

180° Stealth Concealed Hinge

Michal Fanta

VIEW IN BROWSER

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Summary

Sleek, invisible, and opens a full 180°. Upgrade your projects with this robust, support-free concealed hinge.

Hobby & Makers > Mechanical Parts

Tags: stealth hinge invisible hinges 180 hidden concealed soss sosshinge full180

Give your 3D-printed cabinets, boxes, or furniture a professional, clean look with this **180° Concealed Stealth Hinge**.

This hinge is designed specifically for 3D printing, focusing on mechanical strength and ease of manufacturing. When closed, the hinge is completely hidden inside the material, and when open, it allows for a full 180-degree swing without any protruding parts.

Key Features

- **True 180° Opening:** Perfect for folding doors or lid covers.
- **Fully Concealed:** Hidden from view when the door/lid is closed.
- **Support-Free:** Optimized geometry for easy printing without any messy support structures.

Hardware Needed

To assemble this hinge, you will need **3mm diameter steel pins** (or rods) cut to the following lengths:

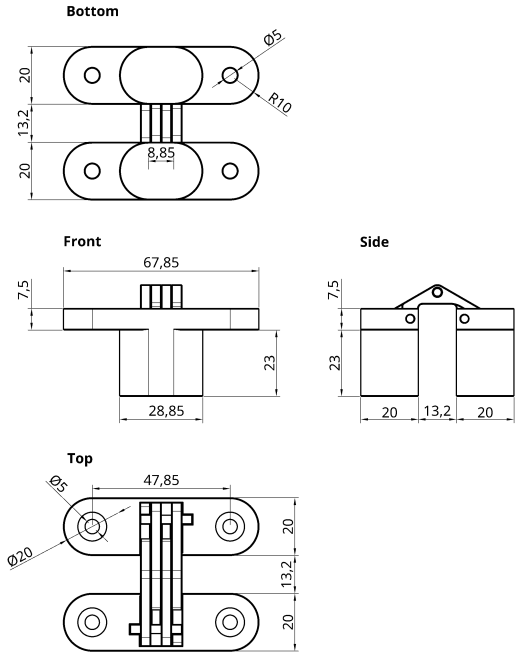
- **1x** 14.4 mm - Locating Dowel or Cylindrical Pins (14.4 mm pin isn't available, so you'll need to slightly sand down a 15 mm pin)
- **2x** 18.0 mm - Locating Dowel or Cylindrical Pins
- **2x** 40.0 – 58.0 mm - Locating Dowel or Cylindrical Pins

Print Settings

- **Material:** PETG, ASA, or PCCF recommended for mechanical strength.
- **Infill:** 20% or more (Wall loops are more important than infill for this part).
- **Wall Loops:** 3-4 for maximum structural integrity around the pin holes.
- **Supports:** None required!

Dimensions

The base hinge size is designed for 3 mm diameter pins, but it can be scaled down by 33.3% to use 2 mm pins, or by 66.7% to use 1 mm pins. Keep in mind that reducing the size will also reduce the overall stiffness of the hinge.

