 16L (P=0.8) are included for installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Read the cautions on page 34 before use.

■ Installation Diagrams



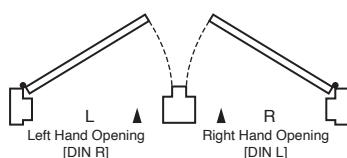
Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
143R-T		143L-T	900(Max)	2100(Max)	30(Min)	60(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
143SR-T		143SL-T						○	85° & 150°		
Empty Hinge	140R-T	140L-T					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



Door Opening Direction (top view)



Remarks

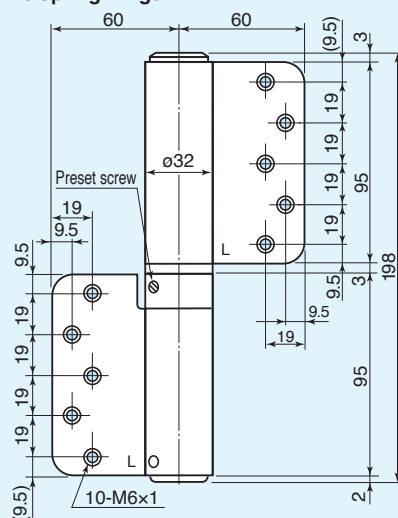
1. Surface treatment: By baked coating of melamine resin.
2. This product has tapped holes on the frame/door side leaf. Use five countersunk head screws M6 for installation.
3. For reinforcement purposes, put a steel plate that is at least 3.2 mm thick and 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
4. When using for fire doors, always use models that do not have the stop function (143R-T or 143L-T).
5. Leave a gap of at least 5 mm between the outer edge of door and the frame.
6. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
7. Prepare mounting screws (M6) separately, since they are not included.
8. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

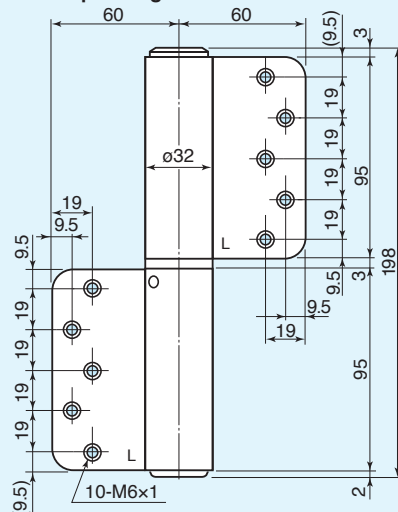
(Unit: mm)

Left hand opening

● Spring Hinge

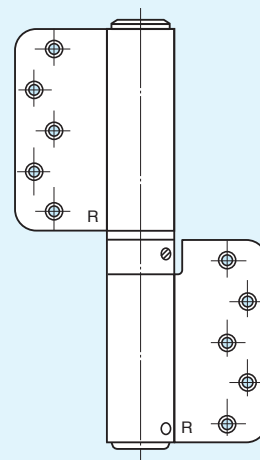


- **Damper Hinge**

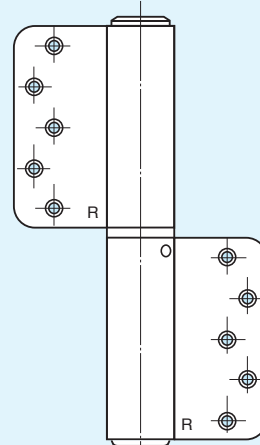


Right hand opening

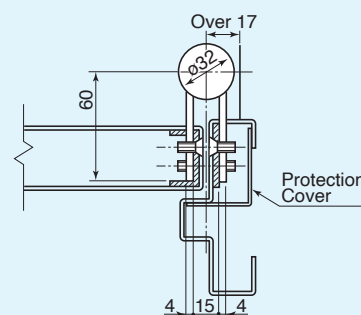
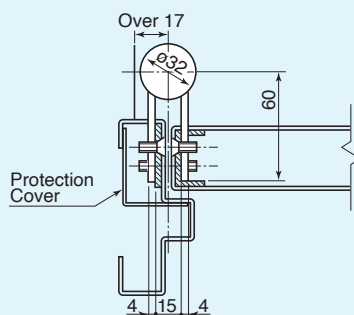
●Spring Hinge



- Damper Hinge

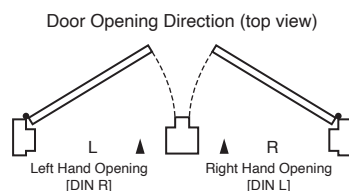


■ Installation Diagrams



Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
143R-AT		143L-AT	900(Max)	2100(Max)	30(Min)	60(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver
143SR-AT		143SL-AT						○	85° & 150°		
Empty Hinge	140R-AT	140L-AT					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.



Remarks

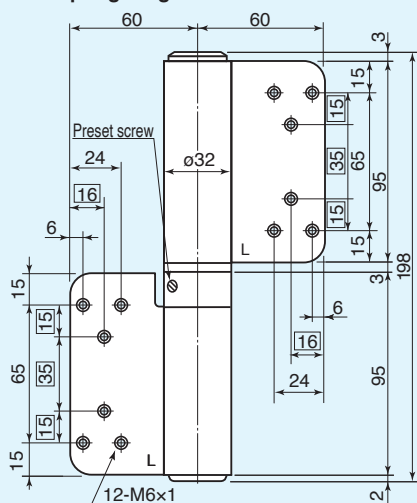
1. For reinforcement purposes, be sure to use steel plates at least 2.3 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
2. Use the countersunk head screws M6 for installation. (Screws not included.) Refer to the dimensions in the square (□) when cutting the leaf. (Do not weld.)
3. When using for fire doors, always use models that do not have the stop function (143R-T or 143L-T).
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Surface treatment: By baked coating of melamine resin.
6. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
7. Read the cautions on page 34 before use

■ External Dimensions (Unit: mm)

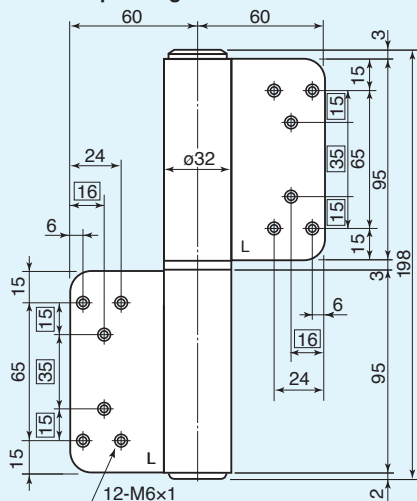
(Unit: mm)

Left hand opening

● Spring Hinge

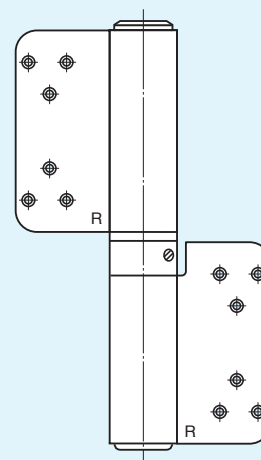


● **Damper Hinge**

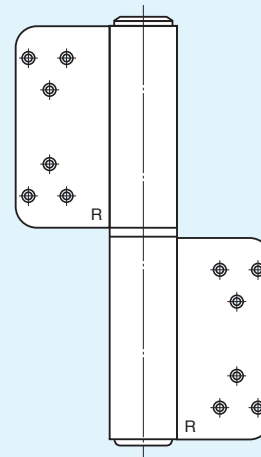


Right hand opening

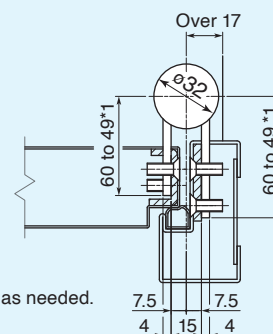
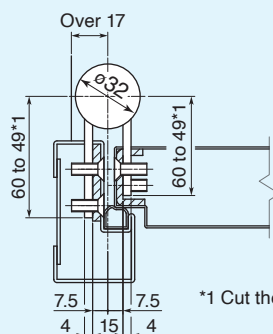
●Spring Hinge



- Damper Hinge



■ Installation Diagrams



*1 Cut the tip of the leaf as needed.

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
234R		234L	1200(Max)	2100(Max)	40(Min)	120(Max)	22.6	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
234SR		234SL						○	85° & 150°		
Empty Hinge	230R	230L					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item

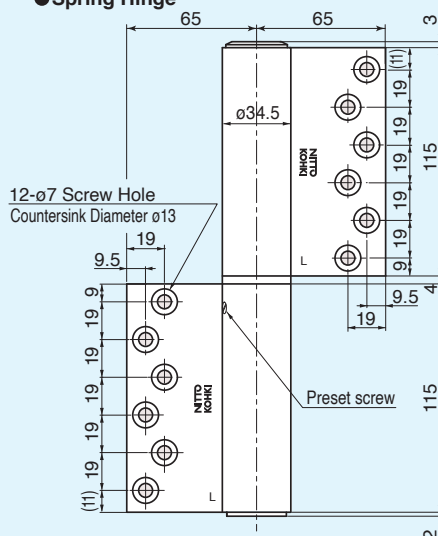


■ External Dimensions (Unit: mm)

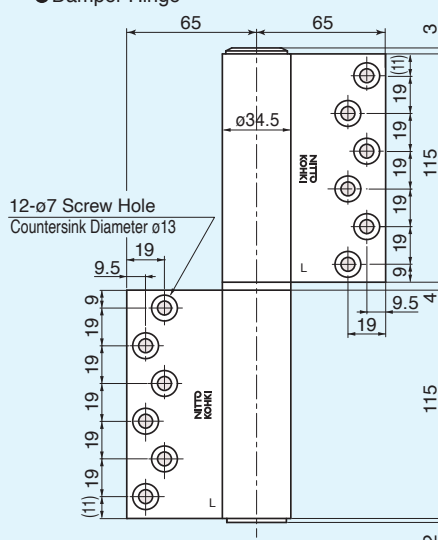
(Unit: mm)

Left hand opening

● **Spring Hinge**

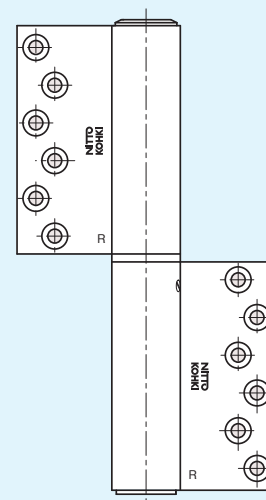


- Damper Hinge

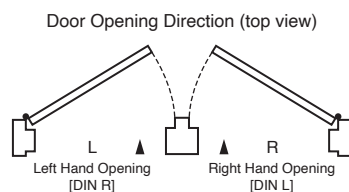
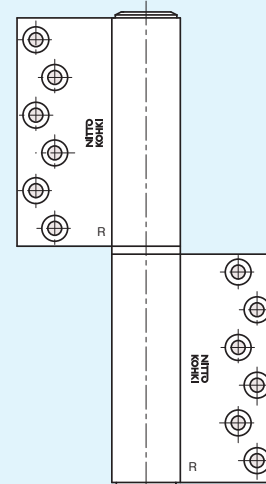


Right hand opening

- Spring Hinge



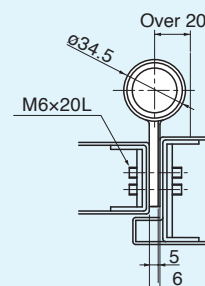
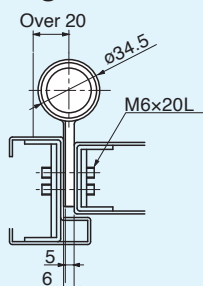
- Damper Hinge



Remarks

1. Surface treatment: By baked coating of melamine resin.
2. For reinforcement purposes, put a steel plate that is at least 3.2 mm thick and 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
3. The countersunk head screws M6 x 20L are included for installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Read the cautions on page 34 before use.

