

# **3D CONCEALED**

## *Hydraulic Concealed Closer*



### **Customer Tested and Approved**

- Three-dimensional adjustment function, quick installation and easy adjustment.
- Concealed system only requires 22 mm (approx. 7/8") on frame side and 38 mm (approx. 1 1/2") on door side. (Routing Depth)
  - Smooth hydraulic closing and precise adjustability.

# 01 PRODUCT FEATURES

- ❑ The 3D concealed hydraulic hinge is handed and has a **maximum** opening of 170 °
- ❑ Self-closing hydraulic system
- ❑ Door or leaf can be adjusted up and down, left and right, and front and back in **three** dimensions
- ❑ Adjustable/customizable closing speed
- ❑ Exceeds load testing of 500,000 cycles
- ❑ Heavy duty castings demonstrate superior load-bearing strength, withstanding a load of **220 lbs** while maintaining normal operation.
- ❑ 5-Year Warranty
- ❑ Patent #10633905

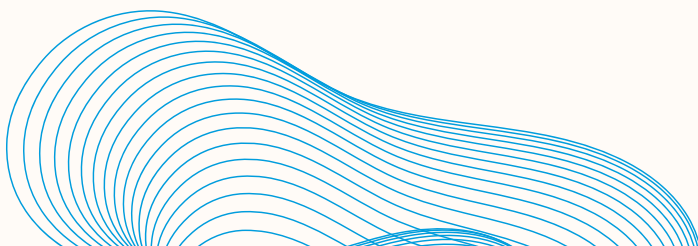
Note: **Hold Open is Standard, non-Hold Open is unavailable.**