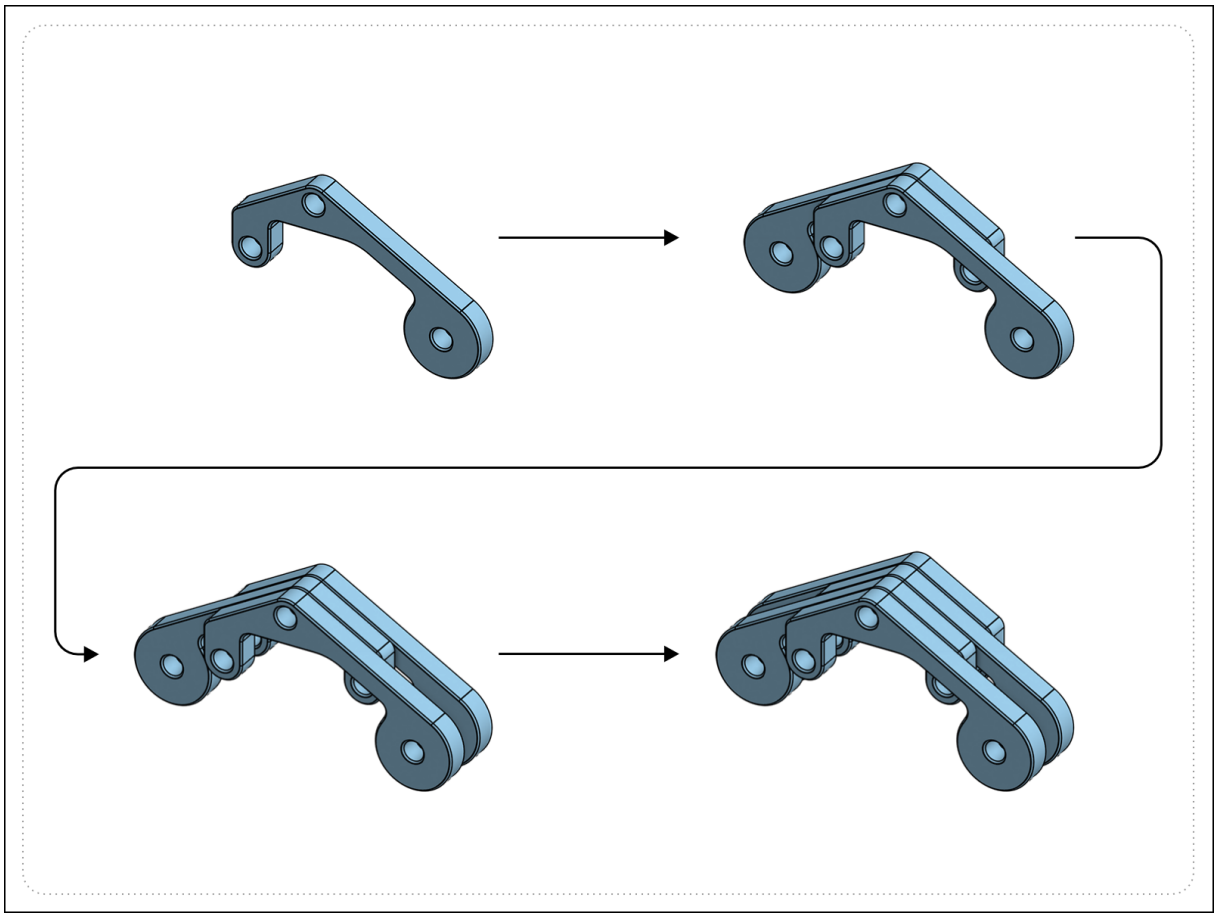


Assembly Guide

- Blue parts are 3D printed
- Black parts are Ø 3mm steel pins, it is necessary to ream the holes for the steel pins to an exact 3mm diameter
- Ensure you have the correct pin lengths for each step

