

AUTO HINGES

Kk107f

DOOR CLOSERS CENTER HANG TYPE

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NITTO KOHKI AUTO HINGE — developed ahead of the world with free use of original closer technology, establishing great confidence in high technological power.

AUTO HINGES (CENTER HANG TYPE)

based on the accumulation of advanced technology:

Used widely for public telephone booths throughout the country

• Designed officially by Nippon Telegraph and Telephone Corp. (NTT), being used in all the public telephone booths throughout the country. The outstanding performance and durability (500,000 or more of closing operations), appreciation among users not only in the country but also in all the countries of the world.

Concealed type (door built-in type)

 Constructed door built-in closer of pivot type, thus being easy to install. In addition, it presents a slim appearance, without affecting the beauty of a door.

Wide range usability

• Designed with a receptive base meeting the requirements for the recent tendency of thinner floor slabs in buildings, thus not causing any damage to floor surfaces in installation; the AUTO HINGE is most suitable to be used in such a place where floor hinges can be hardly installed and the arm of a door closer becomes an obstacle.

Most suitable for fire protection, open smoke ventilation and normally-opened/ closed doors and air supply doors.

• Keeps closing-up of fire protection doors and opening of smoke ventilation doors & air supply doors reliably, by interlocking of smoke sensors in combined use with an electromagnetic release mechanism.

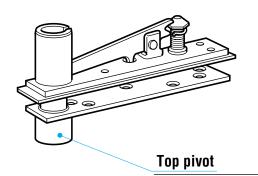
Decorated rubber plate

• Provided with a decorated rubber plate for screening the cutout windows for speed control and spring winding.

Sliding receptive base

• Minimized embedding depth

• Can be centered on-site because of having a sliding seat, thus assuring easy installation.



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- •Can be also installed reversely.
- Options available for special applications.

Easy closing speed adjustment

• Able to adjust the closing speed in a wide range merely by turning the speed control gear to right and left, also allowing fine adjustment.

Smooth closing

• Constructed with unique hydraulic control mechanism, realizing optimum closing operation. Any door closes smoothly and quietly.

Free closing force adjustment

• Able to adjust the closing force freely by adjusting the spring set seat.

Powerful closing force

• Has closing force sufficient to meet the sizes of any door, assuring door closingup. It adopts special ladder type spring, having been already demonstrated for its high persistence.

Easy installation and reduced cost

• Provided with a very thin fix base plate, assuring easy installation on any door and reduced cost.

SPECIFICATIONS

Mode No.	Door size applicable(mm)			Door weight	Standard closing	Spring set	Тор	Max, opening angle	Page
wode NO.	W	Н	D	(kg)	force(N·m)	system	pivot	Max, opening angle	Page
A-8KH	800 (max.)	1,850 (max.)	- 36 (min)	40 (max.)	6.9	Roll-in system	N-21B	180 [°] right or left one-side opening	3
A-8H		2,000		50	8.9				4
A-10H	1,000 1,200	2,100	40	85	10.8				5
A-12H				100	15.7				6
A-14H	1,400			130	19.7				7
A-16H	1,600	2,400	45	160	24.6				8
A-18	1,800		50	200	41.2		N-22B		9
A-22	2,200			240	49.1		19-220		10
A-26	2,600	2,600		310	60.9				11
A-30	3,000	55	410	68.7		N-23B		12	
A-35A	3,500	3,000		650	73.6	-		_	13
A-40	4,000		60	800	78.5		N-25A		14

Note: 1. Difference in opening directions are shown by the symbols, "R" for right-hand door and "L" for left-hand door, suffixed at the end of model No.

2. Pre-set type can be used as roll-in system by unwinding the spring.

3. Each AUTO HINGE (center hang type) consists of a main body, a receptive base, a top pivot, and a decorated rubber plate.

4. Stop mechanism is not built in.

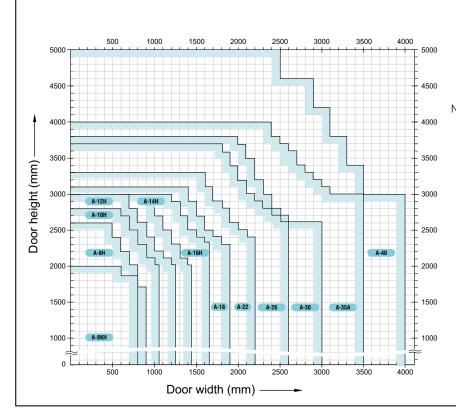
5. For selection of a model refer to the [Chart for Applicable Doors] shown below.

6. Handling of the fixed type (floor type) receptive base

The fixed type (floor type) receptive base is prepared for a place to which the sliding receptive base is not applicable.