**790 lbs (360 kg)  
Load-Bearing Test**




**500,000 Cycles  
Durability Test**



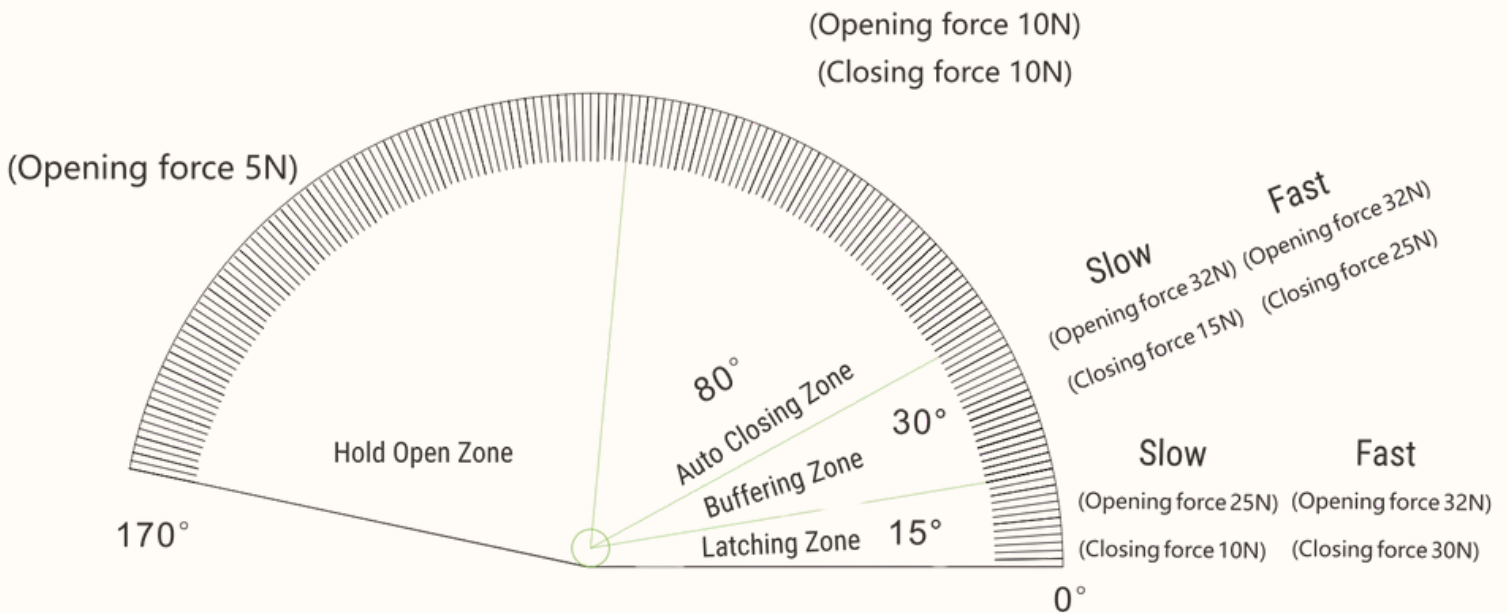
## 02 APPLICATION RANGE

 Bearing capacity 88 LBS (40KG) / piece

 Suitable for wood, aluminum, and hollow metal doors. The number of hinges required depends on the door's weight and size.

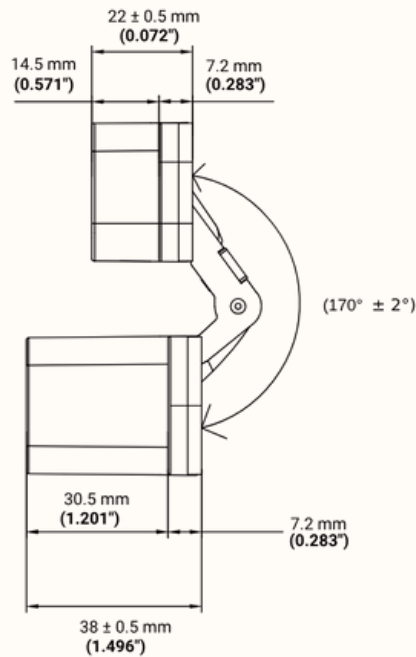
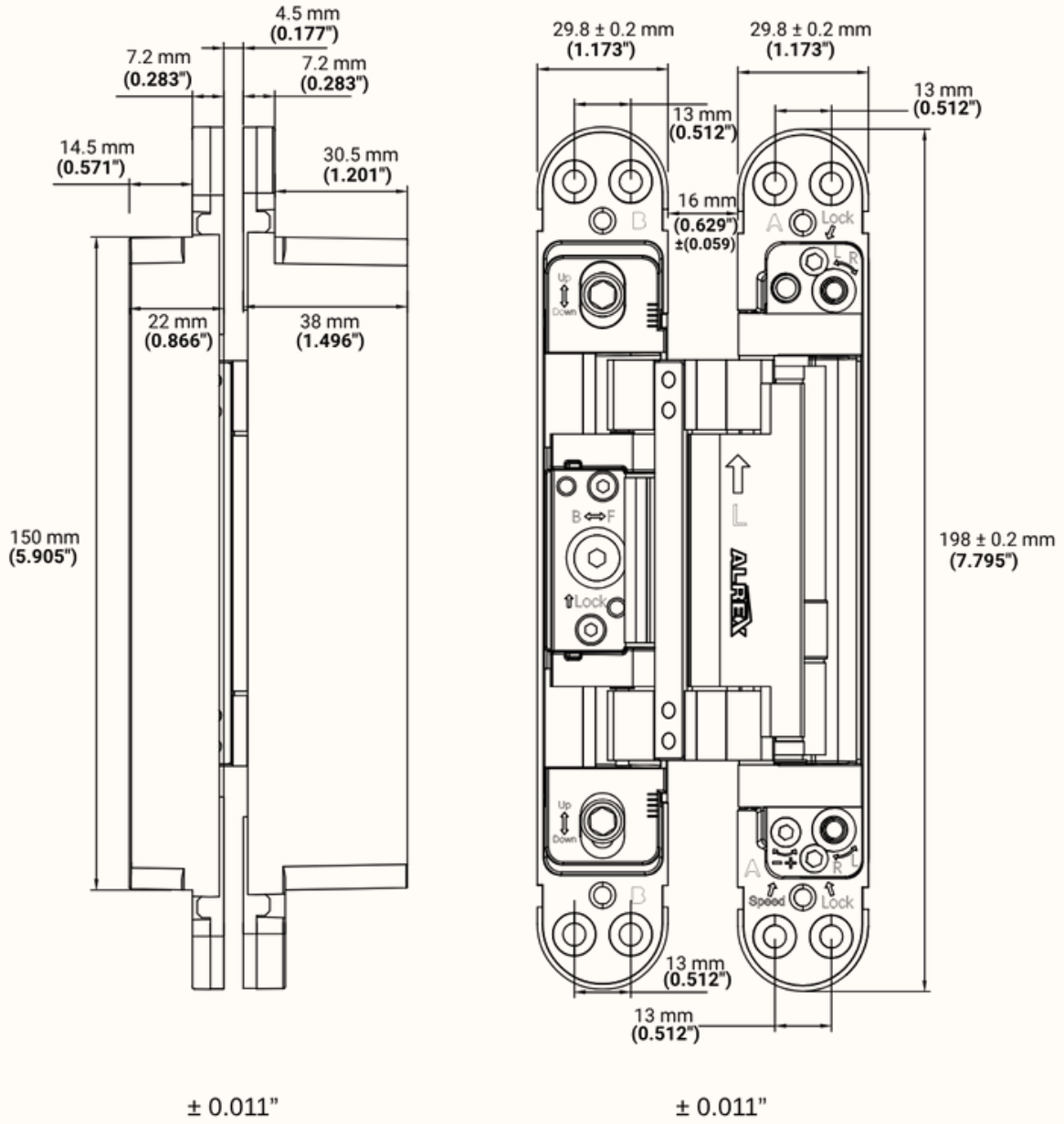
Door Weight	Door Size	Hinge Qty (pc)
Up to 176 lbs	Up to 2'8" x 7'0" Up to 3'0 x 7'6"	2 Closer Hinges / 1 Free Swing Hinge
Up to 220 lbs	Up to 3'6" x 7'6" Up to 3'6" x 9'0"	3 Closer Hinges 3 Closer Hinges / 1 Free Swing Hinge

