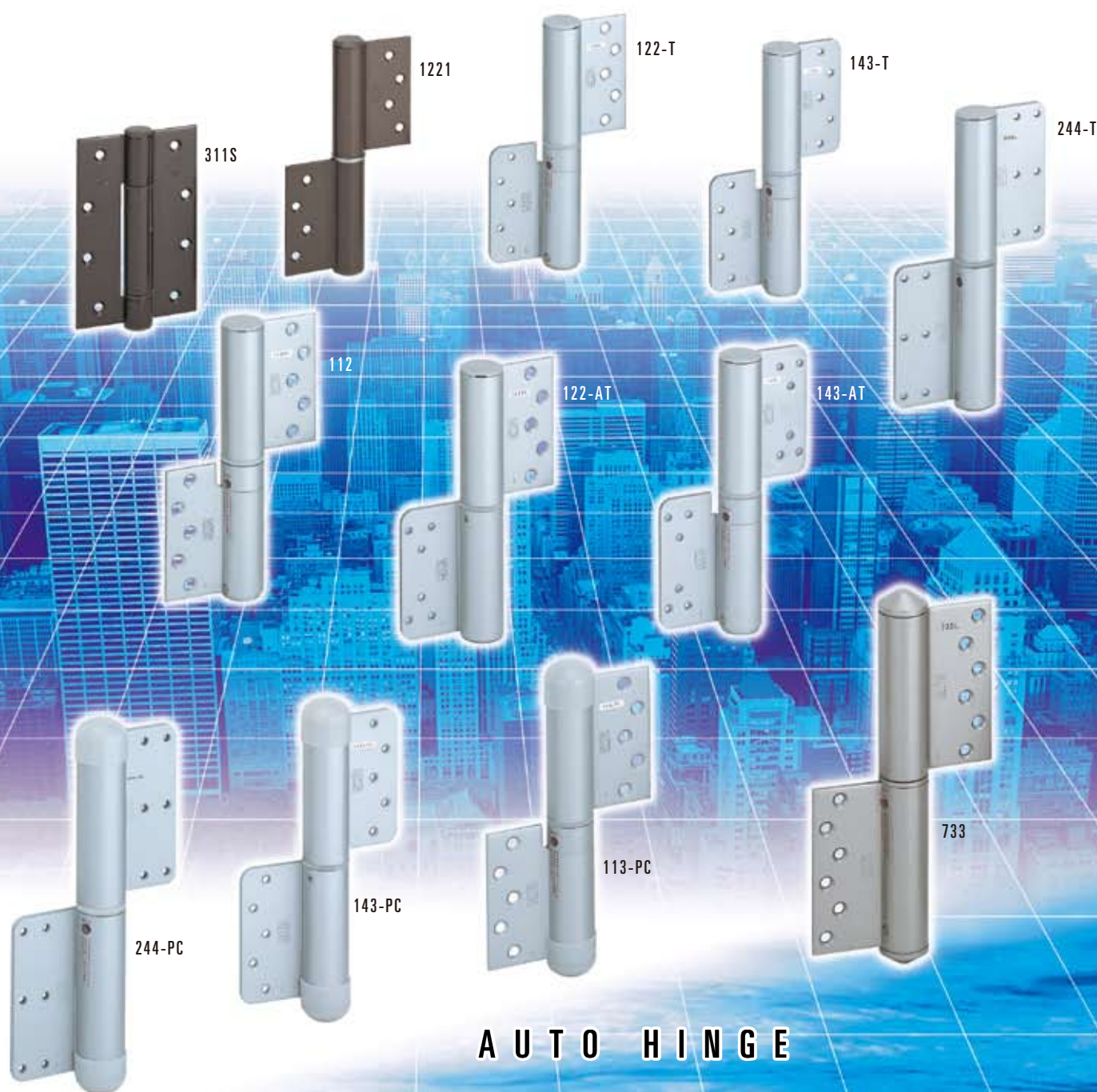


# NITTO KOHKI AUTO HINGES

## FLAG TYPE

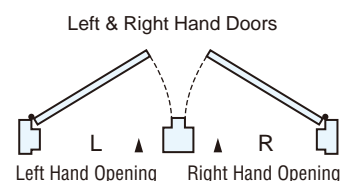


## Flag type series (Table of models with specifications)

	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	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									
		Empty hinge 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.6		Empty hinge	1110R						—	—	—		—	—	—	—	Silver					
			1120R															Bronze				
1210R			Silver																			
1220R																		Bronze				
P.7	100 Series	112R		Wooden door Light steel door (122T for steel frame)	900	2100	30	40	10.0	—	—	180° Left or right one side opening	Silver or Bronze									
		112SR								○	85° and 150°											
P.8		122R-T								Wooden door Aluminum door	1000		2200	60	15.0	—	—	Silver				
		122SR-T														○	85° and 150°					
P.9		113R		Wooden door Light steel door (120T for steel frame)	900	2100		40	10.0					—	—	Silver or Bronze						
		113SR												○	85° and 150°							
P.10		113R TRISET						Steel door		900	2100		60	15.0	—		—		Silver			
		113SR TRISET													○		85° and 150°					
P.11		122R-AT		Aluminum door Light steel door Partition door	900	2100			40				10.0		—		—			Silver		
		122SR-AT													○		85° and 150°					
P.12		132R						Steel door	900	2100	60			15.0	—		—				Silver	
		132SR													○		85° and 150°					
P.13		143R-T		Wooden door Light steel door (120T for steel frame)	900	2100					60		15.0		—		—					Silver or Bronze
