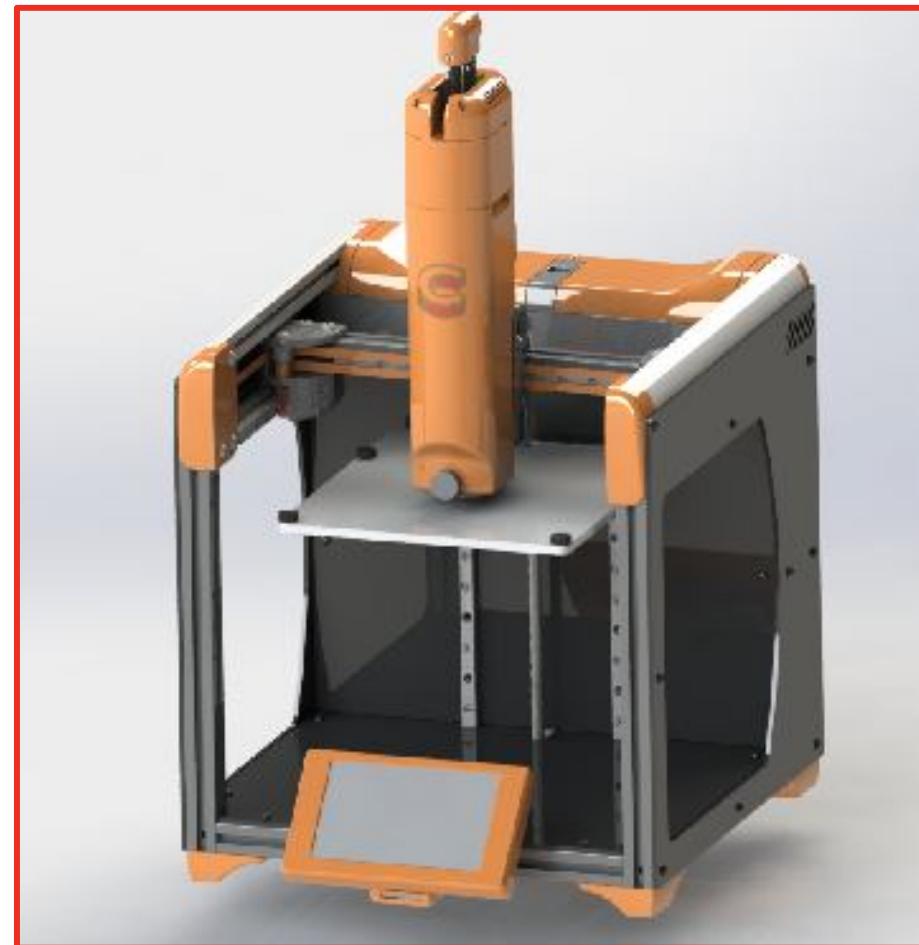


COCOA PRESS



ASSEMBLY MANUAL

Break Free from the Mold.

VERSION 2023-03-03



Before you begin on your journey, a word of caution.

This machine can burn and electrocute you if you are not careful.

Please, read the entire manual before you start assembly.

COCOA PRESS
COCOA Inc.

<u>Introduction</u>	<u>04</u>	<u>X Axis</u>	<u>108</u>
<u>Hardware</u>	<u>08</u>	<u>A/B Belts</u>	<u>125</u>
<u>Extrusion prep</u>	<u>12</u>	<u>Print Bed</u>	<u>138</u>
<u>Frame</u>	<u>17</u>	<u>Toolhead</u>	<u>150</u>
<u>A/B Drives</u>	<u>68</u>	<u>Electronics & Wiring</u>	<u>184</u>
<u>A/B Idlers</u>	<u>83</u>	<u>Skirts & Panels</u>	<u>207</u>
<u>Z Axis</u>	<u>91</u>	<u>Tophat</u>	<u>228</u>

PART PRINTING GUIDELINES

The Cocoa Press team has provided the following print guidelines for you to follow in order to have the best chance at success with your parts. There are often questions about substituting materials or changing printing standards, but we recommend you follow these.

3D PRINTING PROCESS Fused Deposition Modeling (FDM)	INFILL TYPE Grid, Gyroid, Honeycomb, Triangle or Cubic
MATERIAL ABS/ASA/PETG	INFILL PERCENTAGE Recommended: 40%
LAYER HEIGHT Recommended: 0.2mm	WALL COUNT Recommended: 4
EXTRUSION WIDTH Recommended: Forced 0.4mm	SOLID TOP/BOTTOM LAYERS Recommended: 5

FILE NAMING

By this time you should have already downloaded our STL files. You might have noticed that we have used a unique naming convention for the files. This is how to use them.

PRIMARY COLOR

B_Drive_Frame_Lower_x1.stl

These files will have nothing at the start of the filename.

ACCENT COLOR

[a]_Tensioner_Knob_x2.stl

We have added “[a]” to the front of any STL file that is intended to be printed with accent color. The parts are marked with the Cocoa Press logo in the manual when they first appear.

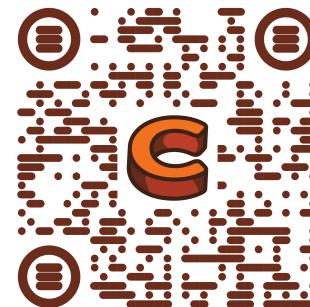
QUANTITY REQUIRED

[a]_Thumb_Nut_x3.stl

Any file that ends with “_x#” is telling you the quantity of that part required to build the machine.

STL FILE LIST

We have put together a comprehensive list of all the STL files used in this manual you can use this to keep track of parts you have printed, identify the names of printed parts, and/or reference where they are used in the body of this manual. Simply copy the document from the link and you can markup a local copy for yourself.



<https://cocoapress.com>

HOW TO GET HELP

If you need assistance with your build, we're here to help. Head on over to our contact page and submit your questions.



<https://cocoapress.com/pages/contact>

**Discord**

[https://discord.gg/
cocoapress](https://discord.gg/cocoapress)

**GitHub**

<https://github.com/cocoapress>

REPORTING AN ISSUE

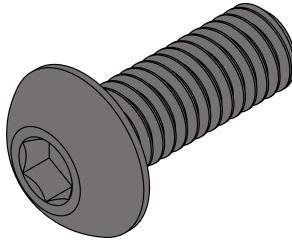
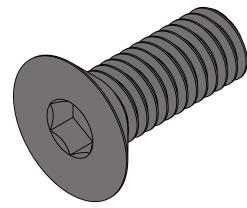
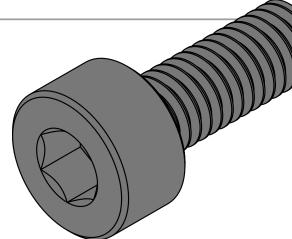
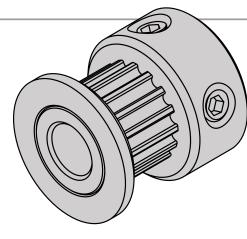
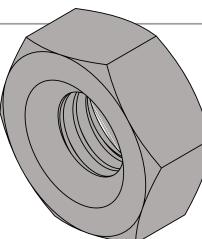
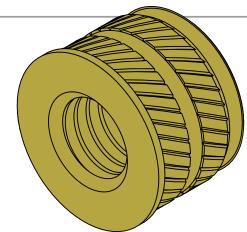
Should you find an issue in the documentation or have a suggestion for an improvement please consider opening an issue on GitHub (<https://github.com/cocoapress/issues>). When raising an issue please include the relevant page numbers and a short description; annotated screenshots are also very welcome. We periodically update the manual based on the feedback we get.

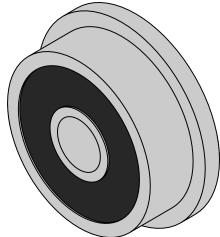
THIS IS JUST A REFERENCE

This manual is designed to be a simple reference manual. Building a printer can be a complex endeavour and for that reason we recommend downloading the CAD files off our Github repository if there are sections you need clarification on. It can sometimes be easier to follow along when you have the whole assembly in front of you.

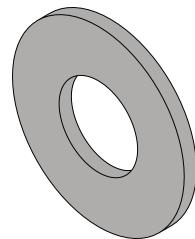


<https://github.com/cocoapress>

	<p>BUTTON HEAD CAP SCREW (BHCS)</p> <p>Metric fastener with a domed shaped head and hex drive. Most commonly found in locations where M3 fasteners are used.</p> <p>ISO 7380-1</p>		<p>FLAT HEAD CAP SCREW (FHCS)</p> <p>Metric fastener with a cone shaped head and a flat top.</p> <p>ISO 10642</p>
	<p>SOCKET HEAD CAP SCREW (SHCS)</p> <p>Metric fastener with a cylindrical head and hex drive. The most common fastener used on the machine.</p> <p>ISO 4762 / DIN 912</p>		<p>PULLEY</p> <p>GT2 pulley used on the motion system of the machine.</p>
	<p>HEX NUT</p> <p>Hex nuts couple with bolts to create a tight, secure joint. You'll see these used in both M2 and M3 variants throughout this guide.</p> <p>ISO 4032 / DIN 934</p>		<p>HEAT SET INSERT</p> <p>Heat the inserts with a soldering iron so that they melt the plastic when installed. As the plastic cools, it solidifies around the knurls and ridges on the insert for excellent resistance to both torque and pull-out.</p>

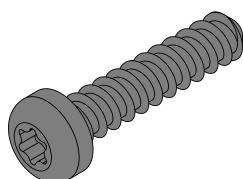
**F695 BEARING**

A ball bearing with a flange used in various gantry locations.

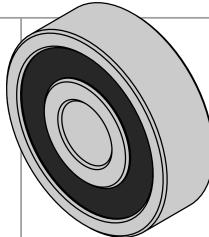
**M3 SHIMS**

Not to be confused with stamped washers. These are used in all M3 call-out locations in this manual.

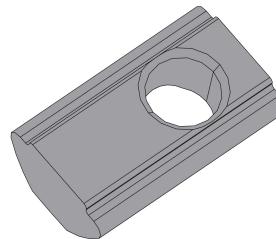
3x6x0.5 DIN 988

**SELF TAPPING SCREW**

Fastener with a pronounced thread profile that is screwed directly into plastic.

**MAKERBEAM T-NUT**

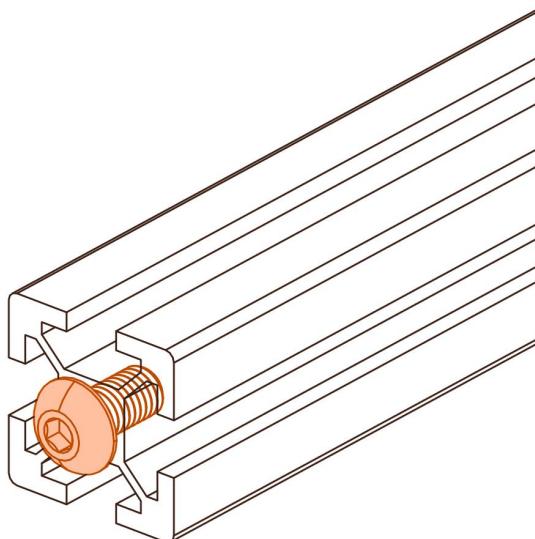
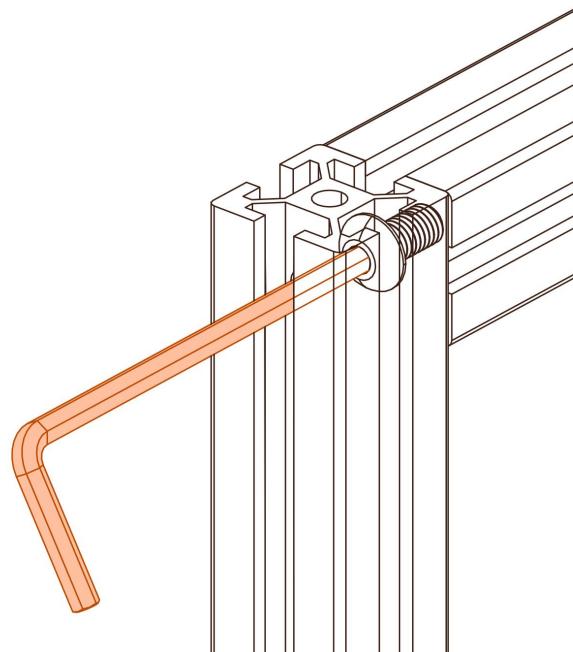
A ball bearing used in various gantry locations.

**POST INSTALL T-NUT**

Nut that can be inserted into the slot of an aluminium profile. Used in both M3 and M5 variants throughout this guide. Often also called "roll-in t-nut".

**ATTENTION BUBBLE**

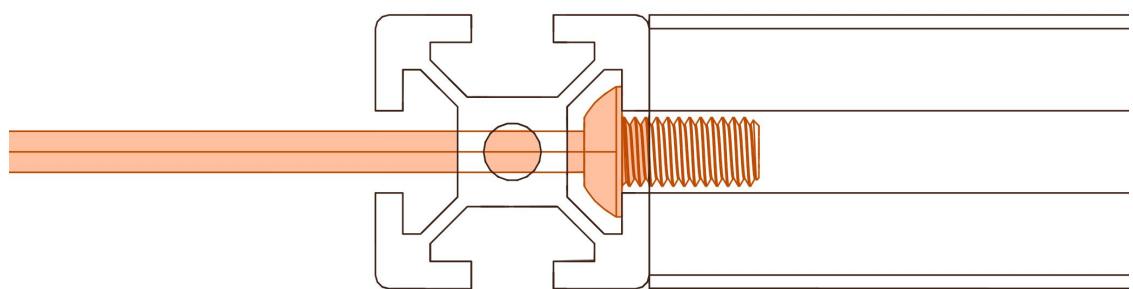
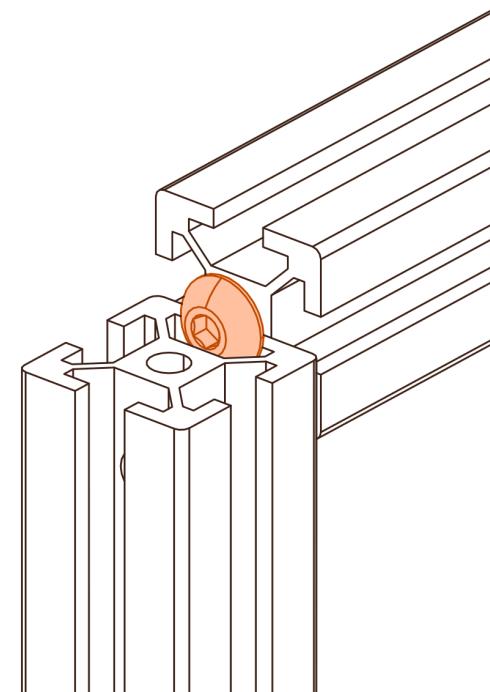
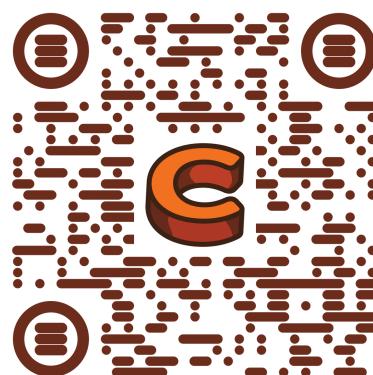
This logo denotes steps that are common areas that mistakes can occur.

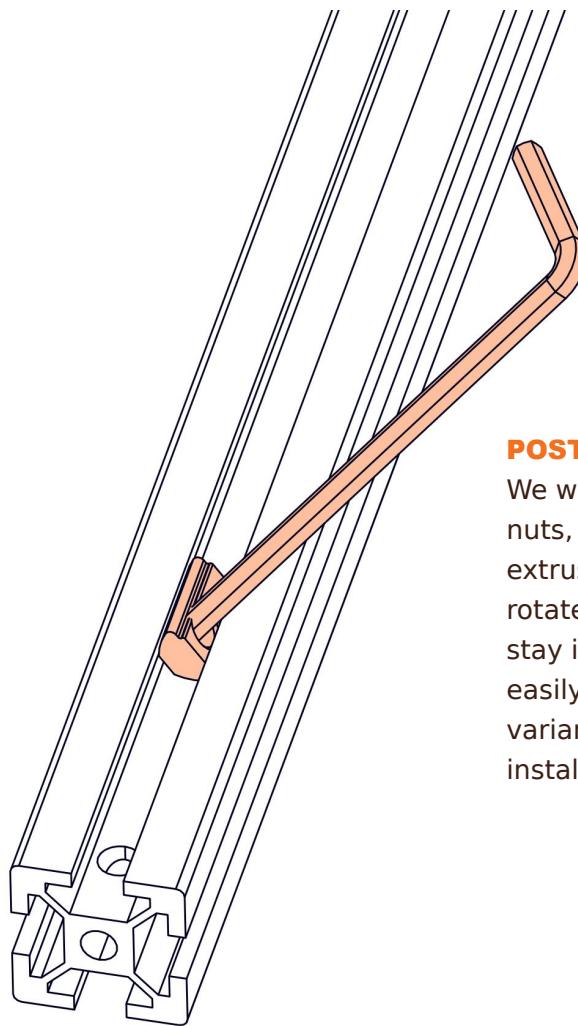
**BLIND JOINT BASICS**

Blind Joints provide a cost-effective and rigid assembly method for joining extrusions. They will be used throughout the frame assembly.

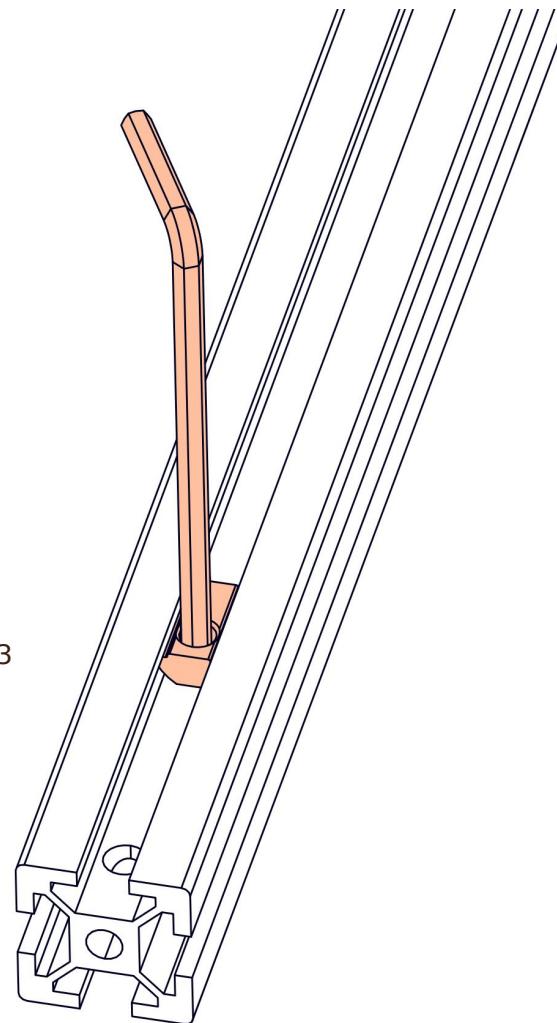
The head of the BHCS is slid into the channel of another extrusion and securely fastened through a small access hole in the extrusion.

If you've never assembled one before we recommend watching our [assembly guide](#).



**POST INSTALL T-NUTS**

We will be using a lot of post install T-nuts, these can be inserted into the extrusion slots at an angle and then rotated to clip into place, they should stay in position and not slide around easily. We will be using both M5 and M3 variants during the build so be sure to install the correct ones at each step

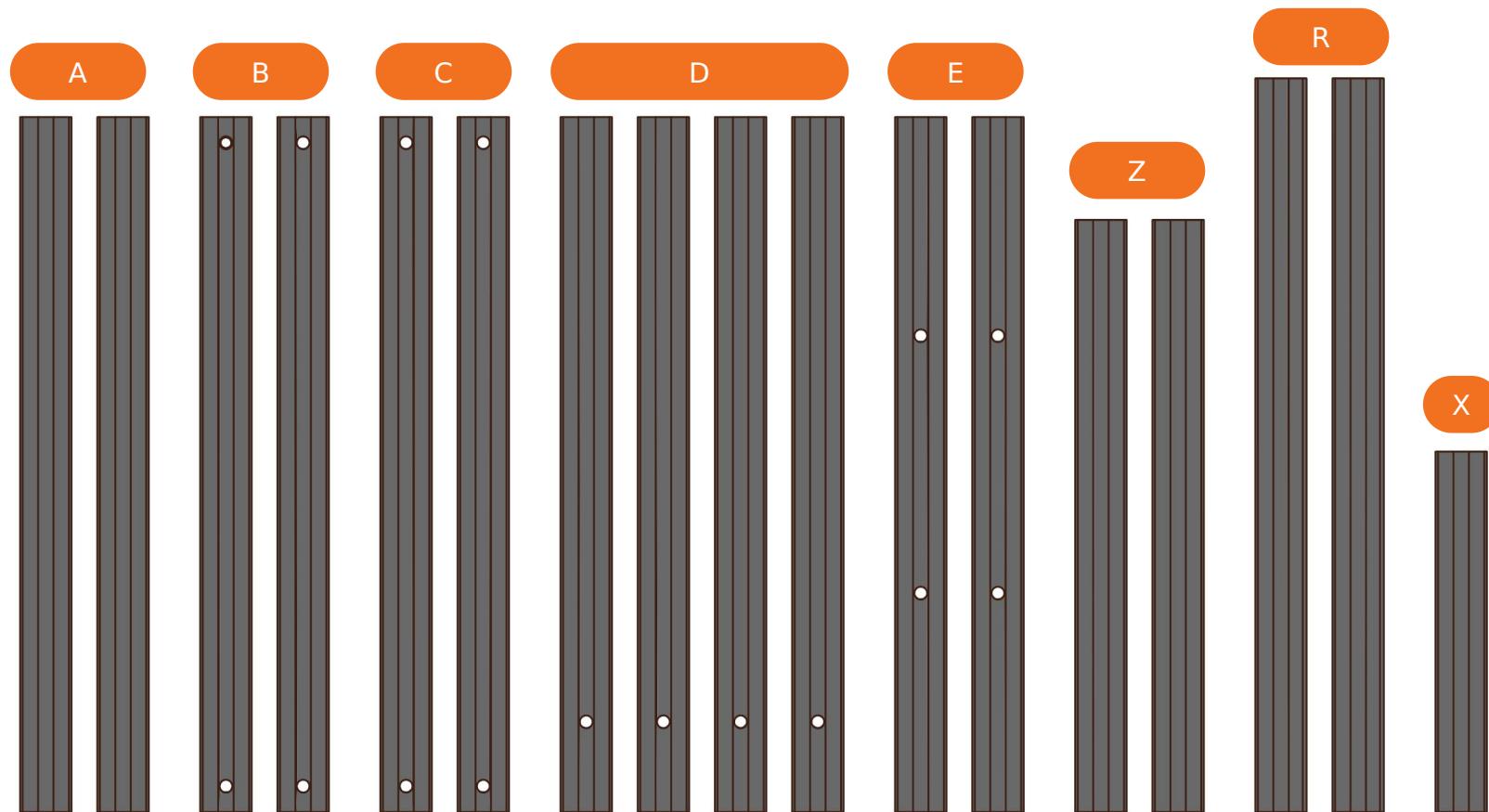


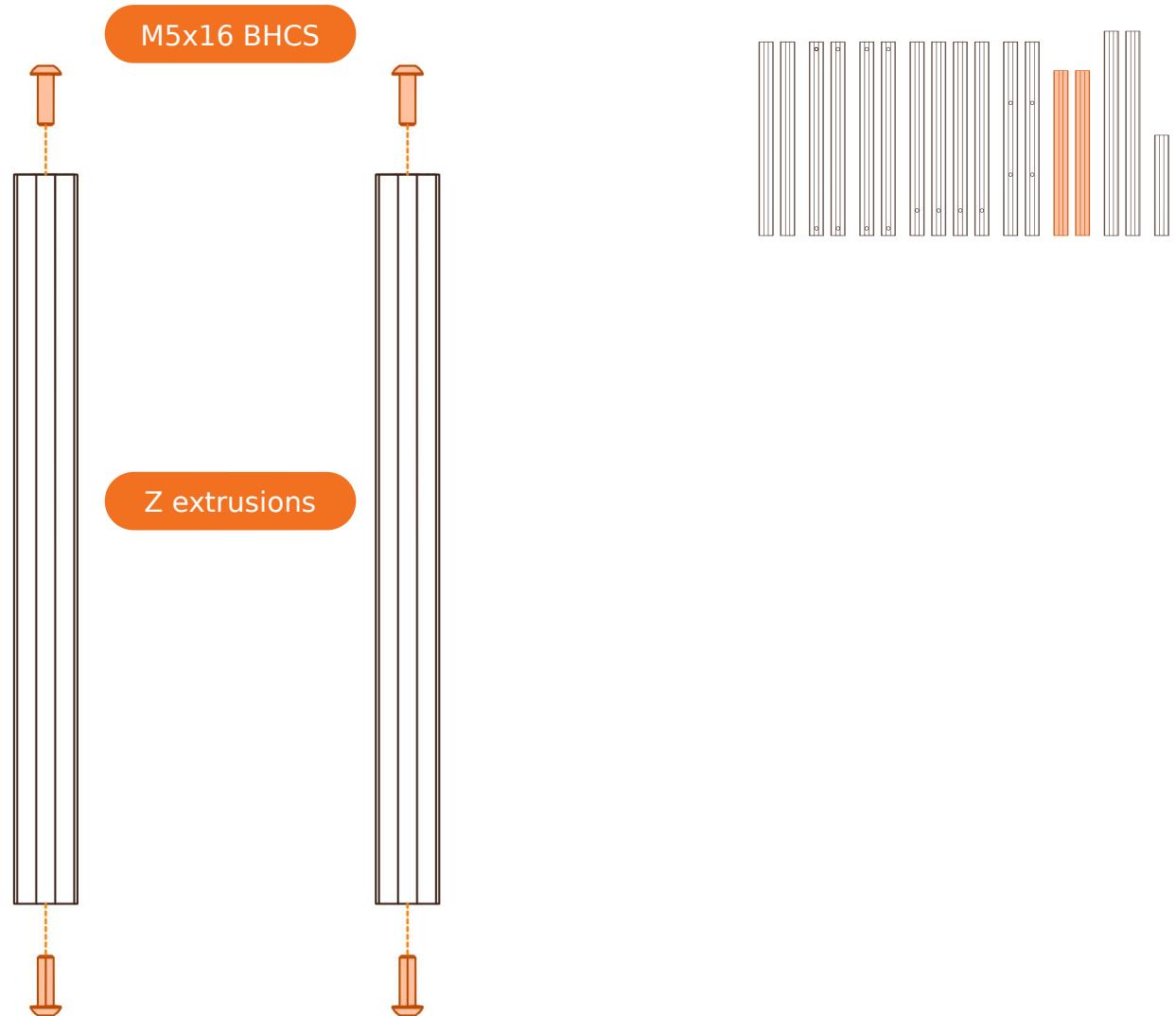
**MULTIPLE VIEWS**

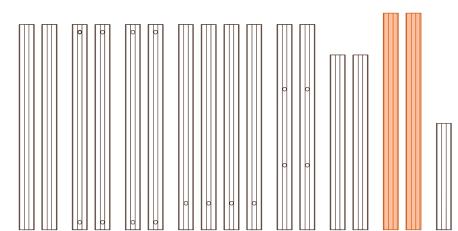
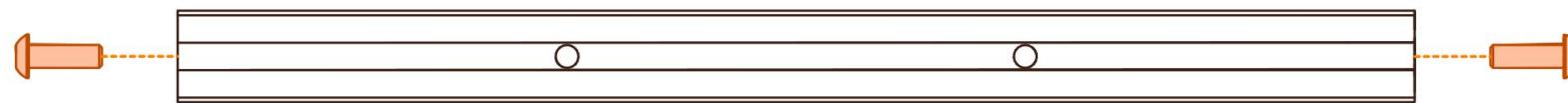
Notes about the views

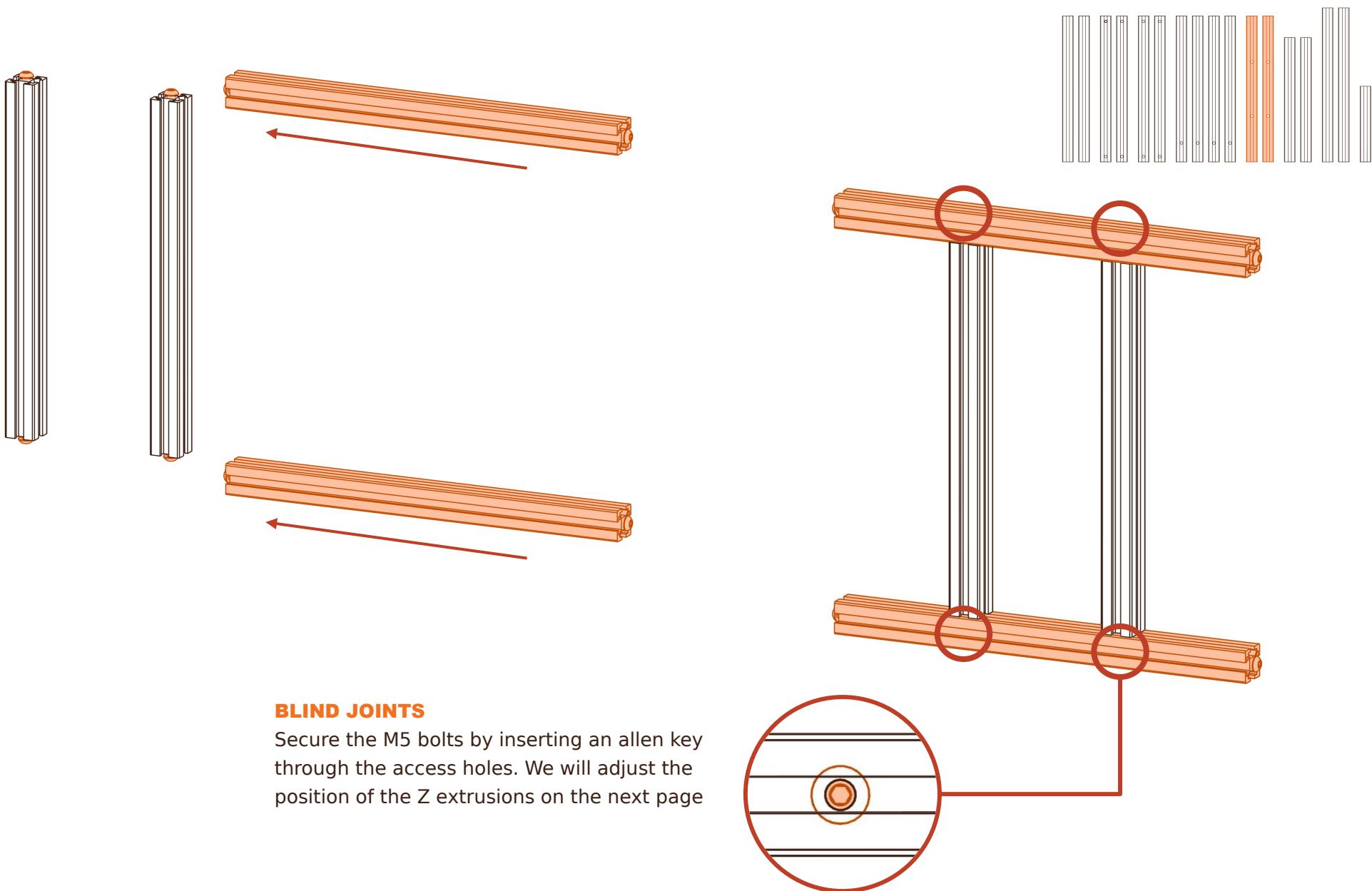
SORT YOUR EXTRUSIONS

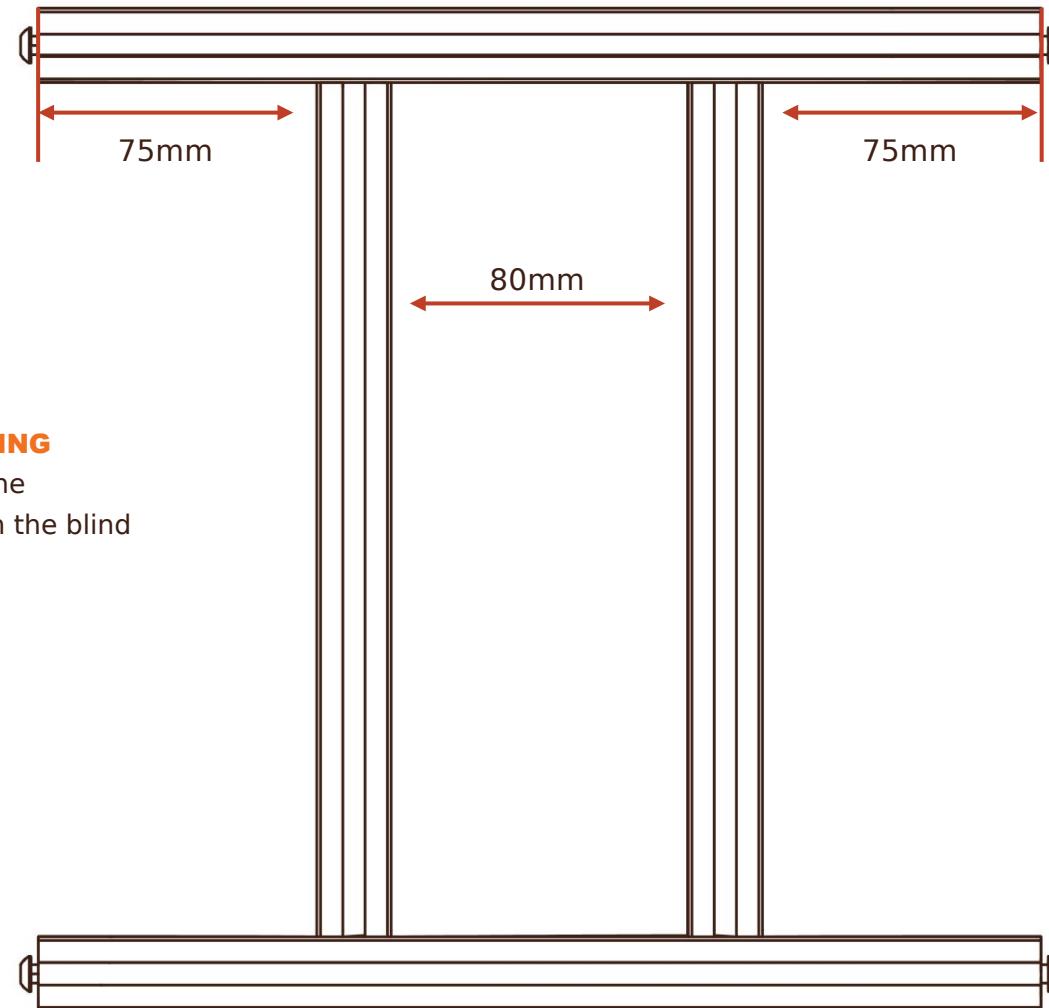
Collect your extrusions and sort them by length. We will highlight the extrusions used in each step and label them as shown on this page.



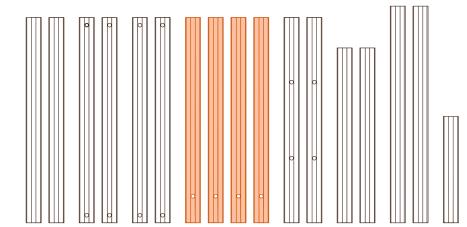
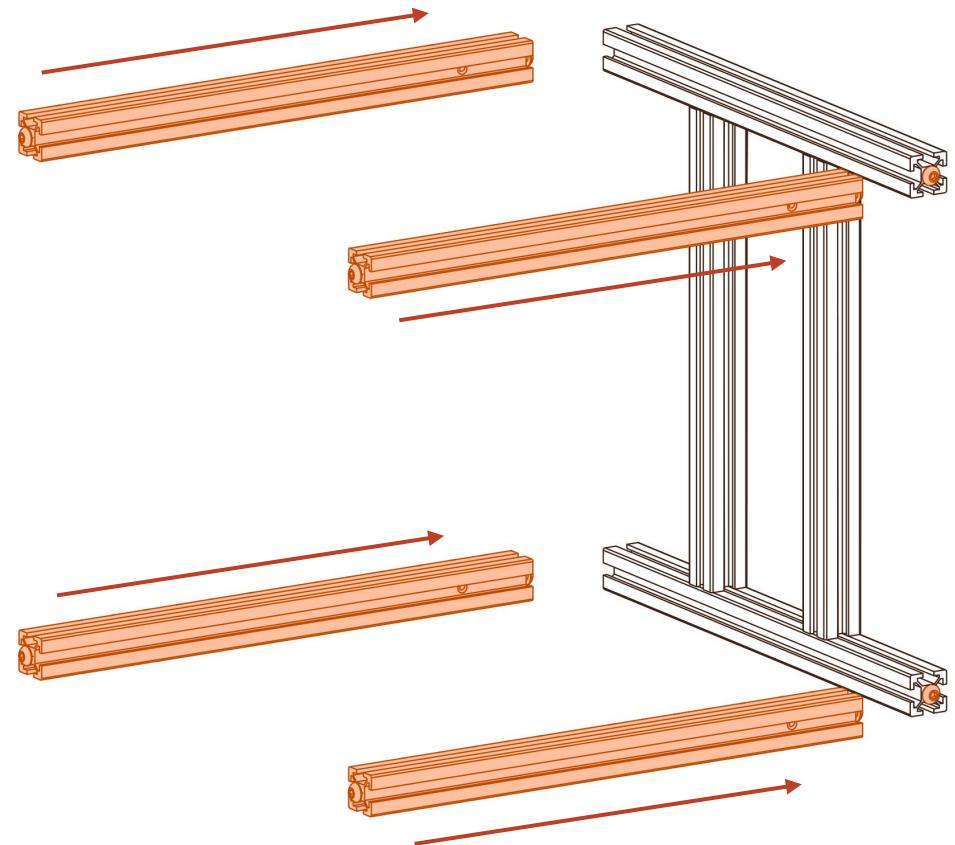
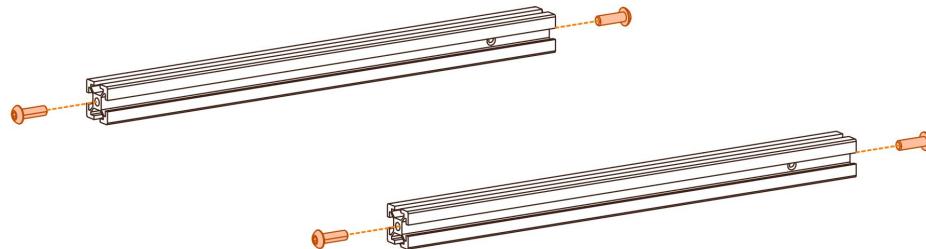


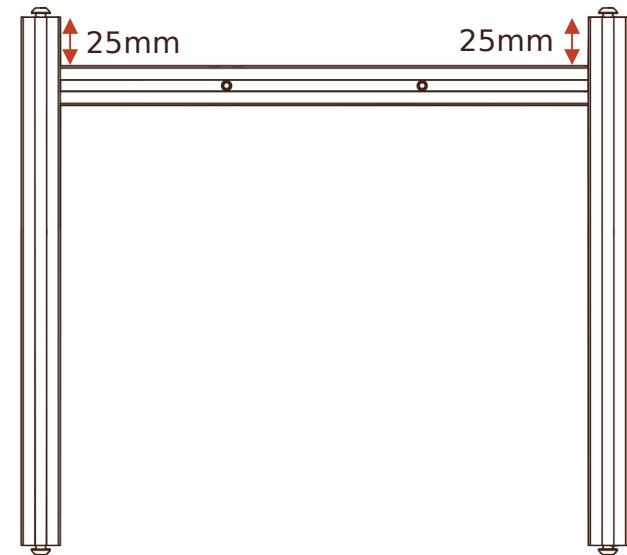
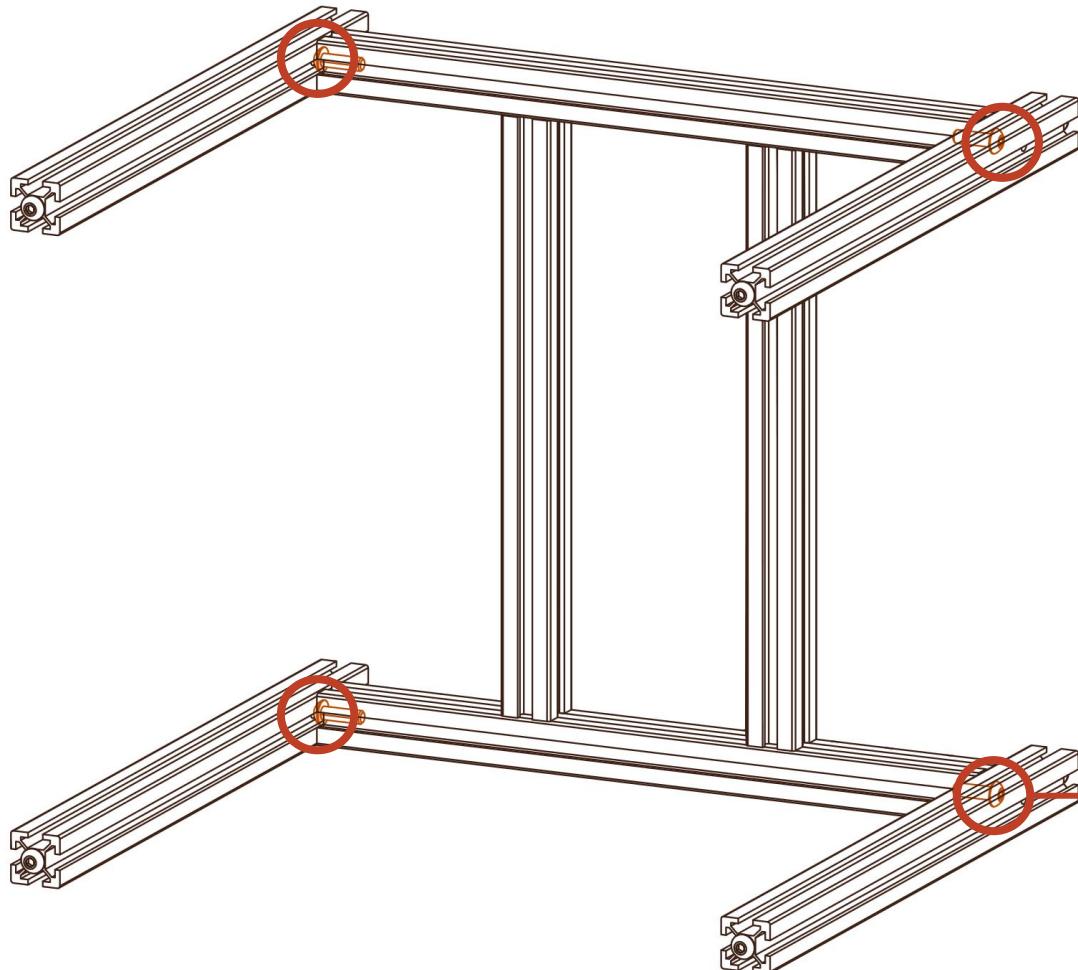
**E extrusions****M5x16 BHCS**



**Z EXTRUSION POSITIONING**

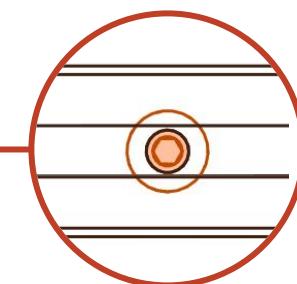
Once you are happy with the positions be sure to tighten the blind joints fully.

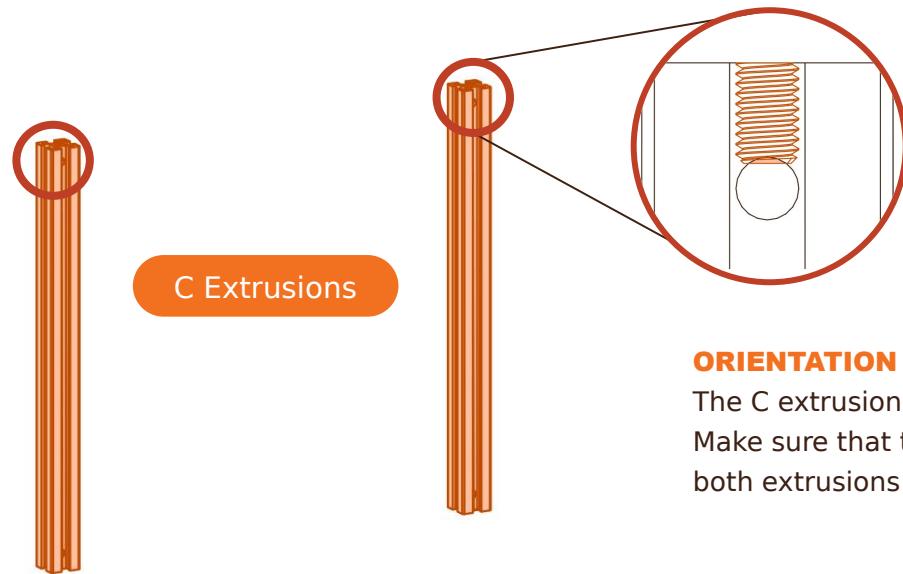
**D Extrusions**



BLIND JOINTS

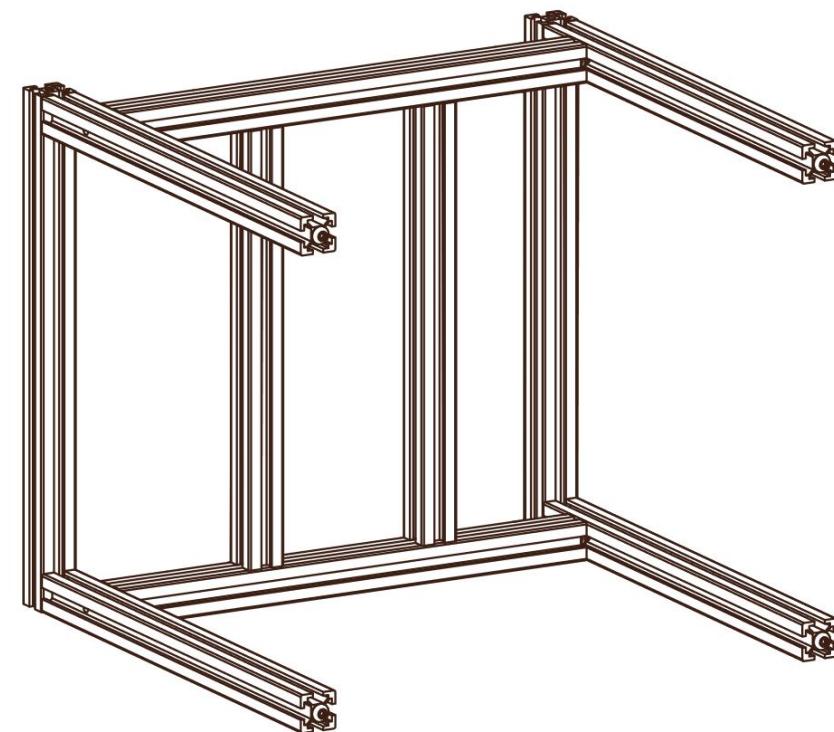
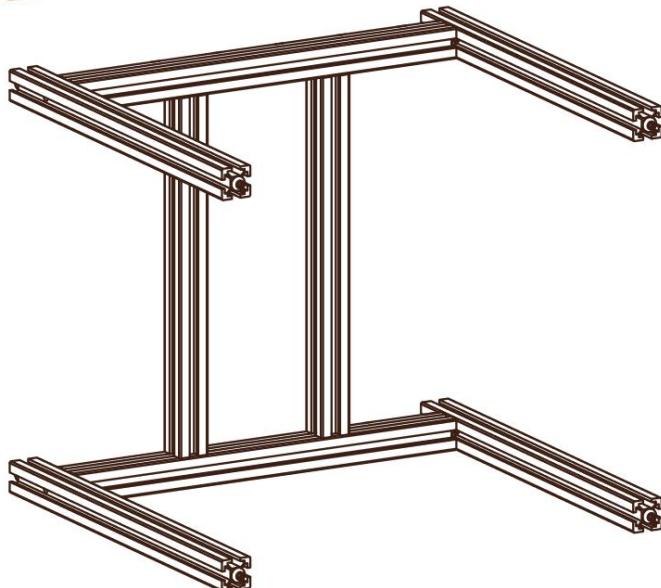
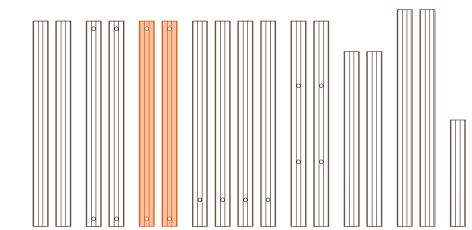
Secure the M5 bolts by inserting an allen key through the access holes. Adjust the position of the D extrusions so that they match the dimensions noted above

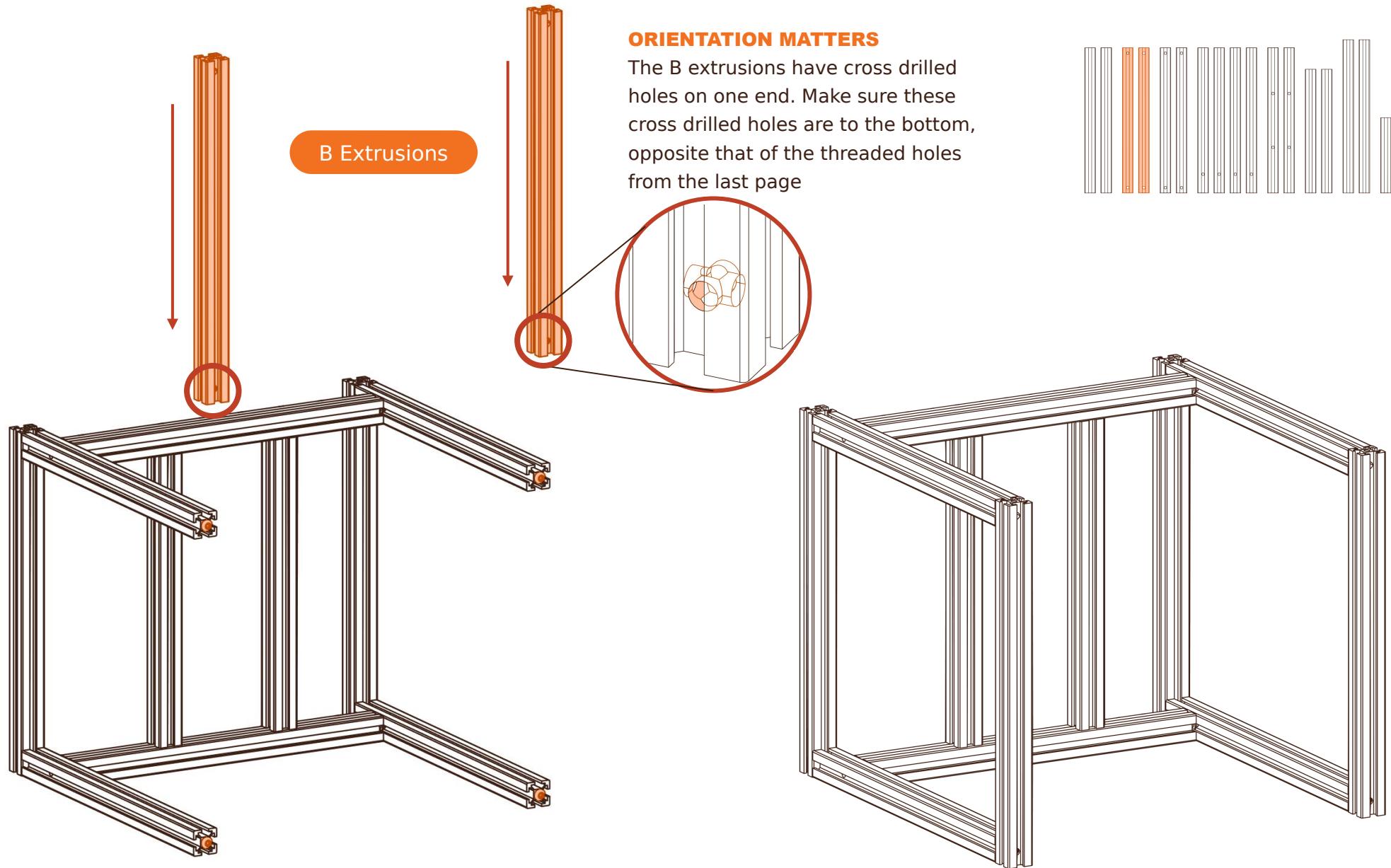


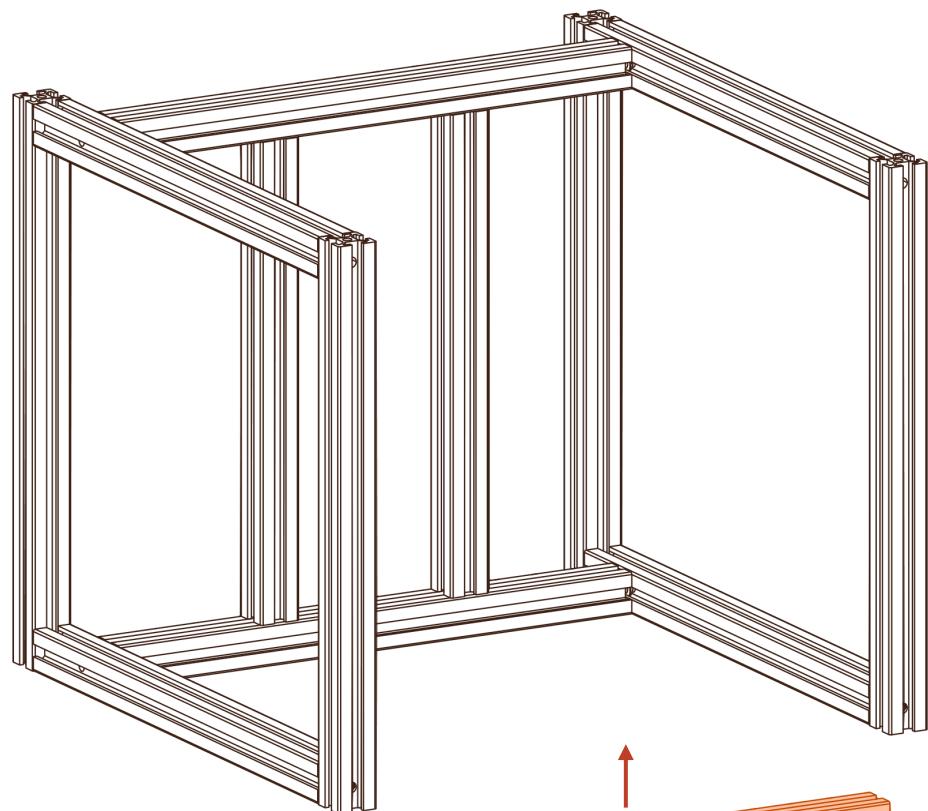


ORIENTATION MATTERS

The C extrusions are only threaded on one end.
Make sure that threaded end is facing up on
both extrusions

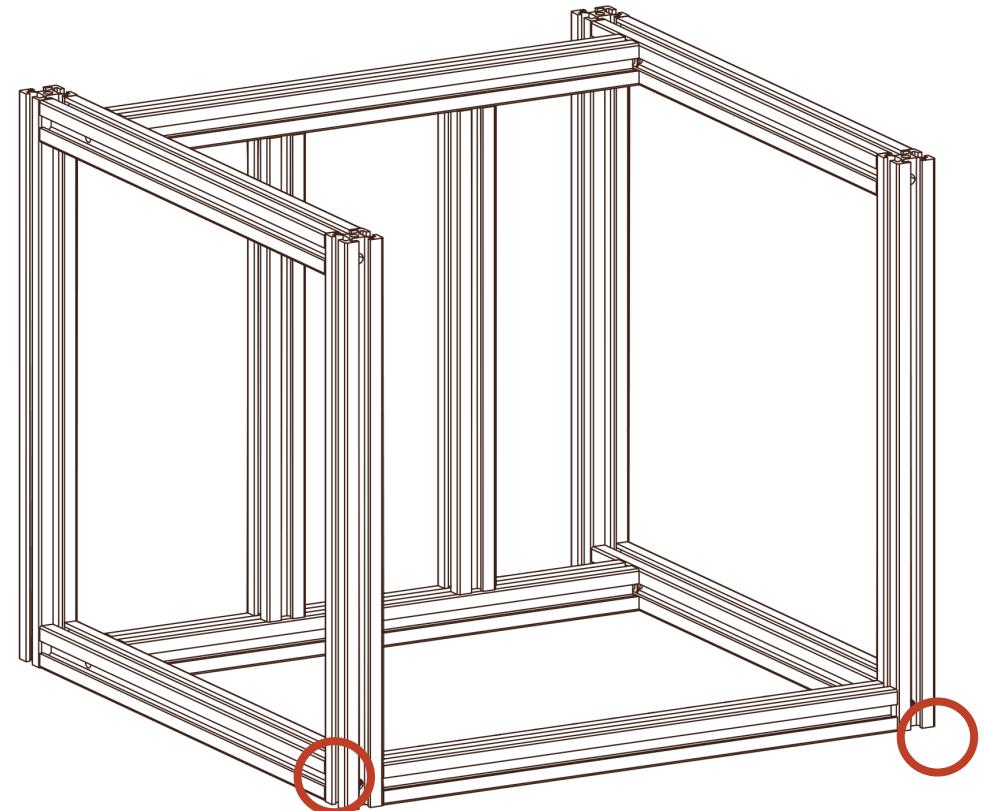




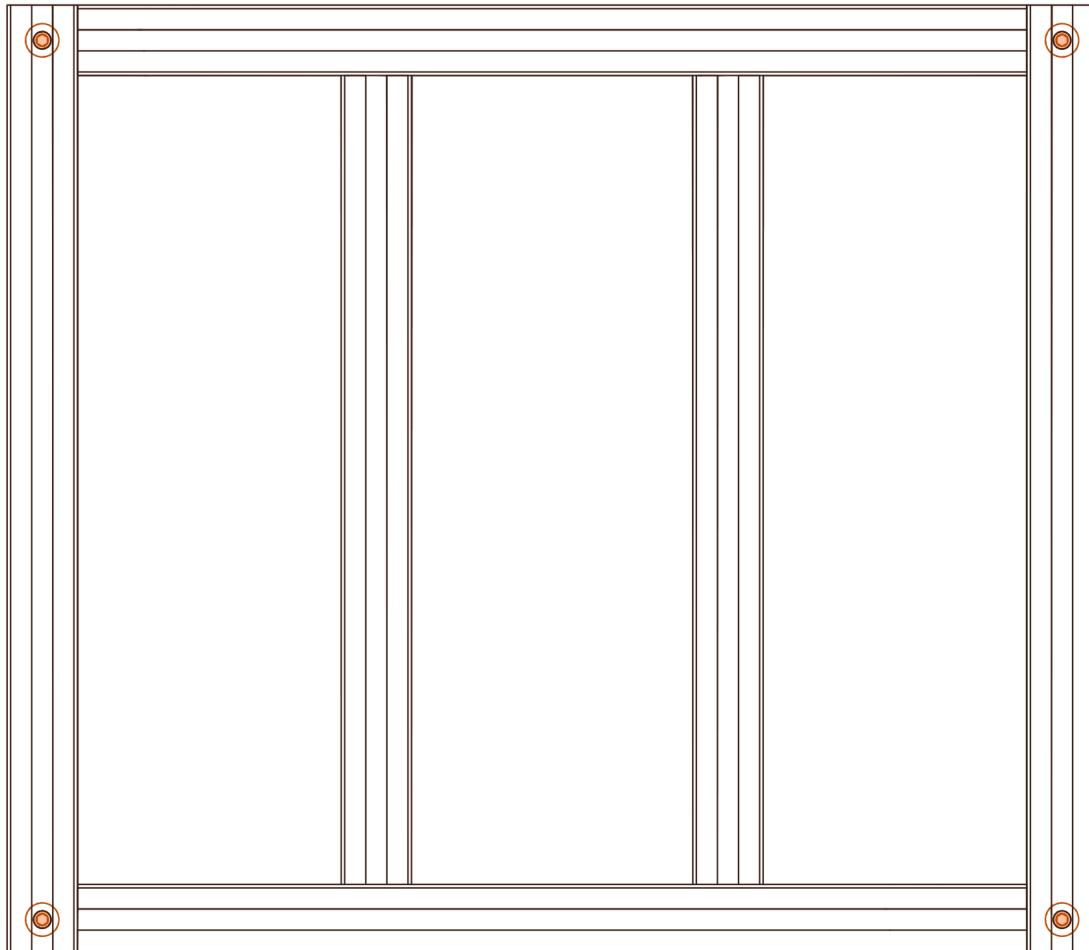


A Extrusion

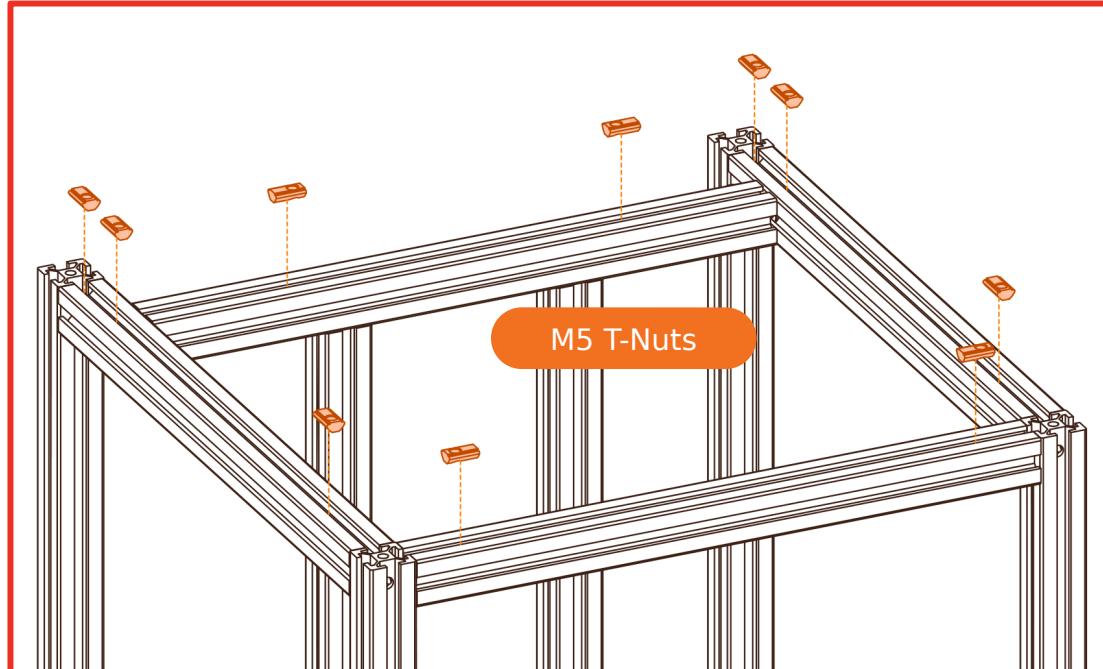
M5x16 BHCS

**TIGHTEN THE BLIND JOINTS**

This is the final piece of the frame, now is a good opportunity to take some extra time to ensure that your connections are tight and everything is square

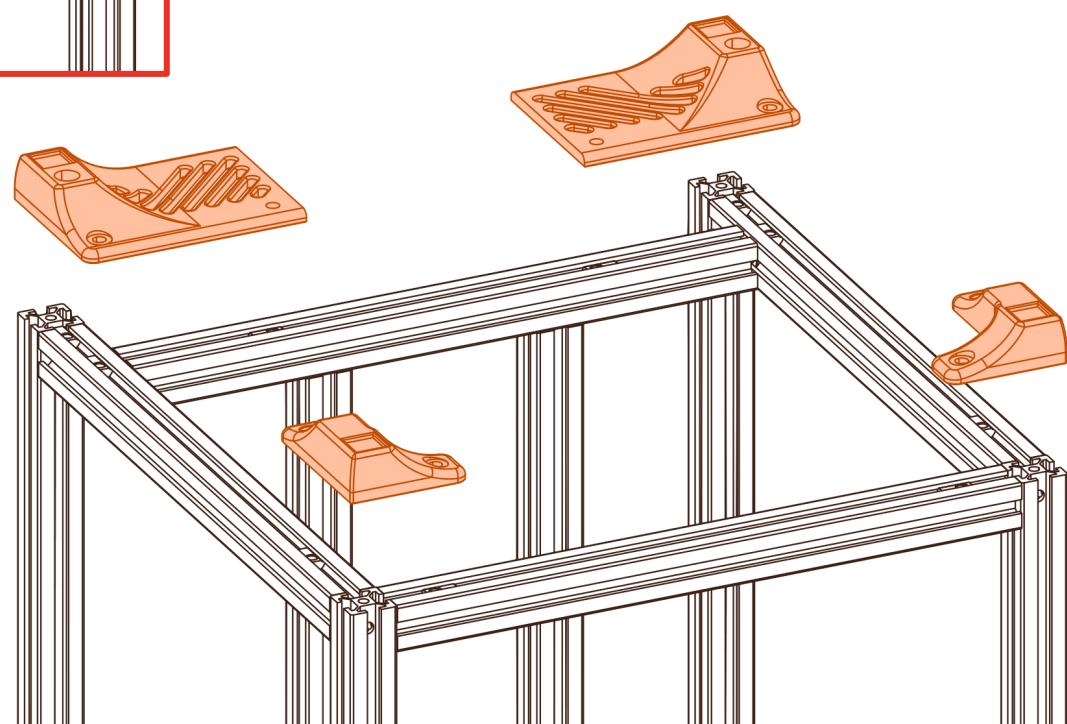


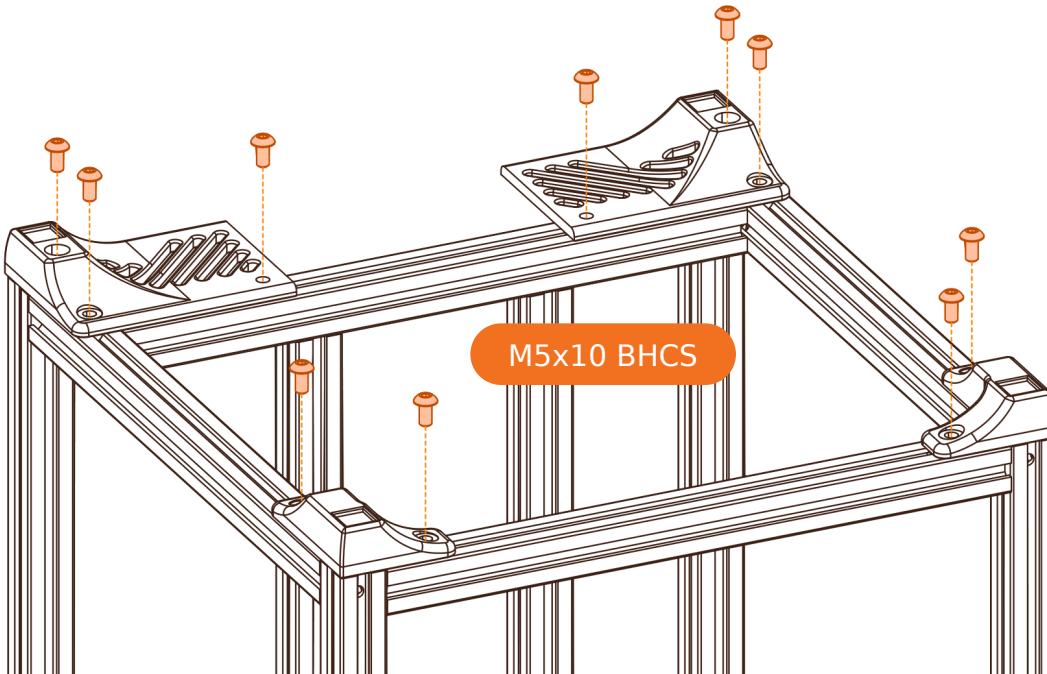
I forget what this picture was for...



