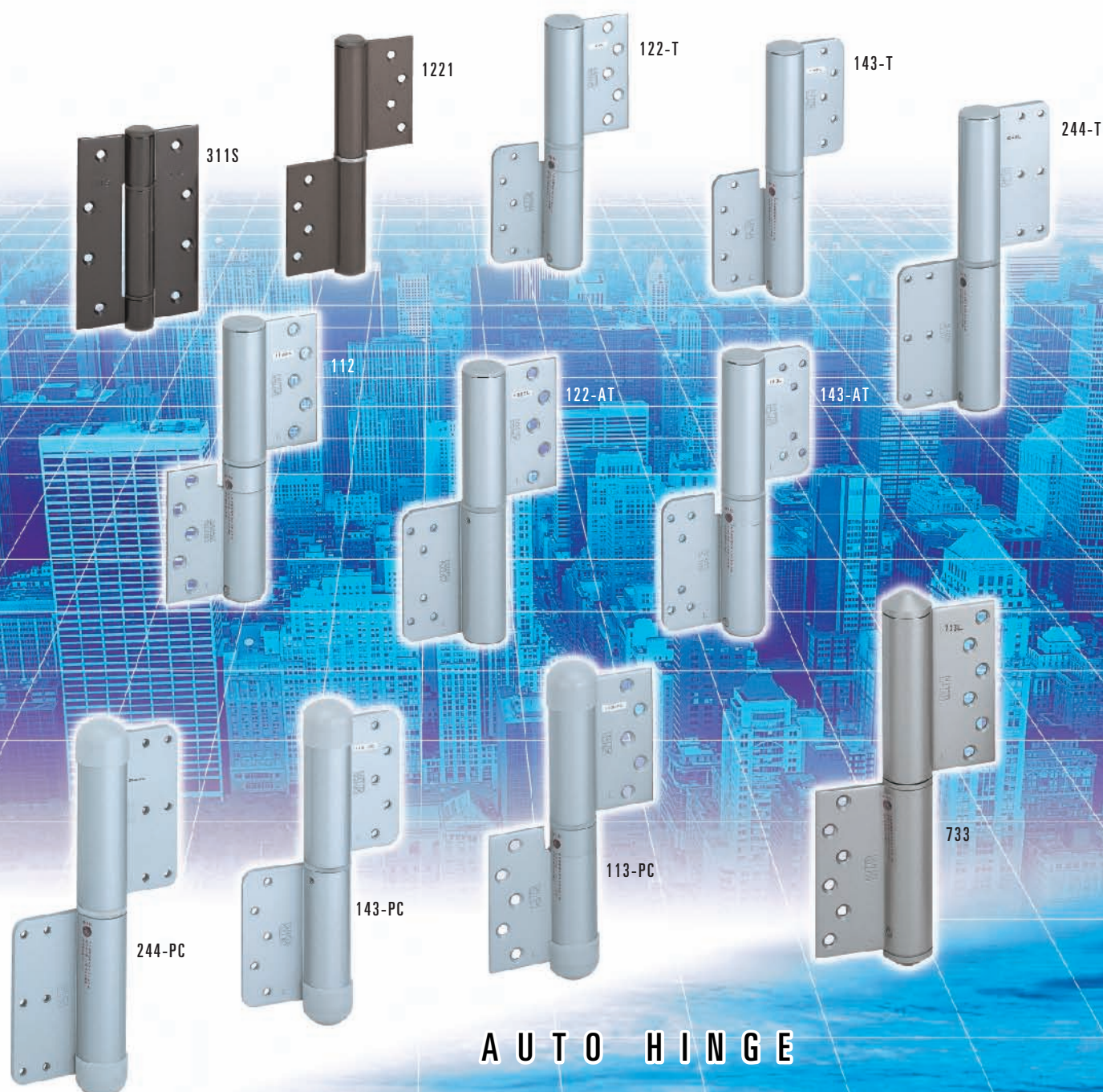


# NITTO KOHKI AUTO HINGES

## FLAG TYPE

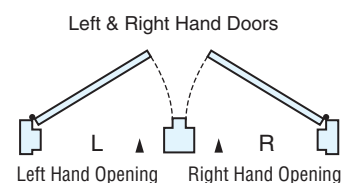


## Flag type series (Table of models with specifications)

	Model number			Type of door	Door size applicable (mm)			Door weight (kg) (Max)	Closing force (N·m)	Stop mechanics	Stop angle	Max. Opening angle	Color						
	Right hand opening	Left hand opening	W (Max)		H (Max)	D (Min)													
P.4	300 Series Empty hinge	311S (Available for both right and left)		Wood, aluminum (Indoor use)	800	2000	30	30	5.0	○	85°~180°	180° Left or right one side opening	Silver Bronze Ivory Gold						
		310 (Available for both right and left)							—	—	—								
P.5	1000 Series	1111R		Wooden door Aluminum door Light steel door	850	2000	30	35	7.9	—	—	180° Left or right one side opening	Silver						
		1111SR								○	85°								
		1121R								—	—		Bronze						
		1121SR								○	85°								
		1211R								—	—		Silver						
		1211SR								○	85°								
		1221R								—	—		Bronze						
		1221SR								○	85°								
P.5		Empty hinge	1110R						1110L						—	—	—		Silver
			1120R						1120L										Bronze
			1210R						1210L										Silver
P.6			1220R						1220L										Bronze
P.7	100 Series	112R		Wooden door Light steel door (122T for steel frame)	900	2100	40	10.0	—	—	180° Left or right one side opening	Silver or Bronze							
		112SR							○	85° and 150°									
P.8		122R-T							—	—		Silver							
		122SR-T							○	85° and 150°									
P.9		113R		Wooden door Aluminum door	1000	2200	60	15.0	—	—									
		113SR							○	85° and 150°									
		113R TRISET							—	—									
P.10		113SR TRISET							○	85° and 150°									
P.11		122R-AT		Wooden door Light steel door (122T for steel frame)	900	2100	40	10.0	—	—									
		122SR-AT		○					85° and 150°										
P.12		132R		Aluminum door Light steel door Partition door					60	15.0			—	—					
		132SR		○									85° and 150°						
P.13		143R-T		Steel door									—	—					
		143SR-T											○	85° and 150°					
		143R-AT							—	—									
P.14		143SR-AT							○	85° and 150°									
P.7	Empty hinge	110R	110L	Wooden door Light steel door (120T for steel frame)	900	2100	40		—	—		Silver or Bronze							
P.8		120R-T	120L-T																
P.11		120R-AT	120L-AT																
P.12		130R	130L	Aluminum door Light steel door Partition door								Steel door							
P.13		140R-T	140L-T																
P.14		140R-AT	140L-AT																
P.15	200 Series Empty hinge	244R-T		Steel door	1200	2100	40	120	22.6	—	—	180° Left or right one side opening	Silver						
		244SR-T								○	85° and 150°								
		240R-T								—	—								

	Model number			Type of door	Door size applicable (mm)			Door weight (kg) (Max)	Closing force (N·m)	Stop mechanics	Stop angle	Max. Opening angle	Color	
		Right hand opening	Left hand opening		W (Max)	H (Max)	D (Min)							
P.17	700 Series	733R		733L	Aluminum door Stainless door Steel door	900	2100	40	120	15.0	—	—	180° Left or right one side opening	Silver
		733SR		733SL							○	85° and 150°		
		Empty hinge	730R	730L							—	—		
P.19	PC Series	113R-PC		113L-PC	Wooden door Aluminum door Light steel door	900	2100	30	40	15.0	—	—	180° Left or right one side opening	Silver
113SR-PC		113SL-PC	Aluminum door Light steel door	○	85° and 150°									
133R-PC		133L-PC		○	85° and 150°									
133SR-PC		133SL-PC												
P.20		143R-T-PC		143L-T-PC	Steel door	1200	2100	40	120	22.6	—	—		
P.21		143SR-T-PC		143SL-T-PC							○	85° and 150°		
P.22		244R-T-PC		244L-T-PC							○	85° and 150°		
244SR-T-PC		244SL-T-PC												
P.19	Empty hinge	110R-PC	110L-PC	Wooden door Light steel door	900	2100	30	40	—	—	—	180° Left or right one side opening	Silver	
P.20		130R-PC	130L-PC	Aluminum door Light steel door										
P.21		140R-T-PC	140L-T-PC	Steel door										
P.22		240R-T-PC	240L-T-PC											
P.23	153 Series	NK153R		NK153L	Glass door	900	2100	8 10 12	60	15.0	—	—	180° Left or right one side opening	Silver
NK153SR		NK153SL	○	85° and 150°										
NK153R TRISET		NK153L TRISET	1000	2200		8 10 12	80	—	—					
NK153SR TRISET		NK153SL TRISET						○	85° and 150°					
P.24		Empty hinge	NK150R	NK150L		1000	2200	8 / 10 / 12	80	—	—			

- Each article is a combination of a spring hinge and a damper hinge (except for empty hinges).
- For opening orientation, each article designation gives an R to represent right-handed opening, and an L to represent left-handed opening. The opening orientation of the 300 series is for both right- and left-handed opening.
- The "S" in an article designation means that the product has a stop (with an internal stop mechanism).
- Every model with a -T or an -AT at the end of its article designation has a tap hole (M6) for installing it on a hinge flap. Nitto Kohki is ready to produce products of the same model but without such tap holes. (Examples: with tap hole, 143R-T; without tap hole, 143-R)
- The 300 and 1000 series with empty hinges are in packages of two pairs each, and the 100, 200, 700 and PC series come in packages of one pair each.



# Comfort in a widening range of applications

## Nitto Kohki's Auto Hinges of the flag type

They match all kinds of doors and make their images stand out beautifully.

### Flag type

#### 300, 1000, 100, and 200 series

##### Simple design

The hinges double as door closers, thus giving the doors a neat-looking finish. Their simple and beautiful designs match all kinds of doors.

##### A wide range of uses

They can also be used on arch doors that are not readily compatible with other door closers and doors with no head rails.

##### Sufficient door-closing power

The 100 and 200 series incorporate two springs (weak and strong) and a switching mechanism (clutch) for them, thus giving a small but sufficient door-closing power.

##### An internal stop mechanism

The 300 series comes with an automatic mechanism for stopping closings at 85° to 180° (free stops), the 1000 series at 85°, and the 100 and 200 series at 85° and 150°.

##### Simple adjustment of closing speed

The speed can easily be adjusted with the mere use of a screwdriver.

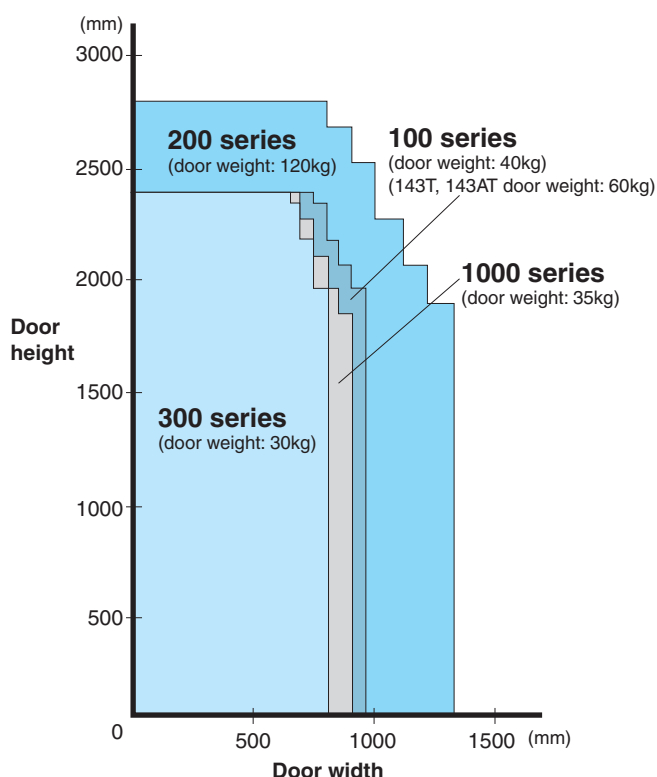
##### Easy to install

These hinges are installed in exactly the same manner as conventional flag-type hinges. They do not require much labor. They are easy to handle.

##### Outstanding durability

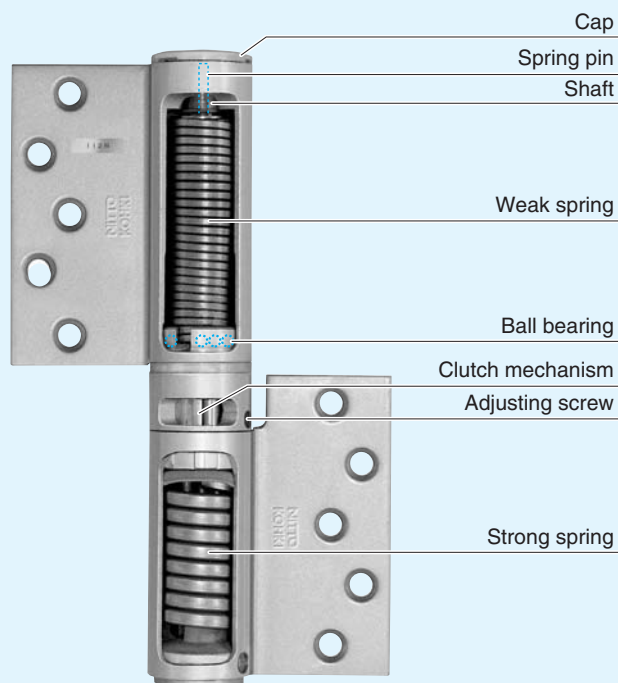
They are so structured as to undergo little friction, thus achieving outstanding durability.

### Table of applicable doors



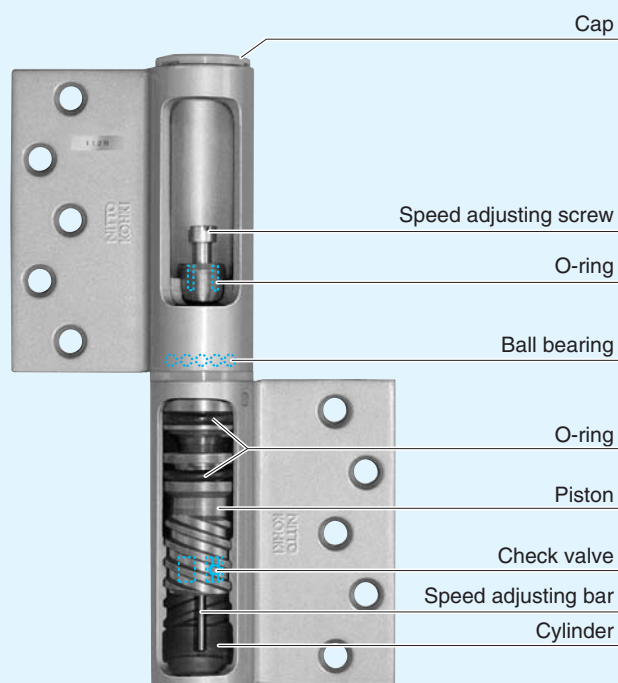
##### Spring hinge

(with an internal self-closing and stop mechanism)



##### Damper hinge

(with an internal control mechanism for closing speed)



- Each model consists of a spring hinge and a damper hinge.
- This diagram represents the structure of the 100 series.



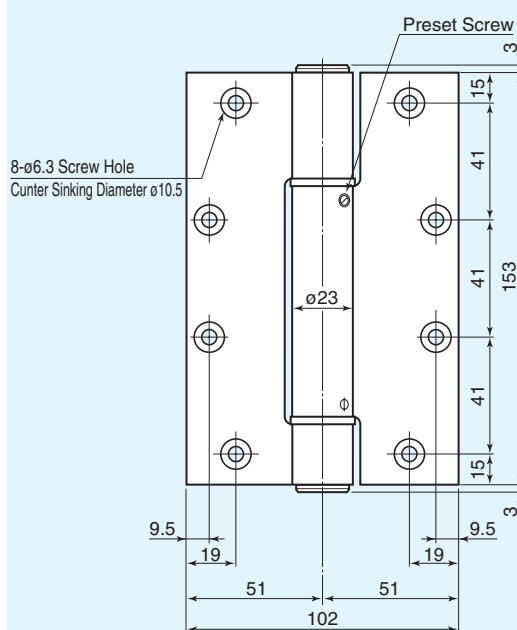
Model Number		Door Size Applicable (mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
		W	H	D						
311 S		800(Max)	2000(Max)	30(Min)	30(Max)	5.0	○	85°~180°	180° Left or Right One-side Opening	Silver Bronze ivory gold
Empty Hinge	310					—	—	—		

● Available for both right-opening and left-opening doors.