7. There is a spring winding-window on both sides from A-8KH to A-16H.

CHART OF APPLICABLE DOORS

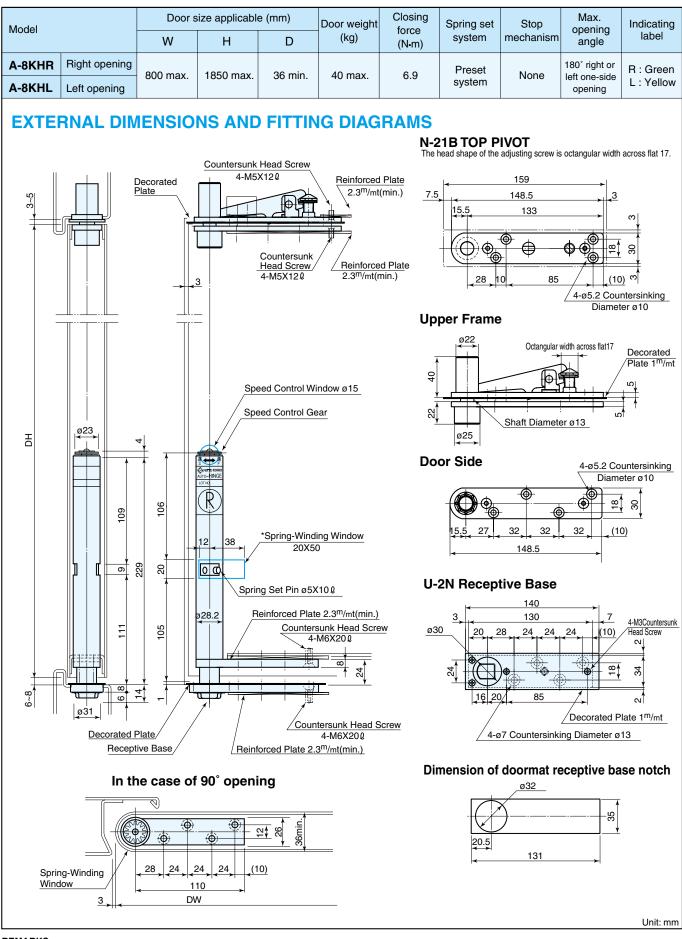


- Select an appropriate model according to the dimensions (height x width) of the door used. (See chart left)
- Then make sure that the door weight is in the range of [Table of Applicable Door Weight] (given below) and determine the model.
- Note: The Chart is drawn up in the condition where wind velocity is 3m/sec as a standard. For using a forced (open smoke) ventilation door or any model under a strong wind, contact us beforehand.

Table of Applicable Door Weight

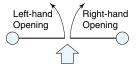
Model	Weight/1m ²	Type of doors		
A-8KH	27kg/m²max.	Steel door (only for wicket door)		
A-8H	31kg/m²max.			
A-10H, A-12H	39kg/m²max.			
A-14H, A-16H	41kg/m ² max.	Steel door		
A-18, A-22, A-26	45kg/m²max.			
A-30	52kg/m²max.			
A-35A	61kg/m²max.			
A-40	65kg/m²max.			

A-8KH (for wicket door)

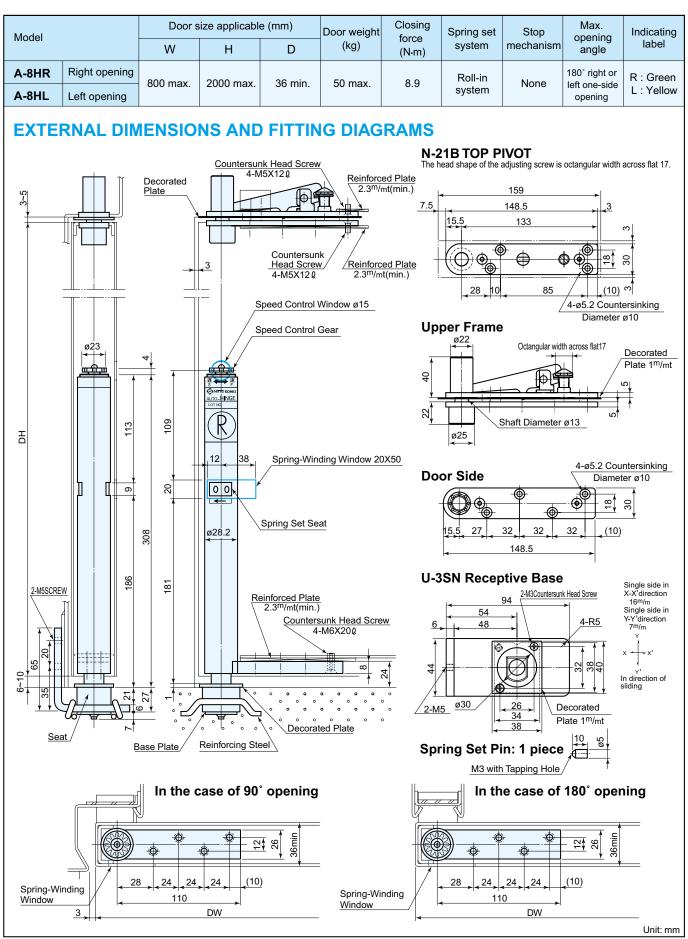


REMARKS

- This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.
 For speed control windows and spring-winding windows use the decorated rubber plate attached. (see page 15)
- * Cutout for spring-winding window is unnecessary when hanging the door by preset system.