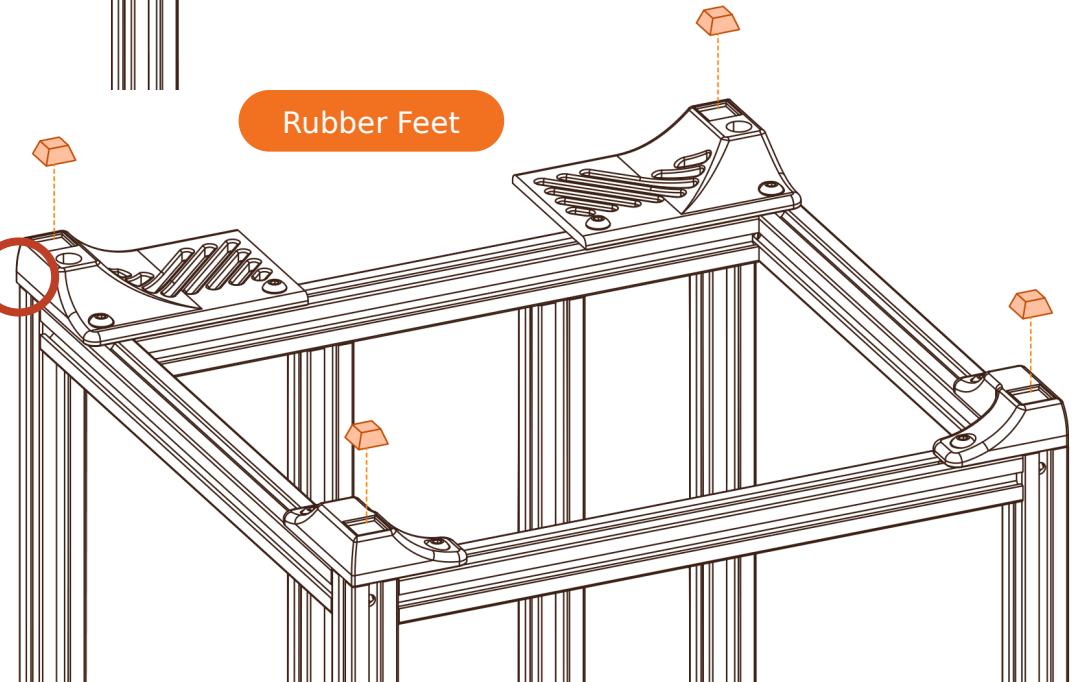
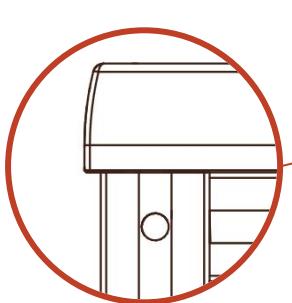
FLIP THE PRINTER OVER

These T-nuts and Printed parts are for the feet, then go on the bottom of the frame, make sure you have the assembly oriented correctly so that it matches the pictures.



**MIND THE GAP**

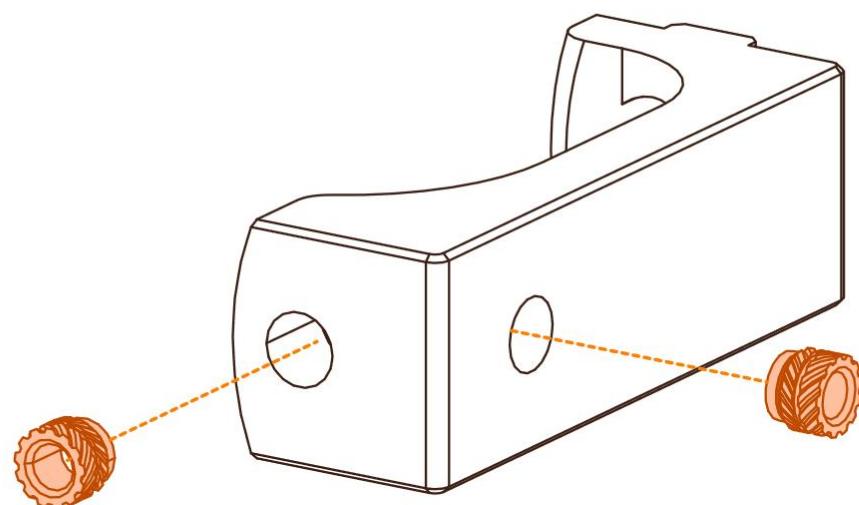
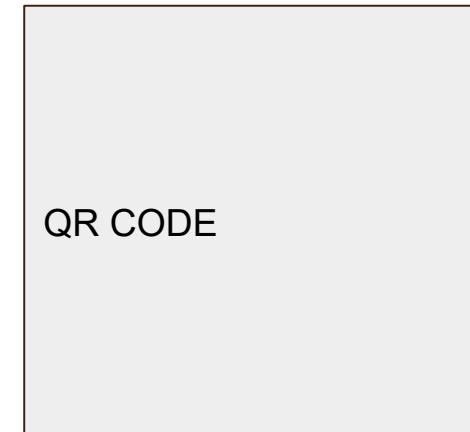
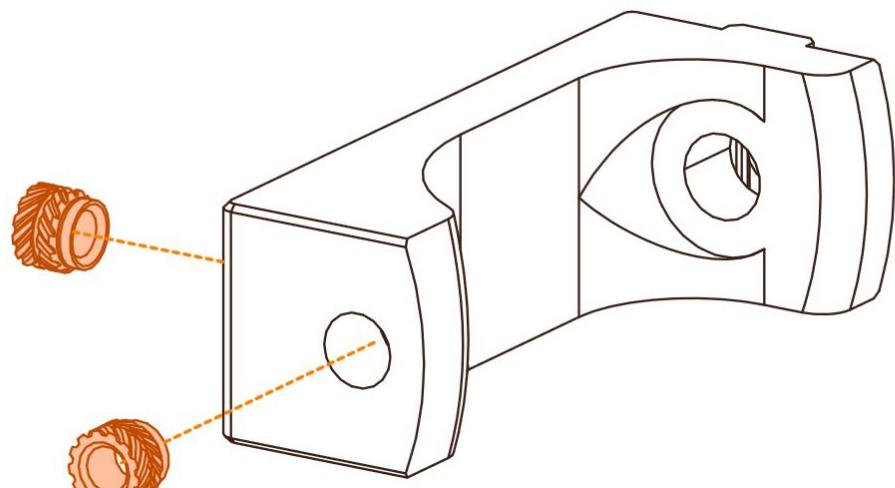
The two rear printed parts will overhang the rear extrusion by about 3mm. This will allow them to be flush with the rear panel once it is installed.

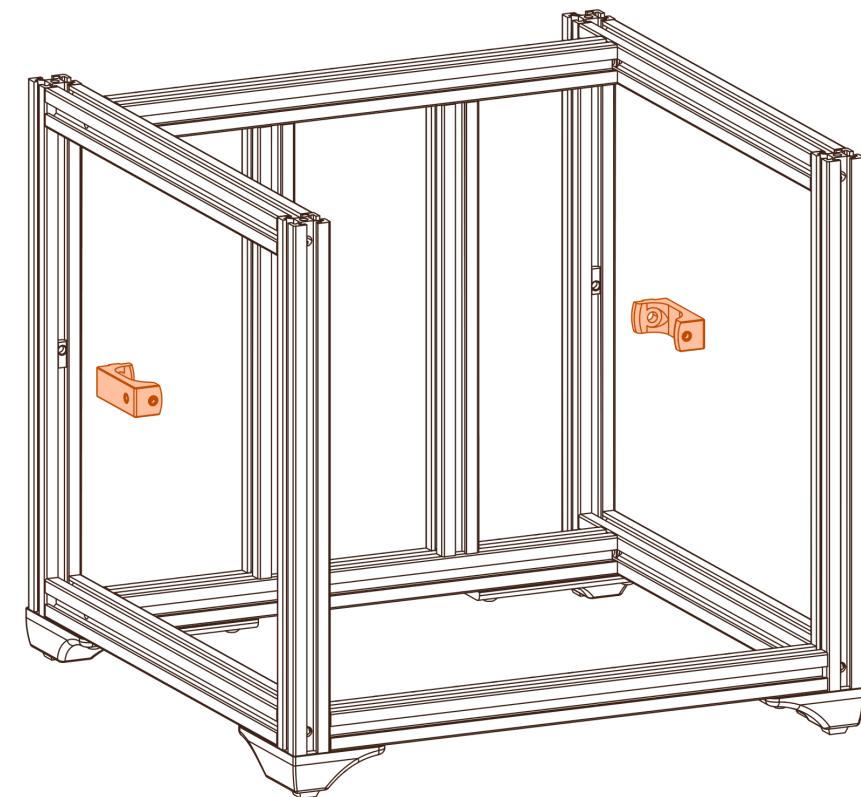
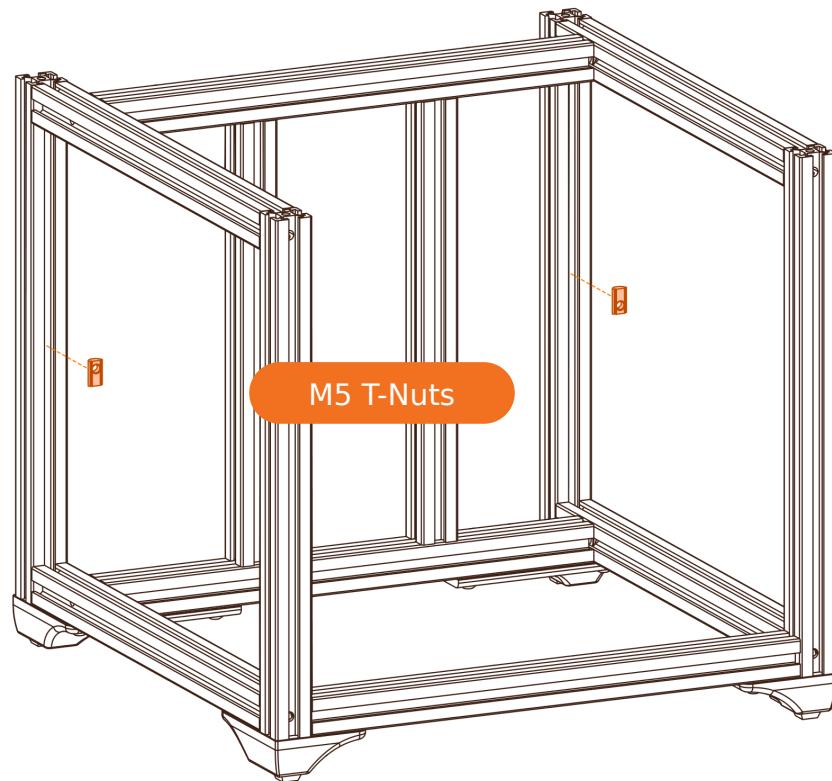
**PRESSURE SENSITIVE ADHESIVE**

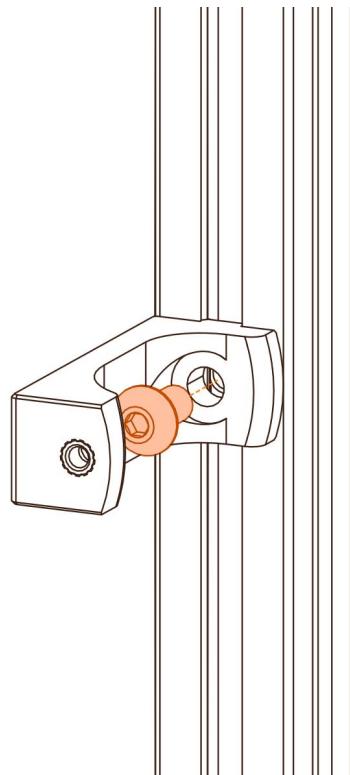
The feet have 3M PSA pre applied, it requires pressure to wet out and bond correctly to the plastic parts.

COMPONENT PREP

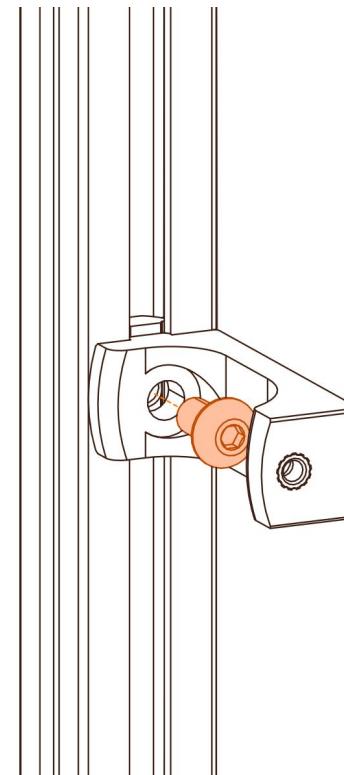
Many of the printed parts will use heatset threaded inserts. If you have never installed these we recommend you watch the linked video.







M5x10 BHCS

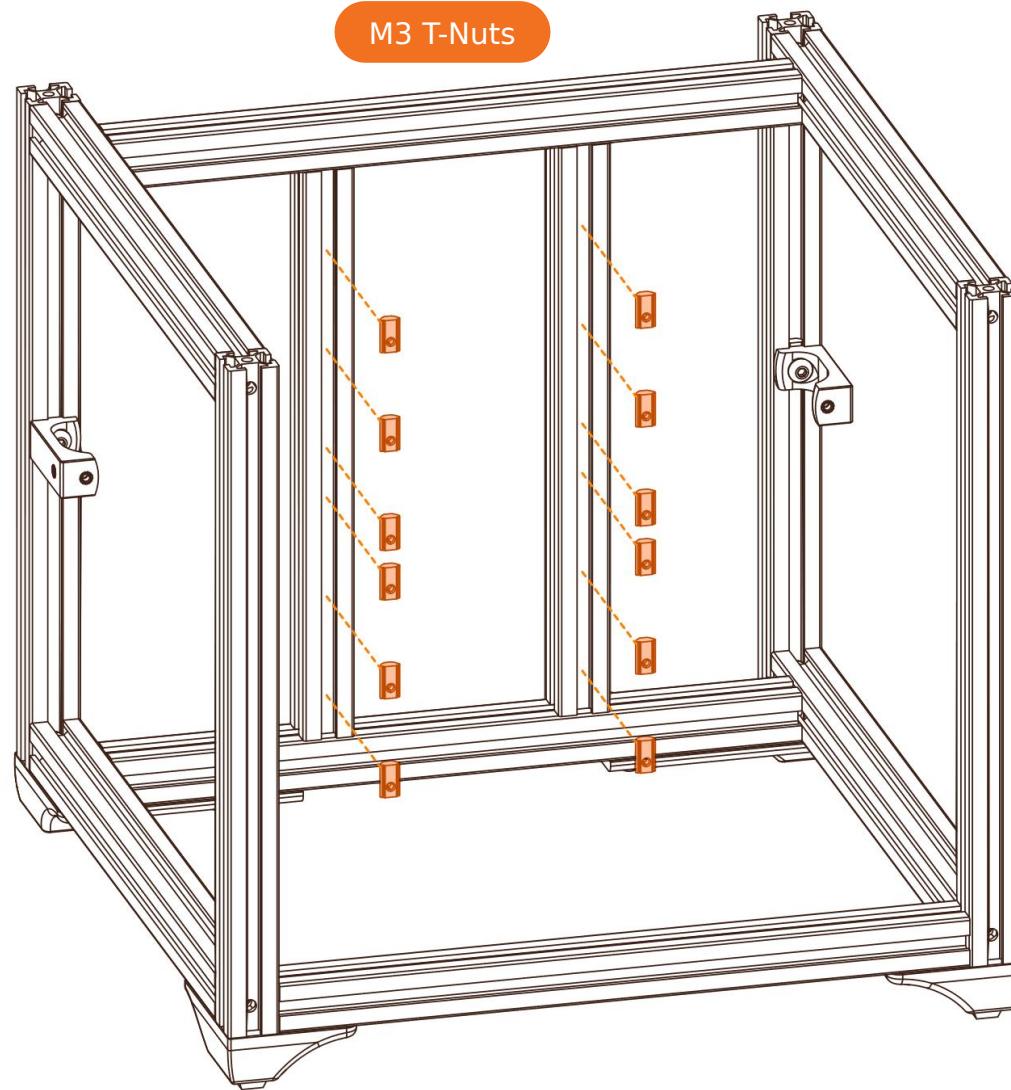


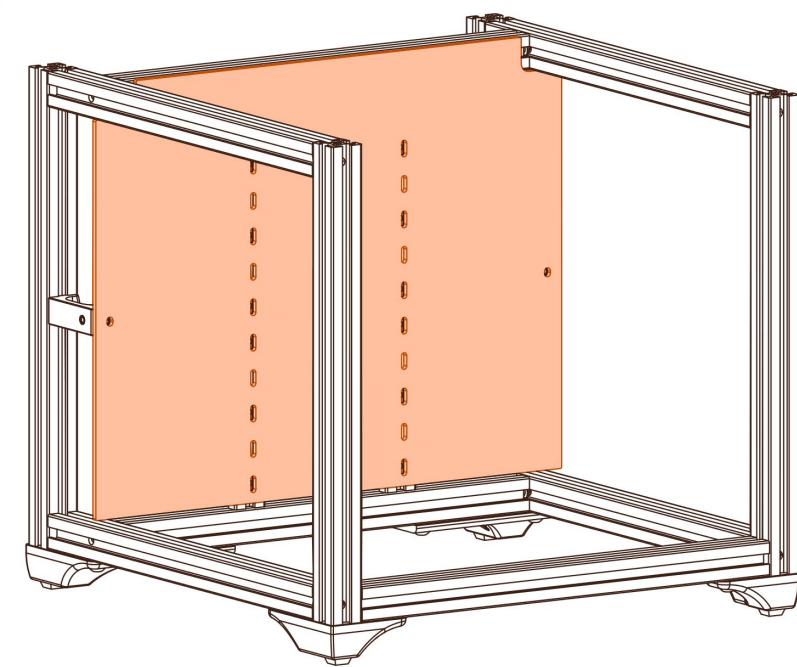
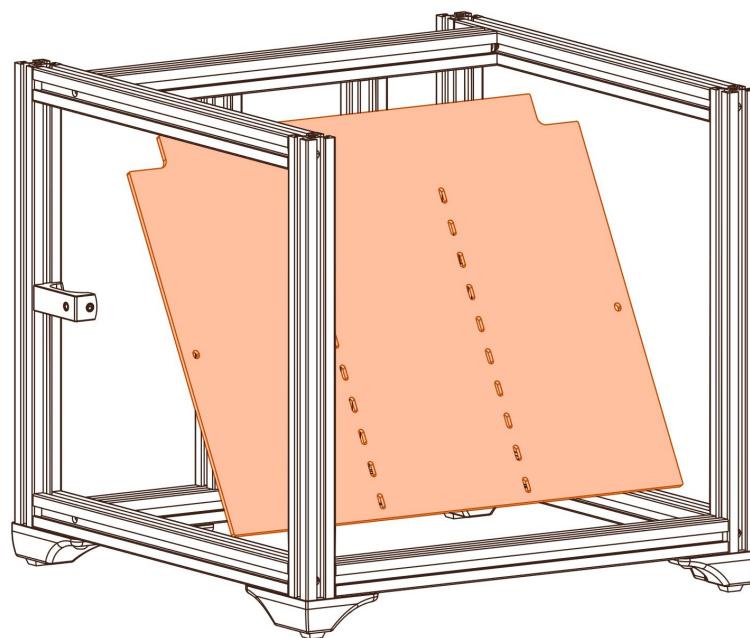
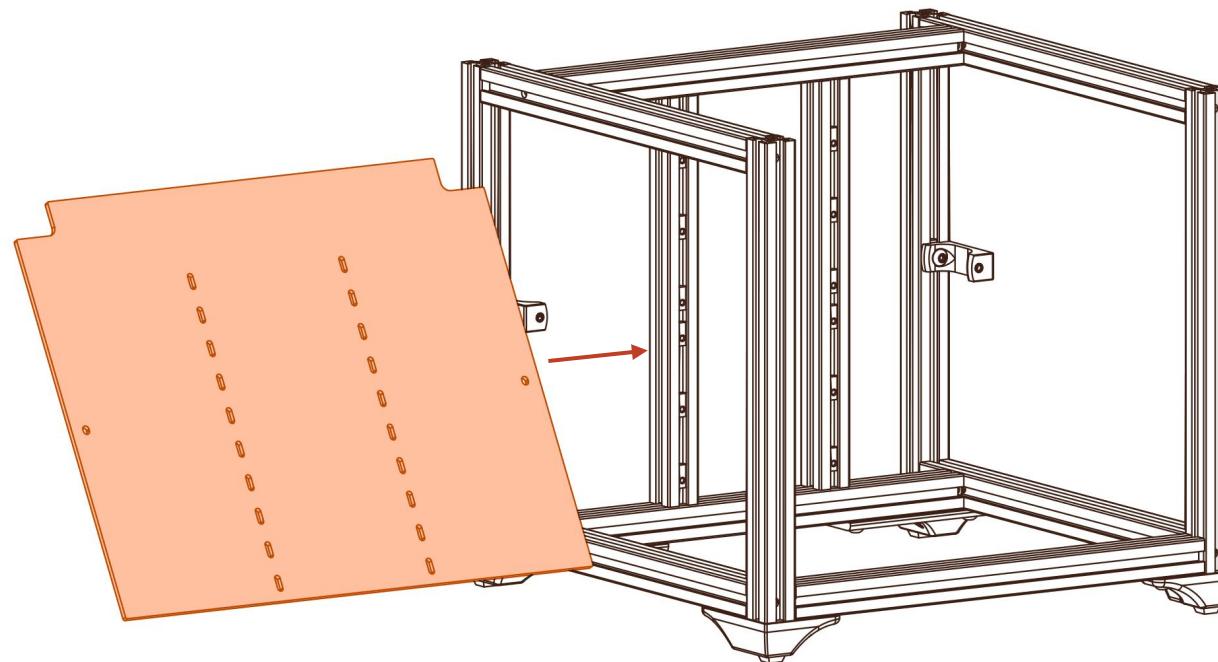
VERTICAL POSITIONING

We will align these supports with the mid panel at a later step.
Their position at this time is not critical

GRAVITY IS YOUR FRIEND

Laying the printer on its back may help with the installation of the T-nuts





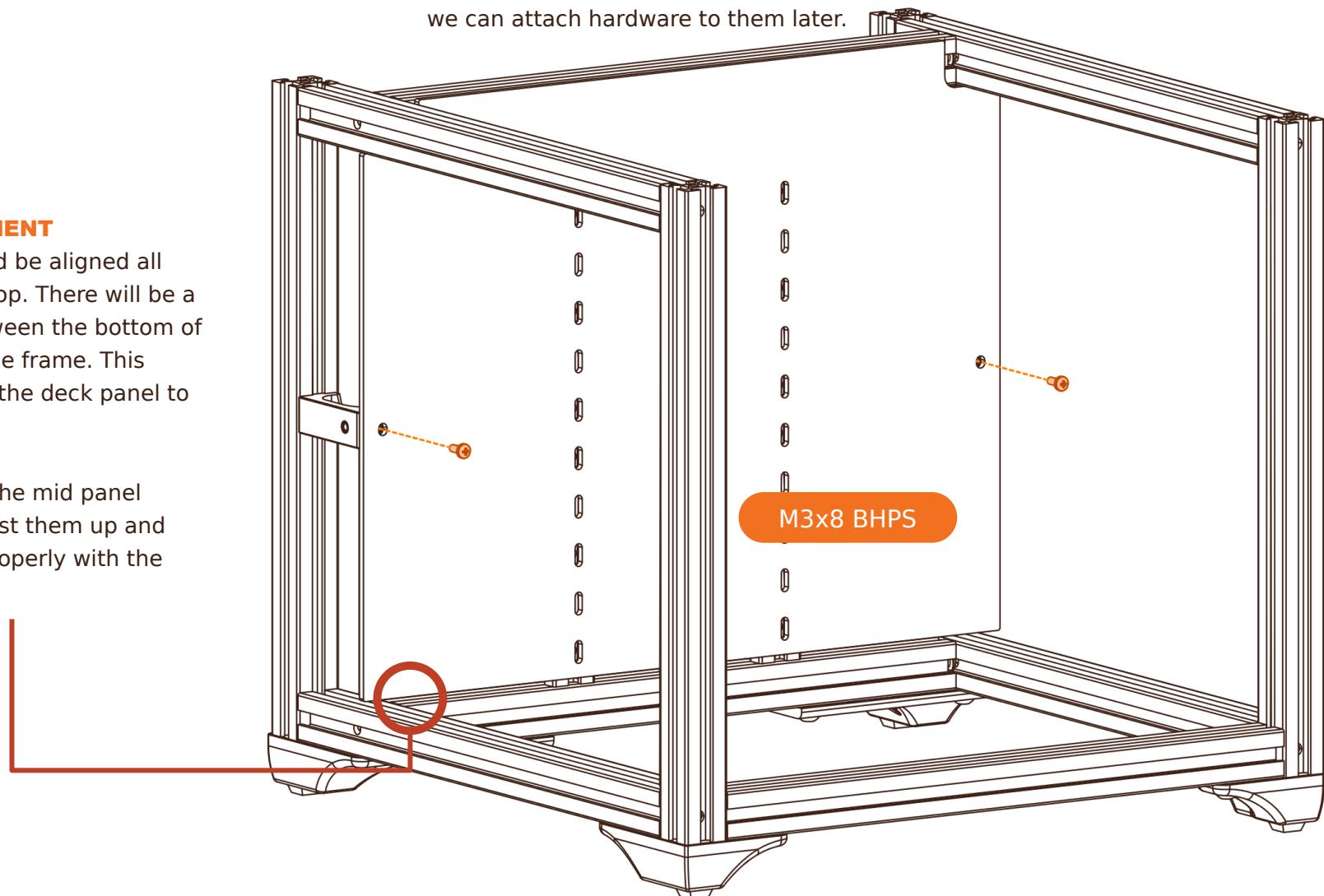
THINKING AHEAD

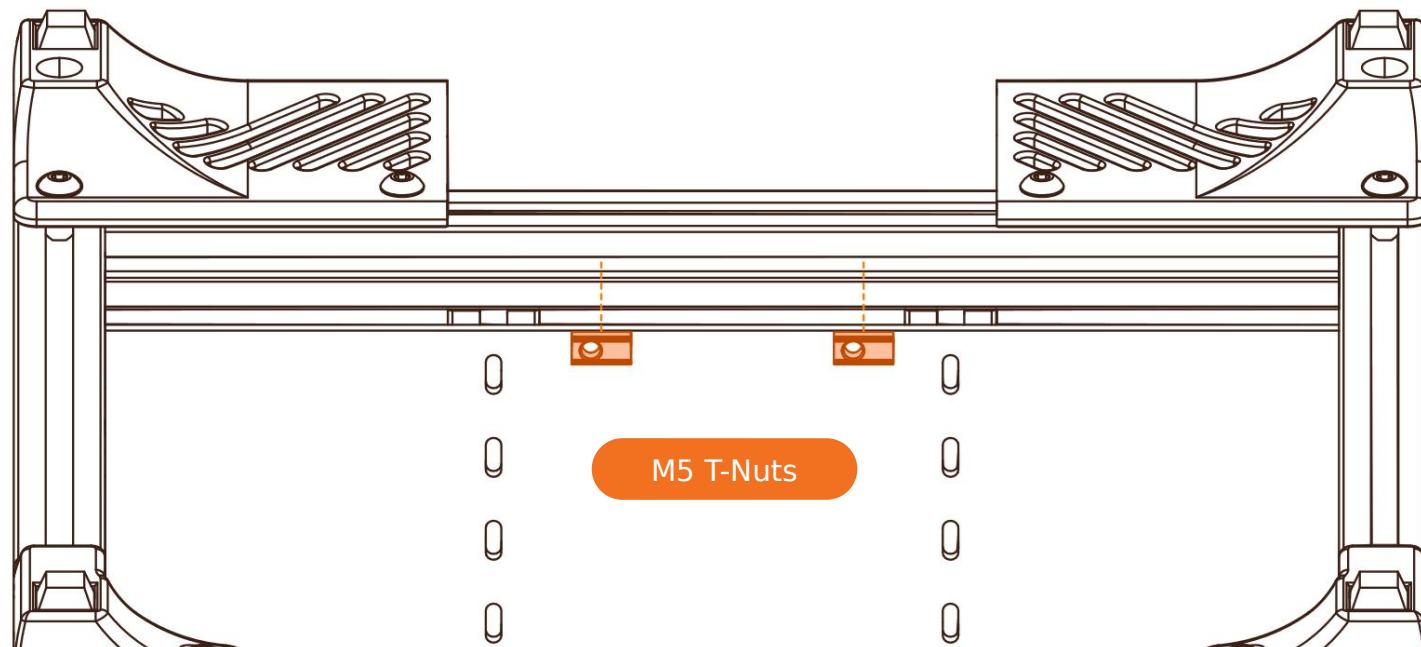
The T-nuts we installed two pages ago need to be aligned with the holes in this panel. Now is a good time to make sure they are positioned correctly so we can attach hardware to them later.

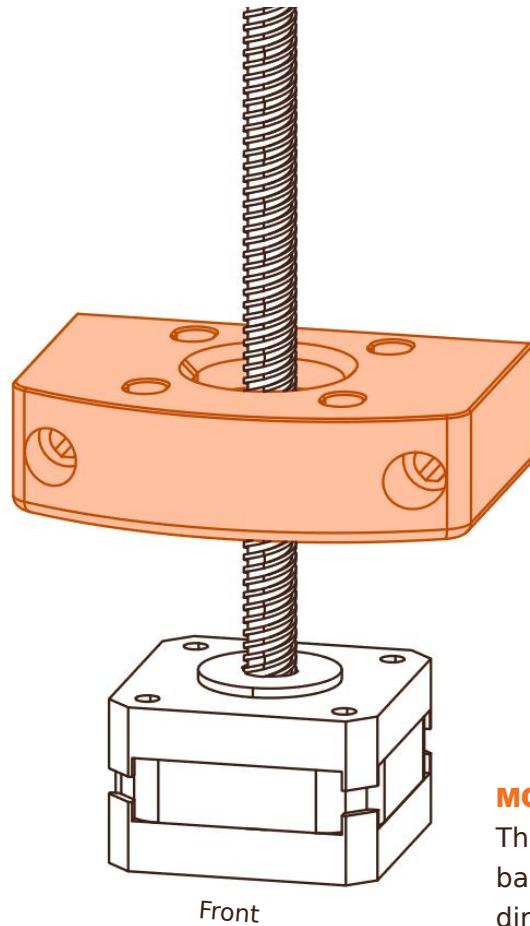
PANEL ALIGNMENT

The panel should be aligned all the way to the top. There will be a ~3mm gap between the bottom of the panel and the frame. This leaves room for the deck panel to be installed.

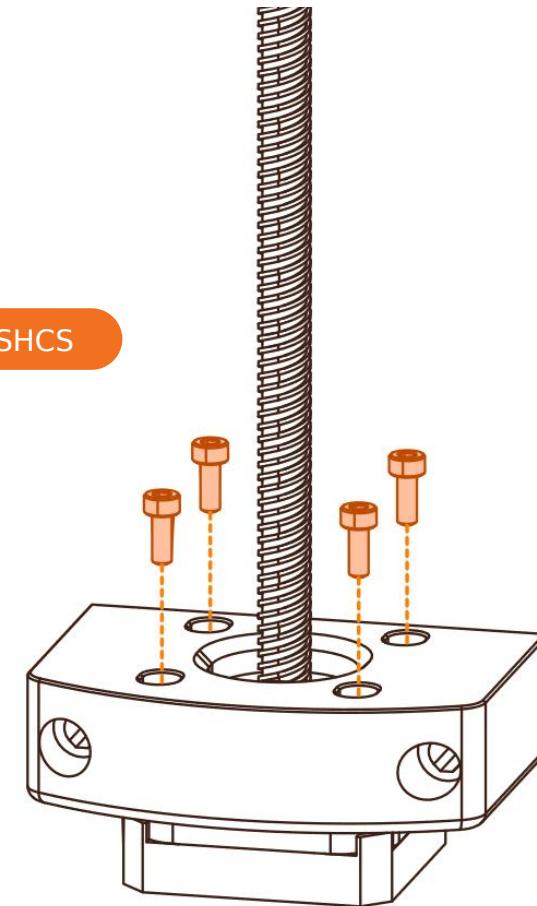
You can loosen the mid panel supports to adjust them up and down to align properly with the screw holes.





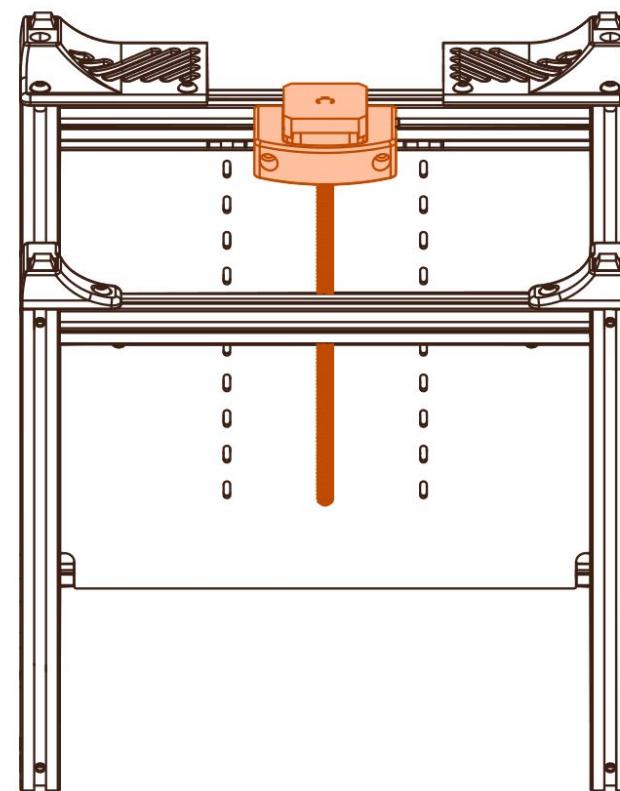
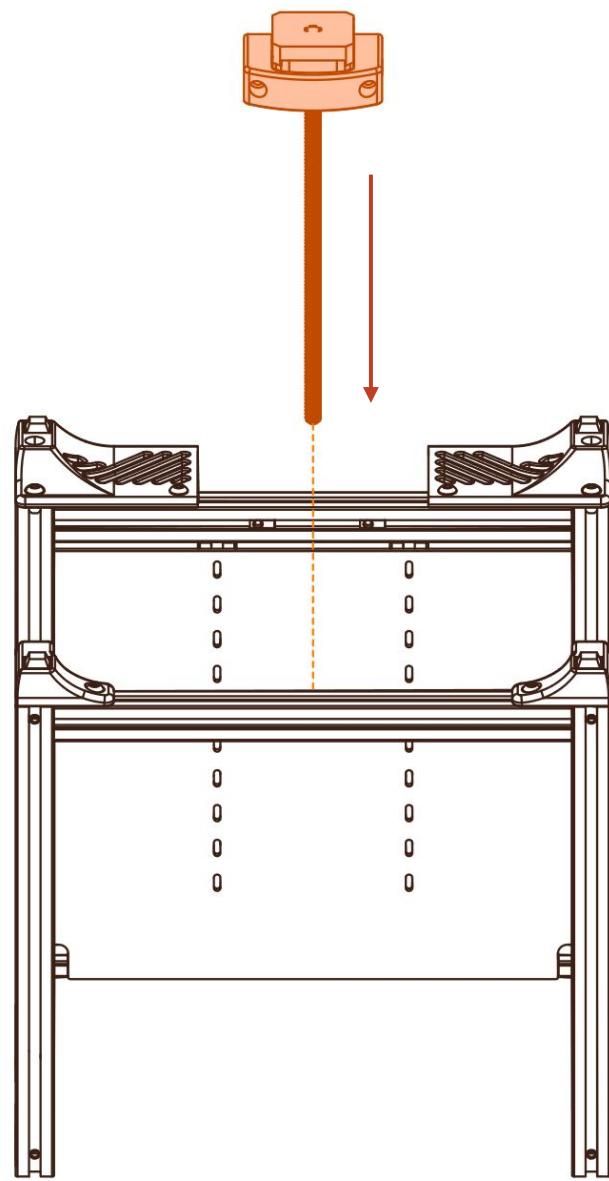


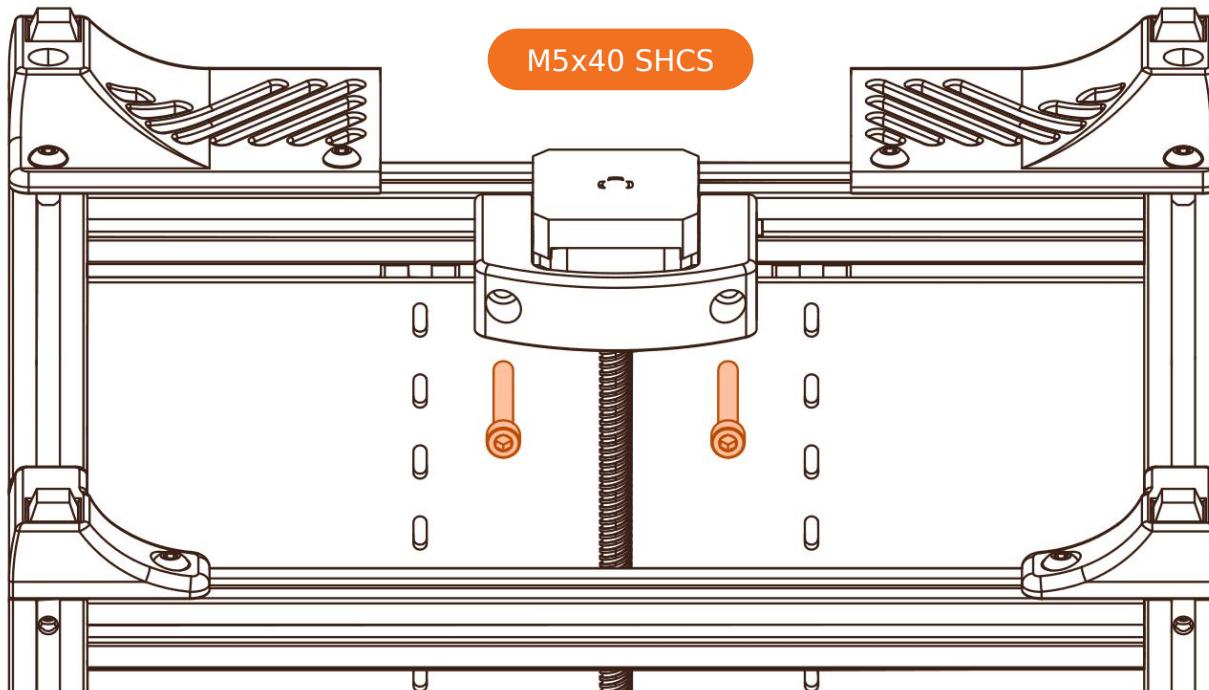
M3x8 SHCS



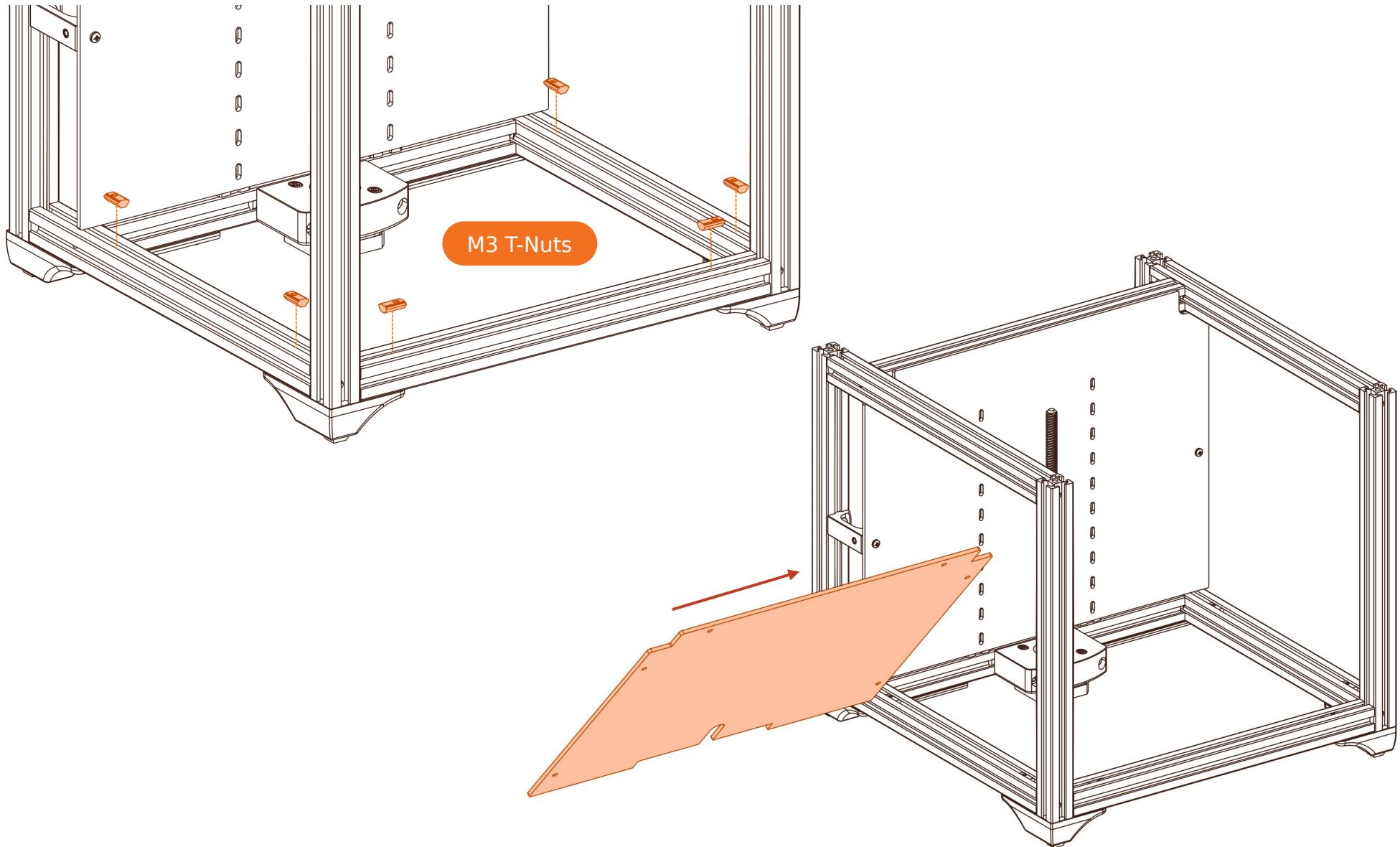
MOTOR WIRING

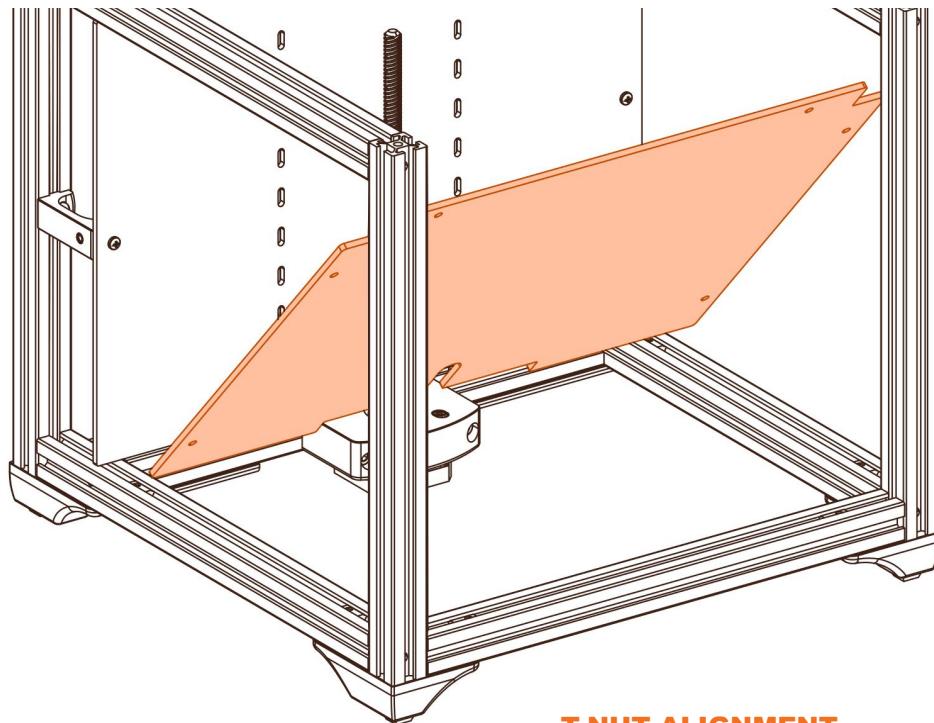
The motor wires should exit out the back of the motor assembly, that direction is hidden in these view but we have labels the “front” of the assembly to help designate the correct orientation



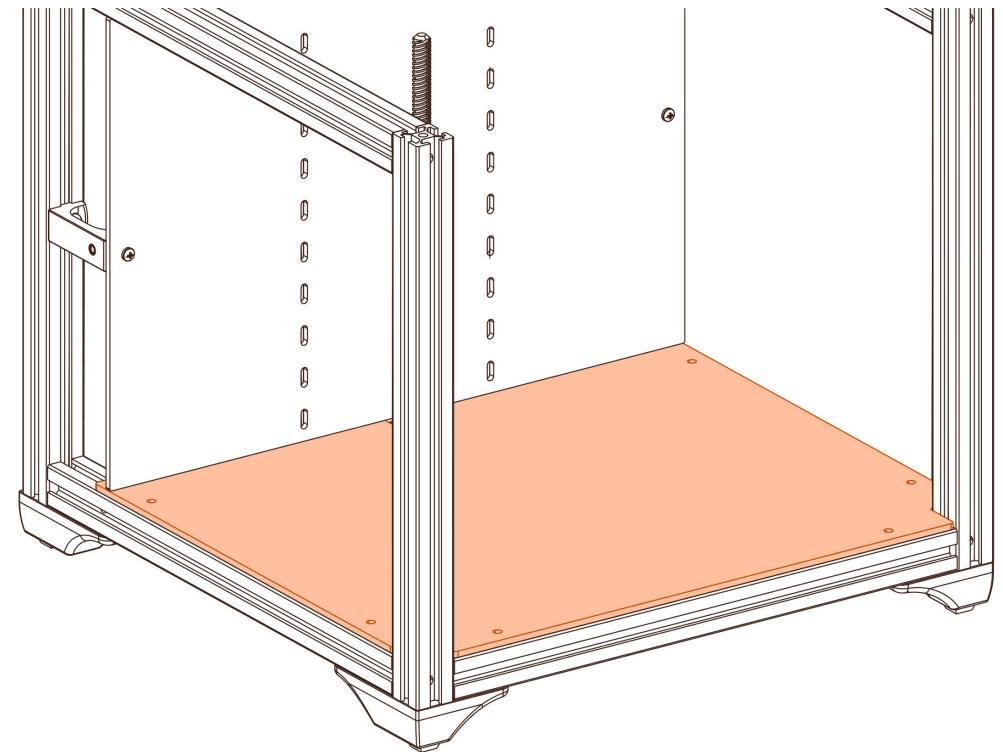
**CENTER THE Z MOTOR**

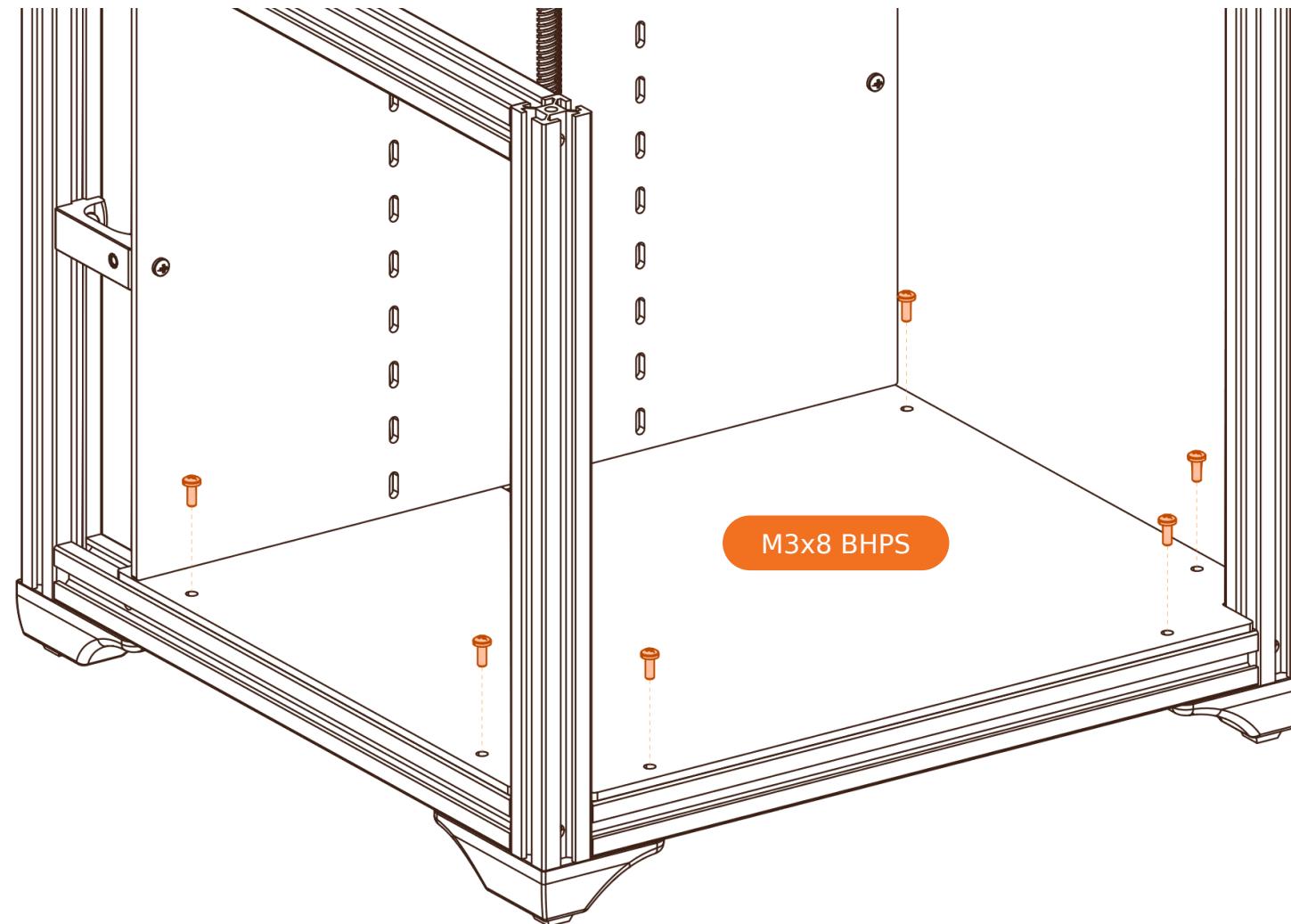
The Z motor should be positioned an equal distance from each side in order for proper bed alignment later on.