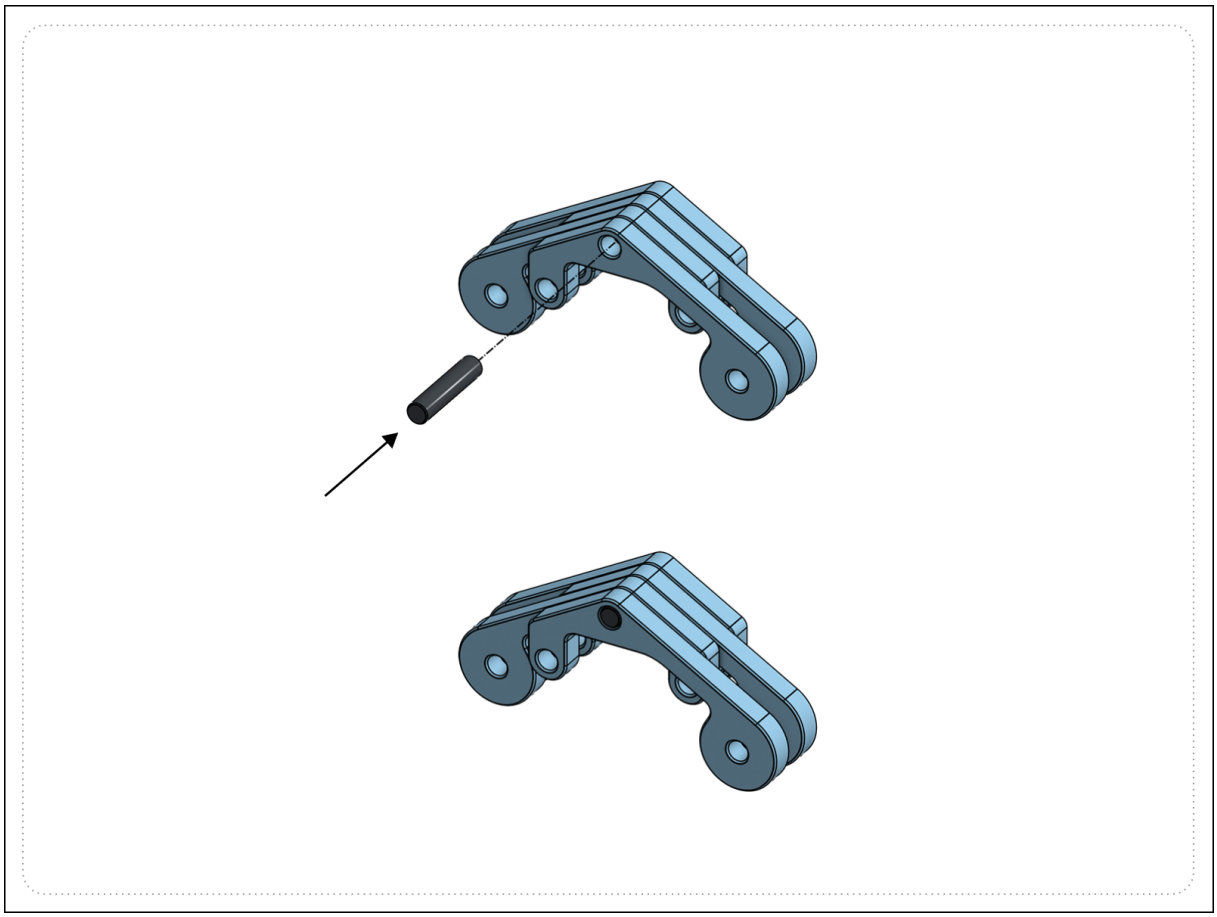
STEP 1/5

Bring all four **hinge_arms** together according to the orientation shown in the image.



