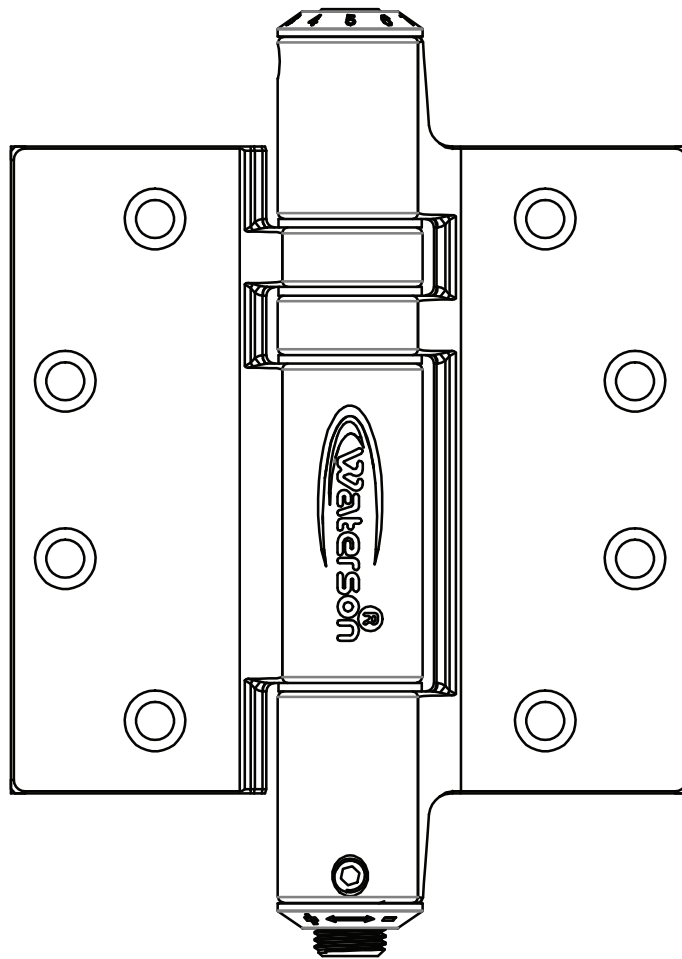




3IN1 AUTO DOOR-CLOSER HINGE



USER GUIDE

Model Type - SB+SA+SA+SA1
For Door <320 Pounds (150 kg)

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1

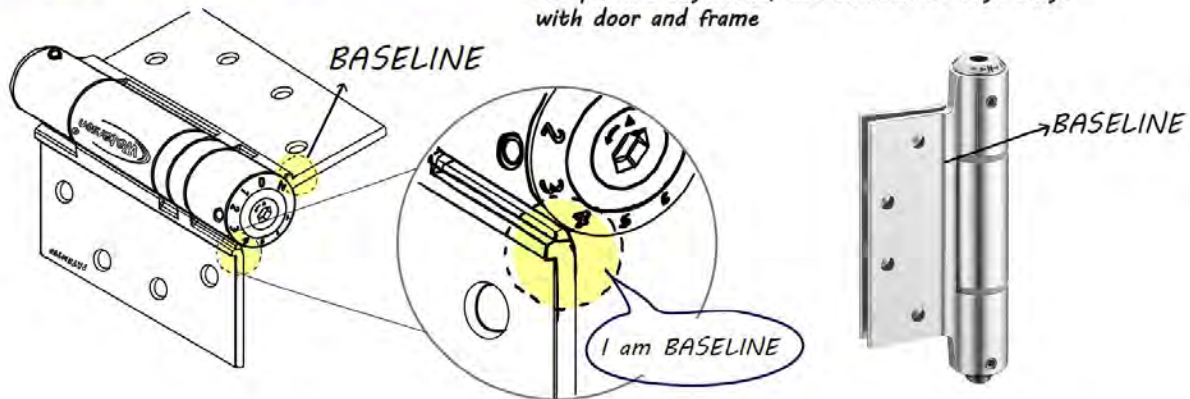
BEFORE INSTALLATION

1-1 Utilize the baseline on the hinges to help successful installation, if possible. Or, follow the edge of the leaf like normal hinge.

• **What is the baseline?**

BASELINE-

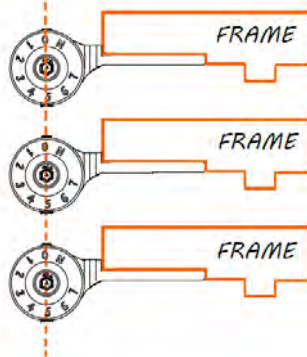
For perfect alignment, use baseline to align hinge with door and frame



• **Why do you need a baseline?**

1. Align vertically and horizontally

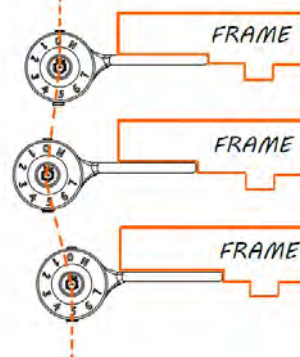
VERTICAL LINE



• Use baseline to ensure vertical alignment of all hinges

1. Not vertically aligned

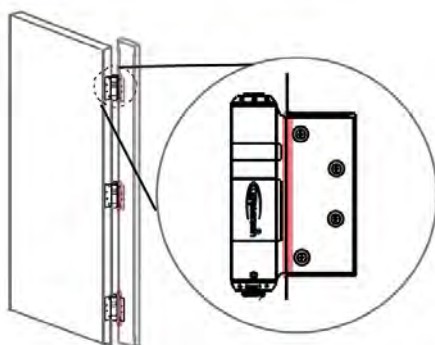
VERTICAL LINE



✗ If alignment is based on the side edges of template, hinges wouldn't be easily aligned

