



Waterson 3In1 Self-closing Hinge USER GUIDE

Hinge orientation & Codes for hinge

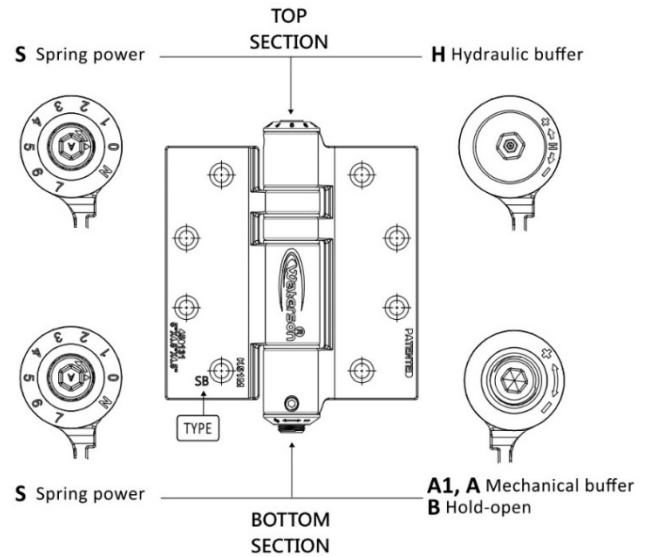
S: Spring power; offers closing force

H: Hydraulic buffer; offers speed buffer

A1: Mechanical buffer; offers speed buffer for 0-20°

A: Mechanical buffer; offers speed buffer for 20-90°

B: Hold-open for 85-95°



Stainless Steel hinge Types - For Wood/Metal/Fire-Rated Doors					
Type of Hinge	Top	Function	Bottom	Function	Mechanism
SS	S	Spring power (provide closing power)	S	Spring power (provide closing power)	Spring power + Spring power
SA1	S	Spring power (provide closing power)	A1	Control closing speed in 0°-20°	Spring power + Mechanical buffer
SA	S	Spring power (provide closing power)	A	Control closing speed in 20°-90°	Spring power + Mechanical buffer
SB	S	Spring power (provide closing power)	B	Hold-open in 90°+/-5°	Spring power + Hold-open
HA	H	Hydraulic Buffer	A	Control closing speed in 20°-90°	Hydraulic Buffer + Mechanical buffer
HB	H	Hydraulic Buffer	B	Hold-open in 90°+/-5°	Hydraulic Buffer + Hold-open

Before Hinge Adjustment

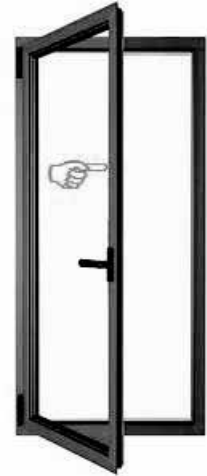
The quality of door installation is super important and could affect the self-closing feature greatly.

Install like regular hinges with reliable precision and hinge alignment. After installing the door,

1. Moving Freely Without Any Interference: Push the door edge lightly from 90° to 0° and the door should swing freely.
2. No Spring Back in the Lower Closing Angle: Try to close the door by hand. Fix first if the door springs back in lower angle and can't easily be latched.

If the above 2 concerns have solved – move to the hinge adjustment section.

If no – follow the check points below to solve the problems.



Point 1: Do your door and frame have enough clearance in between or they are hitting each other?

Use a piece of 0.3-0.5mm thick metal (or a credit card / gap gauge) to verify the clearance. There should be enough clearance to move the 0.3-0.5mm thick metal.

If not, try to **shim** the door or **chisel** the door or frame to create more clearance.

Point 2: Does your door lock and the strike plate match properly or they are creating interference?

Check you latch bolt. It should engage properly with the strike plate. If they are hitting each other, try to realign or create fitting depth for the strike plate, or grind off the strike plate a little bit to get rid of the interference. Consider replacement for strike plate of fitting size and thickness if the interference persists.