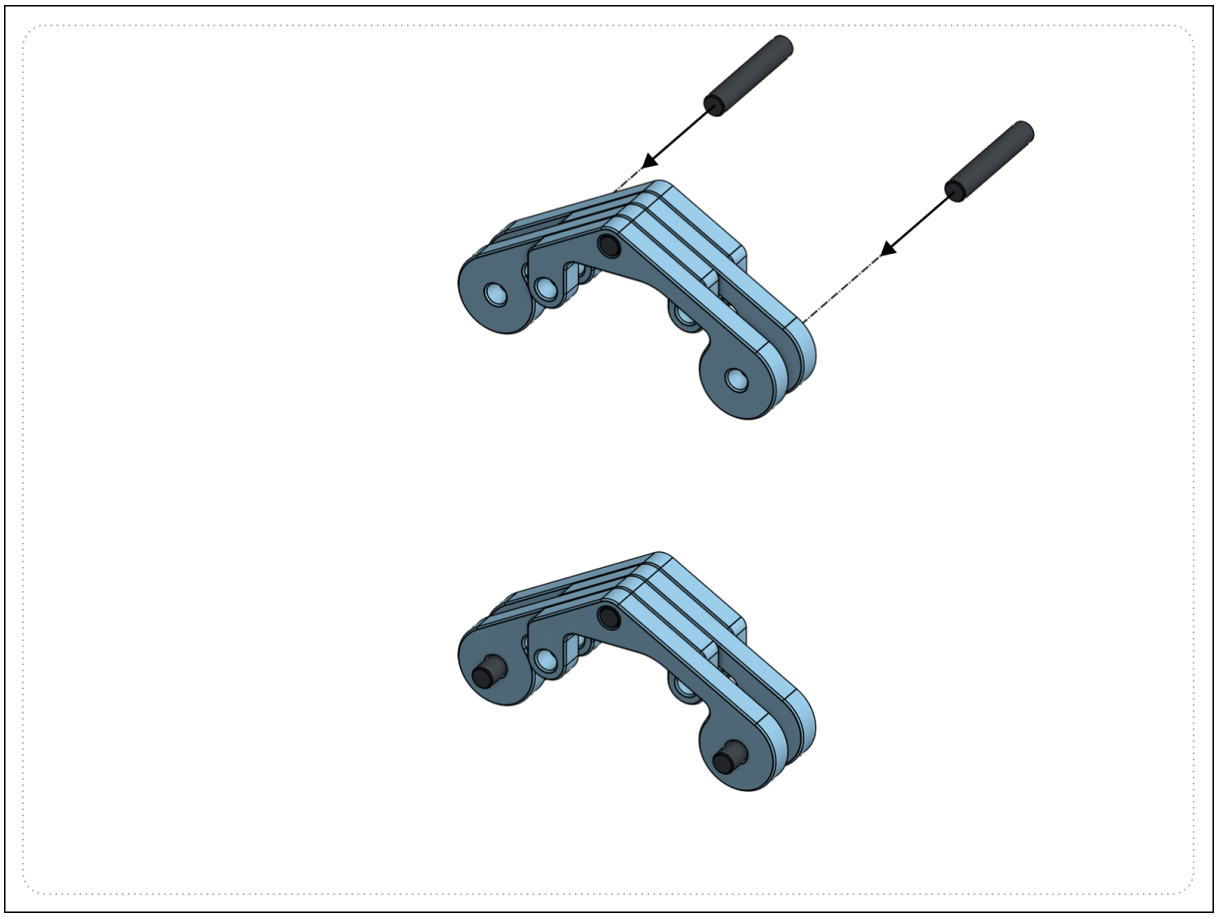
STEP 2/5

Take a **3 mm** diameter pin (**14.4 mm** long) and insert it into the upper hole in the **hinge_arms**.



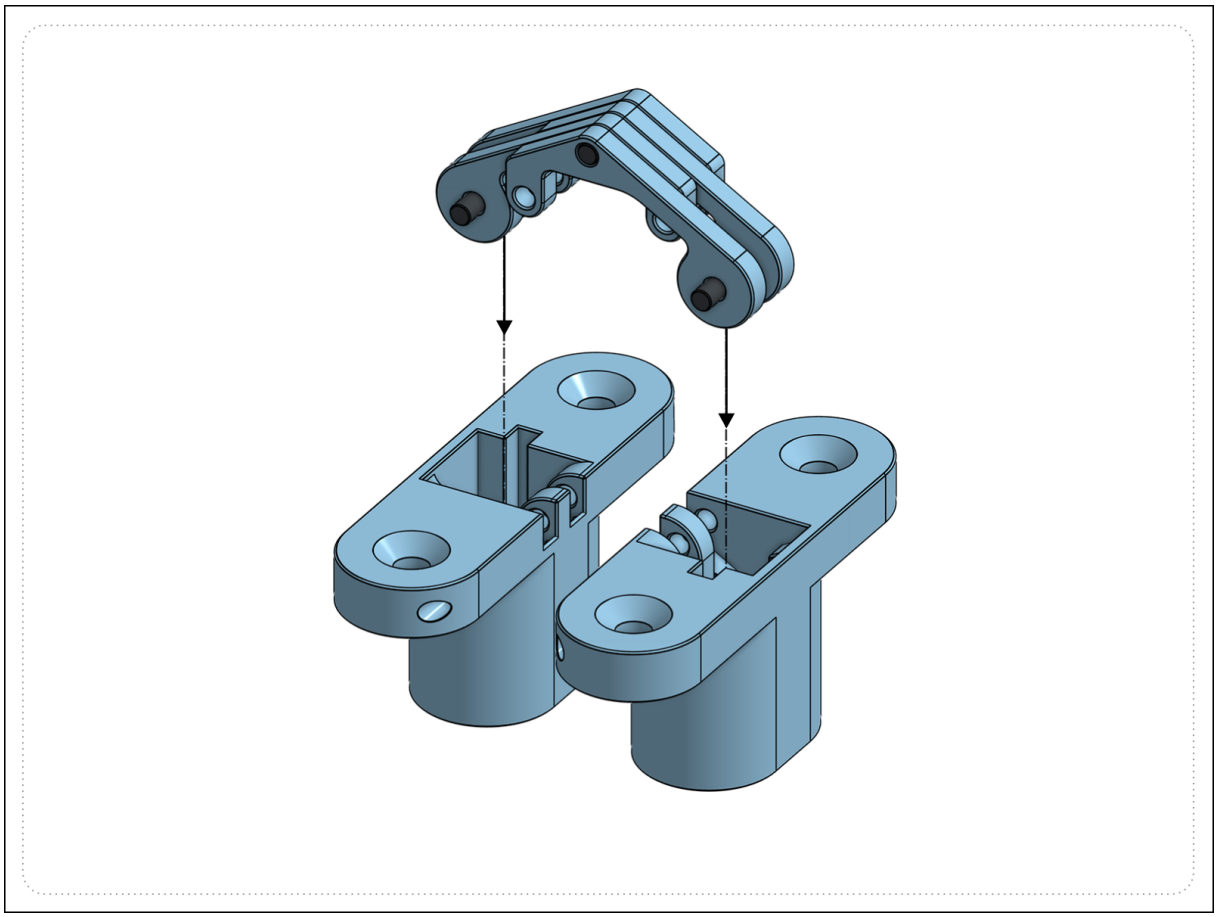
STEP 3/5

Take two **3 mm** diameter pin (**18 mm** long) and insert it into the lower holes in the **hinge_arms** on both sides.