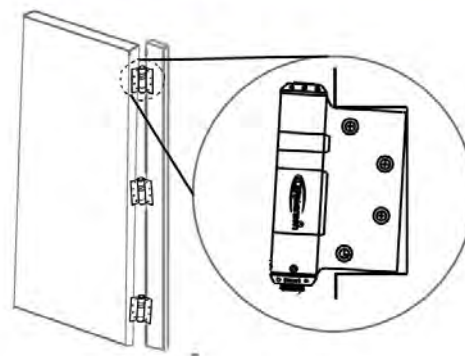
2. Fast installation

An experienced installer can properly install and adjust under 10 minutes



2. Slow installation

Even an experienced installer would take five times longer to properly install.

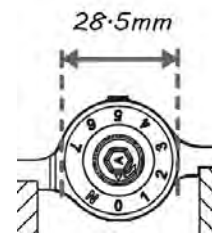


1

BEFORE INSTALLATION

1-2 Do not weld our hinges:

warranty is invalid with welding.

**1-3** Save space for the hinge barrel.**1-4** Prevent sagging.

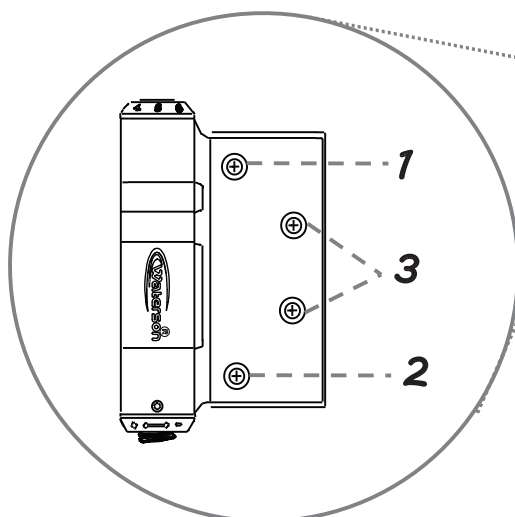
*Waterson
Hinge Helper*



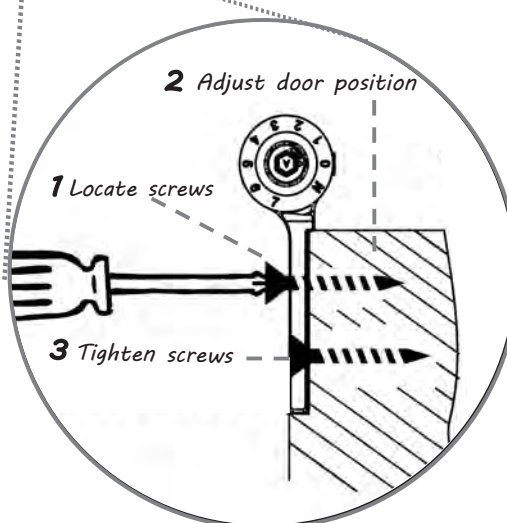
*Installer had to
wrangle with
heavy doors*



*Waterson Hinge
helper contains
pivot and allow
installers to easily
raise up the door,
and prevent door
from sagging*



*Locate top and bottom screws first.
Then locate the rest of the screws.*



1. Locate the screws
2. Adjust door position, make sure it's not sagging
3. Tighten the screws

2

BEFORE ADJUSTMENT

2-1 The quality of door installation is SUPER important and could affect the self-closing feature greatly.

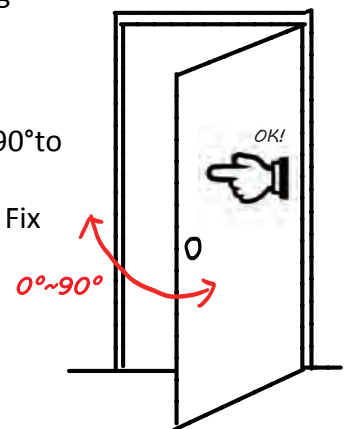
2-1.1 Install like regular hinges with reliable precision and hinge alignment.

After installing the door,

2-1.2 **Moving Freely Without Any Interference:** Push the door edge lightly from 90° to 0° and the door should swing FREELY.

2-1.3 **No Bounce 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.

