



CHAOTICLAB



## CNC VORON TAP V2 BUILD GUIDE

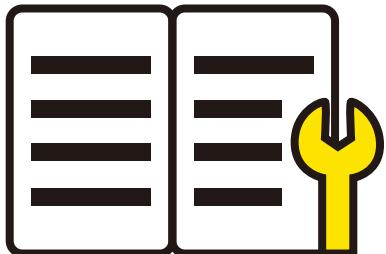
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VERSION 2023-10-06



- Highlighted in blue are included in this **CNC VORON TAP V2**.
- Highlighted in red are other accessories of the Voron printers, which are not included in this **CNC VORON TAP V2** and will need to be prepared by yourself.



Any unauthorized disassembly of this product may cause damage and void the warranty.  
In particular, do not detach the slider from the rail yourself.  
If disassembly is necessary, first loosen the screws securing the sensor, then remove the PCBA circuit board. Follow this sequence strictly to avoid sensor damage.

Note: The two screws for securing the sensor are CM2, not M2. CM2 screws use a 1.3mm hex key, unlike M2 which uses a 1.5mm hex key.

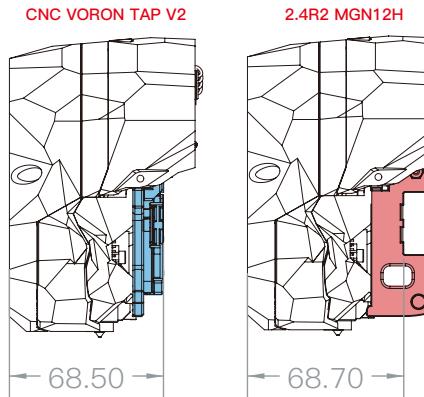
## XY TRAVEL INFLUENCE:

The thickness of the **CNC VORON TAP V2** is similar to that of the 2.4R2 X carriage, so no adjustments to the relevant settings are necessary.

## HARDWARE REQUIREMENTS:

### YOU MUST USE THE MGN12H X-AXIS

You must already be using the MGN12 based X-Axis. **CNC VORON TAP V2** does not fit on the older MGN9 based X-axis.



### CW2 STYLE MOUNTED EXTRUDER REQUIRED

**CNC VORON TAP V2** replaces the X-carriage mount, and requires that the mounting screws come in from the front of the carriage like CW2, not the back like CW1. There are mounts for LGX and Galileo available.

### BED MOUNT MUST BE SECURE

When **CNC VORON TAP V2** is probing, the nozzle will contact the bed with a force of approximately 500–800 grams. Your bed should not move during this. Bed motion compromises the accuracy of **CNC VORON TAP V2**, so it is not recommended for Voron 1.8, Legacy, or Switchwire designs.

If you want to know if **CNC VORON TAP V2** is right for you, tap your finger on the bed firmly. If the bed moves, **CNC VORON TAP V2** is not right for you.

### GOOD MECHANICAL CONDITION

**CNC VORON TAP V2** is far more precise than previous Z sensing systems, and we have found it can reveal previously unnoticed problems in a printer. If your printer has known mechanical issues (such as cracked components) fix them before.

Linear rails ship with oil that is designed to prevent corrosion during the shipping and storage process. This oil should be replaced with a lubricant of your choice. We recommend using an NLGI0 or NLGI1 rated grease. WD-40 makes a good white lithium grease with a spray applicator nozzle that works well in this application.

### FOLLOW THE STEPS BELOW TO GREASE YOUR RAIL WITHOUT DISASSEMBLY:

1. Use WD-40 degreaser or another degreaser of your choice and spray directly into the ball bearing area indicated by the arrow. Ensure that you spray liberally on both sides and run the block up and down the rail several times after spraying.
2. Drop a few drops of isopropyl alcohol down the rail on either side to flush out the WD-40 degreaser.
3. Spray your lubricant on either side of the rail liberally and run the block up and down the rail repeatedly to allow the lubricant to reach all of the balls within the block.



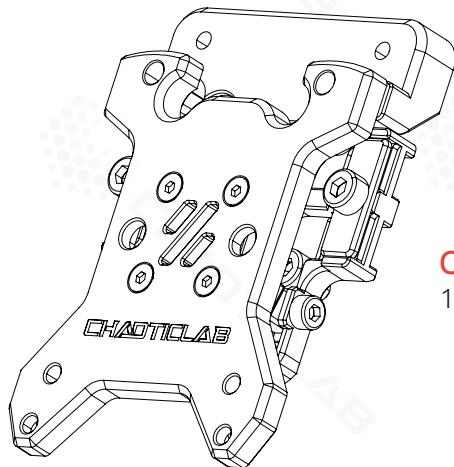
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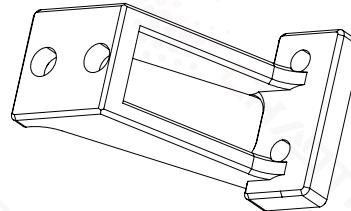
### Packing List

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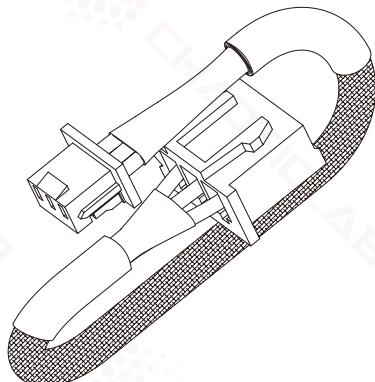
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**CNC Voron Tap V2**  
1pc