## 03 Technical Specifications

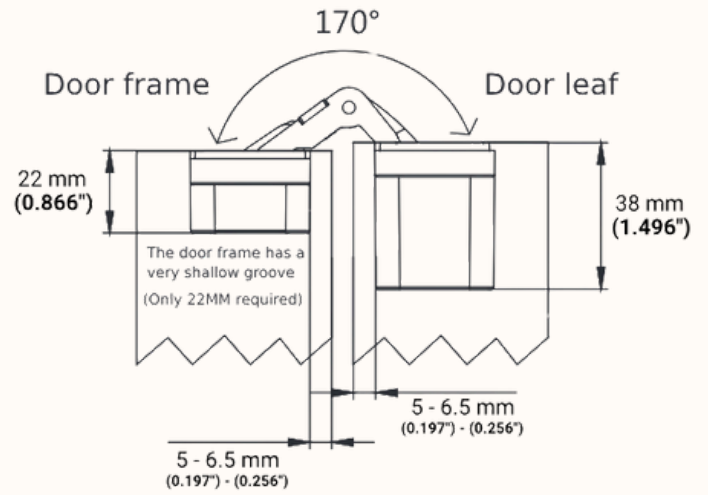
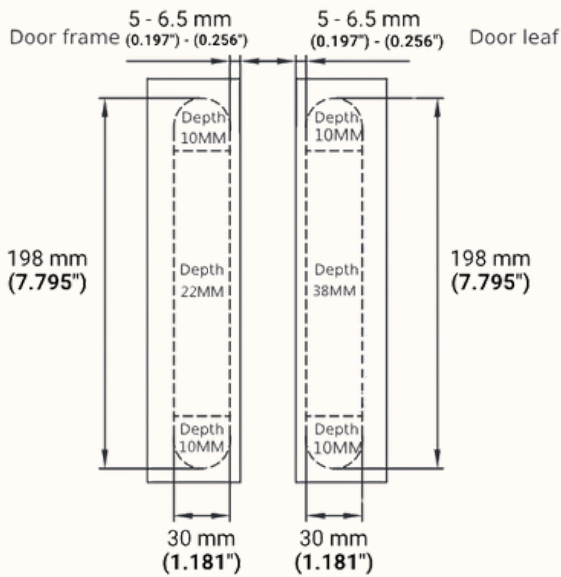