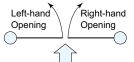


A-8H

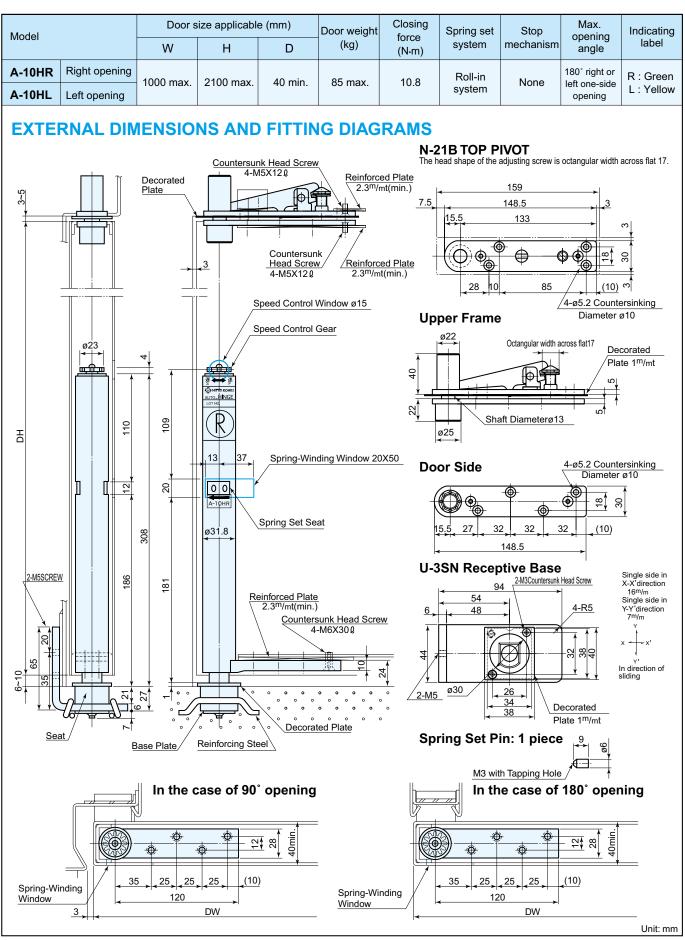


REMARKS

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides. 2 This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
- For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)
 When U-2N receptive base is used, the door can be hanged also by preset system.

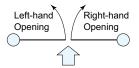


A-10H

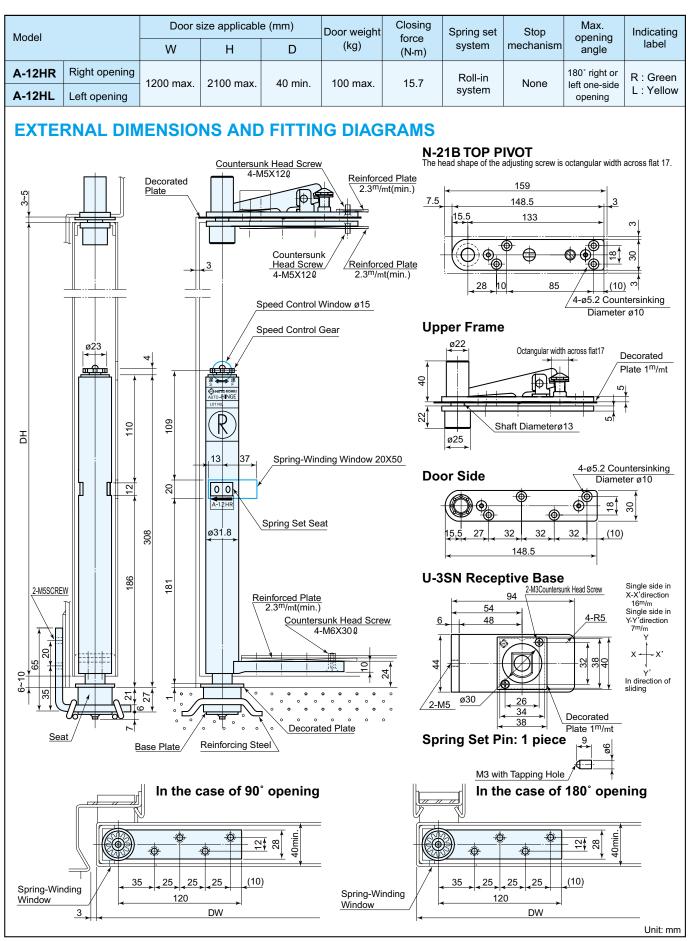


REMARKS

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides. 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
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 When U-2N receptive base is used, the door can be hanged also by preset system.



A-12H

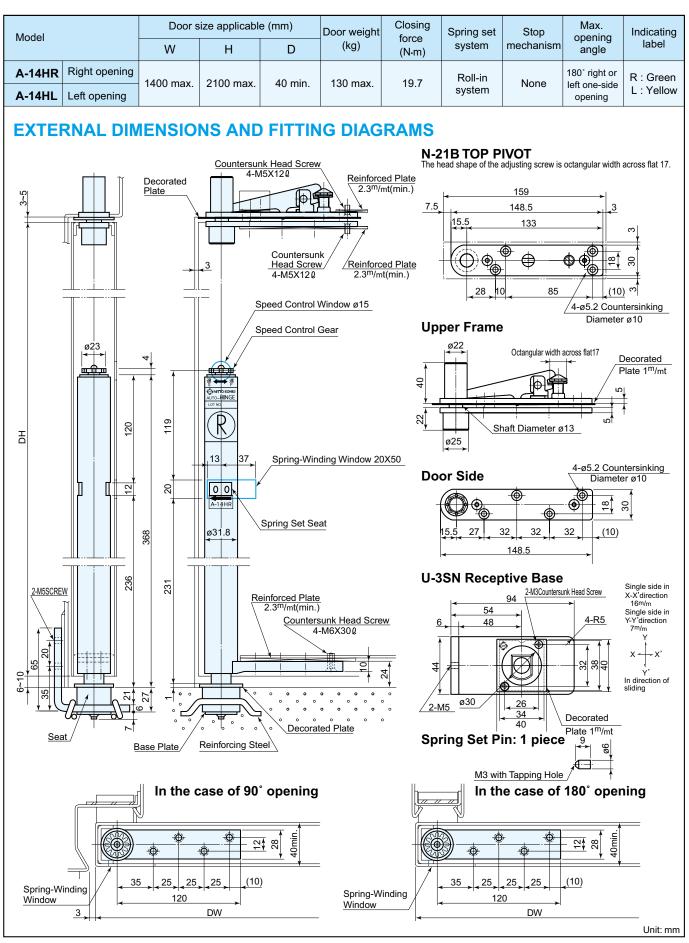


REMARKS

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides. 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat
- should be firmly welded on the base plate. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)
 When U-2N receptive base is used, the door can be hanged also by preset system.