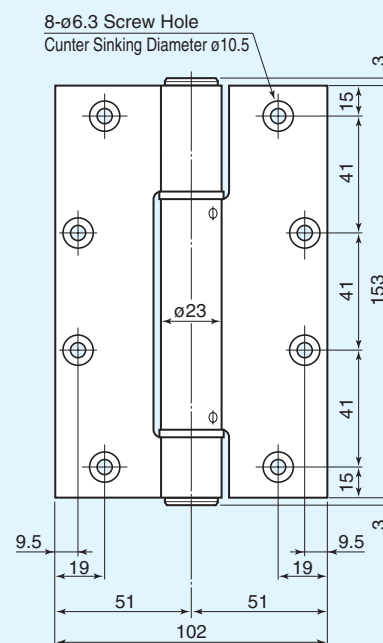


## EXTERNAL DIMENSIONS

● **Spring Hinge**



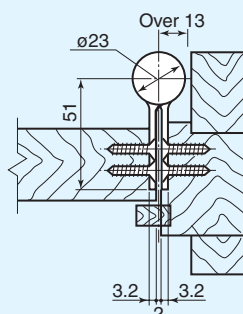
- Damper Hinge



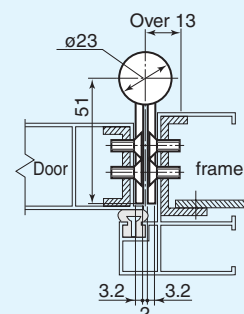
### Remarks

1. Surface treatment is by a baked coating of melamine resin.
2. When using them on wooden doors, use lauan or harder wood.
3. The tapping screws furnished with the products and designed specifically for installation are 25mm long. If the frame is wooden, use a frame at least 25mm thick. If an aluminum, lightweight steel door is involved, use steel screws (flat screws M5).
4. Allow at least 3mm of space between outer edge of door and frame.

## ■ FITTING DIAGRAMS



## Wooden Doors



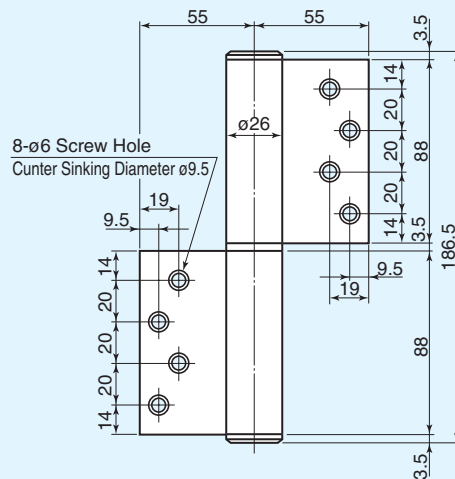
## Aluminium Doors

Model Number		Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door	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°		Bronze
1121R	1121L						—	—		
1121SR	1121SL						○	85°		
Empty Hinge	1110R	1110L	1110L	1120L	1120L	—	—	—	—	Silver
	1120R									Bronze

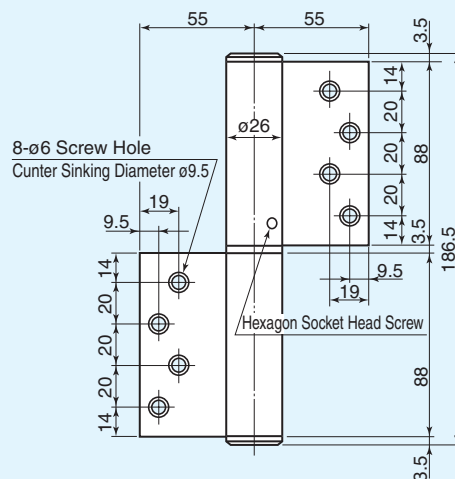


### EXTERNAL DIMENSIONS Left Hand Door

#### ● Spring Hinge

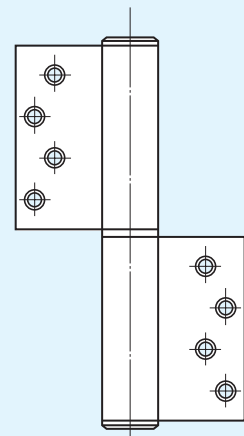


#### ● Damper Hinge

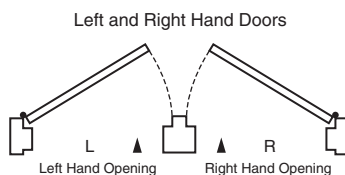
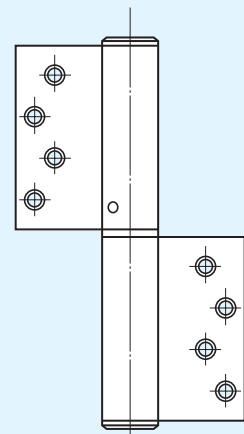


### Right Hand Door

#### ● Spring Hinge



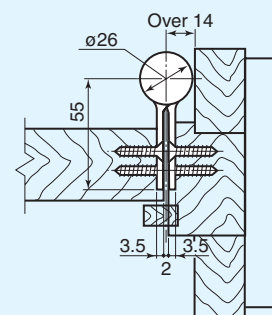
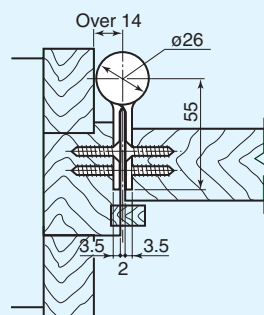
#### ● Damper Hinge



### Remarks

1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Because the attached screws for fitting are 25mm long, the thickness of the frame should be over 25mm.
3. Allow at least 5mm of space between outer edge of door and frame.
4. Body material : Aluminum  
Surface treatment :  
Silver(anodic oxide coating)  
Bronze(baked epoxy resin coating)

### FITTING DIAGRAMS

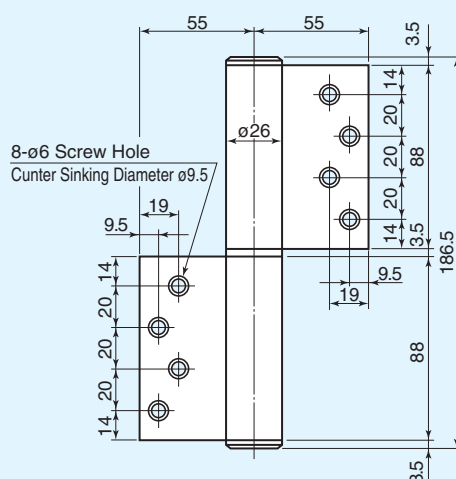


Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		W	H	D						
1211R	1211L	850(Max)	2000(Max)	30(Min)	35(Max)	7.9	—	—	85°	180° Left or Right One-side Opening	Silver
1211SR	1211SL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

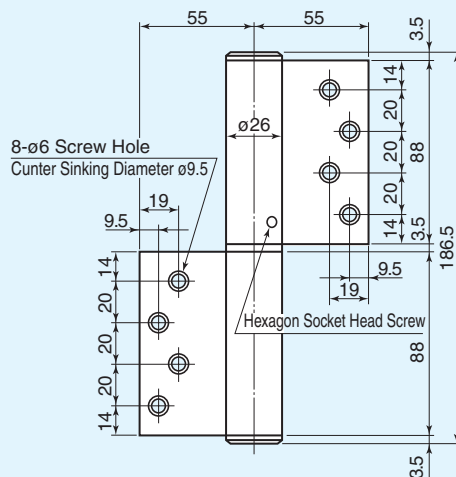


### EXTERNAL DIMENSIONS Left Hand Door

#### ● Spring Hinge

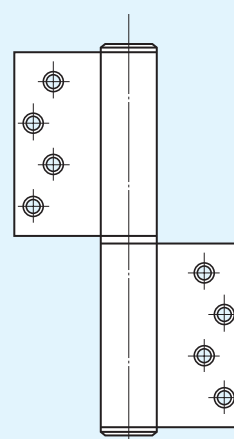


#### ● Damper Hinge

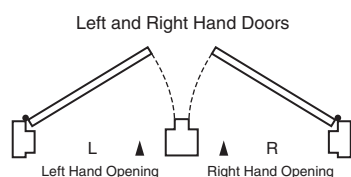
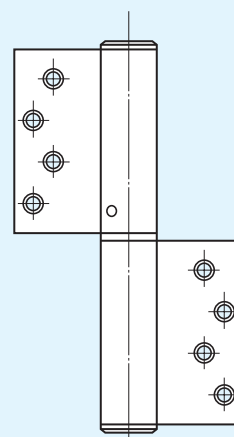


### Right Hand Door

#### ● Spring Hinge



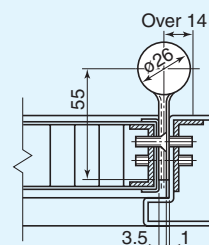
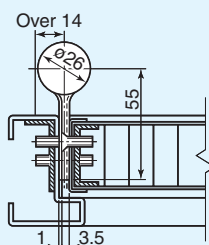
#### ● Damper Hinge



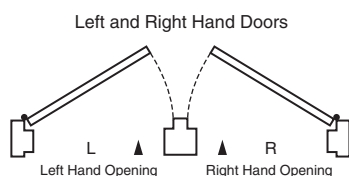
### Remarks

- For the wing fitting place on the door and frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
- Use the screws included in package for installation.
- Allow at least 5mm of space between outer edge of door and frame.
- Body material : Aluminum  
Surface treatment :  
Silver(anodic oxide coating)  
Bronze(baked epoxy resin coating)

### FITTING DIAGRAMS



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

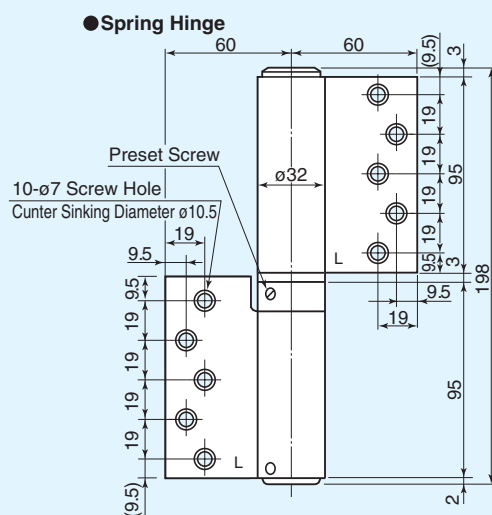


#### Remarks

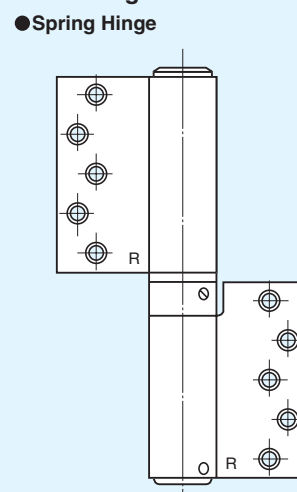
1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Because the attached screws for fitting are 25mm long, the thickness of the frame should be over 25mm.
3. Allow at least 5mm of space between outer edge of door and frame.
4. The R type is also available for the corner of blade.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

#### EXTERNAL DIMENSIONS

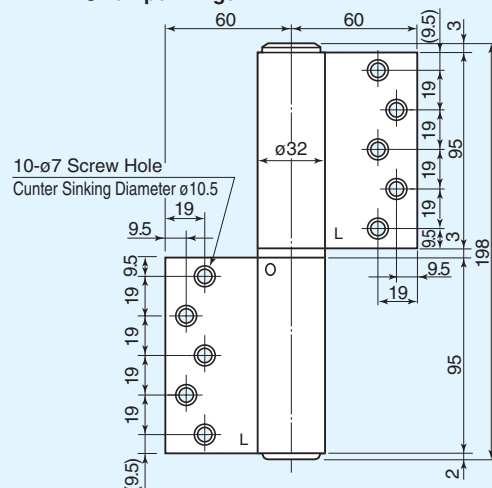
##### Left Hand Door



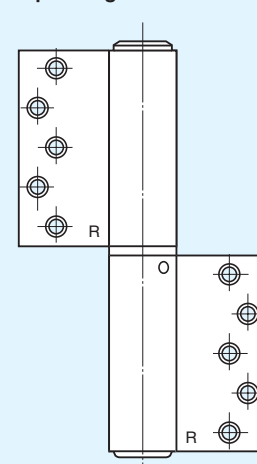
##### Right Hand Door



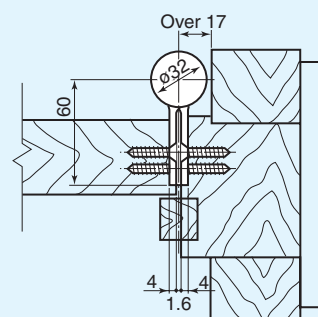
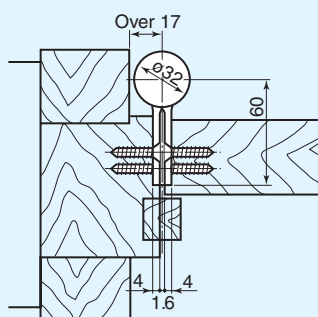
##### ● Damper Hinge



##### ● Damper Hinge



#### FITTING DIAGRAMS



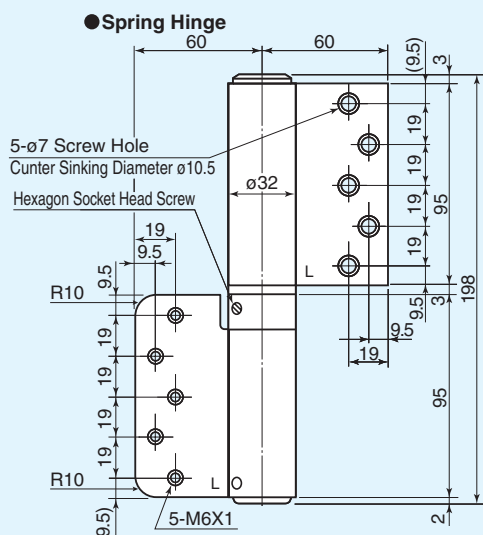


Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		W	H	D						
122R-T	122L-T		900(Max)	2100(Max)	30(Min)	40(Max)	10.0	—	—	180° Left or Right One-side Opening	Silver
122SR-T	122SL-T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

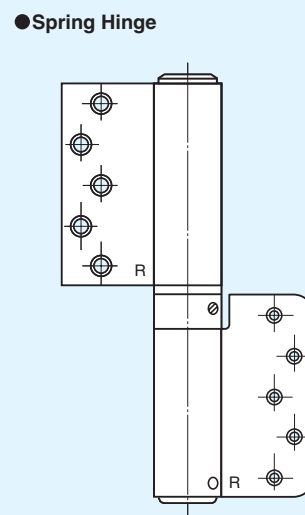


### EXTERNAL DIMENSIONS

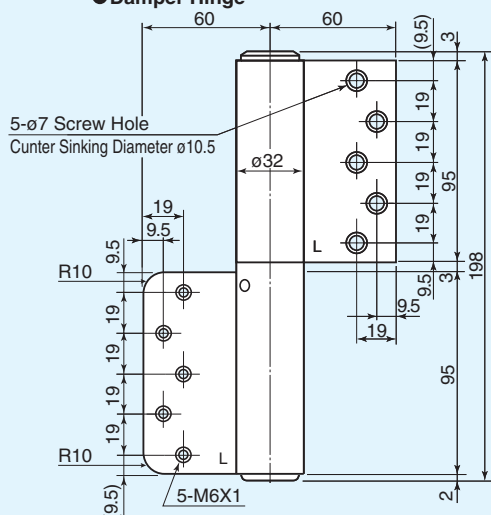
#### Left Hand Door



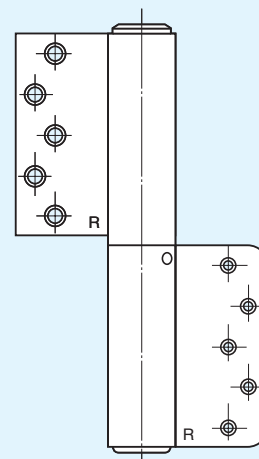
#### Right Hand Door



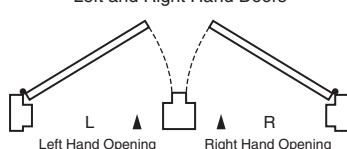
#### ● Damper Hinge



#### ● Damper Hinge



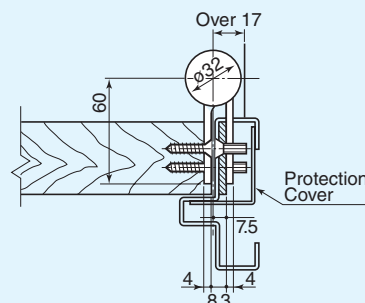
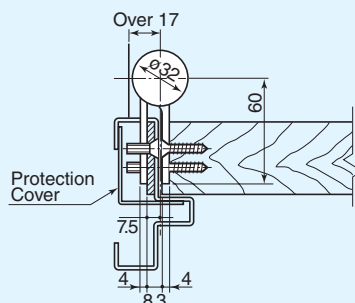
#### Left and Right Hand Doors