		143SR-T													○		85° and 150°					
P.14		143R-AT						Aluminum door Light steel door Partition door	900	2100	60			15.0	—		—		Silver			
		143SR-AT													○		85° and 150°					
P.7		Empty hinge	110R		Wooden door Light steel door (120T for steel frame)	900					2100		40		—	—	—	Silver or Bronze				
P.8			120R-T																			
P.11			120R-AT																			
P.12			130R					Aluminum door Light steel door Partition door														
P.13			140R-T		Steel door																	
P.14			140R-AT																			
P.15	200 Series	244R-T		Steel door	1200	2100	40	120	22.6	—	—	180° Left or right one side opening	Silver									
		244SR-T								○	85° and 150°											
		Empty hinge 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		—							—						
P.20		133SR-PC		133SL-PC	○						85° and 150°						
P.21		143R-T-PC		143L-T-PC	Steel door				60		—	—					
		143SR-T-PC		143SL-T-PC							○	85° and 150°					
P.22		244R-T-PC		244L-T-PC	1200				2100		40	120			22.6	—	—
		244SR-T-PC		244SL-T-PC												○	85° and 150°
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				60									
P.22		240R-T-PC	240L-T-PC											900	2100	40	120
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°						
P.24		NK153R TRISET		NK153L TRISET		1000	2200	8 10 12	80	—	—						
		NK153SR TRISET		NK153SL TRISET				○		85° and 150°							
	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.