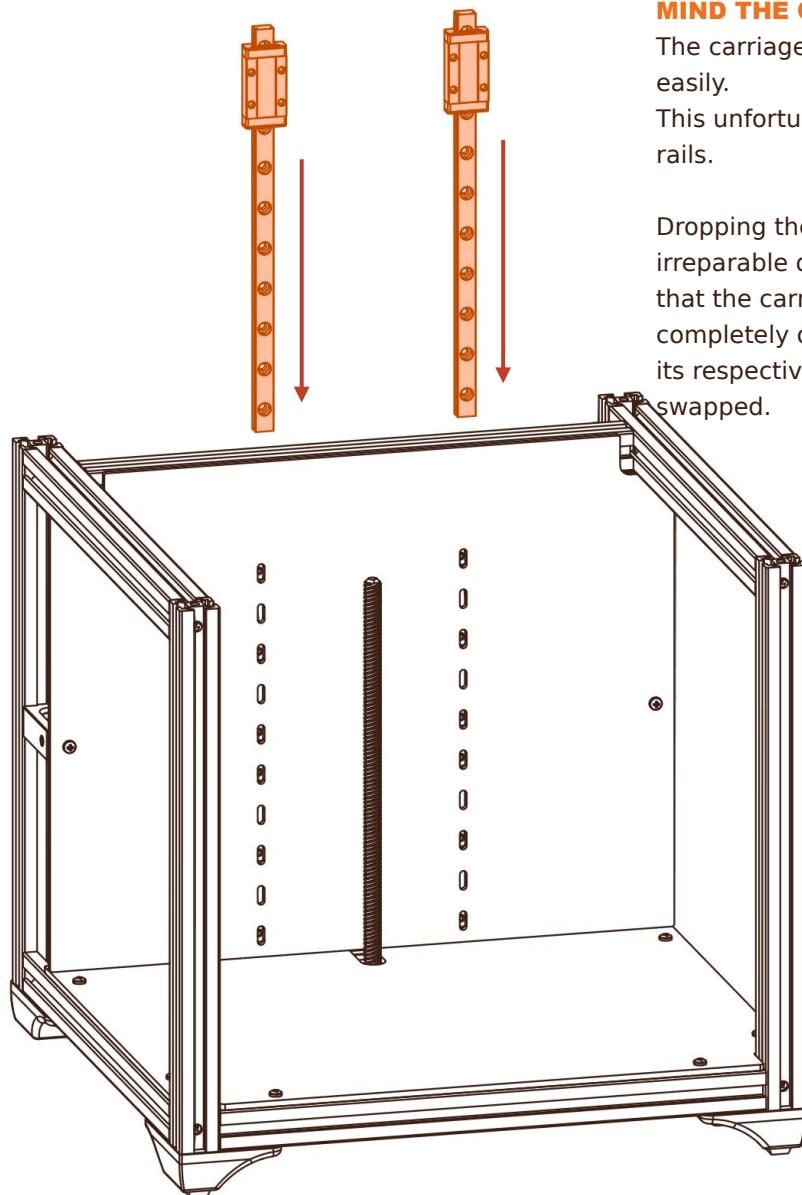


**T-NUT ALIGNMENT**

The T-nuts we installed need to be aligned with the holes in this panel. Holding the edge of the panel up to the T slot can make ensuring the correct spacing for the t nuts easier.





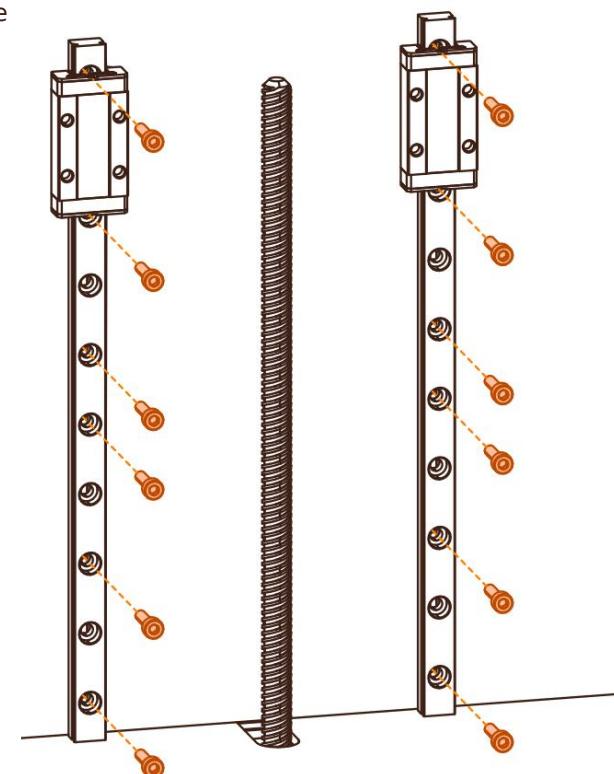


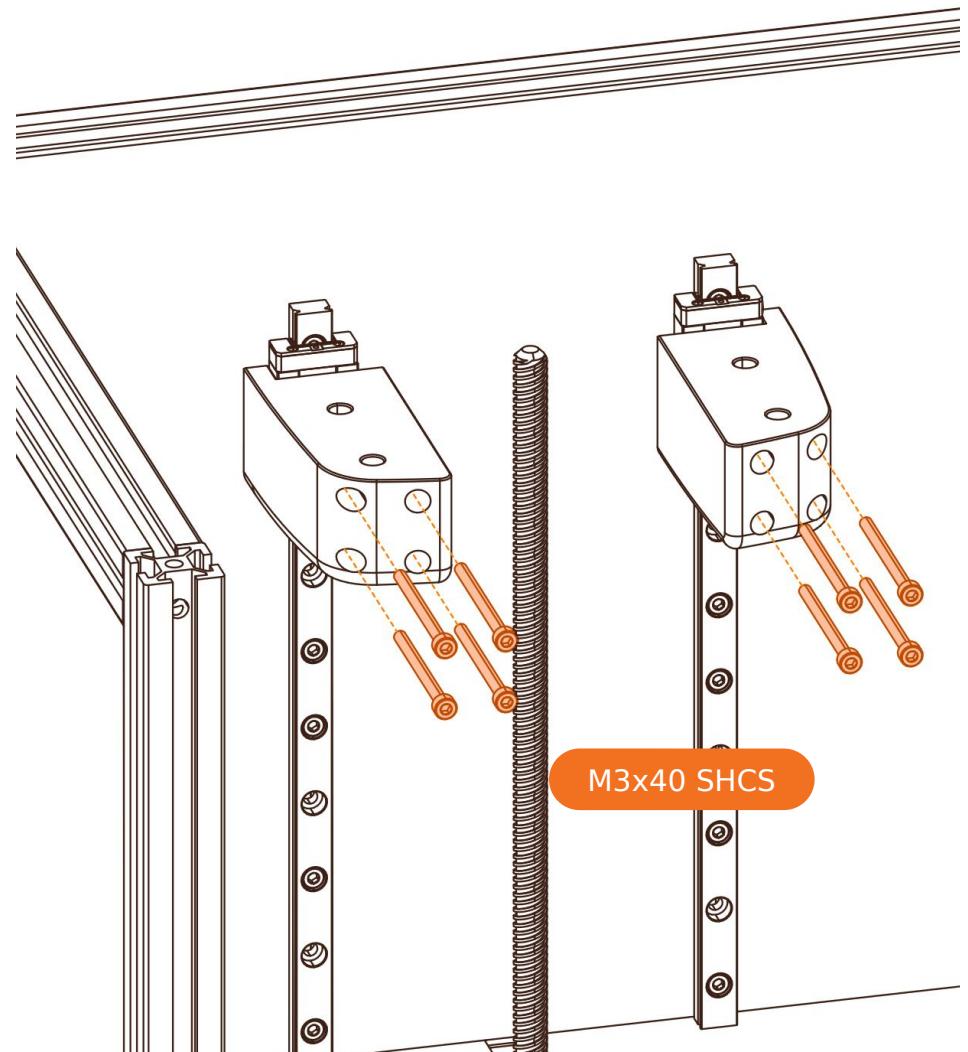
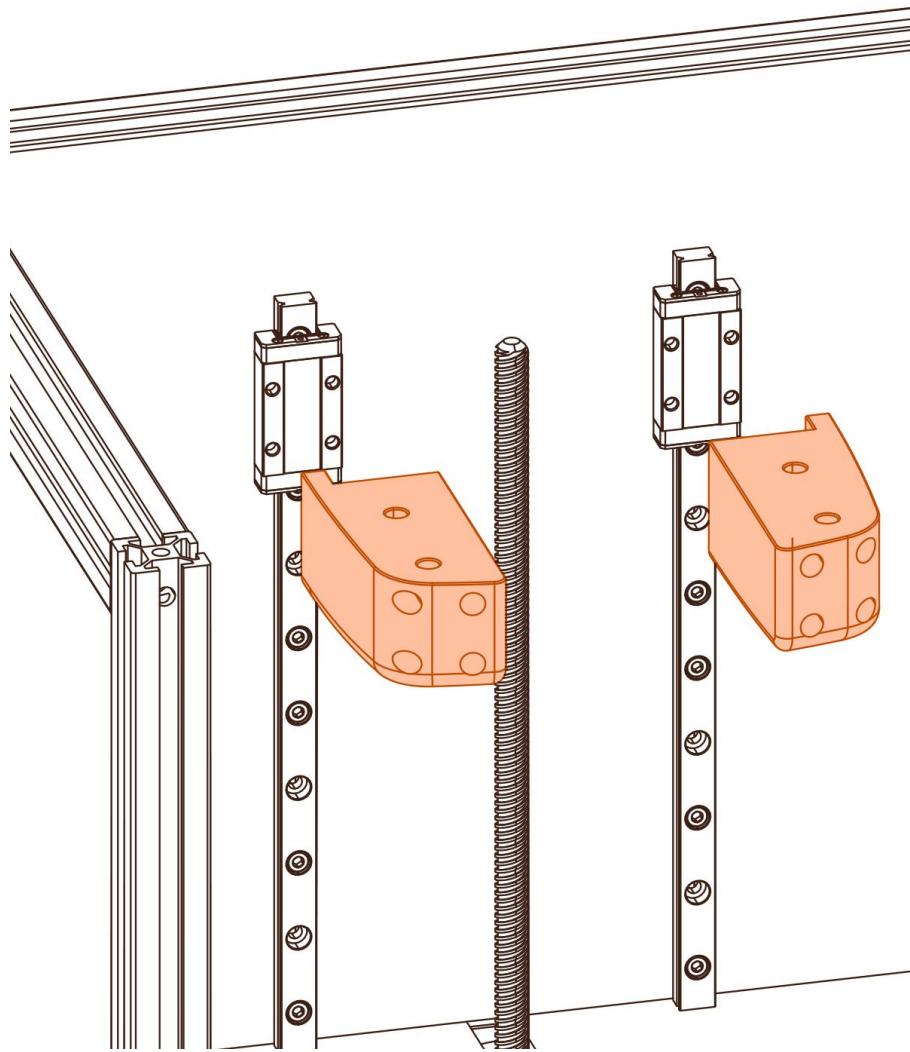
MIND THE CARRIAGES

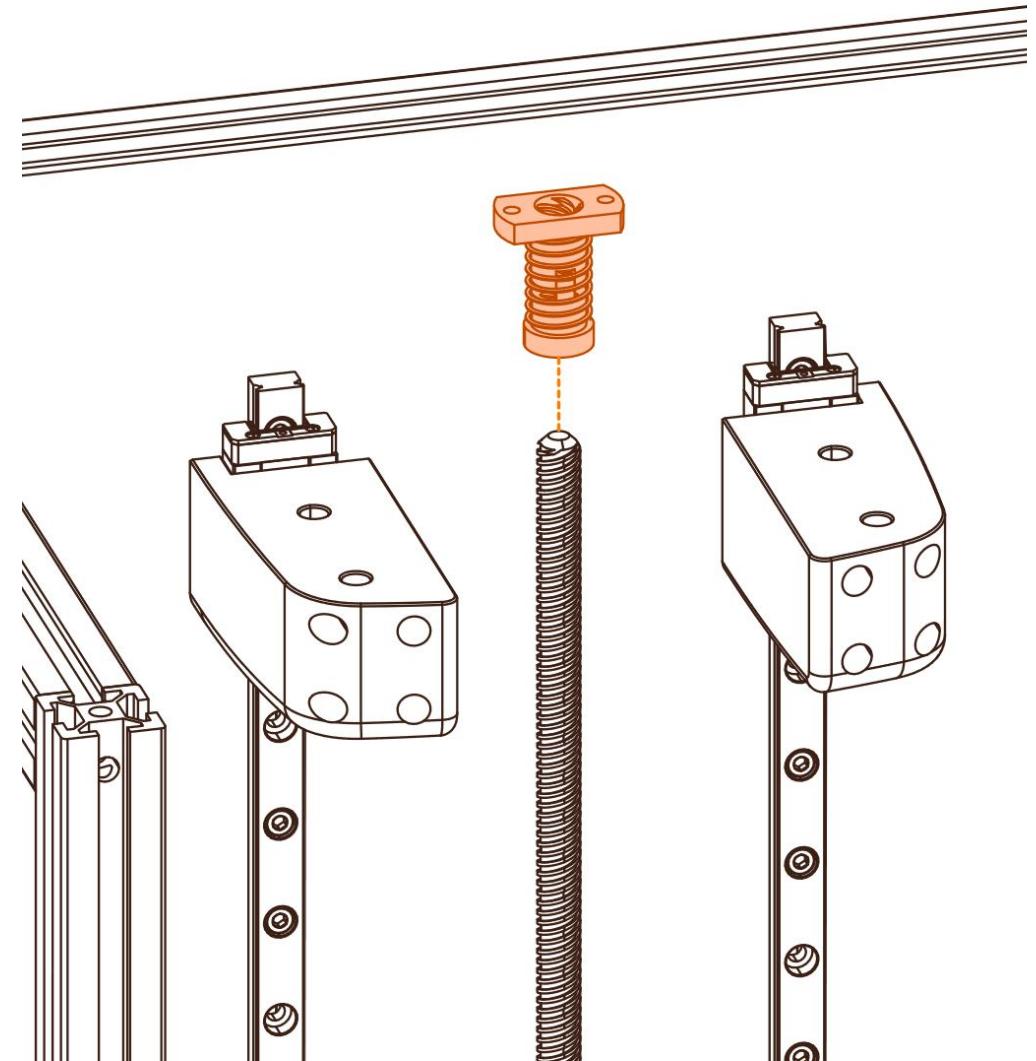
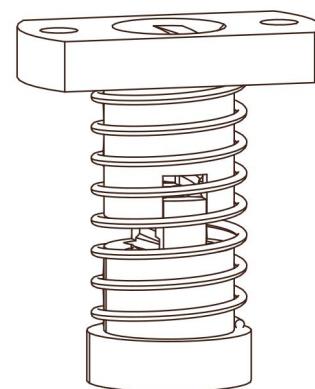
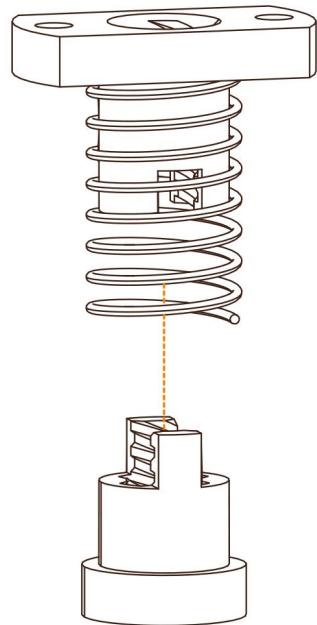
The carriages are designed to slide along the rail easily. This unfortunately also includes sliding off the rails.

Dropping the carriage will likely result in irreparable damage. Take extra care to ensure that the carriages do not accidentally slide completely off the rails. Keep each carriage with its respective rail. They are not meant to be swapped.

M3x10 SHCS





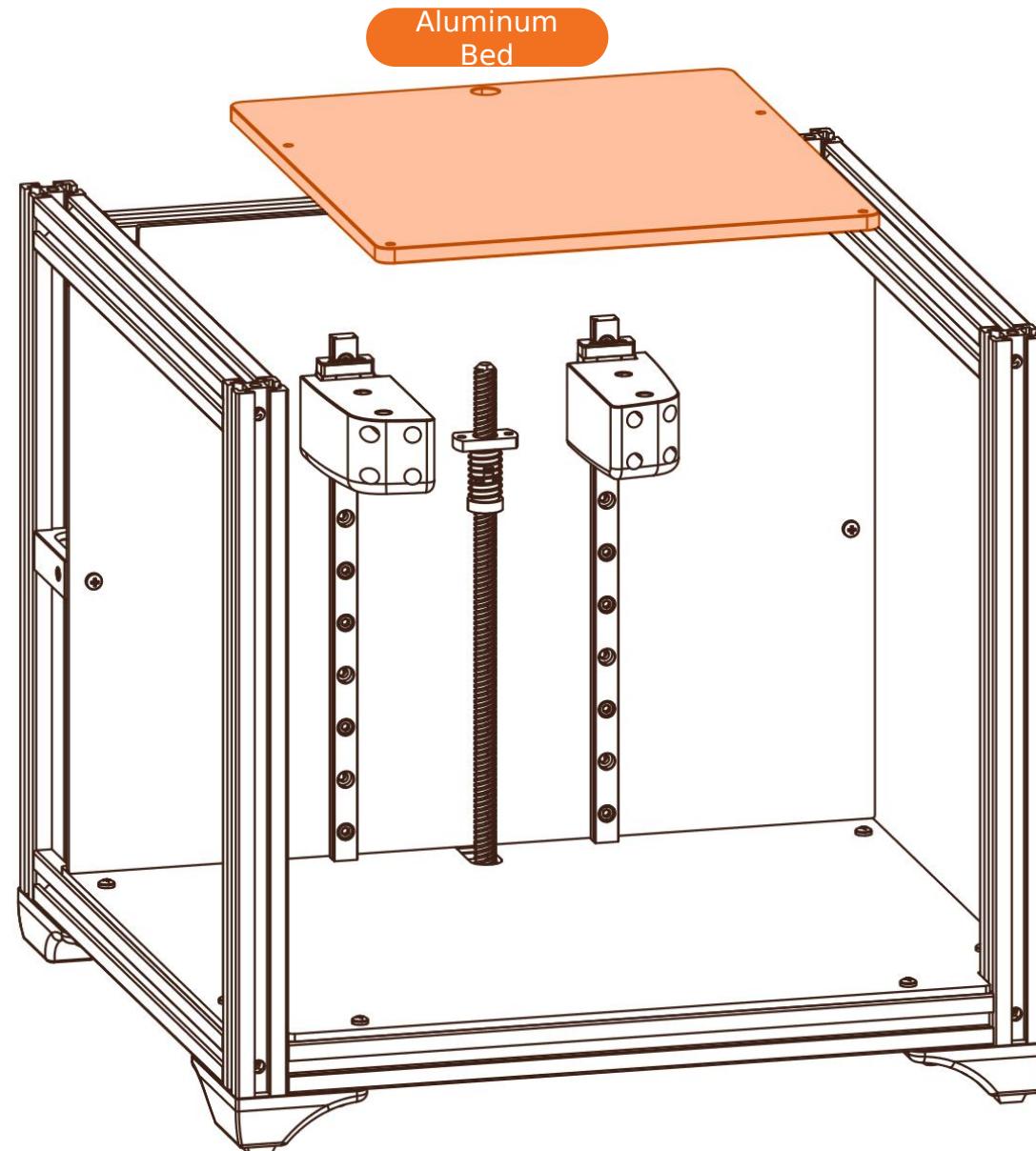
**ANTI-BACKLASH**

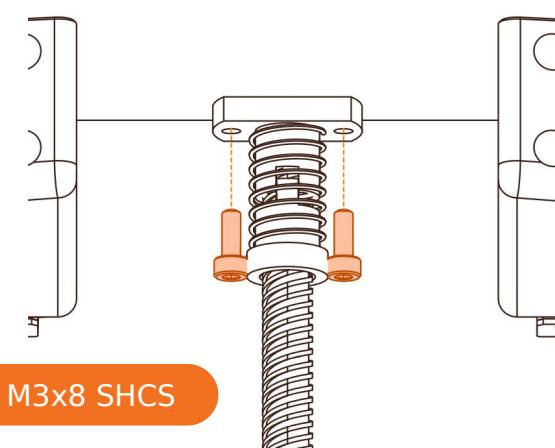
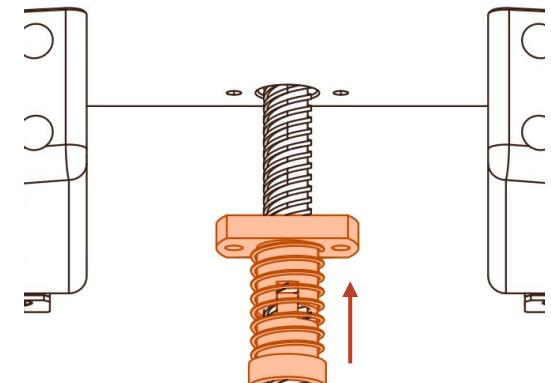
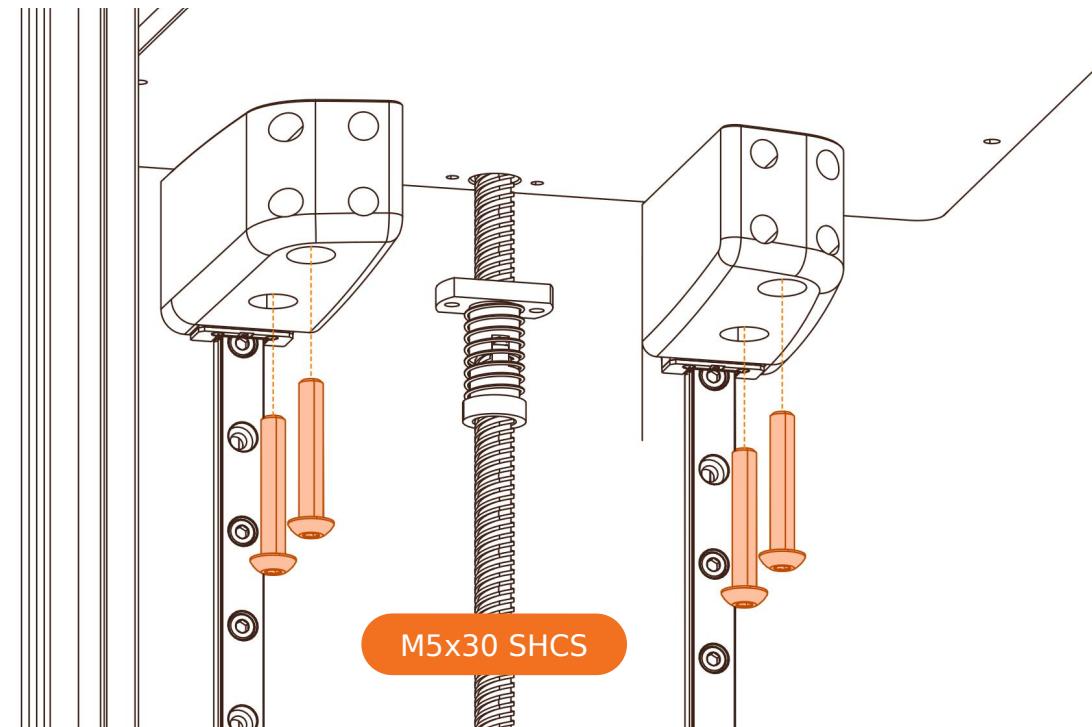
The anti-backlash nut works by applying constant pressure on the leadscrew threads. In order for it to function correctly it must be assembled such that the two pieces cannot spin independently. Refer to the linked video for assembly.

QR CODE

BED PREP

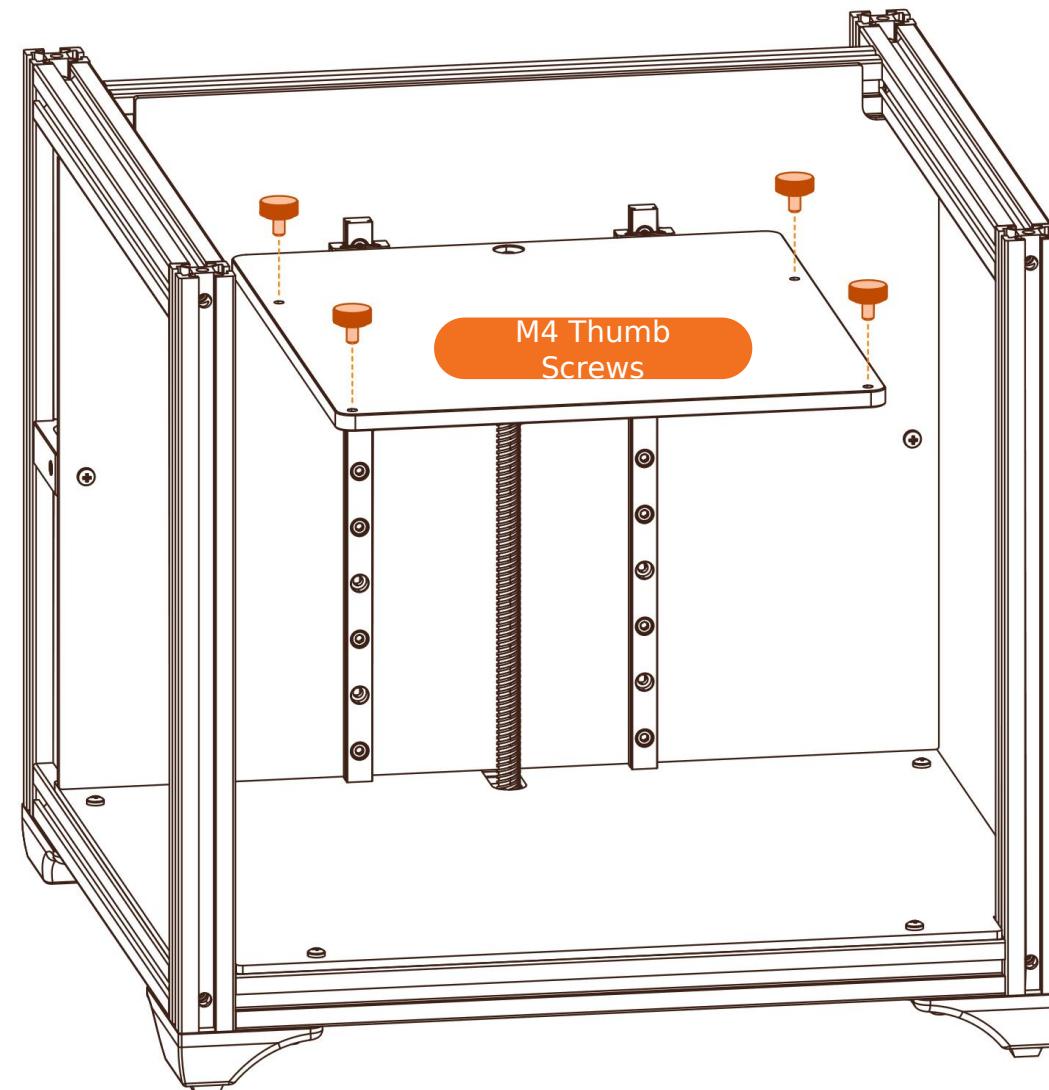
The bed is shipped with a protective film on its surfaces. Remove this before you install it into the printer.

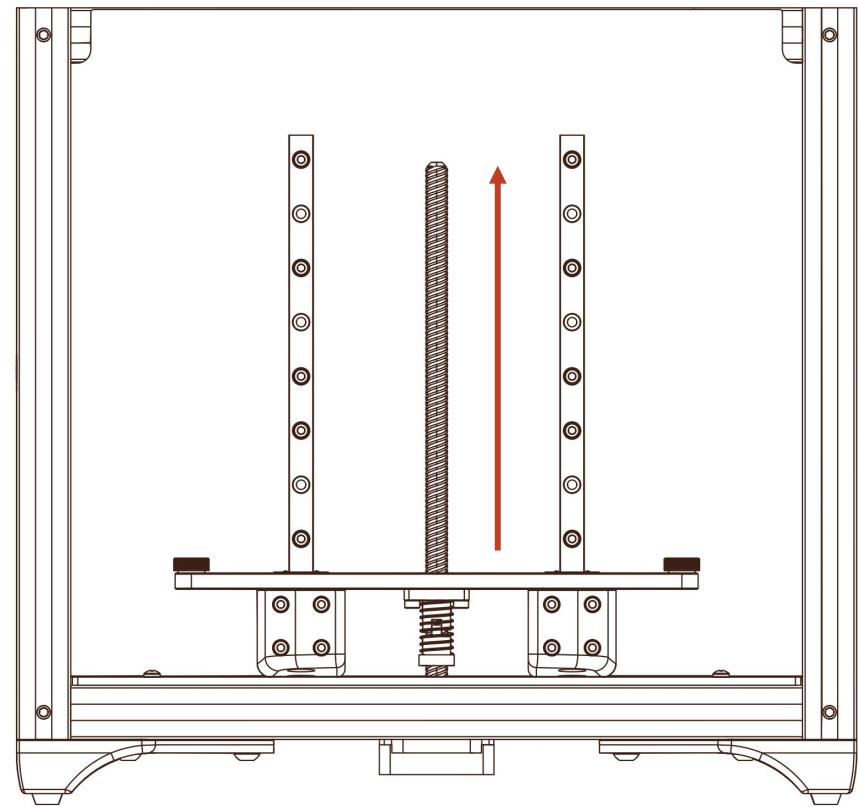
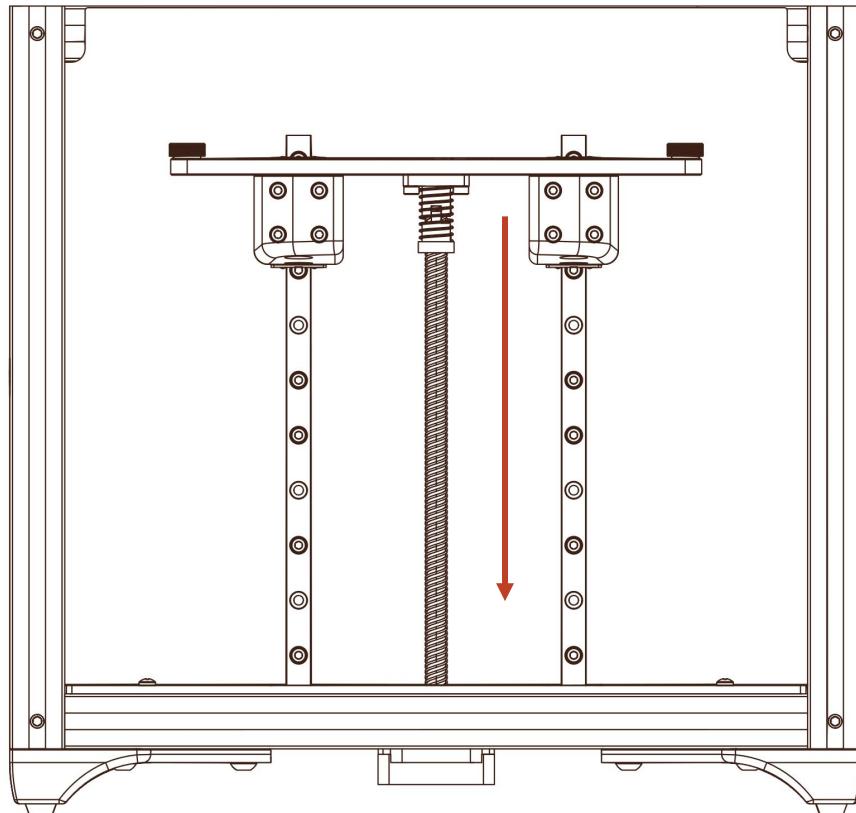




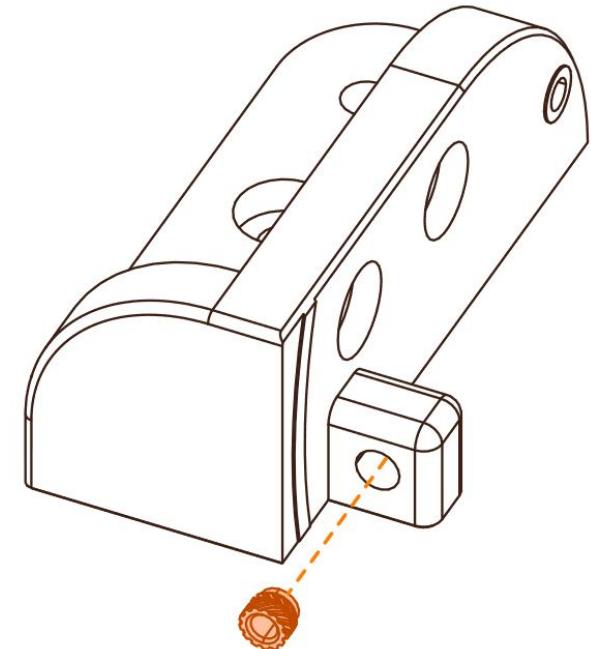
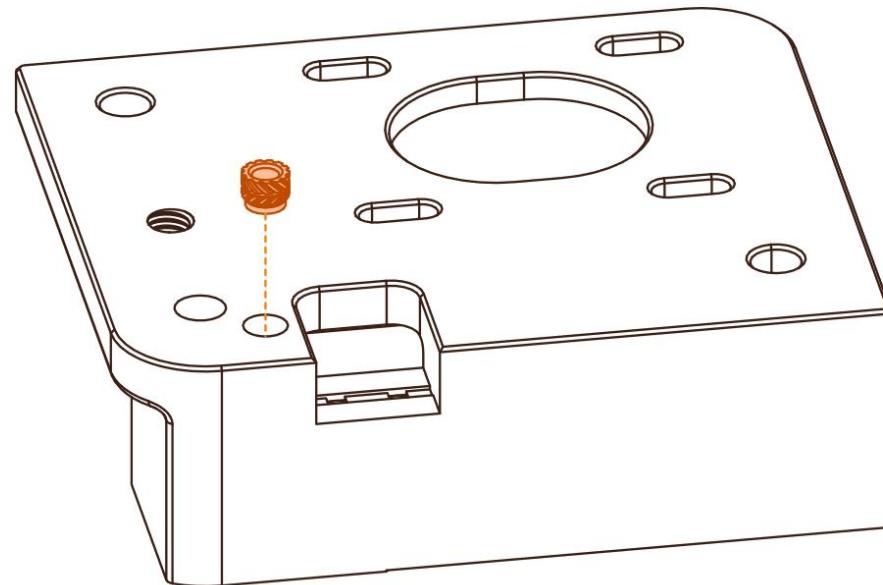
BUILD SURFACE

You can install the silicone build mat that came with the printer, the M4 thumb screws should keep it in place



**CHECK BED ALIGNMENT**

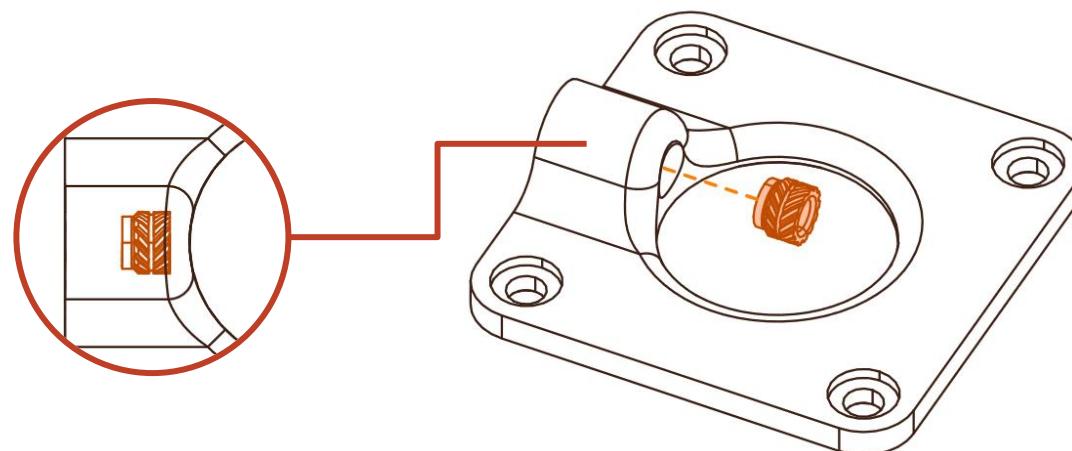
Slide the bed assembly up and down to ensure that there are no areas where it is binding. The motion should be smooth and consistent.

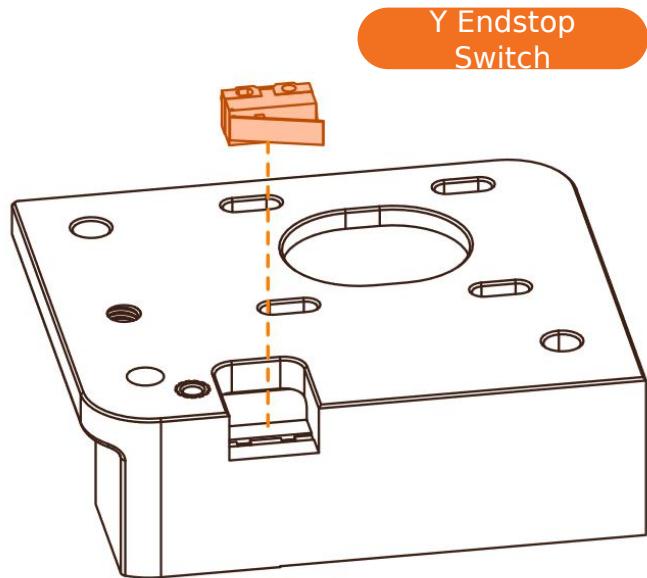


M3 Heatset
Inserts

INSERT INSTALLATION

This headset insert sits below the surface of the printed part, be sure that you have installed it to its correct position

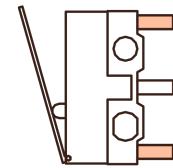




Y Endstop
Switch



M2 Self Tapping
Screws

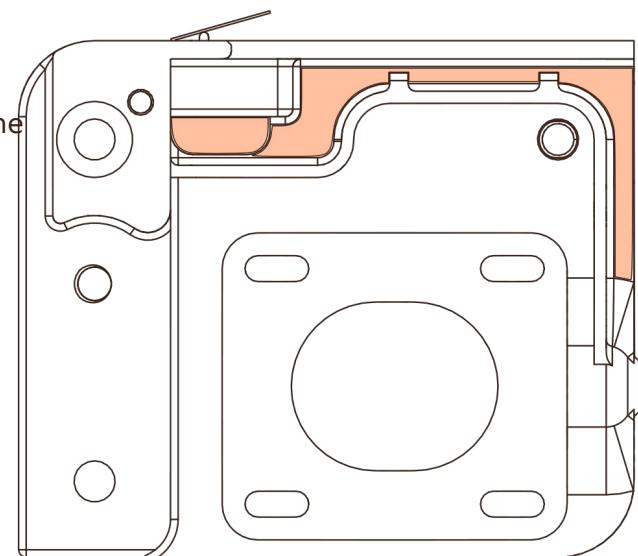


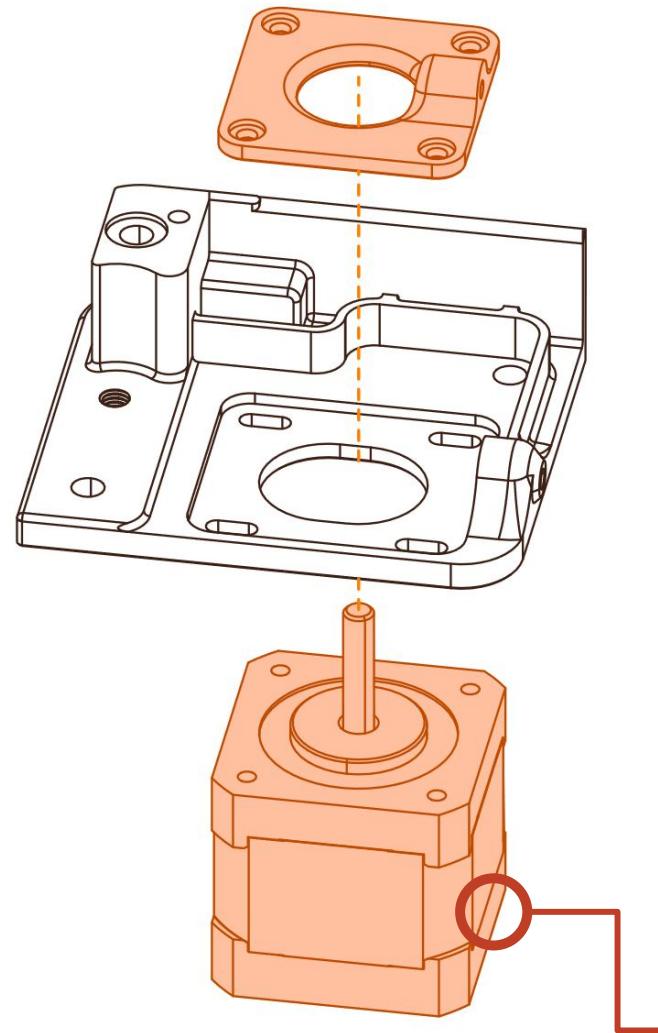
ENDSTOP WIRING

The endstop switches should come pre-wired to the outer two terminals of the switch

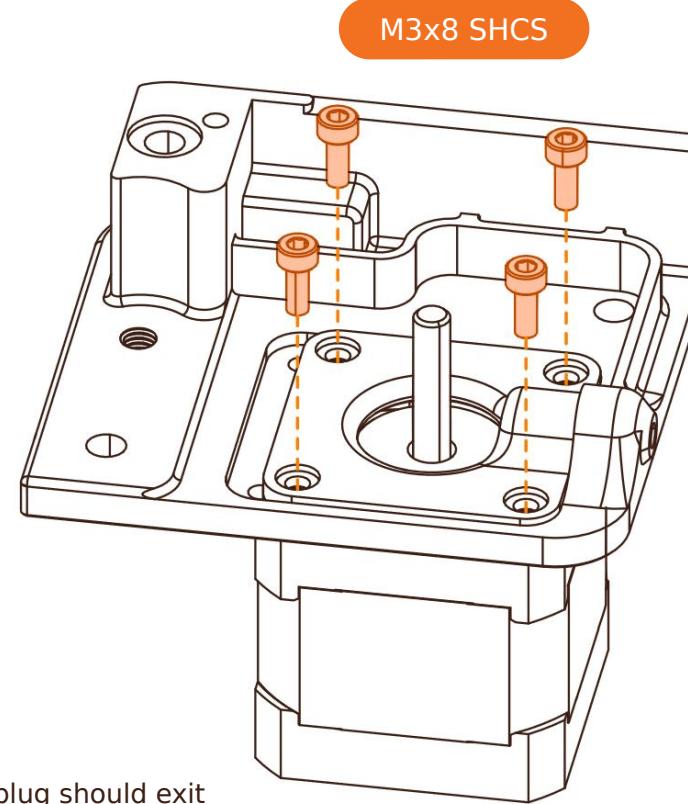
WIRE PATH

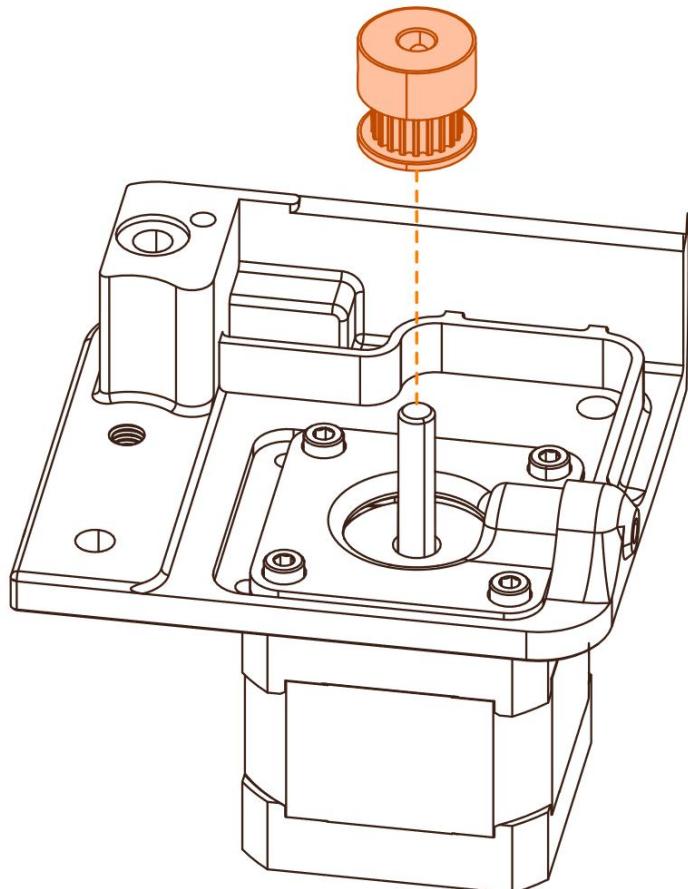
Run the endstop wiring along the highlighted path in the B motor assembly



**MOTOR WIRING**

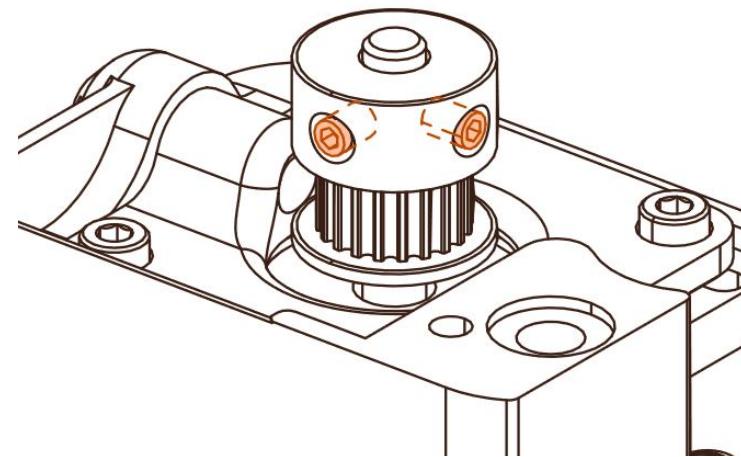
The motor wiring plug should exit from here, towards the center of the machine when the drive unit is installed.

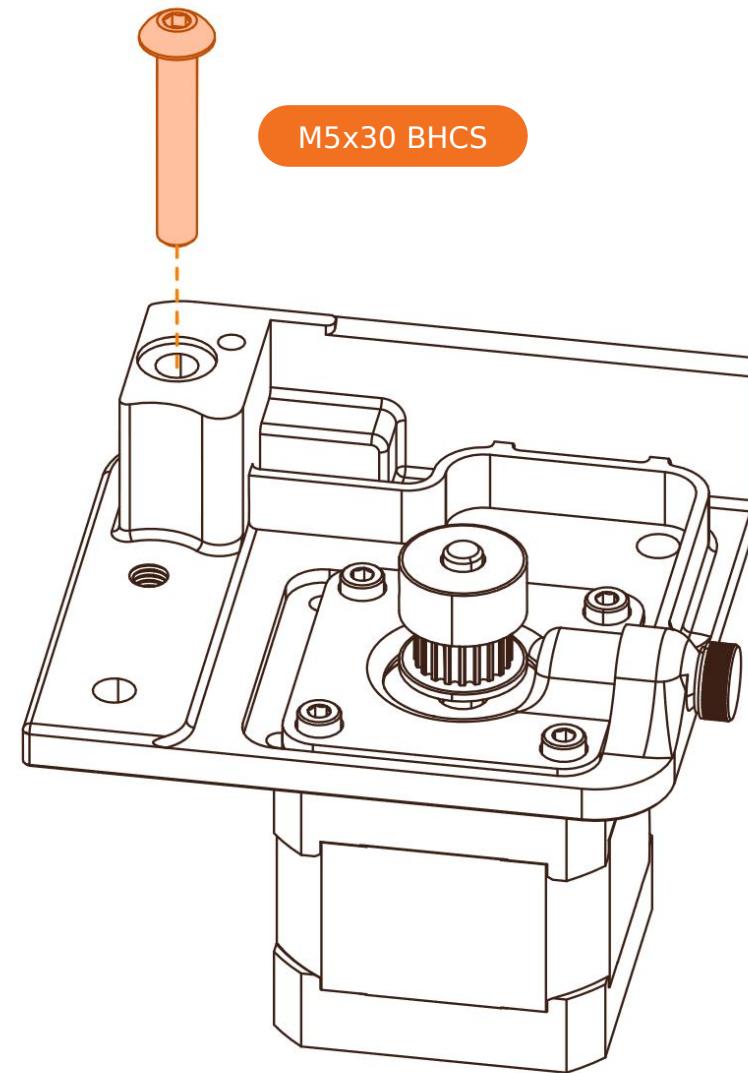
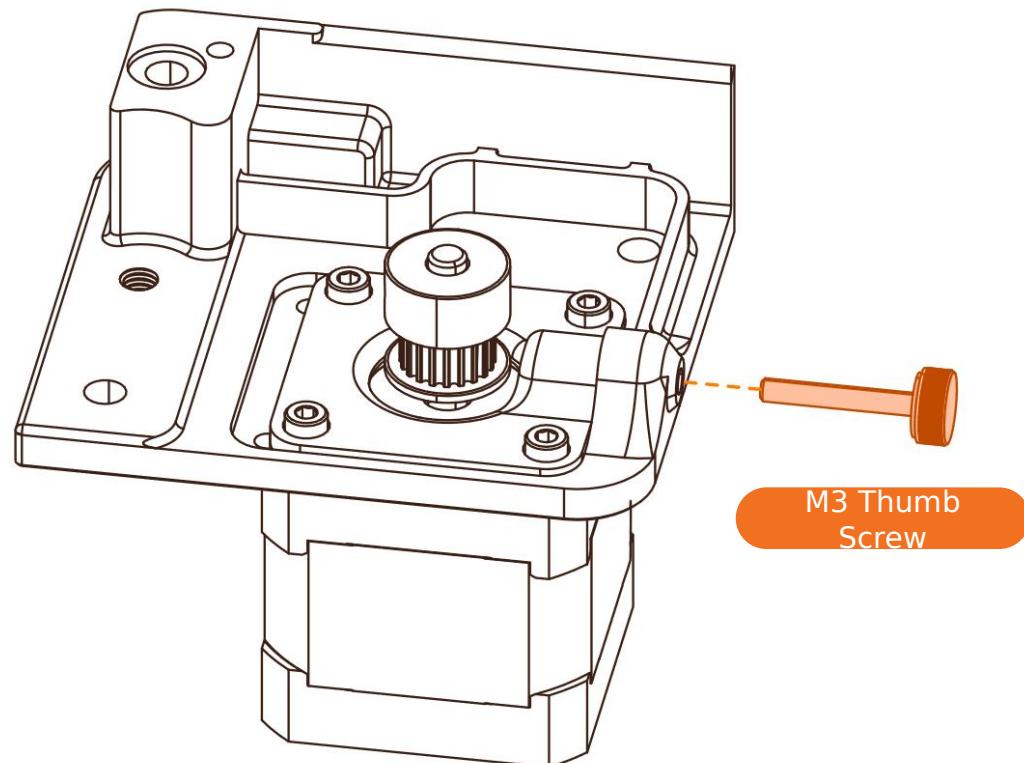


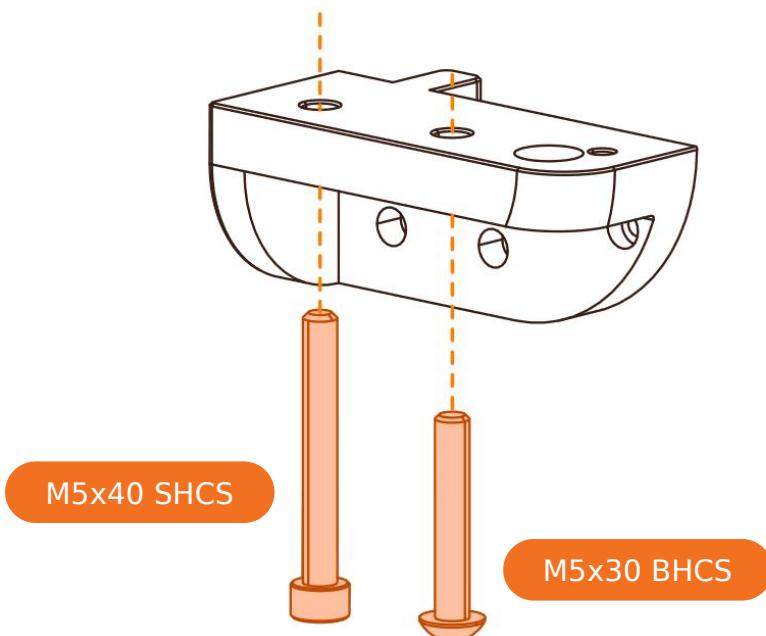


PULLEY PLACEMENT

We will set the height of this pulley at a later step, for now ensure that at least one of the set screws is in contact with the flat portion of the motor shaft





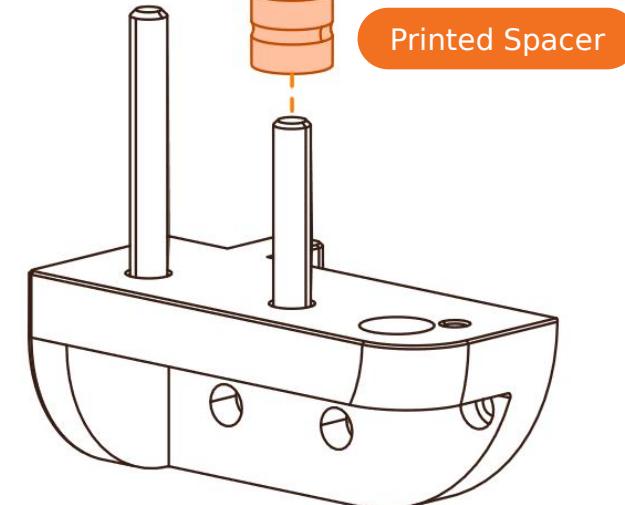


M5 Washer

F695
Bearing

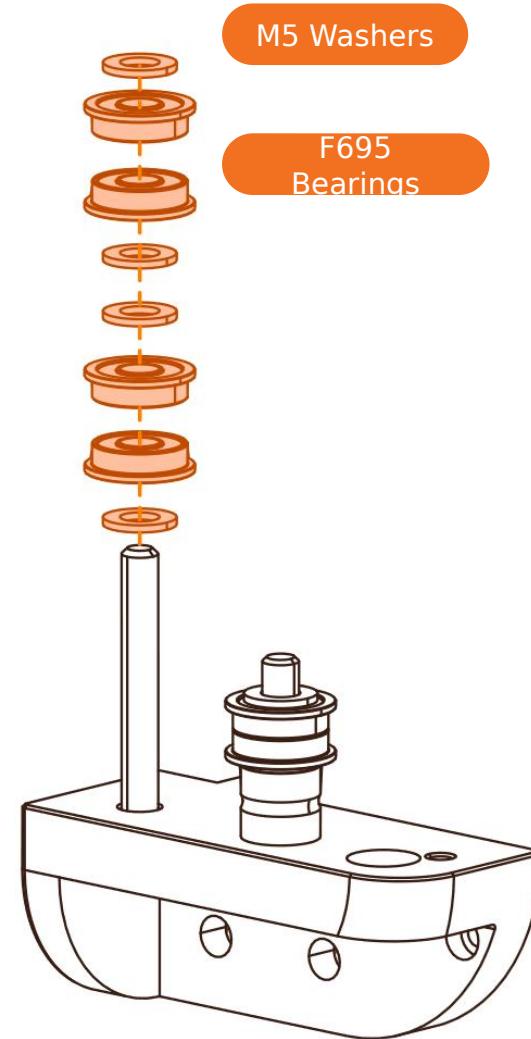
F695
Bearing

M5 Washer



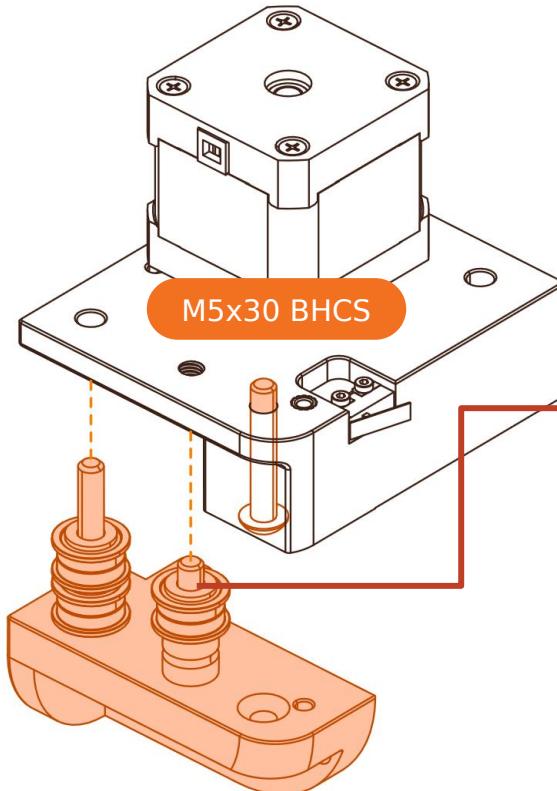
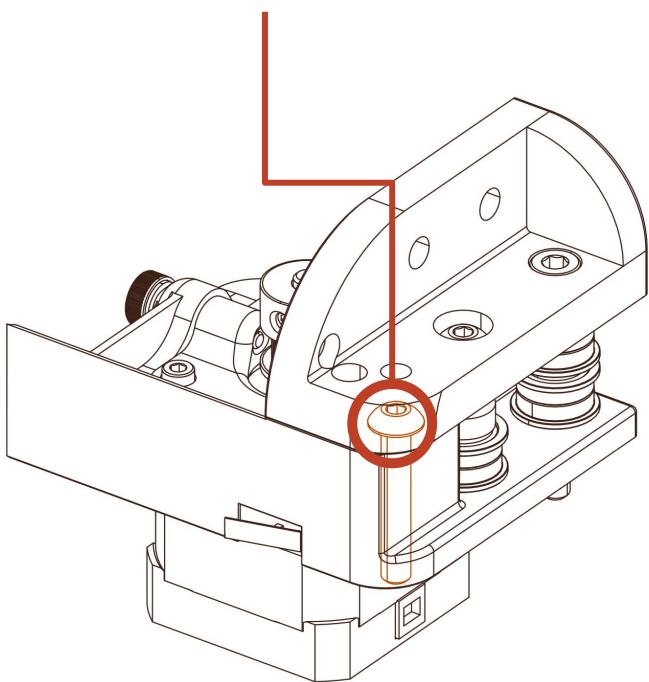
HARDWARE STACKS

We will be installing a number of similar but NOT identical stacks of hardware like the one shown above, pay attention to the printed part orientation and the order of the stacked components as they are not all the same

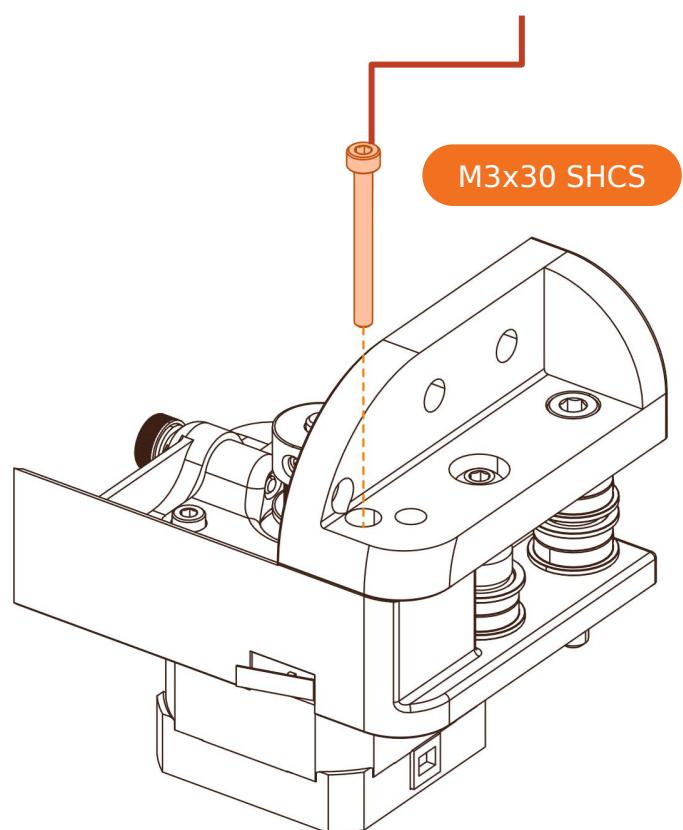


EXTRA SCREWS

We are installing an M5x30 screw here that will be captured by the printed parts, this fastener will help mount the drive unit to the frame at a later step

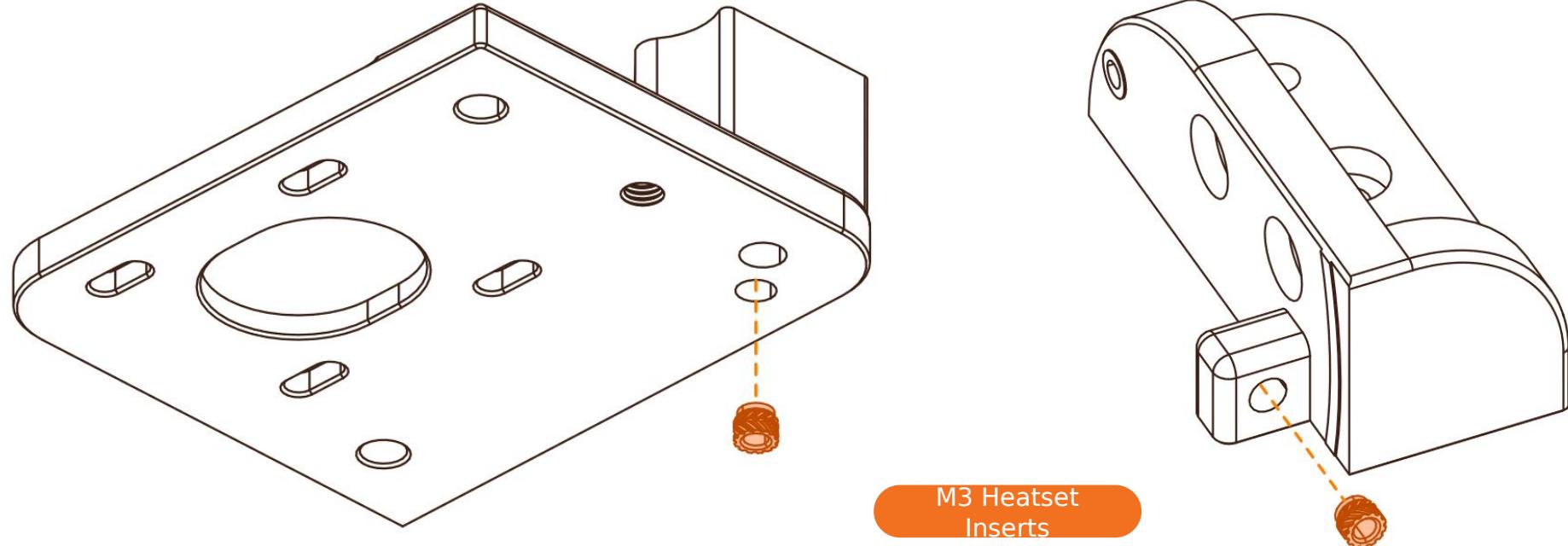
**THREADING INTO PLASTIC**

These two screws will thread into the plastic printed parts, take care not to strip them by tightening them too hard.