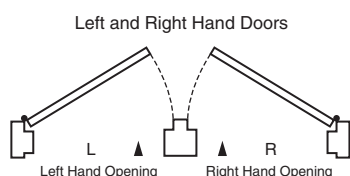
### Remarks

1. For the blade fitting place on the frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
2. For the blade fitting on the frame, use M6 flat screw. (Avoid installation by welding.)
3. For the blade fitting place on the door use a hard wood such as lauan or harder.
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

### FITTING DIAGRAMS



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



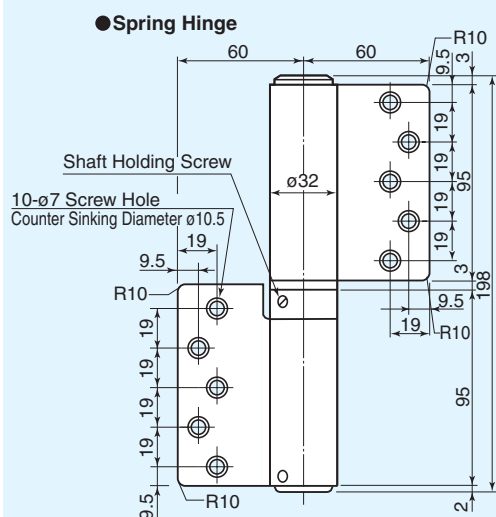
### Remarks

1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Because the attached screws for fitting are 25mm long, the thickness of the frame should be over 25mm.
3. Allow at least 5mm of space between outer edge of door and frame.
4. The edge type is also available for the corner of leaves.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

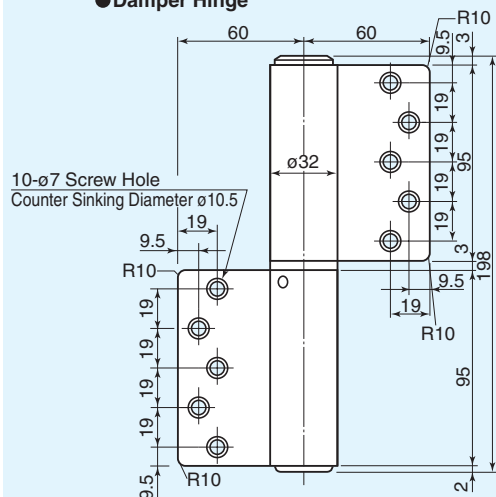
## EXTERNAL DIMENSIONS

### Left Hand Door

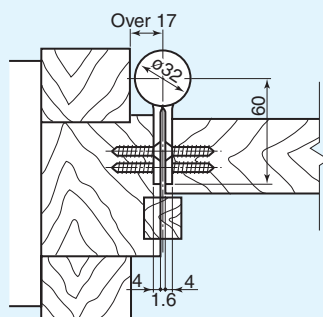
### Left Hand Door



### ● Damper Hinge

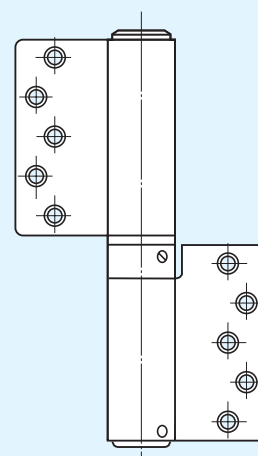


## ■ FITTING DIAGRAMS

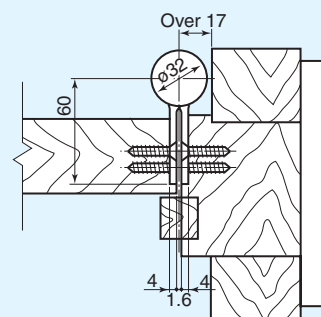
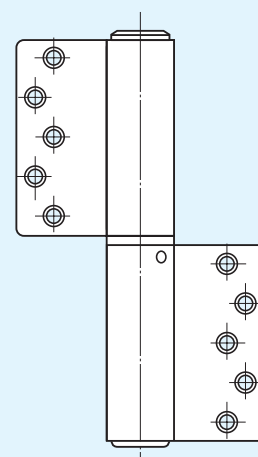


### Right Hand Door

● **Spring Hinge**



- **Damper Hinge**

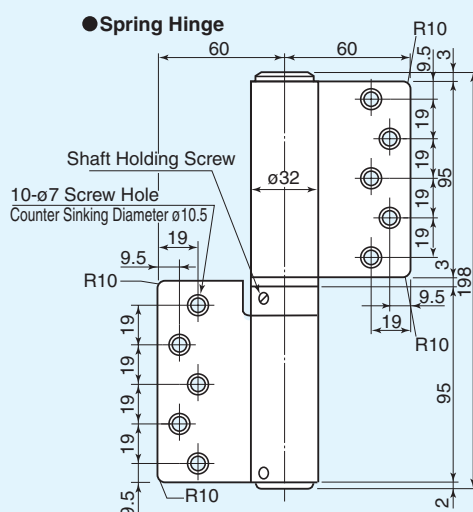


Model Number		Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door	W	H	D						
113R (TRI-SET)	113L (TRI-SET)	1000(Max)	2200(Max)	30(Min)	80(Max)	20.0	—	—	180° Left or Right One-side Opening	Silver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

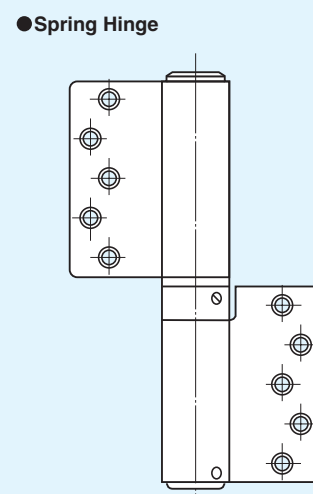


### EXTERNAL DIMENSIONS

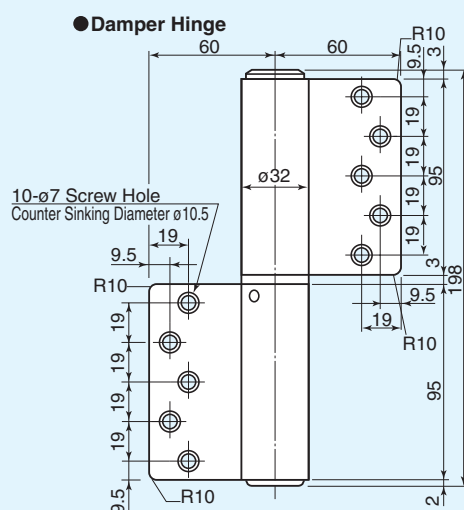
#### Left Hand Door



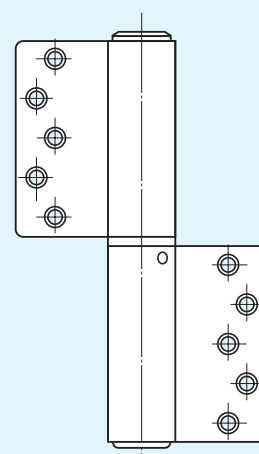
#### Right Hand Door



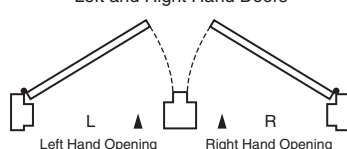
#### ● Damper Hinge



#### ● Damper Hinge



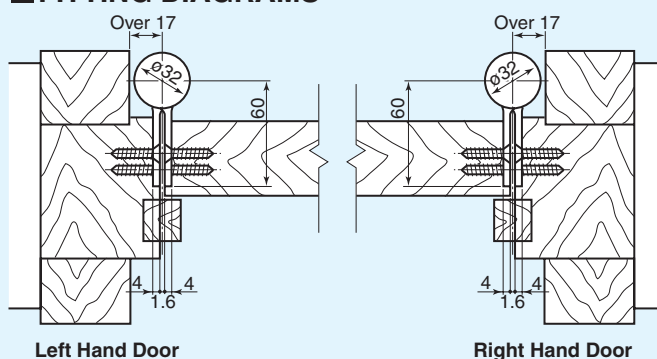
#### Left and Right Hand Doors



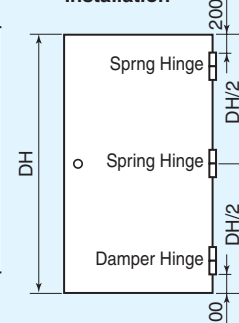
### Remarks

1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Because the attached screws for fitting are 30mm long, the thickness of the frame should be over 30mm.
3. Allow at least 5mm of space between outer edge of door and frame.
4. The edge type is also available for the corner of leaves.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

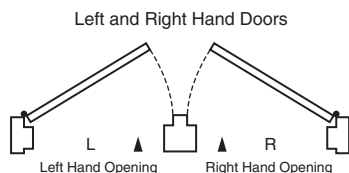
### FITTING DIAGRAMS




#### Installation



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

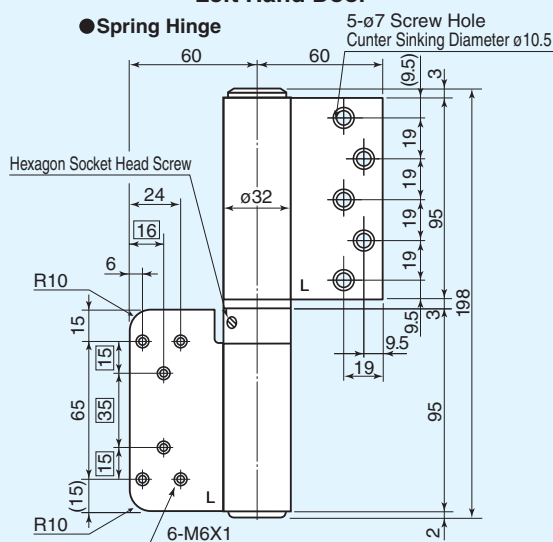


### Remarks

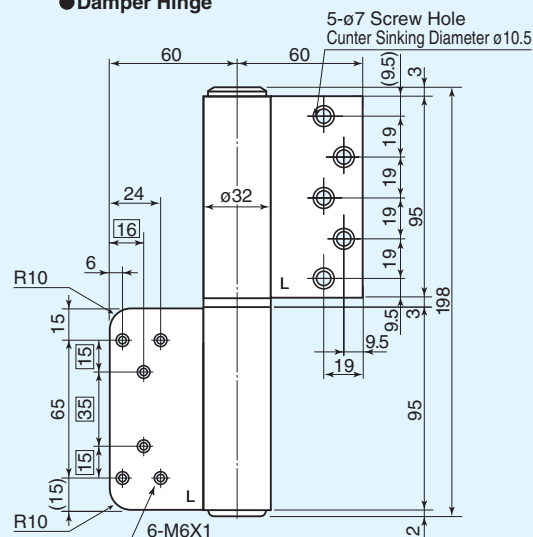
1. For the blade fitting place on the frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
2. For the blade fitting on the frame, use M6 flat screw. (NOT include)  
 dimension can be used. when cut the blade. (Avoid installation by welding.)
3. For the blade fitting place on the door use a hard wood such as lauan or harder.
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

## EXTERNAL DIMENSIONS

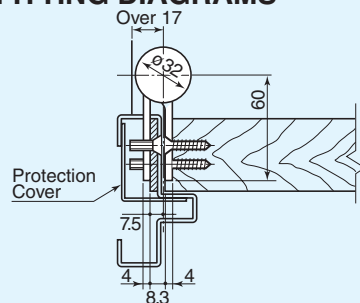
### Left Hand Door



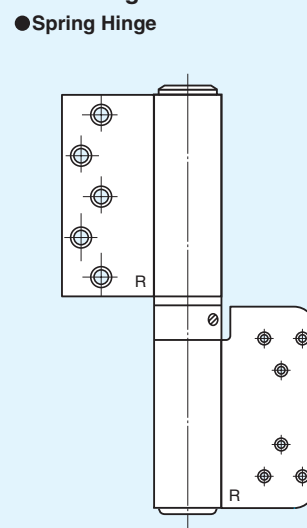
### ● Damper Hinge



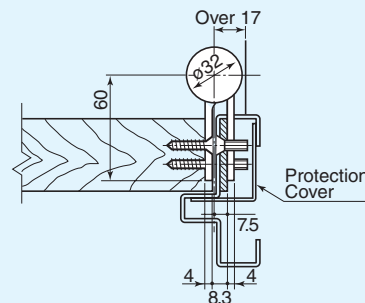
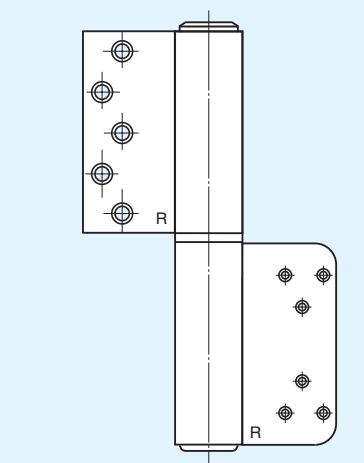
## ■ FITTING DIAGRAMS



### Right Hand Door



- Damper Hinge



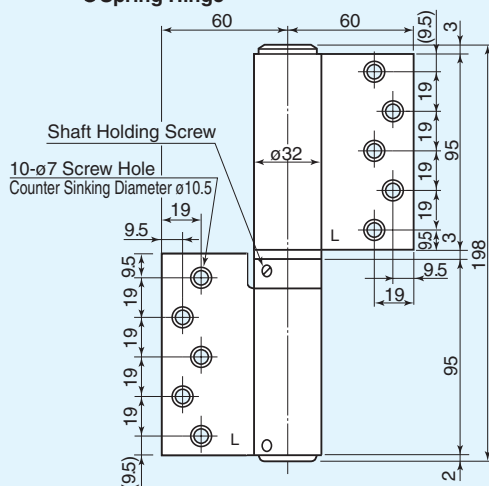
Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		W	H	D						
132R	132L		900(Max)	2100(Max)	30(Min)	40(Max)	10.0	—	—	180° Left or Right One-side Opening	Silver
132SR	132SL			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



### EXTERNAL DIMENSIONS

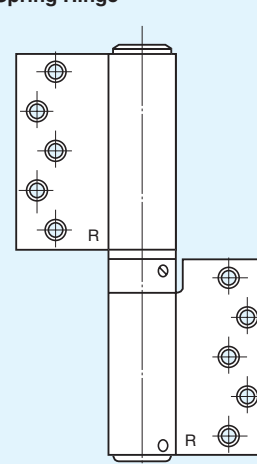
#### Left Hand Door

##### ● Spring Hinge

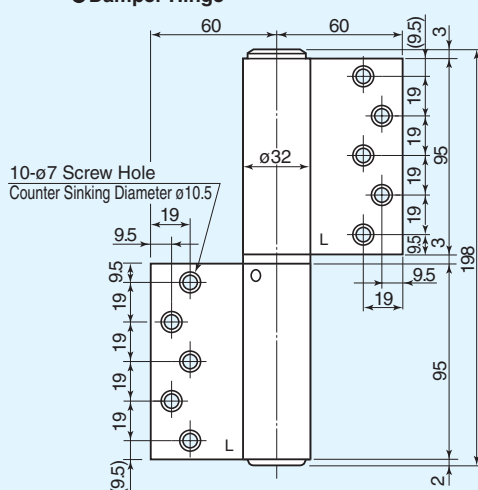


#### Right Hand Door

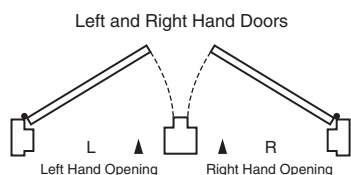
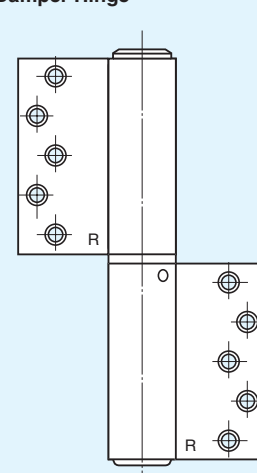
##### ● Spring Hinge



##### ● Damper Hinge



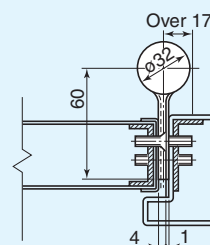
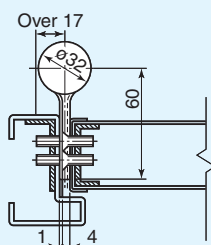
##### ● Damper Hinge