Point 3: Do you use an electric drill to screw the hinges on the door or frame?

It's highly possible that you are tightening the screws too tight and creating hinge itself to twist or bind. Go to the **middle** hinge. Try to mildly loosen the screws on the door and frame by tool and retighten again. Feel the swing again. 80% this could solve the problem.

Adjustment Procedures for door < 260pounds (120 kg) (Top, Middle, Bottom) = (SA1, SA, SA)

A. Set up self-closing power. Only adjust TOP section of all 3 hinges.

A-1 How to decide the self-closing power setting

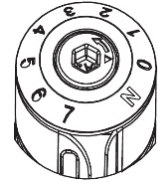
A-1.1 Each hinge includes 1 power adjusters on top of the hinge.

A-1.2 Each adjuster includes N-7 setting value. N(Neutral) is open-box setting without closing force. Keep this setting during hinge installation. From 0-7, one setting value provides 15 pounds(7kg) of closing force.

A-1.3 Example:

(Try to set the values evenly)

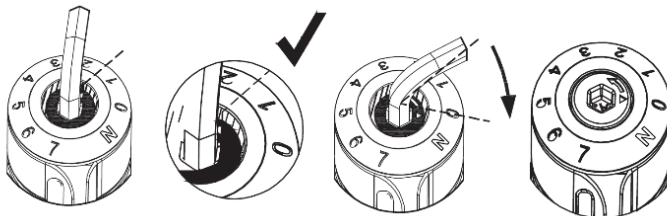
Position	TOP	Middle	Bottom	
Hinge	SA1	SA	SA	Total force
Setting	4	4	4	180 pounds (12*15 pounds) 84 kg (12*7 kgs)
	5	5	4	210 pounds (14*15 pounds) 98 kg (14*7 kg)



A-2 How to Increase or decrease power setting

A-2.1 To increase power: adjust the power adjuster to higher numbers;

A-2.2 To decrease power: press down the power adjuster and turn to lower numbers.



A-3 Set up closing power for different angles

A-3.1 Ensure 3 hinges together can close the door at 20°, 60° and 90°.

A-3.2 The door may slam at this stage. Keep going. Just make sure the door could close at 20°

B. Go to Middle and Bottom hinge (Type SA Hinge) to set up mechanical buffer in 20-90°. Only adjust the bottom of hinge.

B-1 What does A mechanical buffer do

B-1.1 SA mechanical buffer provides speed control in 20-90°. You can adjust it through the speed screw at the bottom of the hinge.

B-2 How to increase or decrease buffer

B-2.1 Adjust the Bottom section of the SA hinge with 5 mm hex wrench.

B-2.2 Turn 5 mm hex wrench from + to - to slower speed & from - to + to faster speed

B-2.3 Adjust this mechanical buffer 1/2 turn at a time. Test the door opening again.

B-2.4 If the speed screw is more engaged in the barrel, the brake is more engaged.



A Speed Adjuster

A : Speed adjuster for 20-90 degree

► CLOSING SPEED

FAST

SLOW

STOP

THE BOTTOM OF THE HINGE

ADJUSTMENT POSITION

+

-

The diagram illustrates the speed adjuster's function. A close-up shows the adjuster with a central screw. A cross-section of the hinge shows the adjuster's location at the bottom. A graph plots closing speed against adjustment position. The y-axis is labeled 'CLOSING SPEED' with levels 'FAST', 'SLOW', and 'STOP'. The x-axis is 'ADJUSTMENT POSITION' with '+' and '-' markers. A red line shows that as the adjustment moves from '+' to '-', the closing speed decreases from 'FAST' to 'STOP'. Three blue dashed arrows point to the 'THE BOTTOM OF THE HINGE' area on the graph.