# 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

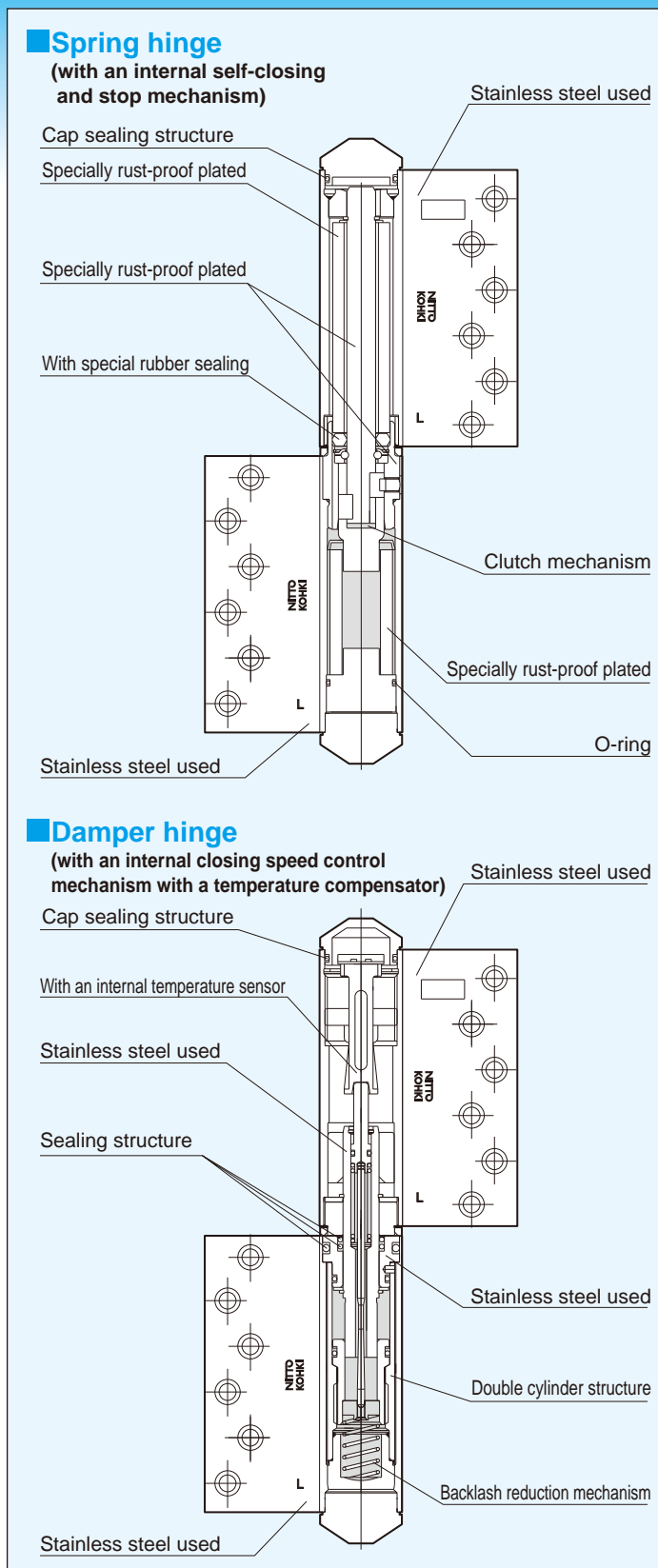
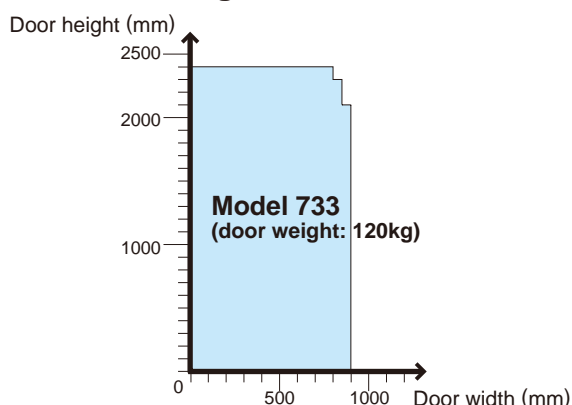
They come with an internal actuator with a temperature sensor. You have only to set the door-closing speed (at a desired setting) initially, and you can keep the door-closing speed constant without being affected by the ambient temperature.

### ■ 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.

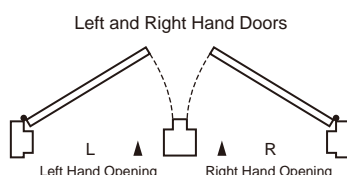
### ■ They are compatible with the stainless steel used in exterior products

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



- 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

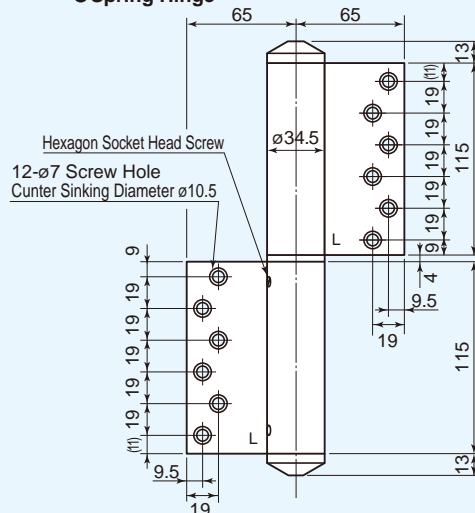
1. Surface treatment is by a baked coating of acrylic resin on the stainless steel.
2. On the mounts of the flaps for both the door and frame, always use a reinforcing steel plate at least 3.2mm and 300mm long. Fix the reinforcement directly on the framework.
3. They come with flat head screws M5 x 16L (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