Left-hand Right-hand Opening Opening

A-14H

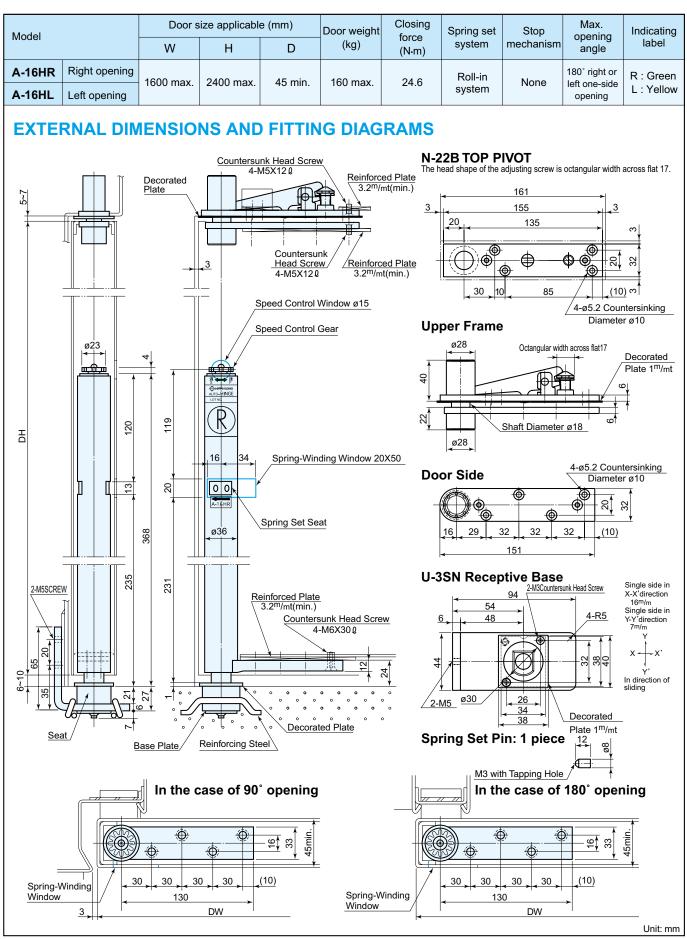


REMARKS

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides. 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
- For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)
 When U-2N receptive base is used, the door can be hanged also by preset system.

Right-hand Left-hand Opening Opening

<u>A-16H</u>



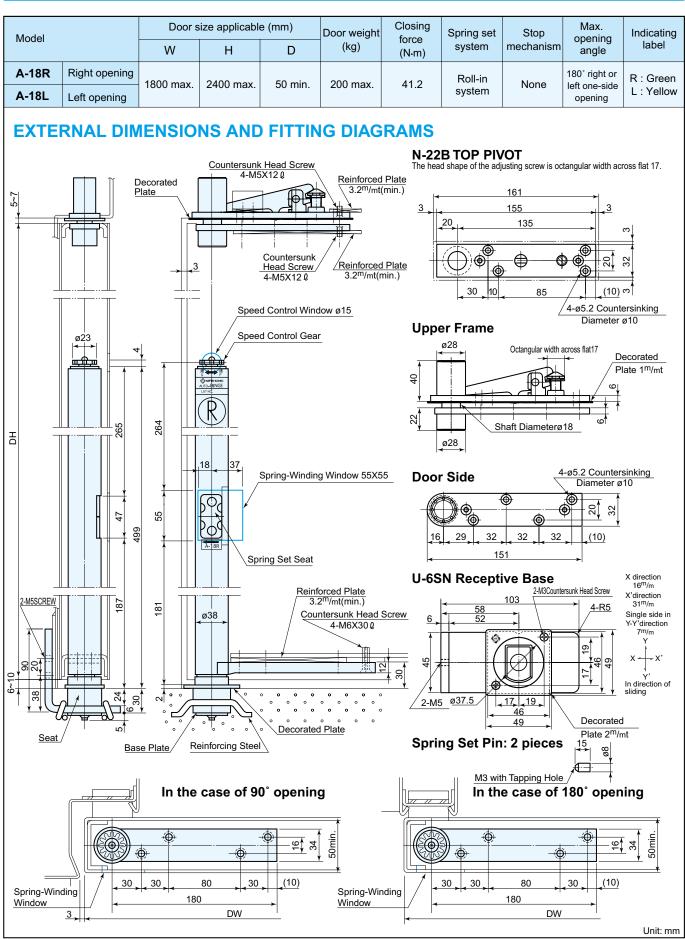
REMARKS

This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.
 This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