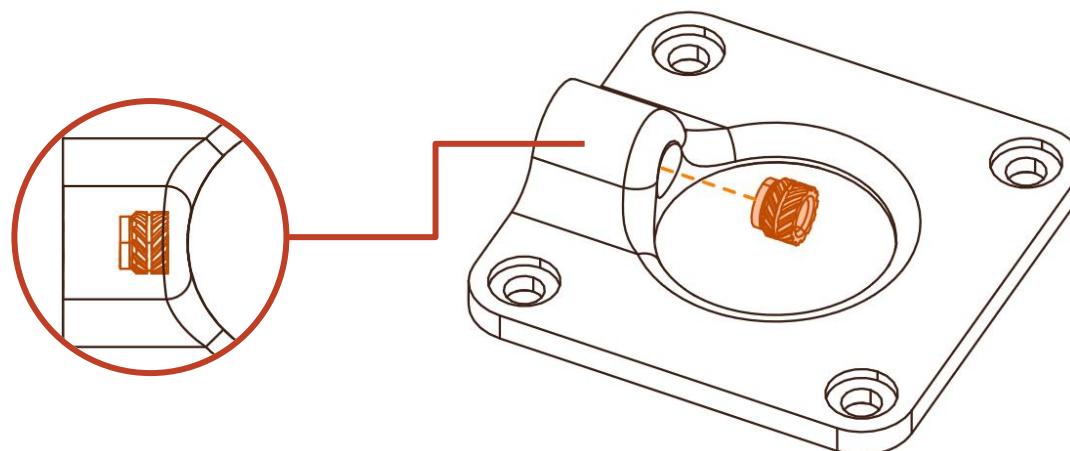
SETTING DRIVE PULLEY HEIGHT

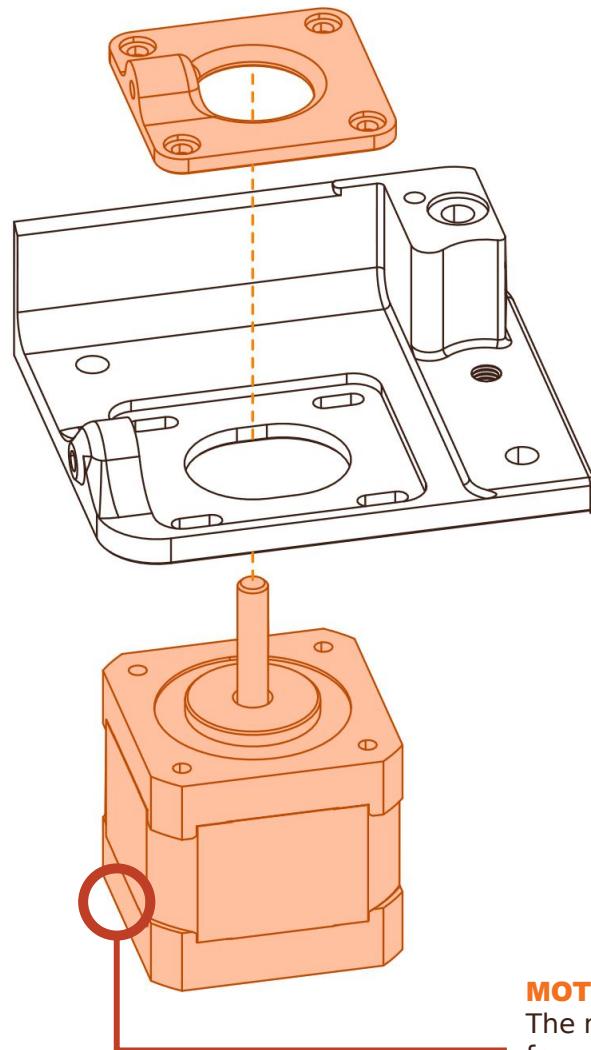
At this point we can adjust the height of the drive pulley on the motor shaft. We want the pulley to be centered with the top pair of bearings on the B drive unit



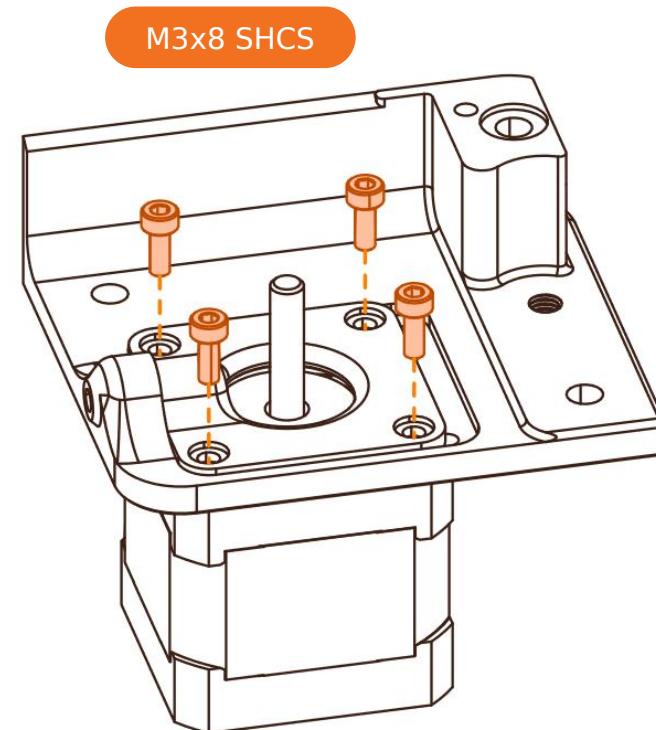
INSERT INSTALLATION

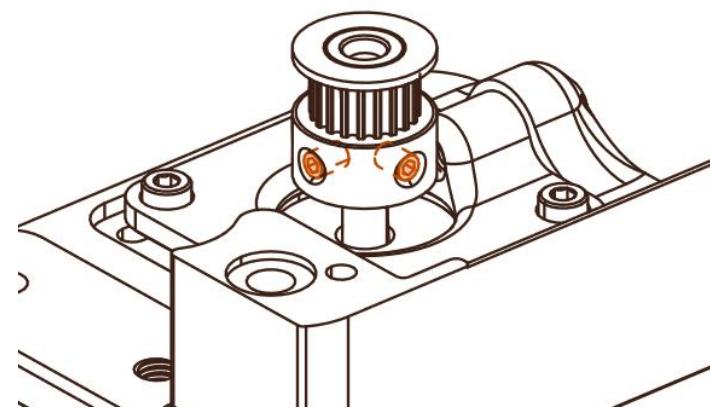
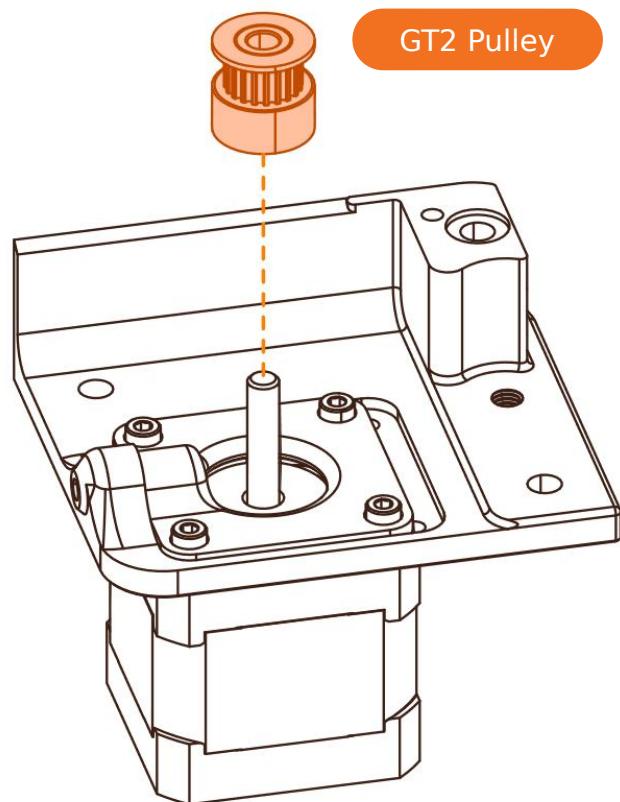
This headset insert sits below the surface of the printed part, be sure that you have installed it to its correct position

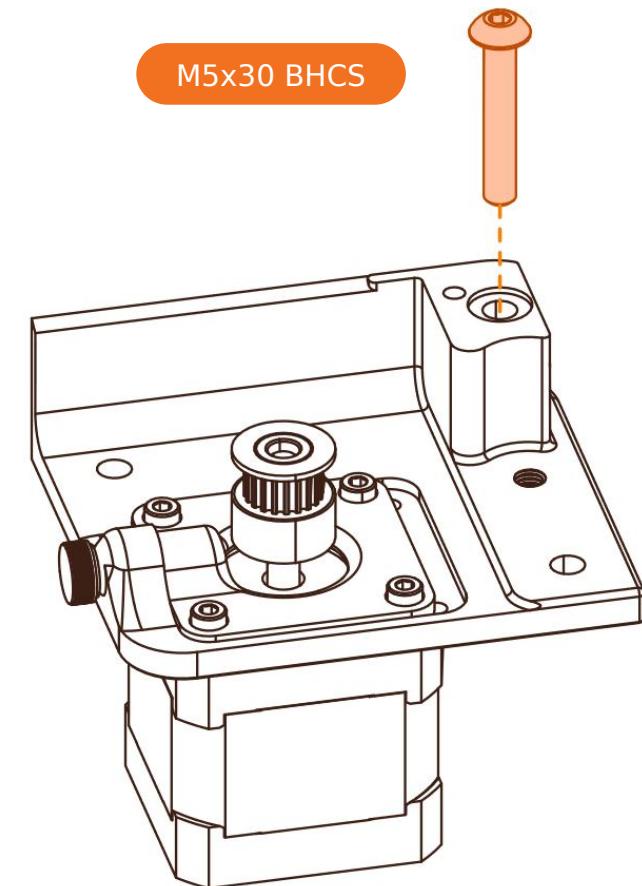
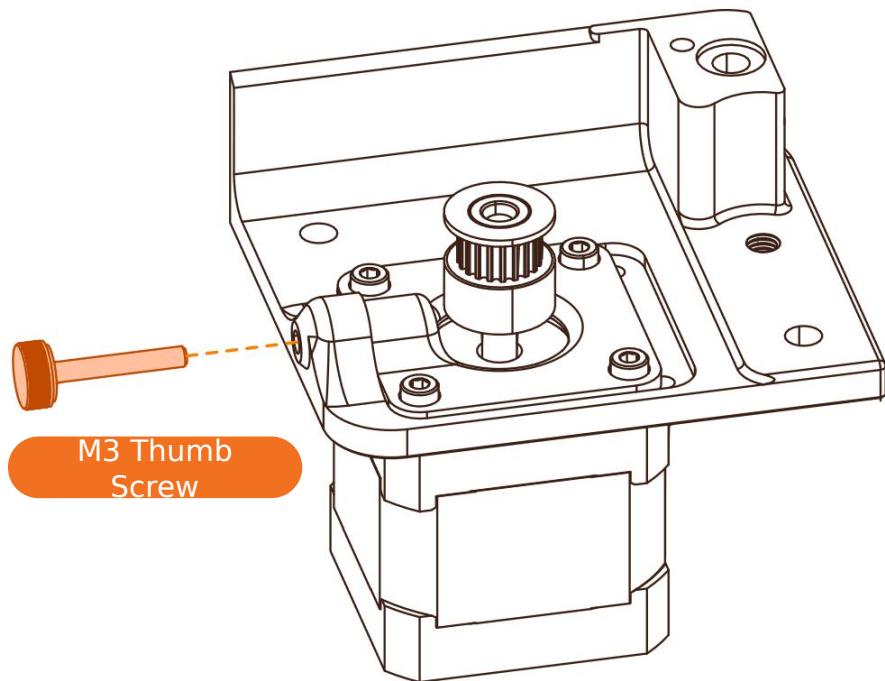


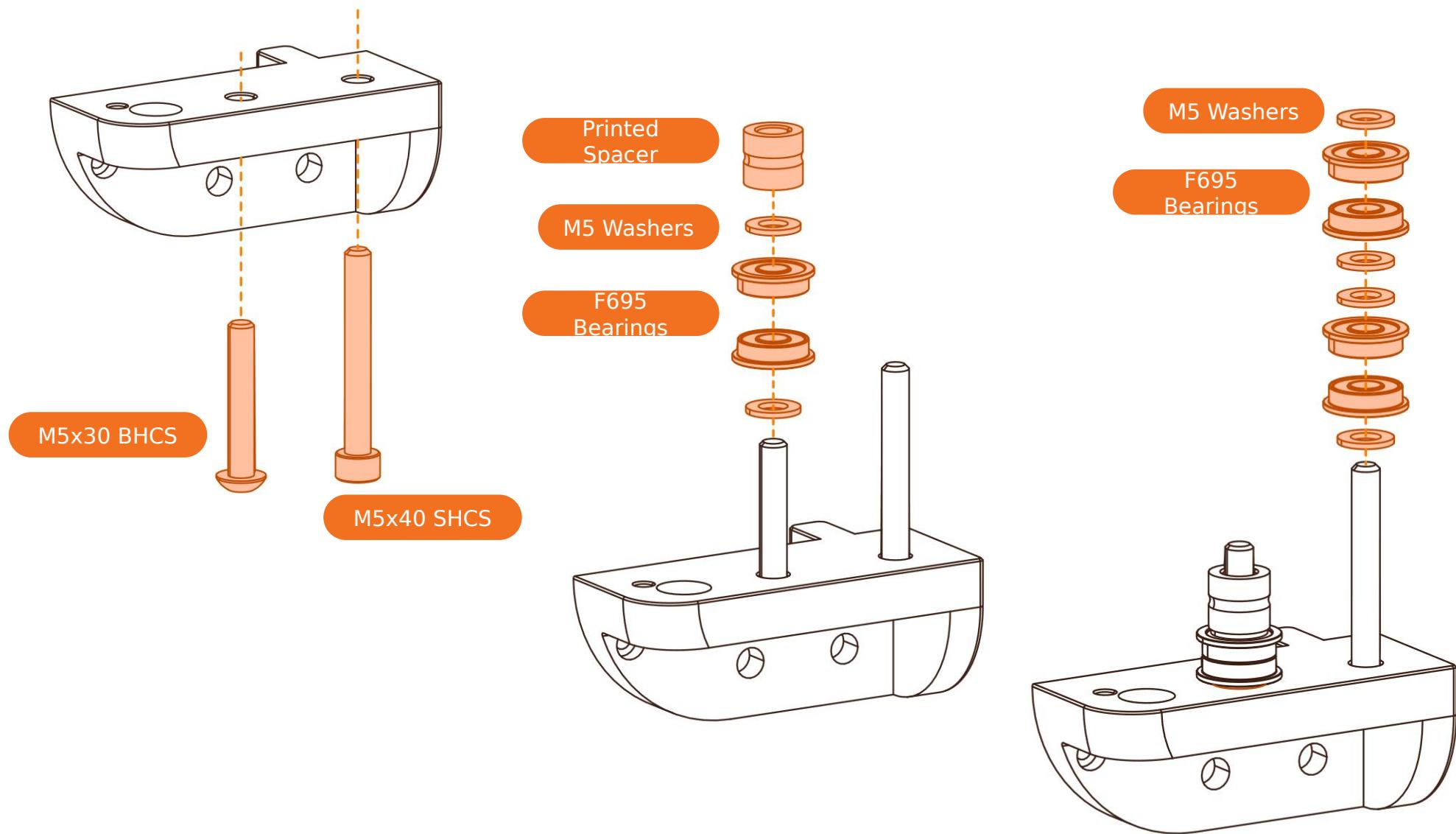
**MOTOR WIRING**

The motor wiring plug should exit from here, towards the center of the machine when the drive unit is installed.



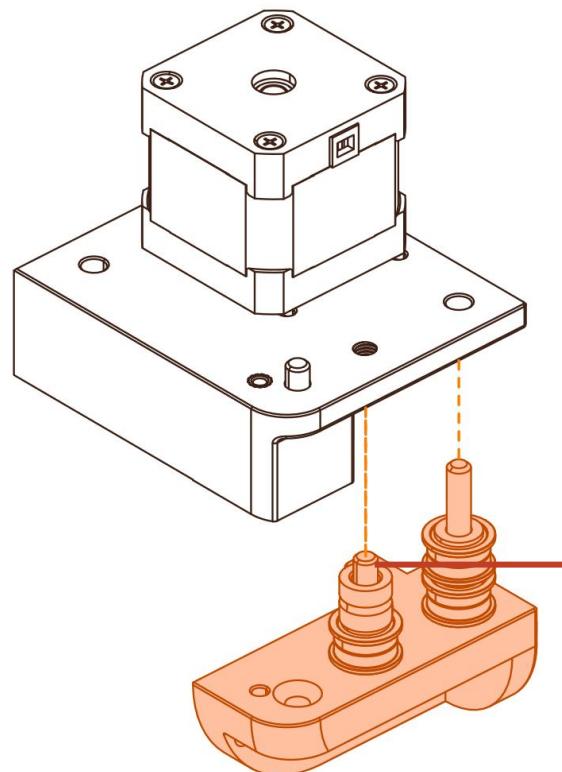
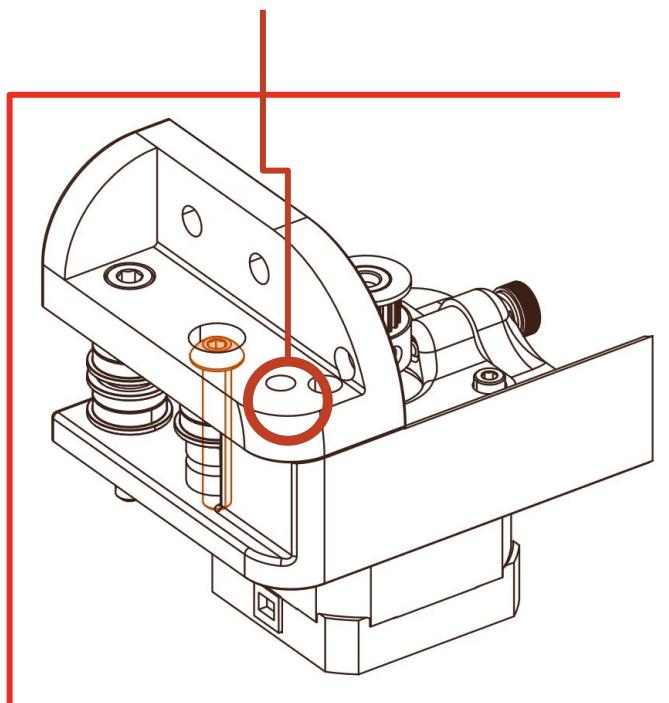




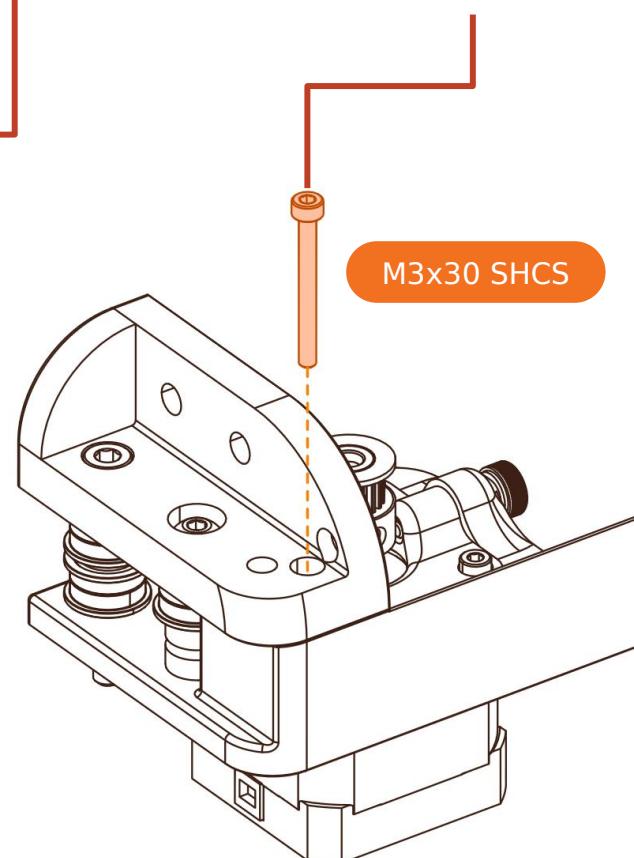


EXTRA SCREWS

We are installing an M5x30 screw here that will be captured by the printed parts, this fastener will help mount the drive unit to the frame at a later step

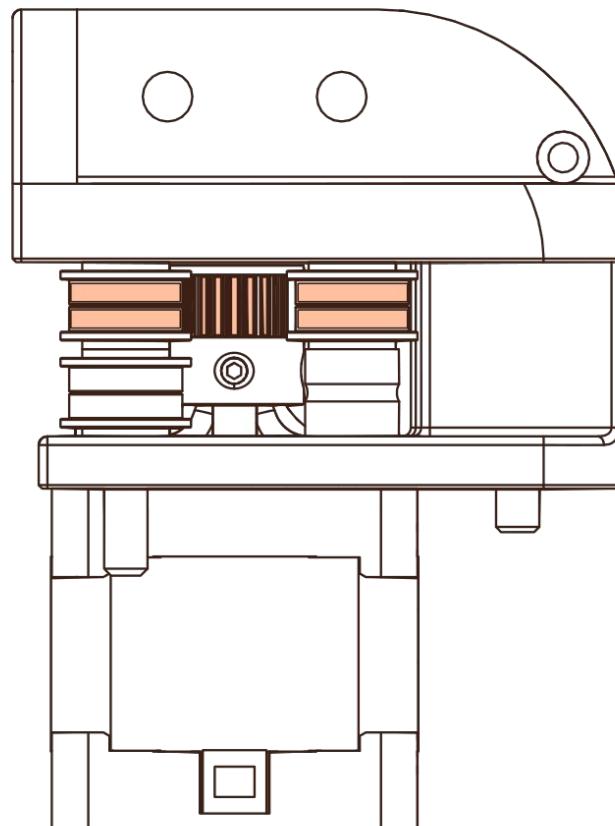
**THREADING INTO PLASTIC**

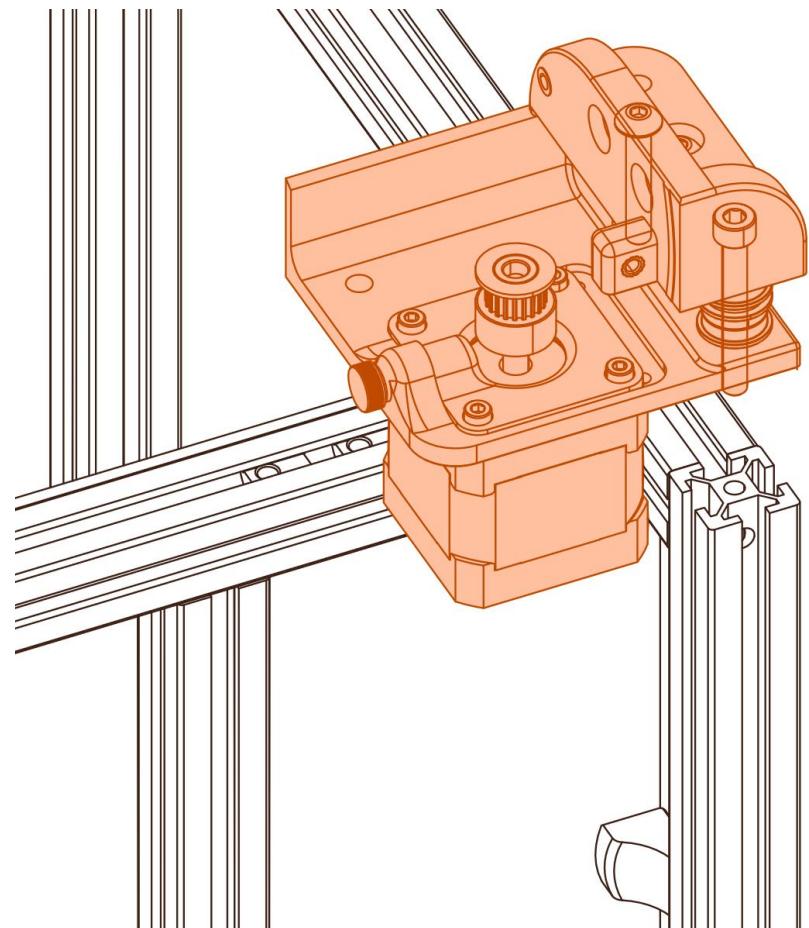
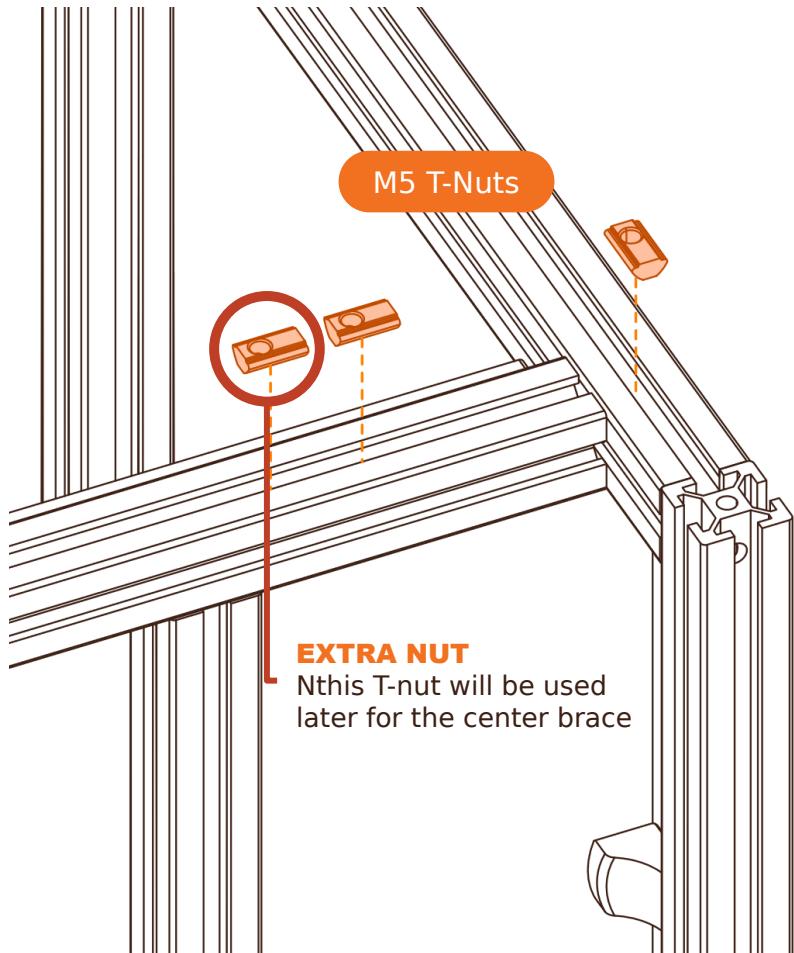
These two screws will thread into the plastic printed parts, take care not to strip them by tightening them too hard.



SETTING DRIVE PULLEY HEIGHT

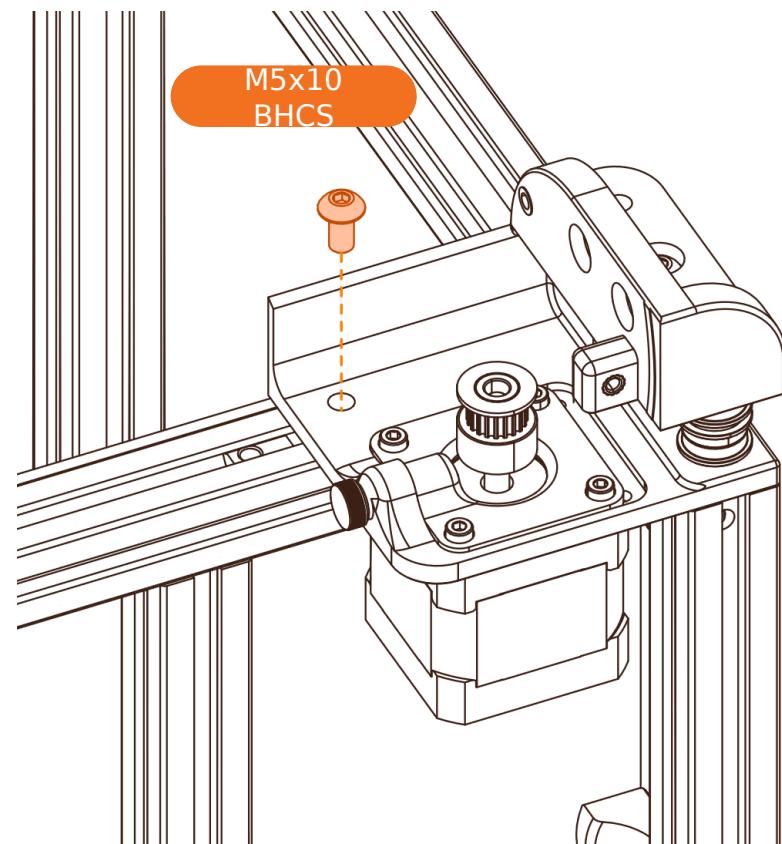
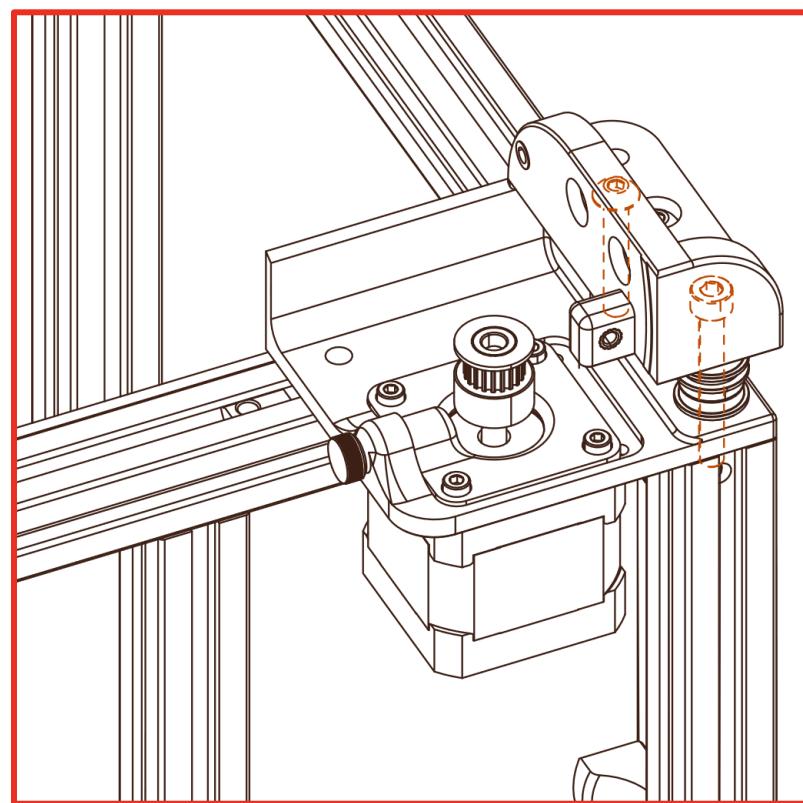
At this point we can adjust the height of the drive pulley on the motor shaft. We want the pulley to be centered with the top pair of bearings on the B drive unit

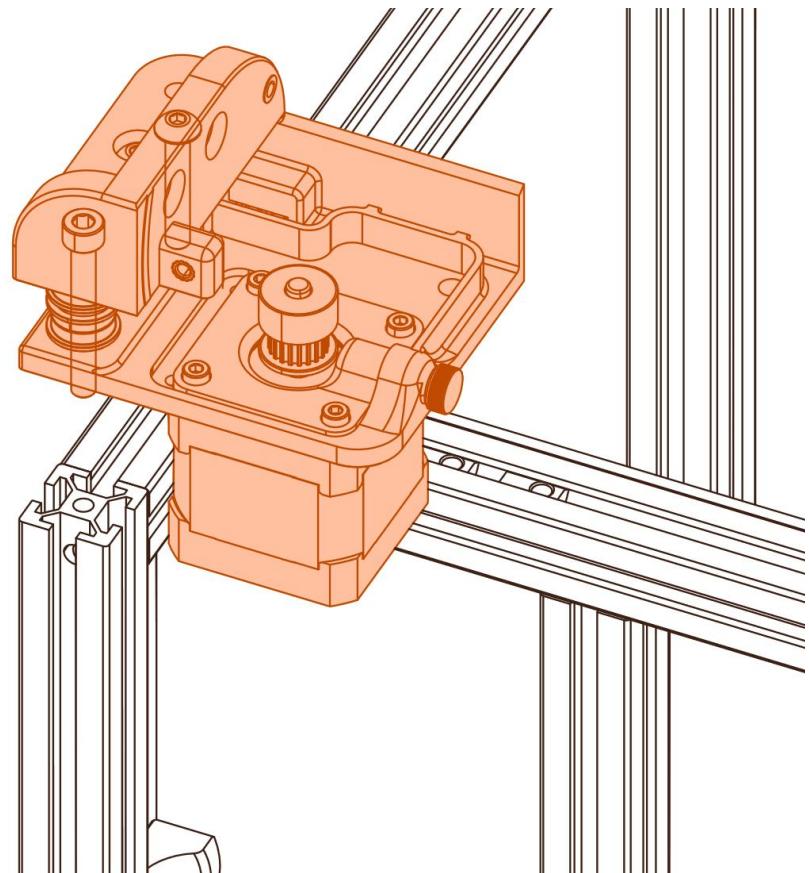
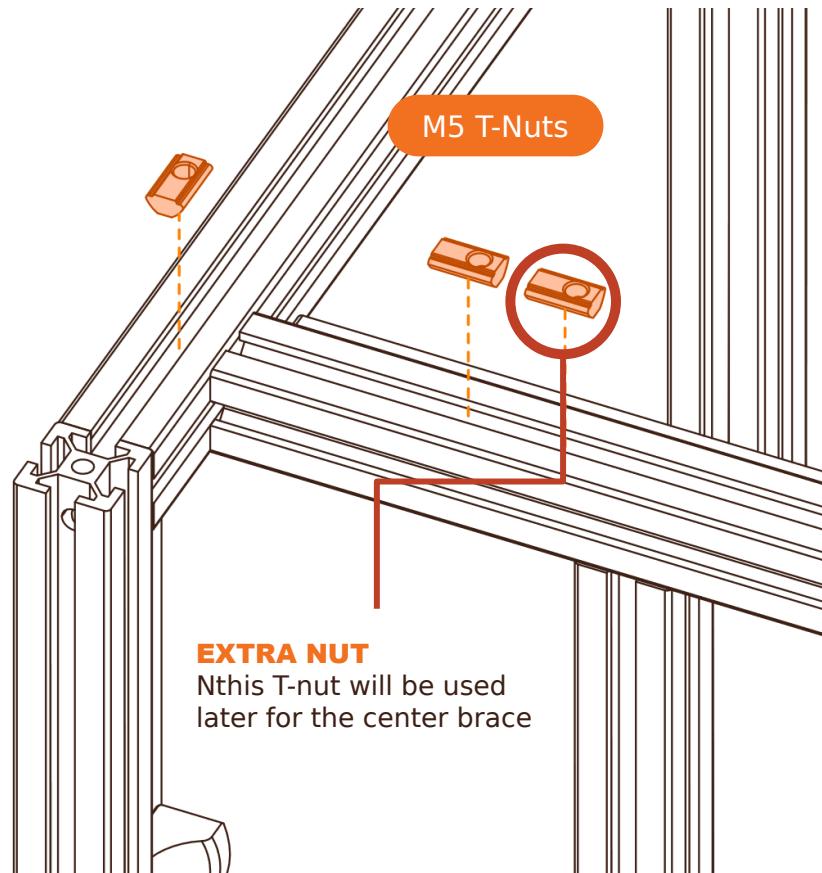




ATTACHING THE DRIVE UNIT

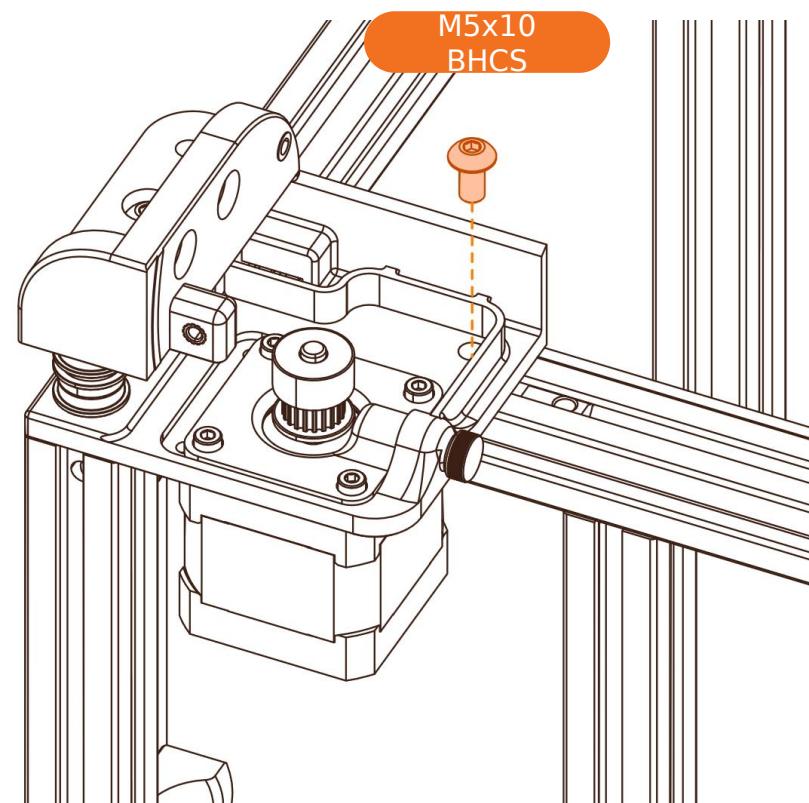
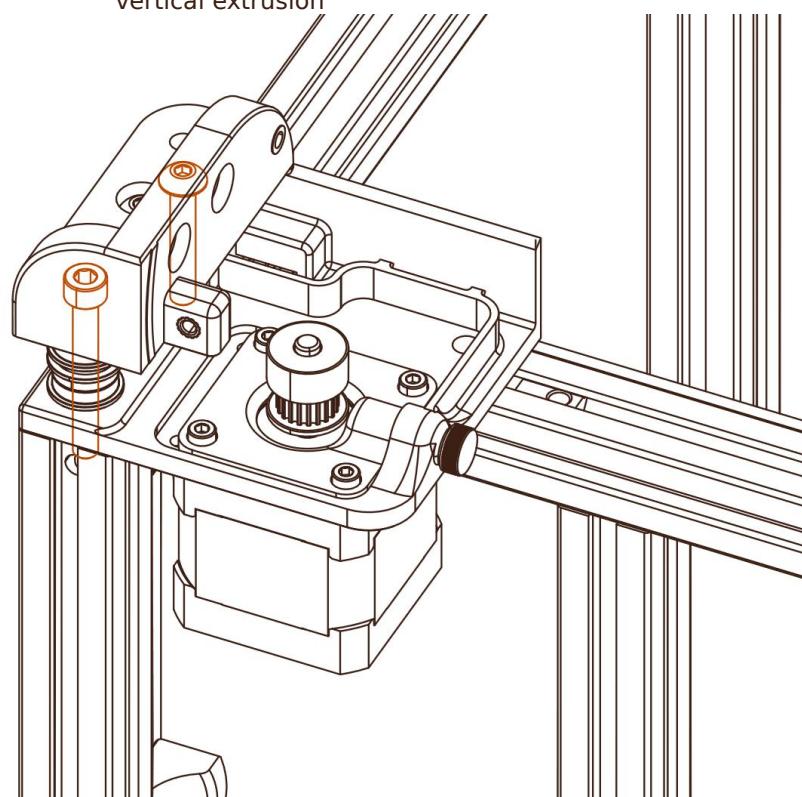
The two highlighted screws help secure the drive unit to the frame, the button head screws threads into a T-nut you installed on the previous page, the socket head screw threads into the end of the vertical extrusion

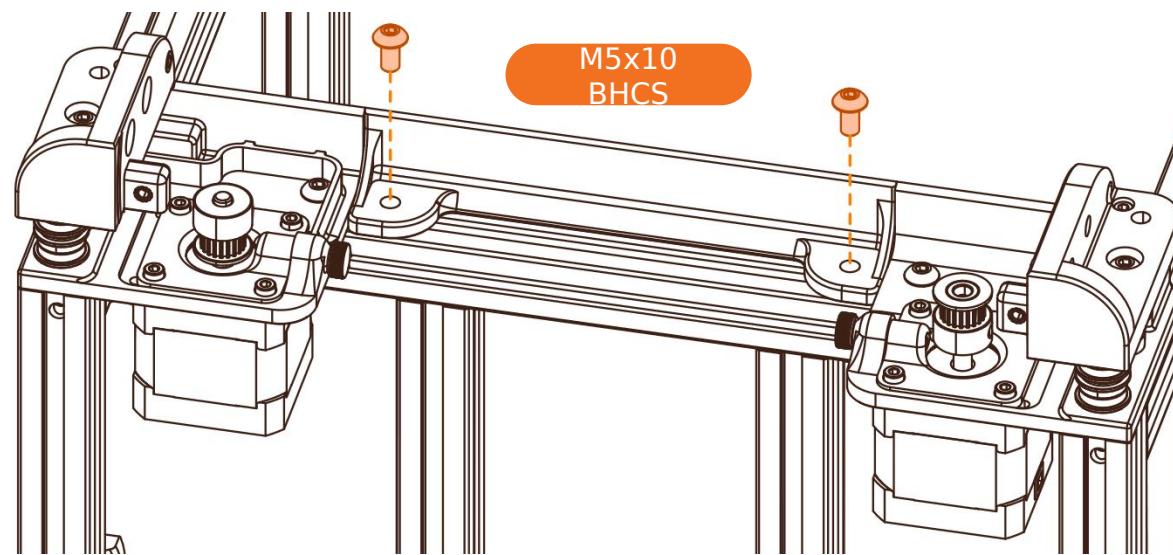
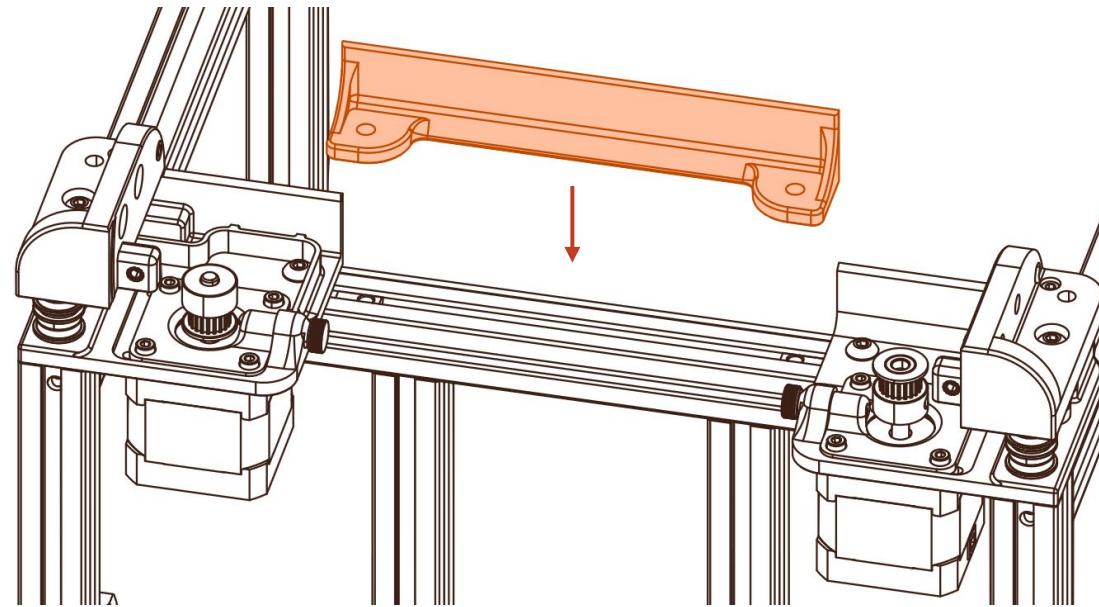


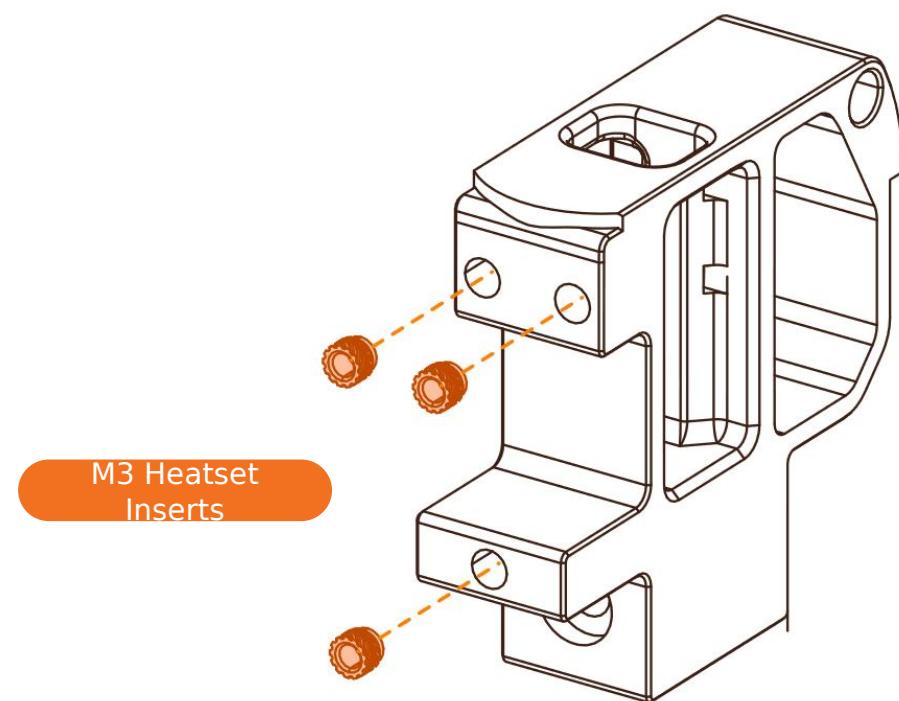
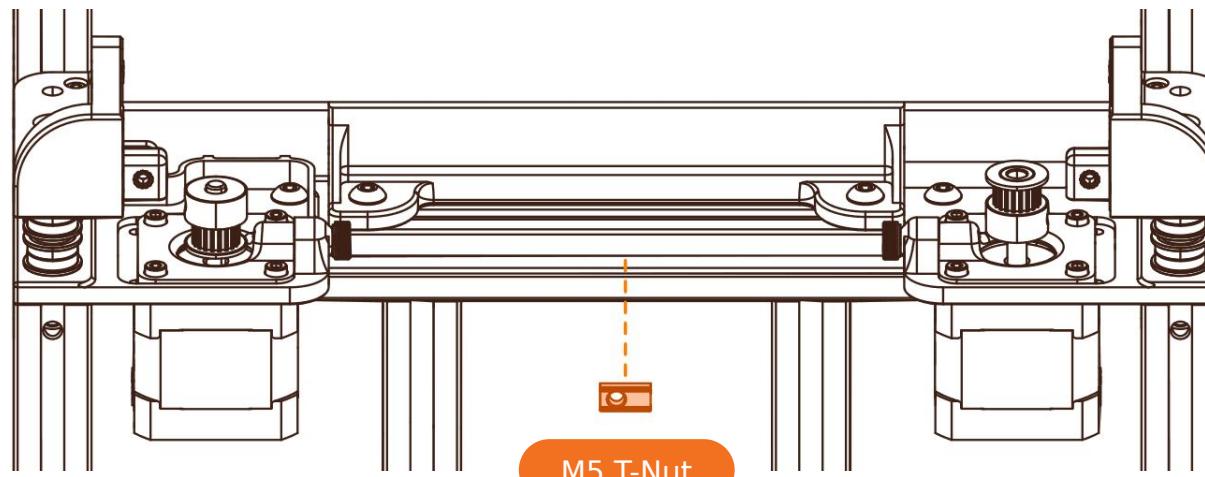


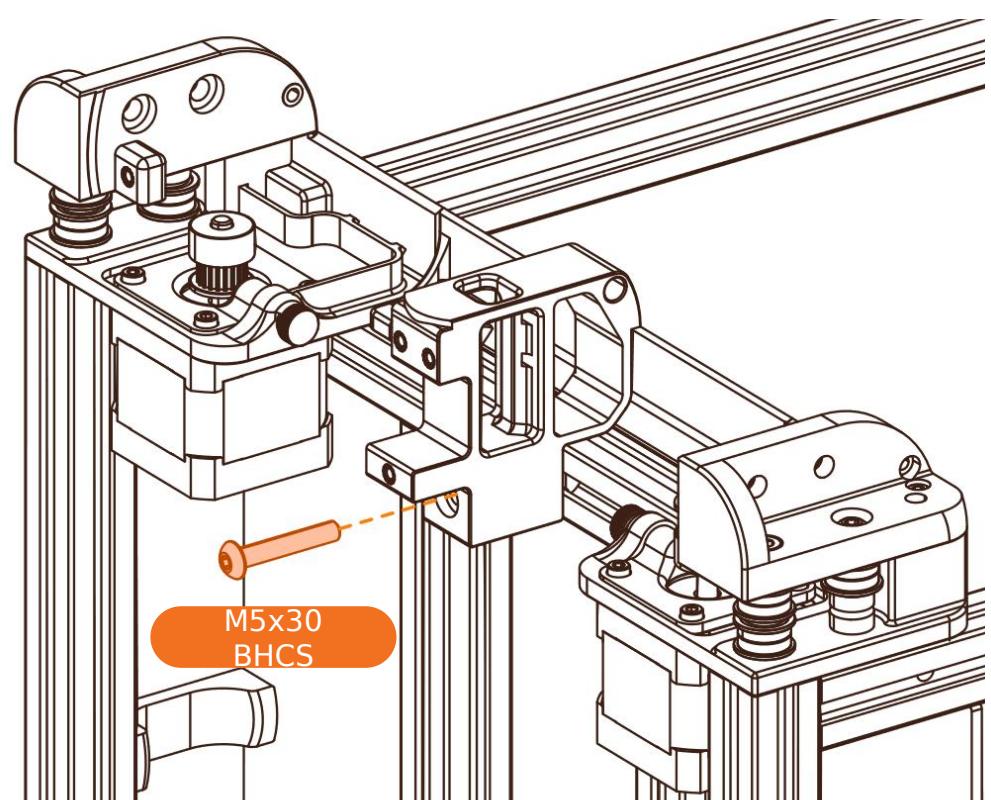
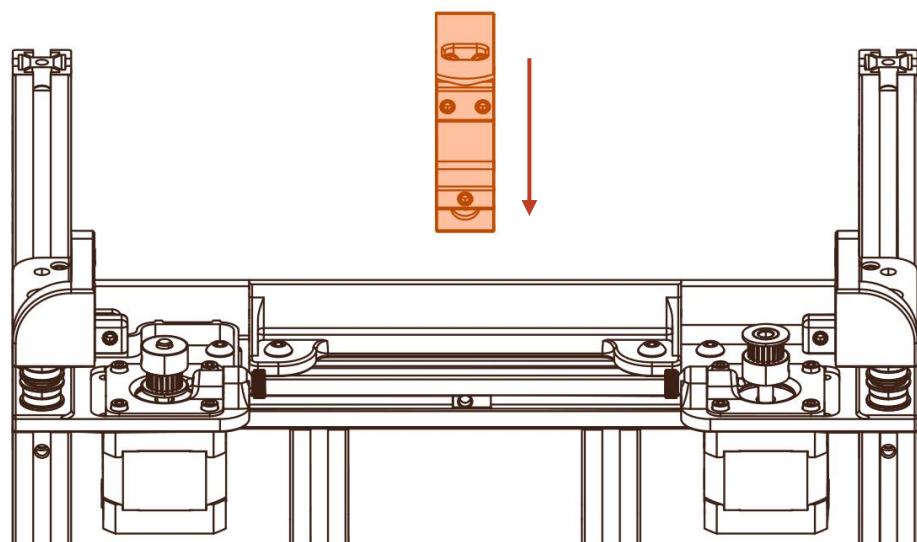
ATTACHING THE DRIVE UNIT

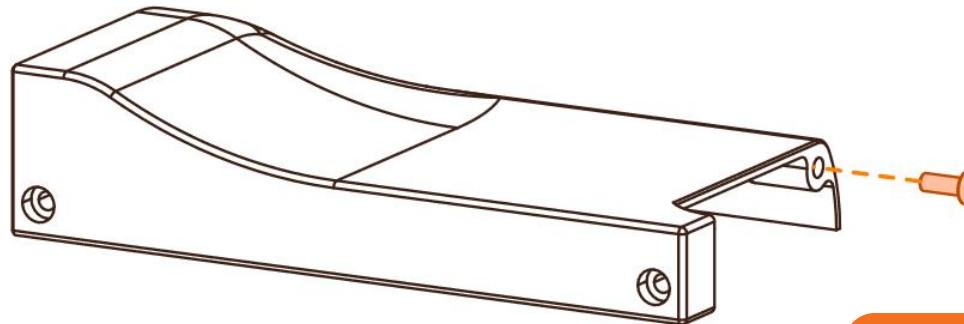
The two highlighted screws help secure the drive unit to the frame, the button head screws threads into a T-nut you installed on the previous page, the socket head screw threads into the end of the vertical extrusion







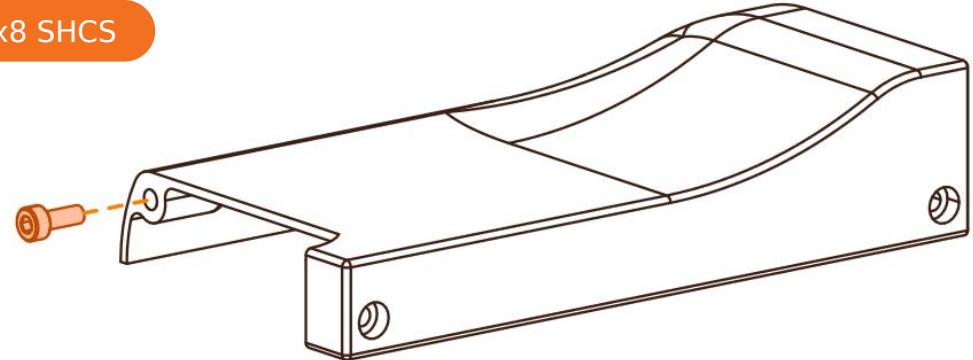


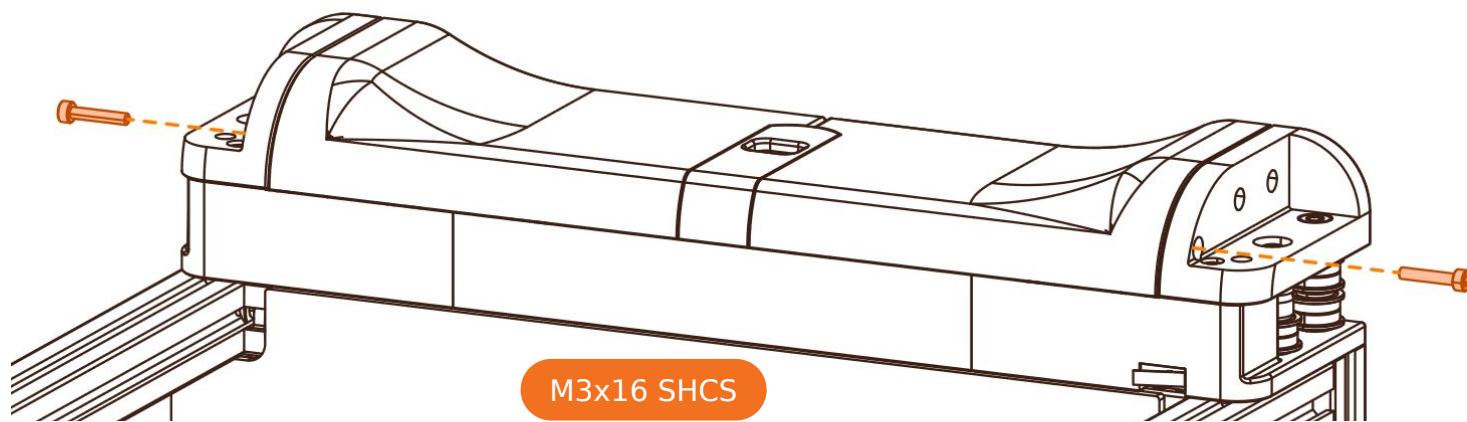
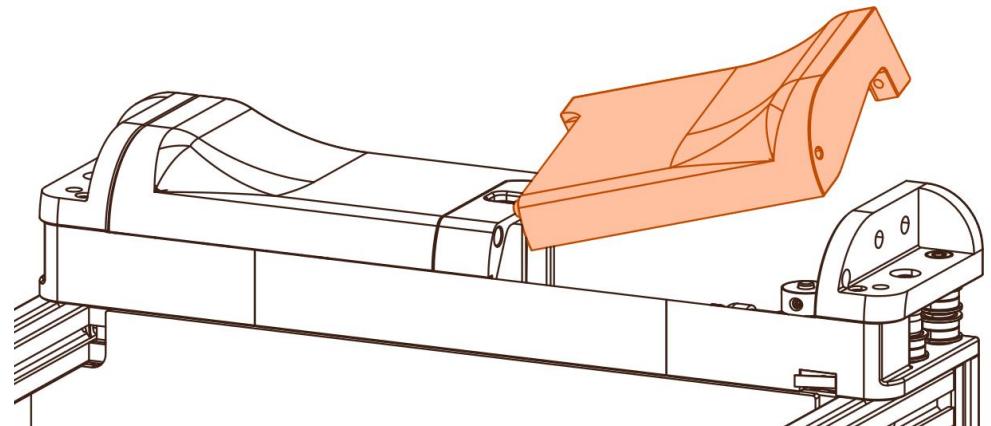
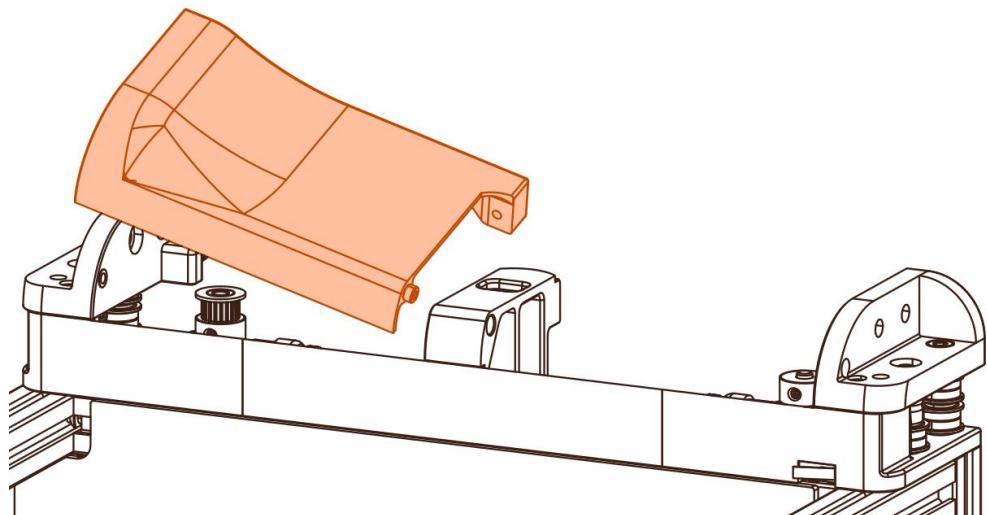


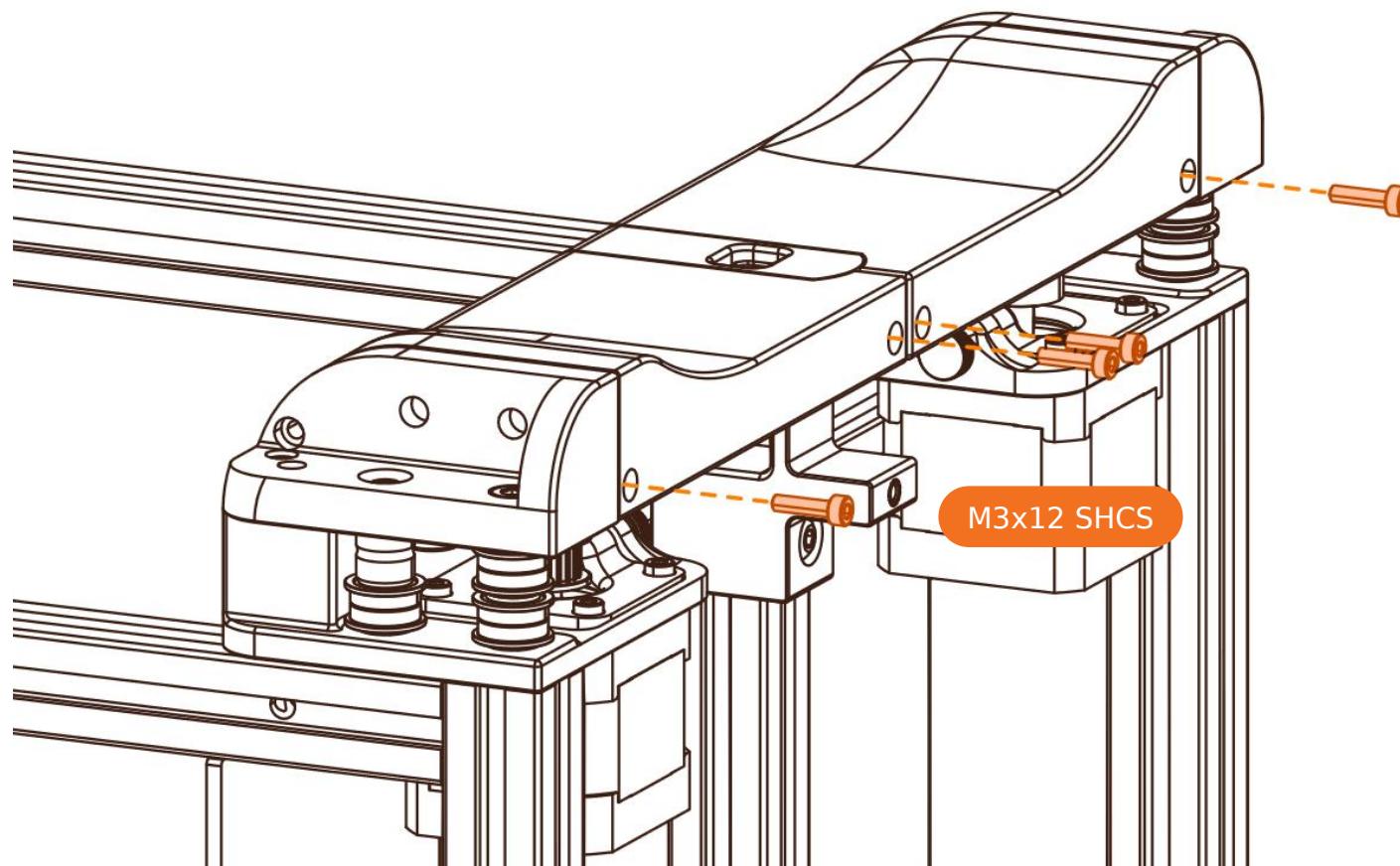
M3x8 SHCS

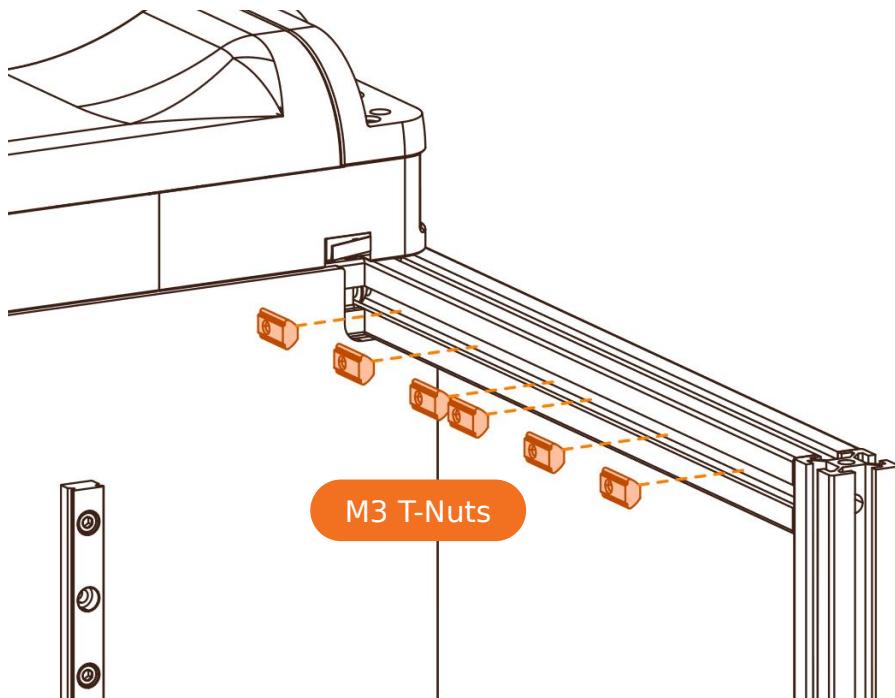
PREPPING THE DRIVE UNIT COVERS

These two M3 screws will act as hinge points for the drive covers, they thread into plastic.