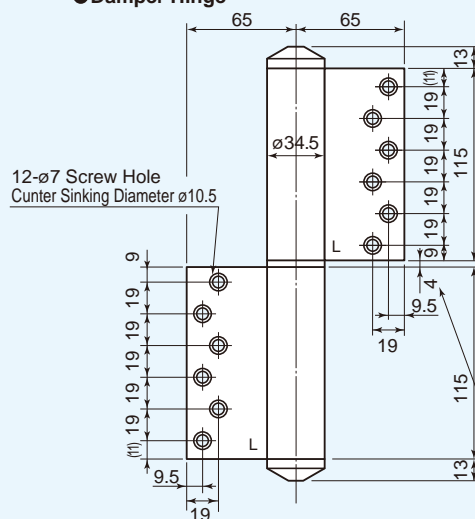
### Left Hand Door

### Left Hand Door

● **Spring Hinge**

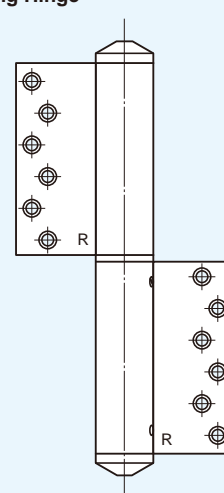


● Damper Hinge

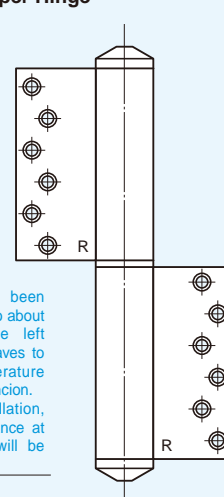


### Right Hand Door

●Spring Hinge

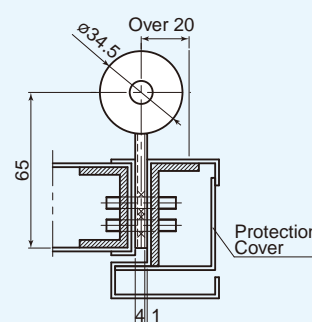
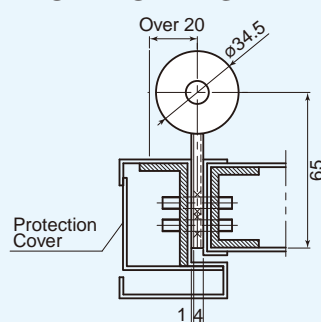


● Damper Hinge



This hinge has been 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





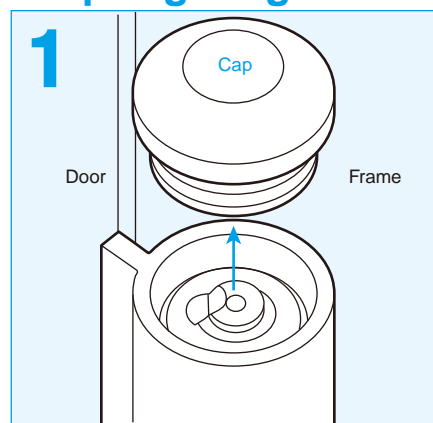
# 700 series

## Installation procedure

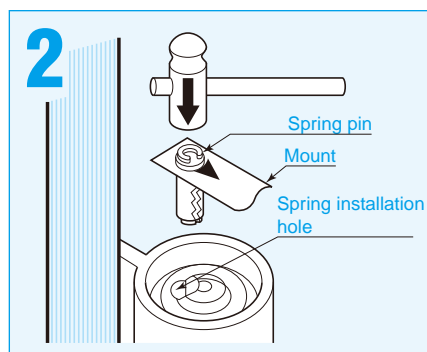
- Suspend the door, then install the hinges.