Right and Left Hand Doors

Left-hand Opening Copening

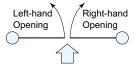


REMARKS

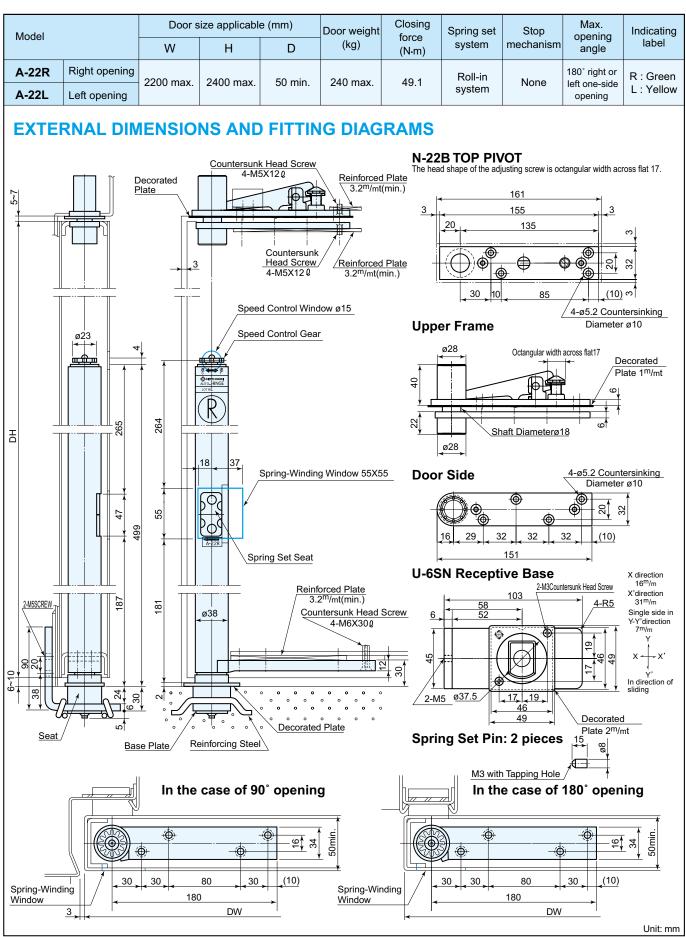
1. This diagram shows the case of right-hand opening doors.

2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)





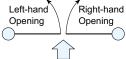


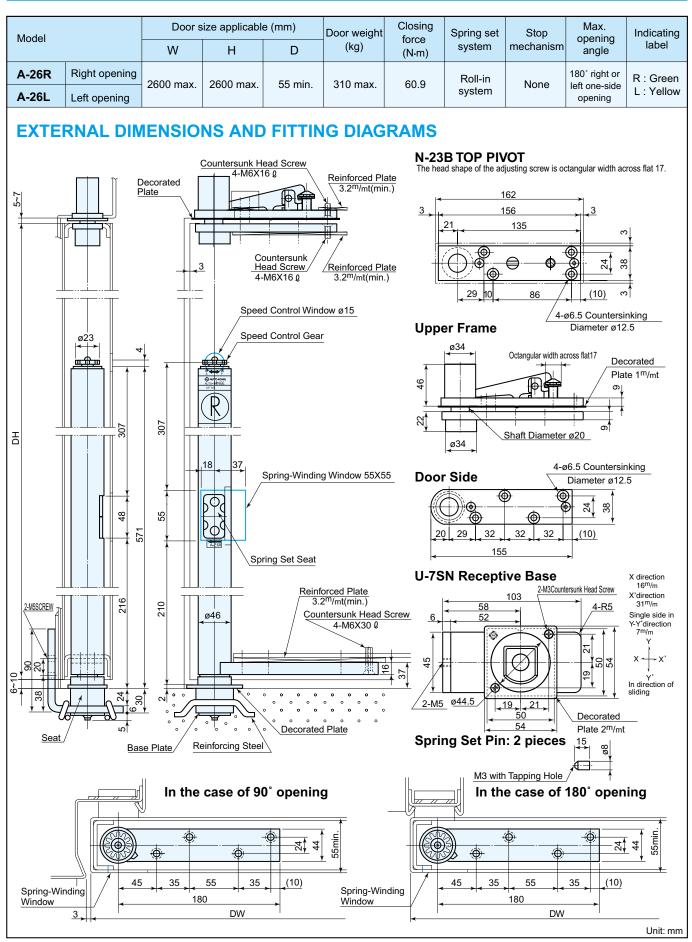
REMARKS

1. This diagram shows the case of right-hand opening doors.

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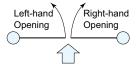


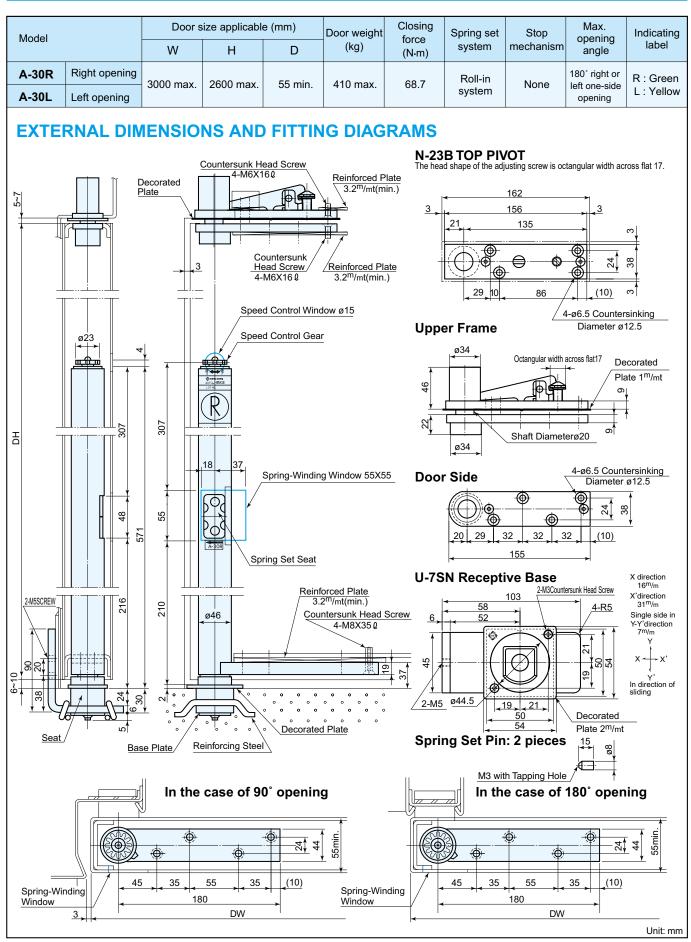
REMARKS

1. This diagram shows the case of right-hand opening doors.

2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)