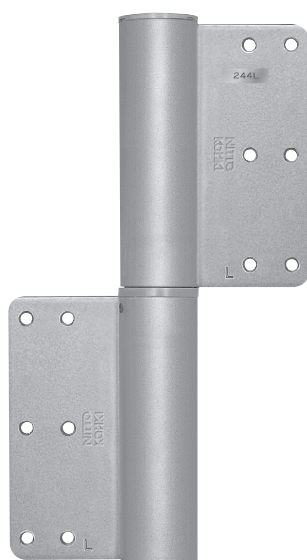
■ Installation Diagrams



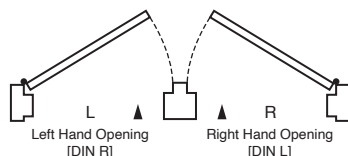
Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening		W	H	D						
244R-T	244L-T		1200(Max)	2100(Max)	40(Min)	120(Max)	22.6	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
244SR-T	244SL-T							○	85° & 150°		
Empty Hinge	240R-T	240L-T				—	—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



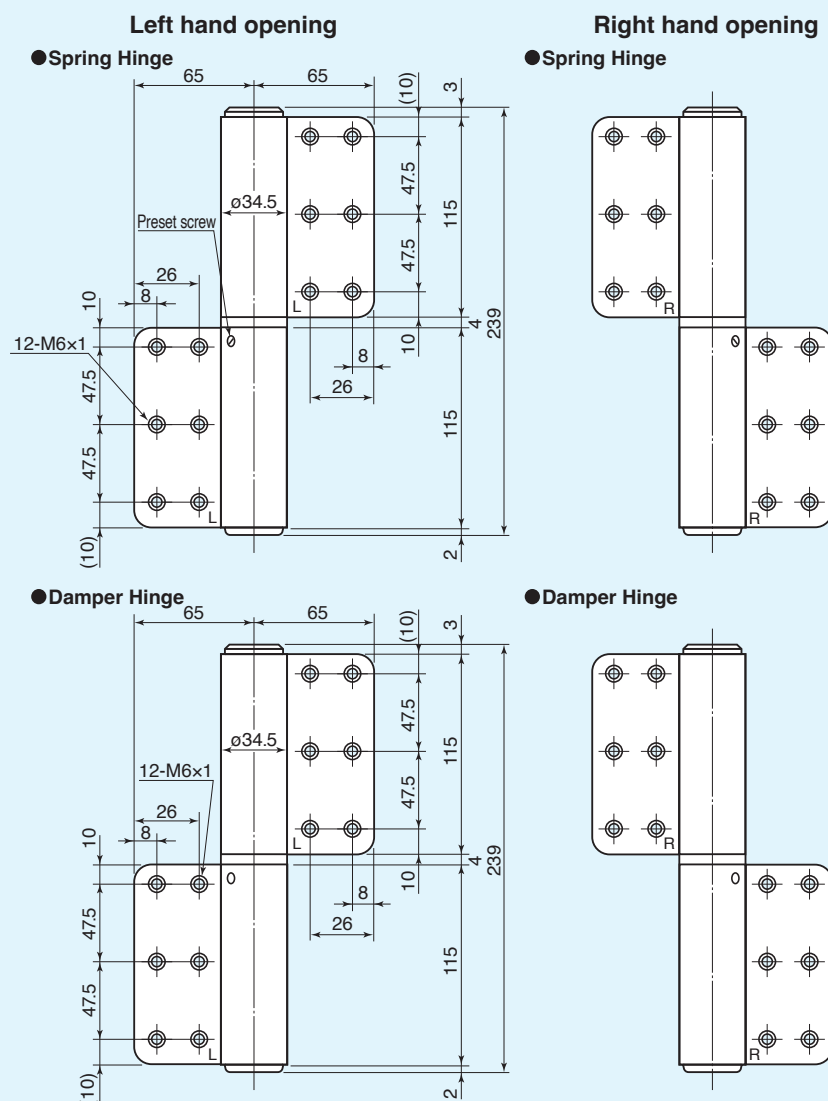
Door Opening Direction (top view)



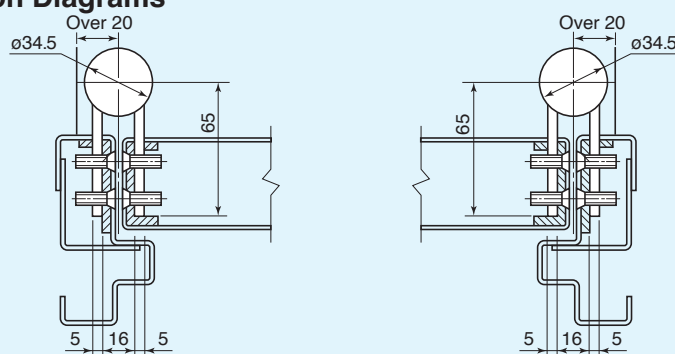
Remarks

1. Surface treatment: By baked coating of melamine resin.
2. This product has tapped holes on the frame/door side leaf. Use six countersunk head screws M6 for installation.
3. For reinforcement purposes, put a steel plate that is at least 3.2 mm thick and 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
4. When using for fire doors, always use the models that do not have the stop function (244R-T or 244L-T).
5. Leave a gap of at least 5 mm between the outer edge of door and the frame.
6. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
7. Prepare mounting screws (M6) separately, since they are not included.
8. Read the cautions on page 34 before use.

External Dimensions (Unit: mm)



Installation Diagrams



Special sealing technology and highly durable stainless steel adopted.

Suitable for a wide range of applications, including for bathrooms and coastal areas.

Offers beautiful and harmonized appearance to suit exterior/interior equipment.

Stainless steel, Flag Type

700 series

Simple design

AUTO-HINGE also functions as a door closer, giving the exterior of the door a neater look. The simple and beautiful design matches various door styles.

Wide range of applications

The applications of the flag type has been further expanded to include use in bathrooms, coastal areas, and other outdoor environments.

High corrosion resistance is achieved by using stainless steel

Corrosion resistance is approximately 3 times higher than the PC series. (Salt spray test: 500 hours or more)

Dew-proof by a special sealing structure

Special surface treatment ensures long lifetime

Approximately twice as durable as the PC series. (At least 200,000 open/close cycle tested)

Outstanding durability

The advanced low-friction structure achieves outstanding durability.

Built-in stop mechanism

Models with "S" in their model number come with a built-in stop mechanism that stops and holds the door at 85° and 150°.

*The opening angle is not limited by the stop mechanism.

Simple adjustment for closing speed

The door closing speed can be easily adjusted with a screwdriver.

No need to adjust the door closing speed

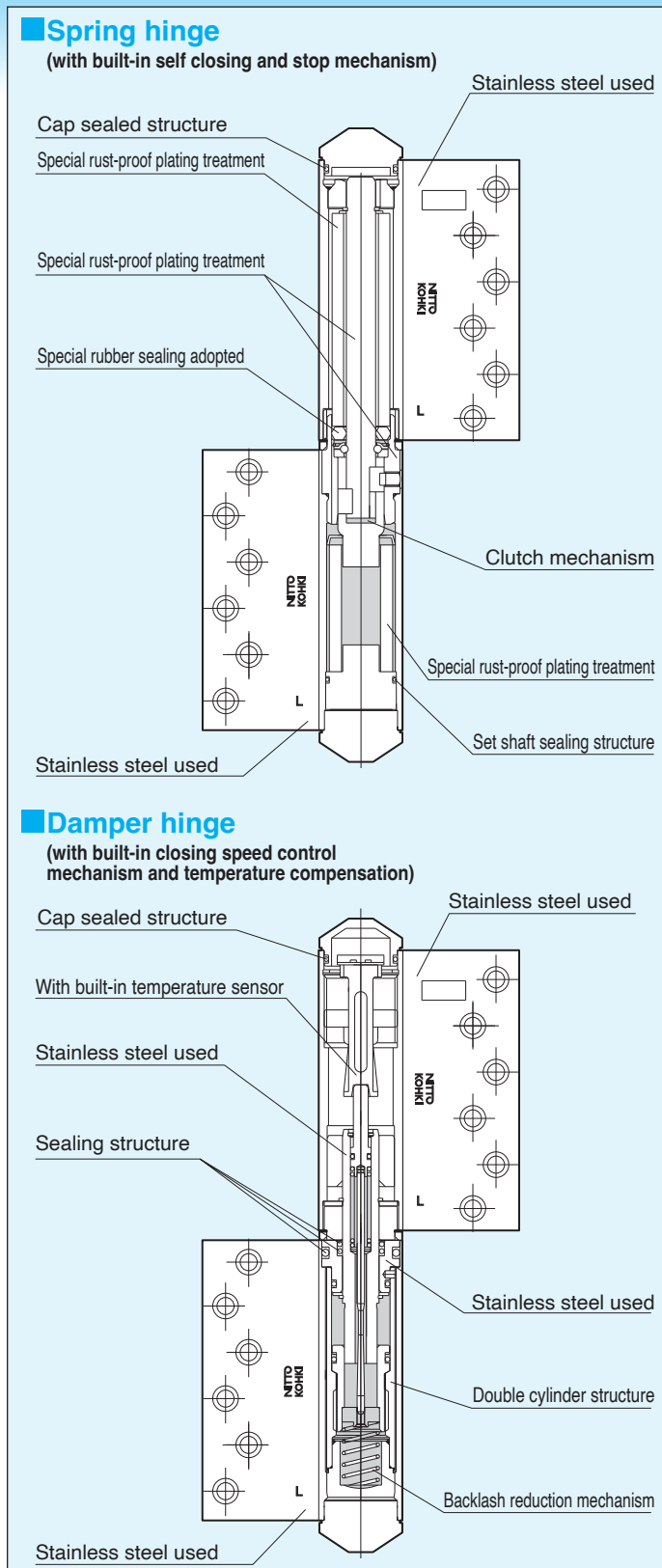
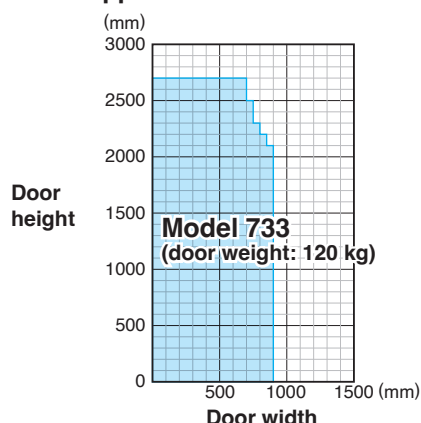
The built-in actuator with temperature sensor maintains a constant door closing speed regardless of the ambient temperature. All you need to do is set the desired door closing speed at the beginning.

Easy to install

AUTO-HINGE is installed exactly in the same manner as conventional flag type hinges. Installation can be done easily with minimal time and labor.

Compatible with the exterior products made of stainless steel

Table of applicable door size for the 700 series:



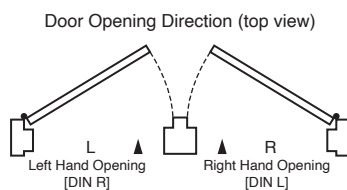
● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

● This diagram shows the structure of the 700 series.