**Limit Switch Bracket**  
1pc

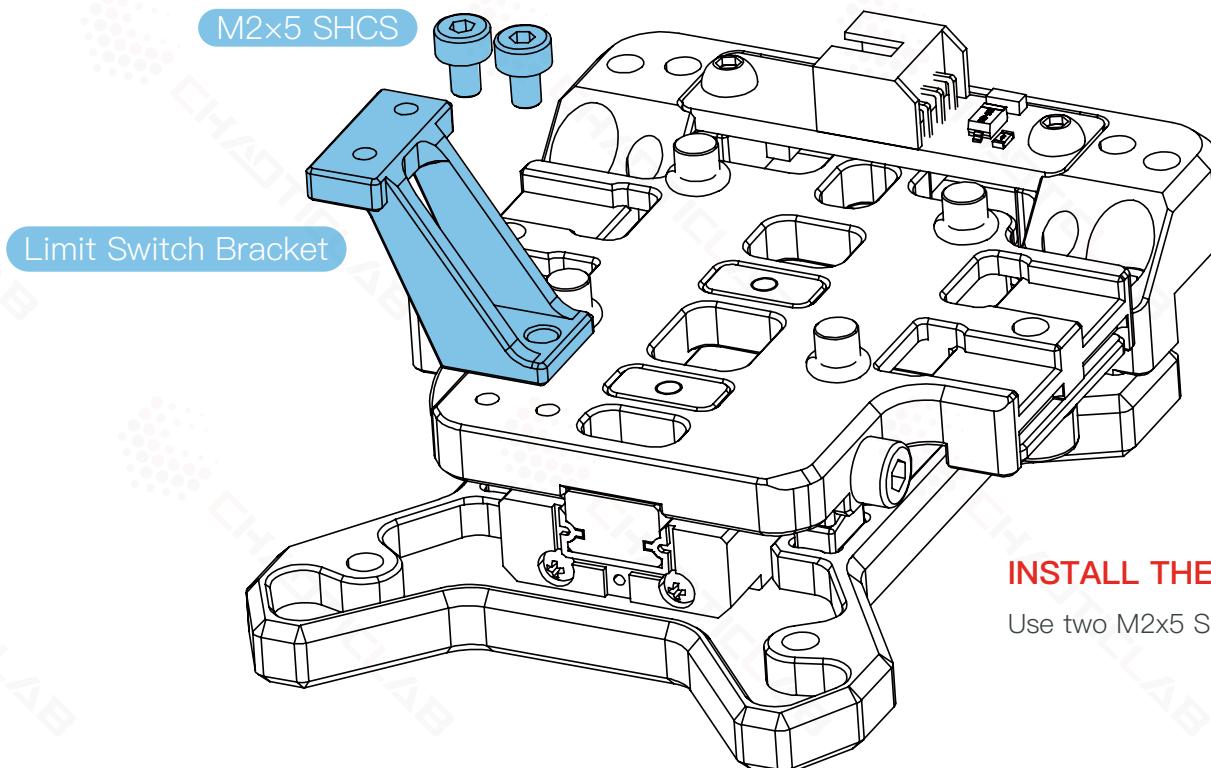


**ZH1.5-3Pin to XH2.54-3Pin Cable (150 mm)**  
1pc



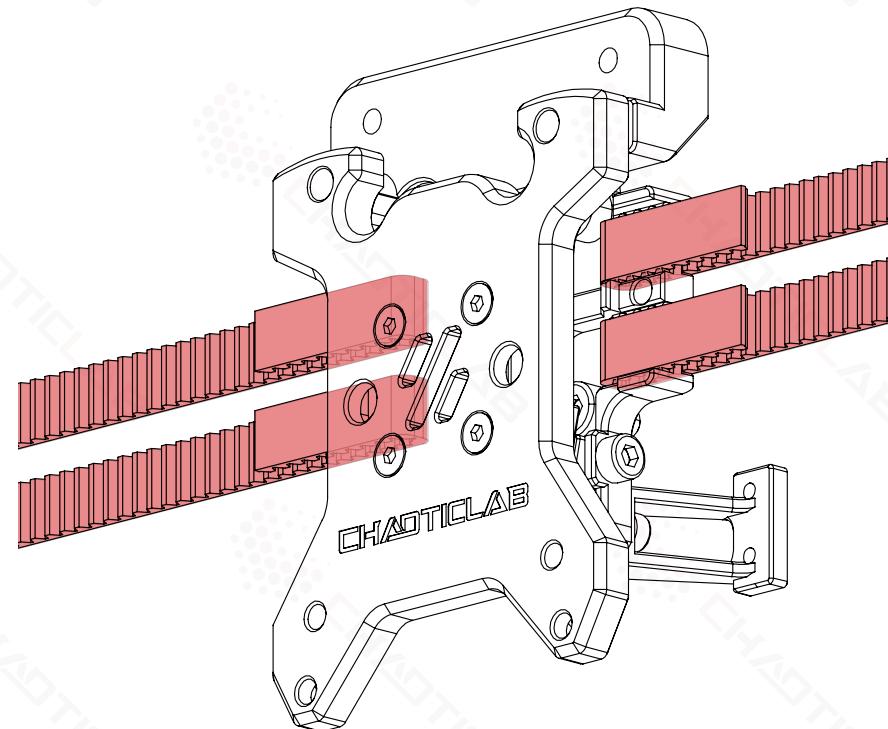
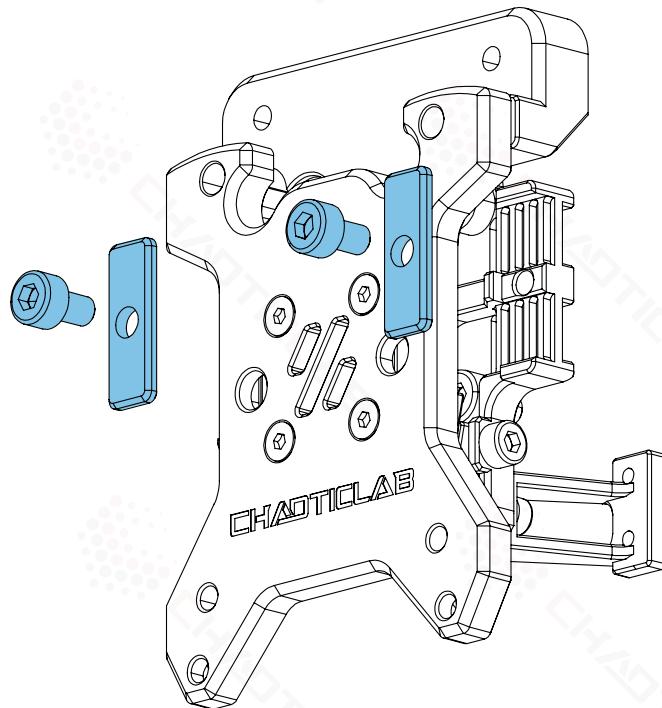
**Socket Head Cap Screw (SHCS)**