1. Handed product, and must be installed either left hand or right hand (please look at hand markings on the product and packaging. Maximum opening of 170°)
2. Hold Open at 80° to 170°
3. Automatic door closing at 85° to 0°
4. External adjustment of closing speed. Ability to adjust buffering speed and latching speed, allowing for soft or fast closures (depending on your application and preference).

# 03 PRODUCT SIZE



## Machining Installation of Door Leaf:

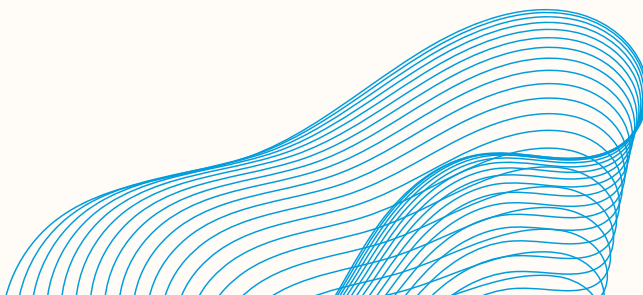
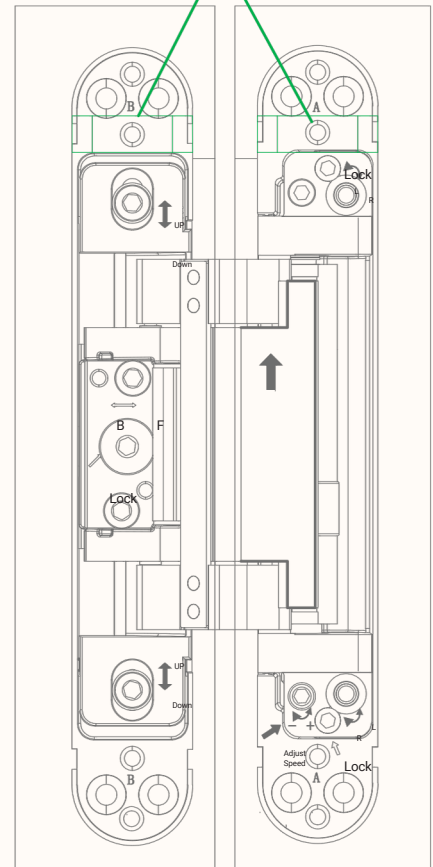


## Precautions for Hinge Installation

(as shown in the following figure)

1. With the hinge opened to 90° (held open by the plastic stoppers), insert the door side leaf into the routed door insert. Secure with included fasteners.
2. Now, insert the door frame leaf into the door frame. Then, fasten hinge screws to secure the hinges to the frame, ensuring the door leaf is firmly connected to the frame.