REMARKS

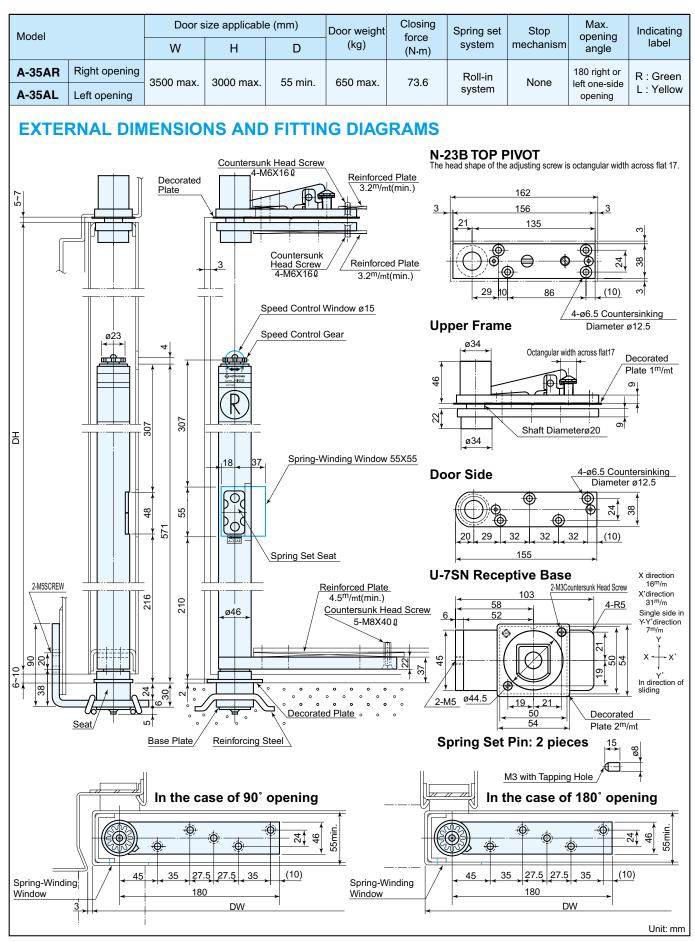
1. This diagram shows the case of right-hand opening doors.

This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)



A-35A

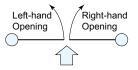


REMARKS

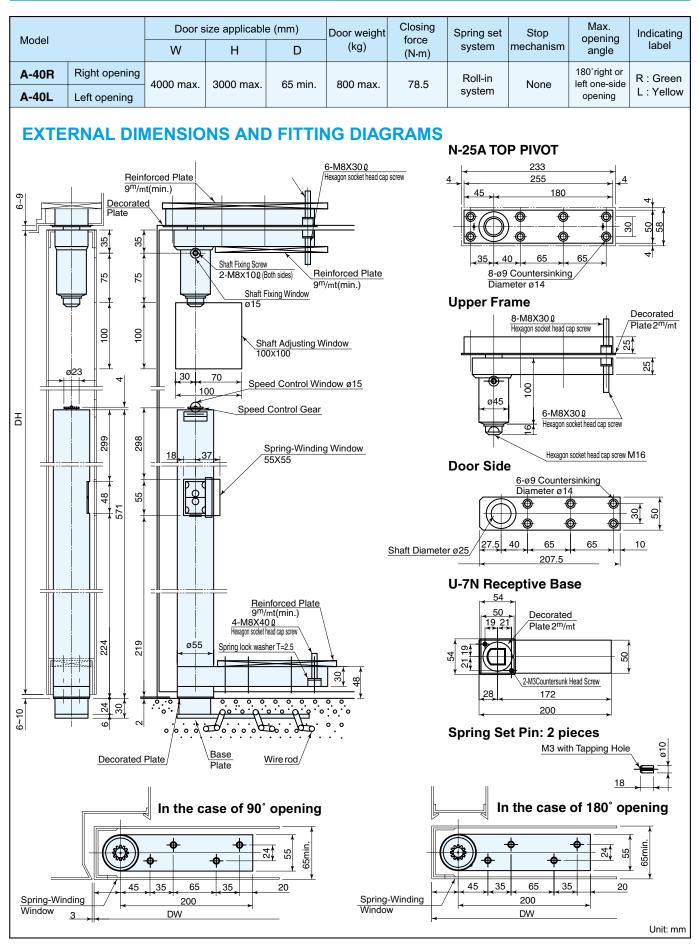
2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot.

The seat should be firmly welded on the base plate.

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)



^{1.} This diagram shows the case of right-hand opening doors.