M3x12	2pcs
M2x8	2pcs
M2x5	2pcs



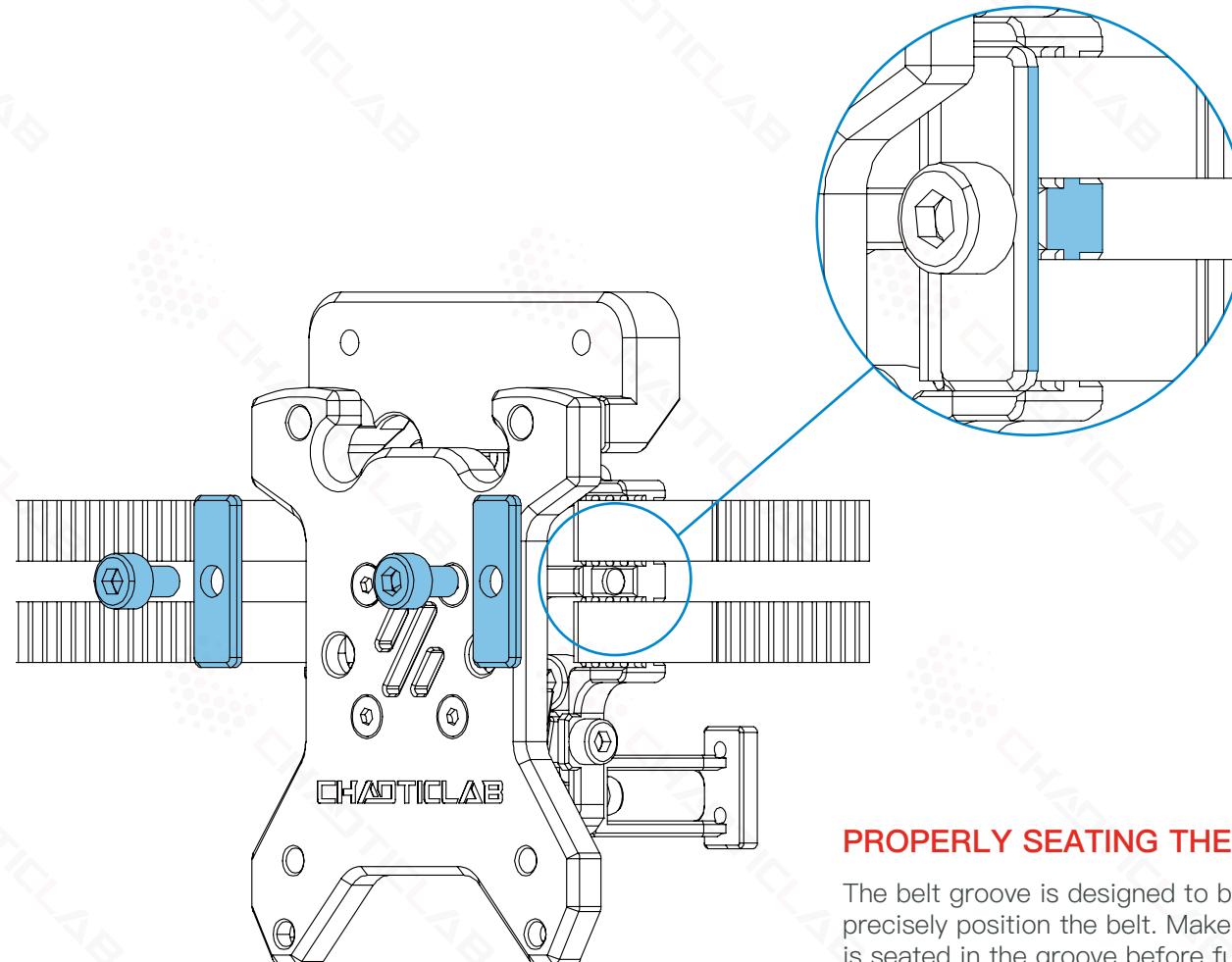
### INSTALL THE LIMIT SWITCH BRACKET

Use two M2x5 SHCS to fix the limit switch bracket to CNC VORON TAP V2.



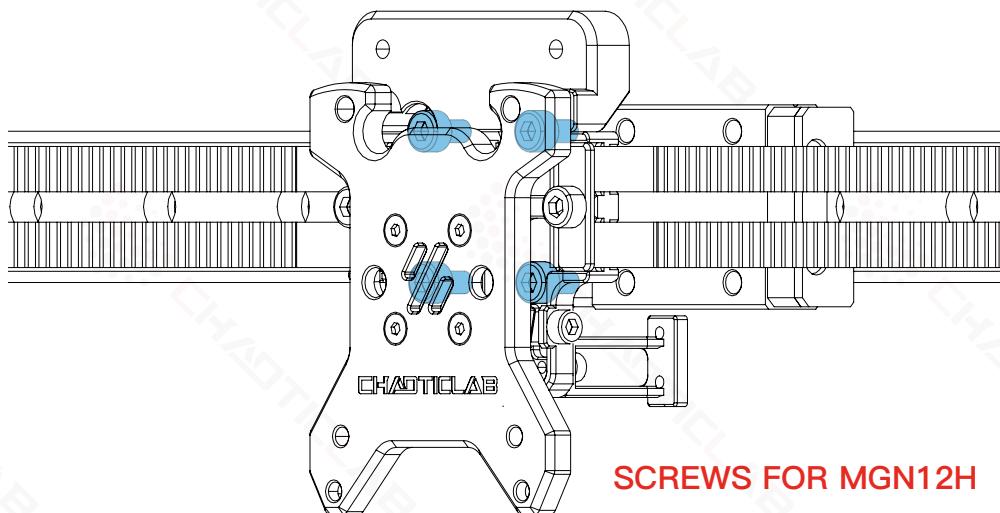
### REMOVE THE BELT CLAMP

Before installing the belt, remove the M3x6 screws and the belt clamp.



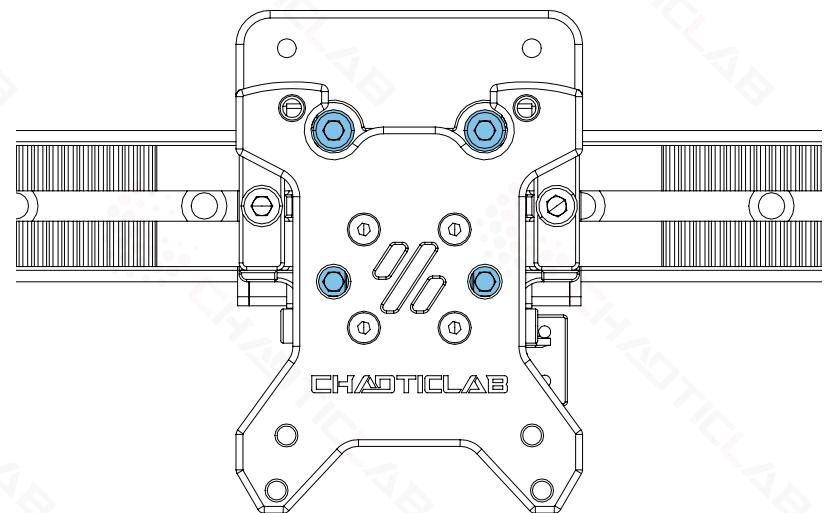
### PROPERLY SEATING THE BELT

The belt groove is designed to be 6mm wide to precisely position the belt. Make sure the belt is seated in the groove before fully tightening the M3x6 screw on the belt clamp.



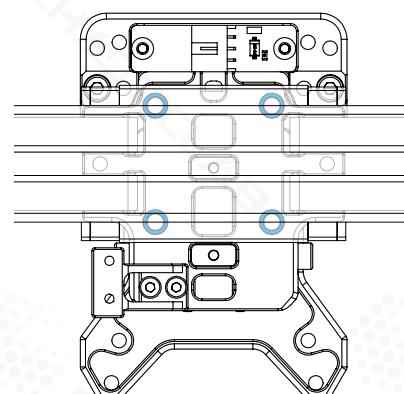
### SCREWS FOR MGN12H

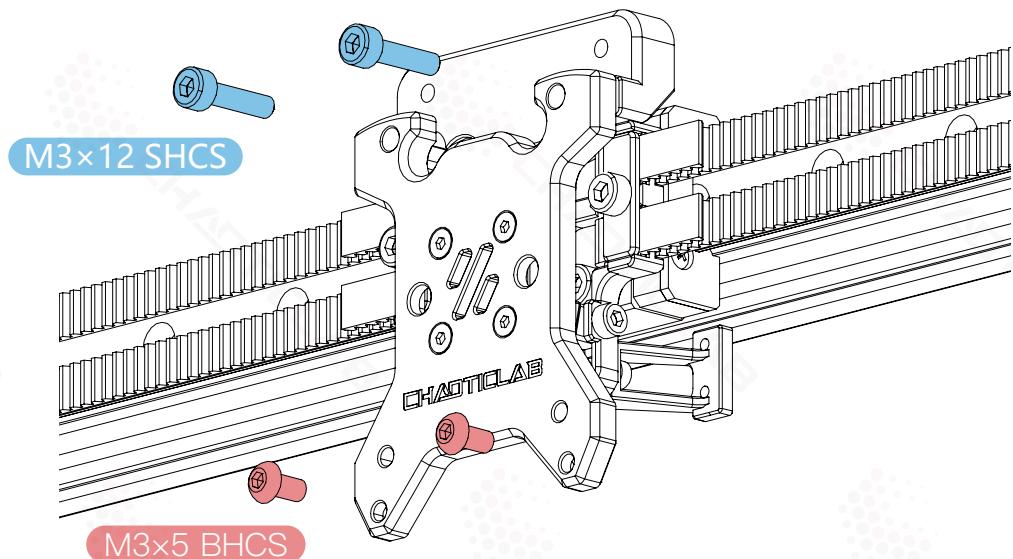
The CNC Voron TAP V2 comes pre-installed with four screws for mounting to the MGN12H rail. When tightening these screws, it is important to synchronize them and keep them locked at the same time. If you fully tighten one screw first, the other may not be able to tighten properly.