Swing freely

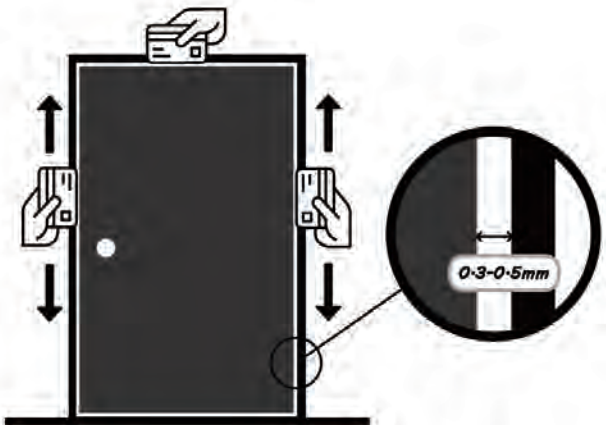


2-2 If the above 2 concerns have solved – move to the hinge adjustment section.

If no – follow the 3 check points (2-2.A~2-2.C) below to solve the problems.

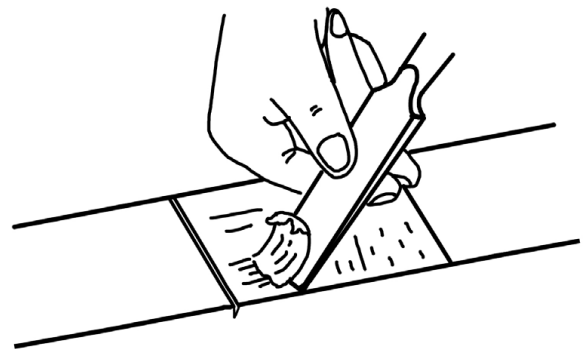
2-2.A : Do your door and frame have enough clearance in between or they are hitting each other?

2-2.A1 Use a piece of 0.3-0.5mm thick metal (credit card / gap gauge) to verify the clearance.



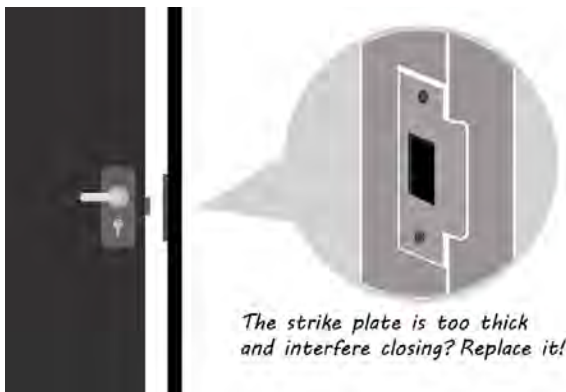
2-2.A2 If clearance is not enough, Shim the door

(reference to P.3,4) or chisel the door or frame for more clearance.

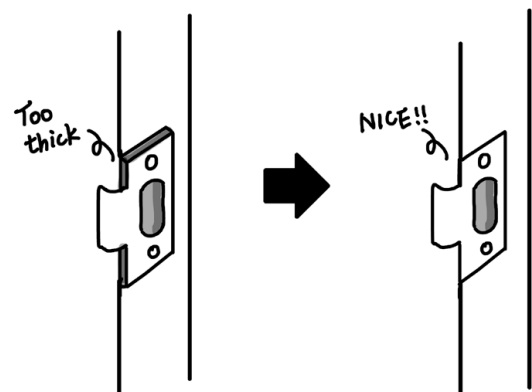


2-2.B: Do your door lock and the strike plate match properly or they are creating interference?

2-2.B1 Check you latch bolt. It should engage properly with the strike plate.



2-2.B2 Realign the strike plate/ create fitting depth for it or Grind it a bit off/ replace the original strike plate.



2

BEFORE **ADJUSTMENT**

2-2.C: *Is your door binding or sagging? Or there are uneven gap between frame and door? Use shim to adjust the door position.*

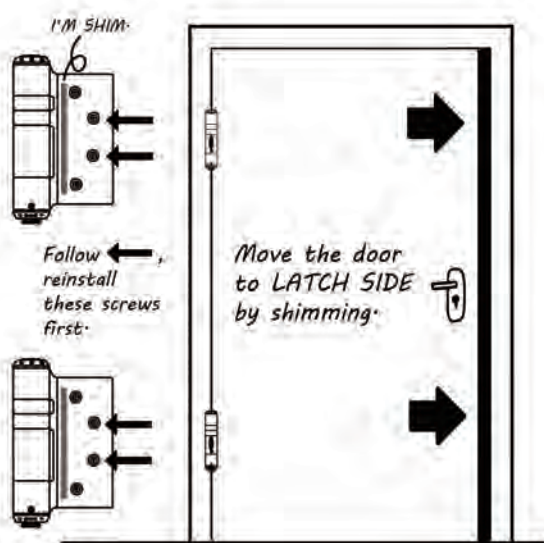
2-2.C1 Check the type of binding problem first, see the four types of door binding below.