### Remarks

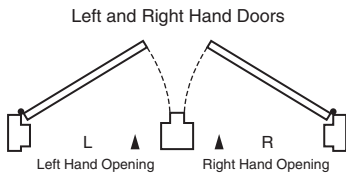
1. For the wing fitting place on the door and frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
2. Use the screws included in package for installation.
3. Allow at least 5mm of space between outer edge of door and frame.
4. Surface treatment is by a baked coating of melamine resin.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

### FITTING DIAGRAMS





Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		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
143SR-T	143SL-T							○	85° & 150°		
Empty Hinge	140R-T	140L-T					—	—	—		



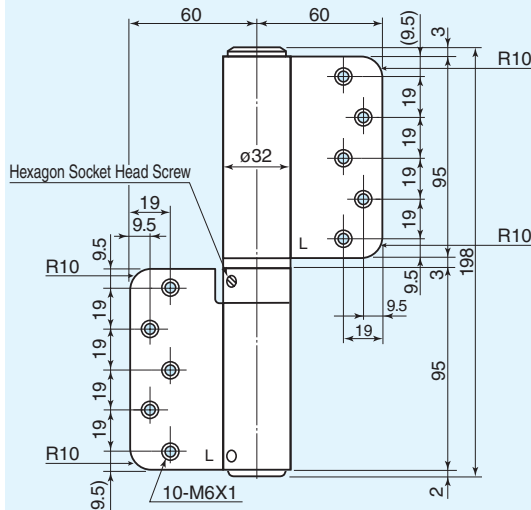
#### Remarks

1. For the blade fitting place on the door and frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
2. For the blade fitting on the door and frame, use M6 flat screw X5 pcs. (Avoid installation by welding.)(not include)
3. In case of applying to a fire protection door, use the model (143R, 143L) without a stop.
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

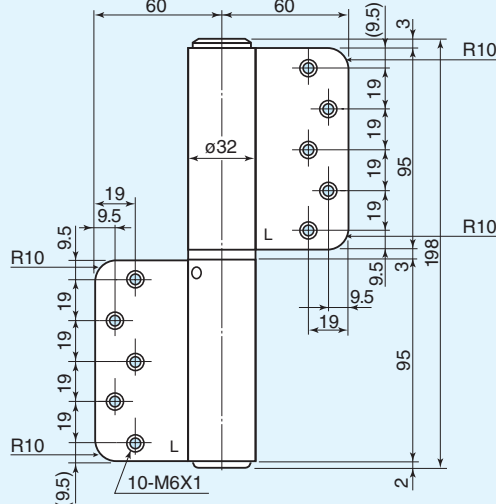
#### EXTERNAL DIMENSIONS

##### Left Hand Door

###### ● Spring Hinge

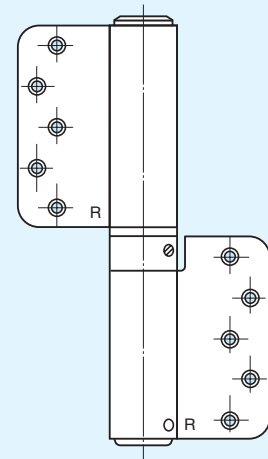


###### ● Damper Hinge

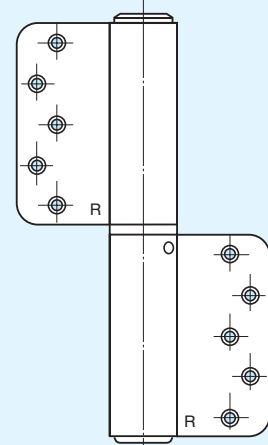


##### Right Hand Door

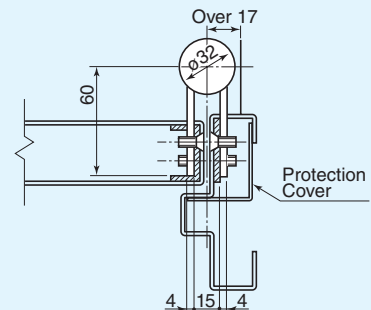
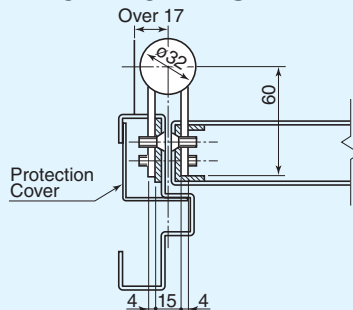
###### ● Spring Hinge



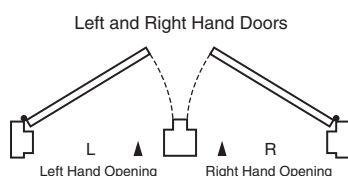
###### ● Damper Hinge



#### FITTING DIAGRAMS



Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door		Left hand door	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					—	—	—		



### Remarks

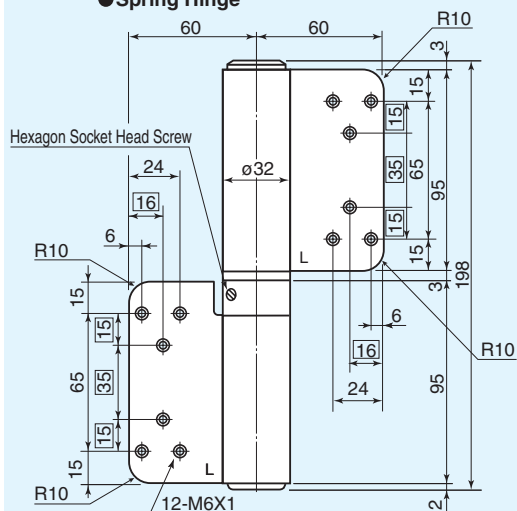
1. For the blade fitting place on the frame, a steel plate of over 2.3mm thickness and 300mm length must be used as a reinforcing material.
2. For the blade fitting on the frame, use M6 flat screwX5 pcs. (NOT include)  
 dimension can be used. when cut the blade. (Avoid installation by welding.)
3. For the blade fitting place on the door use a hard wood such as lauan or harder.
4. Make at least 5mm of space between at outer edge of door and frame.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

## EXTERNAL DIMENSIONS

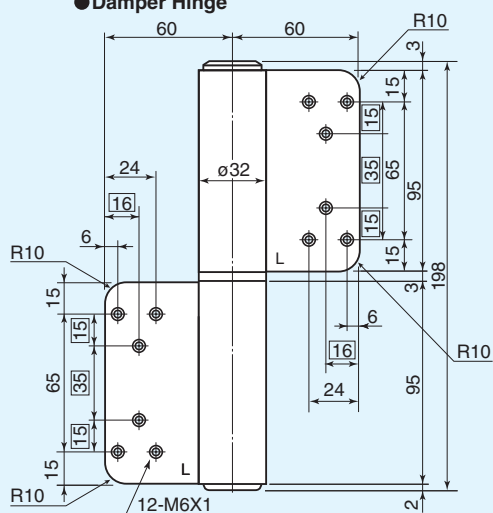
### Left Hand Door

### Left Hand Door

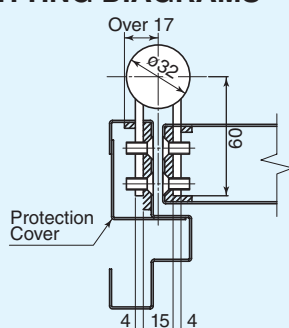
●Spring Hinge



- Damper Hinge

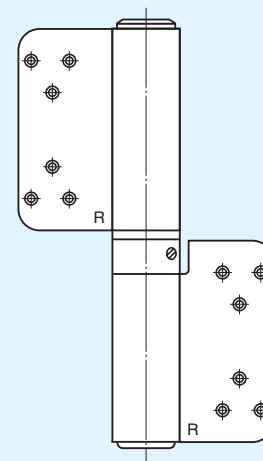


## ■ FITTING DIAGRAMS

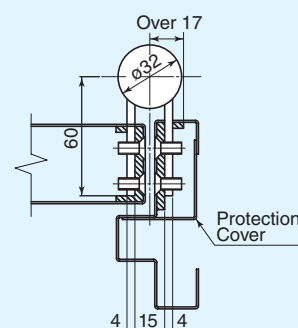
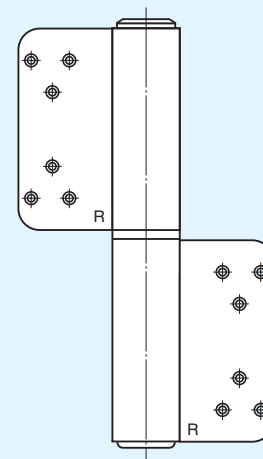


### Right Hand Door

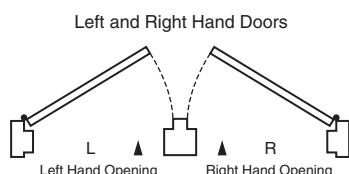
- Spring Hinge



### ● Damper Hinge



Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		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
244SR-T	244SL-T							○	85° & 150°		
Empty Hinge	240R-T	240L-T					—	—	—		

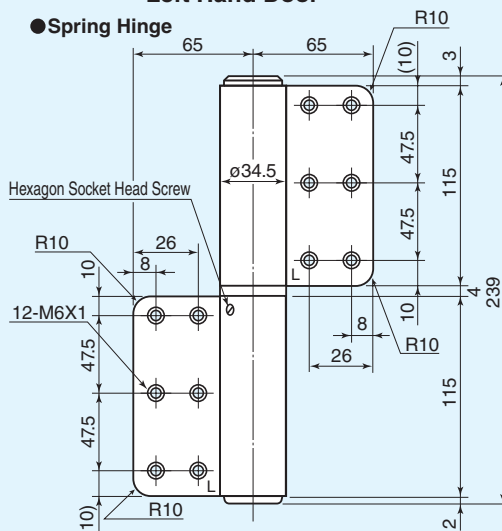


#### Remarks

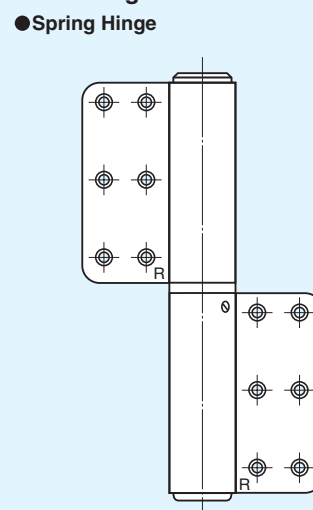
1. For the blade fitting place on the door and frame, a steel plate of over 3.2mm thickness and 300mm length must be used as a reinforcing material.
2. For the blade fitting on the door and frame, use M6 flat screw X6 pcs. (Avoid installation by welding.)(Not include)
3. In case of applying to a fire protection door, use the model (244R-T, 244L-T) without a stop.
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Surface treatment is by a baked coating of melamine resin.
6. Always allow for a door stopper to prevent the door from opening wider than 180°.

#### EXTERNAL DIMENSIONS

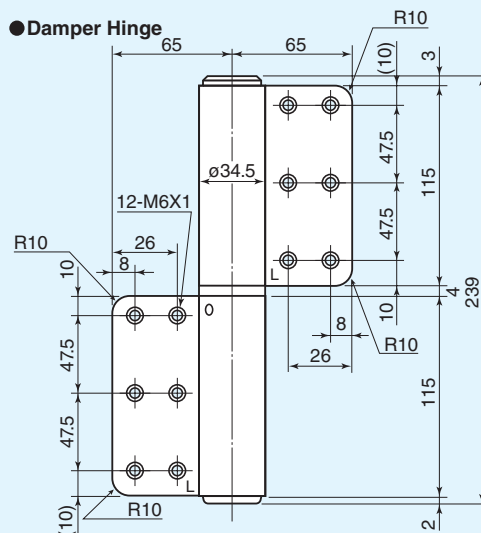
##### Left Hand Door



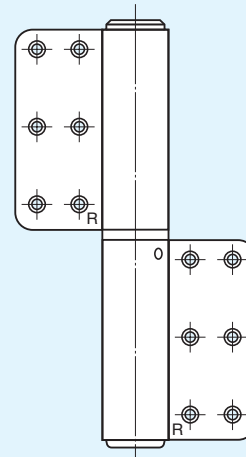
##### Right Hand Door



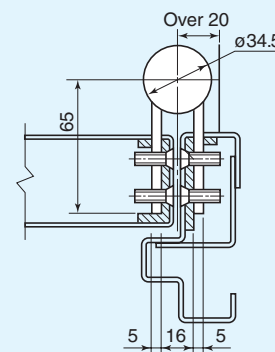
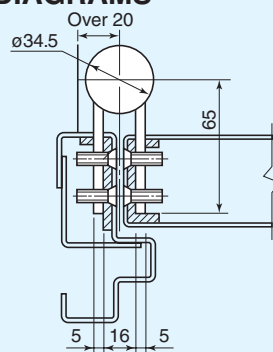
##### ● Damper Hinge



##### ● Damper Hinge



#### FITTING DIAGRAMS



# They come with special sealing and stainless steel. A much wider range of uses including bathrooms and seashores.

They blend in with exterior and interior products and make their images stand out beautifully.

## Stainless steel, flag type **700 series**

### ■ Simple design

The hinges double as door closers, thus giving the doors a neat-looking finish. Their simple and beautiful designs match all kinds of doors.

### ■ A wide range of uses

They meet an even wider range of uses of the flag type. They can be used in bathrooms, seashores and other environments.

### ■ They are made of stainless steel for high corrosion resistance.

About three times as corrosion-proof as the Auto Hinge of the PC type (at least 500 hours in a salt spray test)

### ■ Dew-proofed by a special sealing structure

### ■ Life extended by special surface treatment

About twice as durable as the Auto Hinge of the PC type (at least 200,000 openings and closings)

### ■ Outstanding durability

Their low-friction structure achieves outstanding durability.

### ■ An internal stop mechanism

They come with an internal stop mechanism that stops the door automatically at 85° and 150°.

### ■ Simple adjustment of closing speed

The door-closing speed can easily be set and changed with the mere use of a normal screwdriver.

### ■ No need of adjusting the door-closing speed

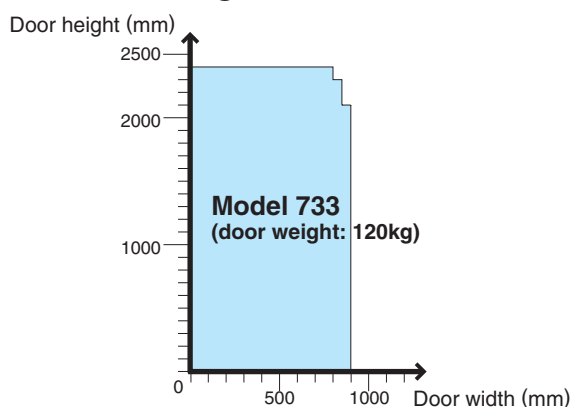
They come with an internal actuator with a temperature sensor. You have only to set the door-closing speed (at a desired setting) initially, and you can keep the door-closing speed constant without being affected by the ambient temperature.

### ■ Easy to install

They are installed in exactly the same manner as ordinary flag type hinges. They do not require much labor and are easy.