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

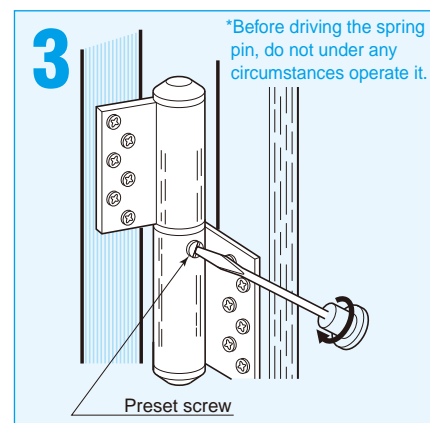
### Spring hinge



- Remove the cap.



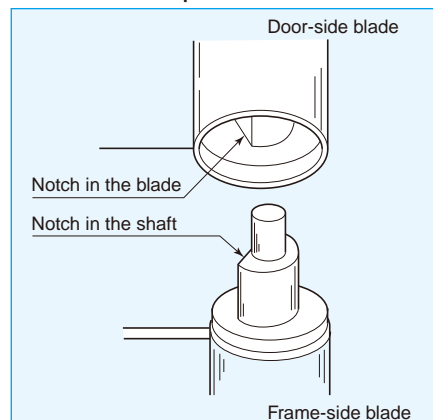
- Drive the spring pin.
- Open the door by about 0° to 10°, align the installation hole, and drive the spring pin securely according to the instructions given on the mount. Do not use a screw or anything similar as an alternative.



- 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.

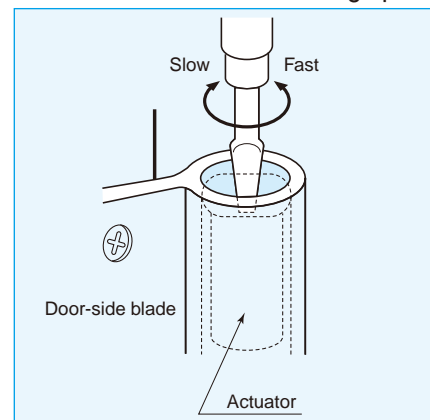
### Damper hinge

#### How to suspend the door

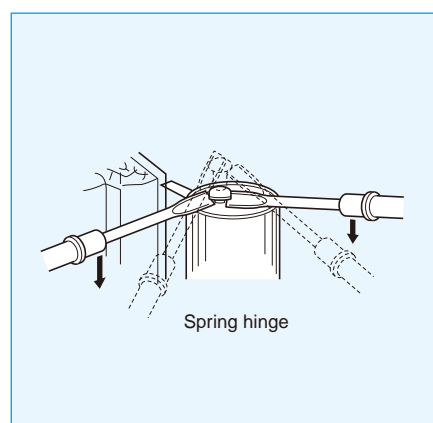


- Align the label on the cap with the notch in the shaft.
- The damper hinge, when handled singly, has a clearance between the top and the bottom blade. When it is installed and the door is suspended, the clearance will disappear, so that it will be installed to automatic speed adjustment. There is therefore 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



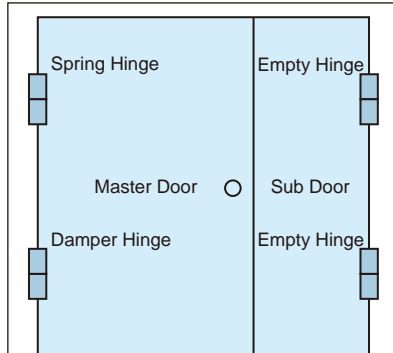
- ① Open the door by about 90°, turn the preset screw clockwise by 3-4 turns, and retighten it as before.
- ② Close the door, and it will stop at about 5°. Therefore pull out the spring pin as shown in the left-hand figure, then remove the door. (\*Do not close the door by overstraining it before pulling 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.