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
733R		733L	900(Max)	2100(Max)	40(Min)	120(Max)	15.0	—	—	180° Left or Right One-side Opening	Shine gray Bronze* Black*
733SR		733SL						○	85° & 150°		
Empty Hinge	730R	730L					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



Remarks

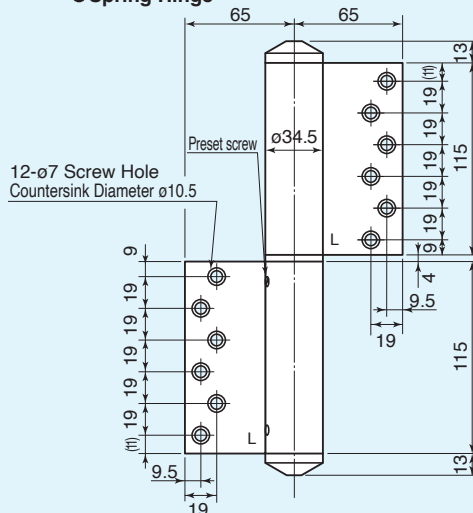
1. Surface treatment: By baked coating of acrylic resin on stainless steel.
2. For reinforcement purposes, be sure to use steel plates at least 3.2 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
3. The countersunk head screws M5 x 16L (P=0.8) are included for installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Do not use the product for sauna rooms.
7. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

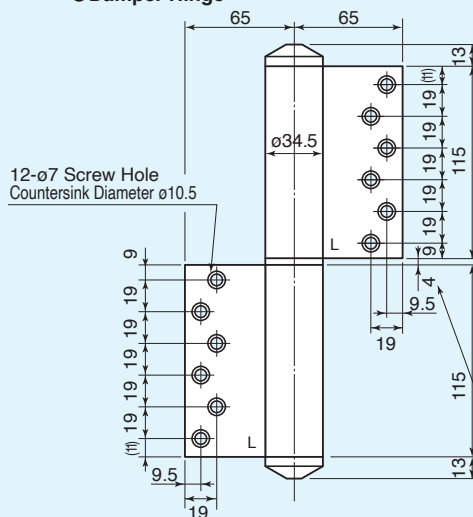
(Unit: mm)

Left hand opening

● **Spring Hinge**

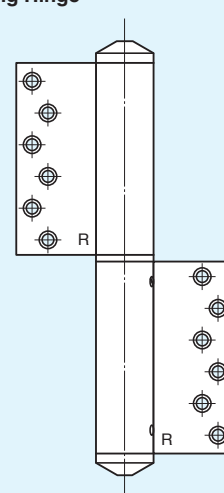


- Damper Hinge

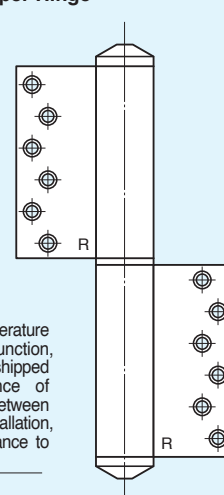


Right hand opening

●Spring Hinge

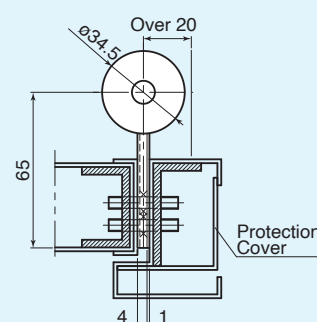
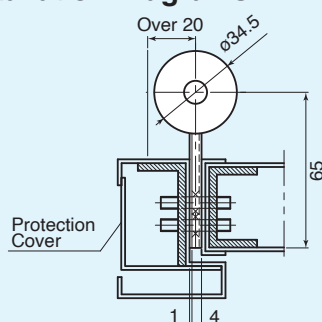


● Damper Hinge



Note:
Due to the temperature compensation function, the leaves are shipped with a clearance of about 10 mm between them. During installation, adjust the clearance to 4 mm.

■ Installation Diagrams



Constant door closing speed at all times.

Various unique features (automatic temperature compensation and drip-proofing) in a slim body.

It complements the beauty of front doors and other exterior doors.

Flag Type PC series

High reliability
in severe outdoor
environments.

Simple design

The simple and beautiful design of the PC series complements the beauty of front doors and other exterior doors, and matches various door styles.

Drip-proof design for outdoor use

The drip-proof structure of the PC series allows it to be used for front doors exposed to outside air as well as gate doors exposed to direct rain.

No need to adjust the door closing speed

The built-in actuator with temperature sensor maintains a constant door closing speed regardless of the ambient temperature. All you need to do is set the desired door closing speed at the beginning.

Setting the door closing speed is easy

The door closing speed can be easily adjusted with a screwdriver.

Easy installation and handling

The PC series, as well as the other models (100/200/700 series), is installed in exactly the same manner as conventional flag type hinges.

Outstanding durability

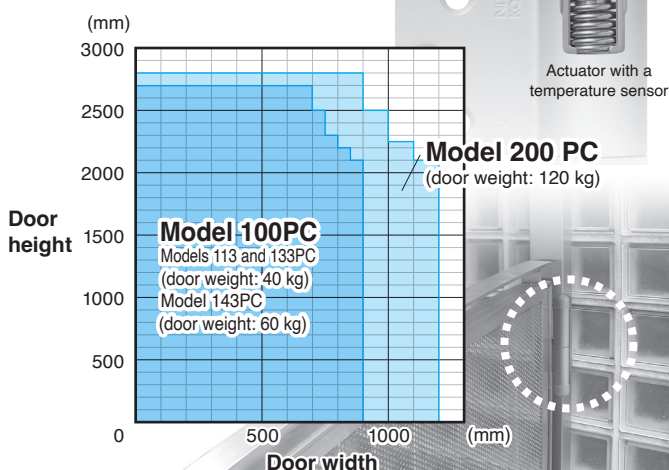
AUTO-HINGE is designed and constructed to minimize friction, resulting in superior durability and longer life.

Equipped with a built-in stop mechanism

Models with "S" in their model number come with a built-in stop mechanism that stops and holds the door at 85° and 150°.

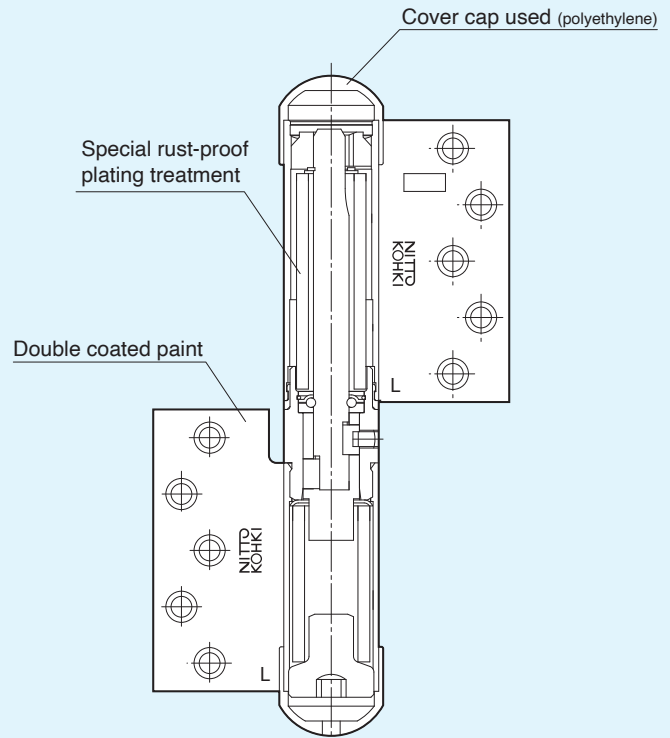
*The opening angle is not limited by the stop mechanism.

Table of applicable door size for the PC series:



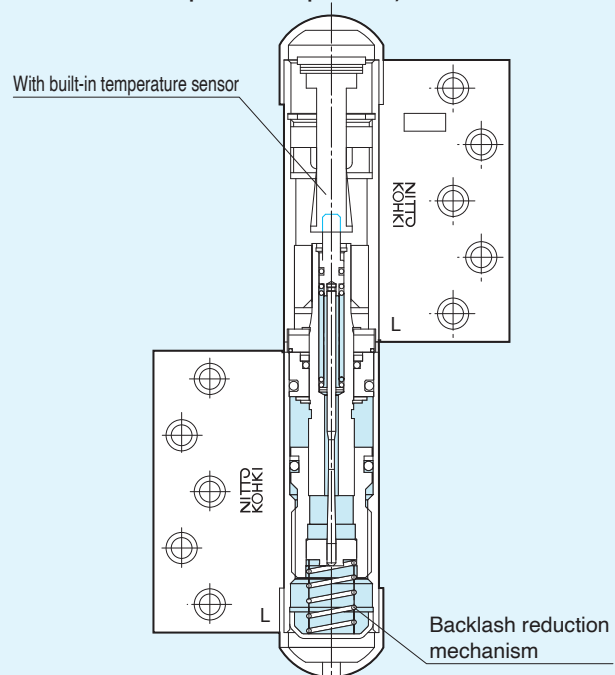
Spring hinge

(with built-in self closing and stop mechanism)



Damper hinge

(with built-in closing speed control mechanism and temperature compensation)

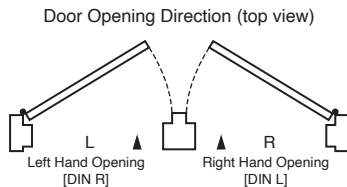


- Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.
- This diagram shows the structure of the PC series.

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
113R-PC		113L-PC	900(Max)	2100(Max)	30(Min)	40(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver Black* Bronze*
113SR-PC		113SL-PC						○	85° & 150°		
Empty Hinge	110R-PC	110L-PC					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item

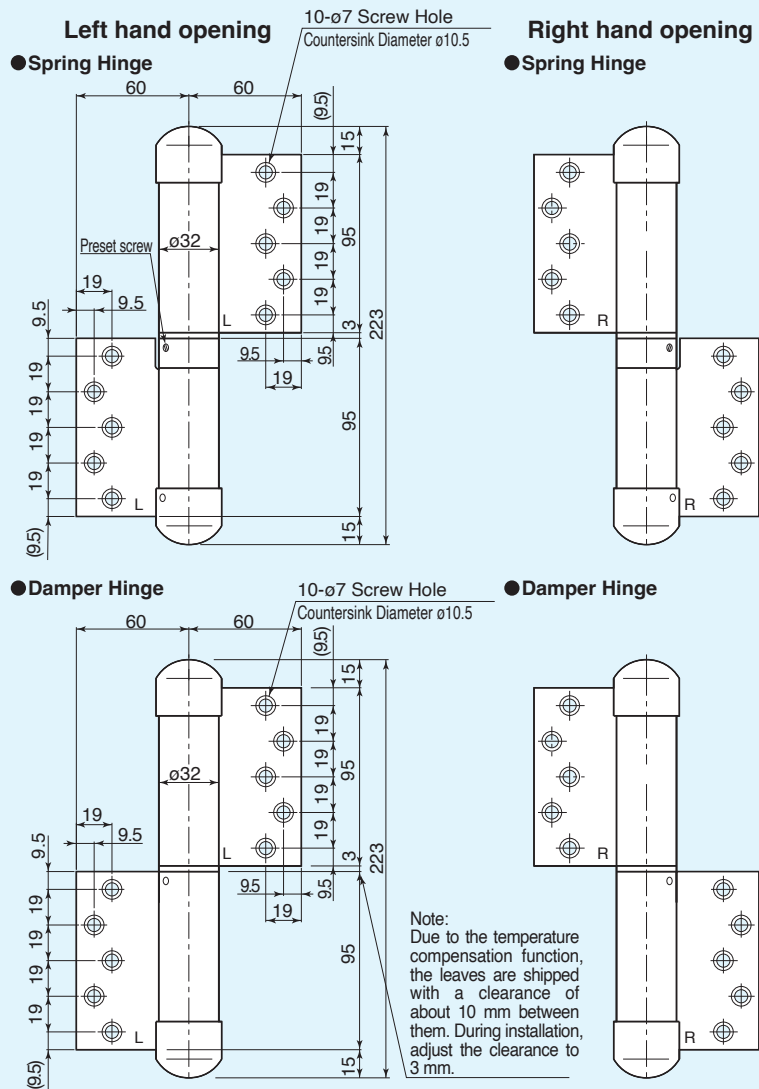


Remarks

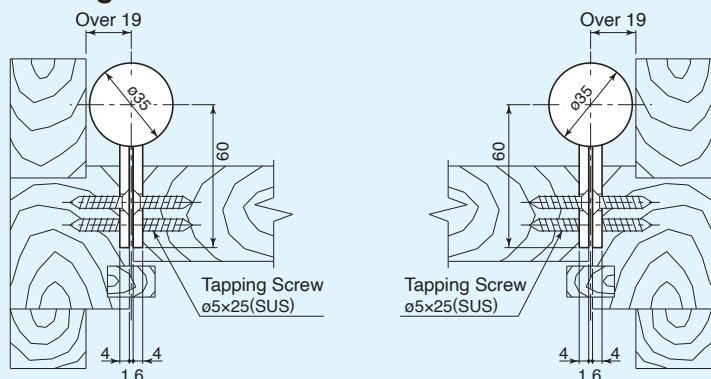
1. Surface treatment: By baked coating of acrylic resin.
2. Be sure to use hardwood that is as hard as or harder than Lauan for the material of the mounting part, or add a steel plate that is at least 2.3 mm thick and 300 mm long to the leaf mounting part of the door/frame for reinforcement purpose. Fix the steel plate directly onto the door/frame.
3. The tapping screws supplied with the products for installation are 25 mm long. When using the hinge on wooden frames, the thickness of the frame must be 25 mm or more.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Do not use the product for sauna rooms.
7. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

(Unit: mm)