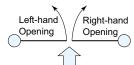
REMARKS

- 1. This diagram shows the case of right-hand opening doors.
- This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

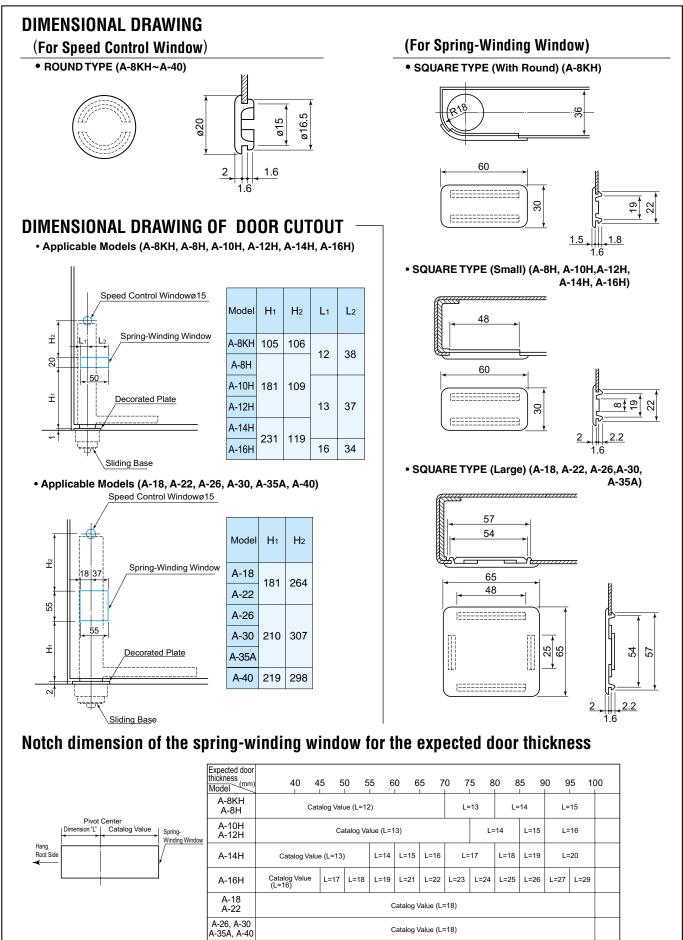
3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15) Prepare the shaft fixing window.

- 4. A big force is applied to the installation unit.
- Perform reinforcement with enough strength.

5. Screw in the top pivot securely as turning the shaft upward and then tighten the shaft fixing screw.



DECORATED RUBBER PLATE



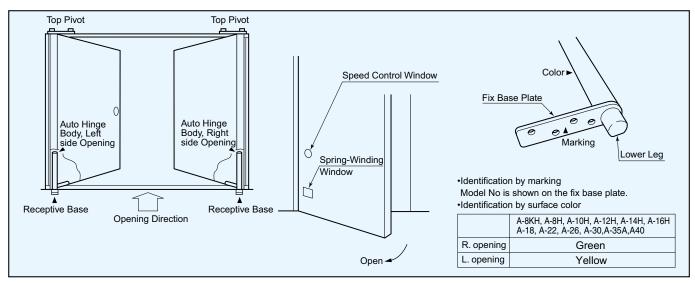
X1. This table shows the notch dimension of the spring-winding window from the pivot center to the hang root side in the center hang type auto hinge.
 When the expected door thickness exceeds the catalog value range, the decorated plate provided as standard equipment cannot

be used

Precautions for Installation

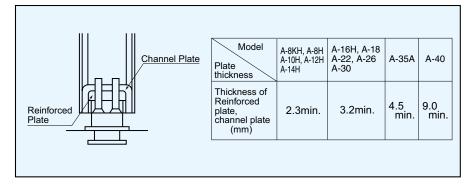
Opening directions of doors

- Opening directions of doors are identified by the seal and marking on the fix base plate (the symbol mark, R or L, suffixed to the end of model No).
- Make sure that the speed control window and spring-winding window are opened on the door opening side.



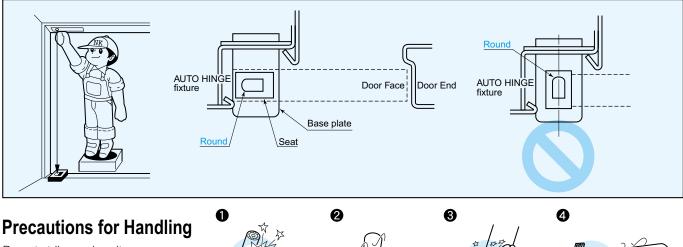
Reinforcing the doors to be used

• Reinforce the doors with reinforced plates and channel plates according to Table given right.

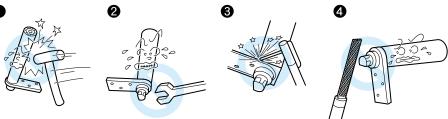


Setting the fix base plate

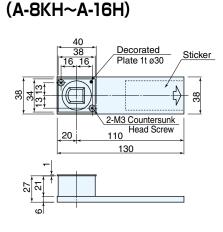
- Be sure to arrange the receptive base so that the Round side of the channel in the seat will come to the AUTO HINGE fixture side when the door is closed.
- Since the seat of the receptive base can slide on the base plate, align it with the top pivot using a plumb bob.
- After the alignment is completed, weld the seat and the base properly.



Do not strike or drop it. Do not turn the lower leg. Do not joint by welding. Do not file the tapered part of the lower leg.