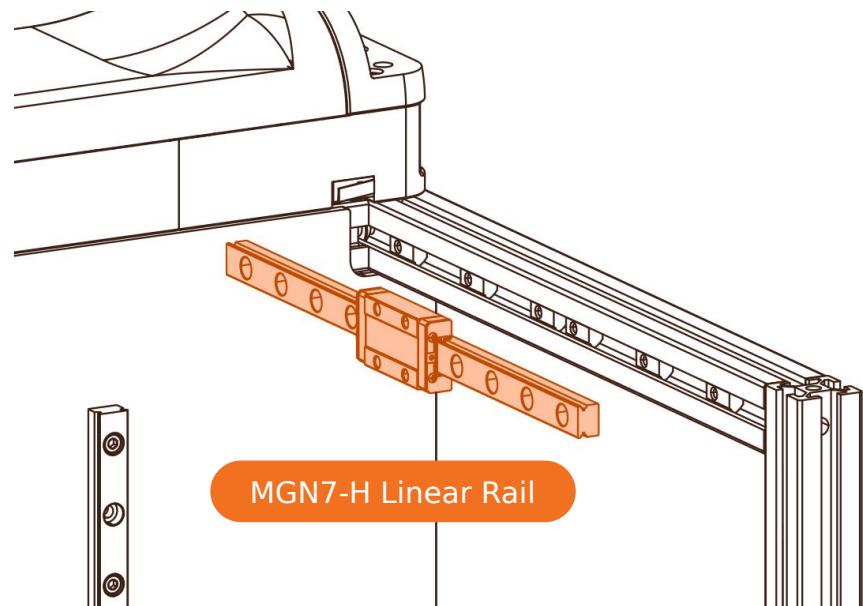




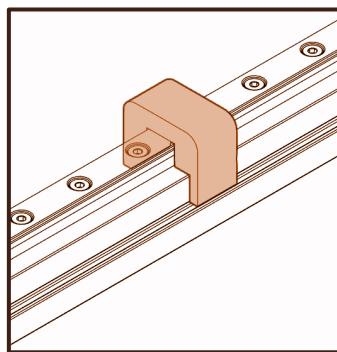




M3 T-Nuts

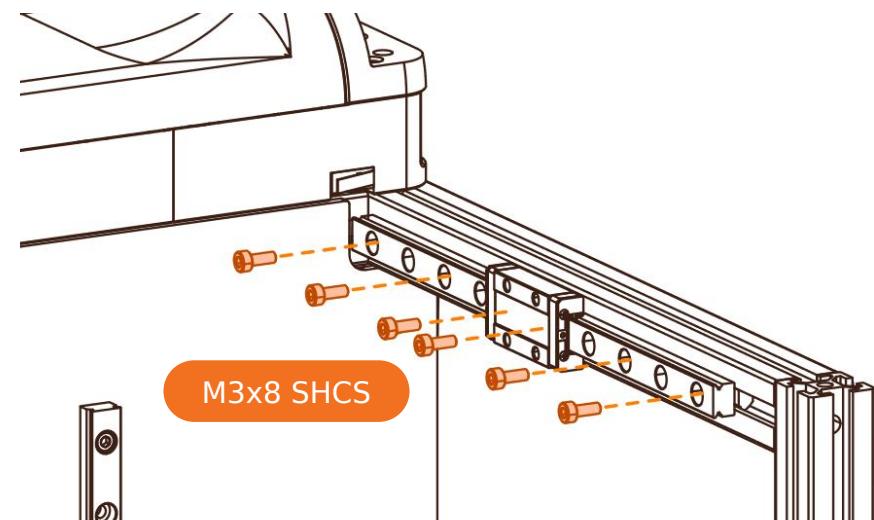


MGN7-H Linear Rail

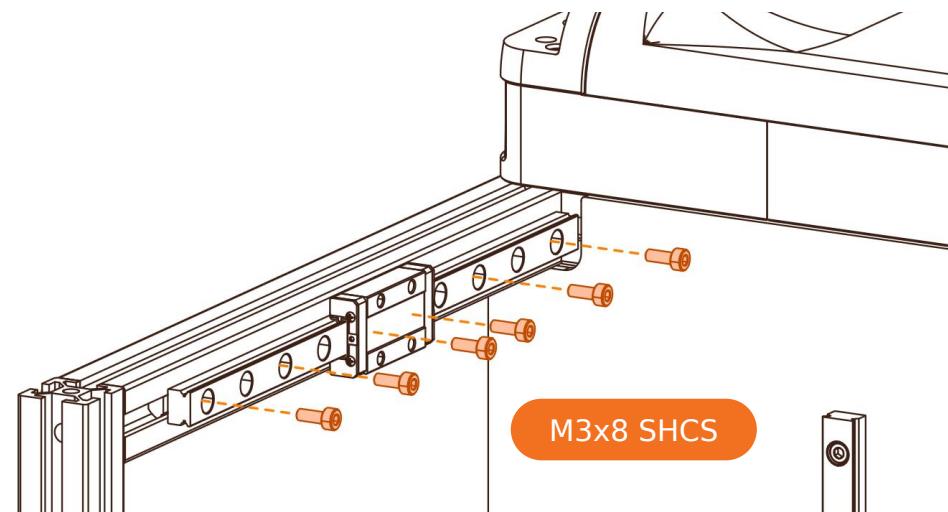
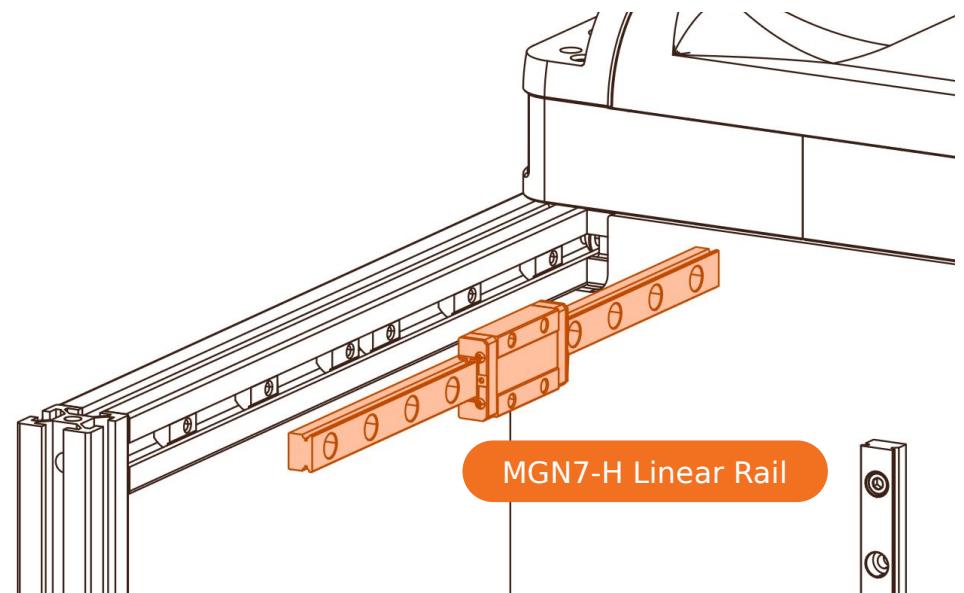
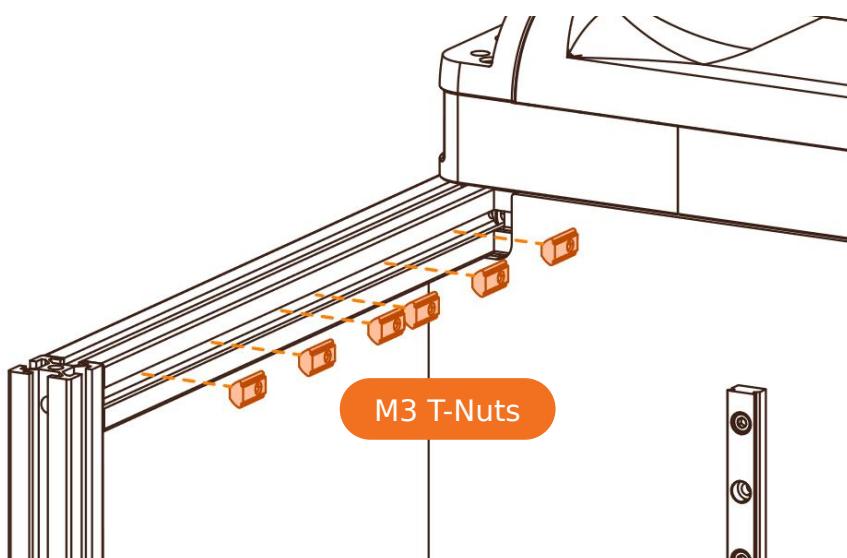


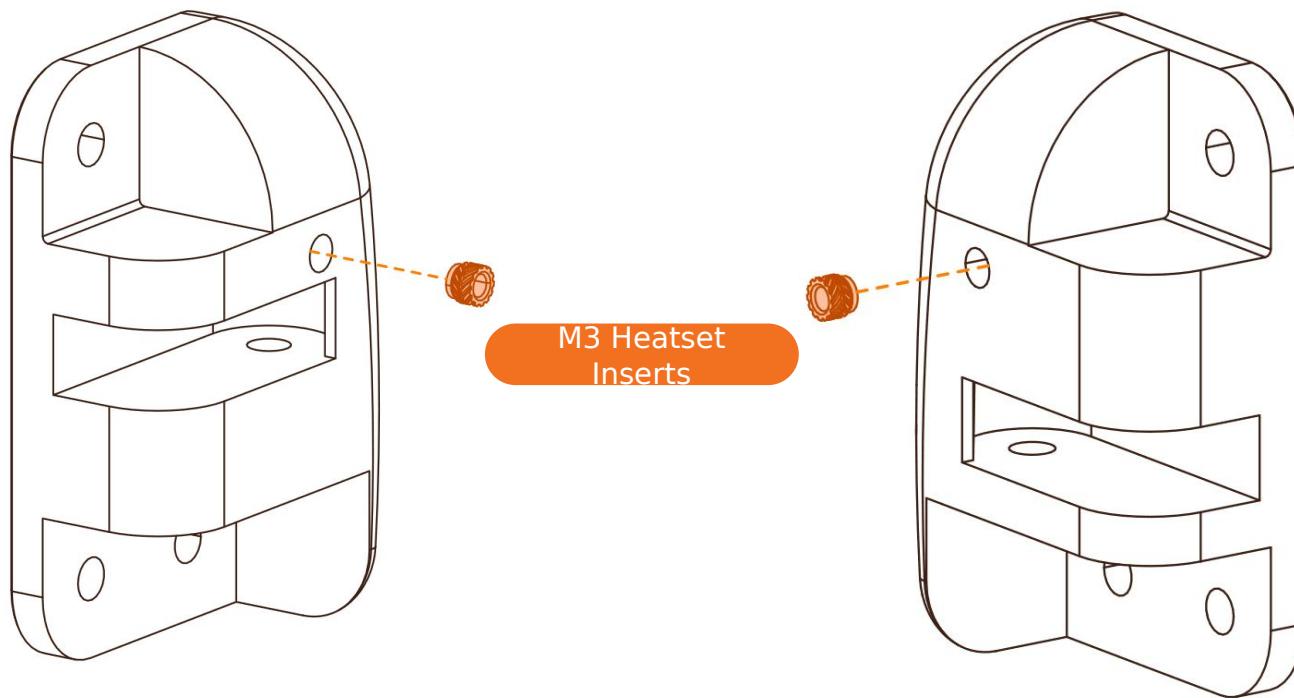
RAIL INSTALLATION GUIDES

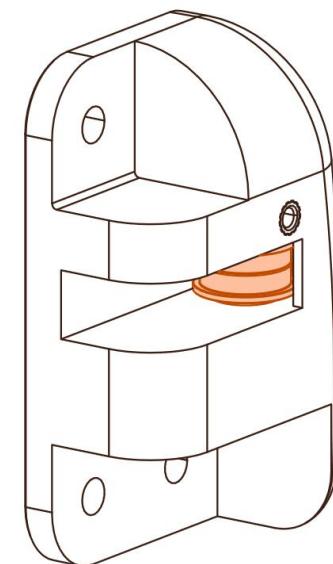
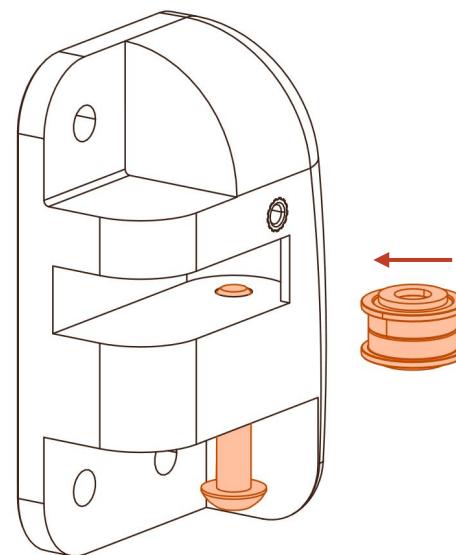
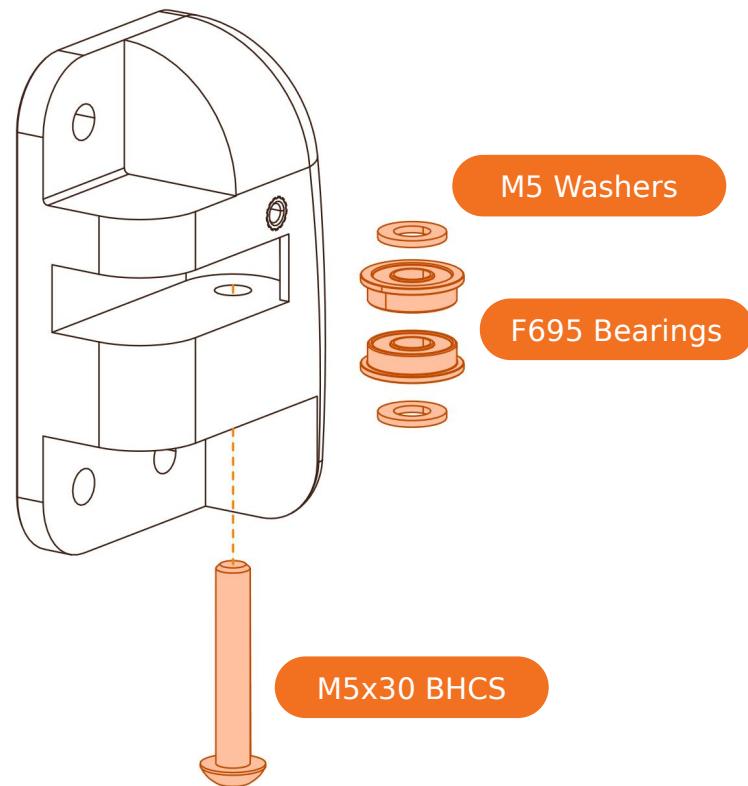
Use the guides to position the rail in the center of the extrusion prior to fastening the screws.

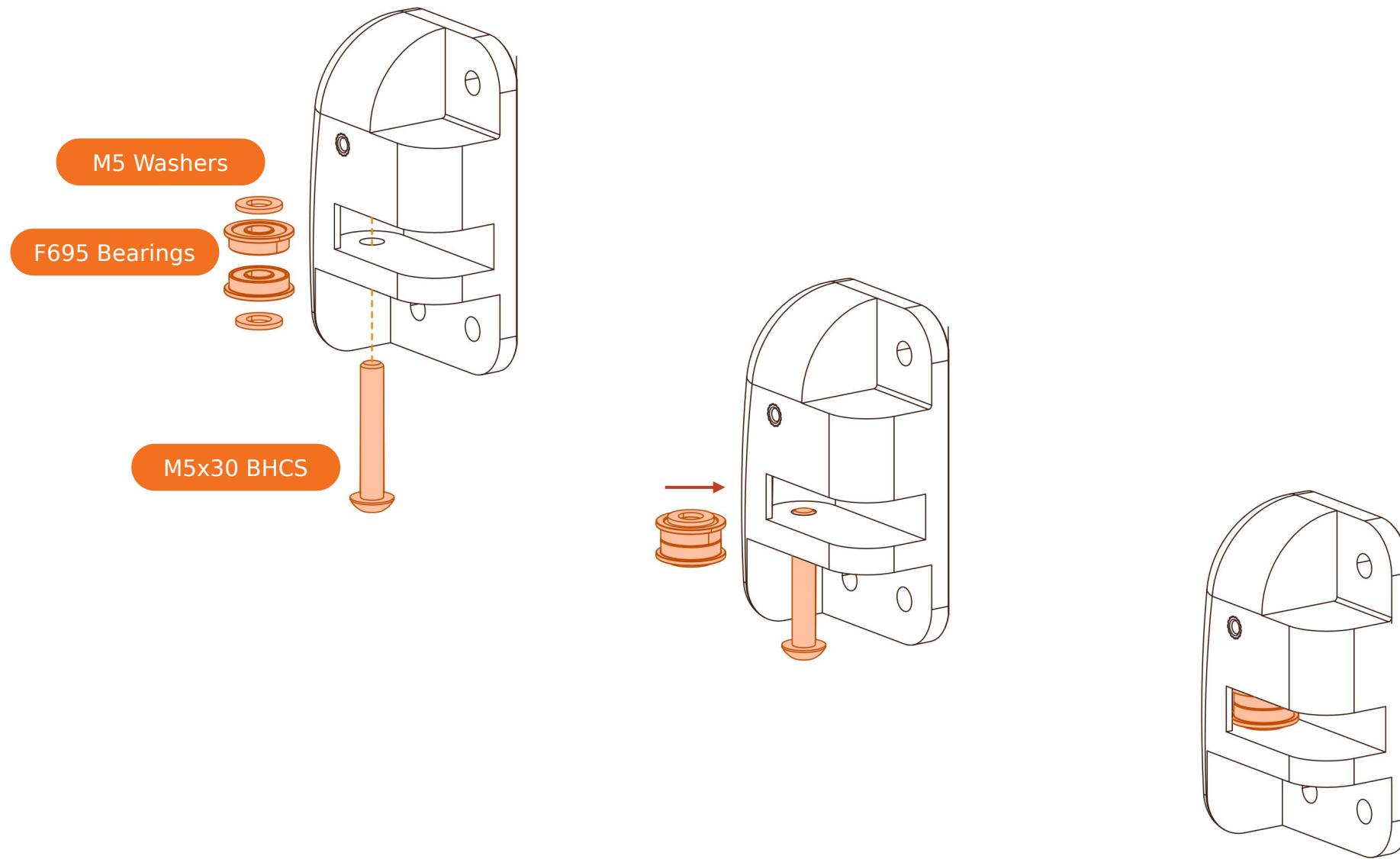


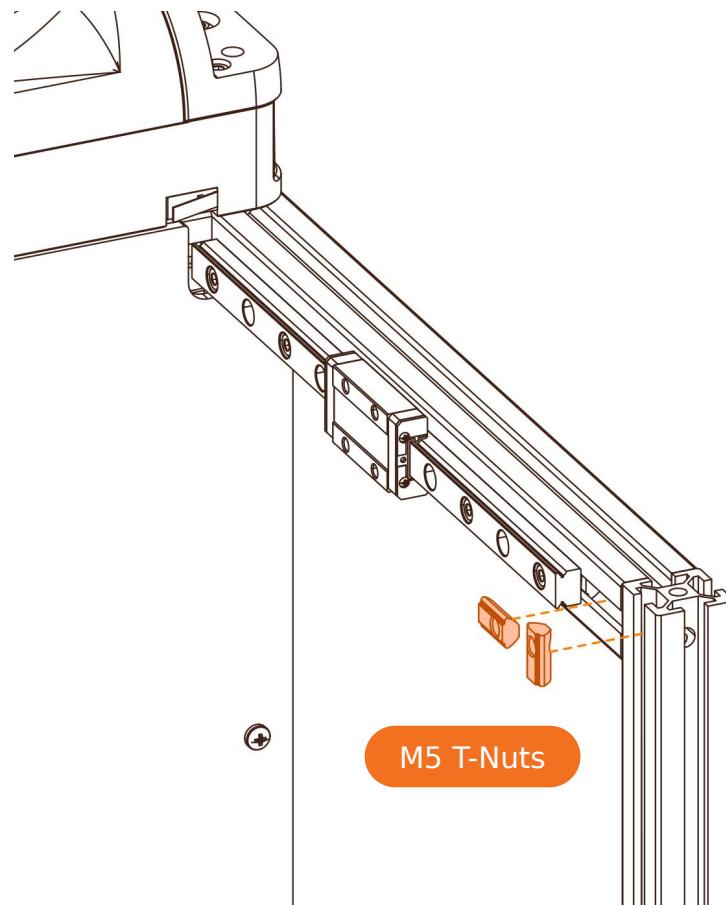
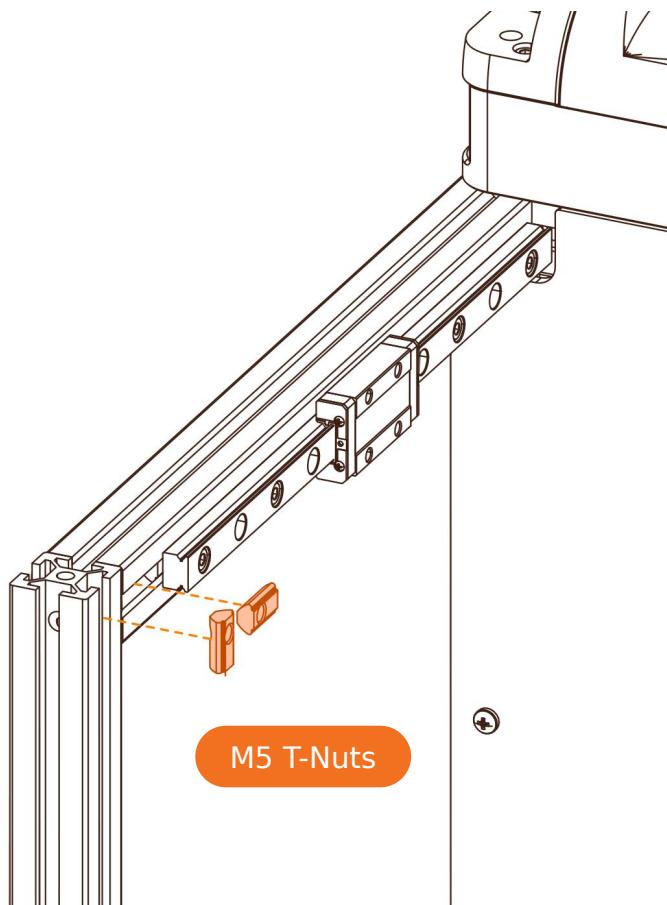
M3x8 SHCS

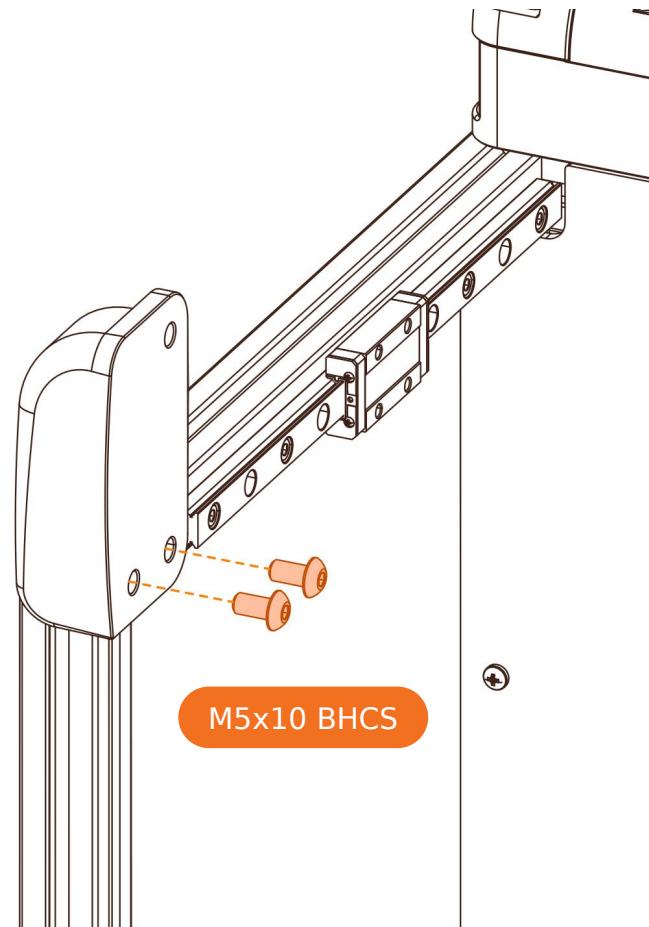
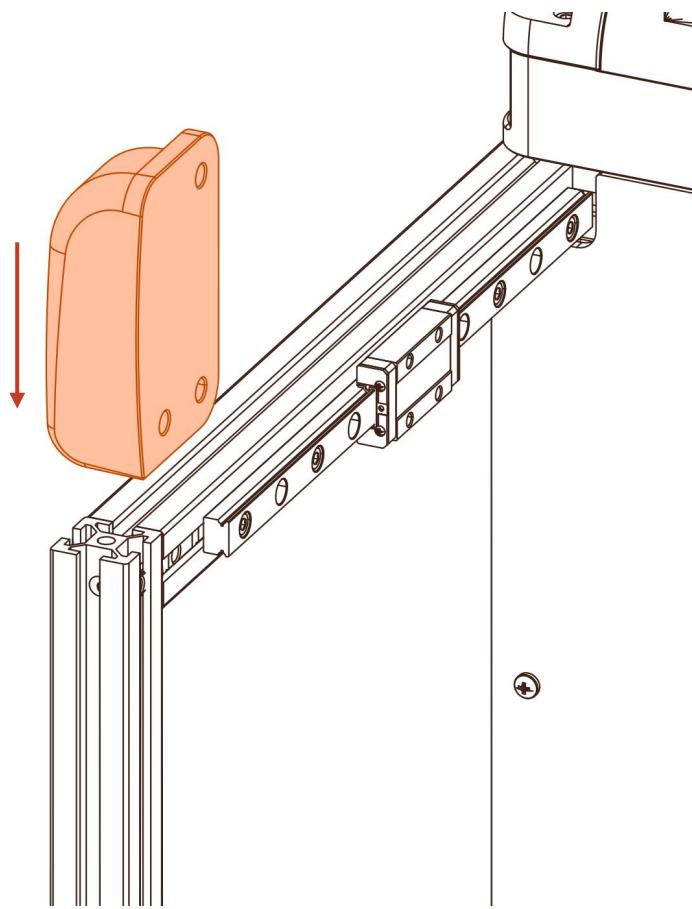


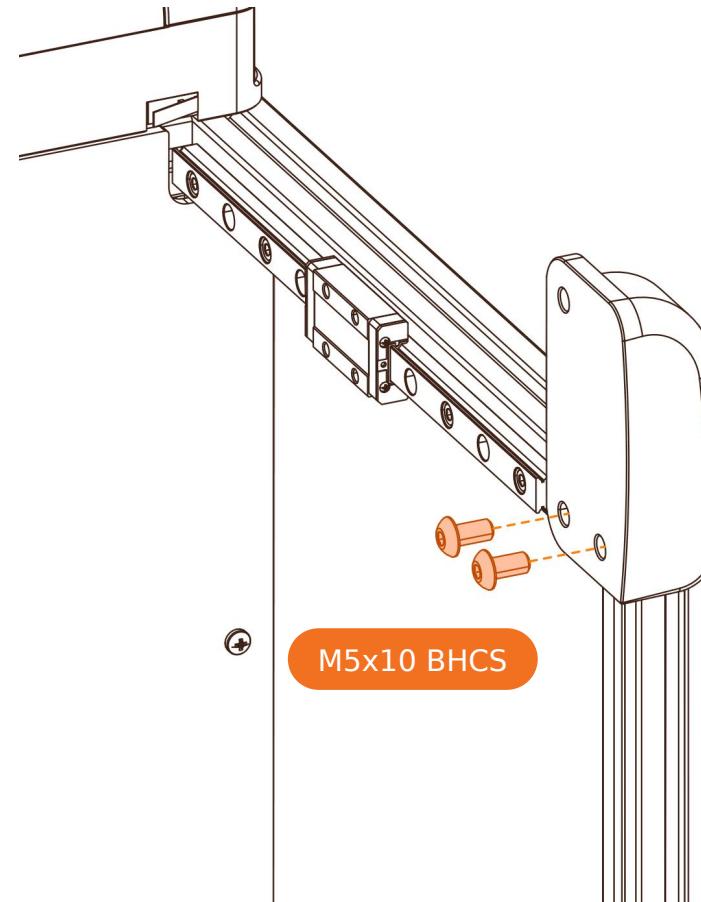
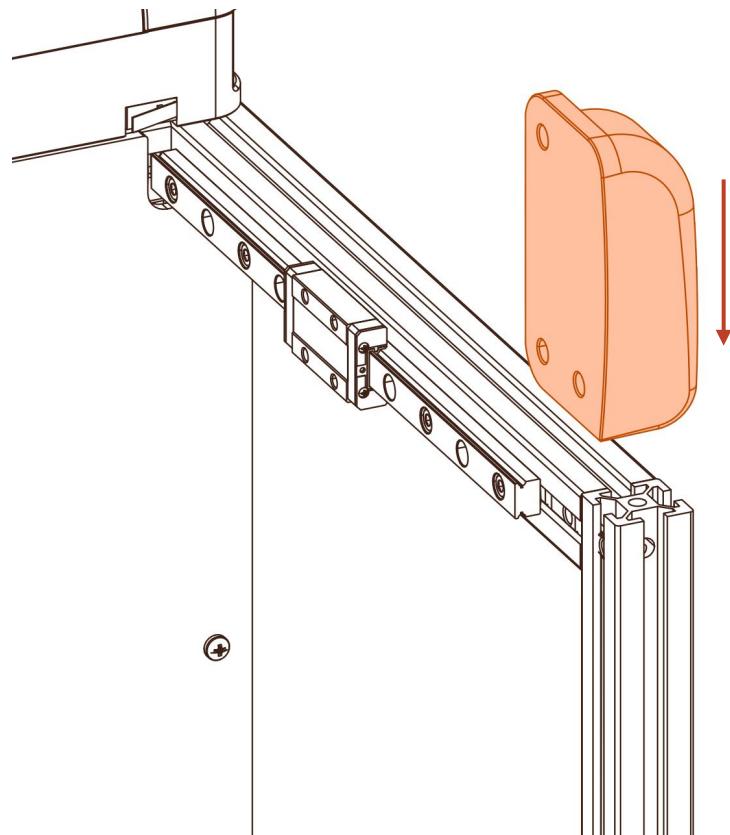


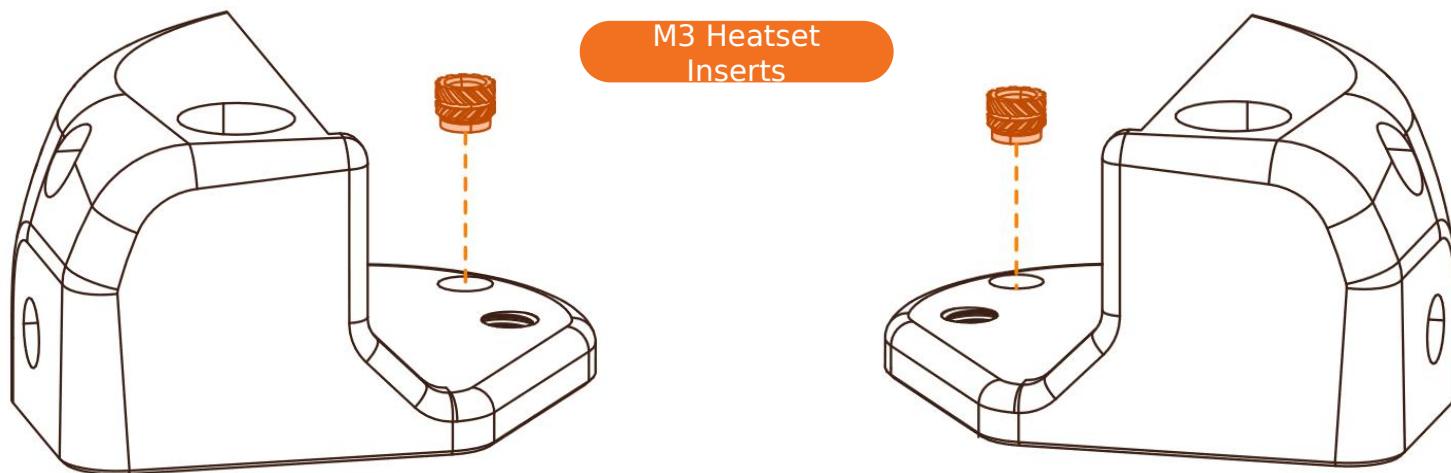






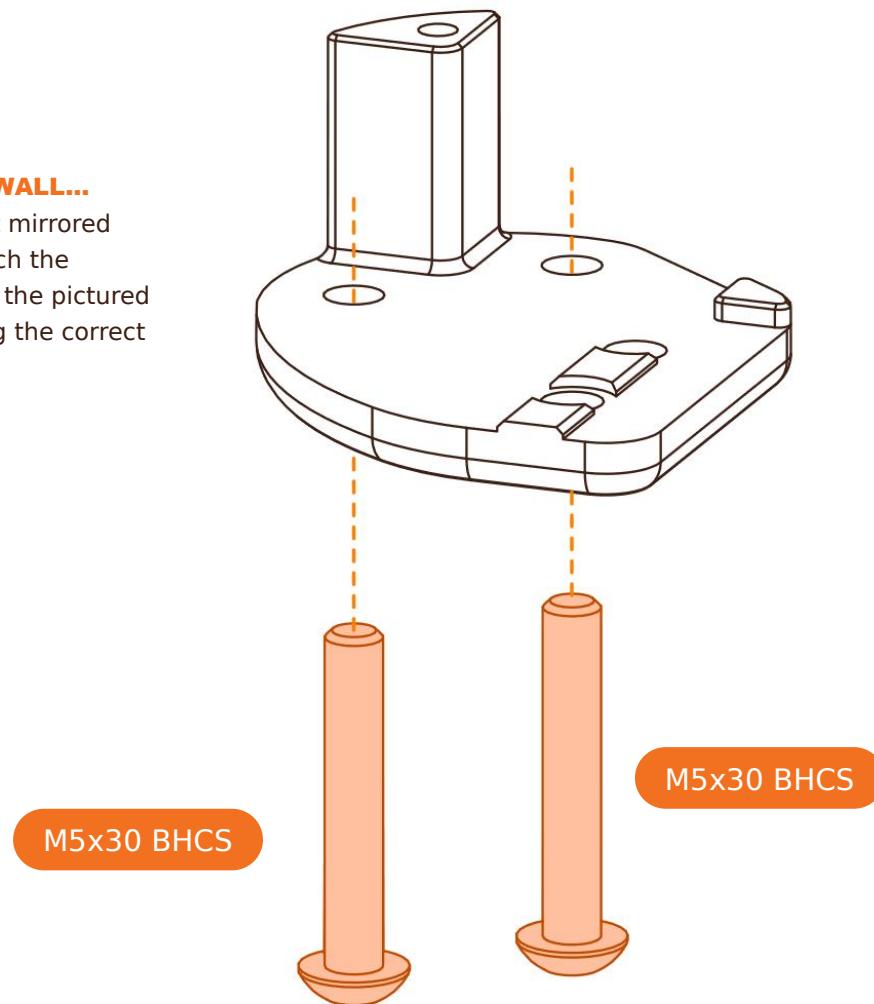


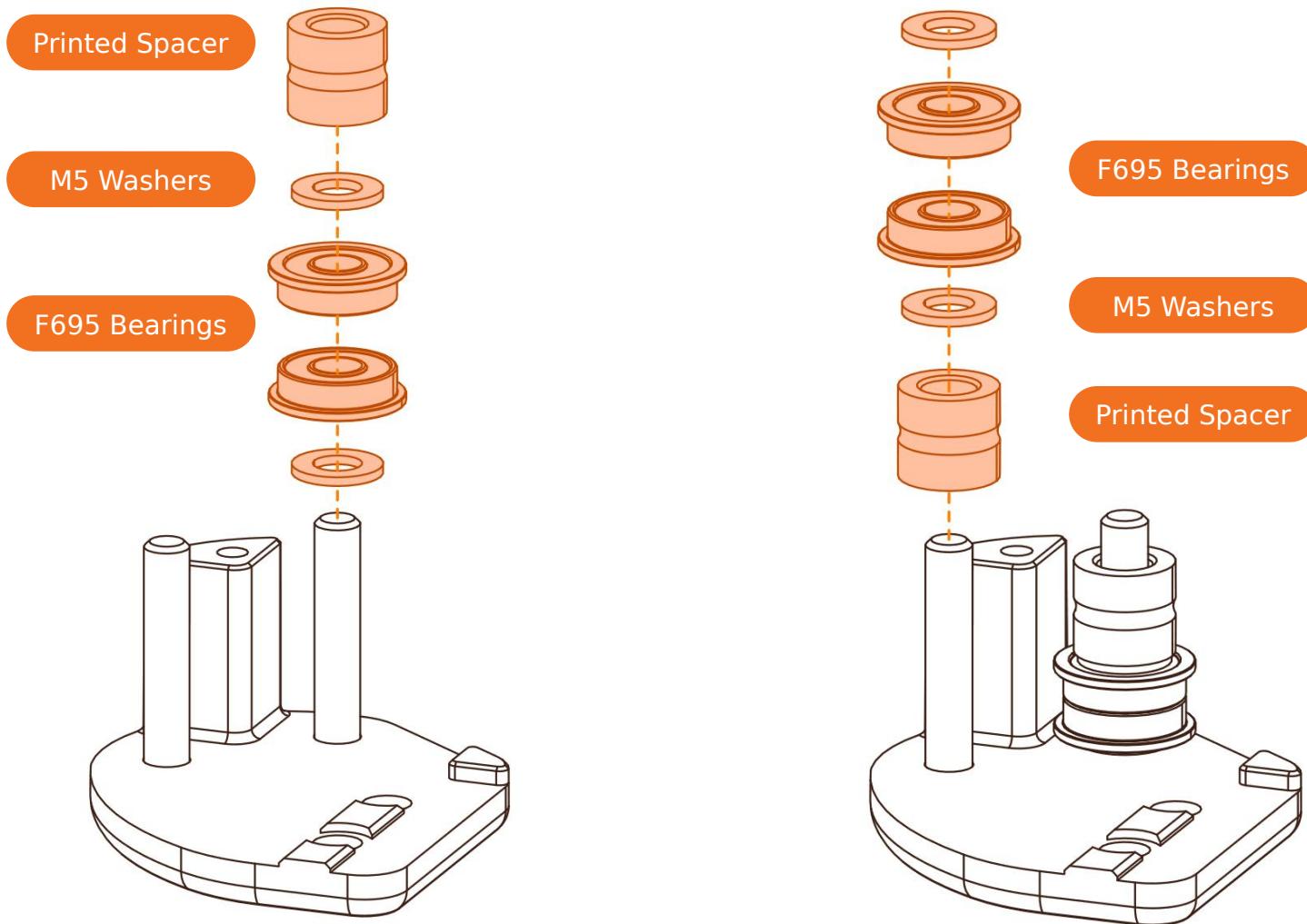


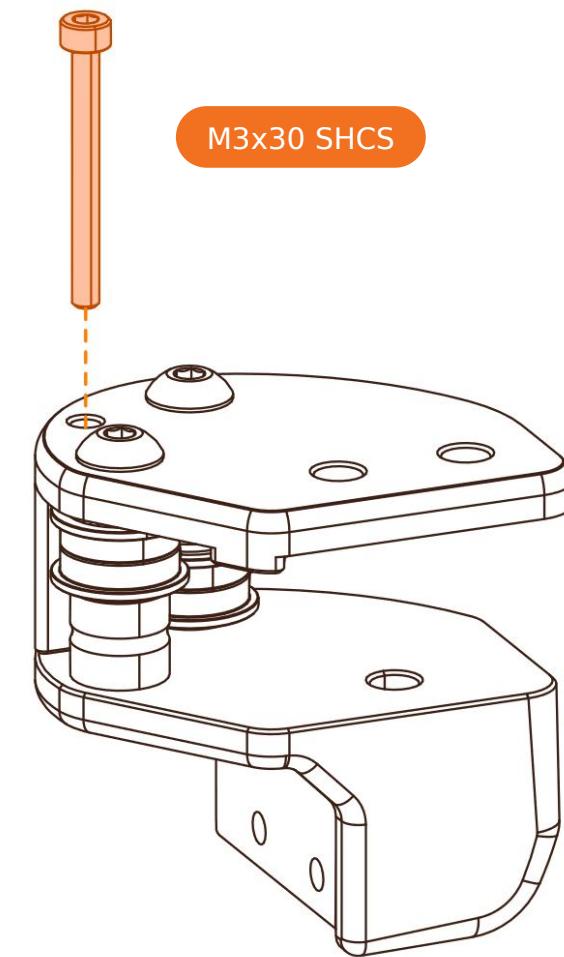
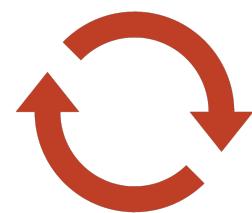
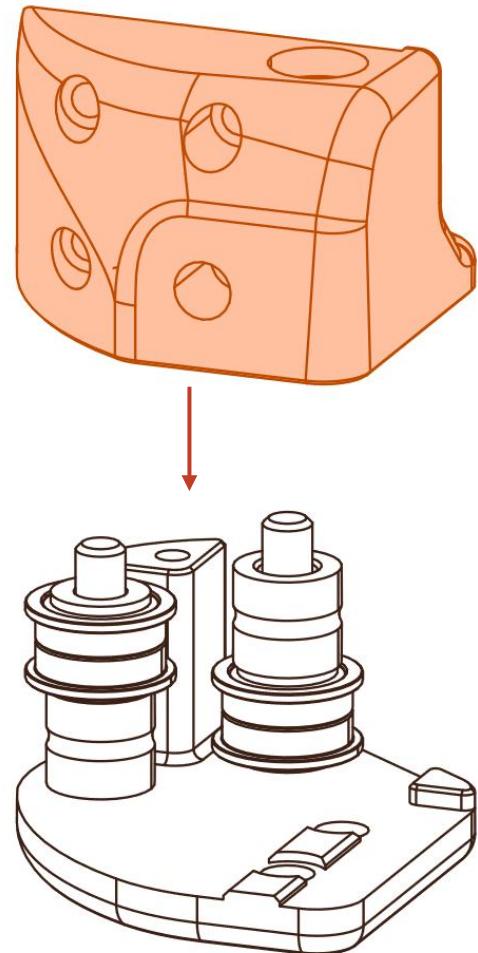


MIRROR MIRROR ON THE WALL...

The X/Y joints use similar but mirrored parts, be sure to closely match the printed part you are using to the pictured to ensure you are assembling the correct joint

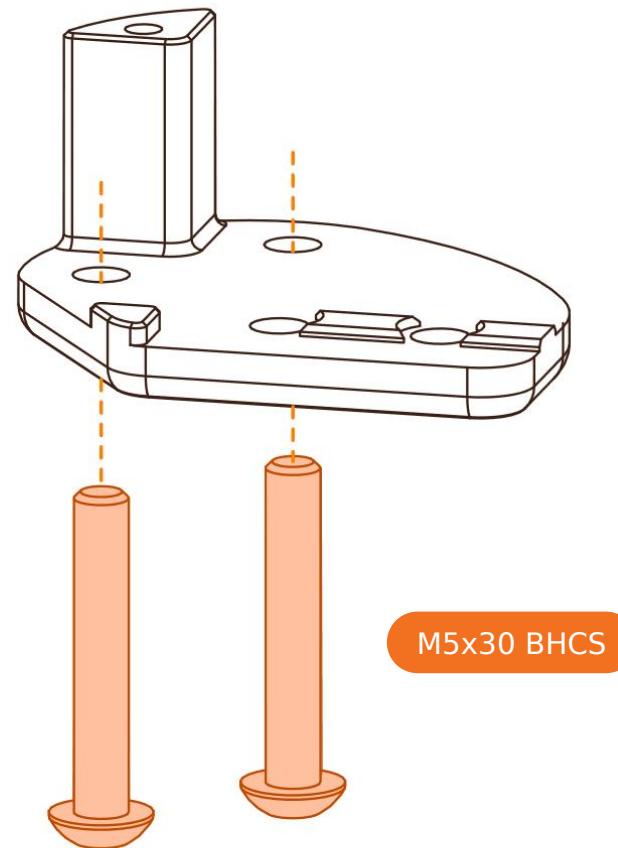


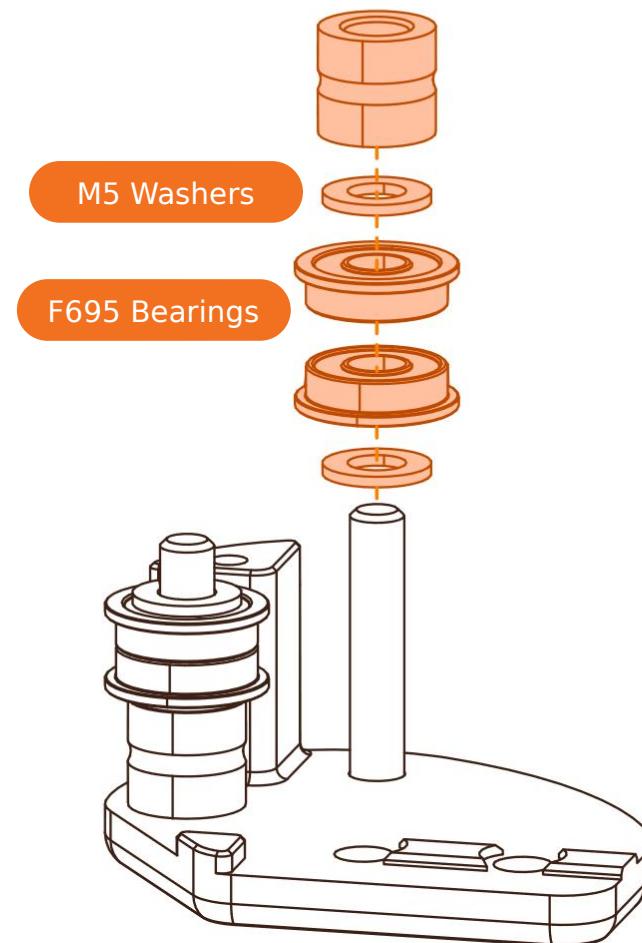
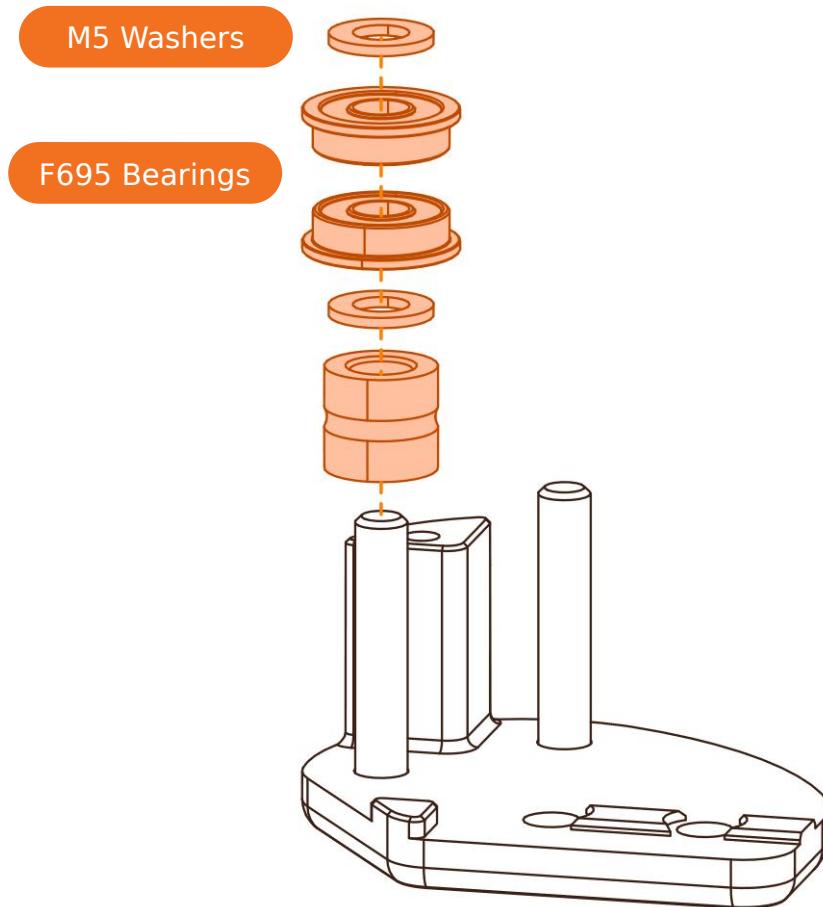


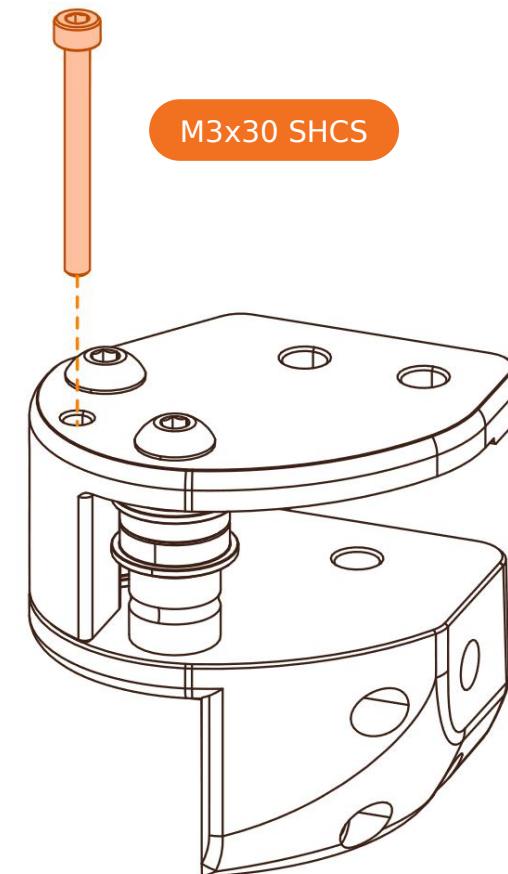
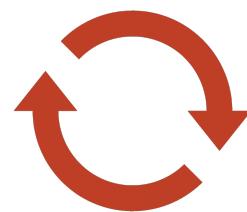
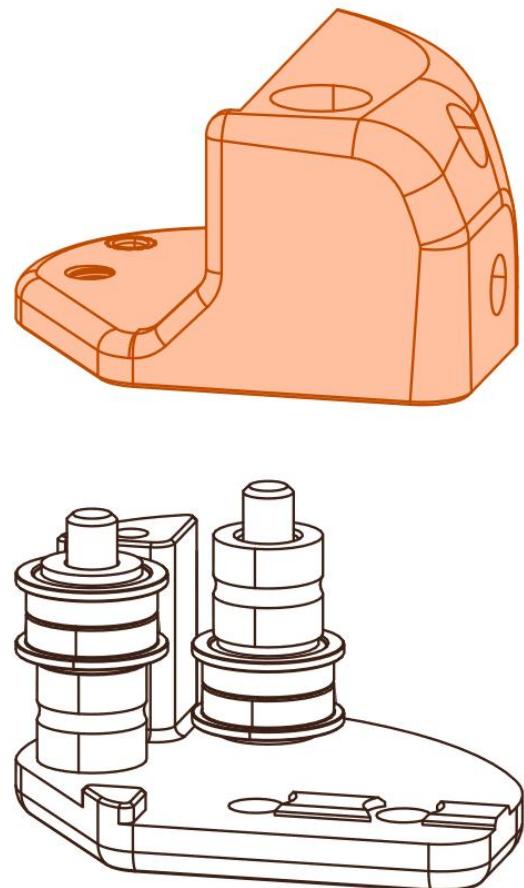