### DO NOT REMOVE RUBBER WASHERS

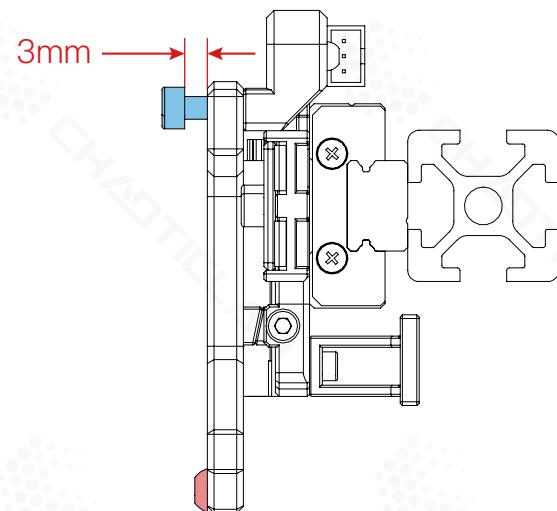
The four rubber washers on the back are there to prevent the screws backing out during installation. Do not remove them during assembly.





### SCREWS FOR MOUNTING THE CW2

M3x5 BHCS is a commonly used size, M3x3 BHCS or even M3x2 BHCS may work better.

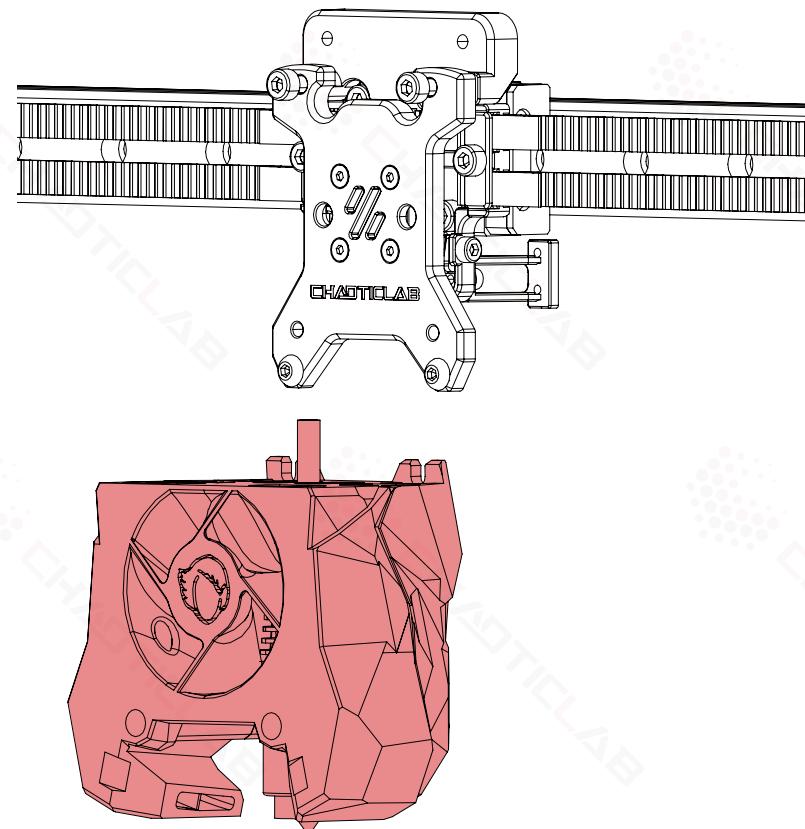


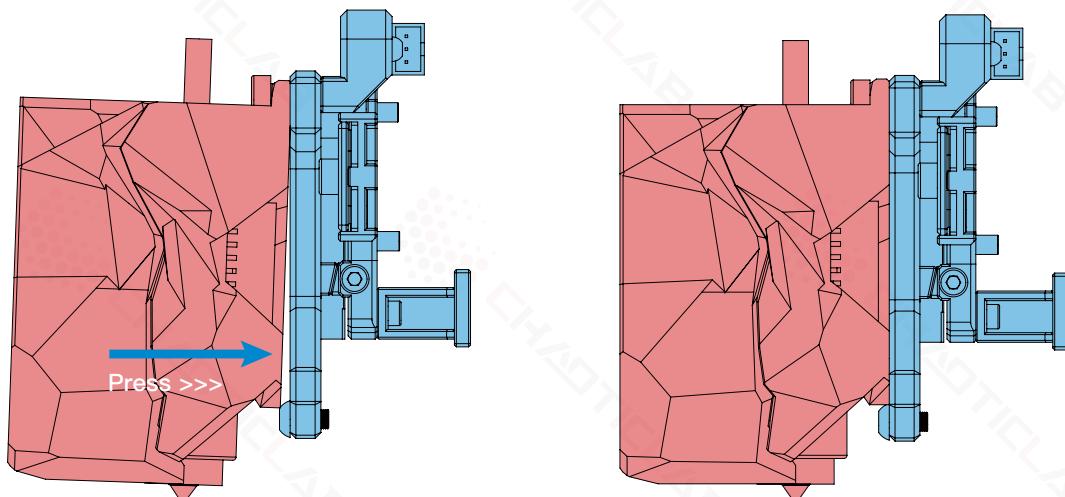
### LEAVE ROOM FOR THE TOOLHEAD

Thread the M3 x 12 SHCS directly into the CNC part, but do not tighten fully. Leave approximately 3 mm of thread to allow clearance for mounting the toolhead.

INSTALL ONTO VORON STEALTHBURNER

WWW.CHAOTICLAB.XYZ



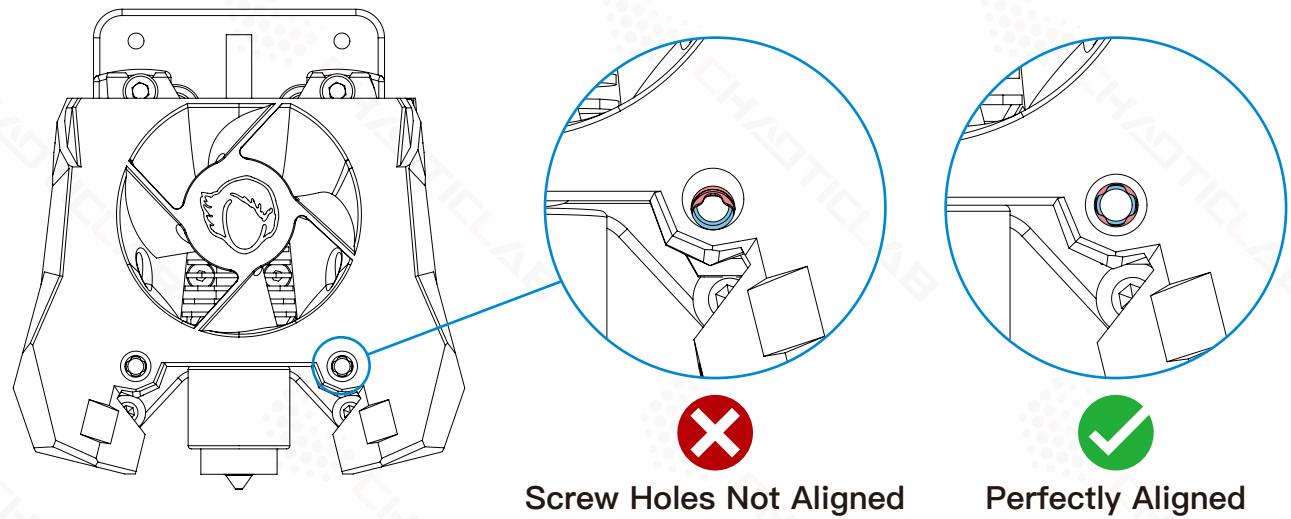


### PRESS TOOLHEAD ONTO TAP

After inserting the tool head assembly into the 3mm gap left by the two M3x12 screws mentioned on page 05, please press the toolhead along the direction indicated by the blue arrow in the figure until the back of the tool head is completely attached to the TAP.