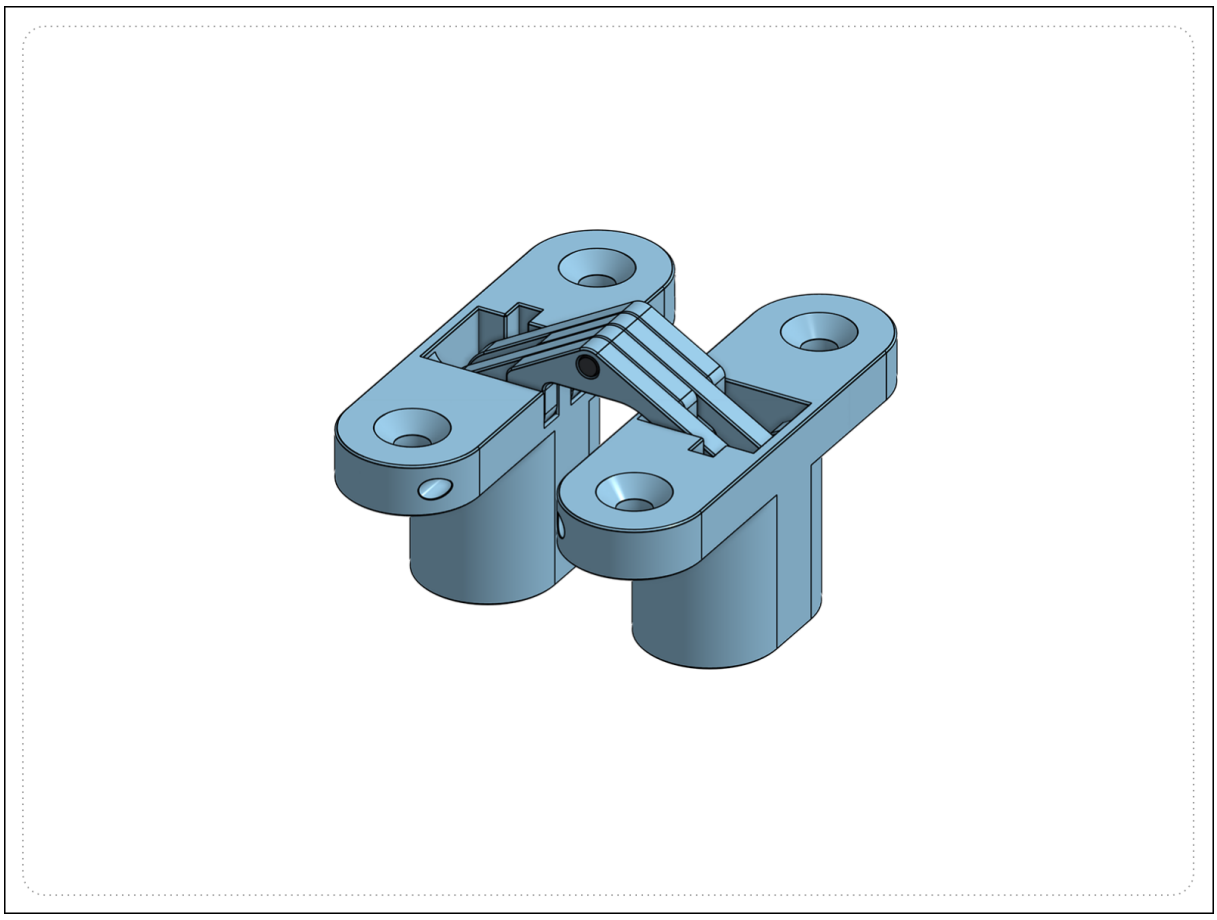


STEP 4/5

Prepare both **hinge_body** parts mirrored against each other.