■ Installation Diagrams



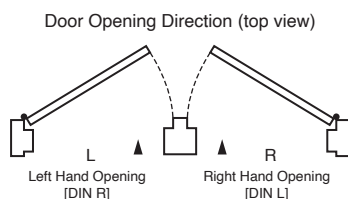
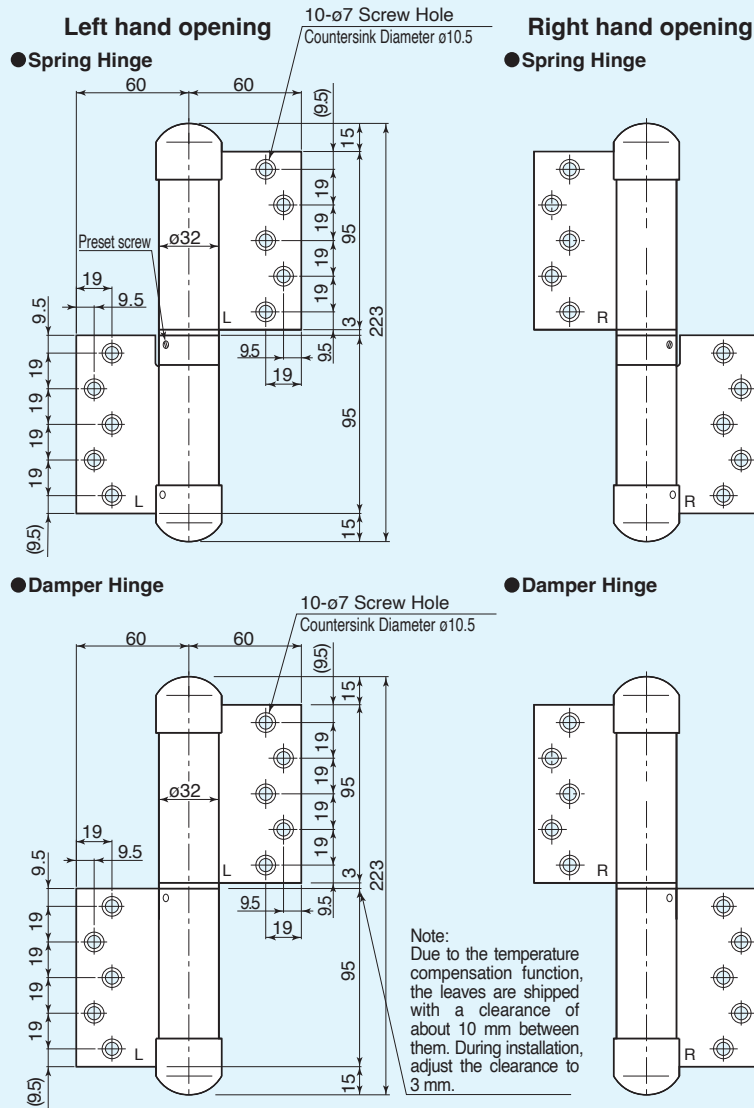
Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening		W	H	D						
133R-PC	133L-PC		900(Max)	2100(Max)	30(Min)	40(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver Black* Bronze*
133SR-PC	133SL-PC							○	85° & 150°		
Empty Hinge	130R-PC	130L-PC					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



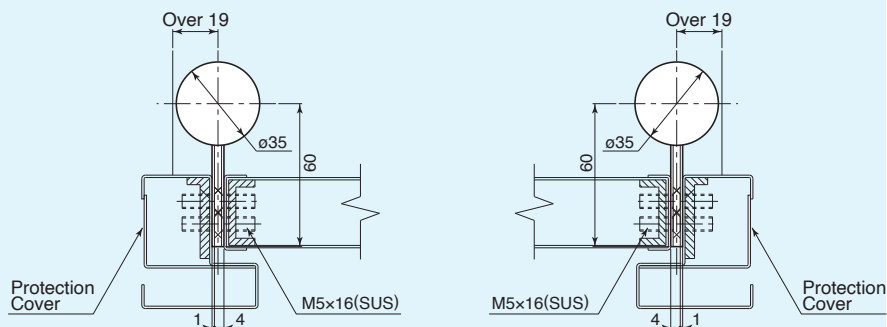
External Dimensions (Unit: mm)



Remarks

1. Surface treatment: By baked coating of acrylic resin.
2. For reinforcement purposes, be sure to use steel plates at least 2.3 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
3. The countersunk head screws M5 x 16L (P=0.8) are included for installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Do not use the product for sauna rooms.
7. Read the cautions on page 34 before use.

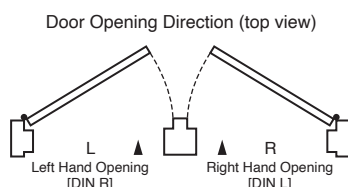
Installation Diagrams



Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
143R-T-PC		143L-T-PC	900(Max)	2100(Max)	30(Min)	60(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver Black* Bronze*
143SR-T-PC		143SL-T-PC						○	85° & 150°		
Empty Hinge	140R-T-PC	140L-T-PC					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

*Made-to-order item



Remarks

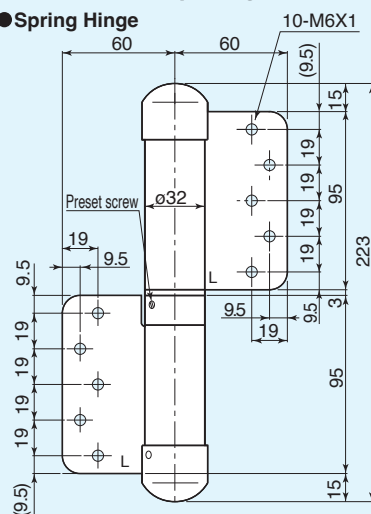
1. Surface treatment: By baked coating of acrylic resin.
2. This product has tapped holes on the frame/door side leaf. Use five countersunk head screws M6 for installation.
3. For reinforcement purposes, put a steel plate that is at least 3.2 mm thick and 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Prepare mounting screws (M6) separately, since they are not included.
7. Do not use the product for sauna rooms
8. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

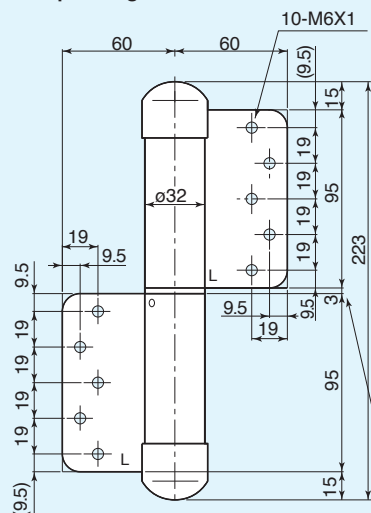
(Unit: mm)

Left hand opening

●Spring Hinge

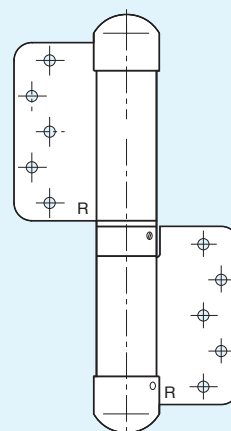


● Damper Hinge

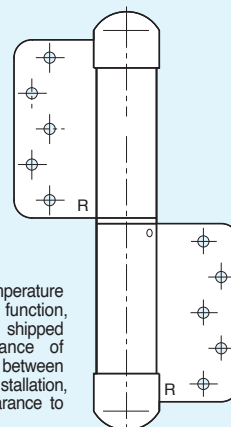


Right hand opening

●Spring Hinge

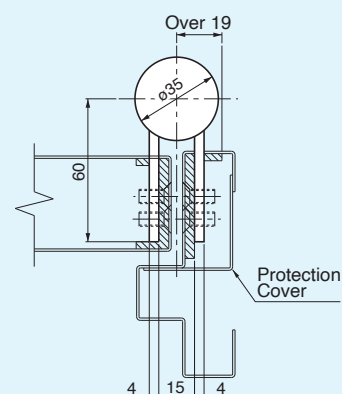
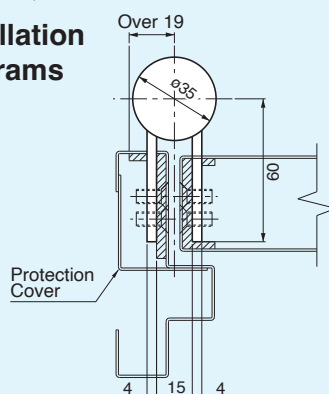


● Damper Hinge



Note:
Due to the temperature compensation function, the leaves are shipped with a clearance of about 10 mm between them. During installation, adjust the clearance to 3 mm.

■ Installation Diagrams



200PC_{series} Model 234-PC

For Heavyweight wooden / Aluminum / Steel Doors

For outdoor use

Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening	Left hand opening		W	H	D						
234R-PC	234L-PC		1200(Max)	2100(Max)	40(Min)	120(Max)	22.6	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
234SR-PC	234SL-PC							○	85° & 150°		
Empty Hinge	230R-PC	230L-PC					—	—	—		

● Each model consists of a spring hinge and a damper hinge. Empty Hinge consists of an empty hinge only.

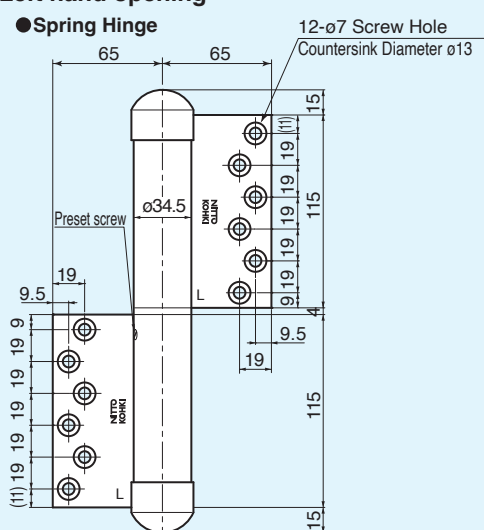
*Made-to-order item



External Dimensions (Unit: mm)

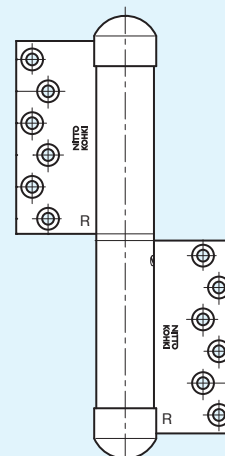
Left hand opening

● Spring Hinge

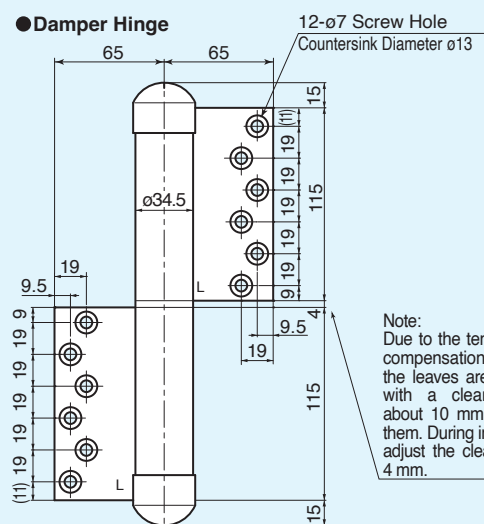


Right hand opening

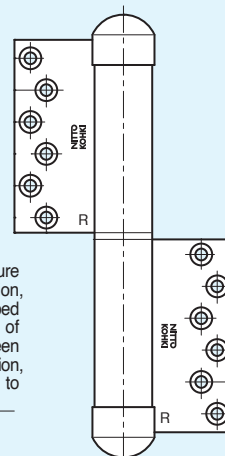
● Spring Hinge



● Damper Hinge

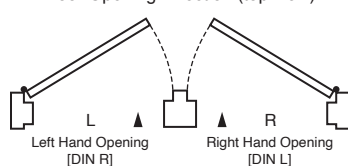


● Damper Hinge



Note:
Due to the temperature compensation function, the leaves are shipped with a clearance of about 10 mm between them. During installation, adjust the clearance to 4 mm.