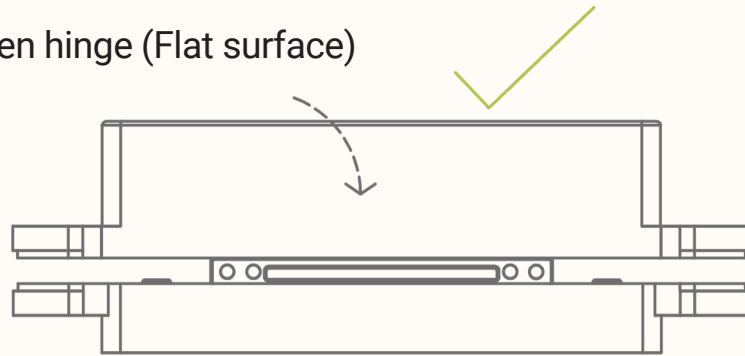
Do not remove the plastic stoppers until the installation is complete.



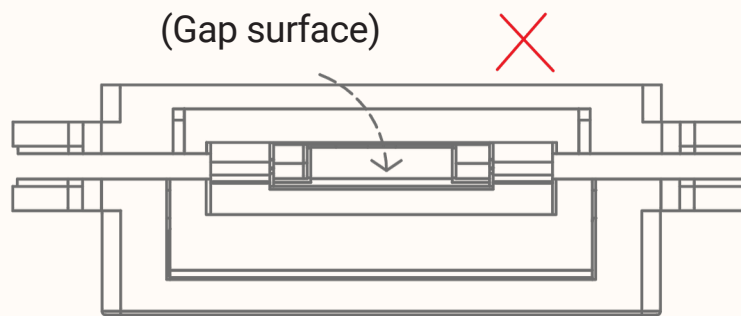
## 05 OPEN HINGE

The 3D Hydraulic Hidden Hinge has a free swing state of  $80^{\circ}$  -  $170^{\circ}$ , which is ideal for installation. If it is accidentally closed to  $0^{\circ}$ , wrenches can be used to open the hinge.

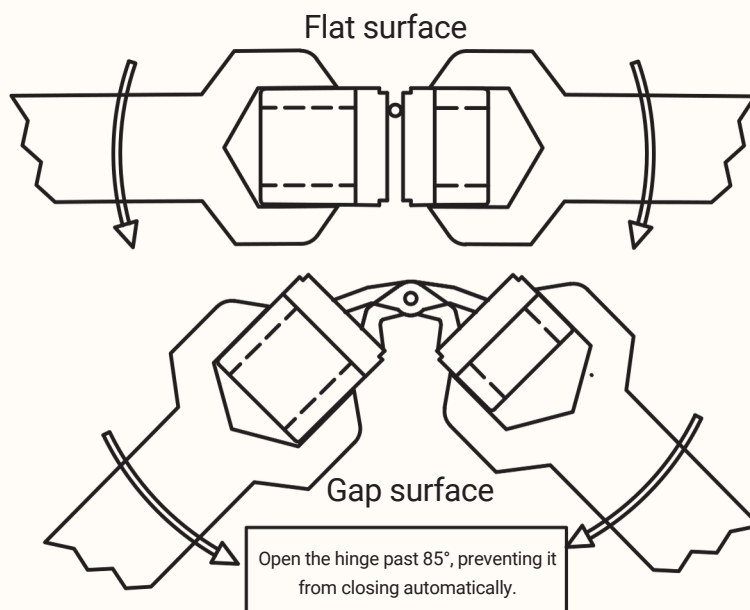
Open hinge (Flat surface)



(Gap surface)