Then loosen all the screws

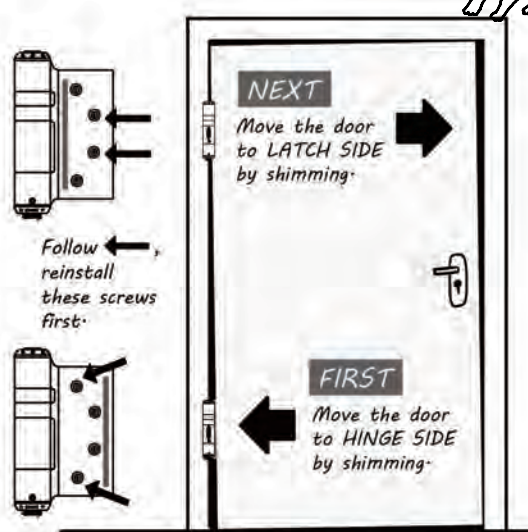
2-2.C2 Adhere the shims as illustrated and fasten two screws indicated with arrows.
(not all the way)

KNOW THE FOUR TYPES OF PROBLEMS

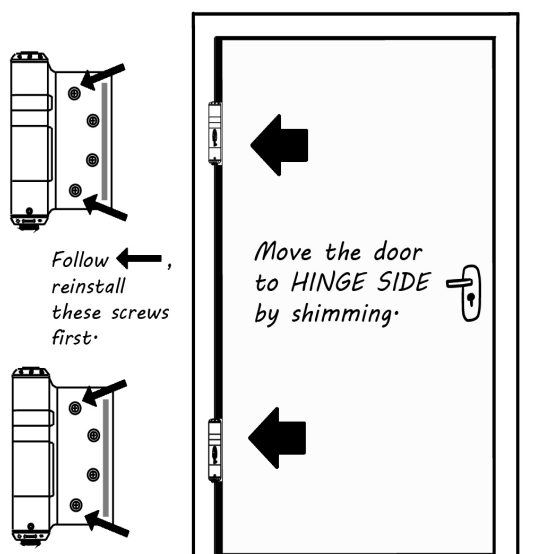
- Large gap is present at latching side



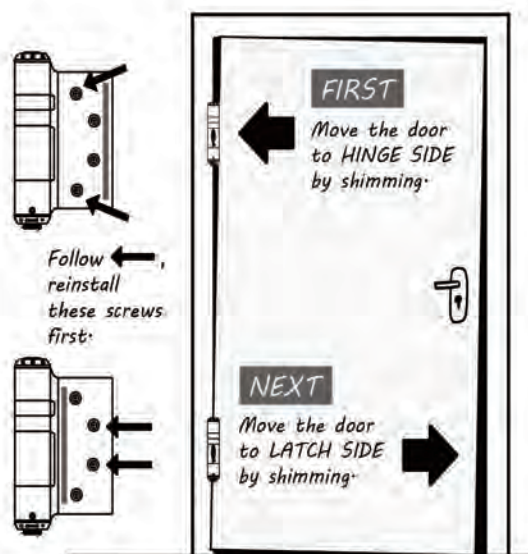
- Door Panel may be tilted



- Large gap is present at hinge side



- Door panel may be tilted



3

ADJUSTMENT PROCEDURE

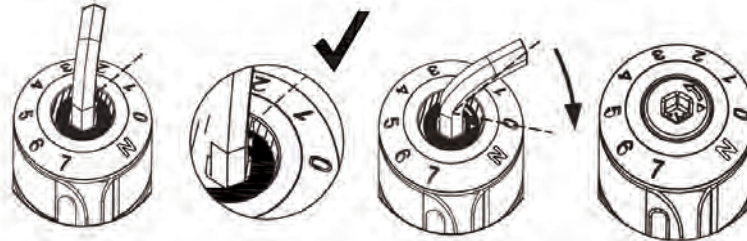
3-1 Go to the hinges with numeric adjusters. Set up minimum closing power. Adjust N-7 numeric adjuster for closing power.

3-1.A How to Increase or decrease power setting

3-1.A1 Use 5 mm hex wrench to adjust closing power.

3-1.A2 To increase power: adjust the numeric adjuster to higher numbers

3-1.A3 To decrease power: press down the numeric adjuster and turn to lower numbers.



3-1.B How to decide the self-closing power setting: make sure door can close at 20°.

3-1.B1 Each adjuster includes N-7 setting value.

One setting value provides about 15-22 pounds(7-10 kgs) of closing power.

3-1.B2 Adjust one by one, set up **the minimum closing power** for your door.

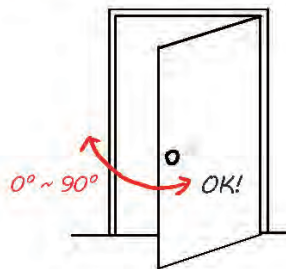
3-1.B3 **The door may slam at this stage. Keep going. Just make sure the door could close at 20°**

Find Minimum Closing Power

A Out of box is "N".



B Make sure door swings freely from 0° to 90°.



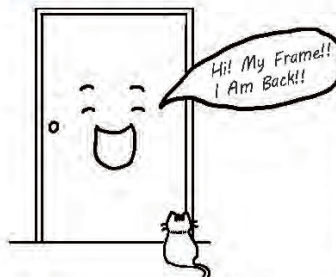
C Move the door to 20°



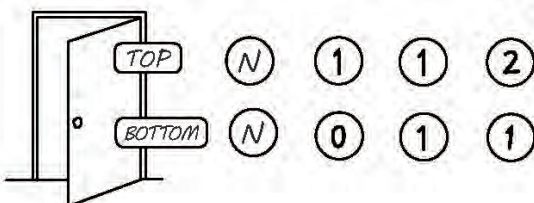
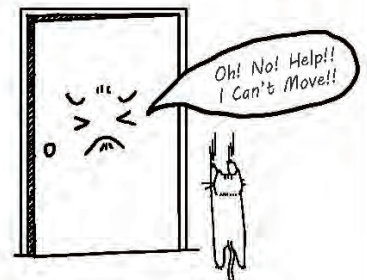
D Add 1 click one by one each time.
※ Don't go straight to "7"!!