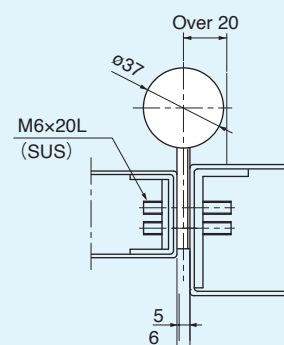
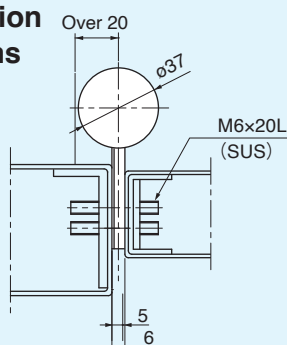
Door Opening Direction (top view)



Remarks

1. Surface treatment: By baked coating of acrylic resin.
2. For reinforcement purposes, be sure to use steel plates at least 3.2 mm thick and 300 mm long on the leaf mounting part of the door/frame. Also, fix the steel plate directly onto the door/frame.
3. The countersunk head screws M6 x 20L (P=1.0) are included for installation.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Do not use the product for sauna rooms.
7. Read the cautions on page 34 before use.

Installation Diagrams

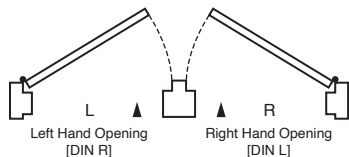


Model Number			Applicable Door Size (mm)			Applicable Door Weight (kg)	Closing Force (Nm)	Stop Mechanism	Stop Angle	Max. Door Opening Angle	Surface Color
Right hand opening		Left hand opening	W	H	D						
244R-T-PC		244L-T-PC	1200(Max)	2100(Max)	40(Min)	120(Max)	22.6	—	—	180° Left or Right One-side Opening	Silver Bronze* Black*
244SR-T-PC		244SL-T-PC						○	85° & 150°		
Empty Hinge	240R-T-PC	240L-T-PC					—	—	—		

*Made-to-order item



Door Opening Direction (top view)



Remarks

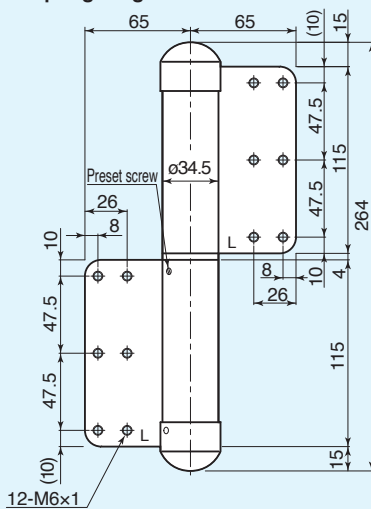
1. Surface treatment: By baked coating of acrylic resin.
2. This product has tapped holes on the frame/door side leaf. Use six countersunk head screws M6 for installation.
3. For reinforcement purposes, put a steel plate that is at least 3.2 mm thick and 300 mm long to the leaf mounting part on the door/frame so that the leaf and gap between the door and frame are parallel. Also, fix the steel plate directly onto the door/frame.
4. Leave a gap of at least 5 mm between the outer edge of door and the frame.
5. Always install a door stopper to prevent the door from opening more than 180°. When installing, the door stopper must touch the door front end.
6. Prepare mounting screws (M6) separately, since they are not included.
7. Do not use the product for sauna rooms.
8. Read the cautions on page 34 before use.

■ External Dimensions (Unit: mm)

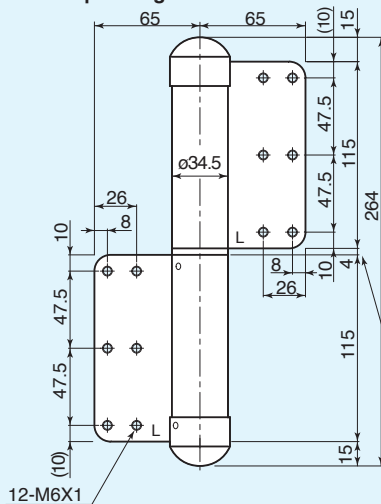
(Unit: mm)

Left hand opening

● Spring Hinge

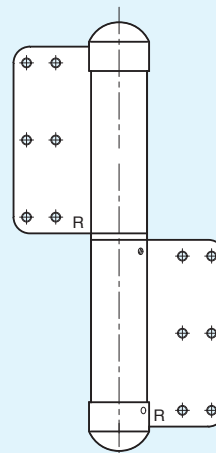


- Damper Hinge

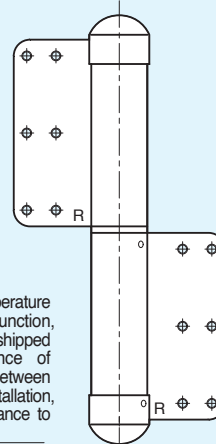


Right hand opening

●Spring Hinge

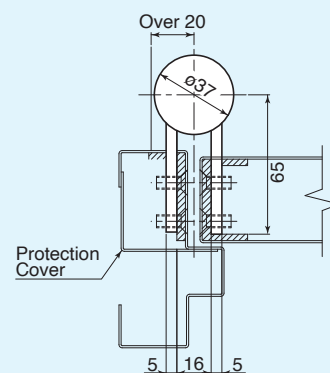
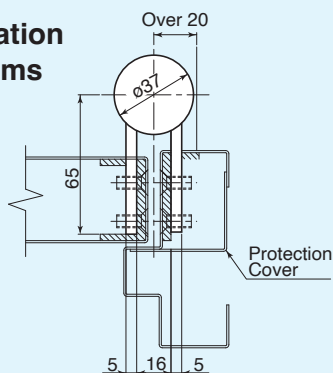


- Damper Hinge



Note:
Due to the temperature compensation function, the leaves are shipped with a clearance of about 10 mm between them. During installation, adjust the clearance to 4 mm.

■ Installation Diagrams

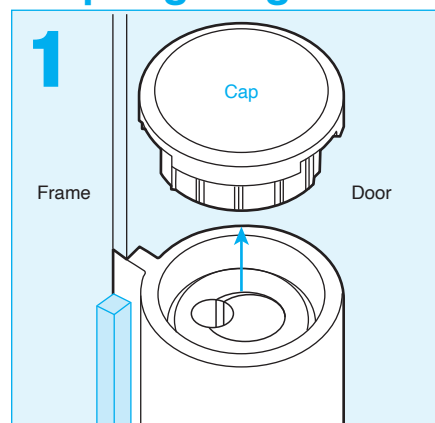


300 series

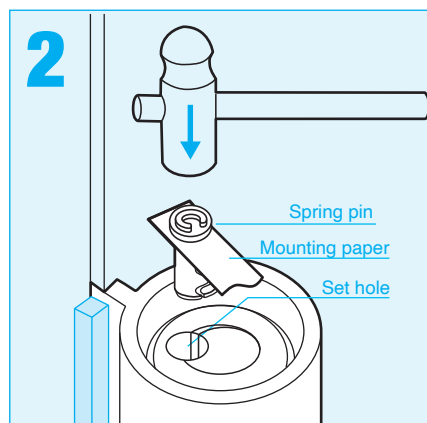
Installation procedure

- Set up the hinges after hanging the door.

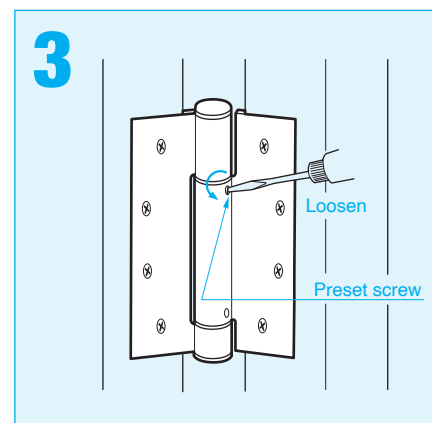
Spring hinge



- Hang the door, then remove the cap.

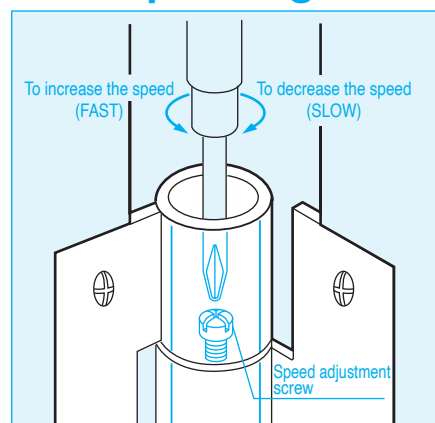


- Open the door about 10° to align the set hole. Drive the supplied spring pin securely into the set hole, in accordance with the mounting instructions.
**If the spring pin is driven in the wrong direction or if it is floated due to insufficient driving, the spring pin may come off or be damaged during use.*
**Do not reuse the spring pin. If a new one is needed, they are sold separately.*
**Do not substitute with other objects such as screws.*



- Open the door about 90° and loosen the preset screw by turning it counterclockwise 3 to 4 turns until it protrudes 1 mm from the hinge surface.

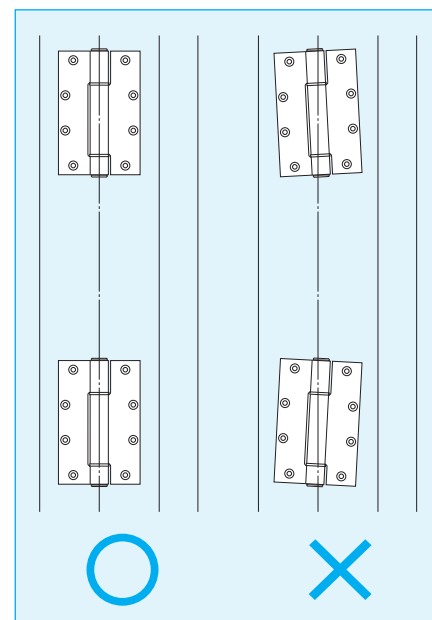
Damper hinge



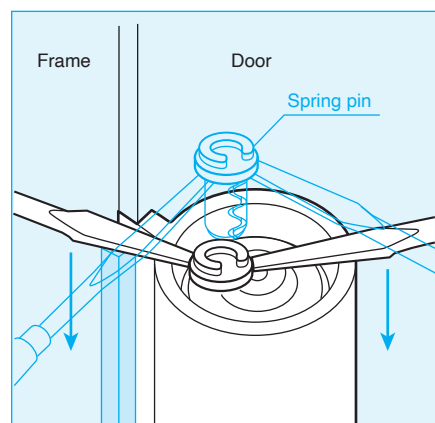
- Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instruction on the cap. Then, place the cap onto the hinge.

Cautions for installation

- Align the spring hinge and damper hinge carefully and make sure they are lined up straight.



How to remove the door



- ① Open the door about 90° and tighten the preset screw by turning it clockwise 3 to 4 turns until it is back to the original position.
- ② When you close the door it will stop moving around 5°. Remove the spring pin as shown in the figure on the left.
*(*Do not push or close the door forcefully before removing the spring pin.)*
- ③ If you would like the spring to function again, use a new spring pin.
**If the spring pin is pulled out without tightening the preset screw, the hinge will not be able to be re-set anymore.*

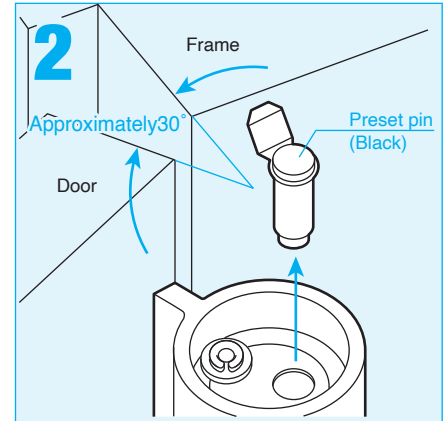
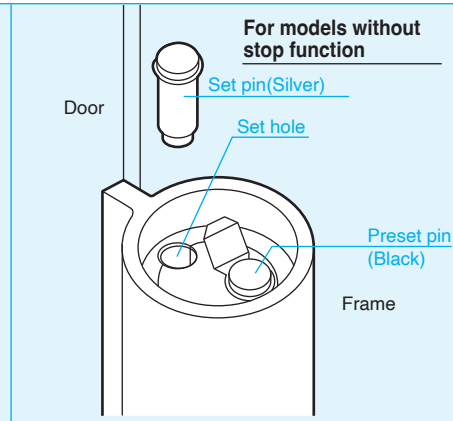
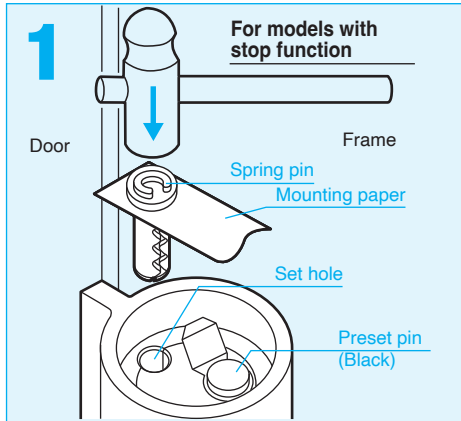
1000 series

Installation procedure

- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

Spring hinge



- Open the door about 10° to align the set hole. Drive the supplied spring pin securely into the set hole, in accordance with the mounting instructions.