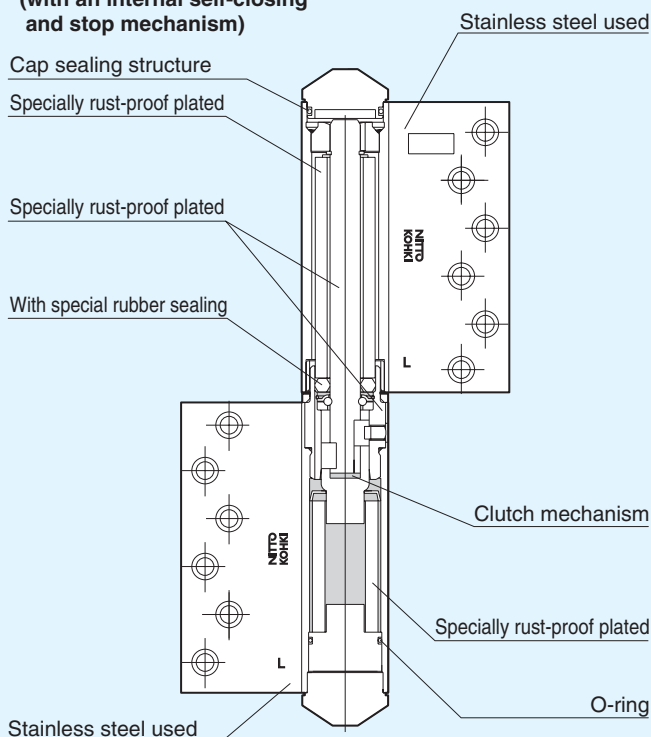
### ■ They are compatible with the stainless steel used in exterior products

### Table of doors applicable to the Auto Hinge 733



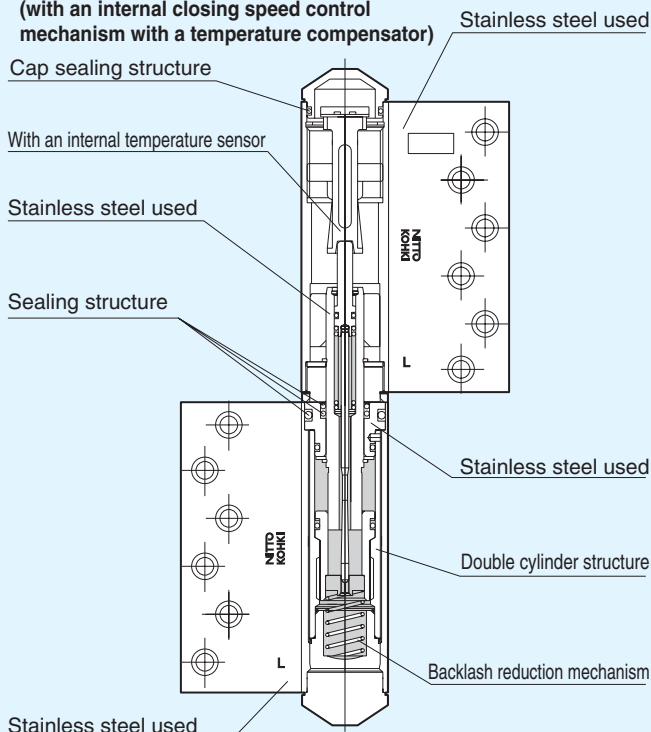
### ■ Spring hinge

(with an internal self-closing and stop mechanism)



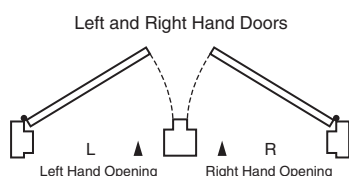
### ■ Damper hinge

(with an internal closing speed control mechanism with a temperature compensator)



- Each model consists of a spring hinge and a damper hinge.
- This diagram represents the structure of the 700 series.

Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door		Left hand door	W	H	D						
733R		733L	900(Max)	2100(Max)	40(Min)	120(Max)	15.0	—	—	180° Left or Right One-side Opening	stain
733SR		733SL						○	85° & 150°		
Empty Hinge	730R	730L					—	—	—		



### Remarks

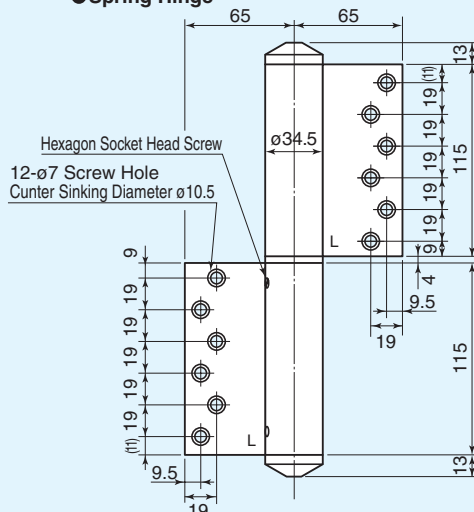
1. Surface treatment is by a baked coating of acrylic resin on the stainless steel.
2. On the mounts of the flaps for both the door and frame, always use a reinforcing steel plate at least 3.2mm and 300mm long. Fix the reinforcement directly on the framework.
3. They come with flat head screws M5 x 16L (P = 0.8) as mounting screws.
4. Always allow for a clearance of at least 5mm for the door.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.
6. Avoid using them in sauna rooms.

## EXTERNAL DIMENSIONS

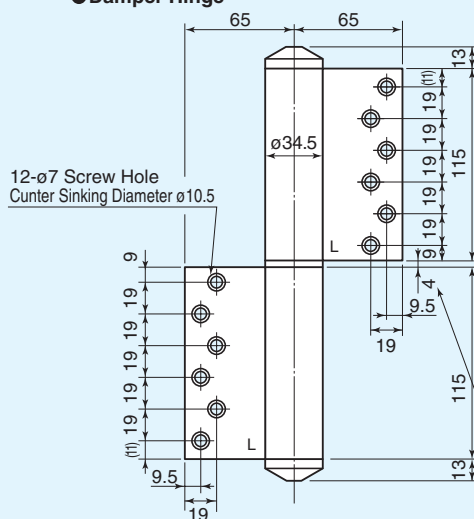
### Left Hand Door

### Left Hand Door

### ● Spring Hinge

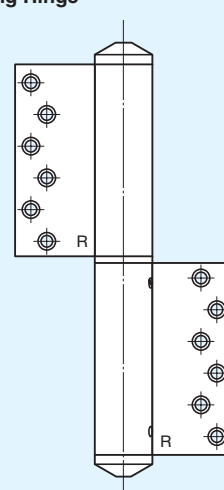


### ● Damper Hinge

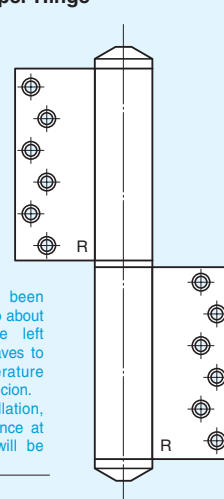


### Right Hand Door

● **Spring Hinge**

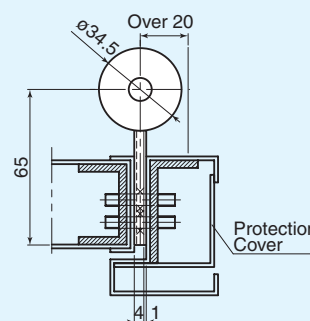
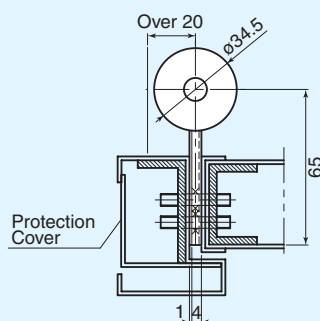


● **Damper Hinge**



This hinge has been factori-adjusted to about 10mm clearance left between both leaves to provide temperature compensation function. In hinge installation, adjust the clearance at site so that it will be reduced to 4mm.

## ■ FITTING DIAGRAMS





# Constant speed of door closing!

## Various functions (automatic temperature compensation and drip-proofing) in a slim body

These hinges make entrance doors and outdoor doors look neat.

### Flag type PC series

They achieve high reliability in severe outdoor environments.

#### Simple design

The hinges double as door closers, thus giving the doors a neat-looking finish. Their simple and beautiful designs match all kinds of doors.

#### Drip-proof types that withstand outdoor use

Being drip-proof, they can be used for entrance doors exposed to outside air and gate doors exposed directly to rain.

#### No need to adjust door-closing speed

On the PC series with an internal actuator with a temperature sensor, you have only to set the door-closing speed (at a desired setting) initially. The hinges will then maintain the door closing speed without being affected by the ambient temperature.

#### Easy to set the door-closing speed

The door-closing speed can easily be set and changed with the mere use of a normal screwdriver.

#### Easy to install and handle

They are handled in exactly the same manner as the company's standard Auto Hinge, flag type, 100 and 200 series.

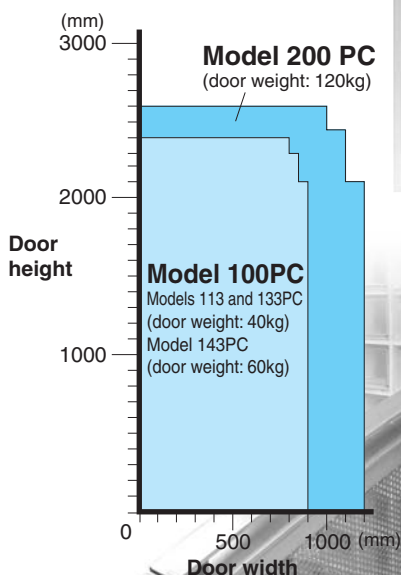
#### Outstanding durability

They are so structured as to produce little friction, thus achieving outstanding durability.

#### Equipped with an internal stop mechanism

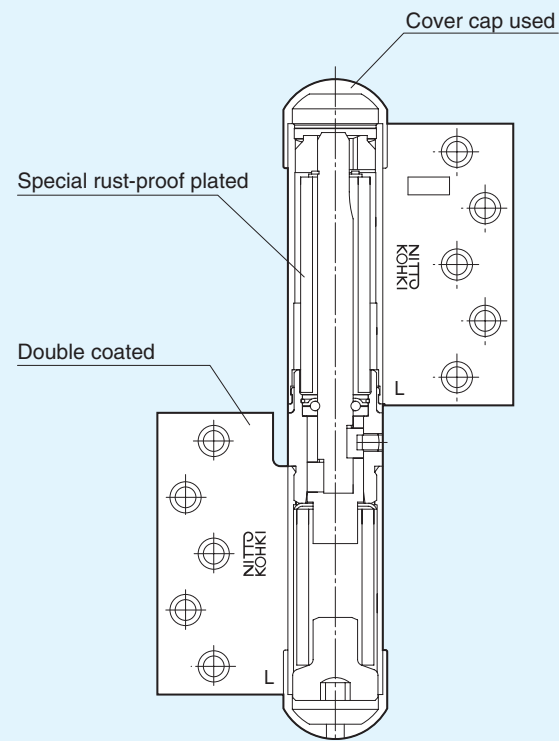
They come with an internal stop mechanism for causing the door to close itself and stop at 85° and 150°.

### Table of doors applicable to Auto Hinges PC series



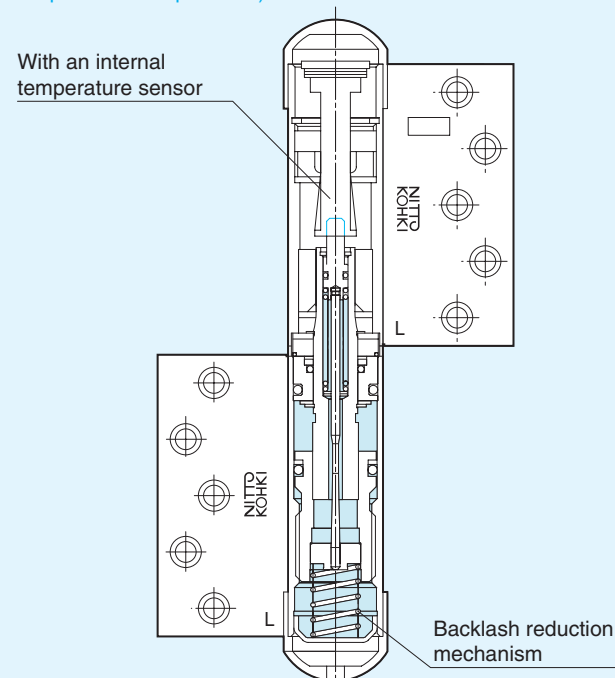
#### Spring hinge

(with an internal self-closing and stop mechanism)



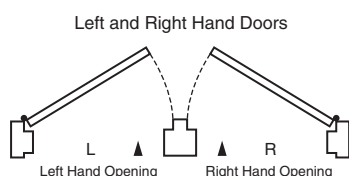
#### Damper hinge

(with an internal closing speed control mechanism with a temperature compensator)



- Each model consists of a spring hinge and a damper hinge.
- This diagram represents the structure of the PC series.

※ Optional Color



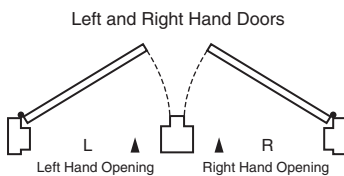
1. Surface treatment is by a baked coating of acrylic resin.
2. For the flap mounts on the door and frame, be sure to use a steel plate at least 2.3mm thick and 300mm long made of lauan or harder wood or reinforcement. Fix the reinforcement directly on the framework.
3. They come with mounting tapping screws 25mm long. Use a frame at least 25mm.
4. Allow for a door clearance of at least 5mm.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

[illegible]

Technical drawings showing the tapping screw assembly for the front and rear views of the cabinet. Both views show a circular hole with a diameter of  $\phi 35$  and a depth of 60. The hole is located 19 units above the bottom edge. The tapping screw is labeled "Tapping Screw  $\phi 5 \times 25 \ell$  (SUS)". The front view shows the screw being inserted from the inside of the cabinet, while the rear view shows it being inserted from the outside. The bottom edge of the cabinet is marked with dimensions 4, 1.6, and 4.

Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door	Left hand door		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					—	—	—		

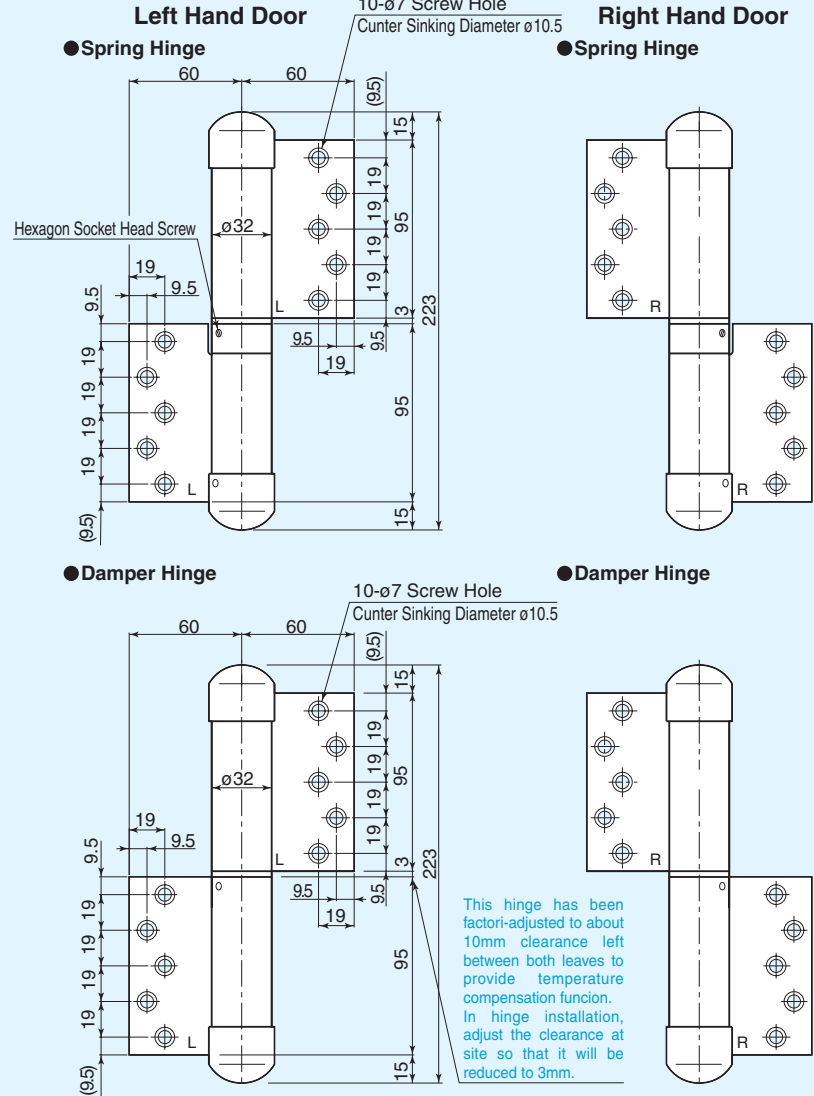
※ Optional Color



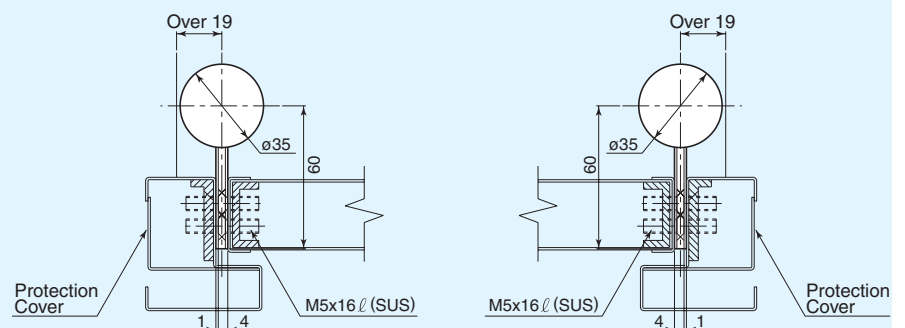
#### Remarks

1. Surface treatment is by a baked coating of acrylic resin.
2. On the mounts of the flaps for both the door and frame, always use a reinforcing steel plate at least 3.2mm and 300mm long. Fix the reinforcement directly on the framework.
3. They come with flat head screws M5 x 16L (P = 0.8) as mounting screws.
4. Always allow for a clearance of at least 5mm for the door.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.
6. Avoid using them in sauna rooms.