E ✓ Door closes well by itself from 20° to 0°.



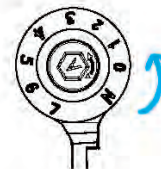
✗ Door doesn't close. Back to **B**.



※ It's the minimum closing power.

Door may close slowly after all adjustment (Hold-open Dampers)

Add 1 or 2 click to speed up!!



3-2 Go to and Middle 1 and Middle 2 hinge (Type SA Hinge) to set up mechanical buffer in 20°-80°. Only adjust the bottom of hinge.

3-2.A What does A mechanical buffer do

SA mechanical buffer provides speed control in 20-80°. You can adjust it through the speed screw at the bottom of the hinge.

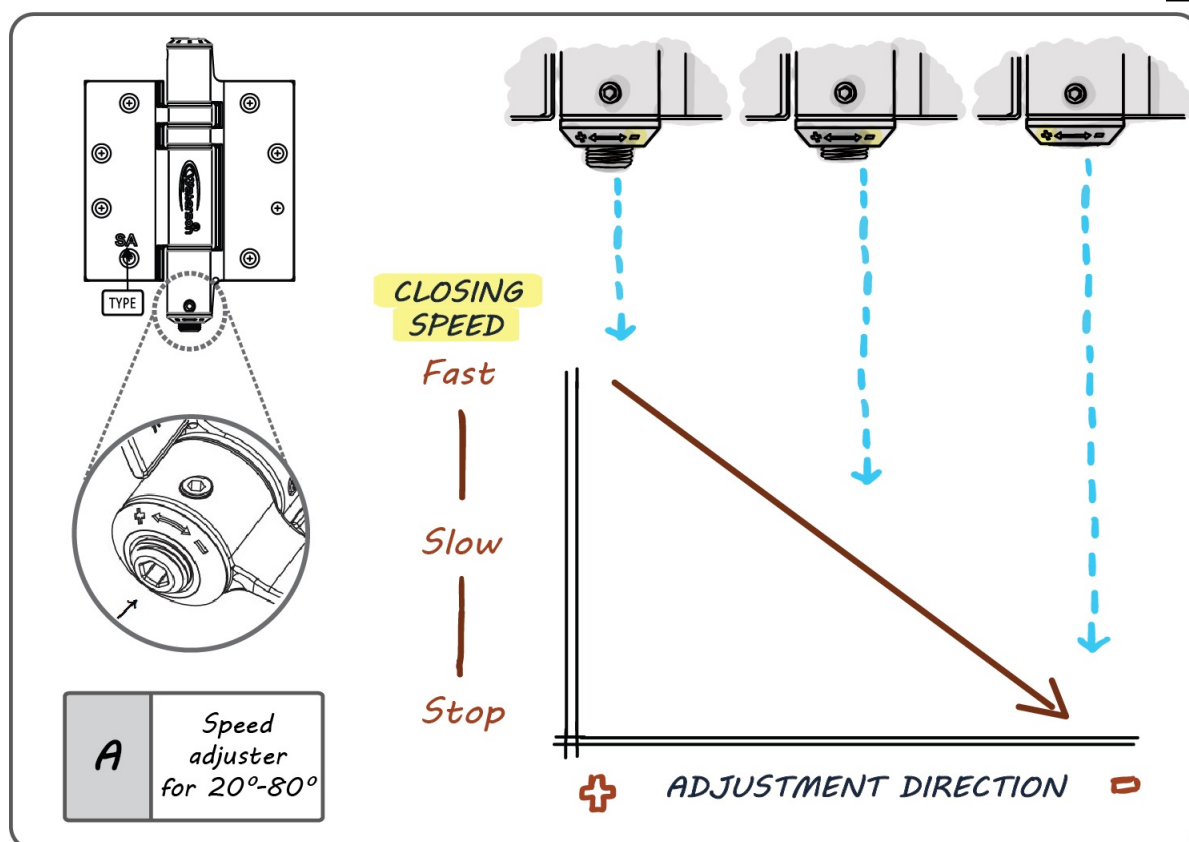
3-2.B How to increase or decrease buffer

3-2.B1 Adjust the Bottom section of the SA hinge with 5 mm hex wrench.

3-2.B2 Turn 5 mm hex wrench from + to – to slower speed & from - to + to faster speed

3-2.B3 Adjust this mechanical buffer 1/2 turn at a time. Test the door opening again.

3-2.B4 If the speed screw is more engaged in the barrel, the brake is more engaged.

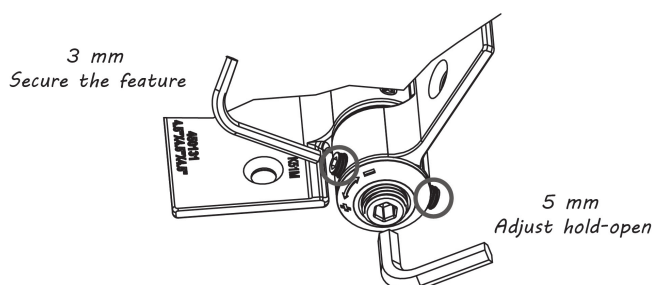


3-3 Lock in the adjustment

3-3.A Make sure self-closing feature works in all angles.