**If the spring pin is driven in the wrong direction or if it is floated due to insufficient driving, the spring pin may come off or be damaged during use.*

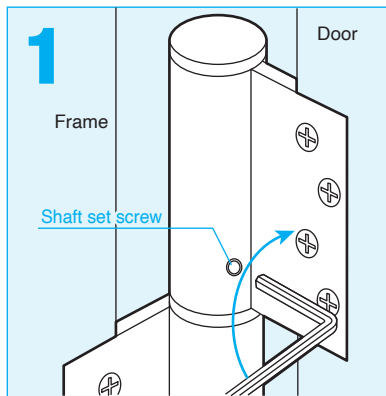
**Do not reuse the spring pin. If a new one is needed, they are sold separately.*

**Do not substitute with other objects such as screws.*

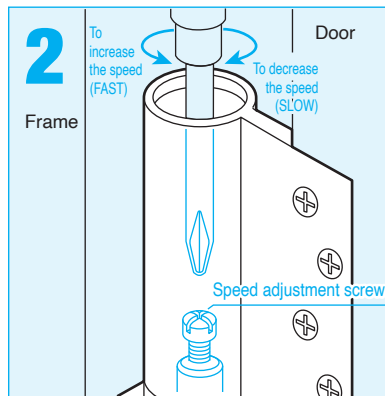
- Open the door about 5° to 10° to align the set hole. Insert the set pin (silver) securely into the set hole. The set pin is located inside the upper cap of the spring hinge.

- Open the door about 30° and pull out the preset pin (black).

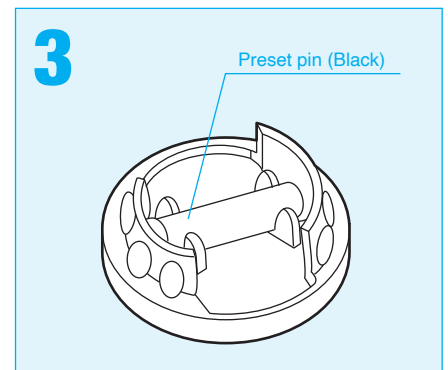
Damper hinge



- Tighten the shaft set screw of the damper hinge securely with the supplied hex key.

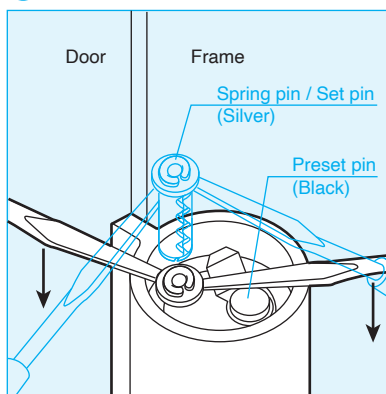


- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.



- Place the preset pin (black) inside the cap and keep it stored for future use. (It will be required when removing the door)

How to remove the door



To remove the hinge from the door, follow the exact procedure in reverse as from when it was attached to the door.

- ① Loosen the shaft set screw of the damper hinge with the hex key.
- ② Remove the cap of the spring hinge and take out the stored preset pin (black). Open the door about 30° and insert the preset pin securely into the other open hole.
- ③ Close the door until it stops about 5°. Take out the spring pin or set pin (silver) as shown in the left figure. Then the internal spring will become free and the door can be removed.

*(*Do not push or close the door forcefully before removing the spring pin.)*

**If the spring pin is pulled out without tightening the preset screw, the hinge will not be able to be re-set anymore.*

- ④ When hanging the door again, set it at the same angle as it was when it was removed. (The angle of the notch on the shaft of the damper hinge)

1000F series

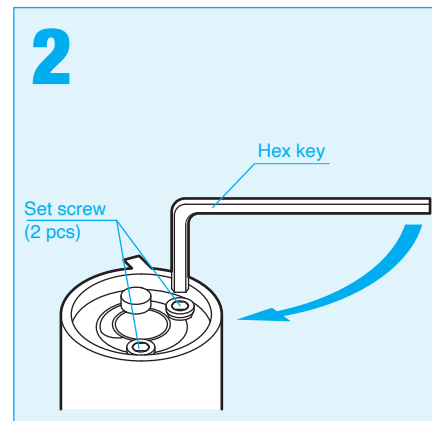
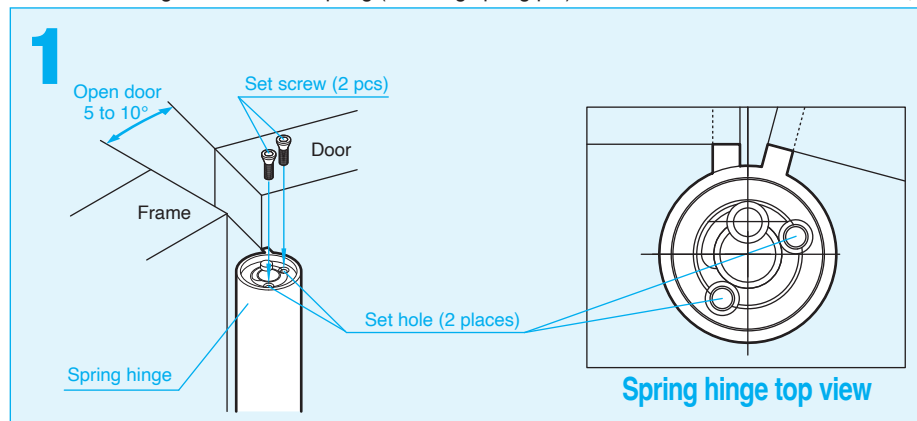
Installation procedure

- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

Spring hinge

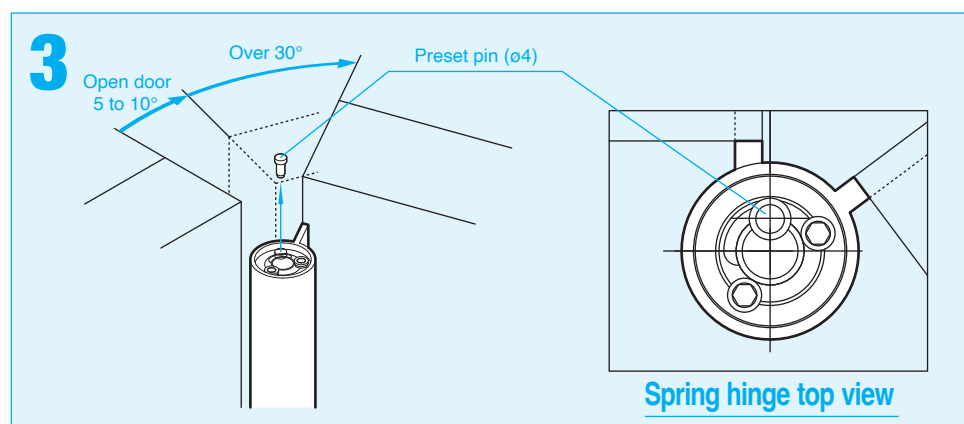
Unlike the setting method of the spring (inserting spring pin) for the other AUTO-HINGE models, the dedicated set screw is used.



- After hanging the door, remove the cap of the spring hinge, open the door about 5° to 10° to set the semicircle (2 places) to form a round hole, and insert the supplied special setting screw M4 (2 pcs.).

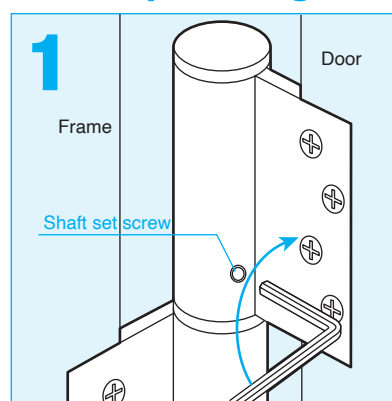
*Be sure to use the supplied dedicated set screws.

- Securely tighten the two set screws (M4) with the supplied hex key until they stop.

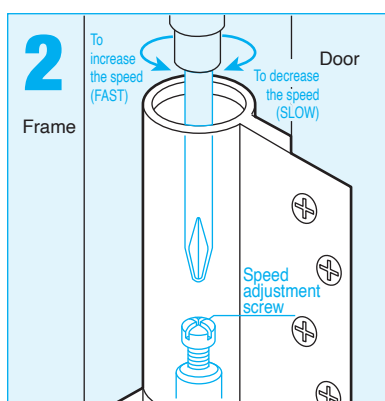


- Open the door an additional 30° or more. Remove the preset pin as shown in the above figure.

Damper hinge



- Tighten the shaft set screw of the damper hinge securely with the supplied hex key.



- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.

Caution

After setting, check the operation of the "Free Stop" function and confirm it works properly. Noise may be generated if the set screws (2 pcs) are loose. In such case, remove the cap from the spring hinge and tighten the set screws securely.

- To use the product as an ordinary door hinge without self closing functions, follow the instructions below.

- ① Set the closing speed of the damper hinge to the fastest setting.
- ② Remove the cap from the spring hinge. Open the door about 45° and insert the preset pin (stored in the cap) fully into the preset pin hole.
- ③ Close the door about 5° to 10° and loosen and remove the set screws M4 (2 pcs.) with the hex key.

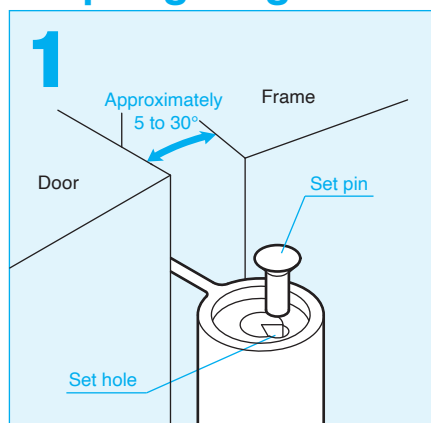
2000 series

Installation procedure

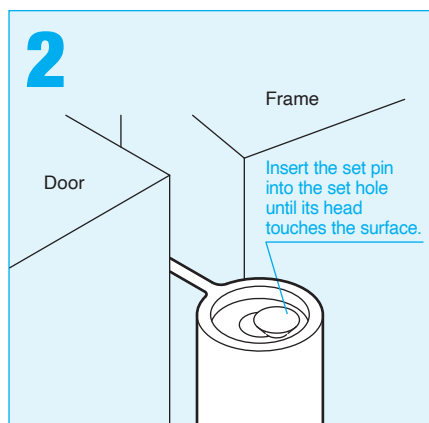
- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

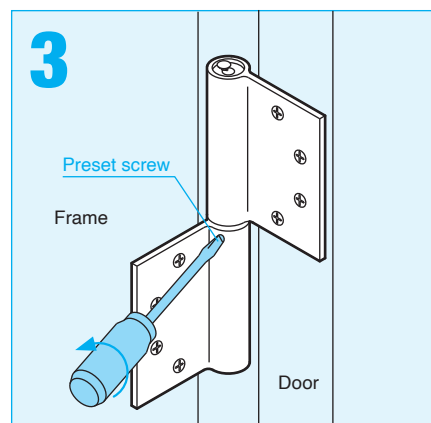
Spring hinge



- Remove the cap of the spring hinge. Open the door about 5° to 30° to align the set hole.

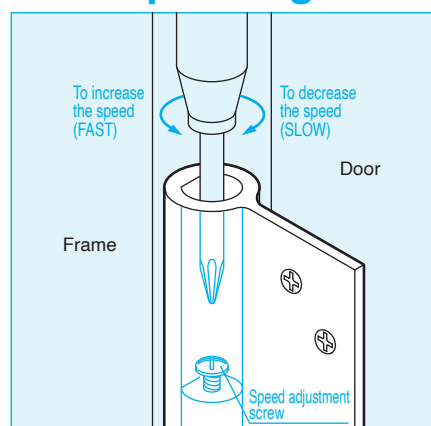


- Insert the supplied set pin securely into the set hole.