#### EXTERNAL DIMENSIONS

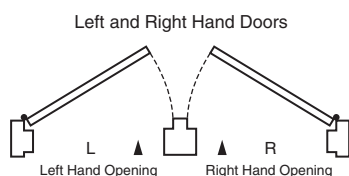


#### FITTING DIAGRAMS



Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door		Left hand door	W	H	D						
143RT-PC		143LT-PC	900(Max)	2100(Max)	30(Min)	60(Max)	15.0	—	—	180° Left or Right One-side Opening	Silver ※Black ※Bronze
143SRT-PC		143SLT-PC						○	85° & 150°		
Empty Hinge	140RT-PC	140LT-PC					—	—	—		

※ Optional Color

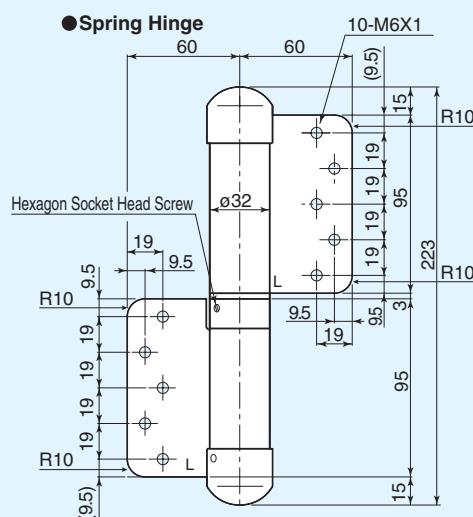


### Remarks

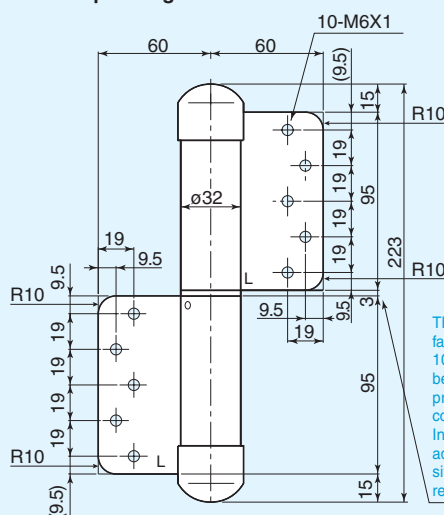
1. Surface treatment is by a baked coating of acrylic resin.
2. For the blade fitting place on the door and frame, a steel plate of over 3.2mm thickness and 300mm length must be used as a reinforcing material.
3. For the blade fitting on the door and frame, use M6 flat screw X6 pcs. (Avoid installation by welding.)(Not include)
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

## ■ EXTERNAL DIMENSIONS

### Left Hand Door

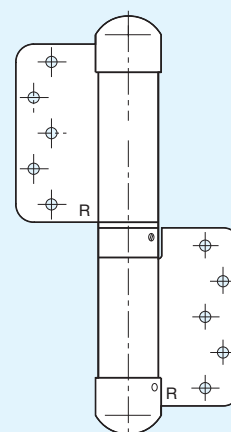


### ● Damper Hinge

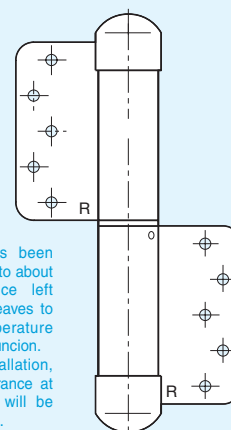


### Right Hand Door

- Spring Hinge

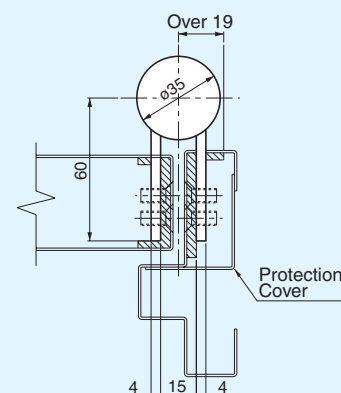
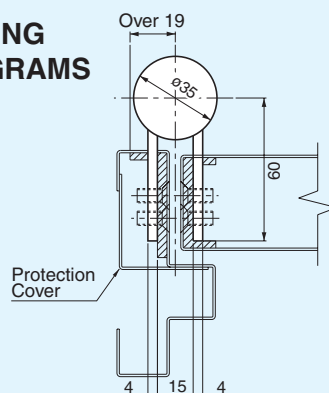


● Damper Hinge



This hinge has been factori-adjusted to about 10mm clearance left between both leaves to provide temperature compensation function. In hinge installation, adjust the clearance at site so that it will be reduced to 3mm.

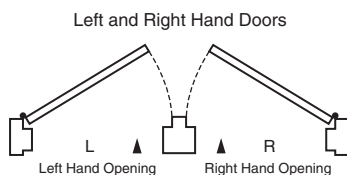
## ■ FITTING DIAGRAMS



# 200PC<sub>series</sub> Model 244T-PC

## STEEL DOORS

Model Number			Door Size Applicable(mm)			Door Weight (kg)	Closeing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door		Left hand door	W	H	D						
244RT-PC		244LT-PC	1200(Max)	2100(Max)	40(Min)	120(Max)	22.6	—	—	180° Left or Right One-side Opening	Silver
244SRT-PC		244SLT-PC						—	—		
Empty Hinge	240RT-PC	240LT-PC									



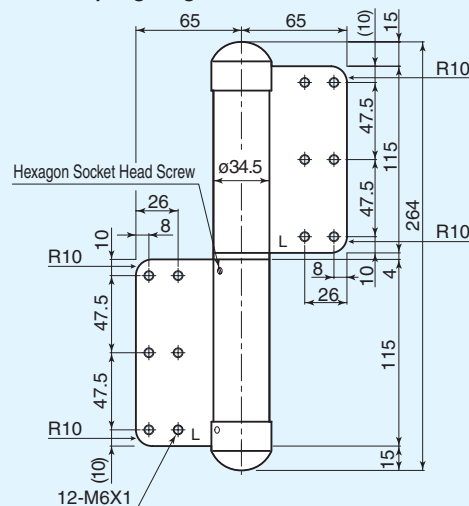
### Remarks

1. Surface treatment is by a baked coating of acrylic resin.
2. For the blade fitting place on the door and frame, a steel plate of over 3.2mm thickness and 300mm length must be used as a reinforcing material.
3. For the blade fitting on the door and frame, use M6 flat screw X6 pcs. (Avoid installation by welding.)
4. Allow at least 5mm of space between at outer edge of door and frame.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

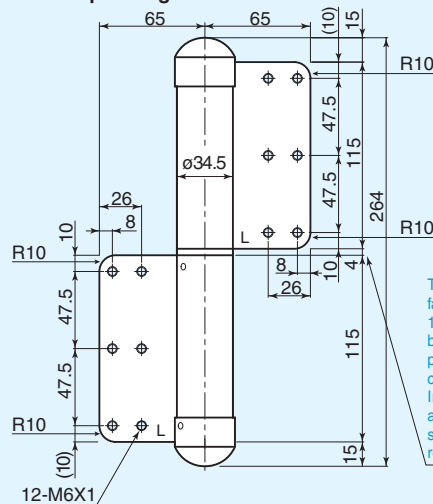
### EXTERNAL DIMENSIONS

#### Left Hand Door

##### ● Spring Hinge

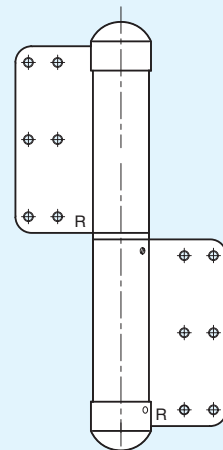


##### ● Damper Hinge

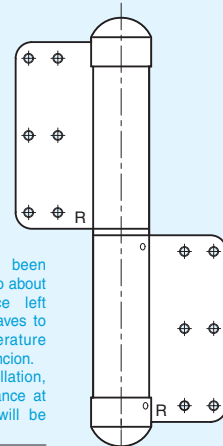


#### Right Hand Door

##### ● Spring Hinge

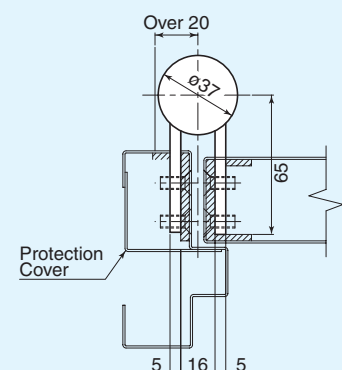
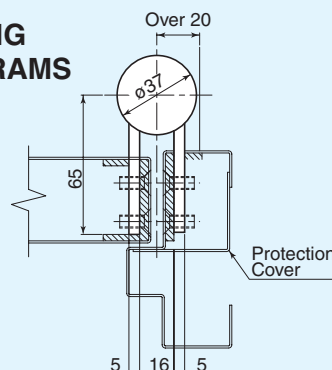


##### ● Damper Hinge



This hinge has been factory-adjusted to about 10mm clearance left between both leaves to provide temperature compensation function. In hinge installation, adjust the clearance at site so that it will be reduced to 4mm.

### FITTING DIAGRAMS





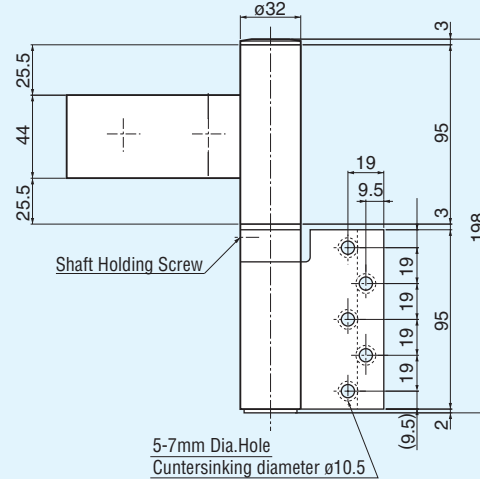
Model Number			Door Size Applicable(mm)					Door Weight (kg)	Closing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color
Right hand door		Left hand door	W	H	D								
NK153R		NK153L	900(Max)	2100(Max)	8	10	12	15.0	—	—	180° Left or Right One-side Opening	Silver & Bronze	
NK153SR		NK153SL							○	85° & 150°			
Empty Hinge	NK150R	NK150L						—	—	—			



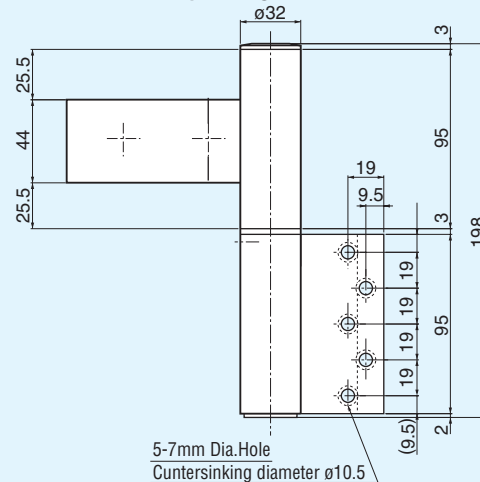
### EXTERNAL DIMENSIONS

#### Left Hand Door

##### ● Spring Hinge

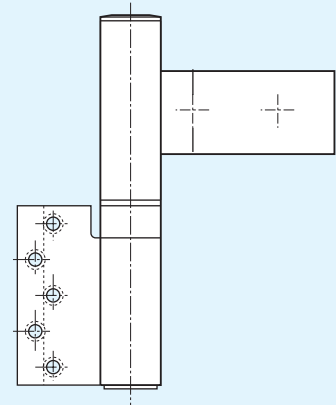


##### ● Damper Hinge

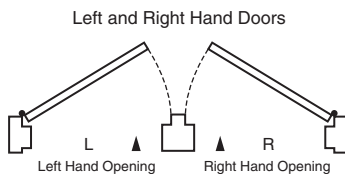
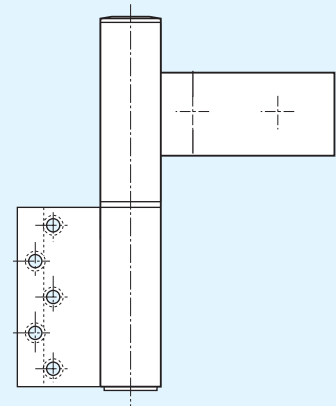


#### Right Hand Door

##### ● Spring Hinge



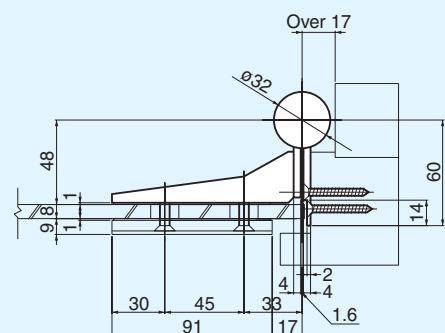
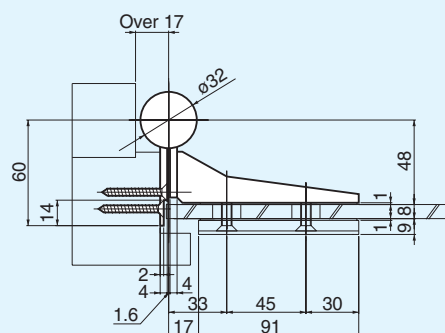
##### ● Damper Hinge



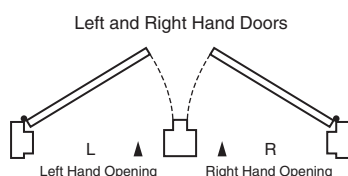
### Remarks

1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Surface treatment is by a baked coating of melamine resin.
3. The attached screws for fitting are 5øX35mm long. the thickness of the frame should be over 35mm.
4. Allow at least 5mm of space between outer edge of door and frame.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

### FITTING DIAGRAMS



Model Number			Door Size Applicable(mm)				Door Weight (kg)	Closeing Force (N·m)	Stop Mechanism	Location of Stop	Max. Opening Angle	Surface Color	
Right hand door		Left hand door	W	H		D							
NK153R (TRI-SET)		NK153L (TRI-SET)	1000(Max)	2200(Max)	8	10	12	80(Max)	20.0	—	—	180° Left or Right One-side Opening	Silver & Bronze
NK153SR (TRI-SET)		NK153SL (TRI-SET)								○	85° & 150°		
Empty Hinge	NK150R	NK150L						—	—	—			



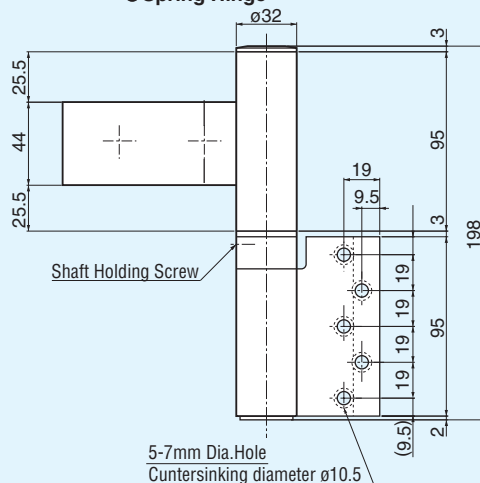
### Remarks

1. The door and frame materials to which the hinge is to be fitted should be of hard wood such as lauan or harder.
2. Surface treatment is by a baked coating of melamine resin.
3. The attached screws for fitting are 5øX35mm long. the thickness of the frame should be over 35mm.
4. Allow at least 5mm of space between outer edge of door and frame.
5. Always allow for a door stopper to prevent the door from opening wider than 180°.