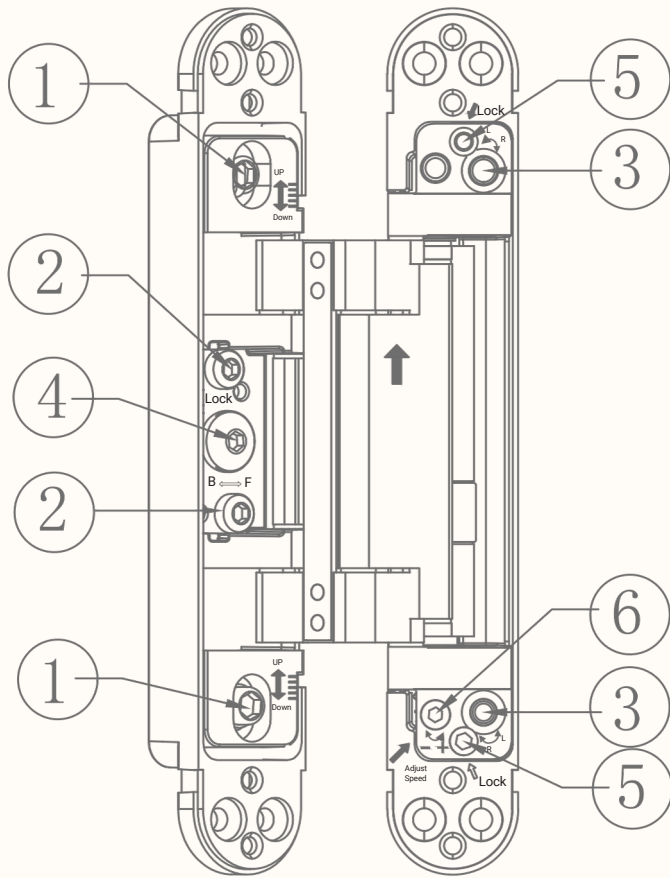
**Opening Method:** Use two 30mm wrenches (or adjustable wrenches) to open the concealed hinge, as shown in the figure below.



**Note:** Before opening the hinge, place a towel or soft material over it to provide padding. Then use a wrench to carefully open the hinge. Failing to do so may damage the hinge, potentially affecting its proper function.

# 06 DOOR GAP ADJUSTMENT

## Adjustment Function Diagram



- ① Door Gap Adjustment Amount (up + down):  
 $\pm 2.5\text{mm}$  (0.098")
- ② Door Gap Adjustment Amount (front + back):  
 $\pm 1.5\text{mm}$  (0.059")
- ③ (Door Gap Adjustment Amount (left + right):  
 $\pm 2\text{mm}$  (0.079")
- ④ Locking Screw
- ⑤ Locking Screws
- ⑥ Speed Control Adjustment