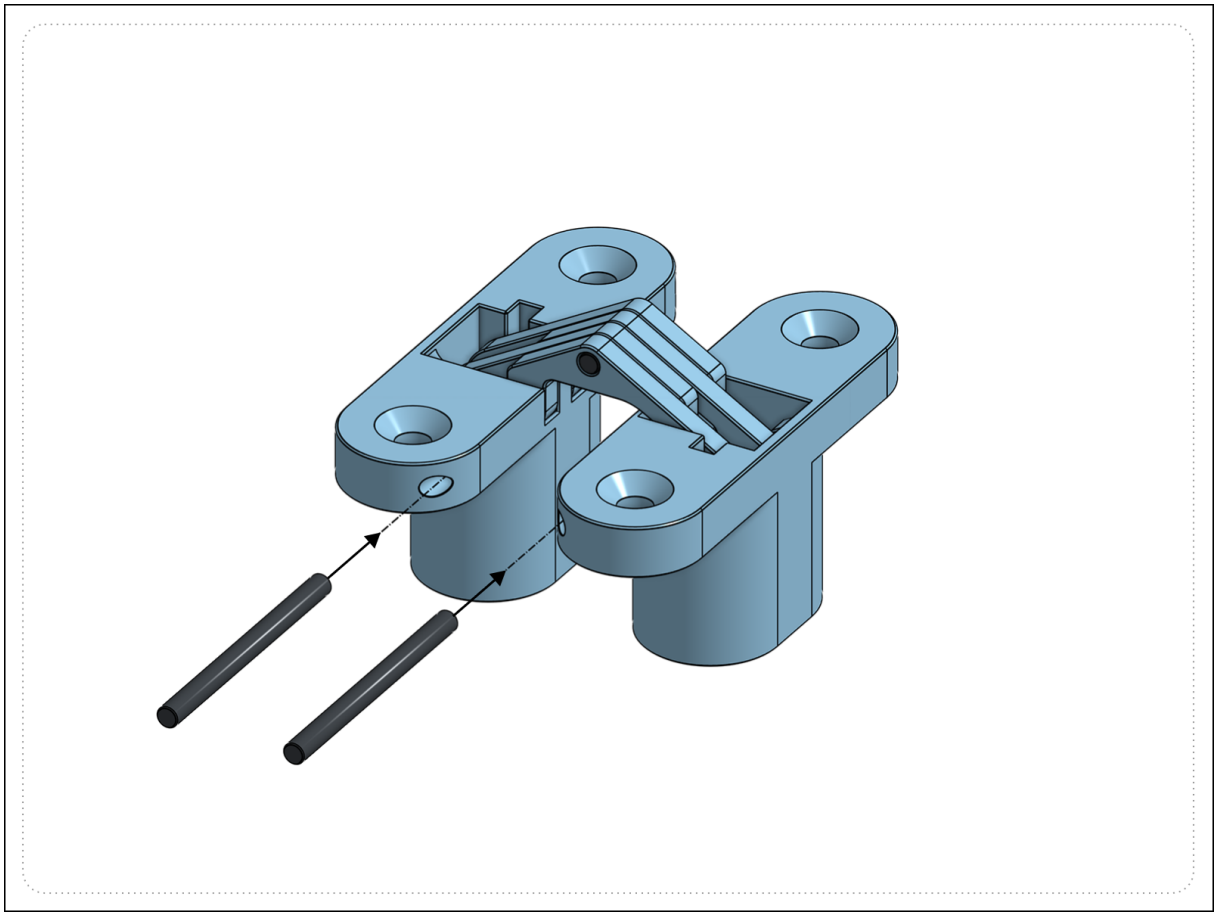


And insert the assembled **hinge_arms** into the **hinge_body**.

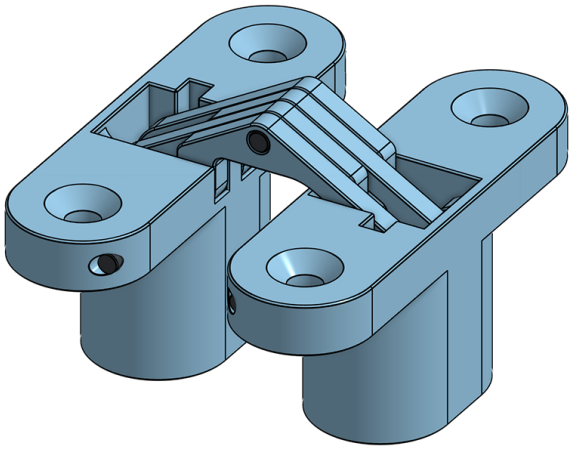


STEP 5/5

Take two **3 mm** diameter pin (**40-58 mm** long) and insert it into holes in the **hinge_body** to secure **hing_arms**.



The hinge is now **assembled** and should move freely from the open position to the closed position.



DONE!

Model files



hinge_body_2x.stl



hinge_arm_4x.stl

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