3-3.B Tighten the 2 side setscrews on each hinge using 3 mm hex wrench to lock in the settings.

Tighten all the set screws to lock the settings!



3

ADJUSTMENT PROCEDURE

3-3 Go to TOP hinge (Type SB Hinge) to set up hold-open feature. Only adjust the bottom of hinge.



3-3.A What does hold-open feature do

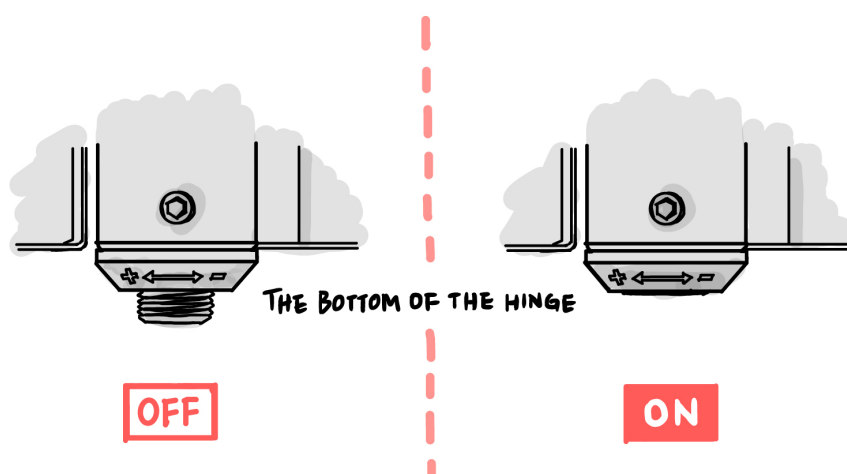
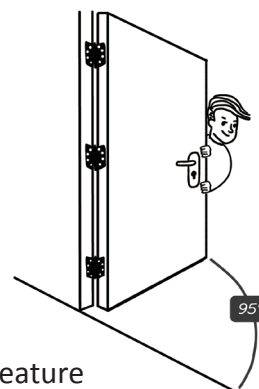
Open the door to 90°, the door could temporarily stop at around 80°-90°.

3-3.B How to set up or release hold-open feature

3-3.B1 The hinge is without hold-open feature out of box. If you don't need hold-open feature, just skip this process

3-3.B2 Locate the BOTTOM section of the SB hinge.

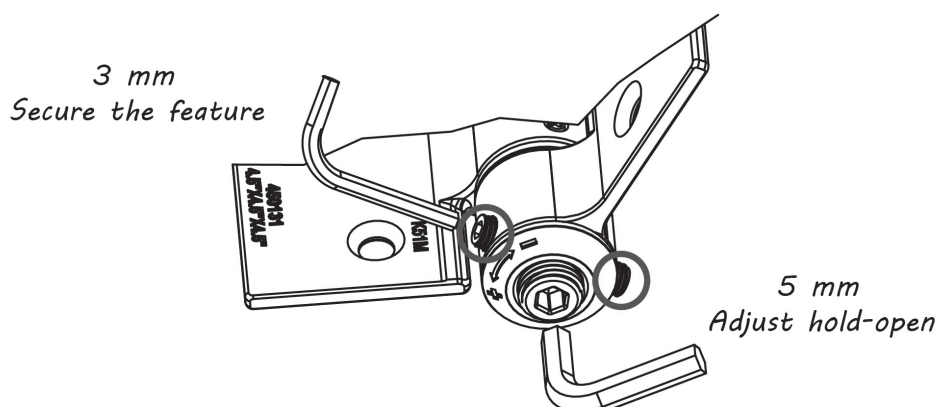
3-3.B3 Turn 5 mm hex wrench from + to – to active hold-open feature & from - to + to close the feature



3-3.C4 Open the door to 95°, hold it, and release it. If the door can stop at 90°, then hold-open is set correctly. If not, repeat 3-3.B3.

3-3.C5 After setting up hold-open properly, tighten the 2 set screws at hinge bottom to secure the feature

Tighten all the set screws to lock the settings!



3

ADJUSTMENT PROCEDURE

3-4 Go to Bottom hinge (Type SA1 Hinge) to set up mechanical buffer in 0°-20°. Only adjust the bottom of hinge.**3-4.A What does A1 mechanical buffer do**