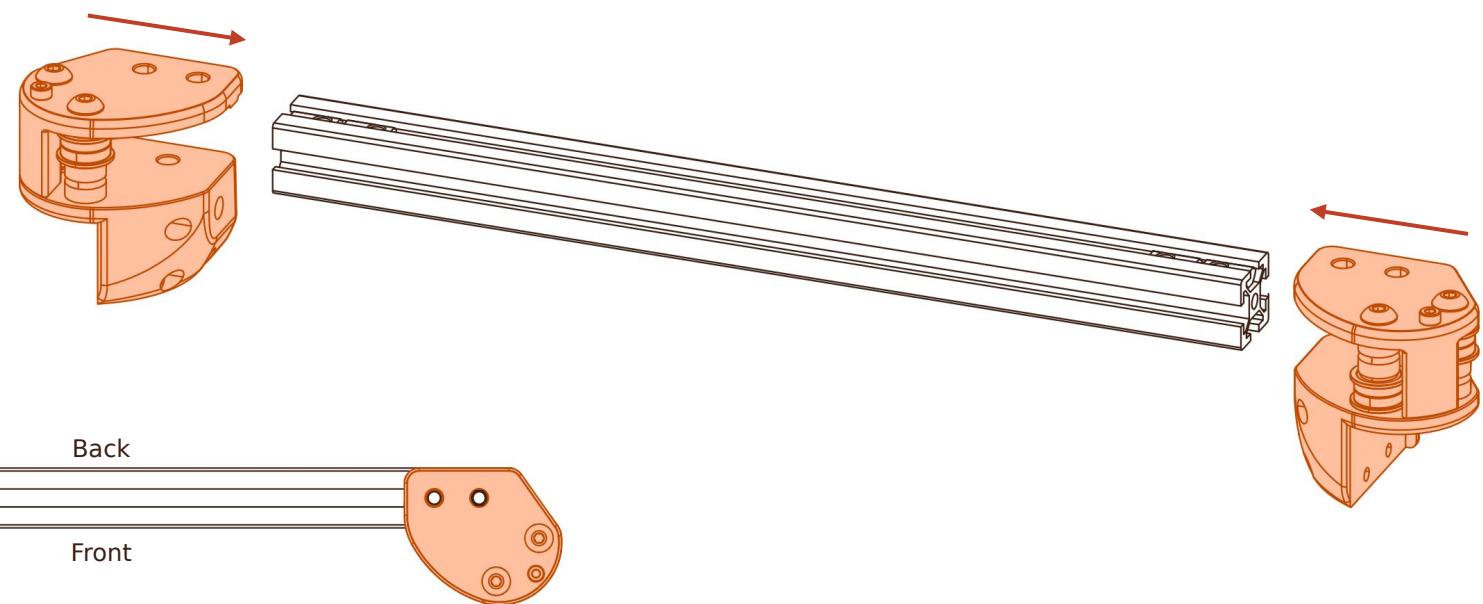
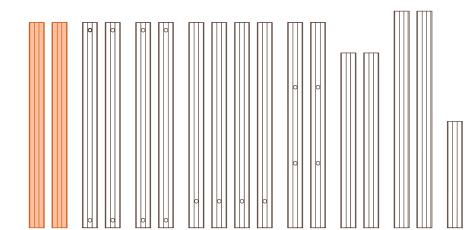
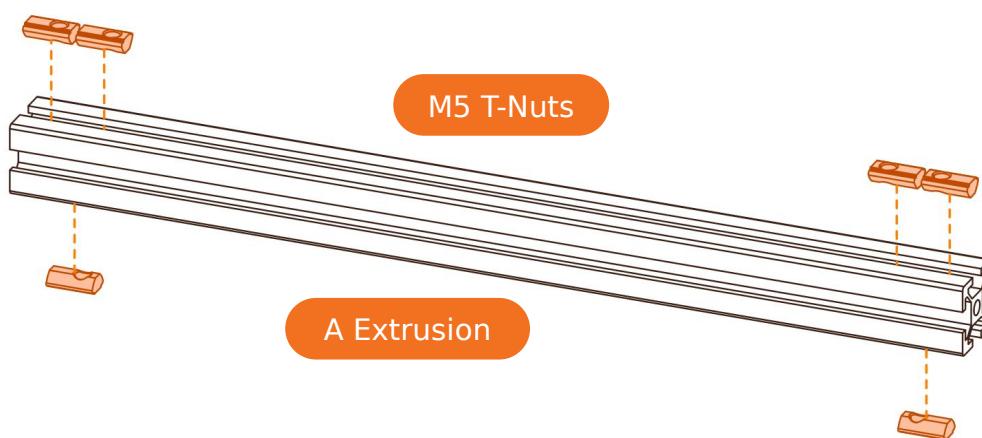
...WHO IS THE FAIREST OF THEM ALL

The X/Y joints use similar but mirrored parts, be sure to closely match the printed part you are using to the pictured to ensure you are assembling the correct joint





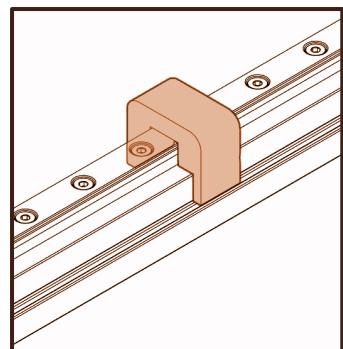
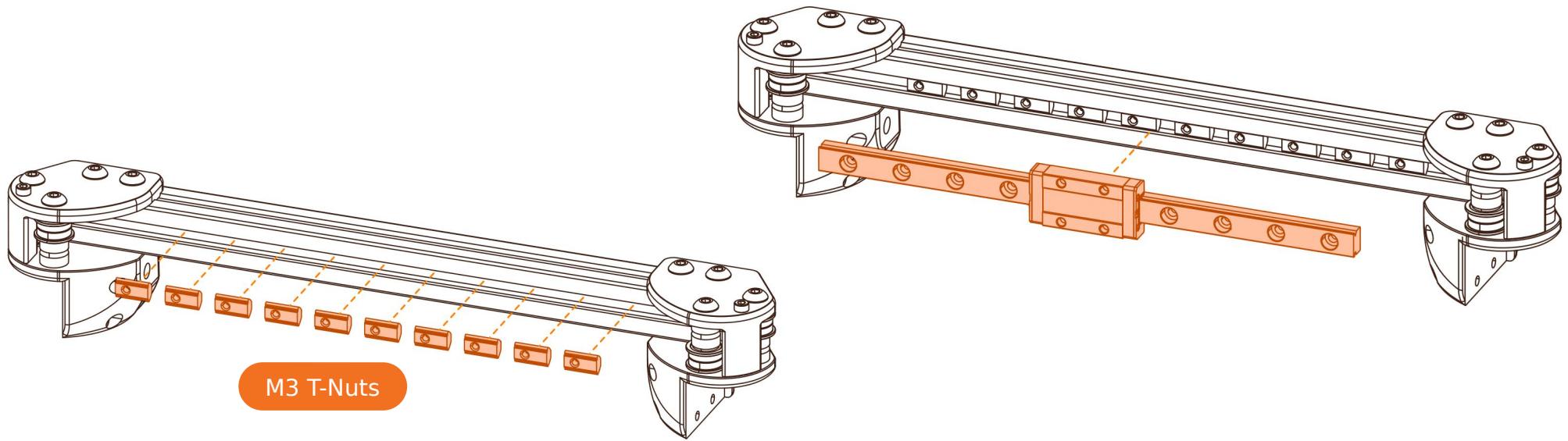


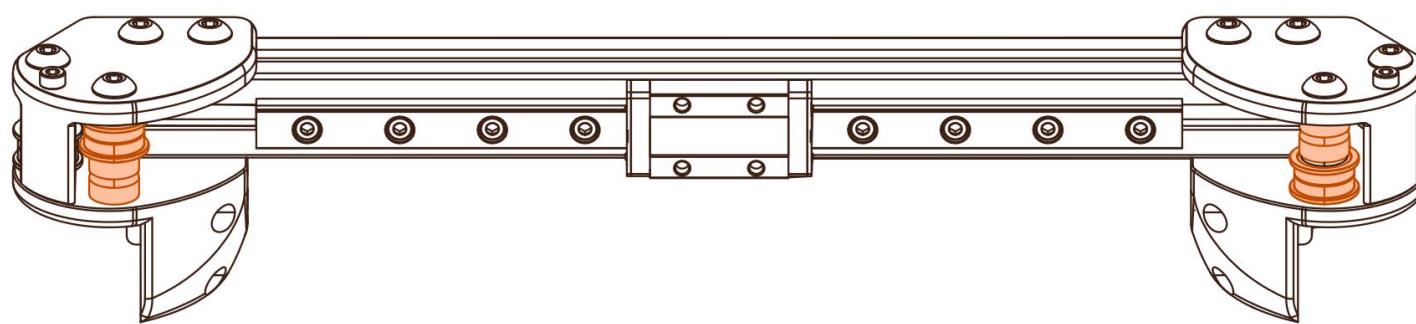


**NOT SO FAST**

Leave these 6 screws loose for now, we will tighten them at a later step once the gantry is installed in the machine

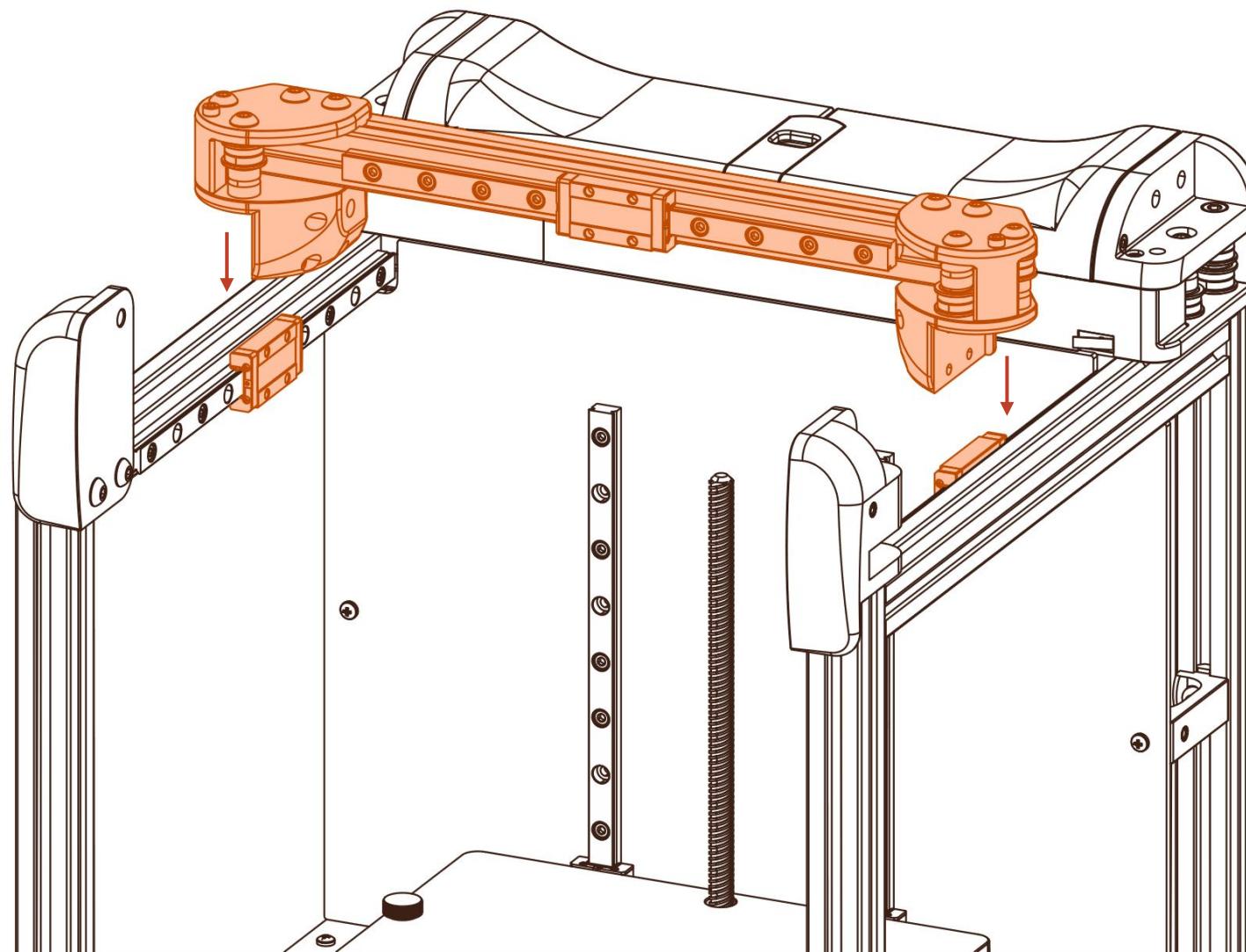


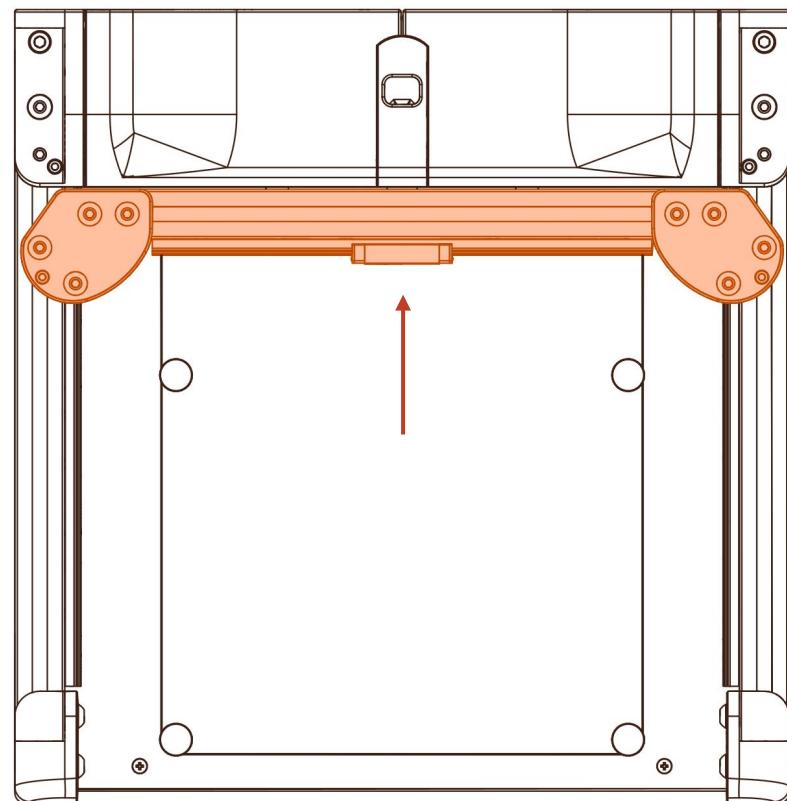
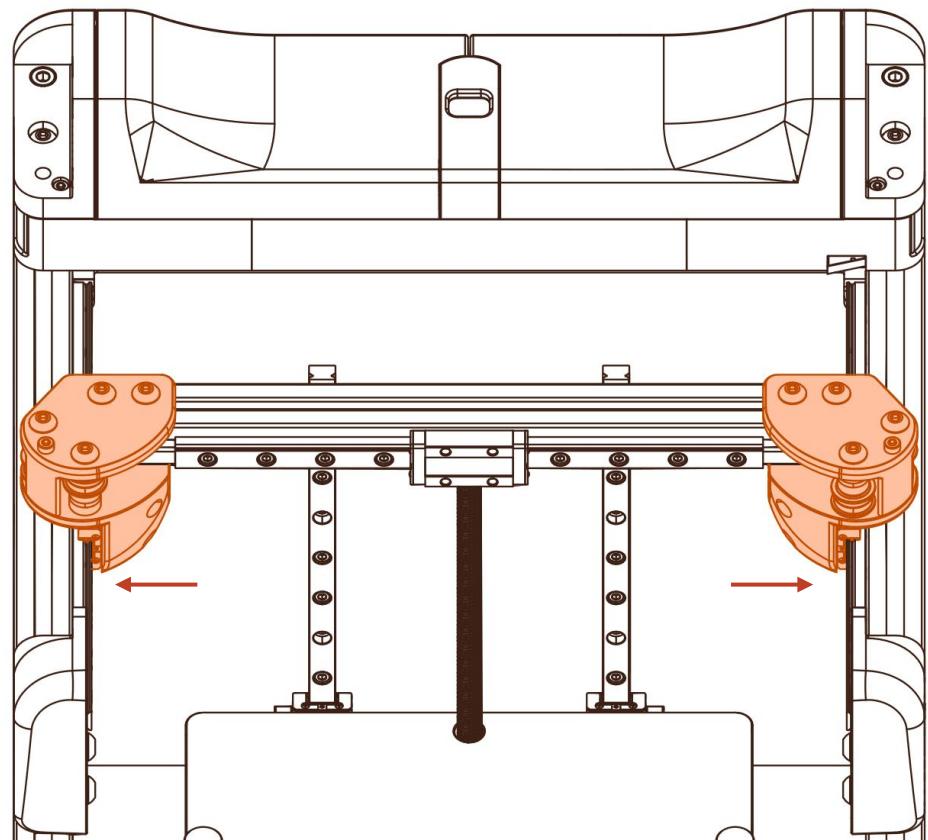




TRUST BUT VERIFY

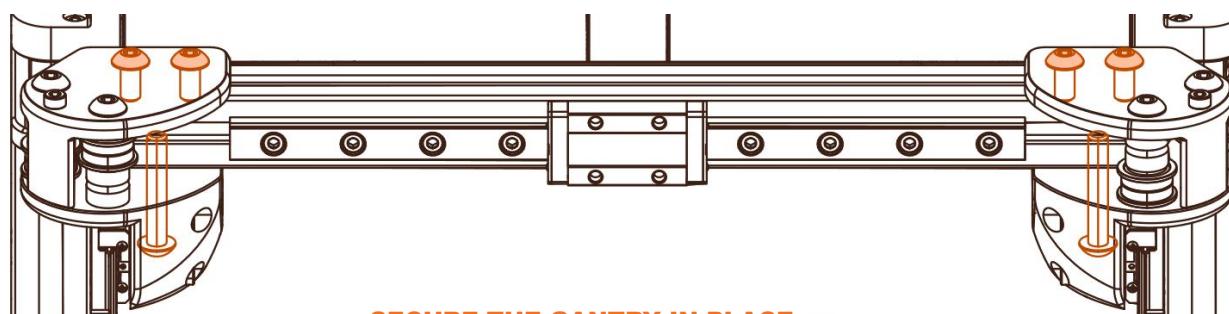
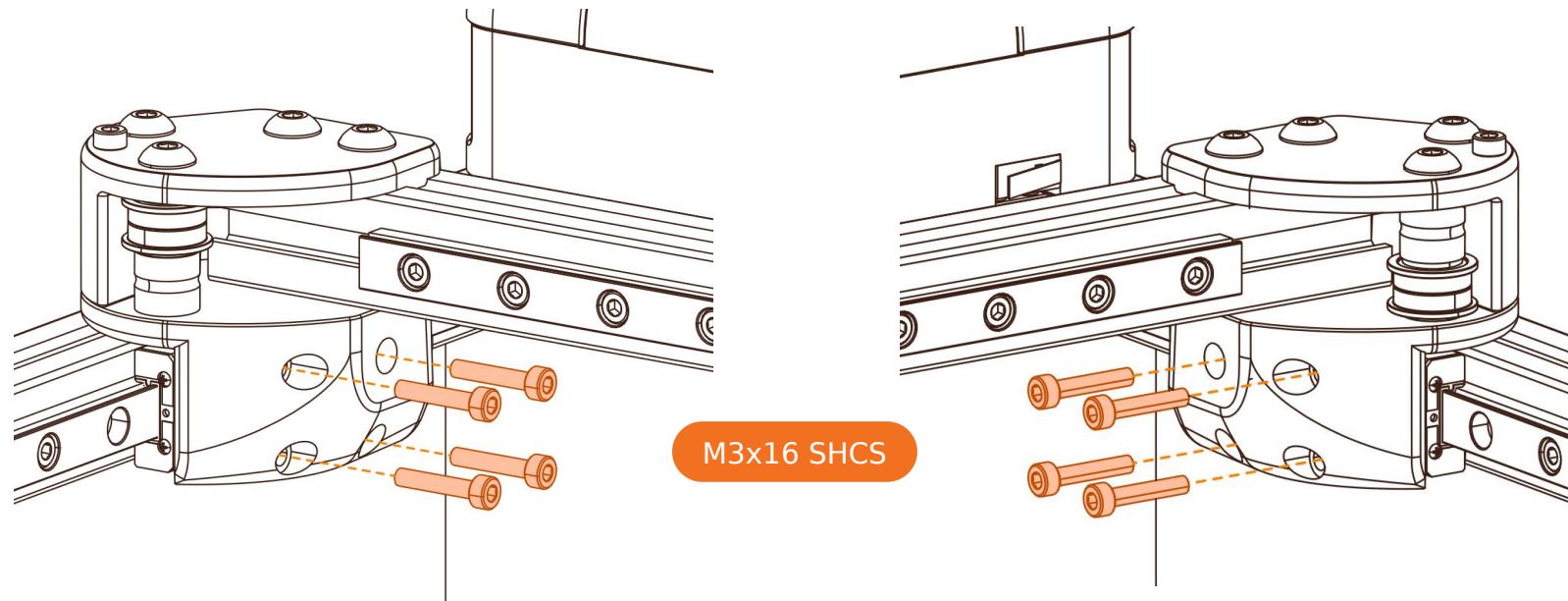
Double check your work, the bearing positions should match the image above.





GANTRY INSTALLATION

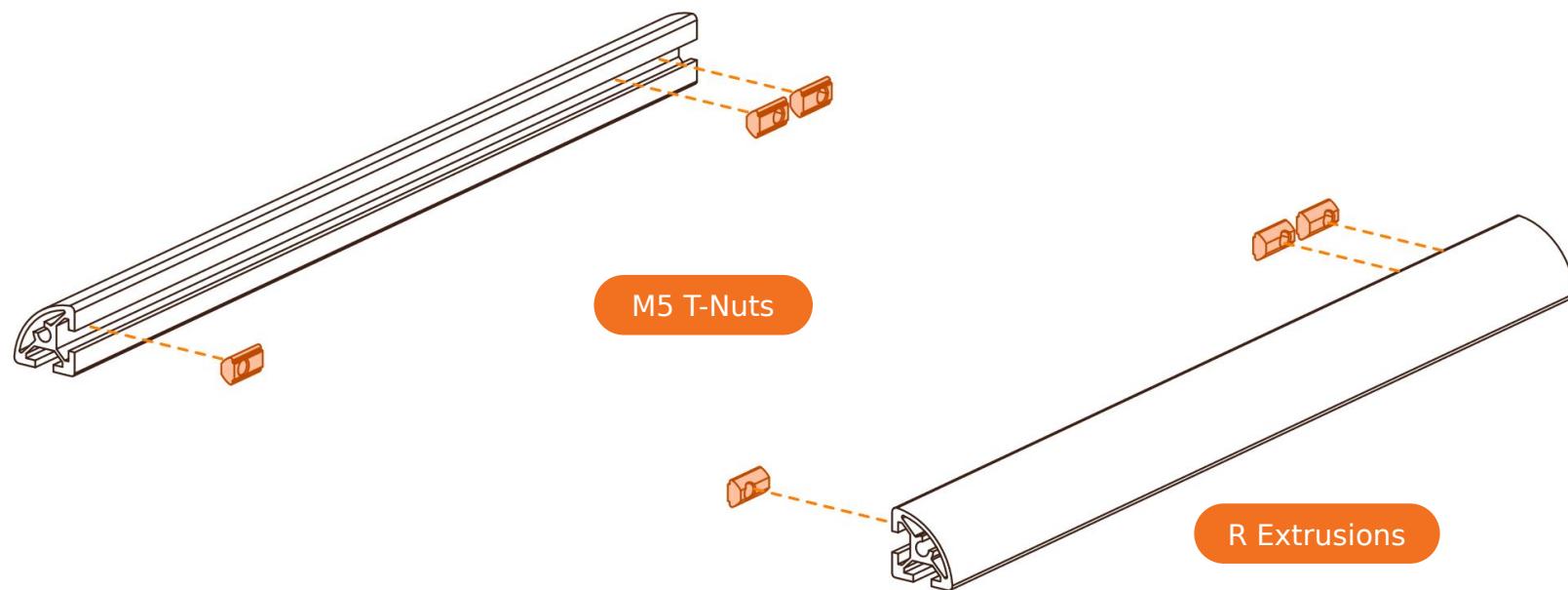
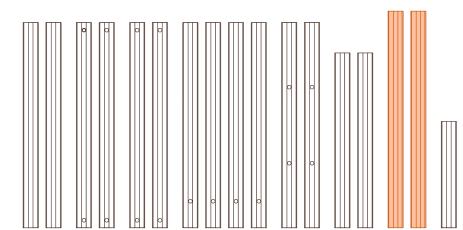
Press the X/Y joints outward so that they are flush with the Y carriages. Then move the gantry all the way to the rear of the machine

**SECURE THE GANTRY IN PLACE**

Now we can tighten the 6 screws we left loose earlier. This will complete the installation of the gantry

TEST THE GANTRY MOTION

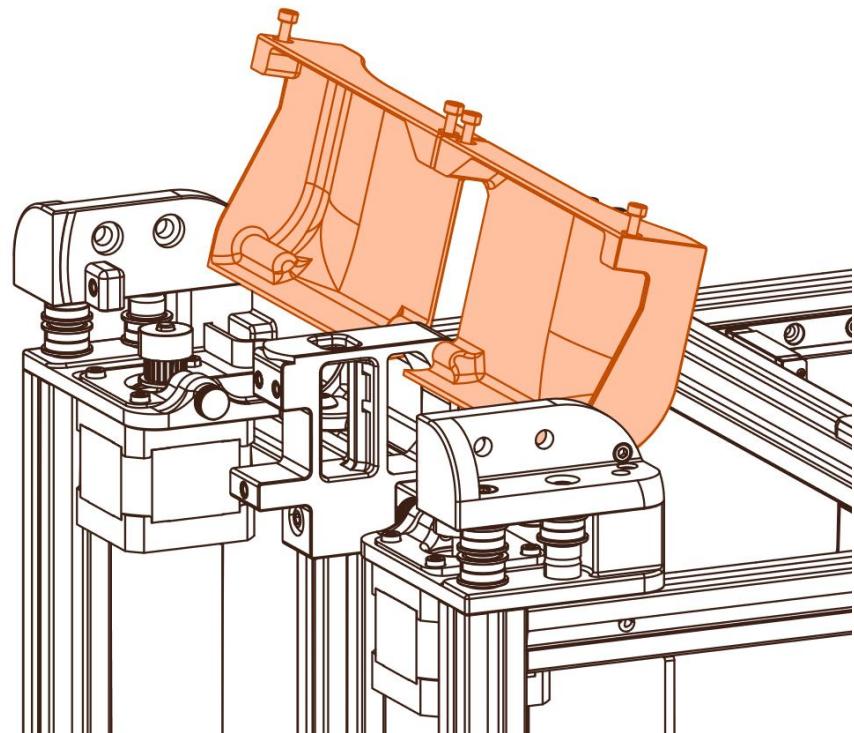
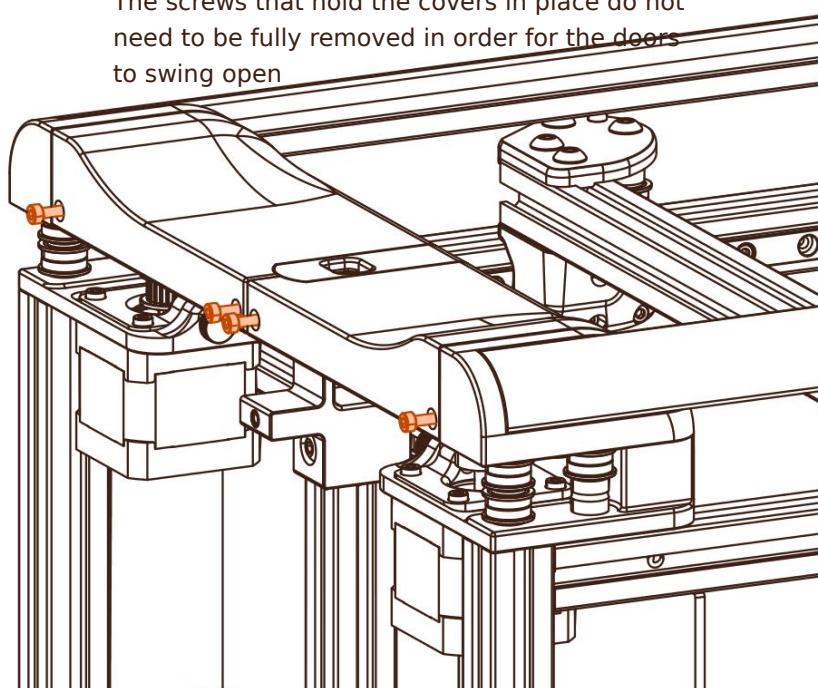
Gantry motion back and forth images

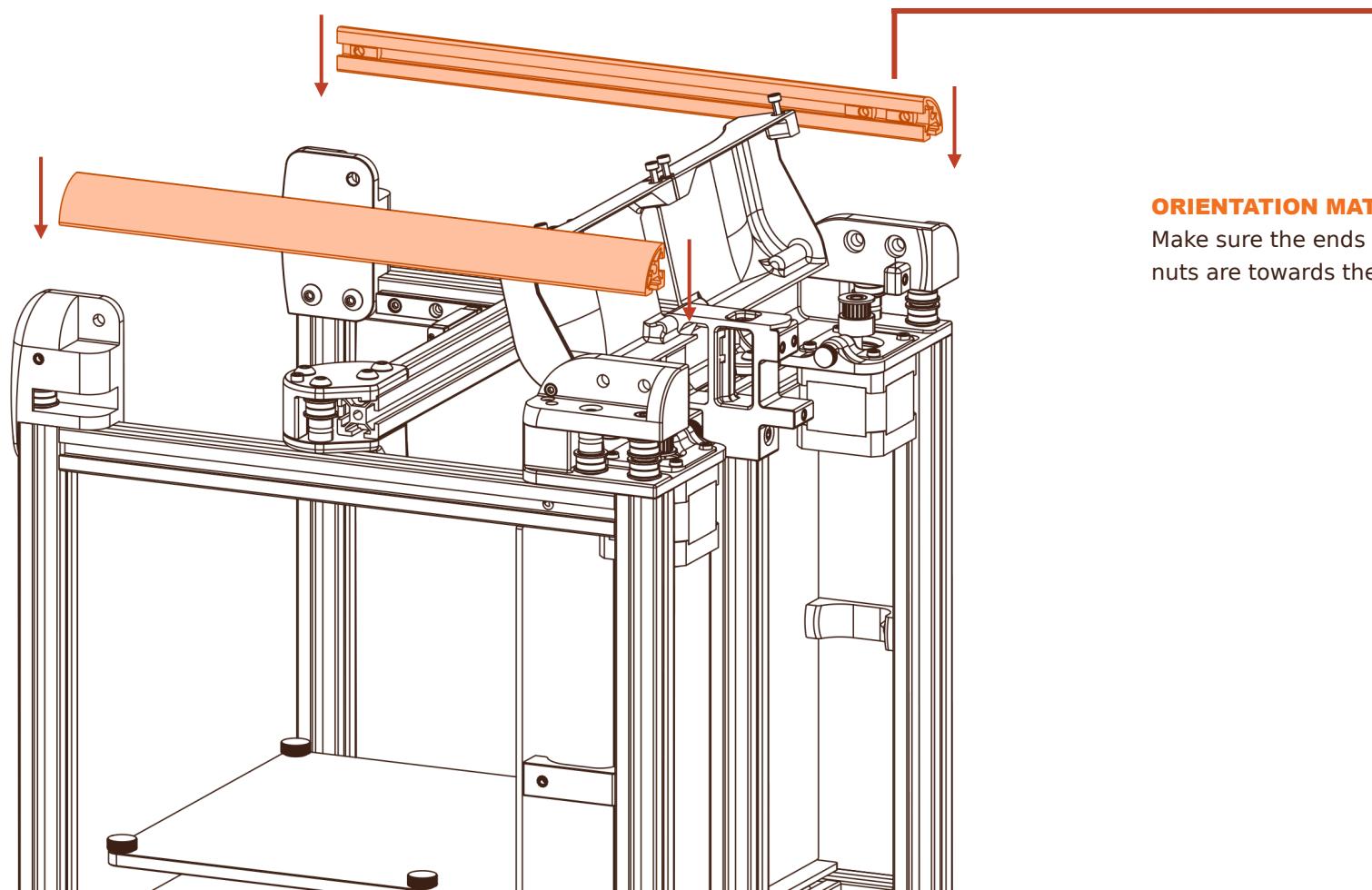


ACCESS TO THE GOODS

Open the Drive covers as we will need access to some of the holes in the drive units for the next steps.

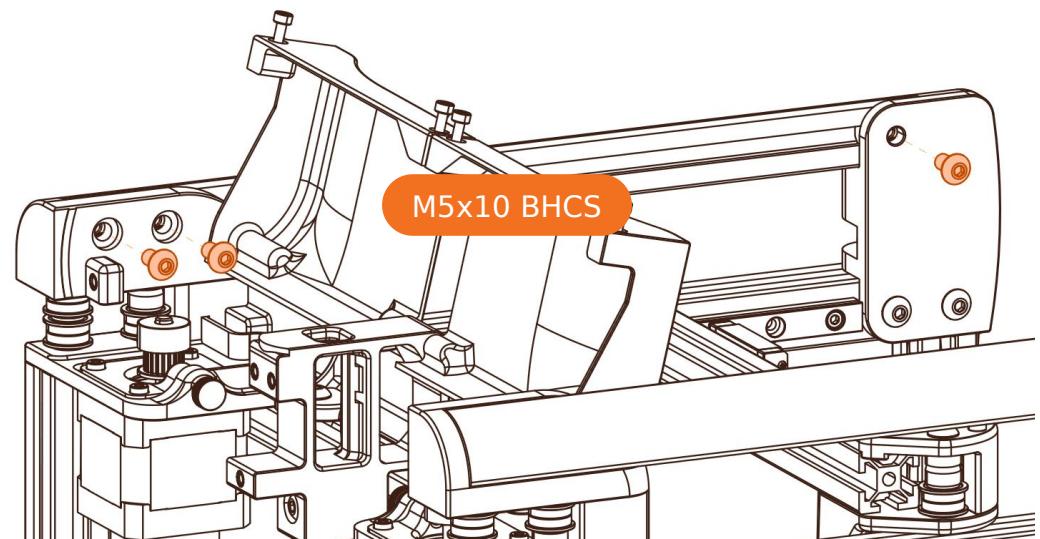
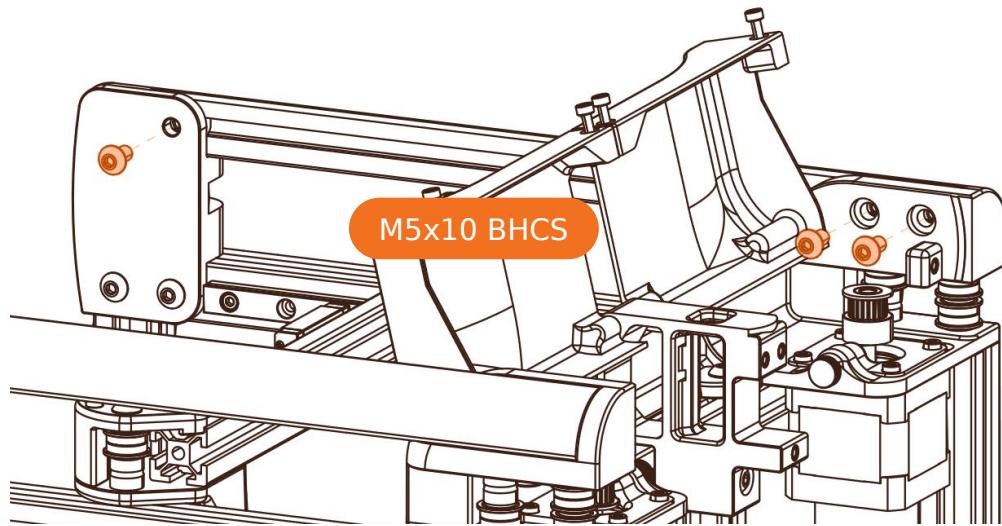
The screws that hold the covers in place do not need to be fully removed in order for the doors to swing open





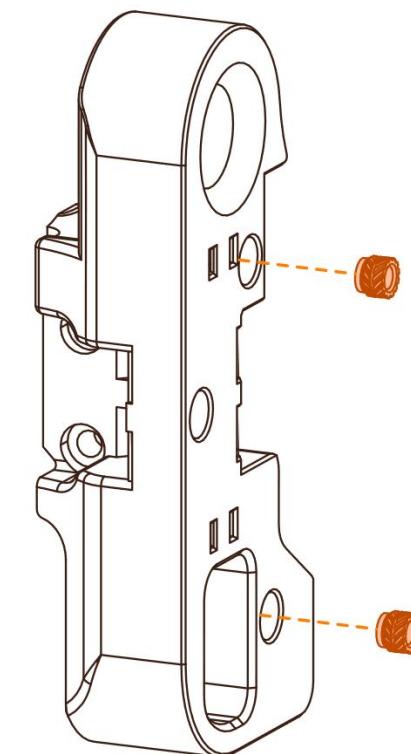
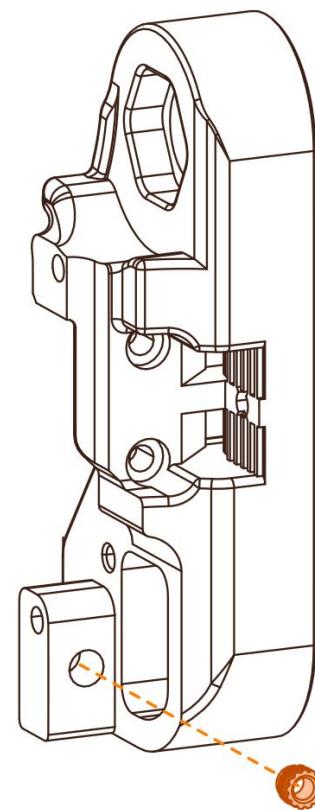
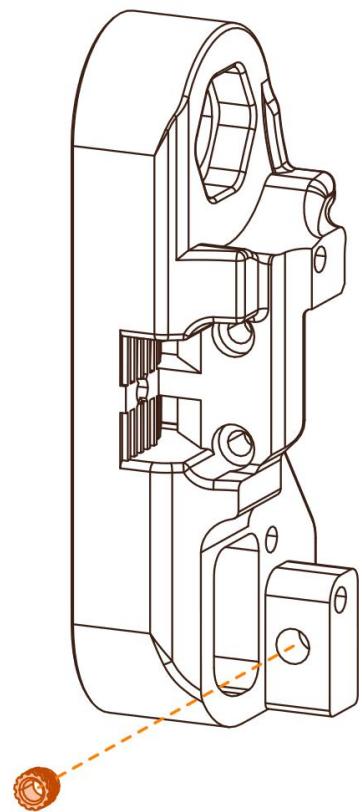
ORIENTATION MATTERS

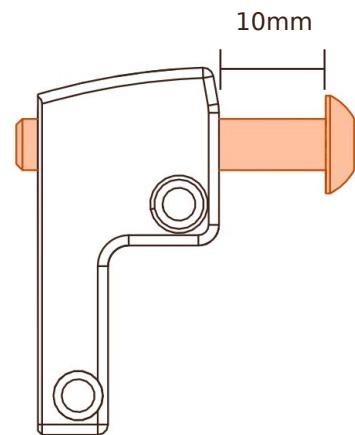
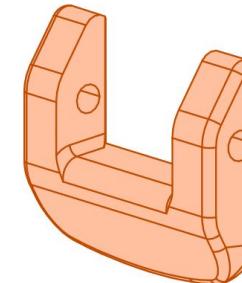
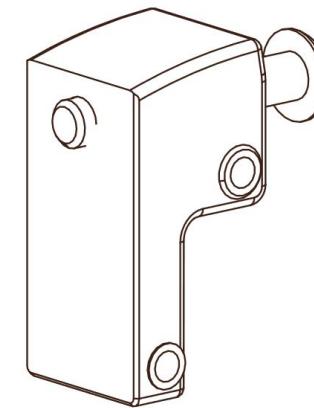
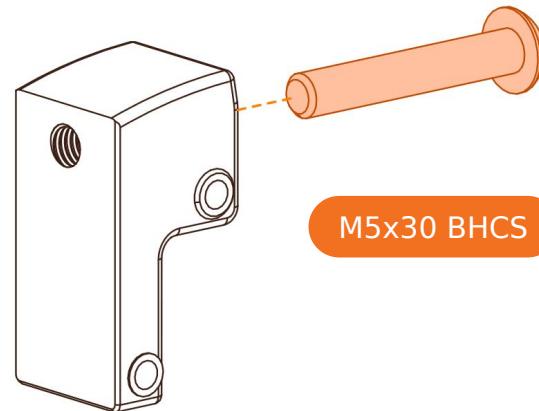
Make sure the ends with two preloaded T-nuts are towards the rear of the machine

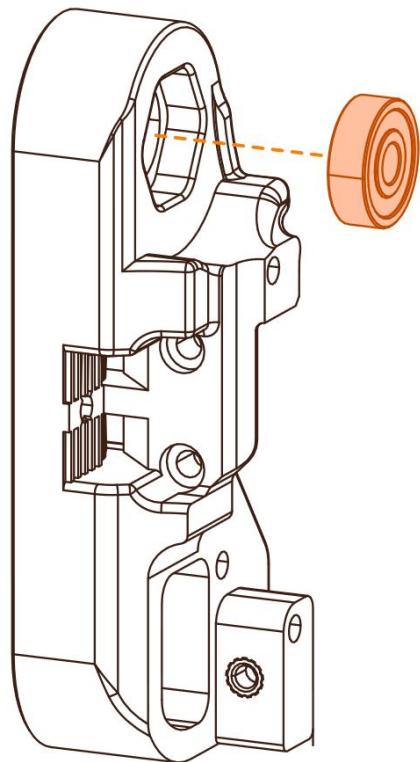


COCOAPRESS.COM

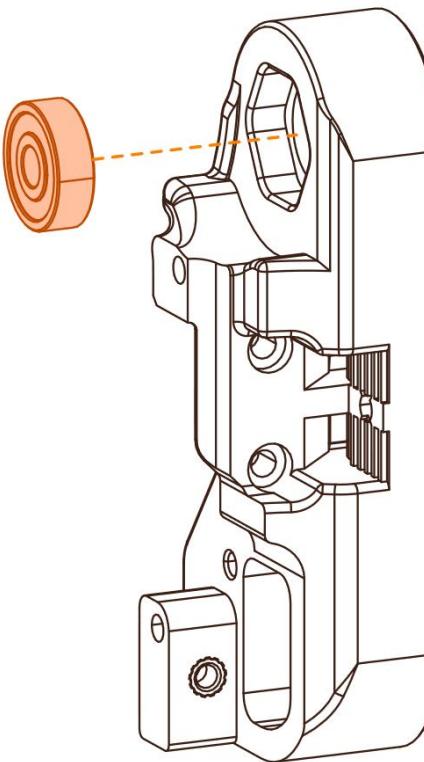


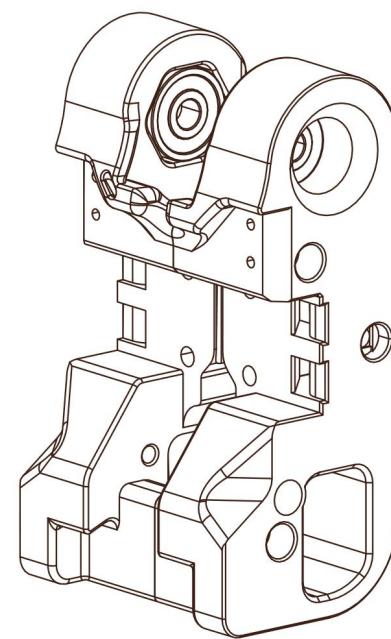
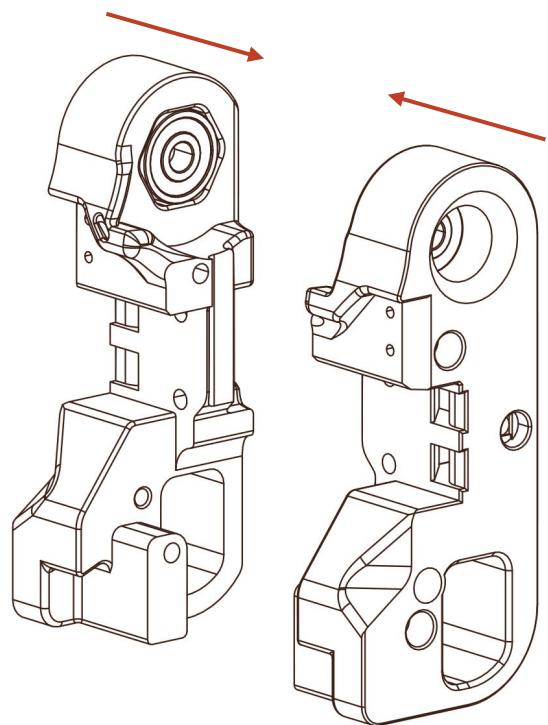


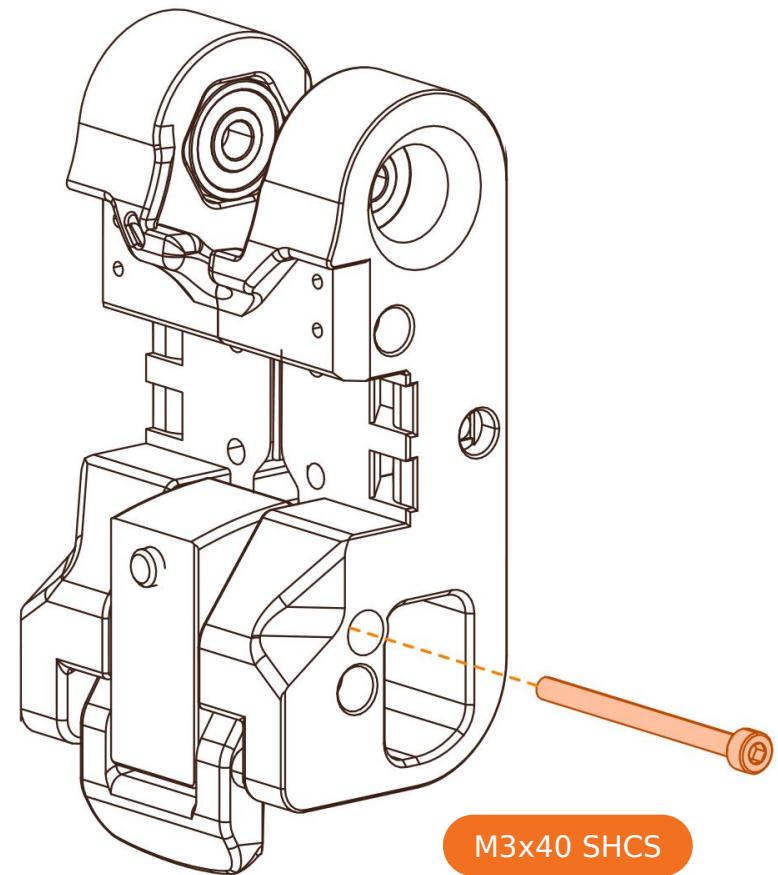
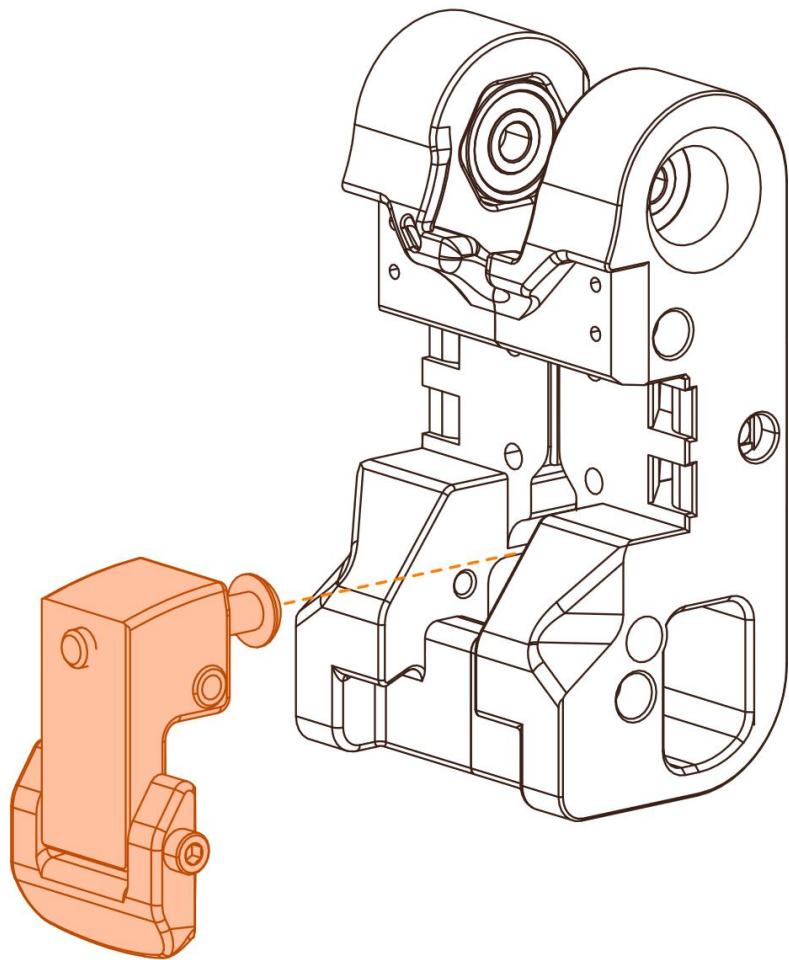


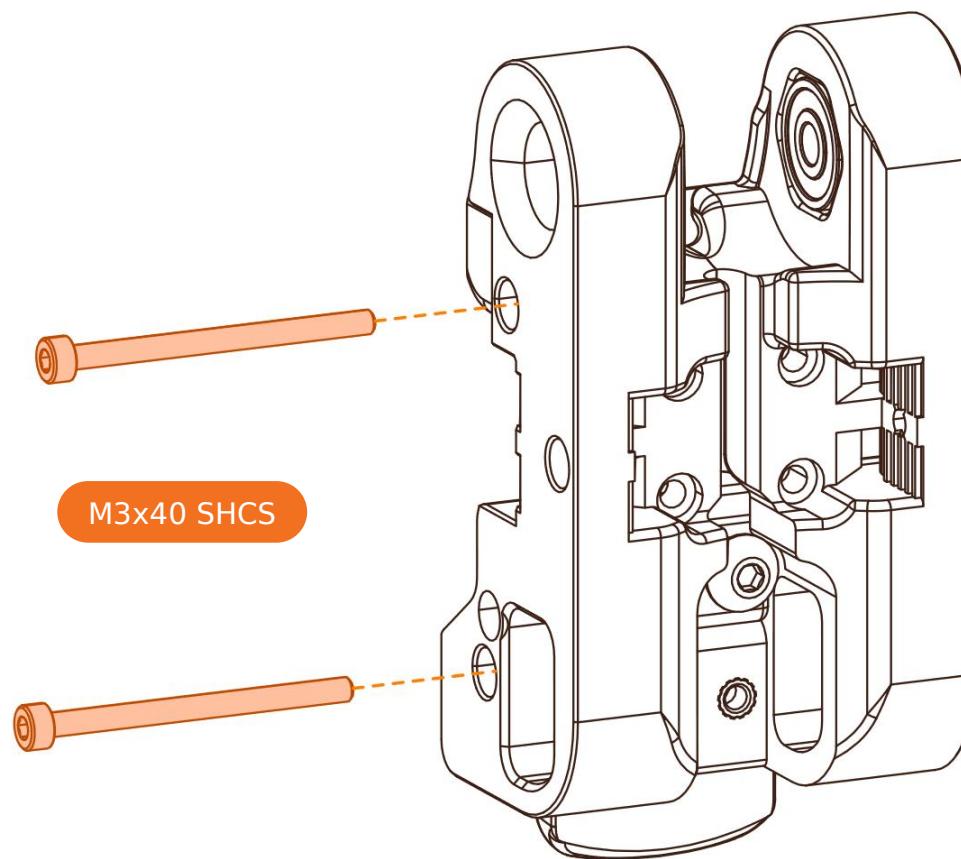


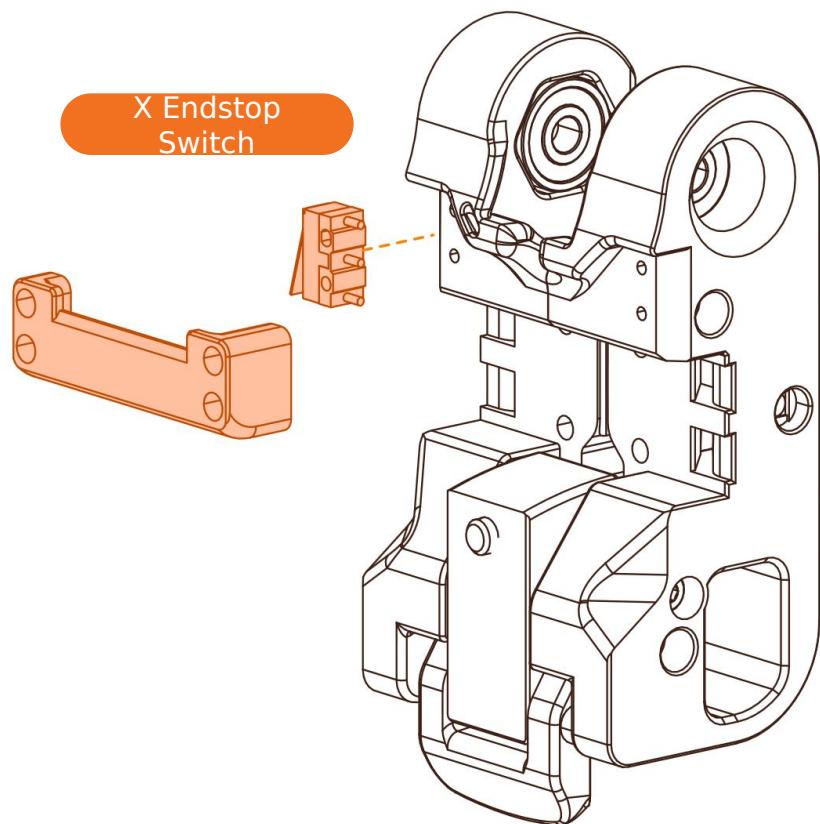
695
Bearings



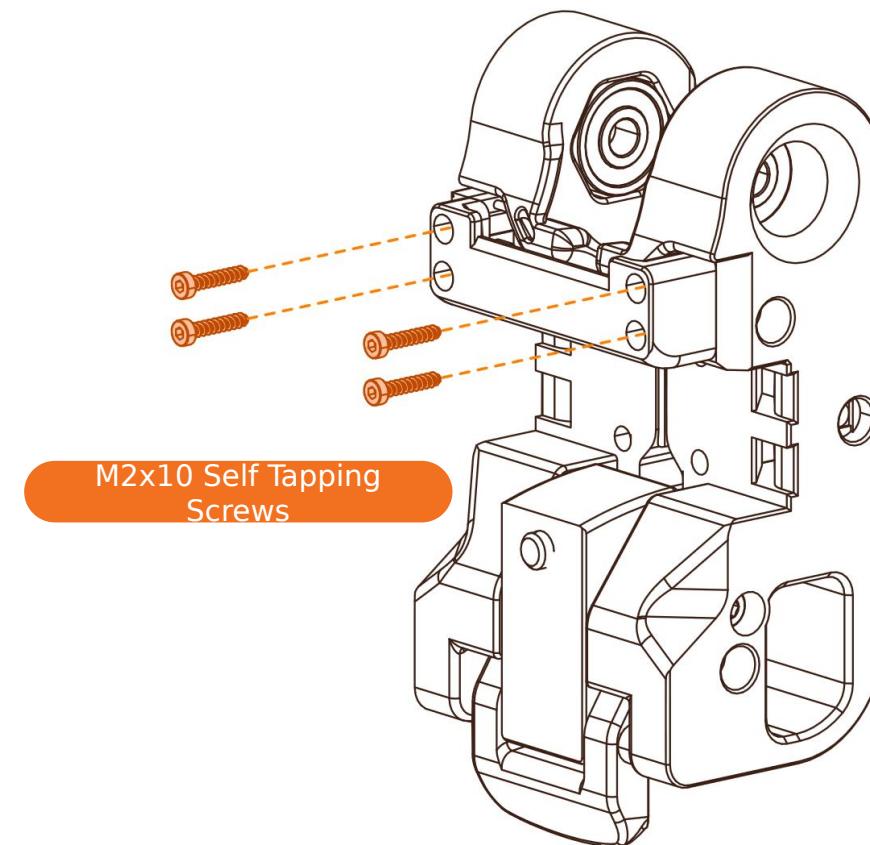








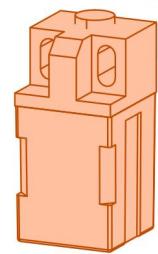
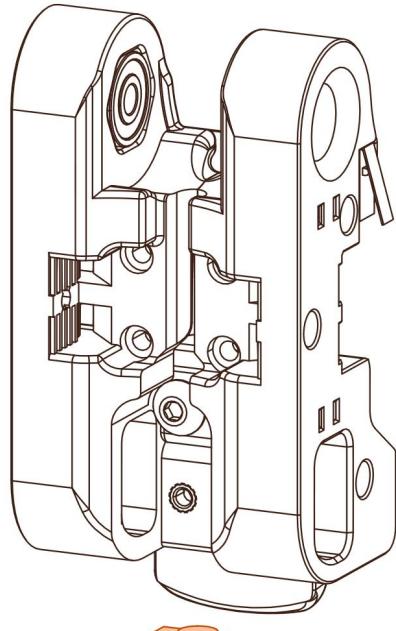
X Endstop
Switch



M2x10 Self Tapping
Screws

COCOAPRESS.COM

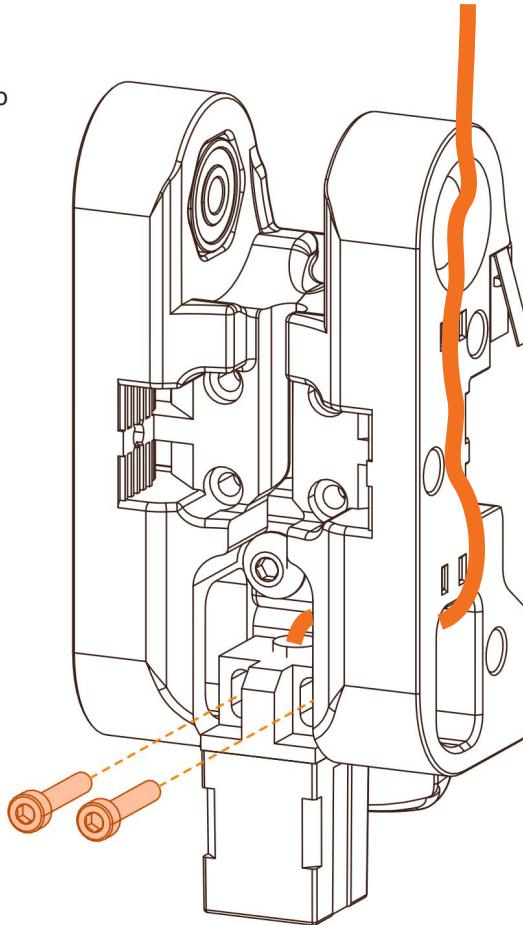


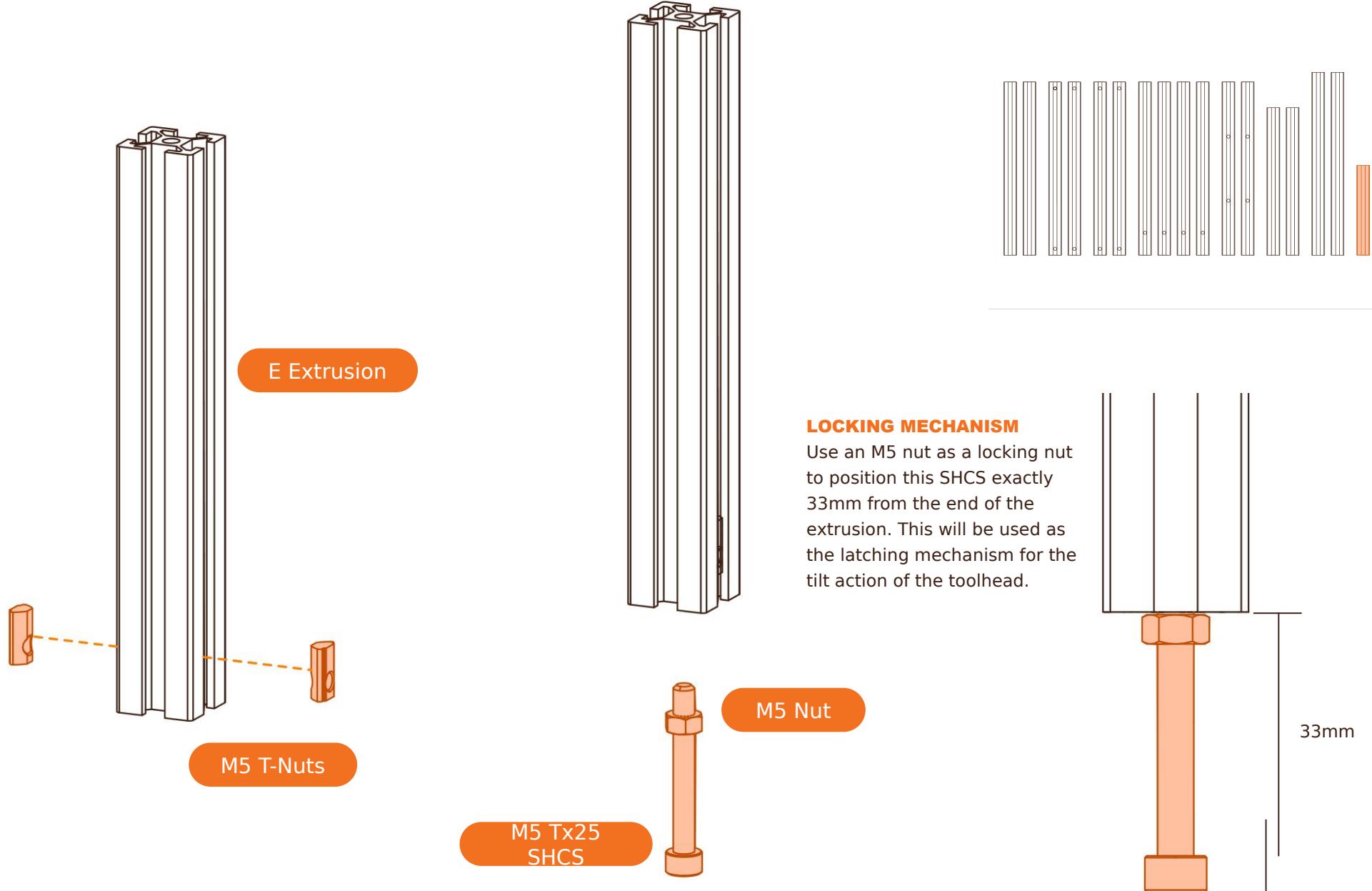


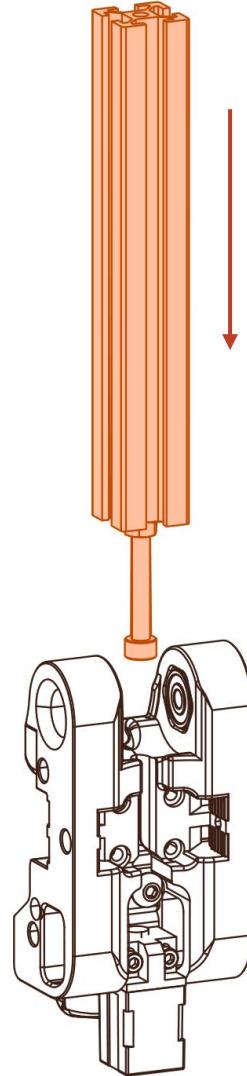
Inductive Probe

PROBE WIRE ROUTING

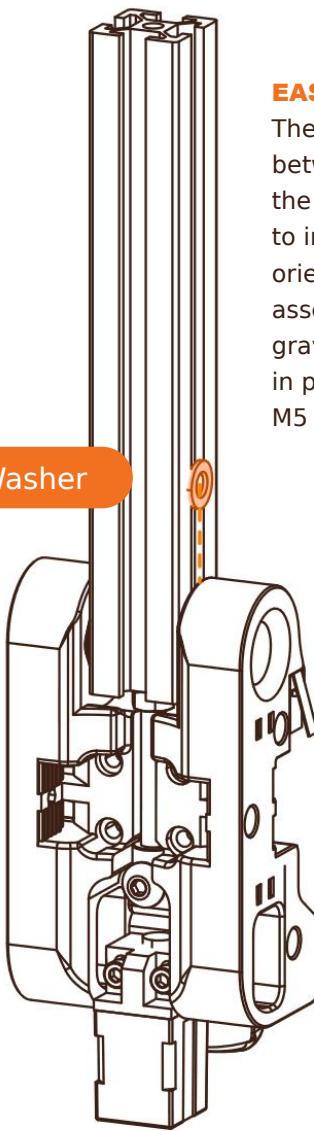
The probe wires will rout out through the printed part and up its side, there are two zip tie points for cable management.