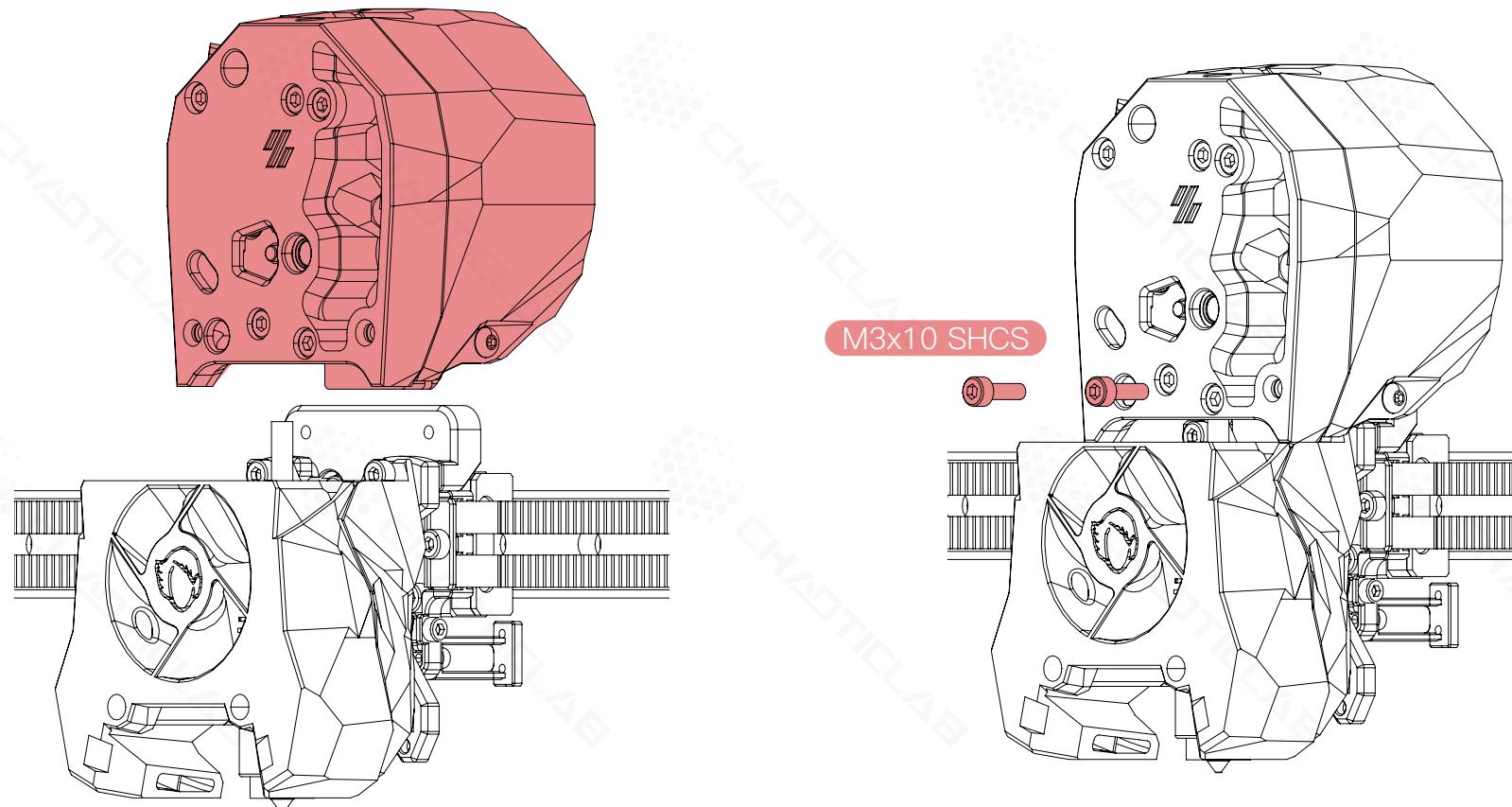
### NOTE

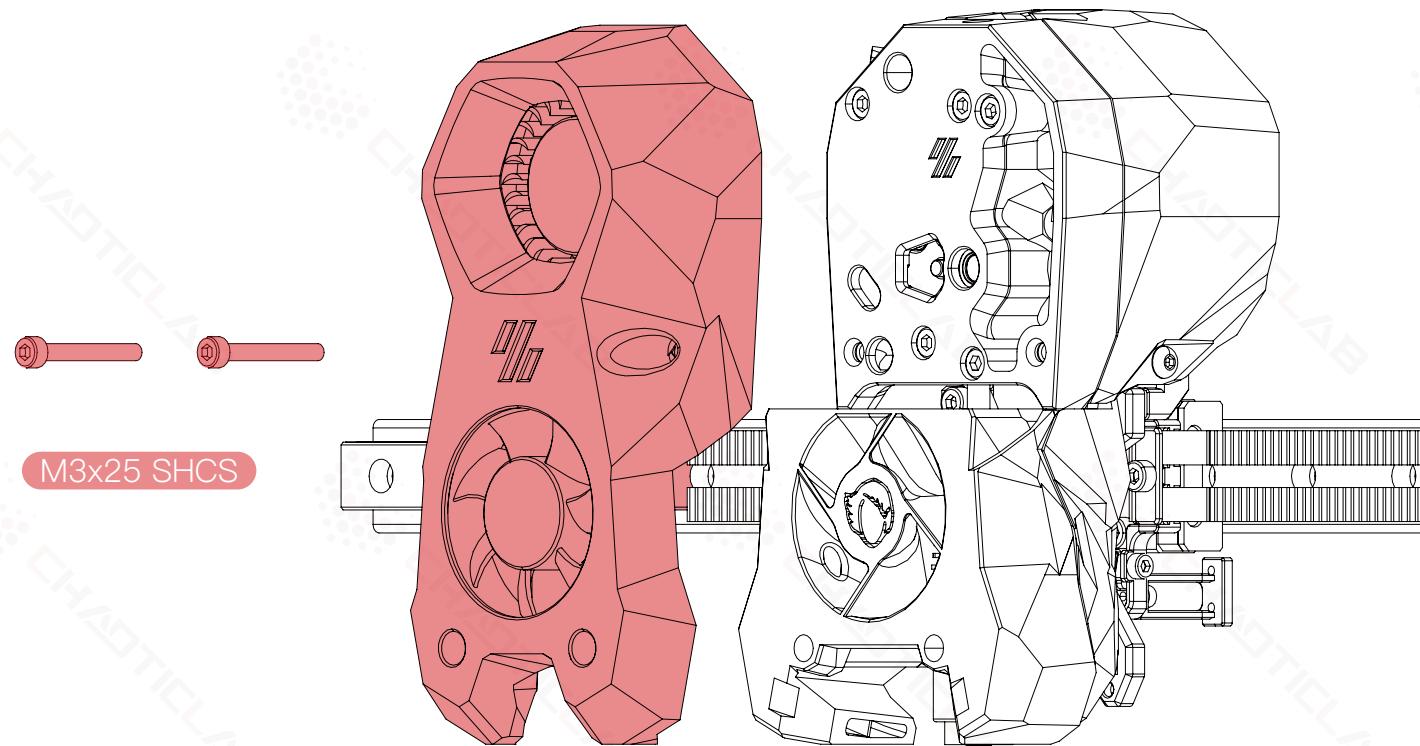
Because CNC machining is more precise than printed parts riveting copper nuts, if the tool head assembly is not installed in place, it will cause the subsequent screws to be unable to lock in. Therefore, before proceeding to the next step, please check whether the tool head assembly is already installed in place as shown in the figure.