C. Go to TOP hinge (Type SA1 Hinge) to set up mechanical buffer in 0-20°. Only adjust the bottom of hinge.

C-1 What does A1 mechanical buffer do

C-1.1 A1 mechanical buffers provide speed control in 0-20°. You can adjust it through the speed screw at the bottom of the hinge.

C-2 How to increase or decrease buffer

C-2.1 Adjust the Bottom section of the SA1 hinge with 5 mm hex wrench.

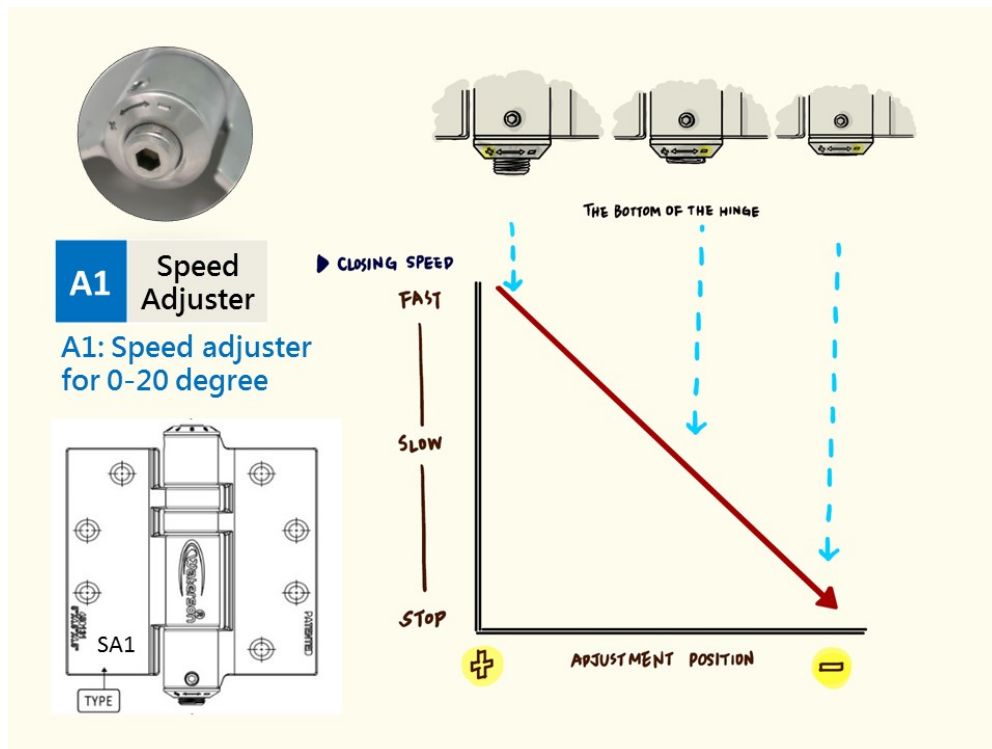
C-2.2 Turn 5 mm hex wrench from + to – to slower speed & from - to + to faster speed

C-2.3 Adjust this mechanical buffer 1/2 turn at a time. Test the door opening again.

C-2.4 If the speed screw is more engaged in the barrel, the brake is more engaged.



**** If the buffer system of SA1 is more engaged, you may need to release the buffer system of SA for around 5°. Sometimes, you could add one more click for power adjuster to add more force.**

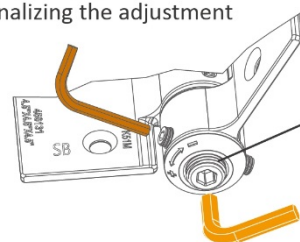


D. Finalize the adjustment

D-1.1 Make sure self-closing feature works in all angles.

D-1.2 Tighten the 2 side setscrews on each hinge using 3 mm hex wrench to finalize the settings.

3mm hex wrench
For finalizing the adjustment



Speed screw
Adjusting mechanical buffer

5mm hex wrench

- +
- For speed increase
-
- For speed decrease