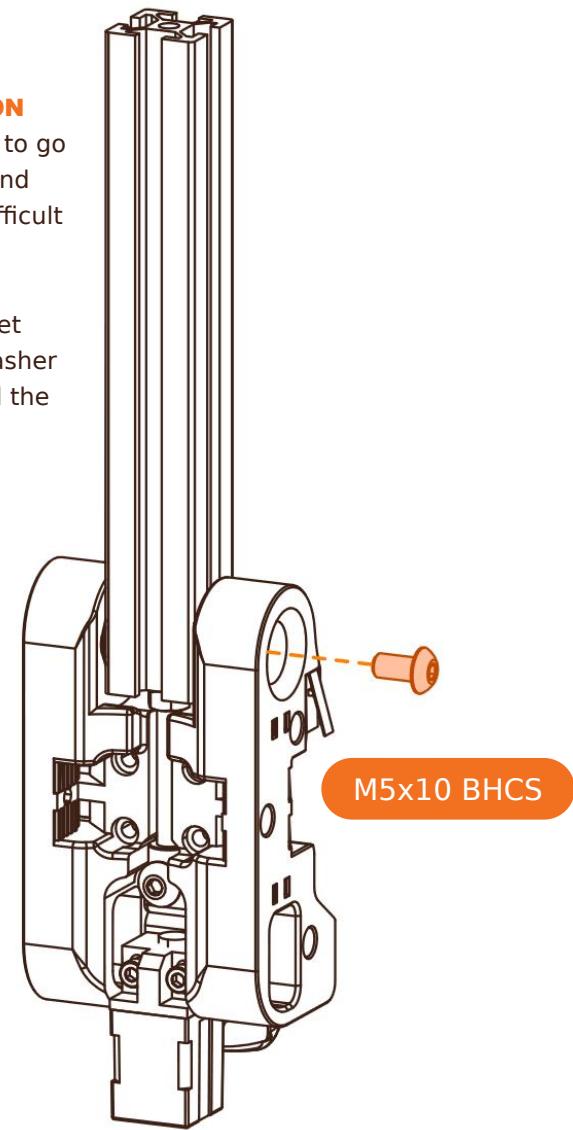


M5 Washer

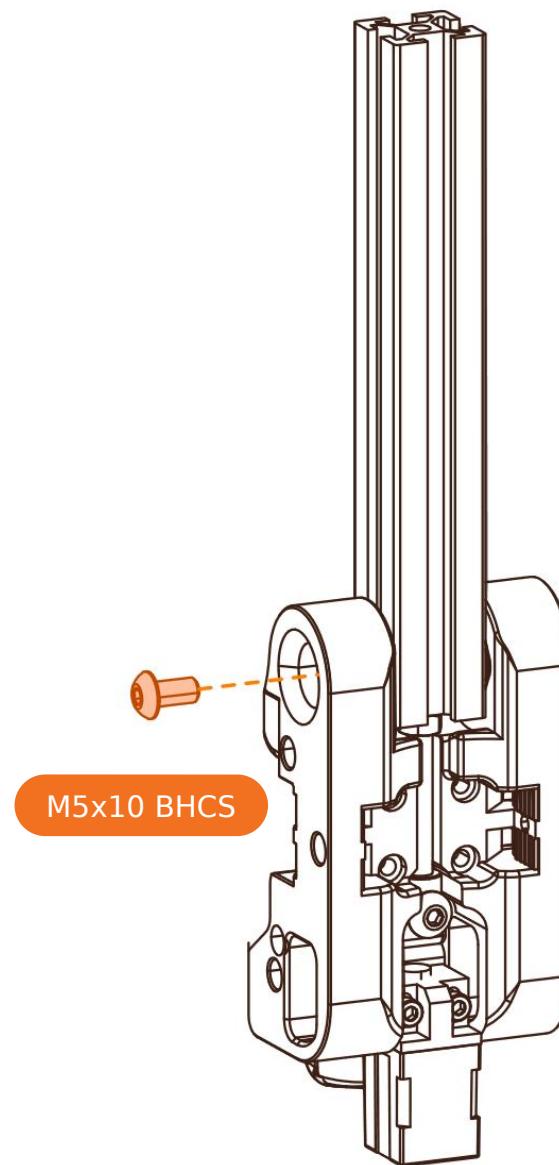


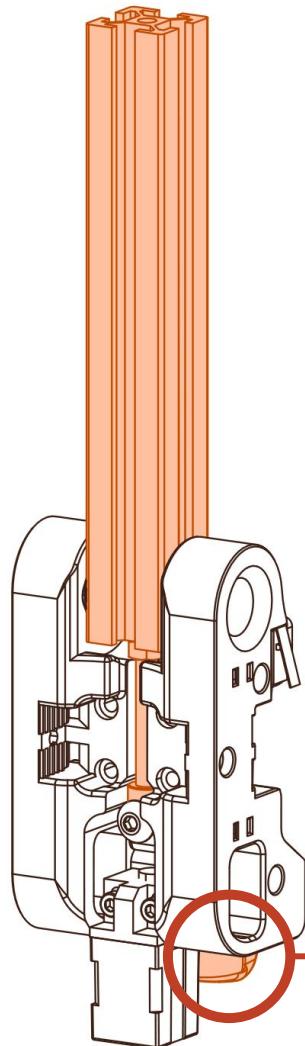
EASE OF INSTALLATION

These M5 washers need to go between the extrusion and the bearing, it can be difficult to install them in this orientation. Turn the assembly on its side to let gravity help keep the washer in place while you install the M5 screw

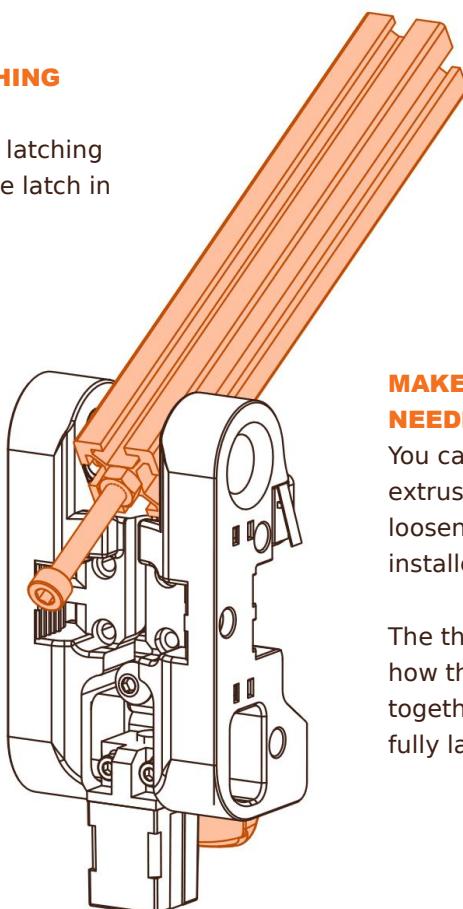


M5x10 BHCS



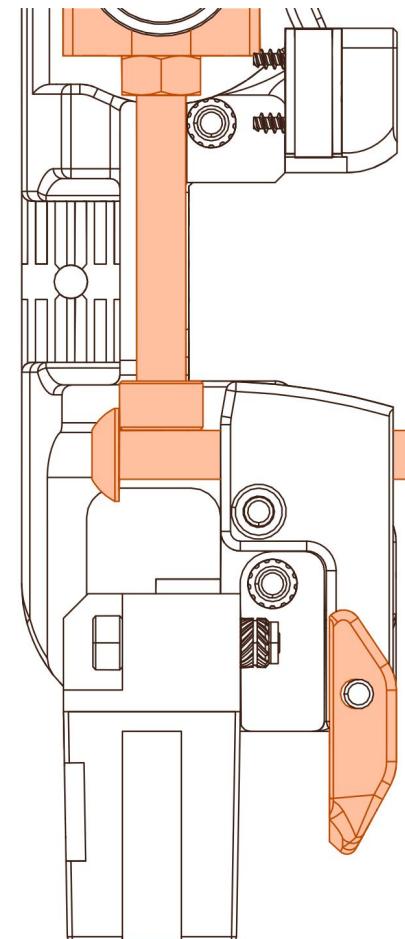
**TEST THE LATCHING ACTION**

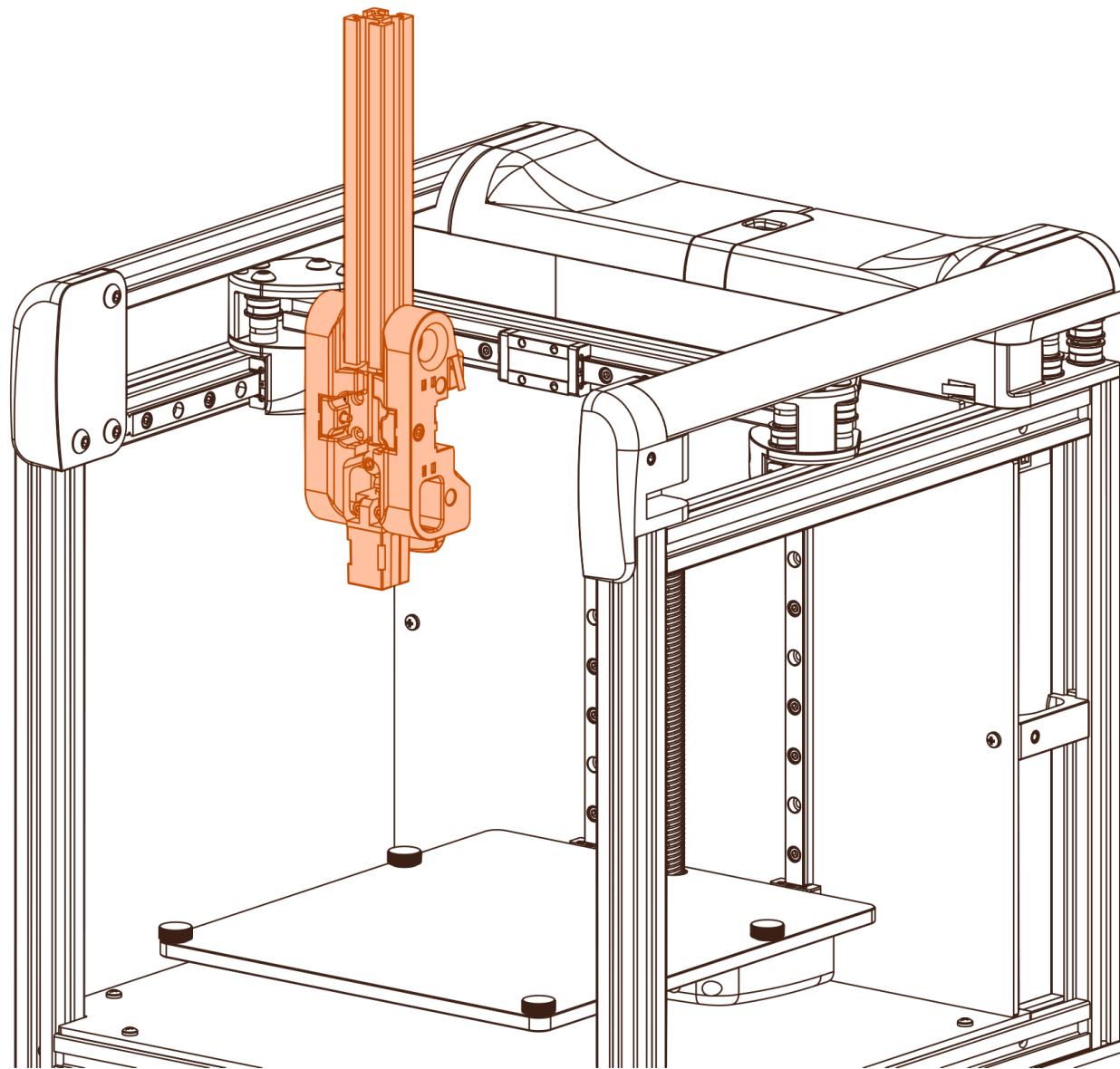
Test the pivot and latching action by using the latch in the rear

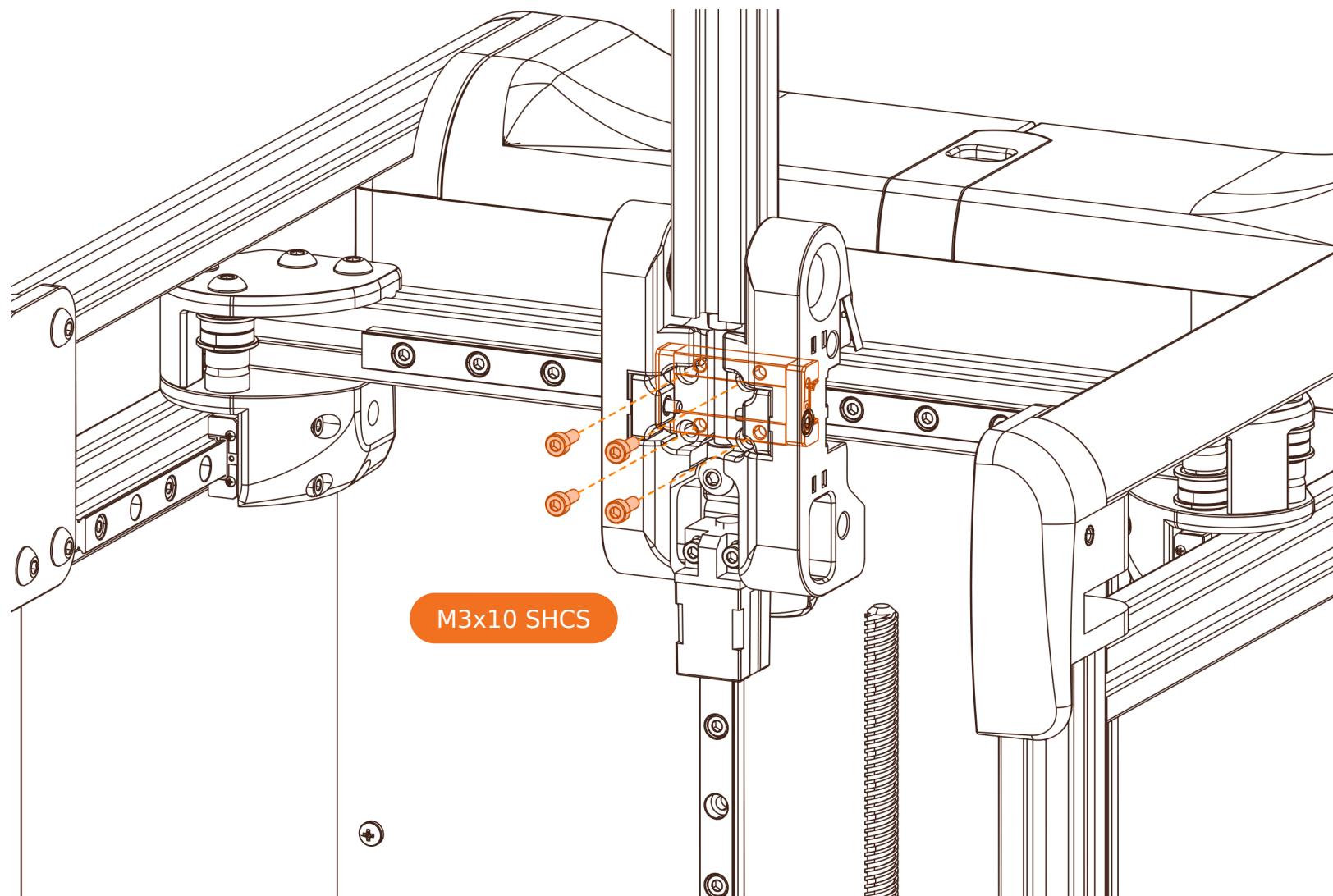
**MAKE ADJUSTMENTS AS NEEDED**

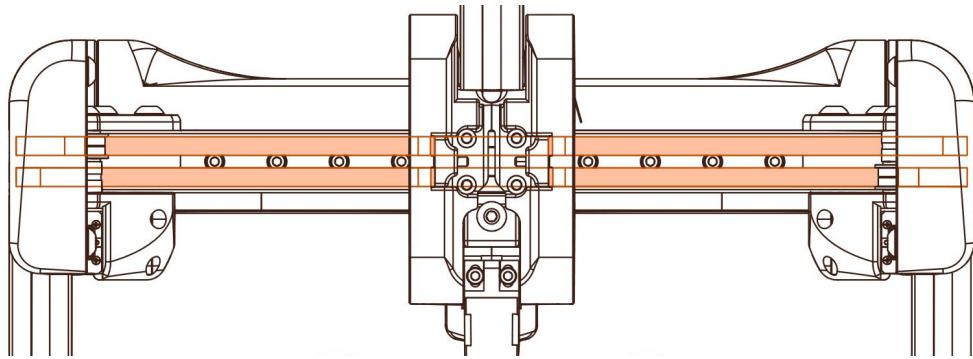
You can adjust the position of the extrusion up and down by loosening the M5x10 BHCS you installed on the last page,

The the right is a cross section of how the components mate together when the mechanism is fully latched





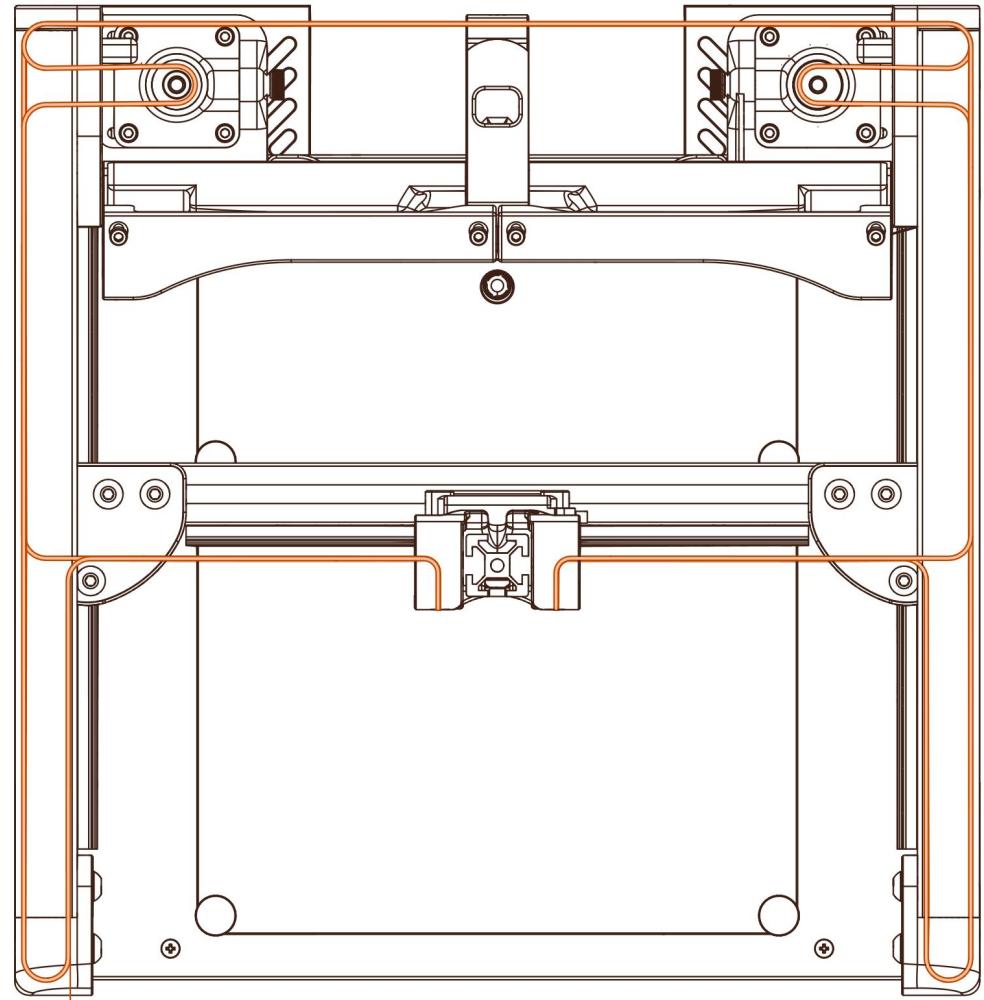


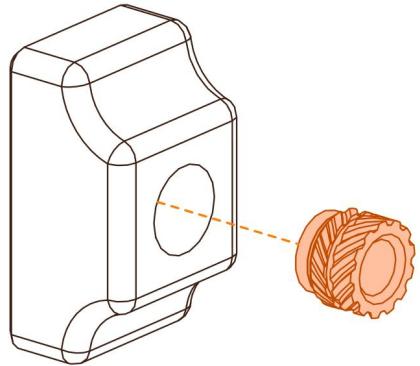
**THE BELT PATH**

The Cocoa Press printer uses a belt path based on the popular CoreXY pattern.

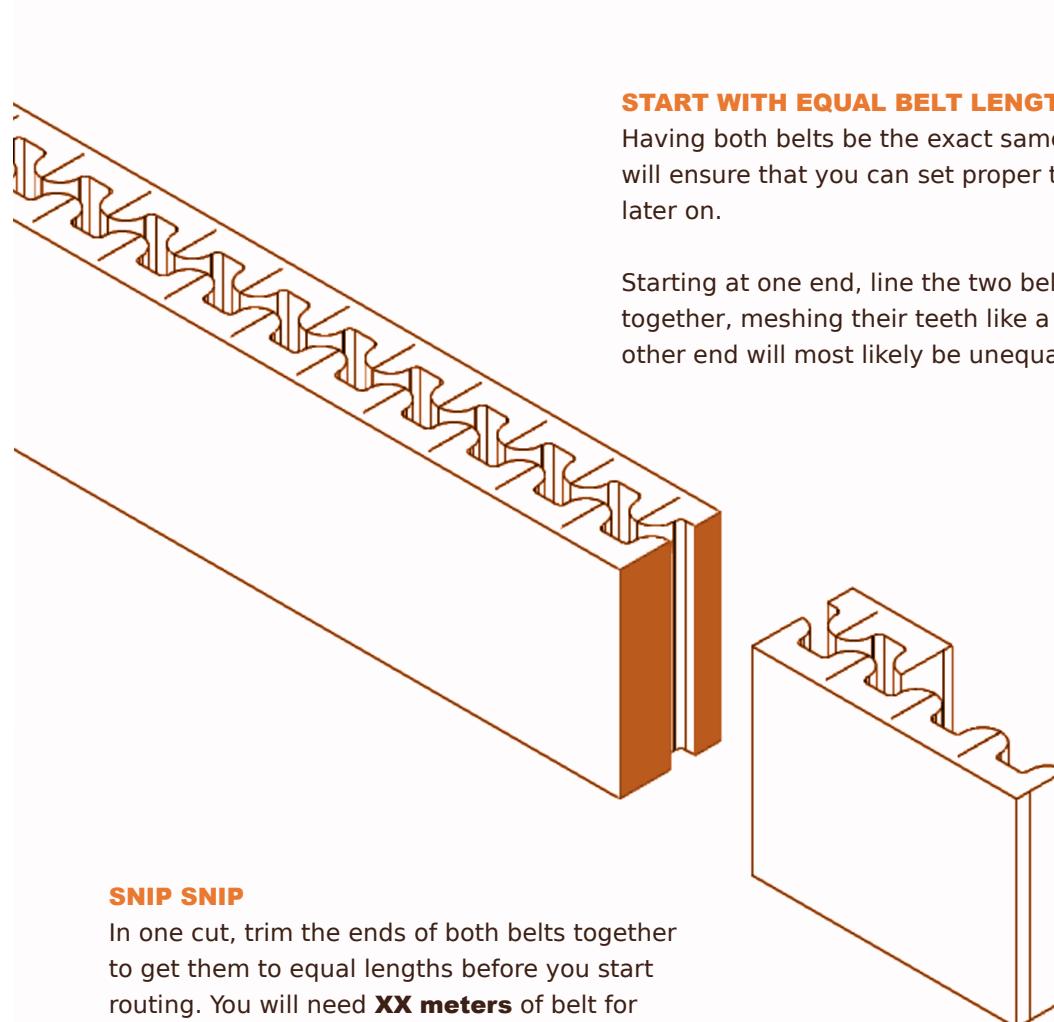
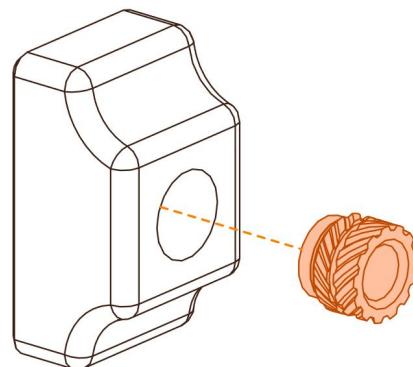
The individual belt paths are stacked on top of each other and the crossing often found in CoreXY designs is omitted. Compared to many other implementations, the motors are moved to a less intrusive position.

Equal belt tension is important to the proper function of a CoreXY motion system.





M3 Heatset
Inserts



START WITH EQUAL BELT LENGTHS

Having both belts be the exact same length will ensure that you can set proper tension later on.

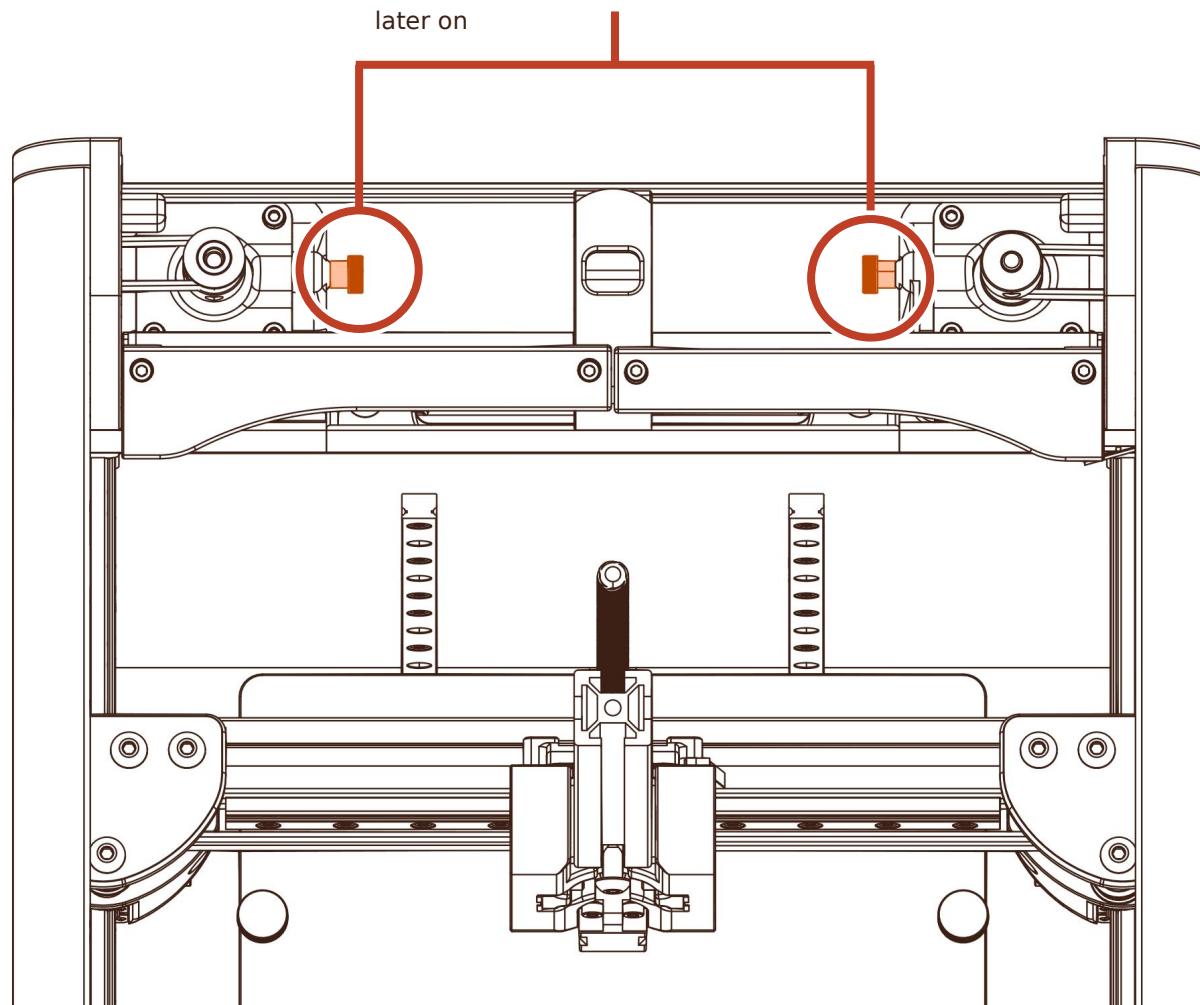
Starting at one end, line the two belt runs together, meshing their teeth like a zipper. The other end will most likely be unequal.

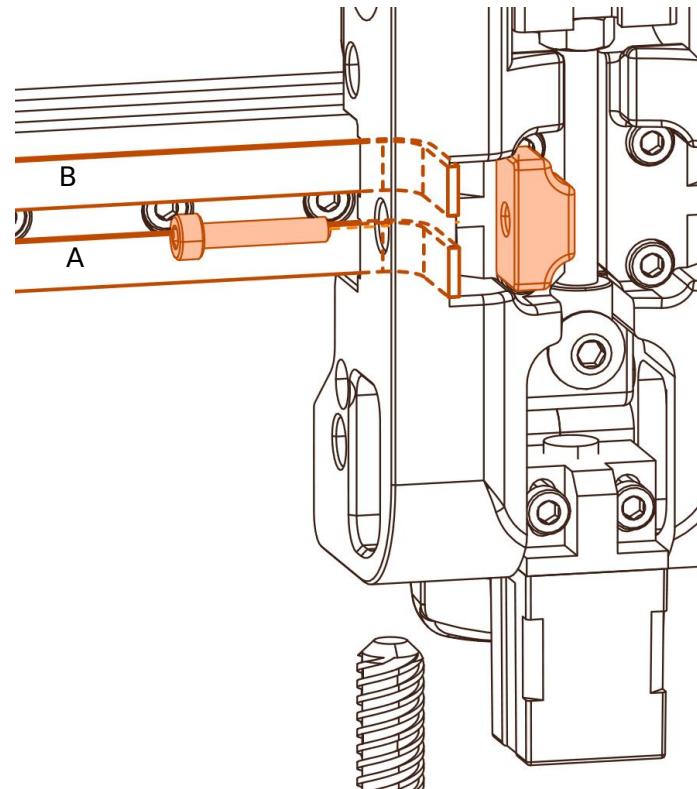
SNIP SNIP

In one cut, trim the ends of both belts together to get them to equal lengths before you start routing. You will need **XX meters** of belt for each run.

LOOSEN THE BELT TENSION KNOBS

Before we begin belting the printer we need to loosen the tension knobs so that we have adequate travel to properly tension the belts later on



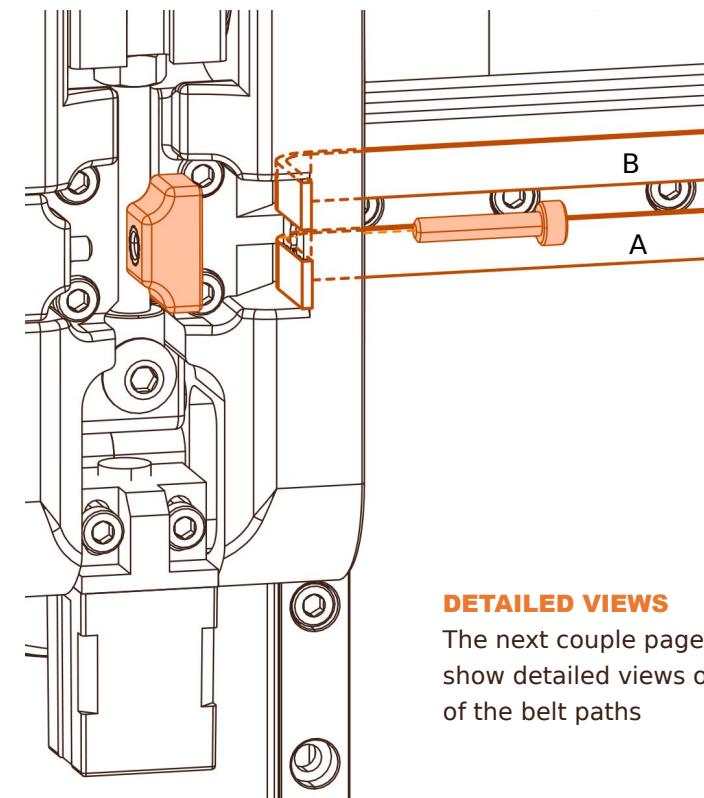


SECURING THE BELTS

Run the belts through their respective paths and then attach them to the opposite side of the X carriage. Before fully tightening the belt clamps you can pull the ends of the belts to tighten them as best you can by hand.

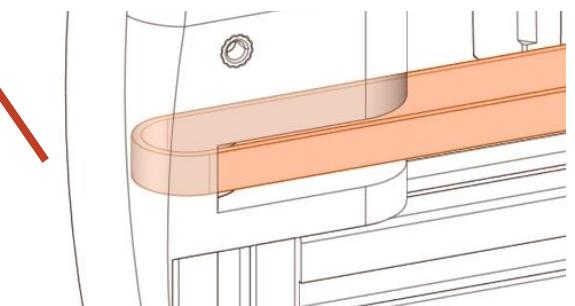
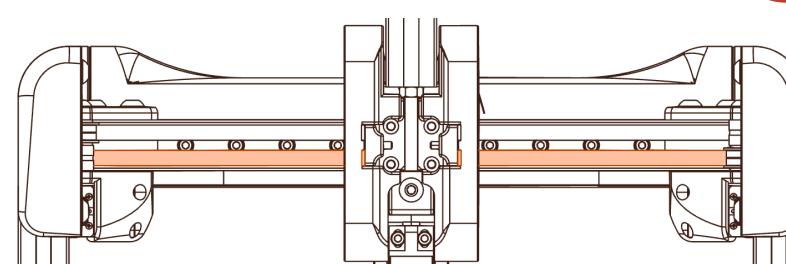
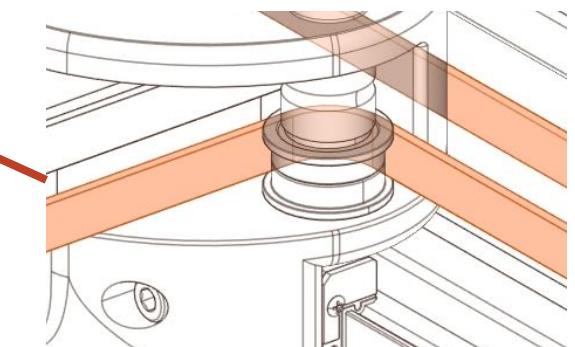
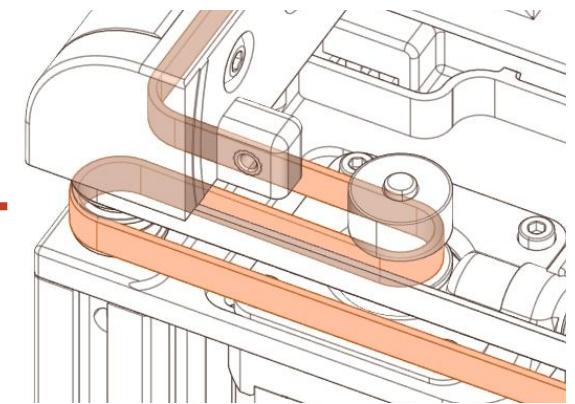
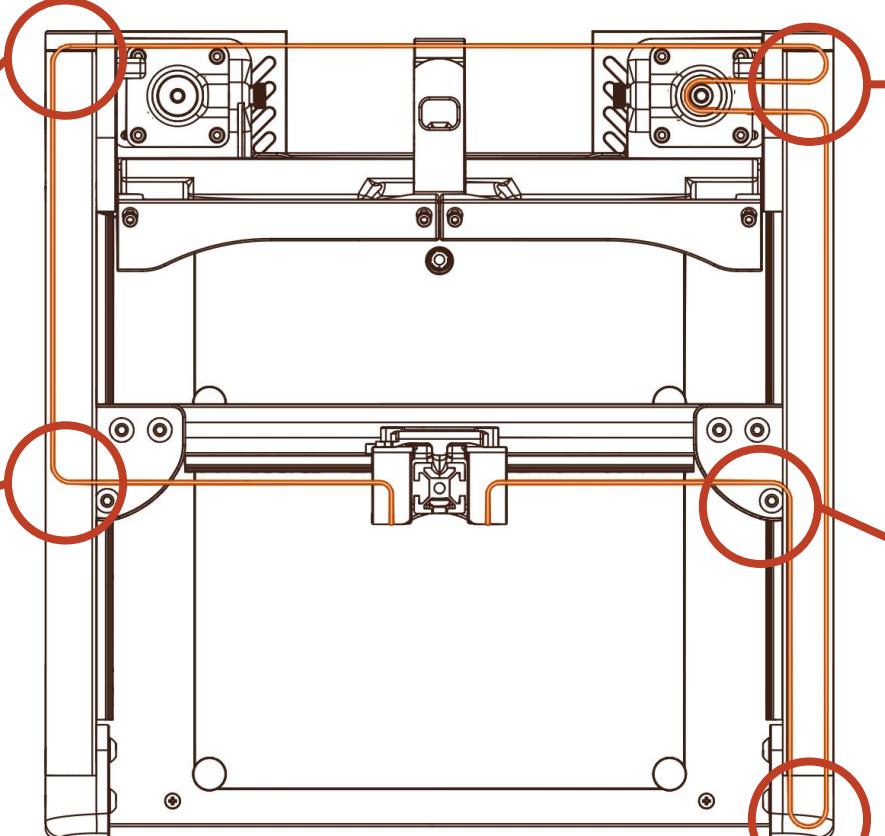
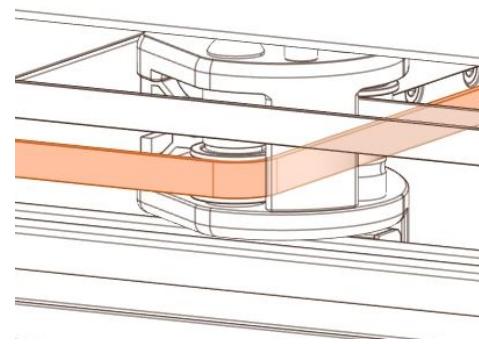
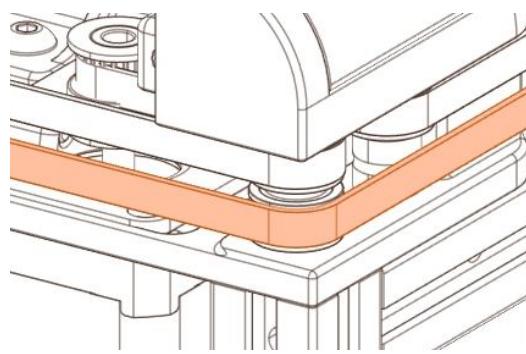
BELTING THE PRINTER

Start on one side of the toolhead and secure the A and B belts to the X carriage



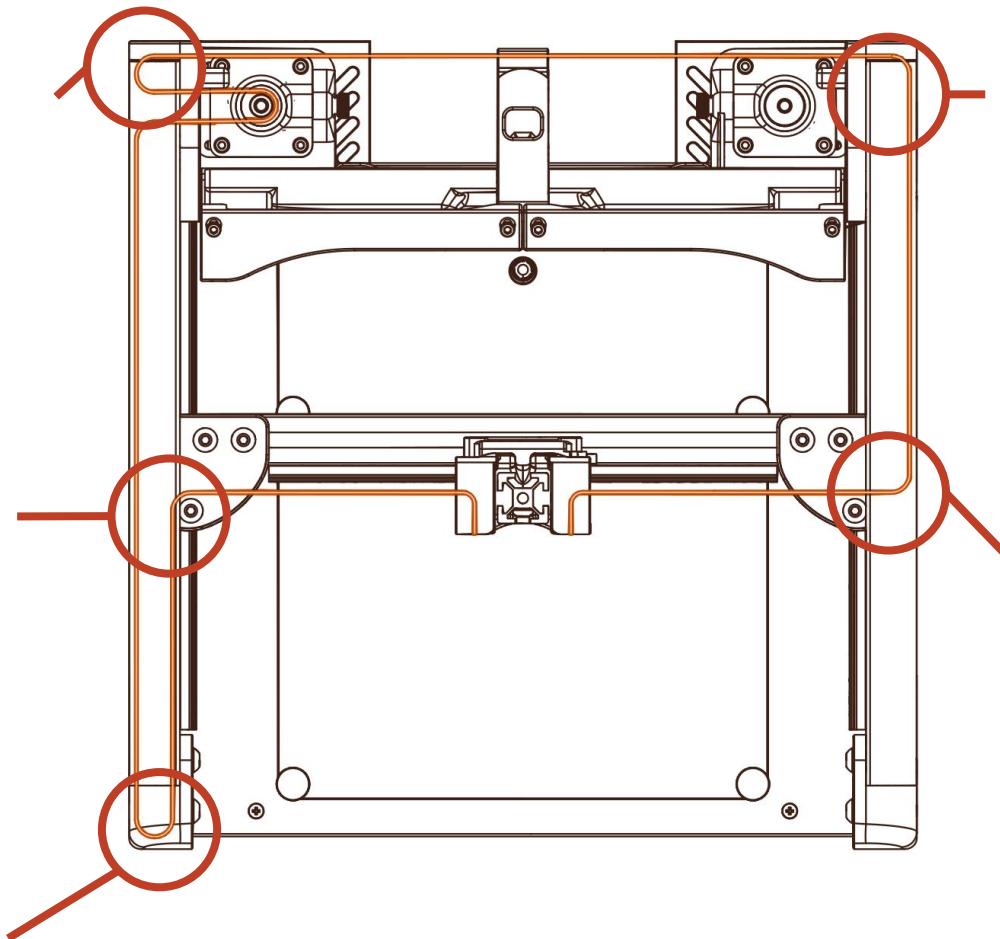
DETAILED VIEWS

The next couple pages will show detailed views of each of the belt paths



LIKE TYING YOUR SHOES BUT WORSE

Thread belt A through the printer.
The A belt sits below the B belt.
The flat side of the belt should only
contact smooth bearing surfaces. No
part of the belt should be touching
plastic.



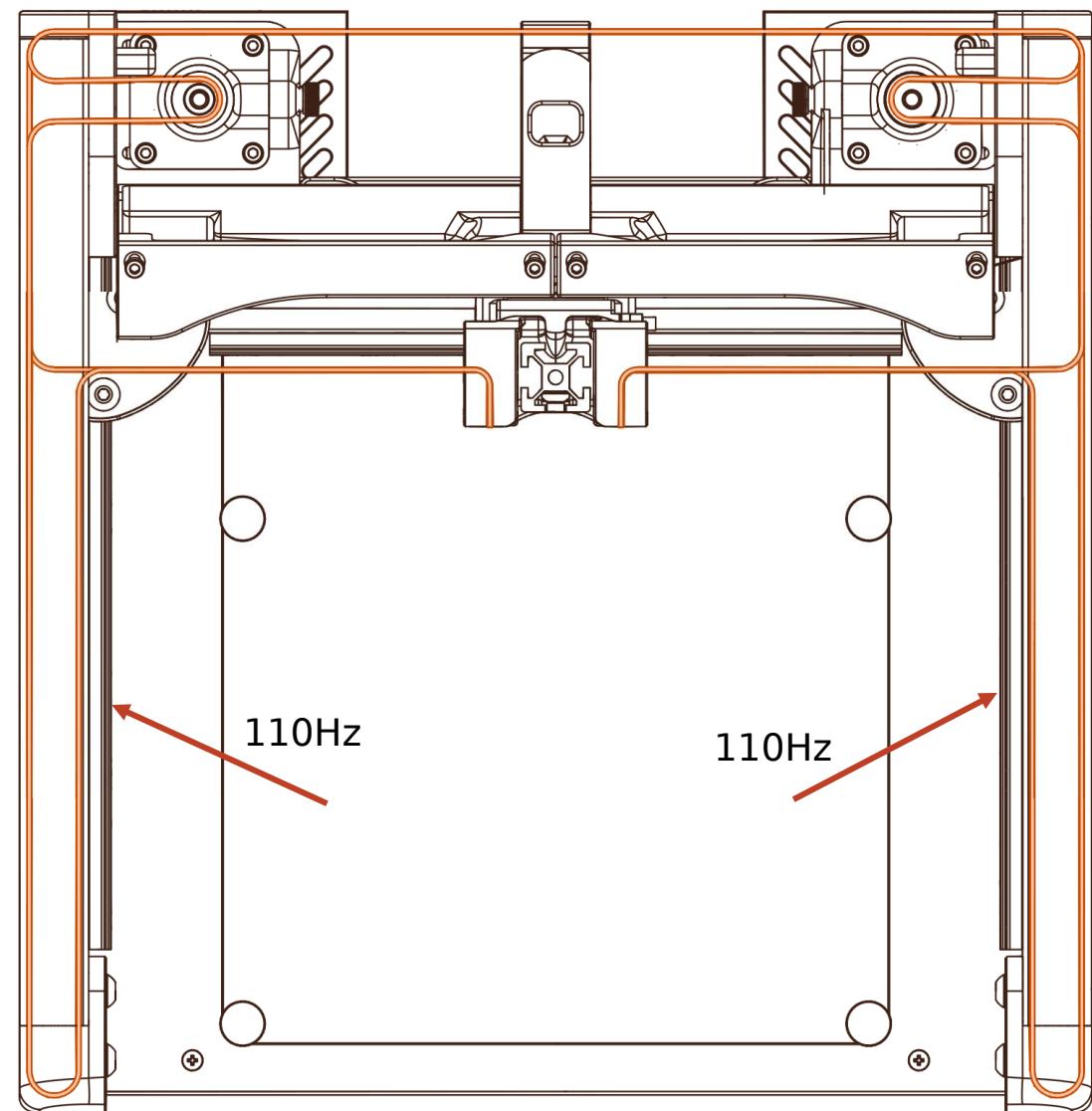
**LIKE TYING YOUR SHOES BUT
WORSE**

Thread belt B through the printer.
The B belt sits above the A belt.
The flat side of the belt should only
contact smooth bearing surfaces. No
part of the belt should be touching
plastic.

110Hz AT MAX Y TRAVEL

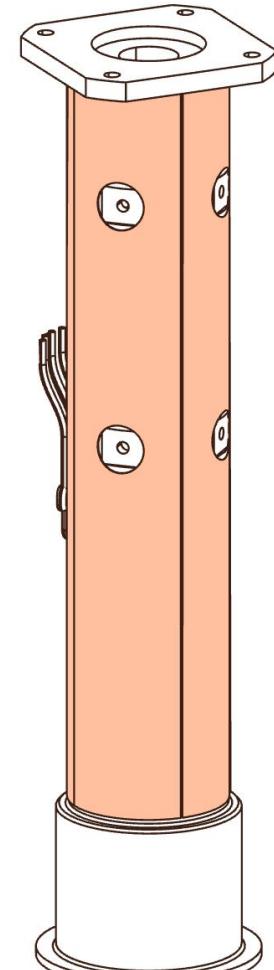
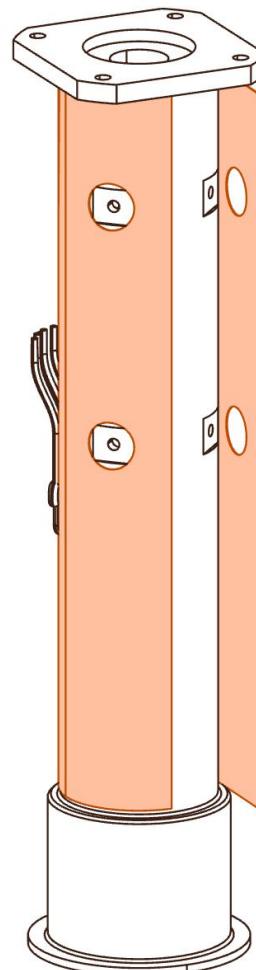
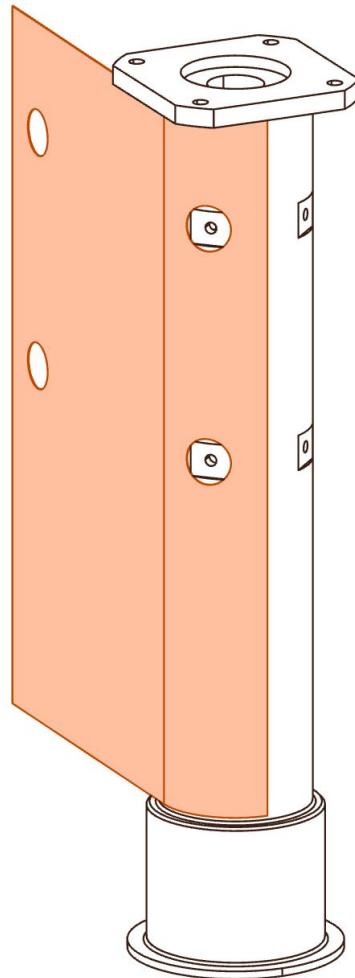
You can use a tuning app on your smartphone to measure the frequency of the belts when the gantry is in a fixed location. Move the gantry all the way to the rear of the printer and pluck the indicated belts. We are looking for 110Hz in these locations.

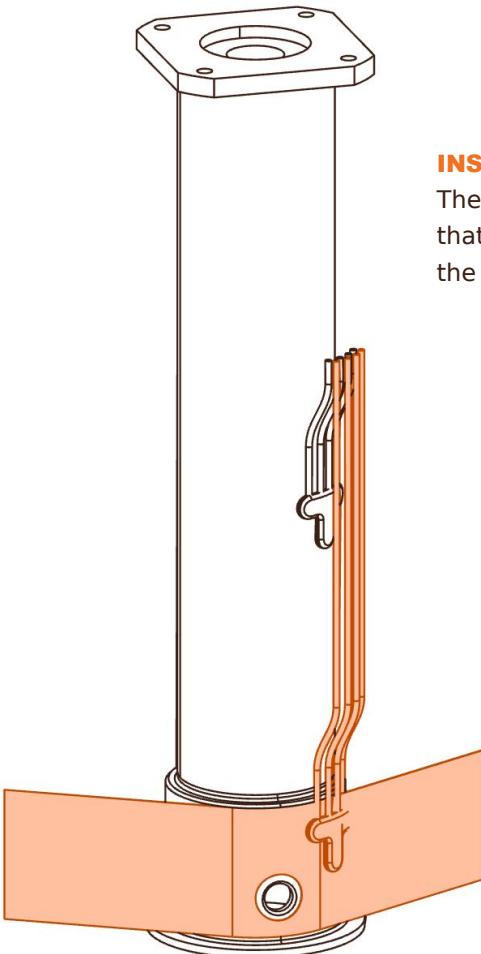
This should ensure that your tension is correct.



INSTALLING HEATERS

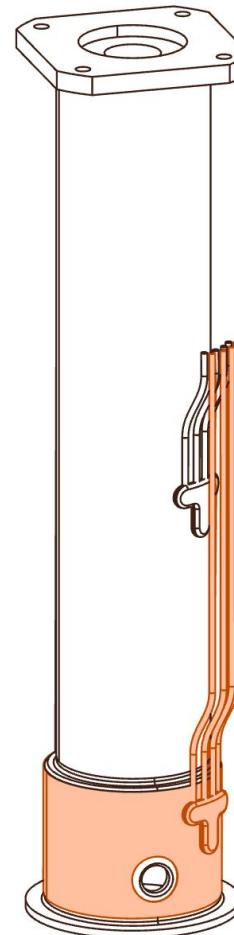
The large heater mat gets wrapped around the machined metal component, the 4 holes in the mat align with the 4 screw holes in the component. Wrap the heater around and be sure to prevent any air bubbles from forming.

