

# Flag Type Auto Hinge 300 Series User's Guide

Thank you very much for purchasing our product. Before using the product, please read these Operating Instructions carefully and abide by safety precautions. After reading, keep the User's Guide on hand for quick reference.

## Operating Instructions

1. Be sure to drive the spring pin before operating the preset screw.
  - Otherwise, the machine might fail.
2. Do not use Auto Hinges in places that are exposed to strong winds.
  - The door could slam, getting your fingers pinched or cause contact or toppling accidents.
3. Do not use the hinges in the environment of high temperature and humidity such as bathroom and sauna room.
  - Otherwise, the machine might fail.
4. Do not open the door more than 180°.
  - Be sure to provide a doorstopper. Otherwise, the machine might fail.
5. Do not force to open the door abruptly.
  - It could get your fingers pinched or cause contact or toppling accidents.
  - Damage to the door, wall or other parts or machine failures could occur.
6. Do not force to close the door hastily while it is closing slowly.
  - It could get your fingers pinched or cause contact or toppling accidents.
  - Damage to the door, wall or other parts or machine failures could occur.
7. Tighten the machine mounting screws firmly.
  - Periodically check once each year to see if the machine is in firm position.
  - The door could topple over.
  - The door could tilt to cause damage to itself, the wall, or the floor or cause the machine to fail.
  - The door could slam, getting your fingers pinched or cause contact or toppling accidents.
8. Release the biasing force of the spring hinge before loosening the blade mounting screws.
  - Otherwise, fingers might be pinched or the machine might fail.
9. If oil has oozed or leaked to disable the hydraulic pressure even after speed adjustment, keeping the door from closing slowly, replace the machine immediately.
  - The door could slam, getting your fingers pinched or cause contact or toppling accidents.
10. Check the specifications, names, and quantities of the parts supplied with it.
  - Use of the product for the wrong door size could damage to the door or wall or cause the machine to fail.
11. In case the machine fails, pull out the spring pin to quicken closing action so as to enable Auto Hinges to be used as ordinary hinges. (See Section "Releasing the spring.")
12. How to reinforce the door and frame
  - Use lauan or harder wood for the blade mounting portions of both of the door and frame.
  - Be sure to provide a door end gap of 5 mm or more.
  - Reinforce the vertical frame to avoid its distortion by the force exerted through Auto Hinges, as needed.



Do not loosen the preset screw before driving the spring pin.

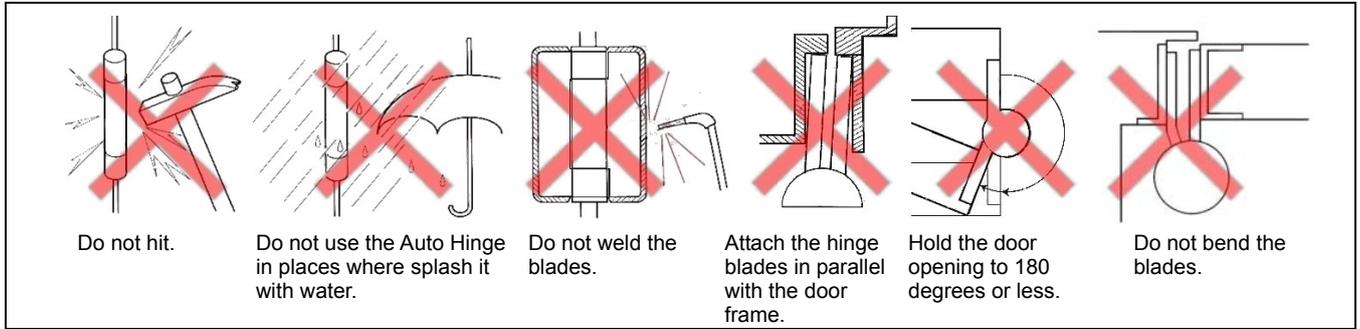


Do not force to open the door abruptly.



Do not force to close the door.

## 1. Pre-installation Tips



## 2. Mounting locations of the hinges and installation of the door

**(1) Mounting locations**

- ◆ Mount the spring and damper hinges on the upper and lower sides of the door subject to installation, respectively.
- ◆ Provide a gap of 200 mm or more between the spring hinge and the door top surface. Otherwise, driving the spring pin is difficult.

- Align the rotational axes of the hinges. Improper alignment might cause awkward movement or incomplete closure of the door.

- Also see Section 1 "Pre-installation Tips."

**(2) Installing the door**

- ◆ Upon checking for the vertical orientation of the hinges, mount them by securely tightening the mounting screws.
- ◆ Ensure smooth movement of the door without excessive friction.

- When mounting the hinges on an aluminum or steel door, use M5 × 16 flat-head screws with a reinforcing back plate being attached.

## 3. Biasing the spring (spring hinge)

**(1) Driving the spring pin**

- ◆ Remove the spring hinge cap, open the door by 15°, and drive the accompanied spring pin while keeping the spring set holes aligned.
- ◆ For the driving direction of the spring pin, see the note of caution indicated on the mat used for packaging.
- ◆ Do not forcibly close the door before releasing the preset screws after driving the pin. Otherwise, the machine might fail.

- Be sure to use the accompanied spring pin, and do not substitute it by any other object.

**(2) Operating the preset screw**

- Operate the preset screw only after driving the spring pin.
- ◆ Open the door by about 90°, and loosen the preset screw by using a flat-head screwdriver so that the preset screw head is flush with the door surface.
- ◆ Adjust the closing speed of the door as described in Section 4.

- Operating the preset screw before driving the spring pin might cause failure of the machine.

## 4. Adjust the closing speed (damper hinge)

- ◆ Remove the damper hinge cap and turn the speed adjustment screw by using a screwdriver.
- ◆ The fastest speed is set at shipment. Set the speed to a most appropriate level by turning the speed adjustment screw clockwise.

Turning the screw clockwise (S) = slower  
Turning the screw counterclockwise (F) = faster

- Do not excessively turn the speed adjustment screw. Otherwise, the machine might fail.

- The adjustment range of the speed adjustment screw is 15 revolutions.

Mounting the damper hinge is now completed.

## Releasing the spring (spring hinge)

- Comply with the following to release the spring pin when removing the door. Otherwise, failure of the machine or accident might be caused.

**(1) Retightening the preset screw**  
Open the door by about 90° and retighten the preset screw to its screwing limit. The door stops at about 10° when slowly closed.

**(2) Pulling out the spring pin**  
With the door stopping at 10°, remove the spring hinge cap and pull out the spring pin by using two flat-head screwdrivers as shown in the illustration on the right.

## NITTO KOHKI CO., LTD.

**Head Office:**  
9-4, Nakaikegami 2-chome, Ohta-ku, Tokyo 146-8555, Japan  
Tel : +81-3-3755-1111 Fax : +81-3-3753-8791  
E-mail : overseas@nitto-kohki.co.jp

**Overseas Auto Hinge Sales Division:**  
8F, Orix Ueno bldg., 7-4-7 Ueno, Taito-ku, Tokyo 110-0005, Japan  
Tel : +81-3-5806-1030 Fax : +81-3-3843-5188  
E-mail : Kentokyo@nitto-kohki.co.jp