INSTALL ONTO VORON STEALTHBURNER

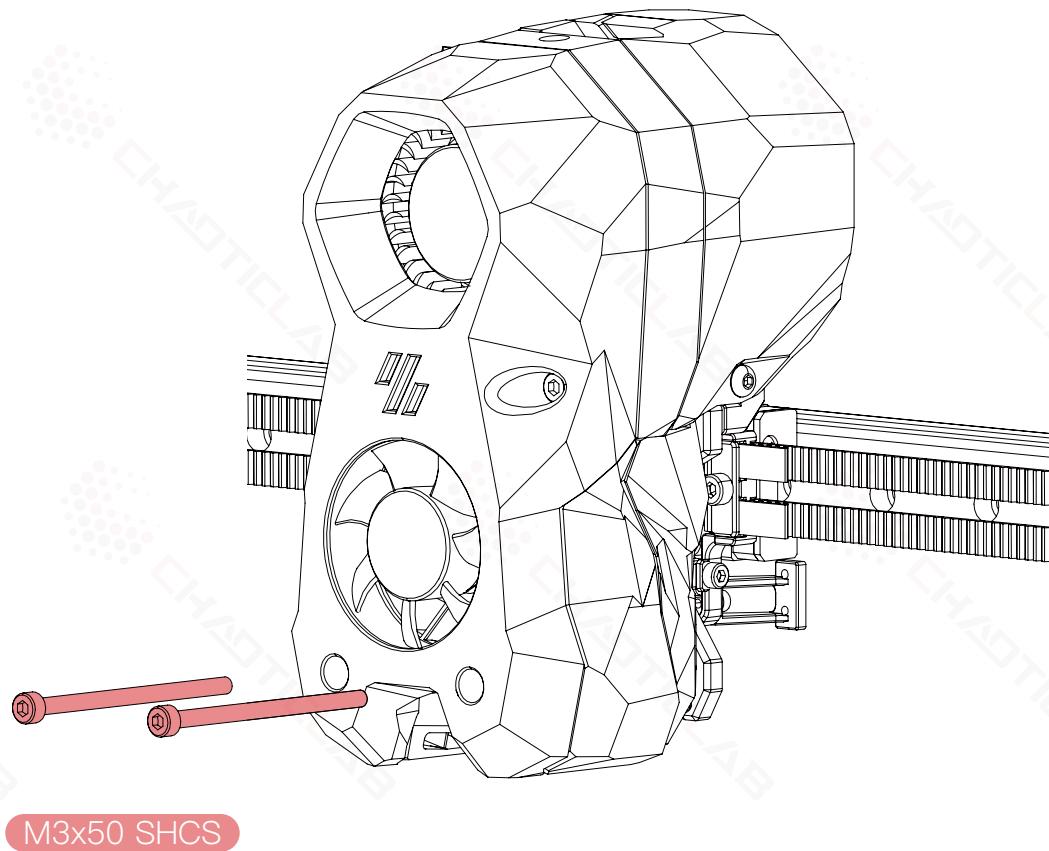
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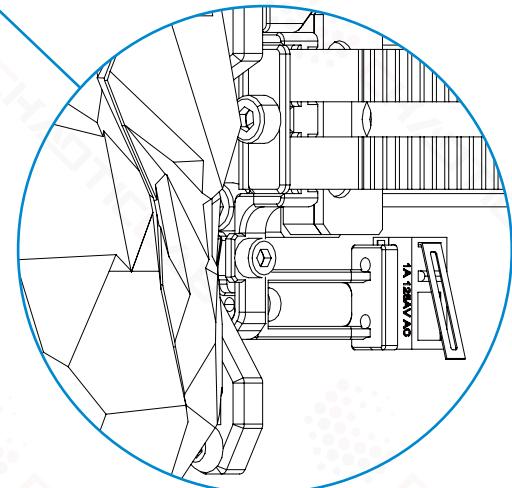
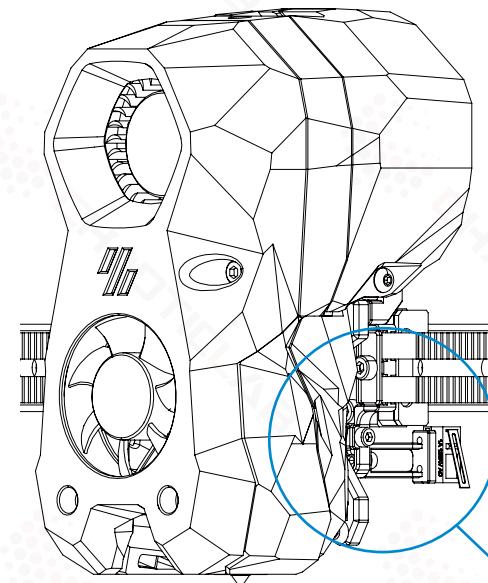
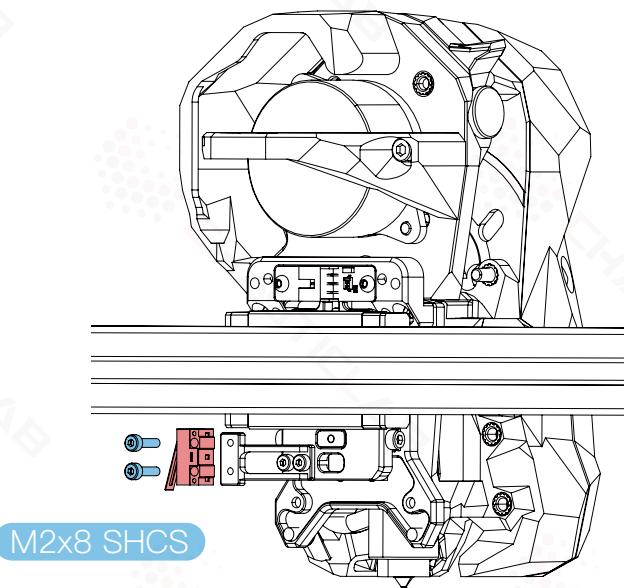