## Adjustment Precautions

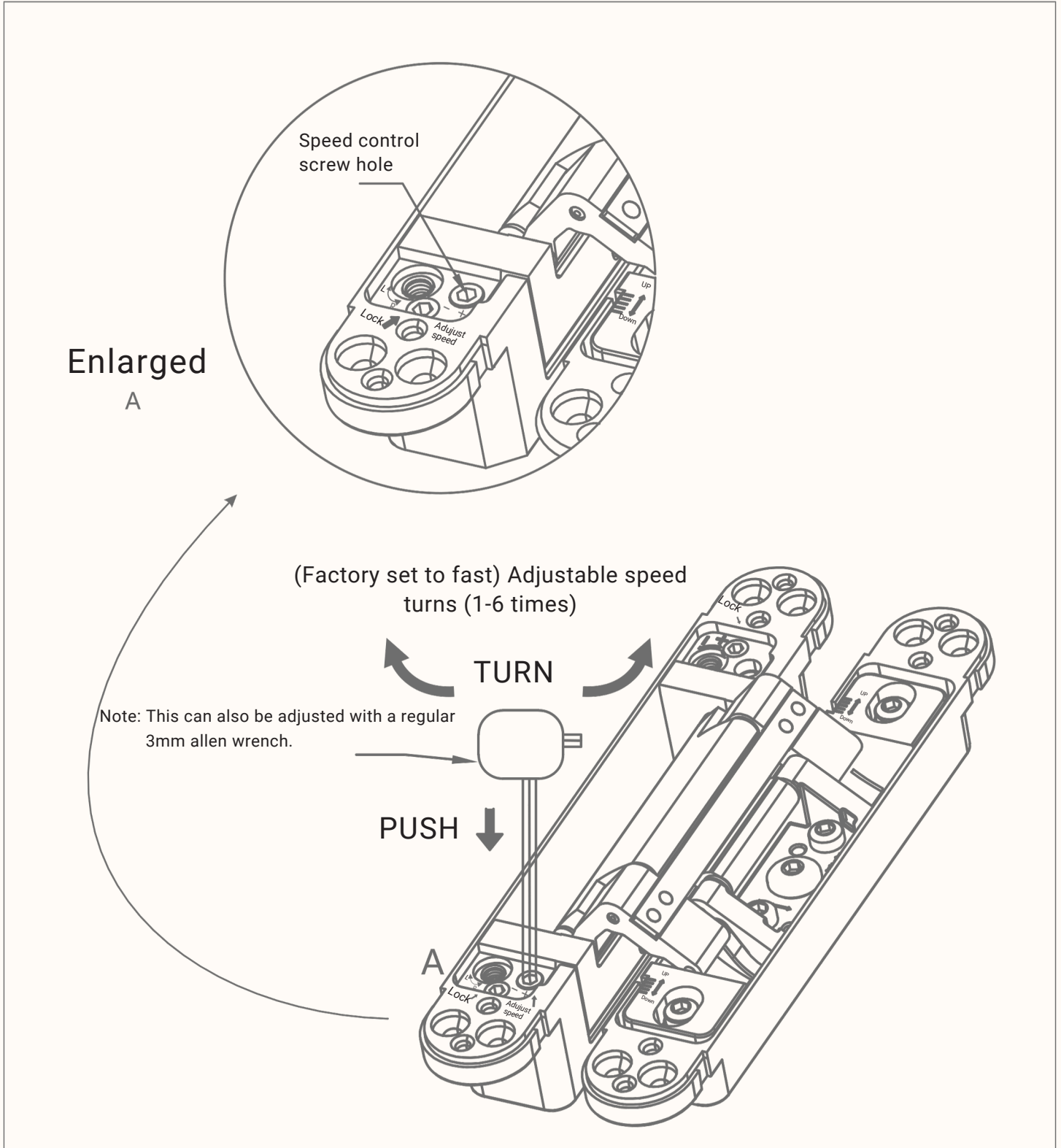
- IF NEEDED: Adjust the upper and lower door gaps of the door leaf  $\pm 2.5\text{mm}$  (0.098")
- Loosen the upper and lower screw ①; Loosen the locking screw ④; Move the door leaf up and down to the appropriate position, then lock the door leaf upper and lower screw ①. Lastly, tighten down the locking screw ④ to lock the position.
- IF NEEDED: Adjust the front and back positions of the door leaf  $\pm 1.5\text{mm}$  (0.059")
- Loosen the two screws ② to adjust the door leaf forward or backward. Before making any adjustments, ensure that locking screw ④ is loosened. After completing the adjustment, re-tighten screw ④ to secure the door leaf in place.
- IF NEEDED: Adjust the left and right door gaps of the door leaf  $\pm 2\text{mm}$  (0.079"). Loosen screws ⑤ then adjust screws ③. During the adjustment process, adjust the screws ③ the same amount to ensure heights of both ends are adjusted as consistently as possible.

**Note:** All hinges on the same door leaf should be adjusted as uniformly as possible to ensure their axis remain aligned—this is especially important when installing three or more hinges. Misalignment can significantly impair the hydraulic performance.

# 07 SPEED ADJUSTMENT

## Speed Adjustment Instructions

 Insert the hex key into the adjustment hole, then gently press in and turn the speed control screw to adjust the closing speed.