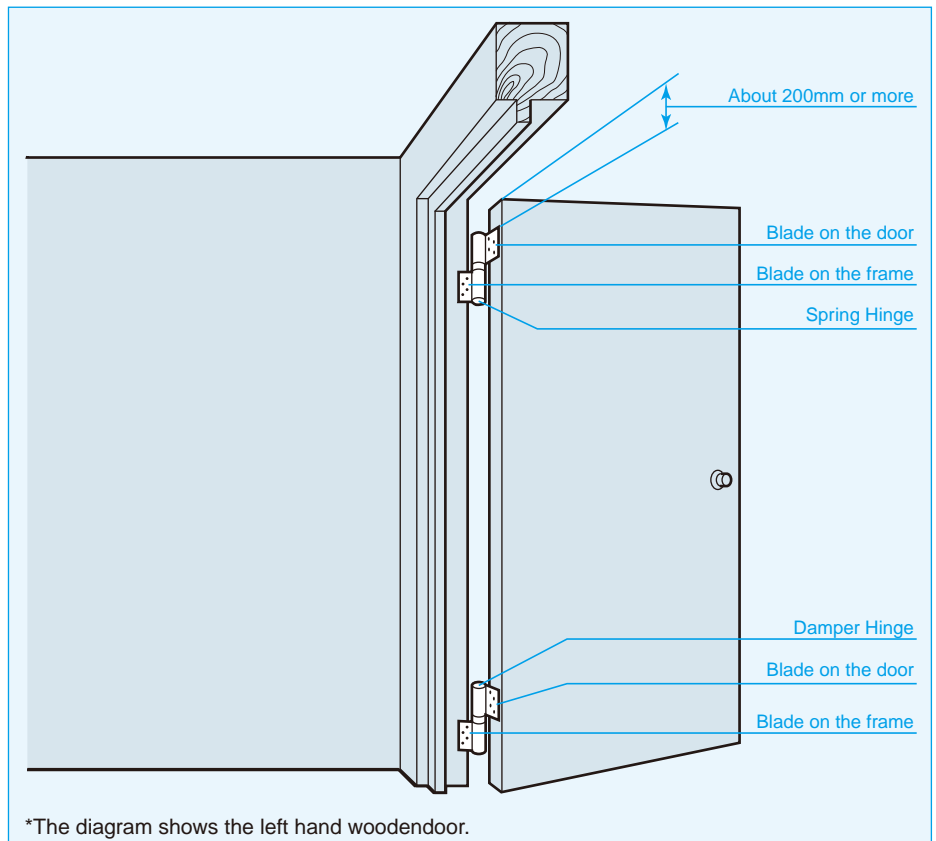
\*Should any hinge break down, pull out the spring pin (see "How to remove the door" in the figure above) and turn the speed adjusting screw to maximize the speed. You can then use it similarly to ordinary hinges.

# AUTO HINGES

## Mounting position Flag Type Auto Hinges



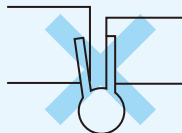
- In case the sub door doesn't require automatic closing mechanism, the empty hinges which is the same appearance as the Auto Hinge without interior mechanism can be applied.



\*The diagram shows the left hand wood door.

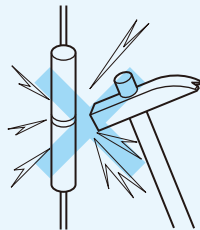
## Handling precautions

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



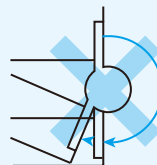
- Do not bend the blades.

- Do not hit the hinge with undue force.



- Hold the door opening to 180 degrees or less.

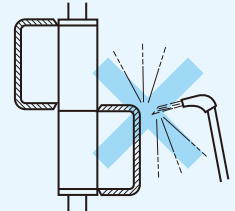
Opening the door wider than 180 degrees would damage the clutch mechanism to prevent it from closing (that is, it remains locked). To avoid this, install a doorstop or similar obstacle.



- 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 without 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

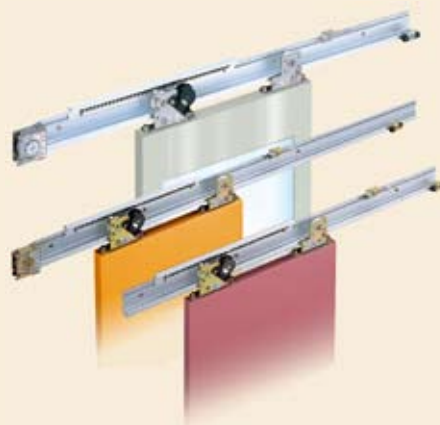
**NSC Series**

For Bath

**NSC-CB 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.



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