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

3-4.B How to increase or decrease buffer

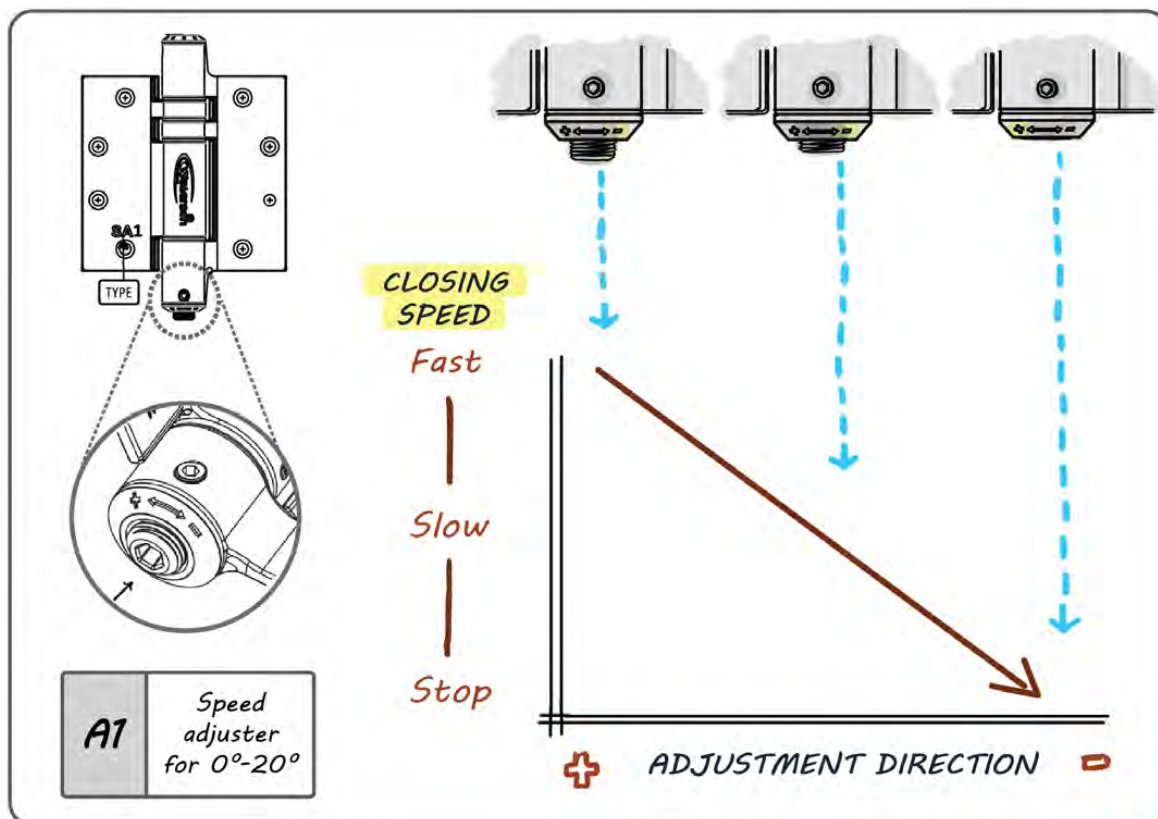
3-4.B1 Adjust the Bottom section of the SA1 hinge with 5 mm hex wrench.

3-4.B2 Turn 5 mm hex wrench from + to - to slower speed & from - to + to faster speed

3-4.B3 Adjust this mechanical buffer 1/2 turn at a time. Test the door opening again.

3-4.B4 If the speed screw is more engaged in the barrel, the brake is more engaged.

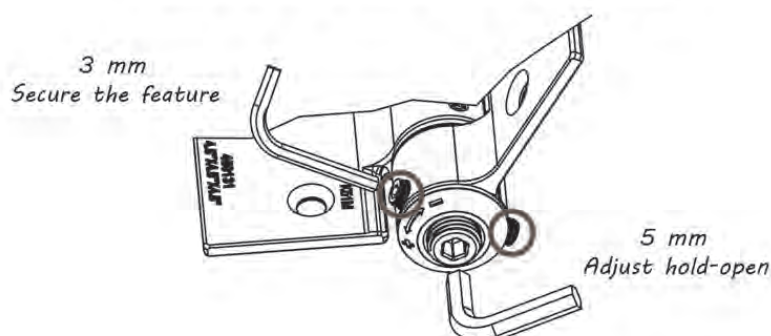
***If the buffer system of SA1 is more engaged, you may need to release the buffer system of SA. The braking in SA1 and SA is interactive. You could add one more click for power adjuster to add more force.**

**3-5 Lock in the adjustment**

3-5.A Make sure self-closing feature works in all angles.

3-5.B Tighten the 2 side setscrews on each hinge using 3 mm hex wrench to lock in the settings.

Tighten all the set screws to lock the settings!