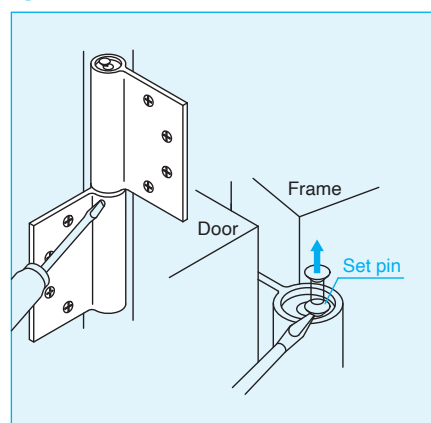
- Open the door about 90° and loosen the preset screw with a flat-blade screwdriver until the screw head comes up to the hinge surface.
- Never operate the door before inserting the set pin.
- Place the cap onto the hinge.

Damper hinge



- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.

How to remove the door



- ① Open the door about 90° and turn the preset screw clockwise until it hits the base.
- ② Close the door slowly until it stops around the 15° position. In that state, insert a flat-blade screwdriver under the head of the set pin and lift to remove it.
- ③ The spring hinge becomes free and the door can be removed.

**Make sure to close the door slowly. If the door is pushed or closed forcefully after the preset screw is tightened, it may damage the preset screw and cause a malfunction.*

**Never loosen the leaf mounting screws while force is being applied to close it as this may cause an accident.*

**Do not remove the door without releasing the closing force. It may cause an accident.*

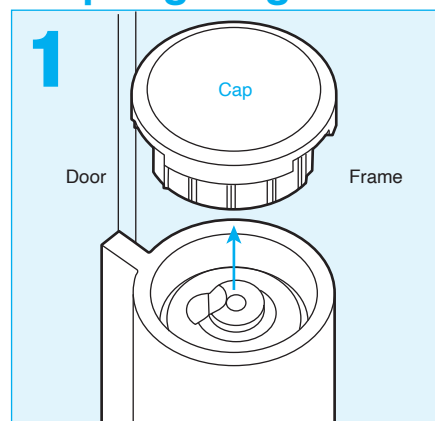
100/200/NK_{series}

Installation procedure

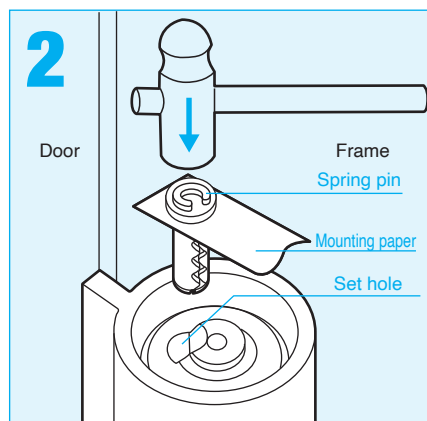
- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

Spring hinge



- Remove the cap.

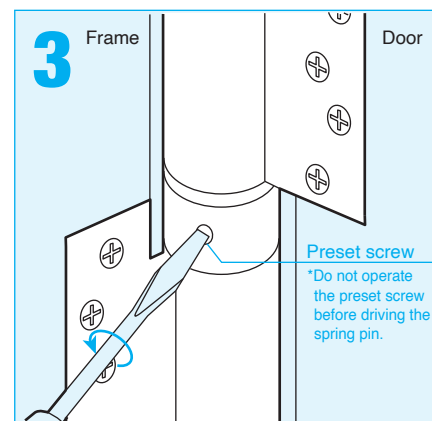


- Open the door about 10° to align the set hole. Drive the supplied spring pin securely into the set hole, in accordance with the mounting instructions.

**If the spring pin is driven in the wrong direction or if it is floated due to insufficient driving, the spring pin may come off or be damaged during use.*

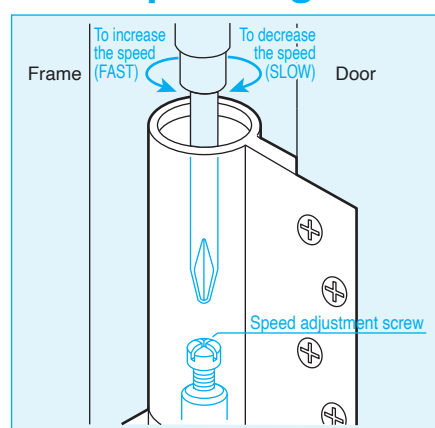
**Do not reuse the spring pin. If a new one is needed, they are sold separately.*

**Do not substitute with other objects such as screws.*



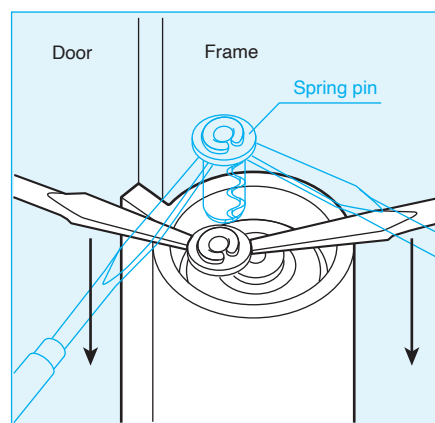
- Open the door about 90° and loosen the preset screw by turning it counterclockwise 3 to 4 turns until it protrudes 1 mm from the hinge surface. Do not operate the preset screw before driving the spring pin.

Damper hinge



- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.

How to remove the door



- ① Open the door about 90° and tighten the preset screw by turning it clockwise 3 to 4 turns until it is back to the original position.
- ② When you close the door it will stop moving around 5°. Remove the spring pin as shown in the figure on the left before removing the door.

*(*Do not push or close the door forcefully before removing the spring pin.)*

- ③ When hanging the door again, set it at the same angle as it was when it was removed. (The angle of the notch on the shaft of the damper hinge)

**If the spring pin is pulled out without tightening the preset screw, the hinge will not be able to be re-set anymore.*

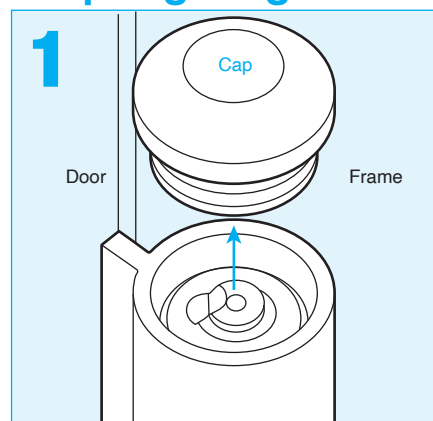
700 series

Installation procedure

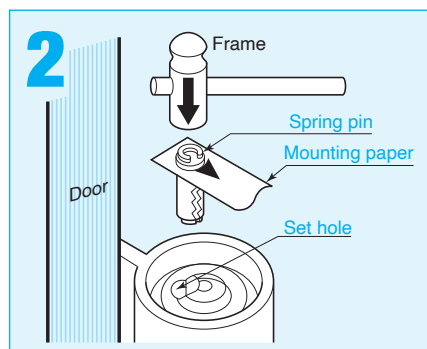
- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

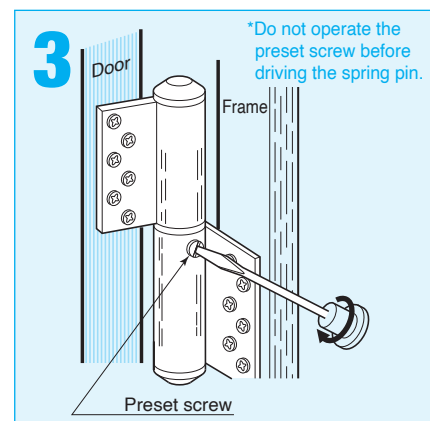
Spring hinge



- Remove the cap.



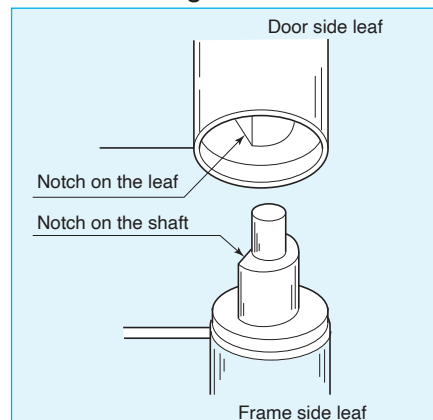
- Drive the spring pin.
 - Open the door about 10° to align the set hole. Drive the supplied spring pin securely into the set hole, in accordance with the mounting instructions.
- *If the spring pin is driven in the wrong direction or if it is floated due to insufficient driving, the spring pin may come off or be damaged during use.*
- *Do not reuse the spring pin. If a new one is needed, they are sold separately.*
- *Do not substitute with other objects such as screws.*



- Open the door about 90° and loosen the preset screw by turning it counterclockwise 3 to 4 turns until it protrudes 1 mm from the hinge surface. Do not operate the preset screw before driving the spring pin.

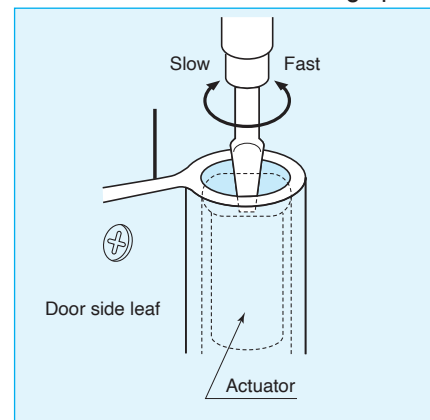
Damper hinge

How to hang the door

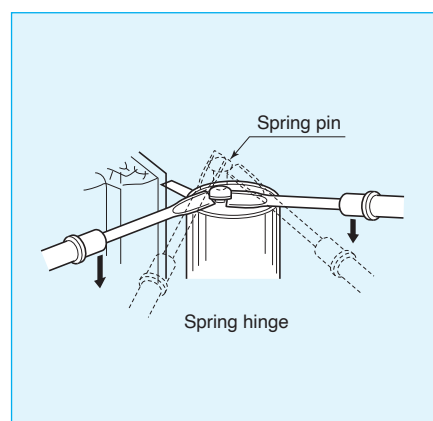


- Align the label on the cap with the notch on the shaft.
- Before installation, there is a gap between the upper hinge and the lower hinge of the damper hinge. This gap will disappear once the damper hinge is installed and the door is hung, and the self closing speed adjustment will become available. Confirm that the gap is gone between the leaves after hanging the door.
- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.

How to set the door closing speed



How to remove the door



- ① Open the door about 90° and tighten the preset screw by turning it clockwise 3 to 4 turns until it is back to the original position.
- ② When you close the door it will stop moving around 5°. Remove the spring pin as shown in the figure on the left before removing the door.
- ③ When hanging the door again, set it at the same angle as it was when it was removed. (The angle of the notch on the shaft of the damper hinge)

**If the spring pin is pulled out without tightening the preset screw, the hinge will not be able to be re-set anymore.*

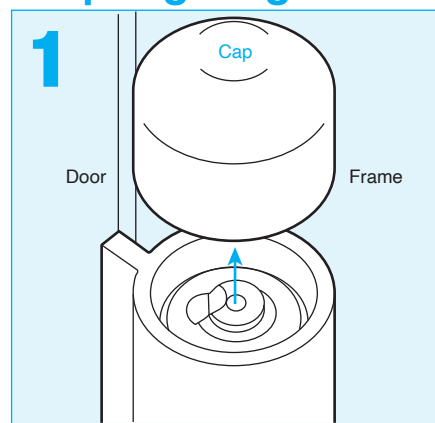
*Contact Nitto Kohki or distributors for non-standard usage and other questions.

Installation procedure

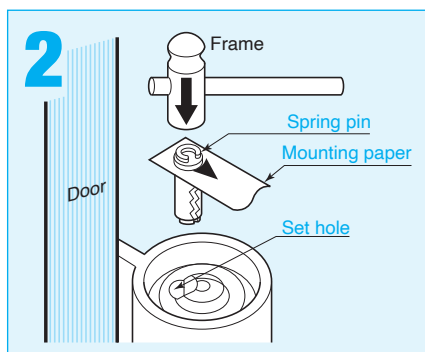
- Set up the hinges after hanging the door.

*When hanging the door, align the notch on the shaft of the damper hinge with the hole on the door side of the hinge body.