INSTALL ONTO VORON STEALTHBURNER

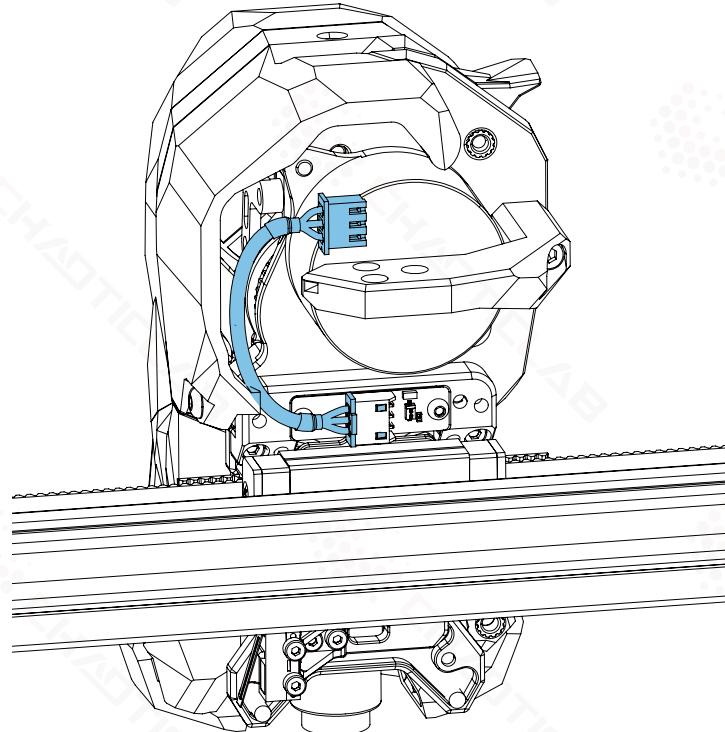
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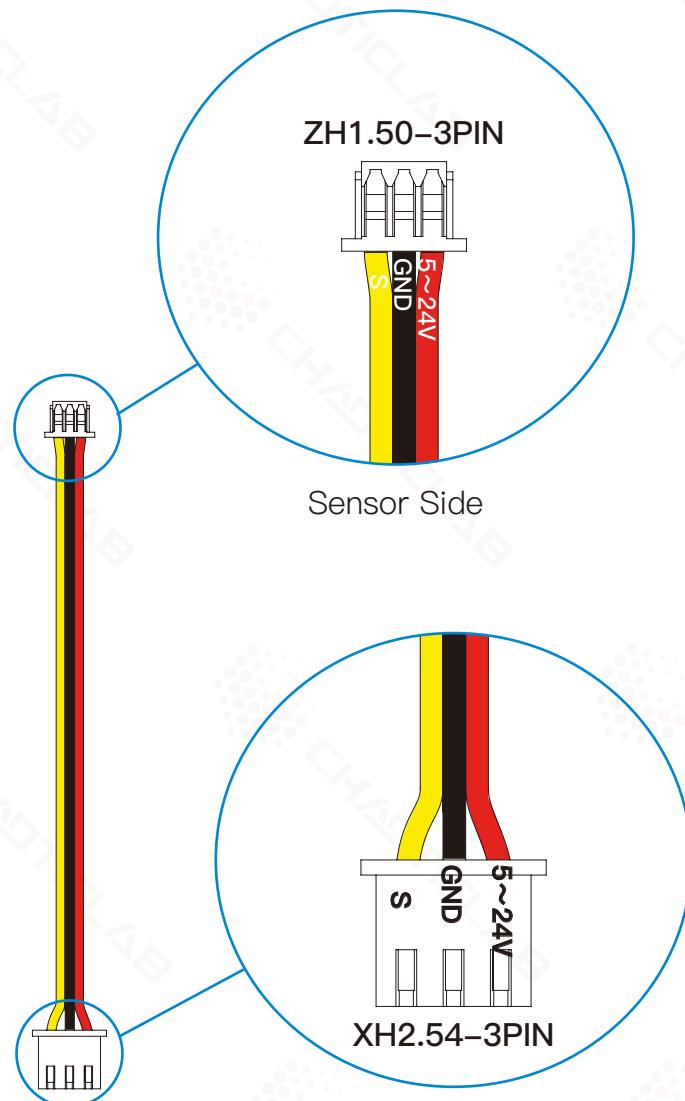
### END-STOP SWITCH

Install the limit switch in the specified orientation, with the handle facing downward as shown.

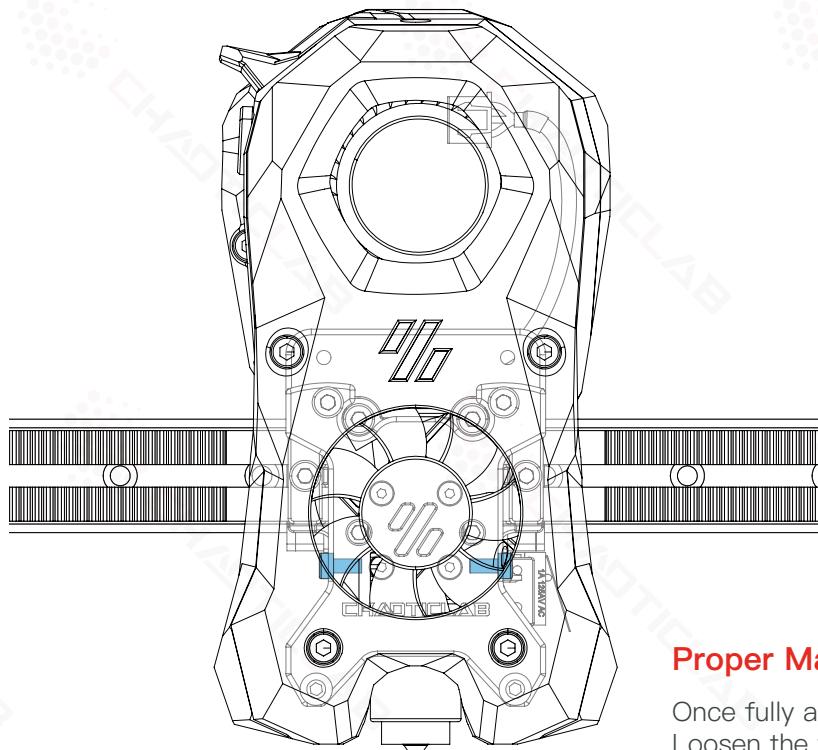


### Cable Length

If not using a tool board, prepare a cable of sufficient length to match your machine.