4

HINGE ORIENTATION & CODE FOR HINGE

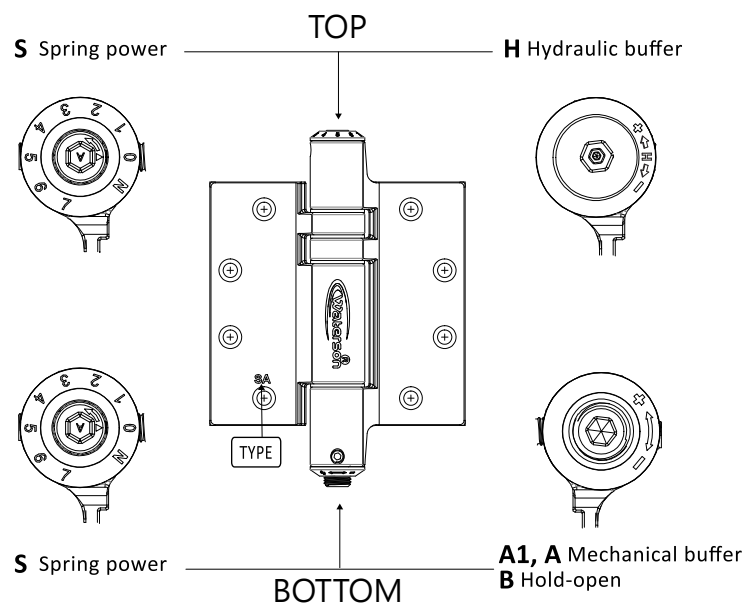
S: Spring power; offers closing force

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 90°±5°



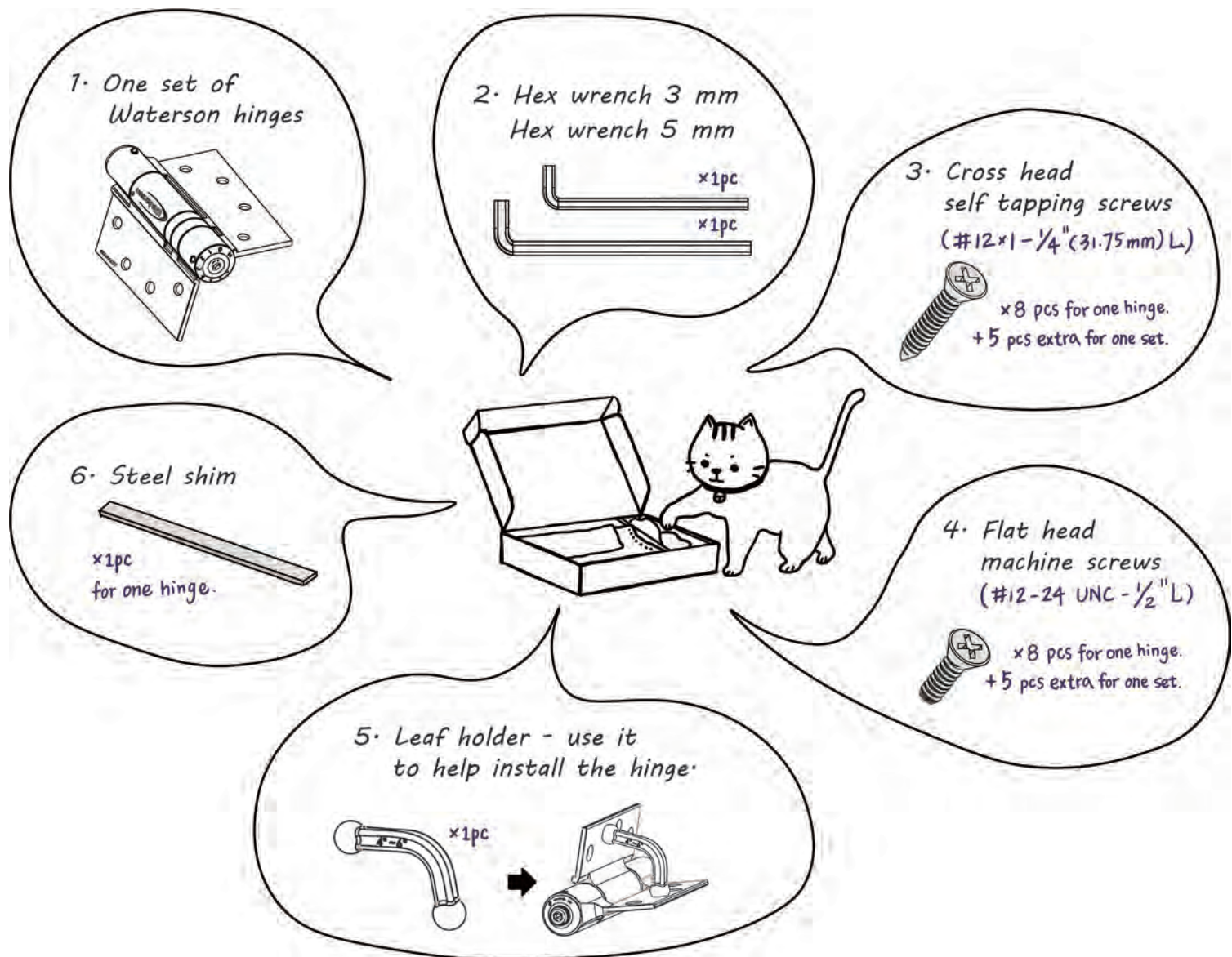
Hinge Function Types

Type for order	Mechanism	Top	Function	Bottom	Function
DS	Spring power + Spring power	S	Spring power	S	Spring power
SA1	Spring power + Latch speed adjuster	S	Spring power	A1	Speed adjuster Control closing speed in 0°-20°
SA	Spring power + Swing speed adjuster	S	Spring power	A	Speed adjuster Control closing speed in 20°-90°
SB	Spring power + Hold-open	S	Spring power	B	Hold-open 90°±5°
HS	Hydraulic Buffer + Spring power	H	Hydraulic Damper	S	Spring power
HA	Hydraulic Buffer + Swing speed adjuster	H	Hydraulic Damper	A	Speed adjuster Control closing speed in 20°-90°

5

TOOLS YOU NEED

● In WATERSON Hinge Box



● Please Prepare By Yourself

1. Screw driver

2. Electric drill

3. Spirit level