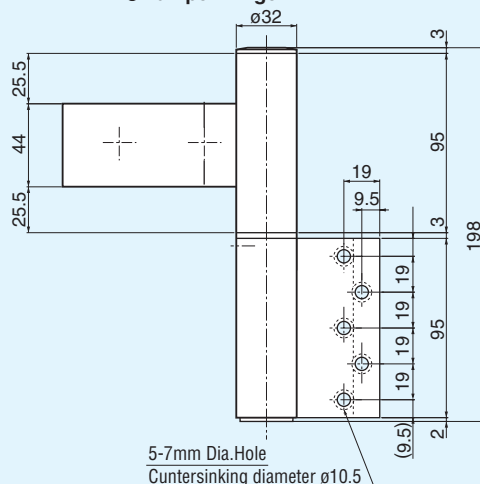
## ■ EXTERNAL DIMENSIONS

### Left Hand Door

● **Spring Hinge**

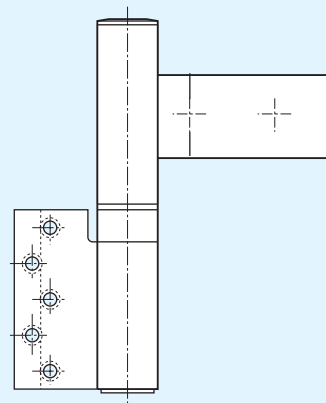


● **Damper Hinge**

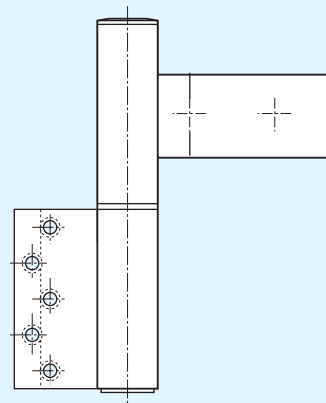


### Right Hand Door

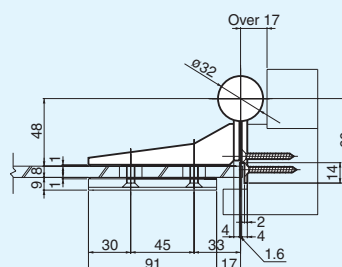
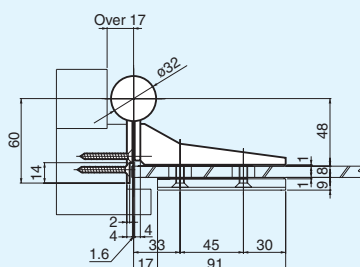
- Spring Hinge



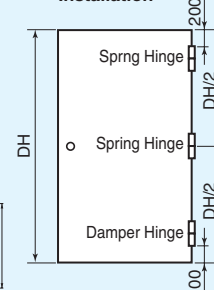
- Damper Hinge



## ■ FITTING DIAGRAMS



## Installation

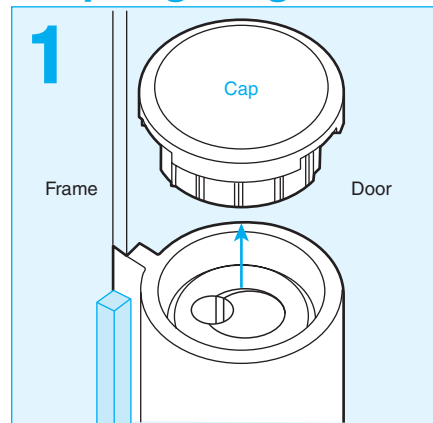


# 300 series

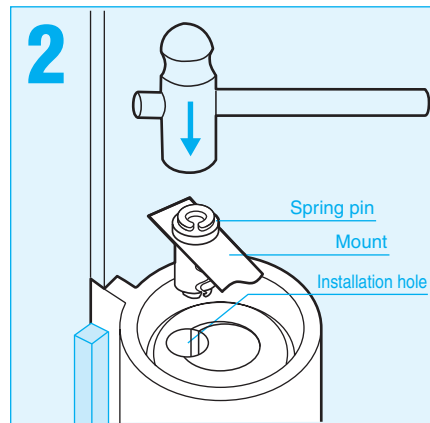
## Installation procedure

- Suspend the door, then install the hinges.

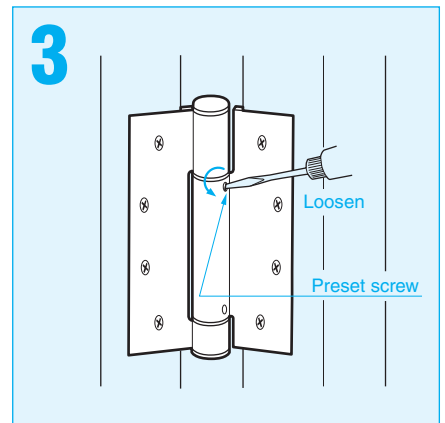
### Spring hinge



- Install the door, then remove the cap.

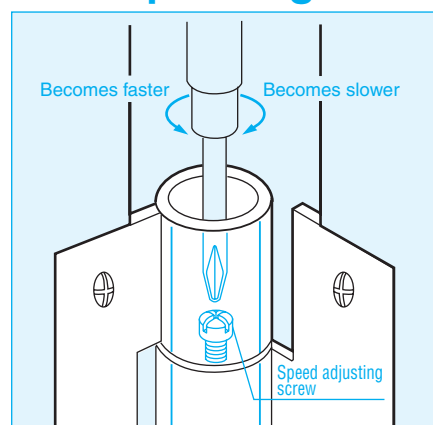


- Open the door 10° to 15° or so. Drive the furnished spring pin securely into the installation hole according to the explanations about the mount. Then install the cap.



- Open the door about 90°. Turn the preset screw by 3 to 4 turns counterclockwise, then make it stick out from the hinge surface by about 1mm.

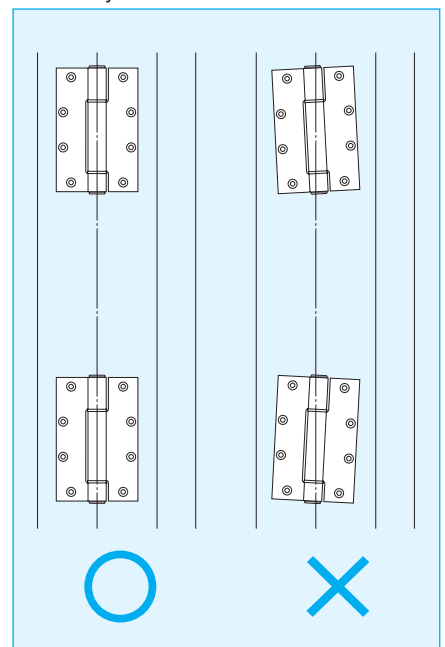
### Damper hinge



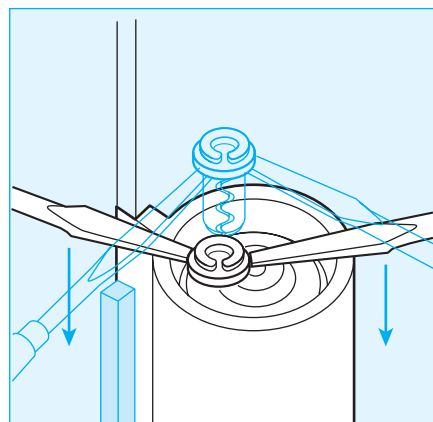
- Turn the speed adjusting screw according to the instructions given on the cap of the damper hinge, thus adjusting the door-closing speed. Then apply the cap.

### Cautions on installation

- Center the spring hinge and damper hinge securely.



### How to remove the door



- ① Open the door about 90°, turn the preset screw clockwise by 3-4 turns, thus retightening it as before.
- ② Close the door, and the door will stop at about 5°. Detach the spring pin as shown in the left-hand figure. (Do not close the door by overstraining it before pulling out the spring pin.)
- ③ To make the spring work again, use a new spring pin.

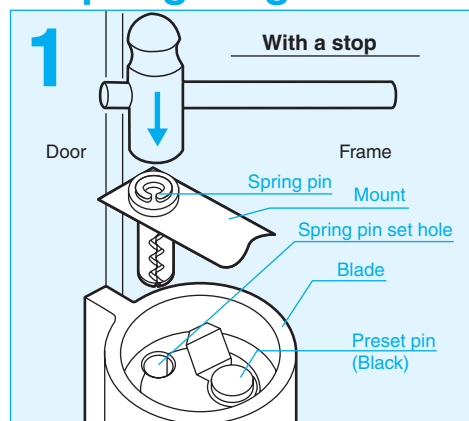
# 1000 series

## Installation procedure

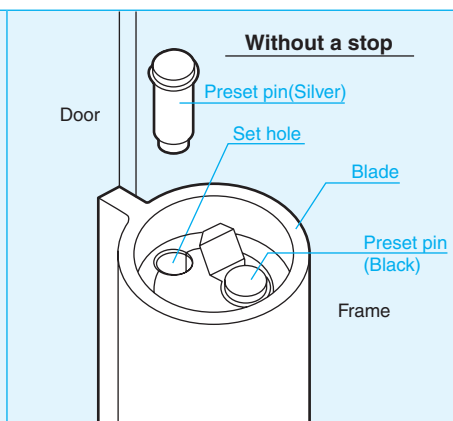
- Suspend the door, then install the hinges.

\*When suspending the door, align the notch in the shaft of the damper hinge with the hole in the door-side flap.

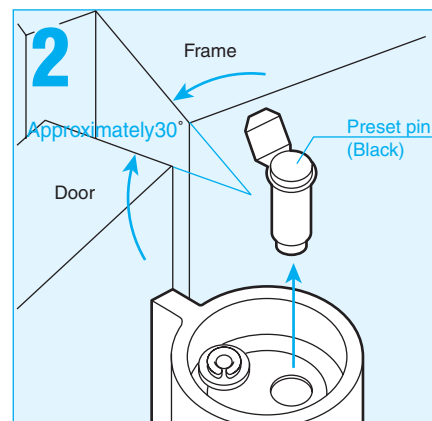
### Spring hinge



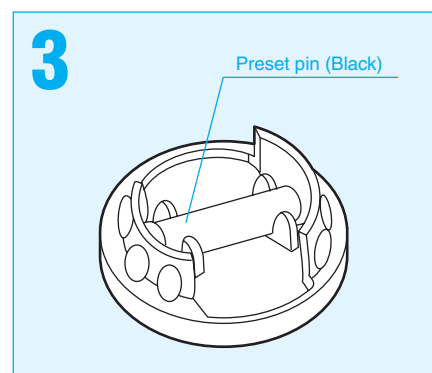
- With the door ajar about 5 to 15 degrees, hammer the silver colored spring pin into the spring set hole.



- With the door ajar about 5 to 15 degrees, insert the set pin firmly in to the spring set hole. The set pin (silver) is located inside the upper cap of the spring hinge.

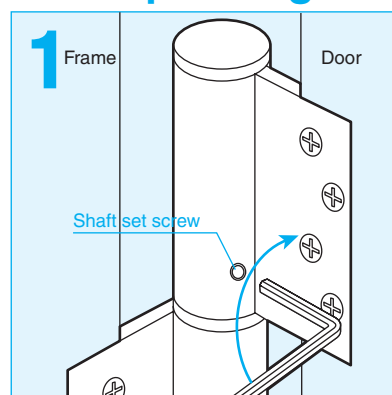


- Next open the door approximately 30° and make sure to pull out the black pre-set pin.

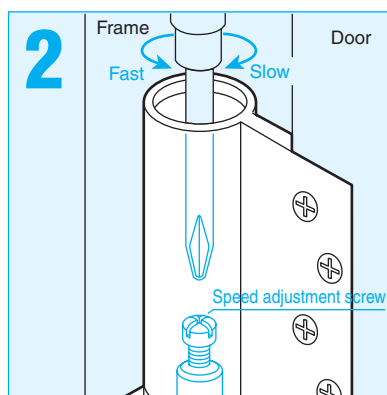


- Then place the pre-set pin you have just removed, in the cap and store it there.

### Damper hinge

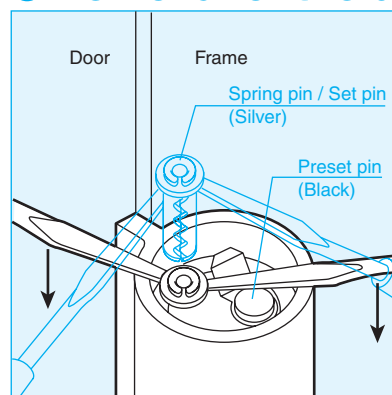


- Screw the damper hinge's hexagon socket head screw tightly with the hexagon wrench enclosed.



- Finally to set the door closing speed, turn the speed adjustment screw in the damper hinge to the desired speed.

### Removal of the door



When taking off the Auto Hinge, do everything in exactly the opposite of when you fastened it to the door.

- ① When taking off the Auto Hinge, do everything in exactly the opposite of when you fastened it to the door.
- ② Loosen the damper hinge's hexagon socket screw. Next remove the spring hinge's upper cap. Open the door approximately 30° and take the stored preset pin from the cap. Then push it into the pre-set pin hole firmly. If you don't push it in firmly enough it may come out and the spring will become loose.
- ③ Close the door approximately 5° and take out the spring pin, as shown in the drawing on the left side. And you can take off the hinge.
- ④ It is dangerous to remove the fitting screws when the spring is still wound.

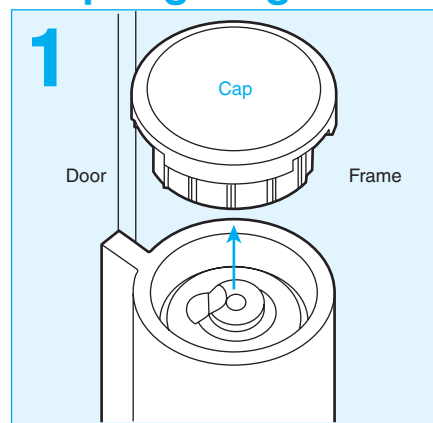
# 100/200/NK series

## ■ Installation procedure

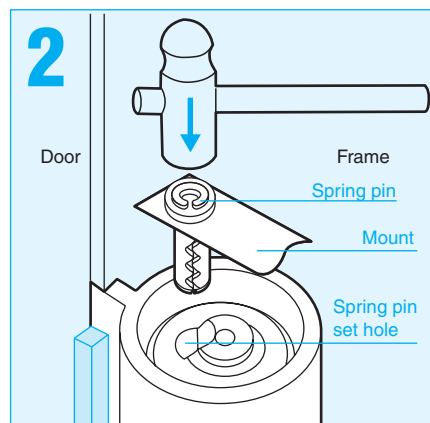
- Suspend the door, then install the hinges.

\*When suspending the door, align the notch in the shaft of the damper hinge with the hole in the door-side flap.

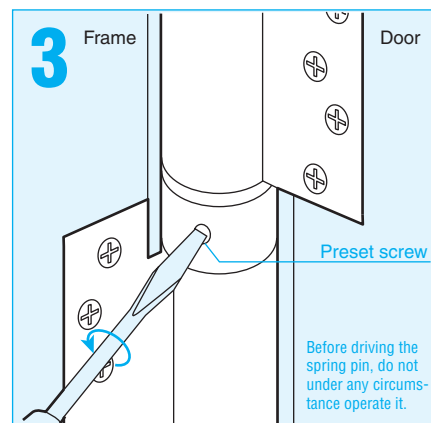
### ● Spring hinge



- Remove the cap.

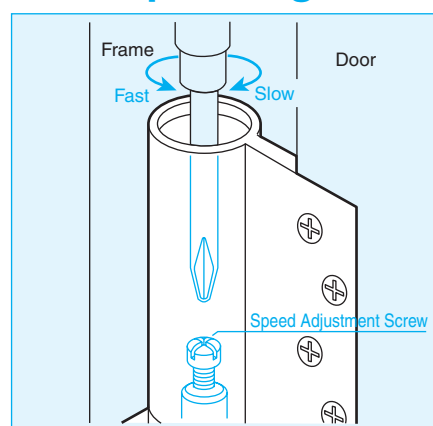


- Drive the spring pin.
- Open the door by about 0° to 10°, align the installation hole, and drive the spring pin securely according to the instructions given on the mount. Do not use a screw or anything similar as an alternative.



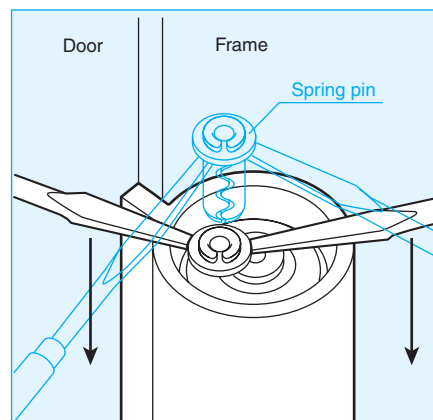
- Open the door by about 90°, turn the preset screw counterclockwise by 3-4 turns, and make it stick out by about 1mm from the hinge surface. Before driving the spring pin, do not under any circumstances operate it.

### ● Damper hinge



- Finally to set the door closing speed, remove the cap from damper hinge and turn the speed adjustment screw in the damper hinge to the desired.

### ● Removal of the door



- ① Open the door by about 90°, turn the preset screw clockwise by 3-4 turns, and retighten it as before.
- ② Close the door, and it will stop at about 5°. Therefore pull out the spring pin as shown in the left-hand figure, then remove the door. (\*Do not close the door by overstraining it before pulling out the spring pin.)
- ③ To suspend it again, do so at the angle at which the door was removed (the angle at which there is the shaft notch in the damper hinge).