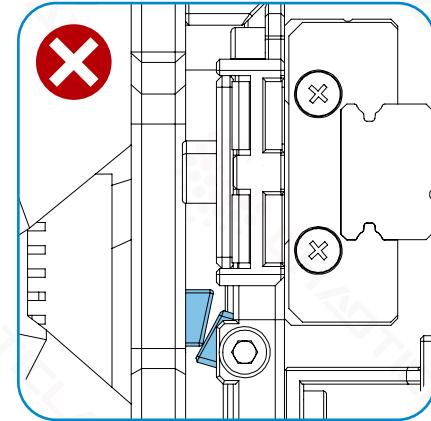
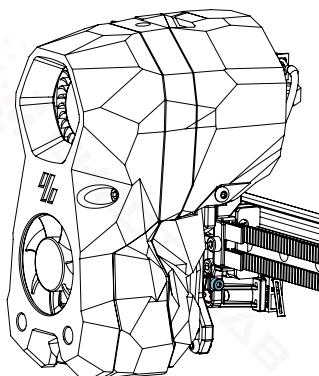


Board Side

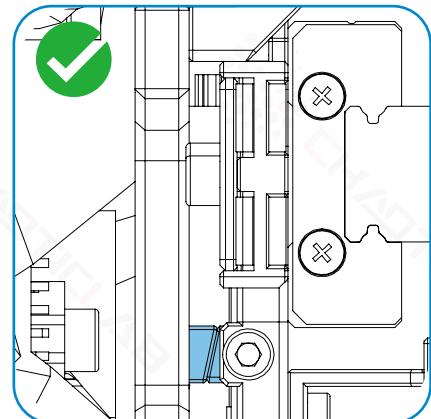


### Proper Magnet Positioning

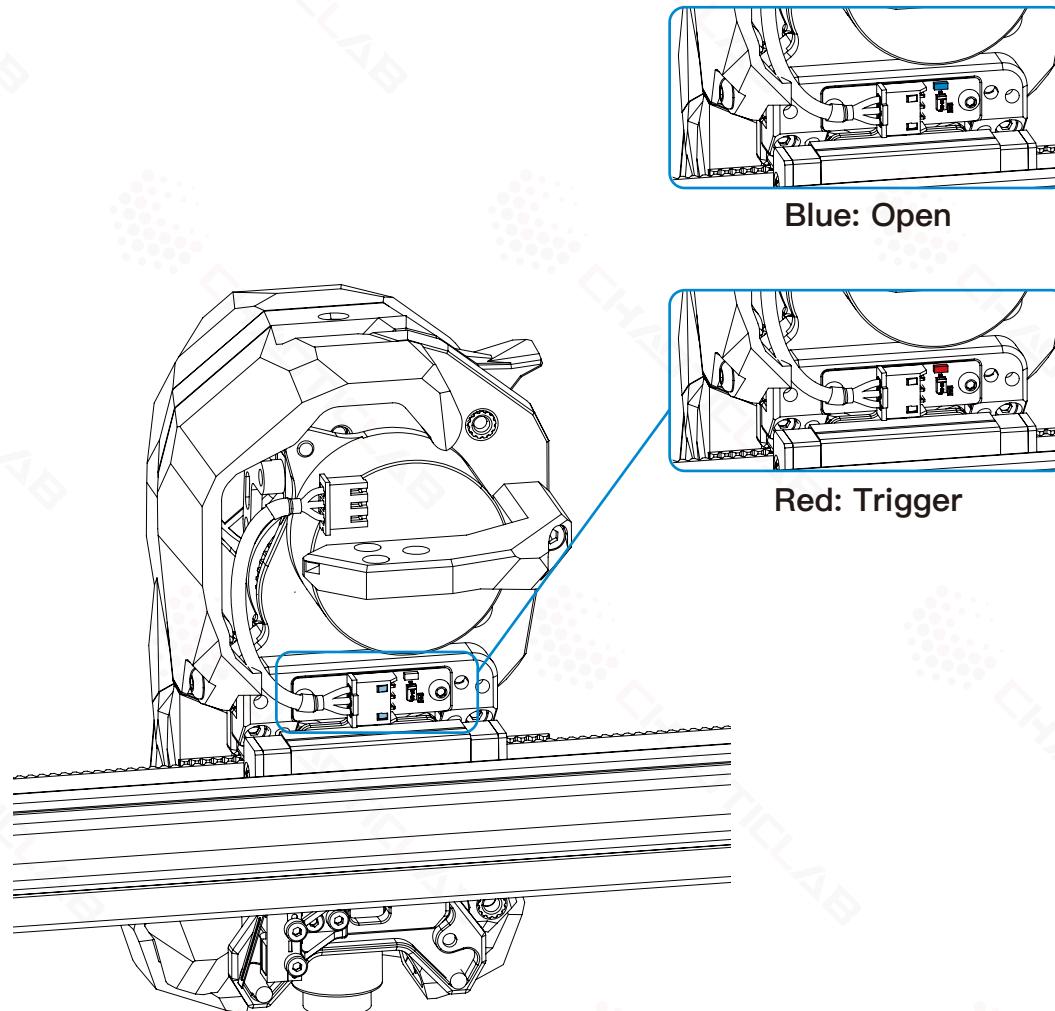
Once fully assembled, adjust the magnet assembly:  
Loosen the two screws highlighted in the image,  
Position the magnet in the correct orientation as shown.  
Tighten the screws to secure the magnet assembly in place.



Wrong Position

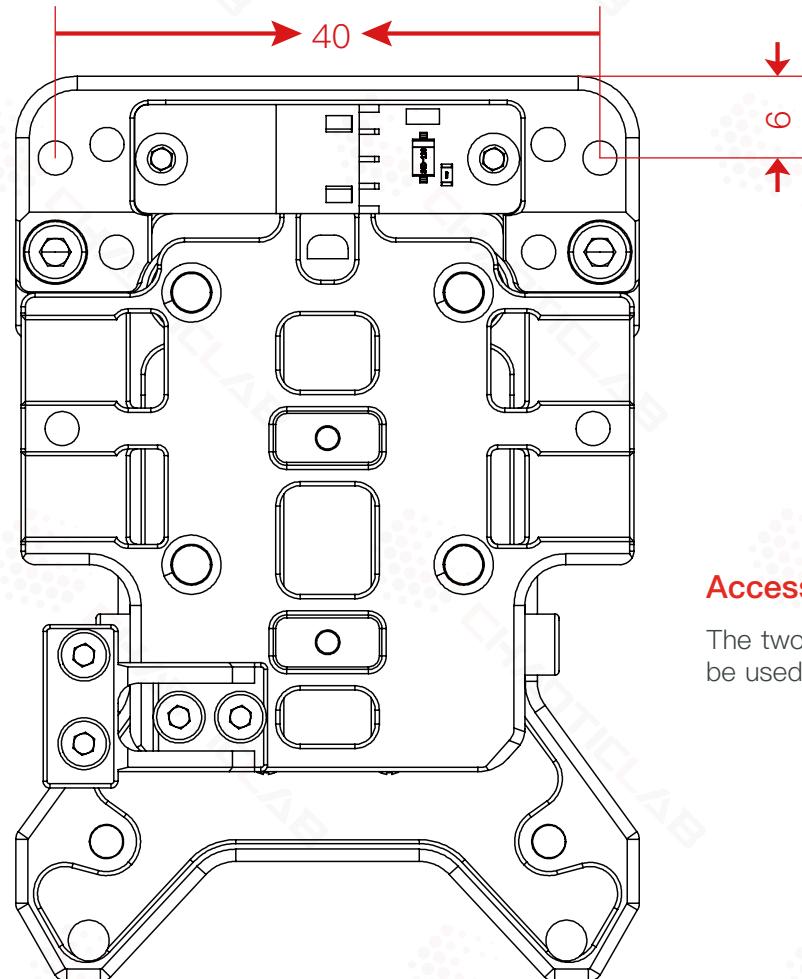


Correct Position



Blue: Open

Red: Trigger



### Accessory Installation Holes

The two extra M3 screw holes on the back are reserved. They can be used to install a CAN bus cable bracket or other accessories.



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**Website**

[www.chaoticlab.xyz](http://www.chaoticlab.xyz)

**GitHub**

[github.com/chaoticlab](https://github.com/chaoticlab)

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