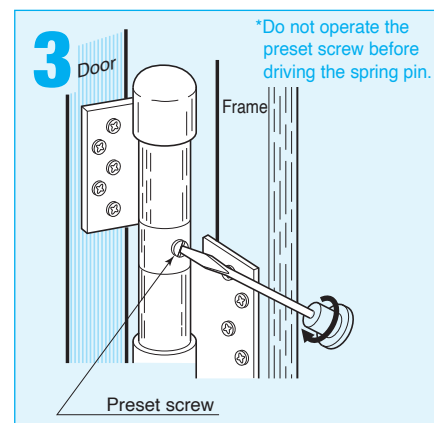
● Spring hinge



- Remove the cap.



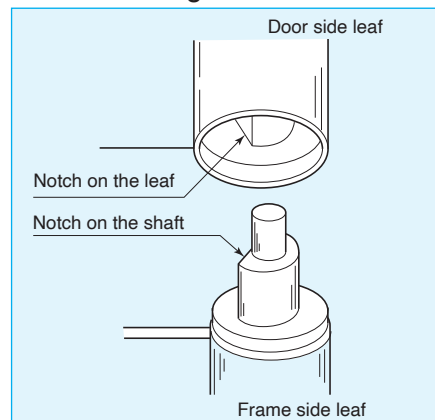
- Drive the spring pin.
- Open the door about 10° to align the set hole. Drive the supplied spring pin securely into the set hole, in accordance with the mounting instructions.
**If the spring pin is driven in the wrong direction or if it is floated due to insufficient driving, the spring pin may come off or be damaged during use.
*Do not reuse the spring pin. If a new one is needed, they are sold separately.
Do not substitute with other objects such as screws.



- Open the door about 90° and loosen the preset screw by turning it counterclockwise 3 to 4 turns until it protrudes 1 mm from the hinge surface. Do not operate the preset screw before driving the spring pin.

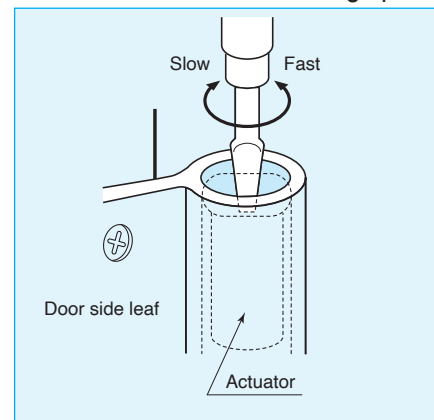
● Damper hinge

● How to hang the door

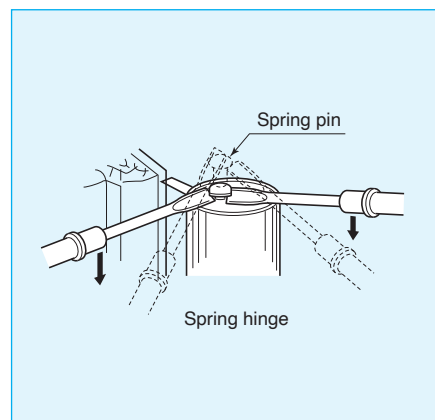


- Align the label on the cap with the notch on the shaft.
- Before installation, there is a gap between the upper hinge and the lower hinge of the damper hinge. This gap will disappear once the damper hinge is installed and the door is hung, and the self closing speed adjustment will become available. Confirm that the gap is gone between the leaves after hanging the door.
- Remove the cap of the damper hinge. Adjust the door closing speed by turning the speed adjustment screw with a screwdriver, in accordance with the instructions on the cap. Then, place the cap onto the hinge.

● How to set the door closing speed



● How to remove the door

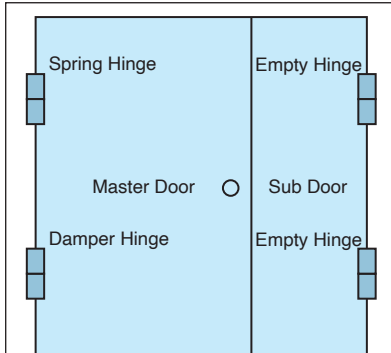


- ① Open the door about 90° and tighten the preset screw by turning it clockwise 3 to 4 turns until it is back to the original position.
- ② When you close the door it will stop moving around 5°. Remove the spring pin as shown in the figure on the left before removing the door.
*(*Do not push or close the door forcefully before removing the spring pin.)*
- ③ When hanging the door again, set it at the same angle as it was when it was removed. (The angle of the notch on the shaft of the damper hinge)
**If the spring pin is pulled out without tightening the preset screw, the hinge will not be able to be re-set anymore.*

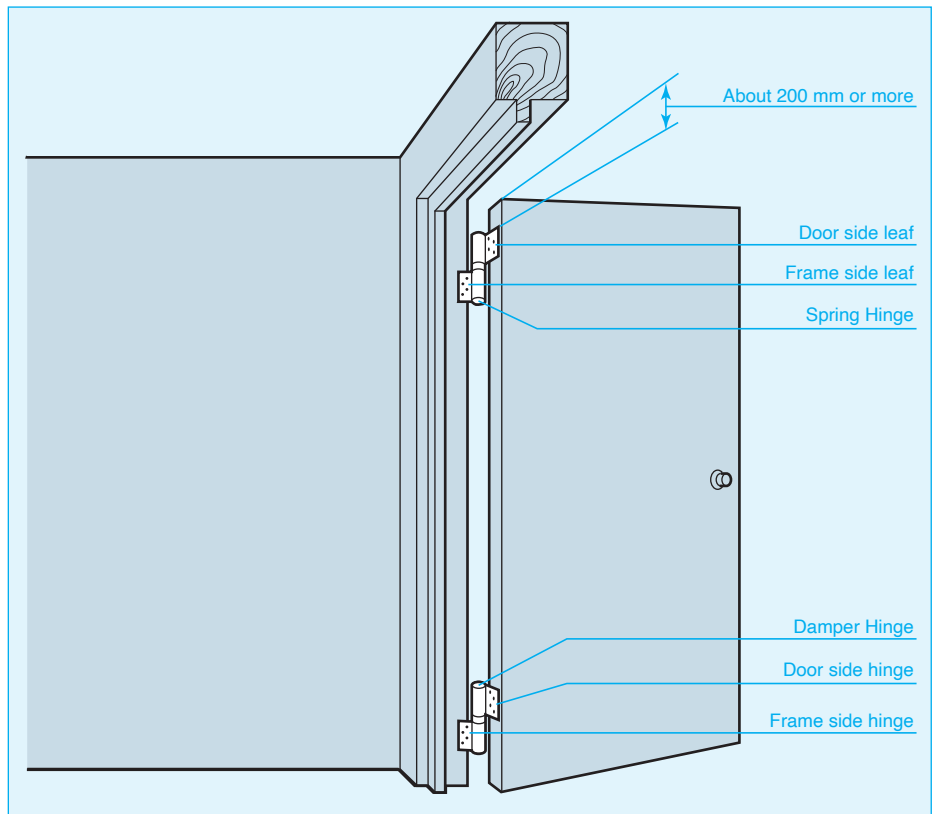
*Contact Nitto Kohki or distributors for non-standard usage and other questions.

AUTO-HINGE Cautions

Mounting position for AUTO-HINGE flag type



- In case the sub door does not require the self-closing function, you may use the empty hinges for the sub door so as to match the appearance with the master door.



*The diagram shows the left hand opening wooden door.

Precautions for handling

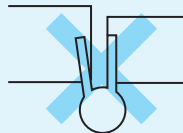
Do not handle the product in the following ways.

- Do not loosen the preset screw before hanging the door.
- Do not close the door forcefully.
- Do not bend the hinge leaf or use it in windy locations.
- Do not use the PC series in hot and humid places such as bathrooms and sauna rooms.
- Do not use the 700 series in high temperature rooms such as sauna rooms.

How to handle

- Keep the waterproof cover for the spring that came attached on until the door is hung. (122T, 132, 143T)
- Should the hinge break, pull out the spring pin or set pin and set the closing speed to the fastest setting by turning the speed adjustment screw. Then, you can use the hinge as an ordinary door hinge without self closing/stop functions.

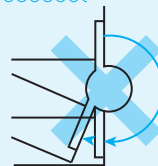
- Attach the hinge leaves in parallel with the door frame.



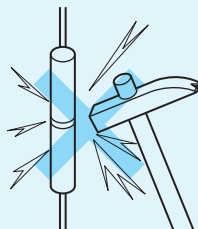
- Do not bend the hinge leaves.

- Do not open the door more than 180°.

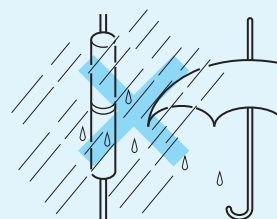
If the door is opened more than 180°, it will damage the spring mechanism and the door may stop opening/closing. To avoid this, always install a door stopper on the door end side.



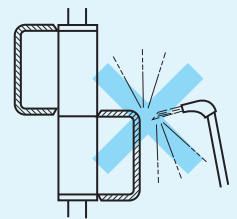
- Do not hit or strike the hinge.



- Do not use the hinge in places where water may splash directly on the hinge. (Only the PC series and 700 series can be used in such places.)

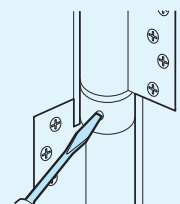


- Do not weld the hinge leaves.



- Do not use the hinges in places exposed to extremely strong wind.

- Make sure to loosen the preset screw after driving the spring pin. Otherwise, the door will not close completely. Moreover, if the door is opened and closed without loosening the preset screw, it might not be possible to loosen it anymore and the door may become unusable.



User-friendly technology

Door Closer

Auto Hinge & Sliding Door Closer

OTHER RELATED PRODUCTS

AUTO-HINGE

Center Hang Type

Concealed door hinge with self-closing function. Built into the door, offering clean exterior appearance. Excellent performance and durability, suitable for the fire proof doors.

- Concealed design, built into the bottom side of the door. Completely hidden inside the door, offering streamlined door appearance.
- Suitable for fire doors, smoke ventilations, air intake doors or regular swing doors.



Door Closer

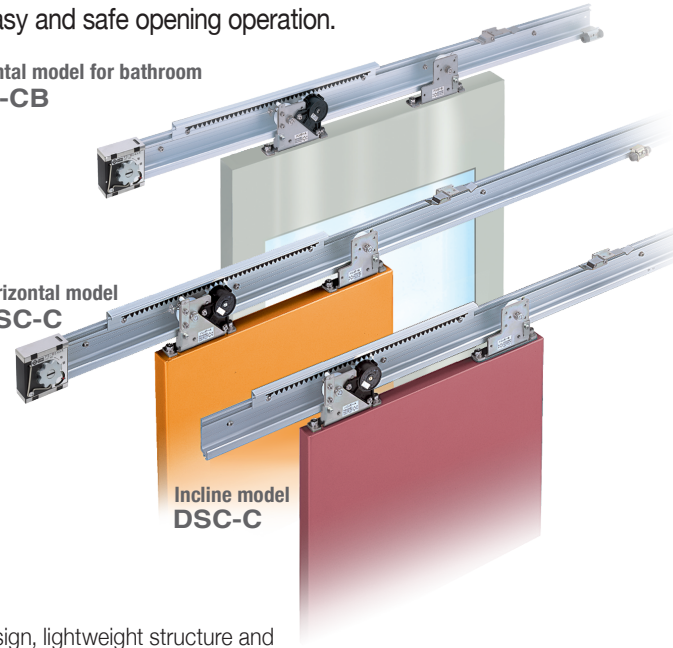
Sliding Door Closer

Innovative solution adding self-closing feature to your sliding door. Also designed to assist in reducing the door opening resistance to achieve an easy and safe opening operation.

Horizontal model for bathroom
NSC-CB

Horizontal model
NSC-C

Incline model
DSC-C



- Compact design, lightweight structure and long-life time are achieved by the unique endless viscosity resistance system.
- Easy to adjust the door closing force and speed.

⚠ Safety precautions

- To avoid personal injury and other accidents, thoroughly read the precautions set forth in the "Instruction Manual" or "Catalog" and properly complete the installation and adjustment procedures before use.
- Ensure that the door closing speed is properly adjusted at all times. If it is set too fast, personal injury may be caused.

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JQA-EM4057
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