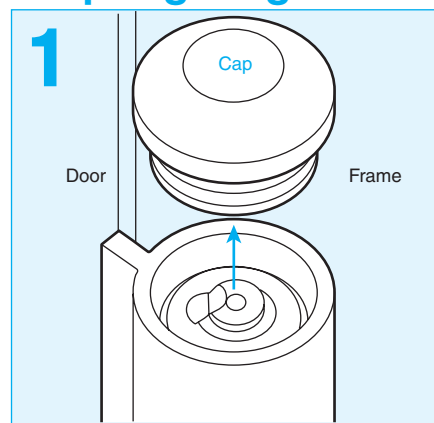
# 700 series

## Installation procedure

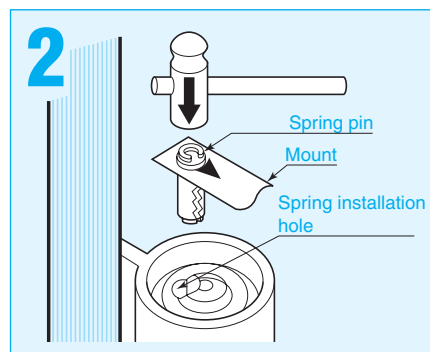
- Suspend the door, then install the hinges.

\*When suspending the door, align the notch in the shaft of the damper hinge with the hole in the door-side flap.

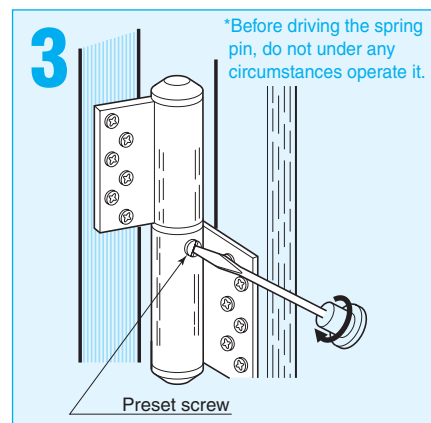
### Spring hinge



- Remove the cap.



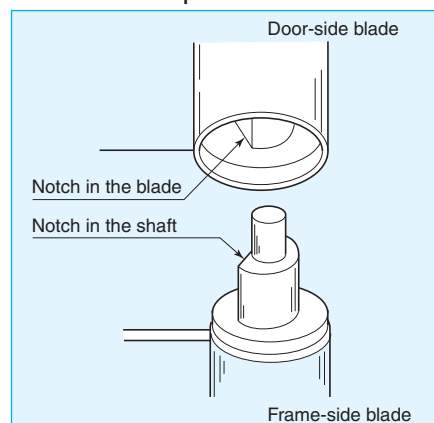
- Drive the spring pin.
- Open the door by about 0° to 10°, align the installation hole, and drive the spring pin securely according to the instructions given on the mount. Do not use a screw or anything similar as an alternative.



- Open the door by about 90°, turn the preset screw counterclockwise by 3-4 turns, and make it stick out by about 1mm from the hinge surface. Before driving the spring pin, do not under any circumstances operate it.

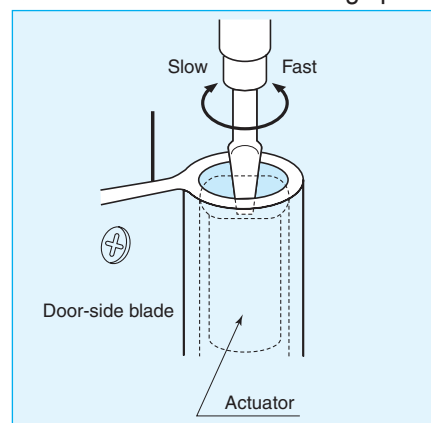
### Damper hinge

#### How to suspend the door

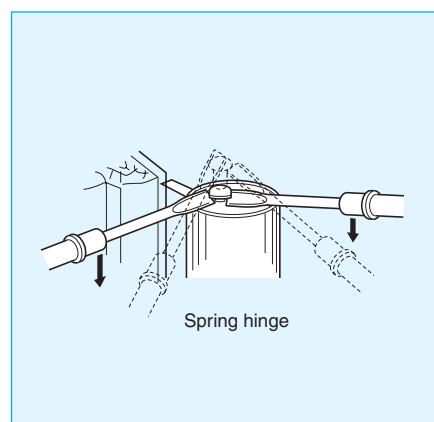


- Align the label on the cap with the notch in the shaft.
- The damper hinge, when handled singly, has a clearance between the top and the bottom blade. When it is installed and the door is suspended, the clearance will disappear, so that it will be installed to automatic speed adjustment. There is therefore no problem. After suspending the door, check that there is no clearance between the top and the bottom blade.

#### How to set the door-closing speed



### How to remove the door



- ① Open the door by about 90°, turn the preset screw clockwise by 3-4 turns, and retighten it as before.
- ② Close the door, and it will stop at about 5°. Therefore pull out the spring pin as shown in the left-hand figure, then remove the door. (\*Do not close the door by overstraining it before pulling out the spring pin.)
- ③ To suspend it again, do so at the angle at which the door was removed (the angle at which there is the shaft notch in the damper hinge).

\*For any questions about the handling procedure, please consult the Hinge Sales Sect. or any office of Nitto Kohki.

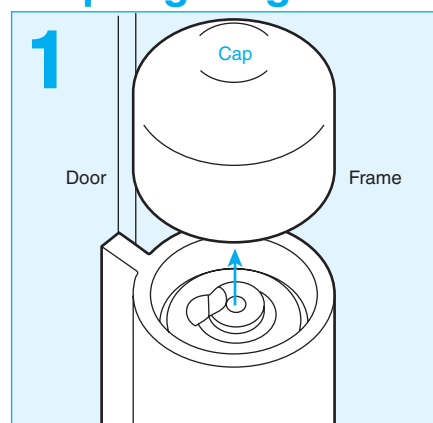
\*Should any hinge break down, pull out the spring pin (see "How to remove the door" in the figure above) and turn the speed adjusting screw to maximize the speed. You can then use it similarly to ordinary hinges.

## Installation procedure

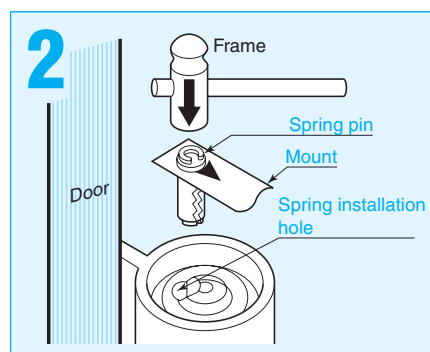
- Suspend the door, then install the hinges.

\*When suspending the door, align the notch in the shaft of the damper hinge with the hole in the door-side flap.

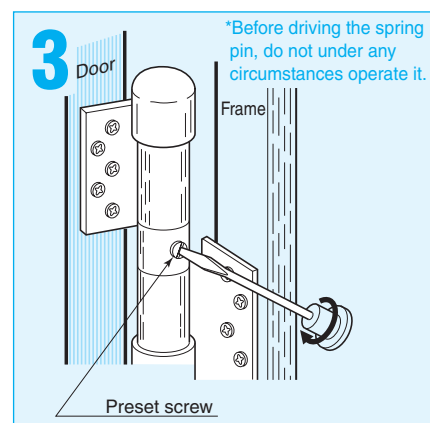
### Spring hinge



- Remove the cap.



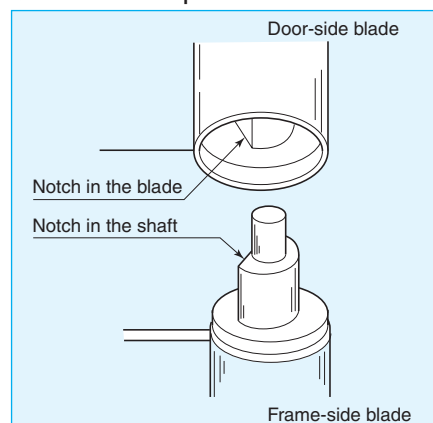
- Drive the spring pin.
- Open the door by about 0° to 10°, align the installation hole, and drive the spring pin securely according to the instructions given on the mount. Do not use a screw or anything similar as an alternative.



- Open the door by about 90°, turn the preset screw counterclockwise by 3-4 turns, and make it stick out by about 1mm from the hinge surface. Before driving the spring pin, do not under any circumstances operate it.

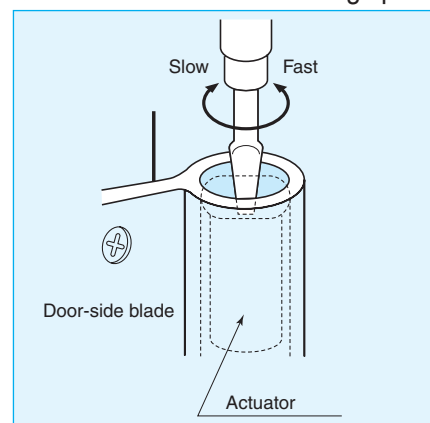
### Damper hinge

#### How to suspend the door

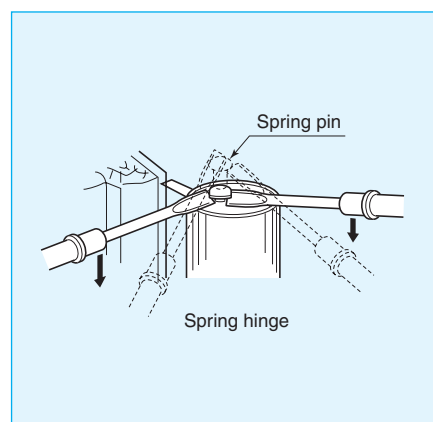


- Align the label on the cap with the notch in the shaft.
- The damper hinge, when handled singly, has a clearance between the top and the bottom blade. When it is installed and the door is suspended, the clearance will disappear, so that it will be installed to automatic speed adjustment. There is therefore no problem. After suspending the door, check that there is no clearance between the top and the bottom blade.

#### How to set the door-closing speed



### How to remove the door



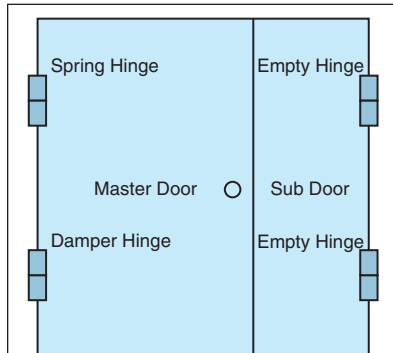
- ① Open the door by about 90°, turn the preset screw clockwise by 3-4 turns, and retighten it as before.
- ② Close the door, and it will stop at about 5°. Therefore pull out the spring pin as shown in the left-hand figure, then remove the door. (\*Do not close the door by overstraining it before pulling out the spring pin.)
- ③ To suspend it again, do so at the angle at which the door was removed (the angle at which there is the shaft notch in the damper hinge).

\*For any questions about the handling procedure, please consult the Hinge Sales Sect. or any office of Nitto Kohki.

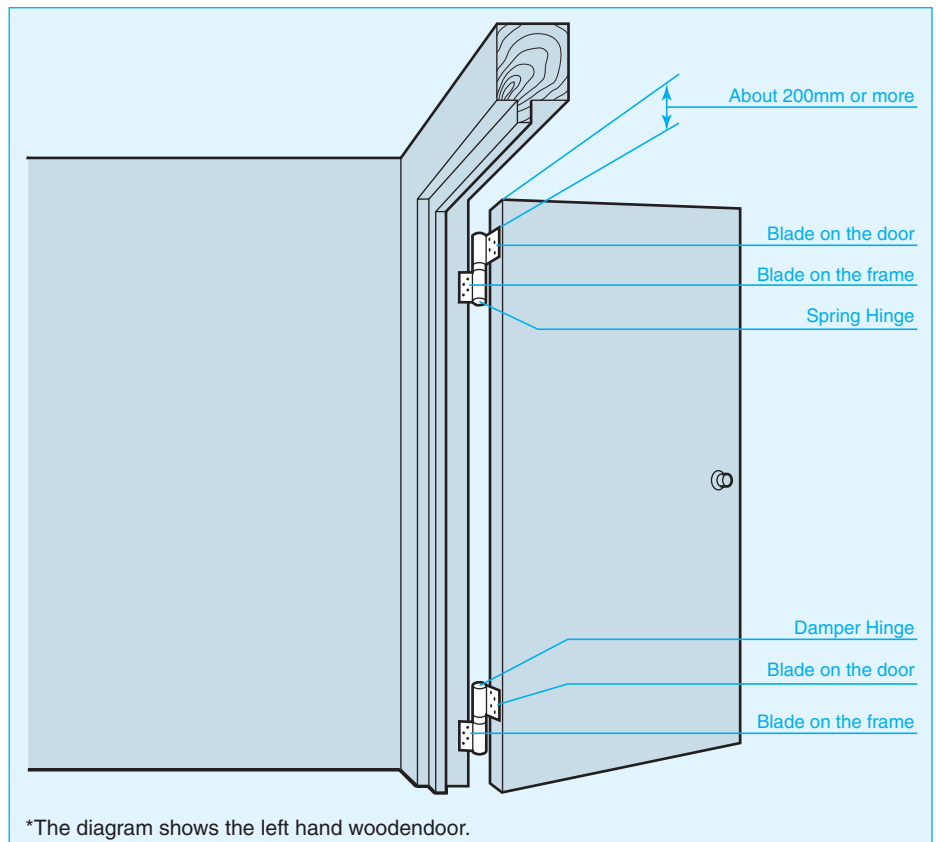
\*Should any hinge break down, pull out the spring pin (see "How to remove the door" in the figure above) and turn the speed adjusting screw to maximize the speed. You can then use it similarly to ordinary hinges.

# AUTO HINGES

## Mounting position Flag Type Auto Hinges



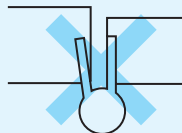
- In case the sub door doesn't require automatic closing mechanism, the empty hinges which is the same appearance as the Auto Hinge without interior mechanism can be applied.



\*The diagram shows the left hand woodendoor.

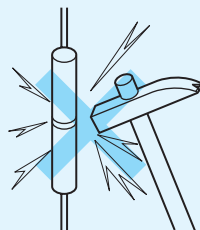
## Handling precautions

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



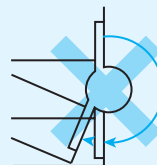
- Do not bend the blades.

- Do not hit the hinge with undue force.



- Hold the door opening to 180 degrees or less.

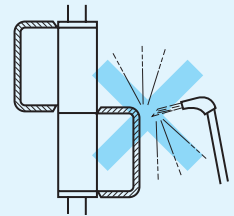
Opening the door wider than 180 degrees would damage the clutch mechanism to prevent it from closing (that is, it remains locked). To avoid this, install a doorstop or similar obstacle.



- Do not leave the Auto Hinge in places where it is exposed to direct moisture, or splash it with water. (Except pc and 700 series)



- Do not weld the blades.



- Avoid bending the hinge blades, or using the hinge in places where it is exposed to strong winds.

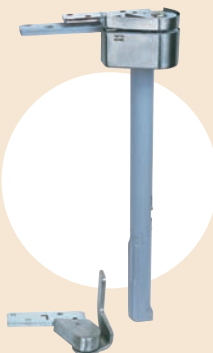
# OTHER RELATED PRODUCTS

## Center Hang type



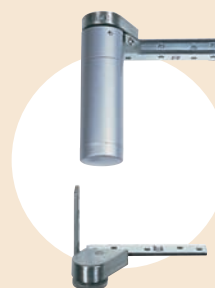
- Most suitable for fire protection, open smoke ventilation and normally-opened / closed doors and air supply doors.
- Concealed type (door built-in type.)

## Concealed



- Can be selected stop or with out stop by select.
- 2 way closing speed.
- Door built-in type.

## Create



- Projecting type door closer  
Automatically closes a door with quiet in combined use of a capsule with built-in spring and hydraulic device and a special pivot hinge.
- Simple design  
Provided with arm-free construction, presenting simple design and beauty fit for any door.

## Sliding closer

- The endless, viscosity resistance system (patent pending) is employed to offer a compact, lightweight, long-life closer.
- The door closing speed can easily be adjusted for a desired level.
- The temperature compensation function (patent pending) is incorporated so that the closing speed remains virtually the same even when the ambient temperature changes.

### Horizontal type

**NSC Series**

### For Bath

**NSC-B Series**

### Inclined type

**DSC Series**



### ⚠ 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 too high, personal injury may result.



**NITTO KOHKI CO., LTD.**

Head Office and Research Center

Nakaikagami 2-9-4, Ohta-ku, Tokyo 146-8555 Japan

Phone:03(3755)1111 Fax:03(3753)8791

Overseas Auto Hinge Sales Division

Yokoyama Bldg. 7F, Nishi-Nippori 2-40-3, Arakawa-ku,  
Tokyo 116-0013 Japan

Phone:03(5850)5781 Fax:03(3801)6001

Product Info <http://www.nitto-kohki.co.jp>

Contact us [Kentokyo@nitto-kohki.co.jp](mailto:Kentokyo@nitto-kohki.co.jp)

★ Specifications and designs are subject to change at any time without notice.