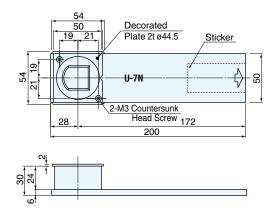


FIXED RECEPTIVE BASE

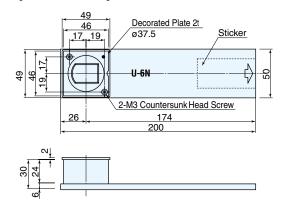


U-7N (A-26~A-35A)

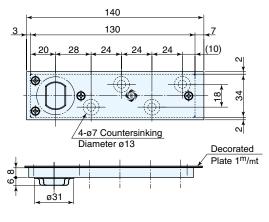
U-3N



U-6N (A-18•A-22)



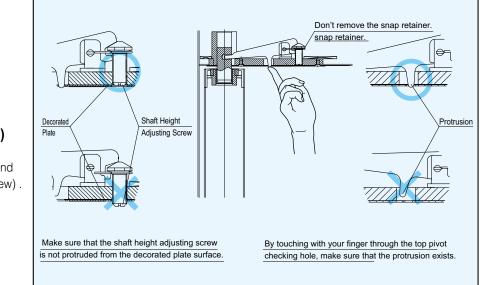
U-2NH (A-8KH~A-16H)



(A-8KH~A-16H)

CAUTION FOR OPERATING THE TOP PIVOT

• After operating the top pivot, perform checking as shown in the right diagram.



※ Operation for top pivot (A-35)

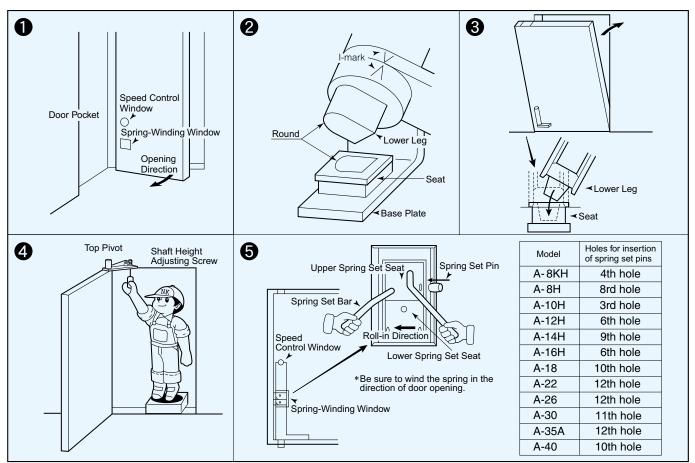
Be sure to screw a shaft into the body and fasten the shaft setscrew(hexagonal screw).

ROLL-IN SYSTEM (A-8KH~35A) HANGING AND SPRING WINDING METHODS

- Make sure that the speed control window and the springwinding window are opened on the door opening side (door pocket side)
- Make sure that both the round positions of the lower leg and receptive base match properly. Only proper positioning makes it to hang the door in place. In case the rounds are out of position, roll in the spring to set the I-mark in position.
- In hanging, insert the lower leg in the receptive base with the door inclined, and then stand the door.
- 4 Make sure that the whole lower leg is in the receptive base,

and then with the door opened 90°, center the top pivot. Use a screwdriver and screw in the shaft height adjusting screw of the top pivot clockwise reliably.

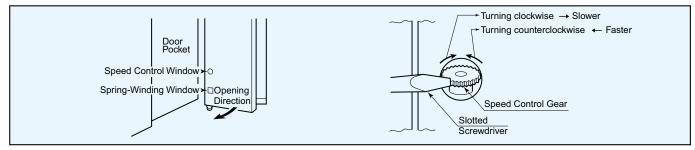
After hanging, roll in the spring with the spring set bar. To wind the spring, roll in the upper spring set seat in the direction of door opening and insert the set pin into the spring set pin hole given in Table
 below. After then, roll in and set also the lower spring set seat in such manner as above. (only the upper spring set seat for A-8H~A-16H).



This figures show the case of right-side opening door.

CLOSING SPEED ADJUSTMENT

- After hanging the door and setting the spring, insert a screwdriver through the speed control window and turn the speed control gear.
 Turning clockwise → Slower
 Turning counterclockwise ← Faster
- Turning the speed control gear will not allow vertical movement.
- The turning limit of the speed control gear are 18 turns.
- The point where the gear suddenly comes to heavy turn for both right and left turning is the limit of turning.



REMARKS : Further turning beyond such limit may cause damage

User-friendly technology **AUTO HINGES**

OTHER RELATED PRODUCTS

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FLAG TYPE

- Armless closer making a boast of Nitto Kohki, being easily installed on an arch door, etc.
- Various models according to types 0 and sizes of doors (wooden, aluminum, lightweight steel, steel doors) are available from us.

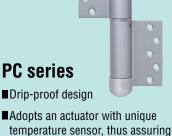
BUTTERFLY TYPE

- Small, slim door closer, being most suitable for lightweight doors (for indoor type).
- Easy to install because of having butterfly shape.
- Usable in common for both right- and left-side opening.



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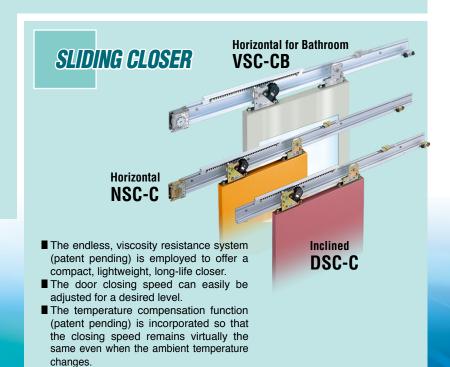


constant closing speed all the year

round.

700 series

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



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