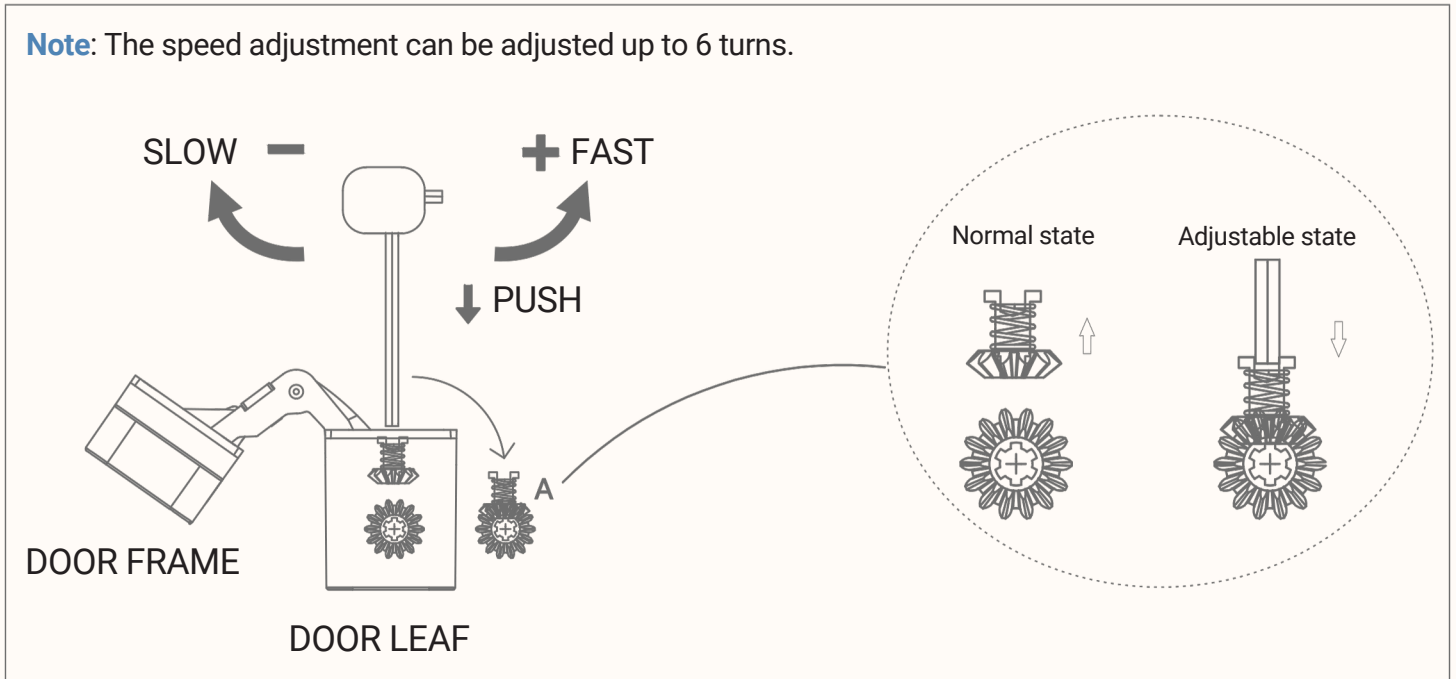


# 07 SPEED ADJUSTMENT

## Speed Adjustment Instructions

Note: During adjustment, if there is a noticeable torque change (e.g., internal gear engagement noise), stop twisting immediately. This indicates the adjustment limit has been reached. Continuing to adjust may damage the mechanism.

**Note:** The speed adjustment can be adjusted up to 6 turns.



# 08 EMBEDDED DECORATIVE COVER

After adjusting, open and close the door several times to ensure proper operation. Once confirmed, insert the decorative covers.

Ensure the decorative covers are installed in the correct positions: A, B, and C.

# 09 ACCESSORIES LIST

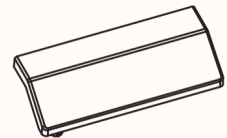
## FOR ONE HINGE



A Decorative Cover x 2



B Decorative Cover x 2



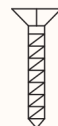
C Decorative Cover x 1



4mm Hex Key x 1



3mm Hex Key x 1



5X30 Wood Tooth Screw x 8