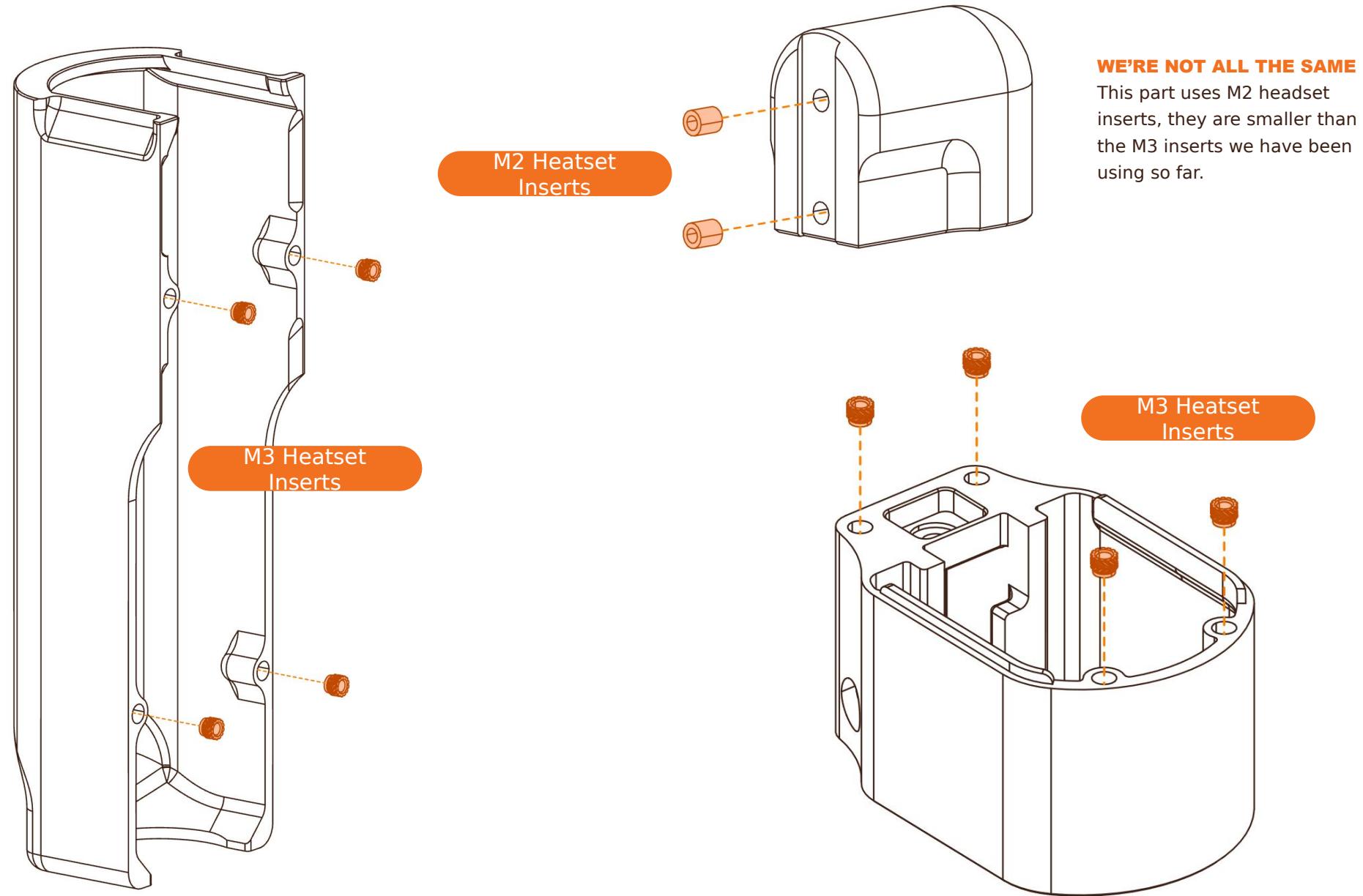


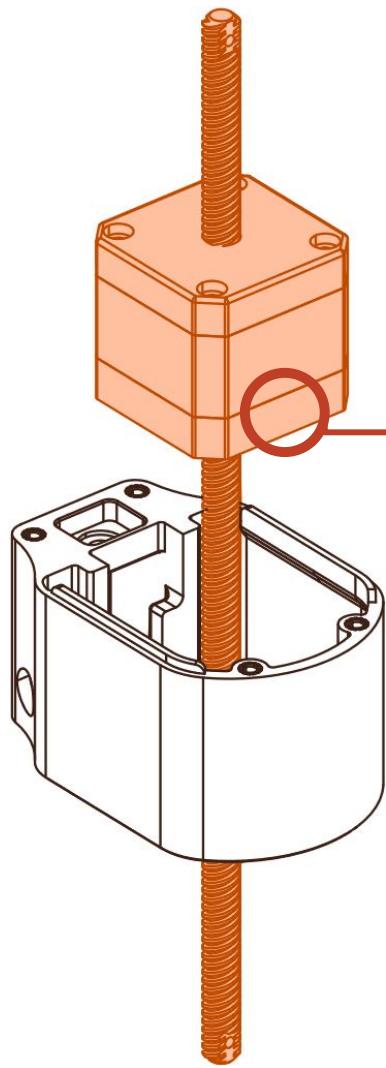


INSTALLING HEATERS

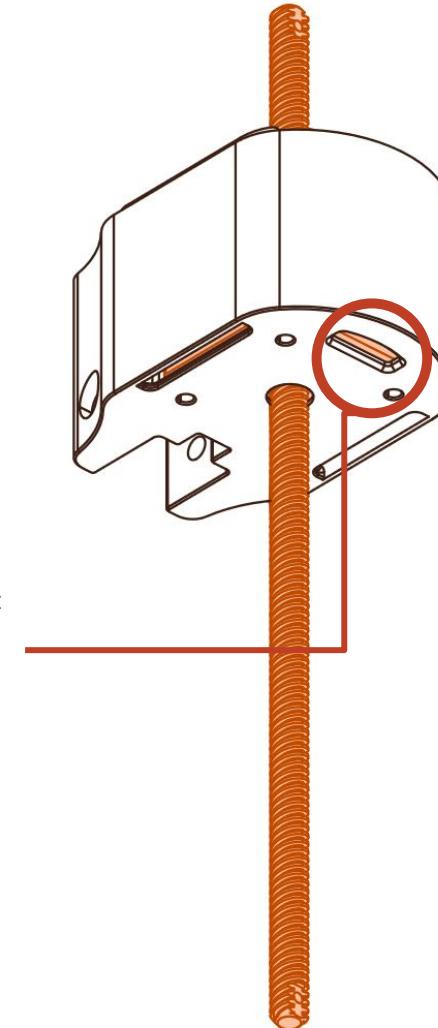
The smaller heater has a single hole that aligns with the hole in the front of the machined component

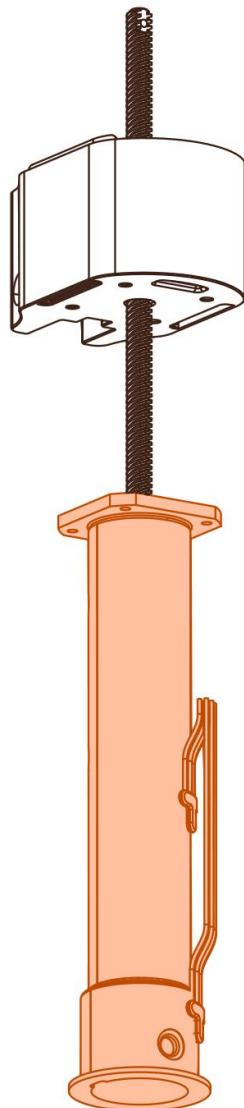




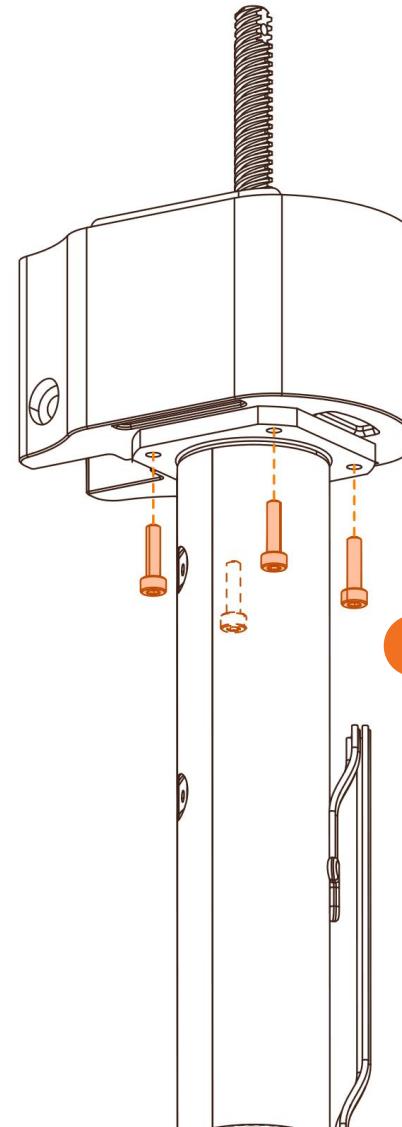
**MOTOR WIRE ROUTING**

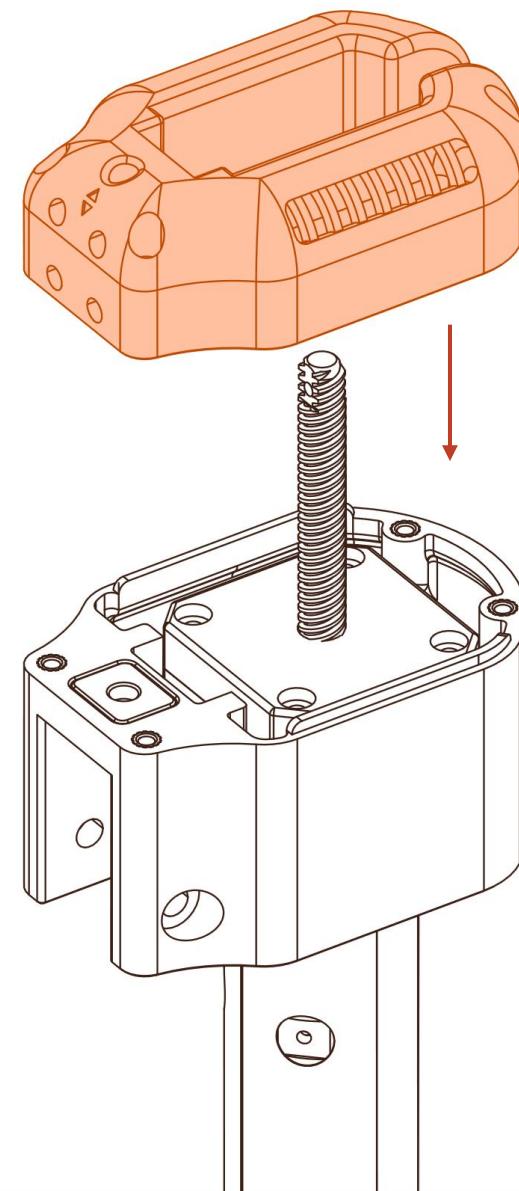
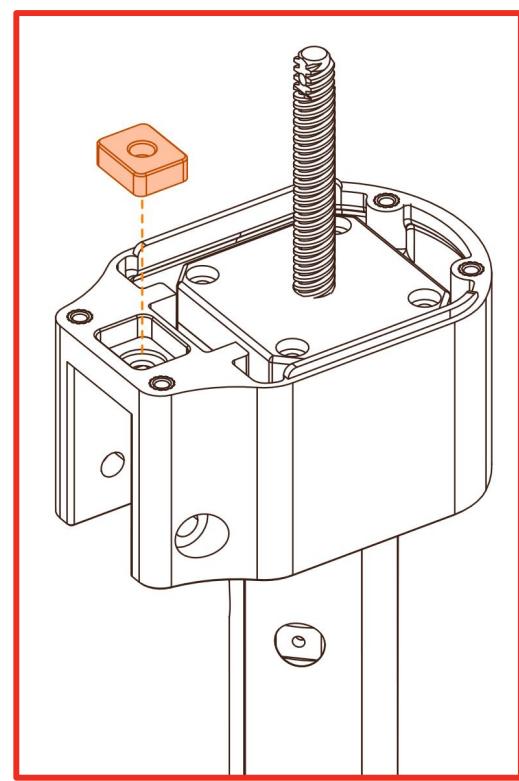
The motor wires should exit out the front of the motor and then can be routed down through the open window in the printed part.

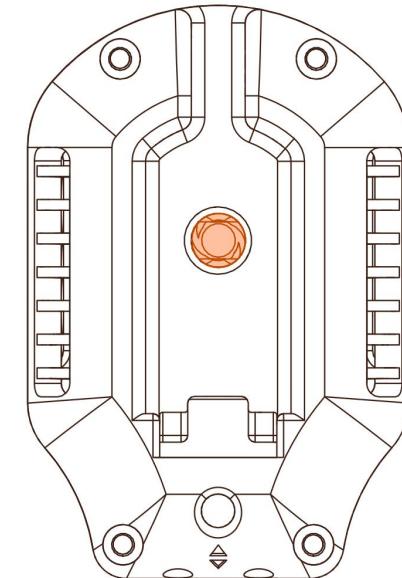
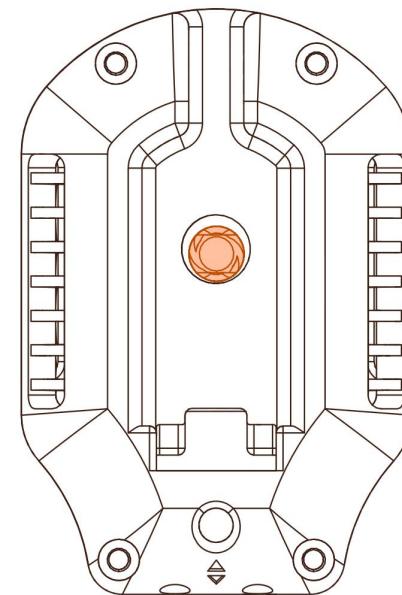
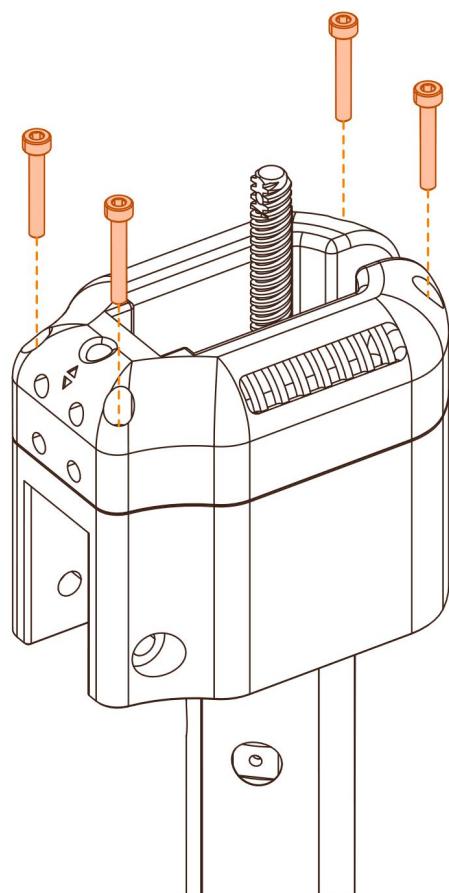


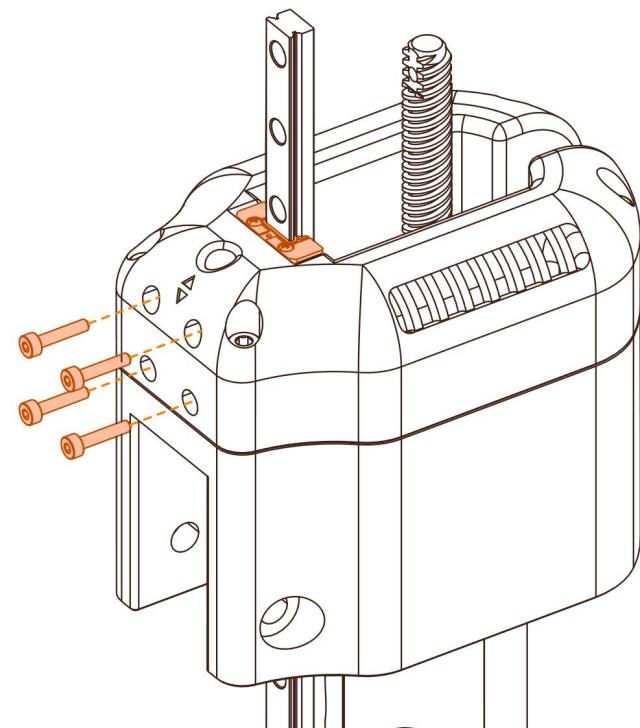
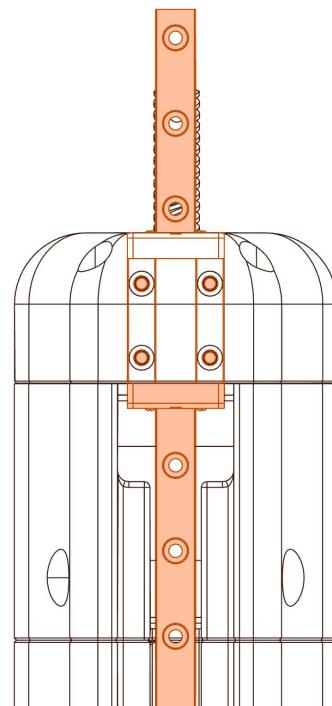
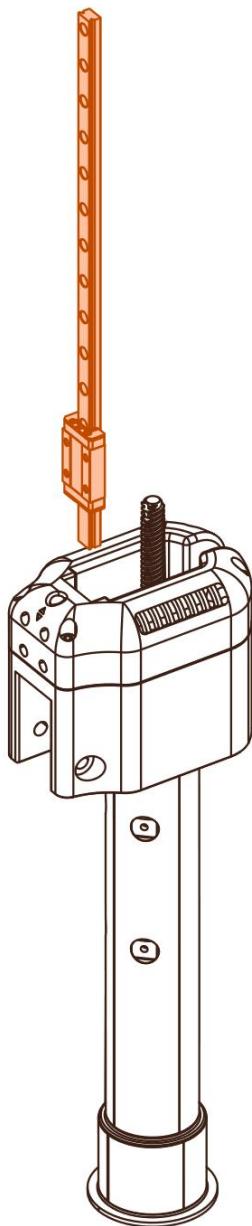
**FRONT TO FRONT**

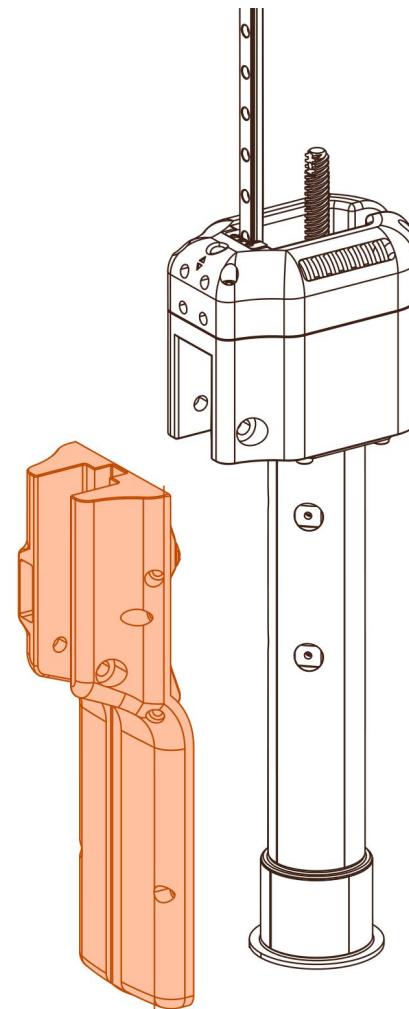
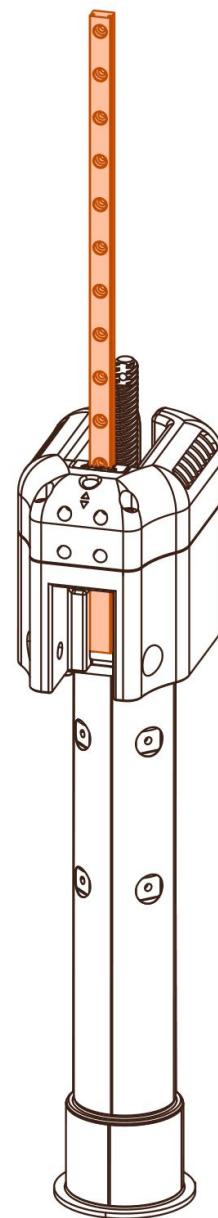
Make sure the threaded hole in the cartridge assembly is facing the front, rounded portion, of the printed part

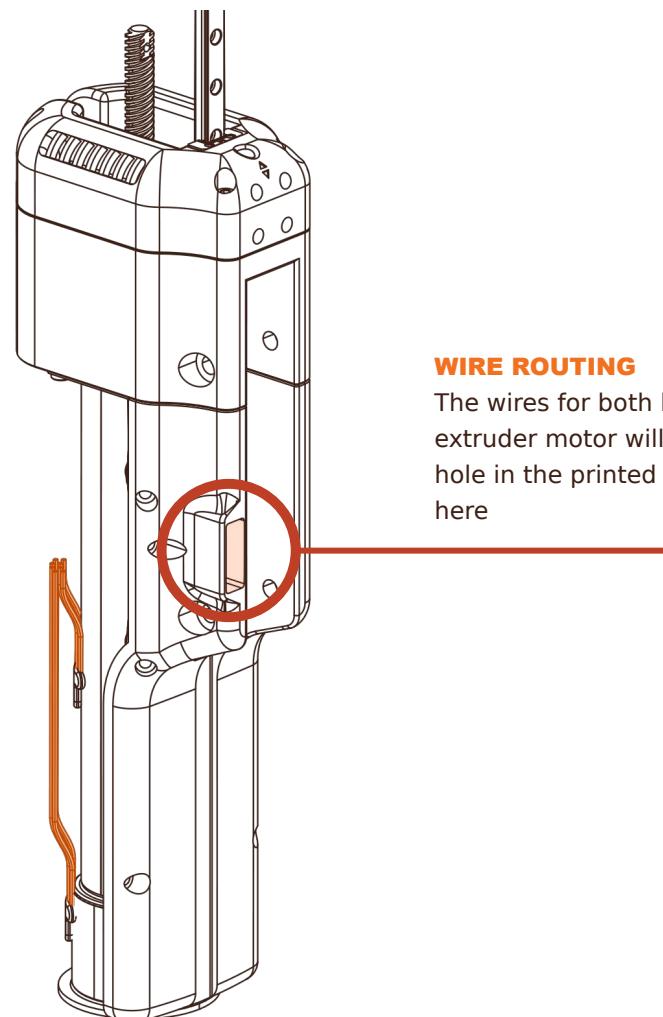
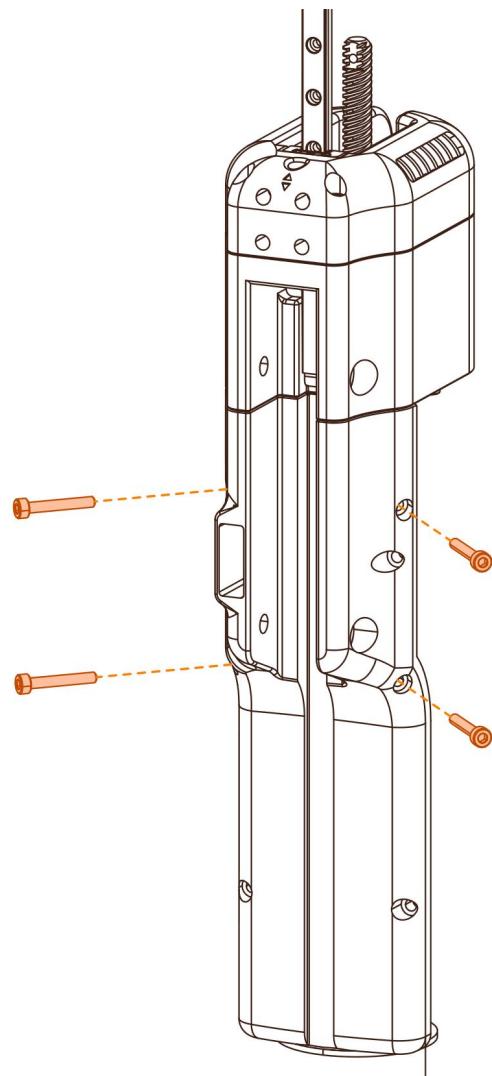






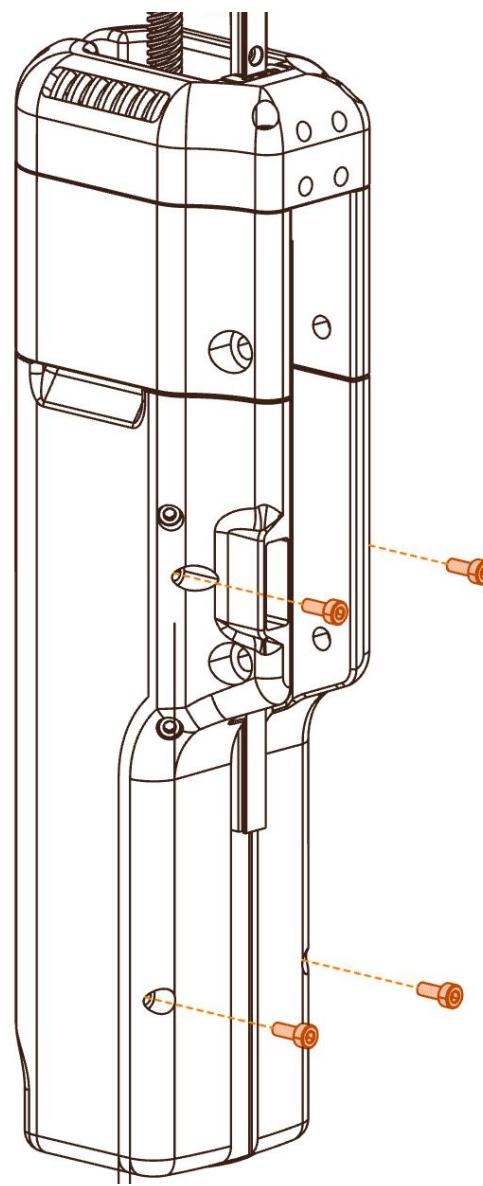
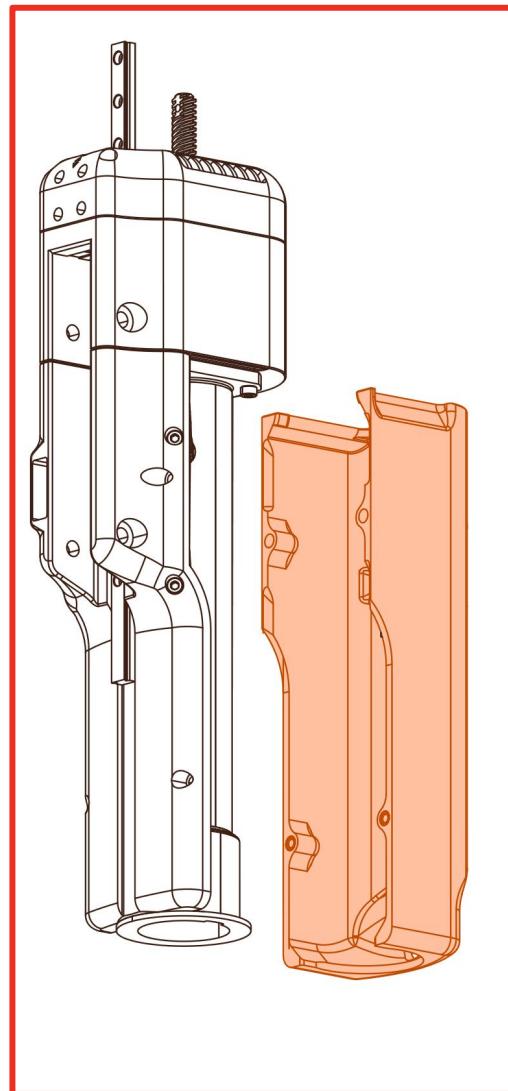


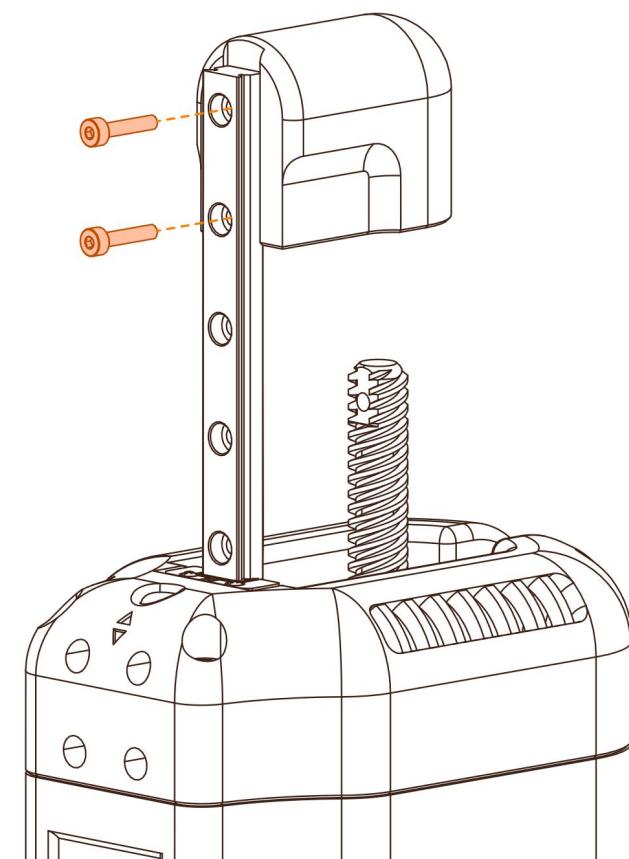
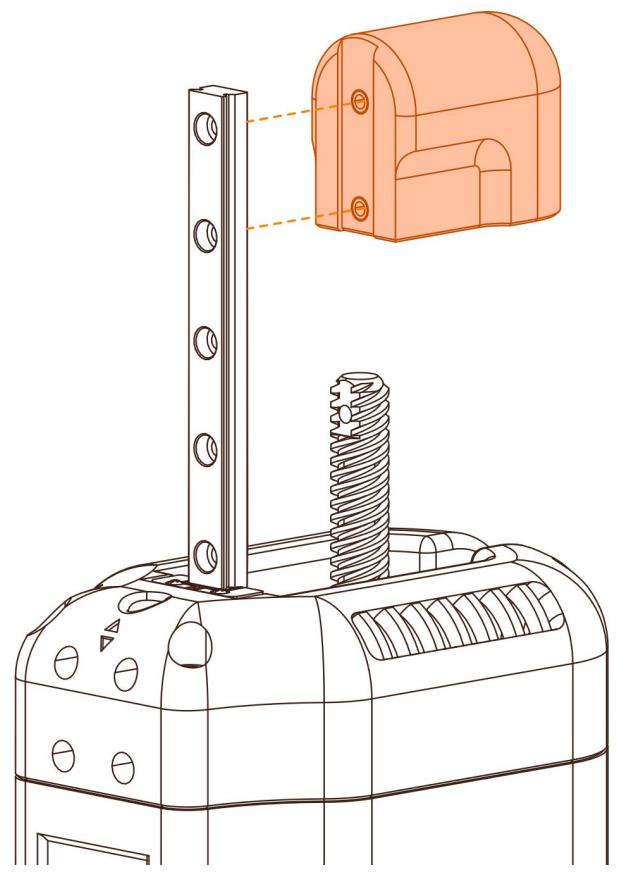


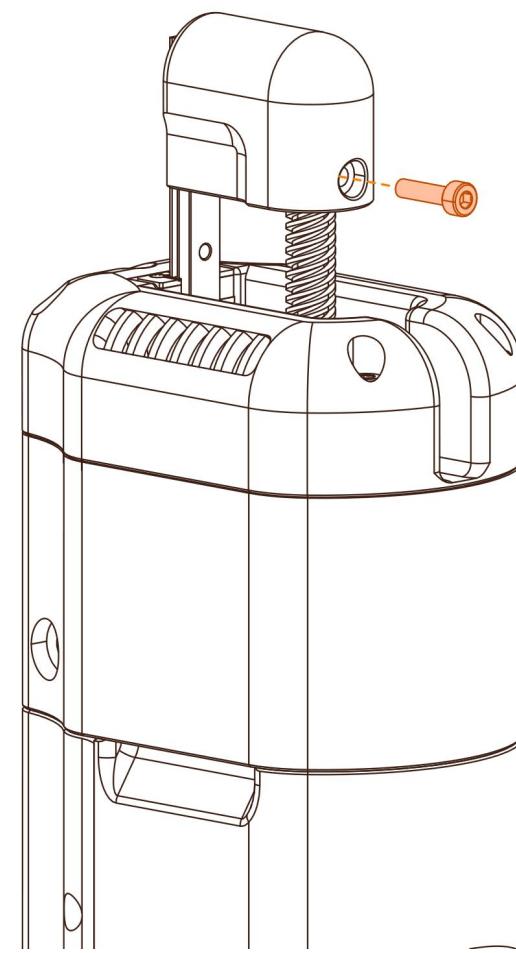
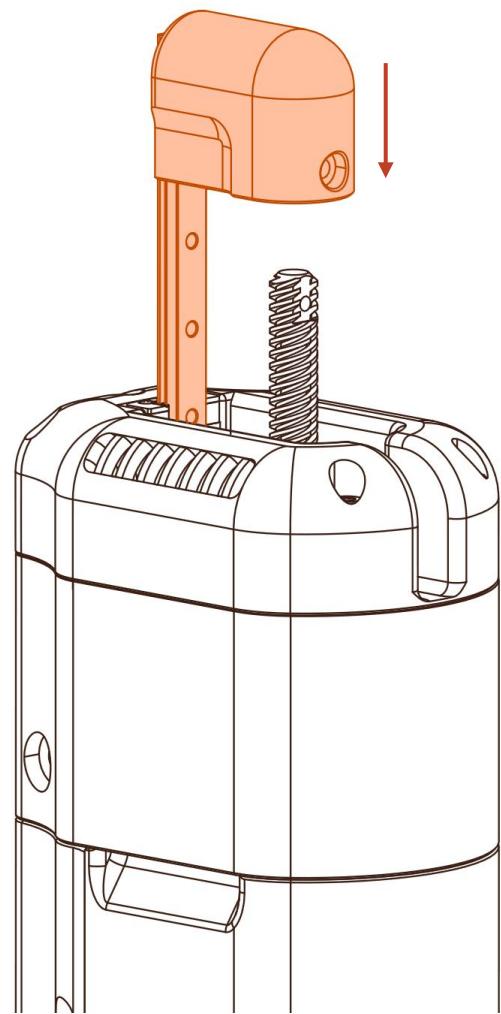


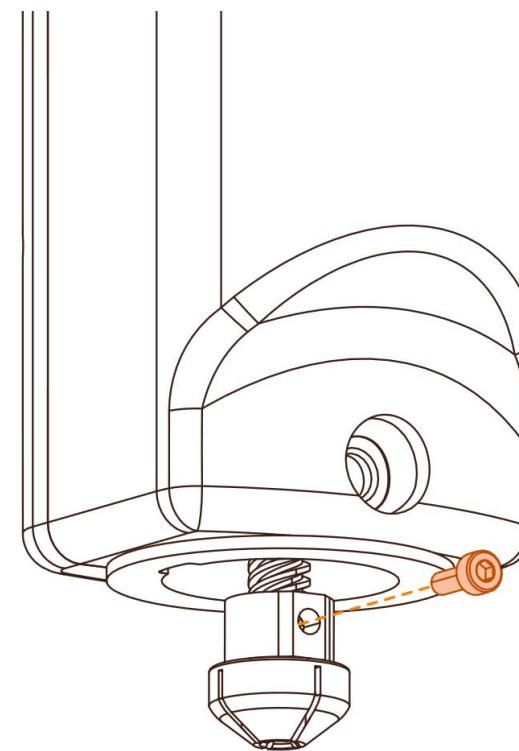
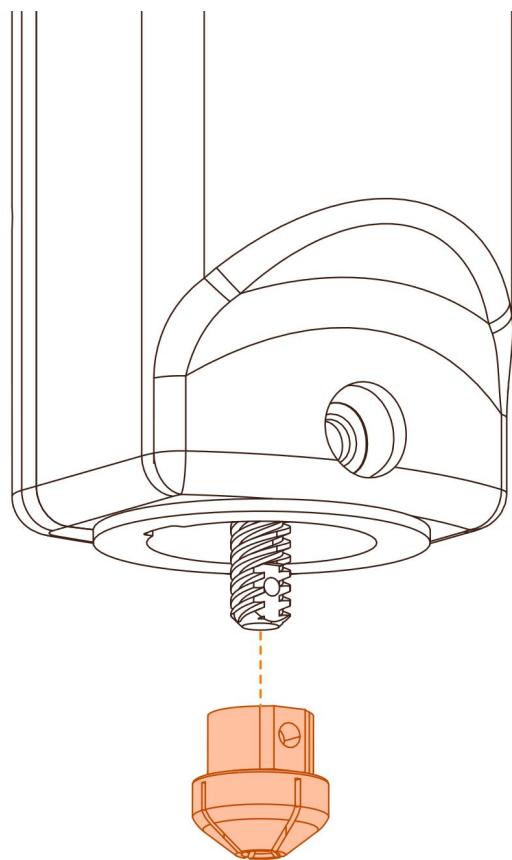
WIRE ROUTING

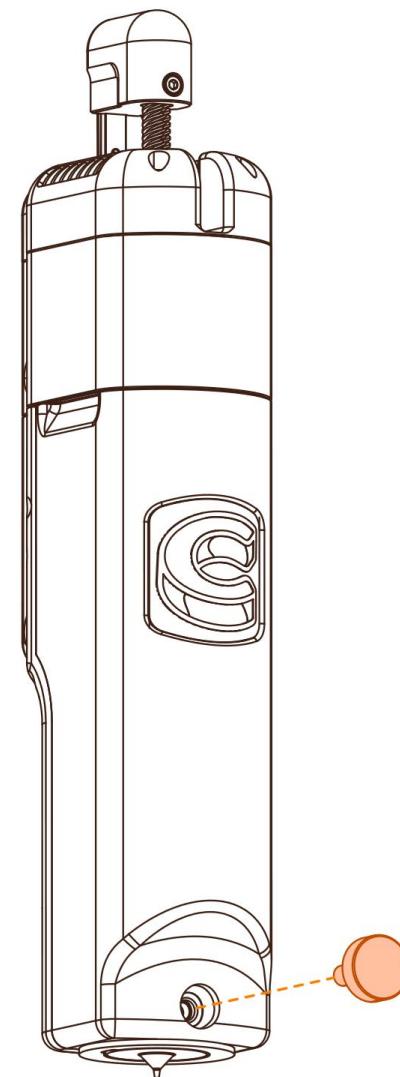
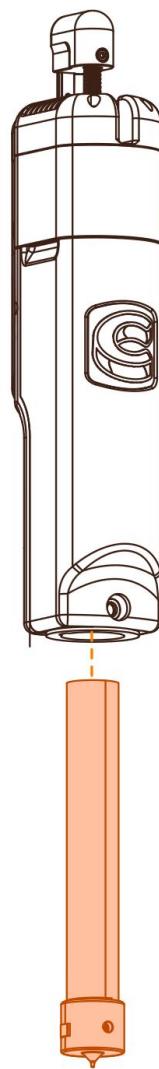
The wires for both heaters and the extruder motor will feed through the hole in the printed part highlighted here

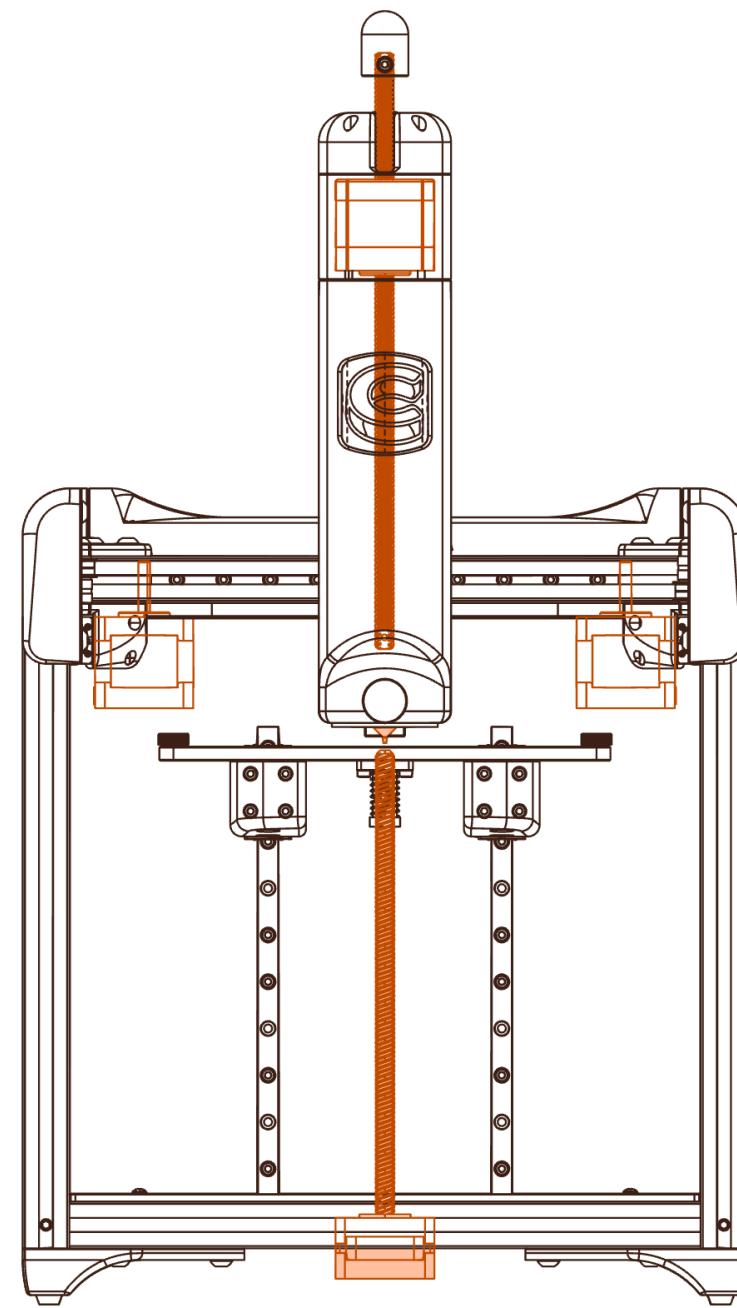


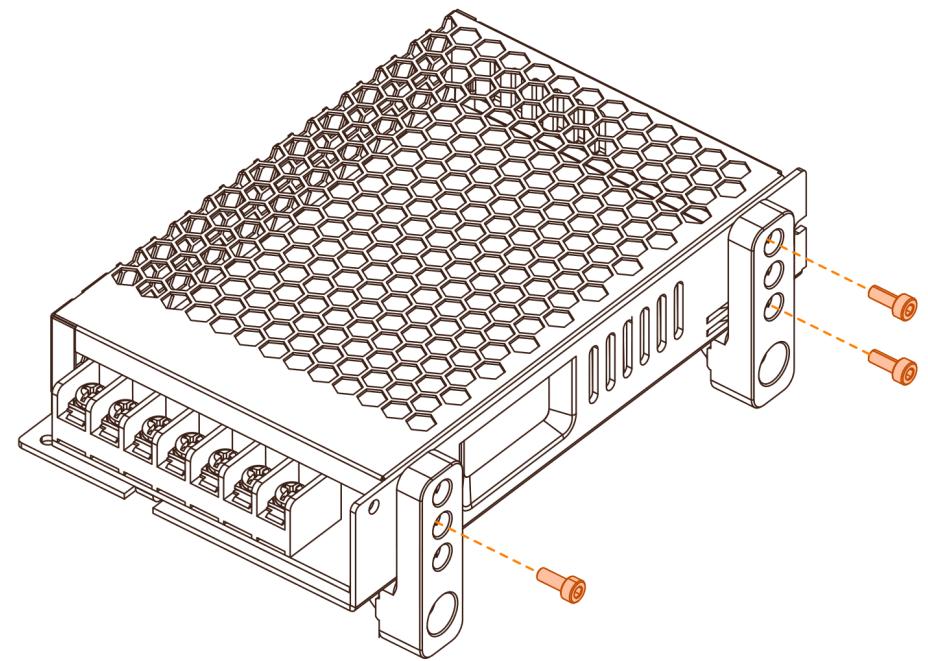
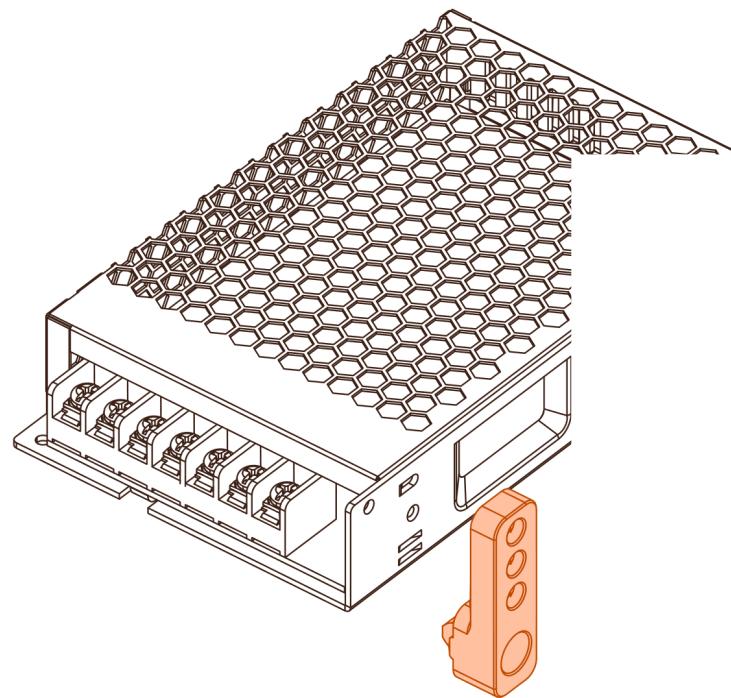


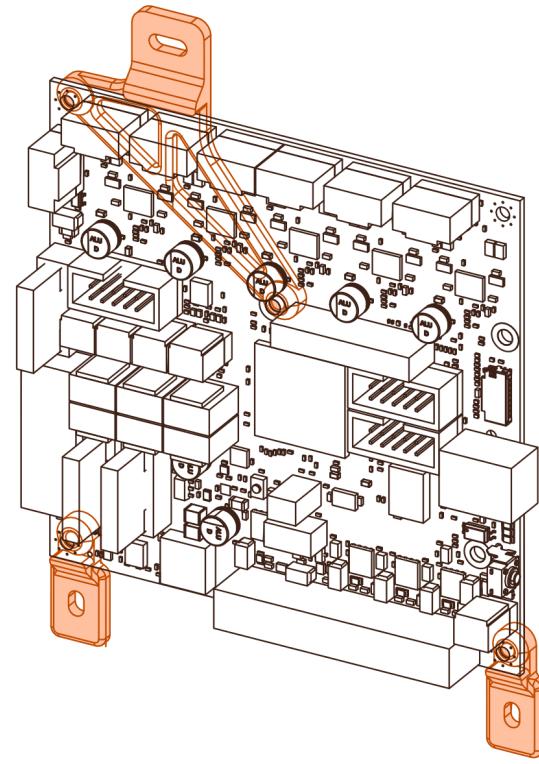
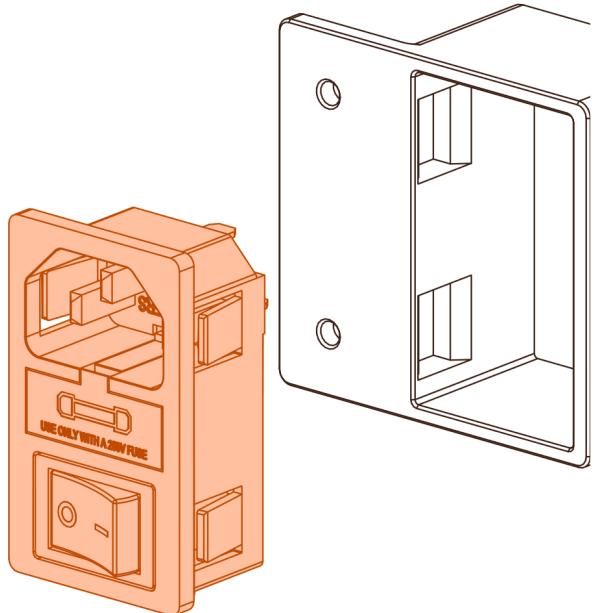


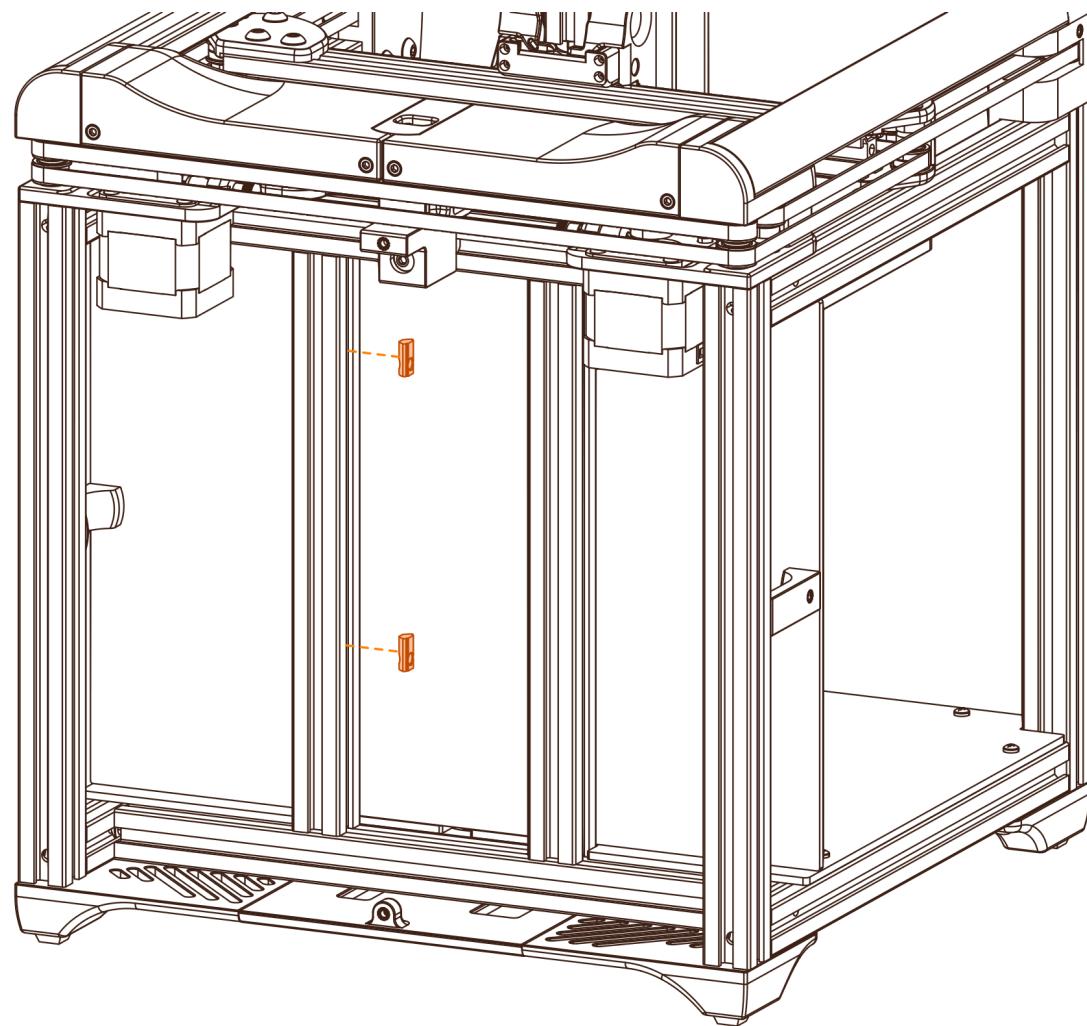


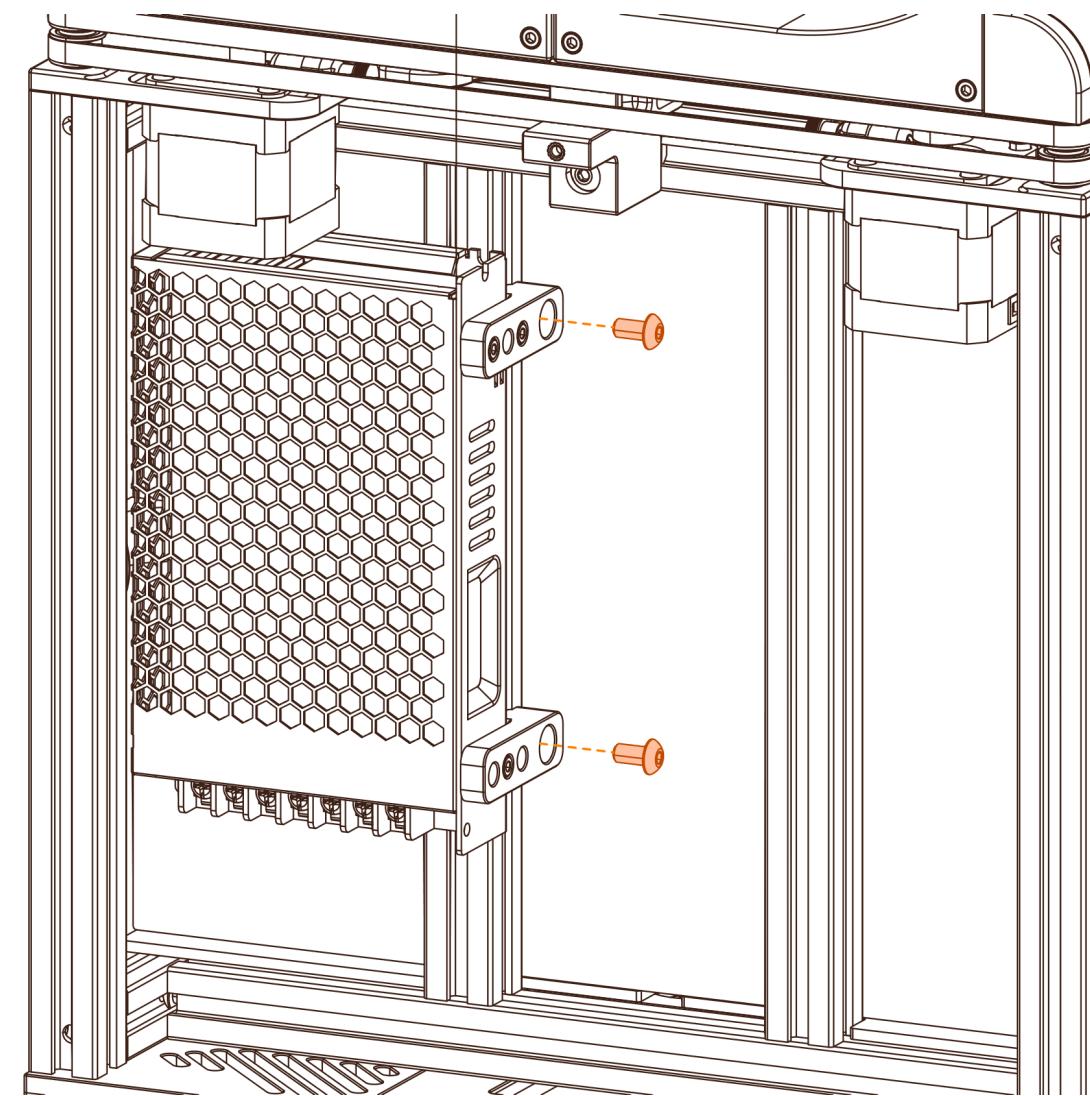
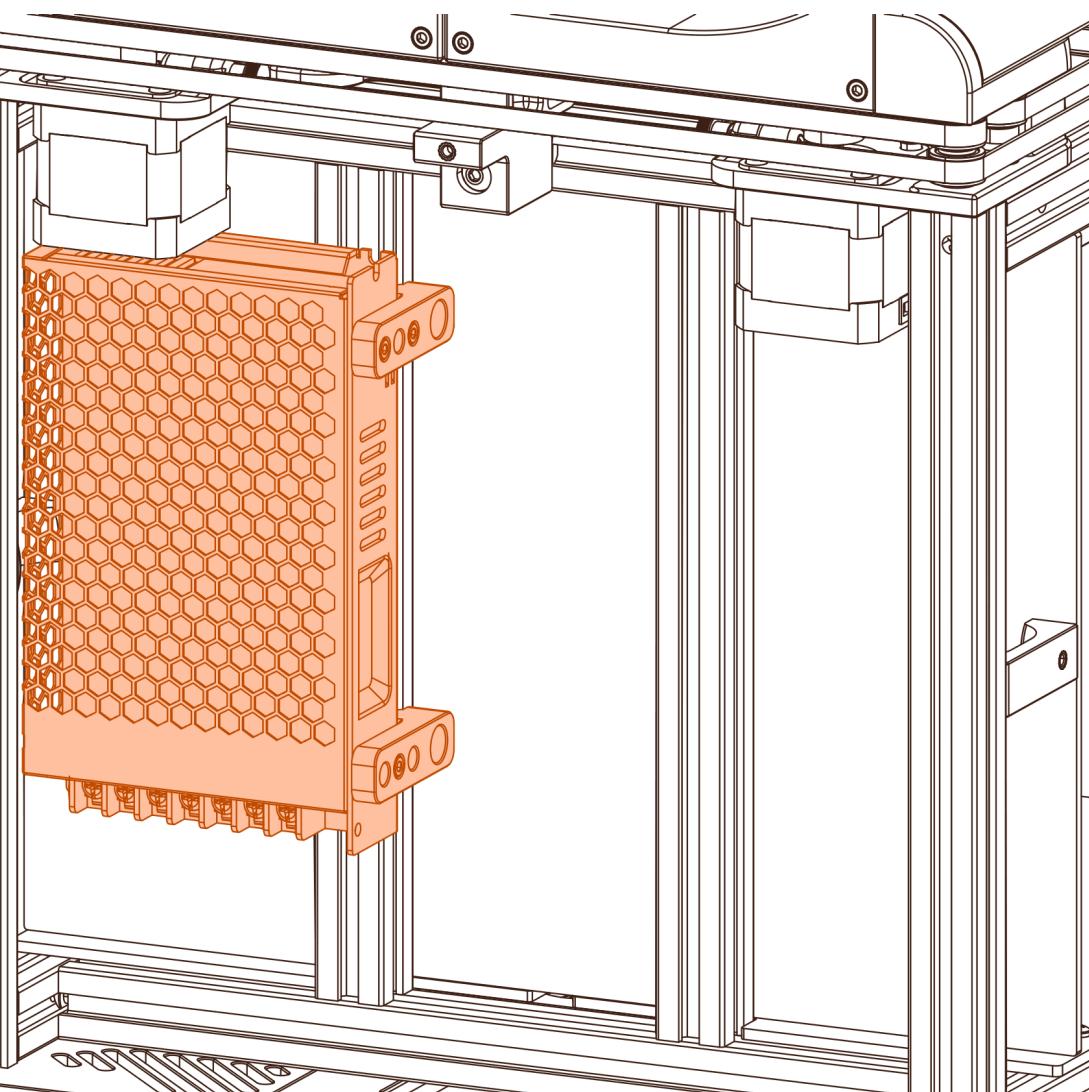


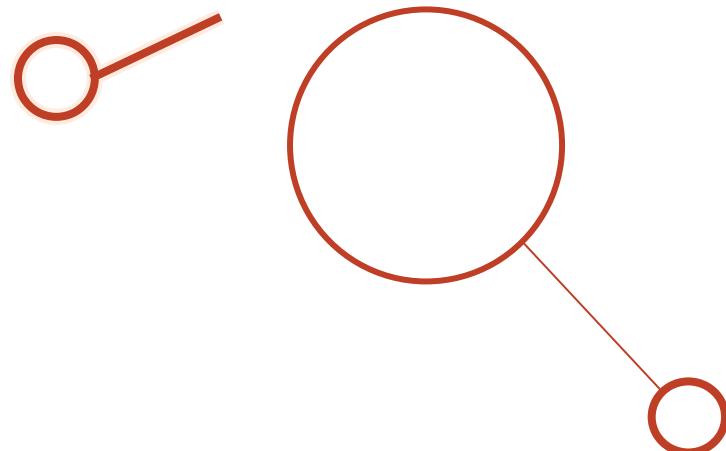










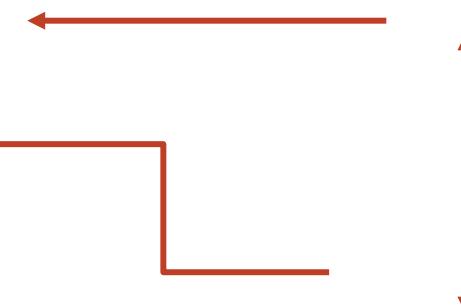


80mm

TOP

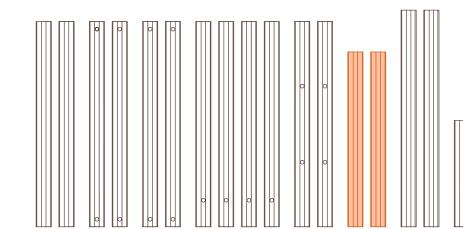
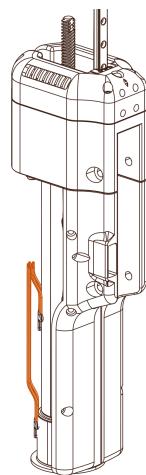
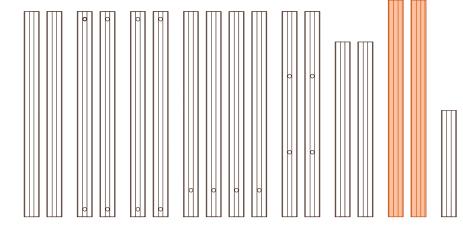
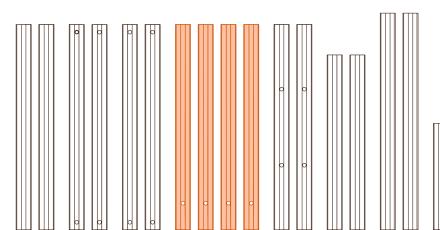
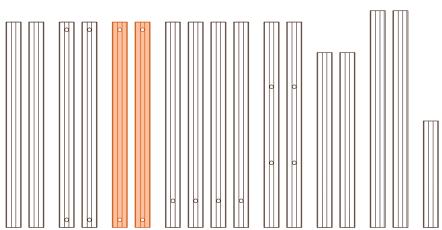
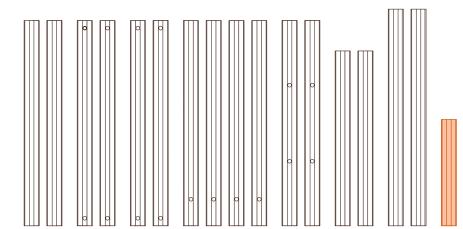
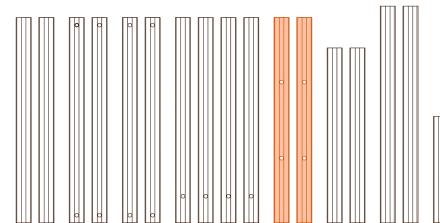
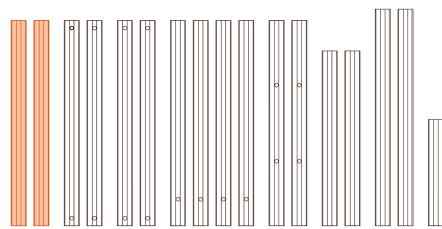
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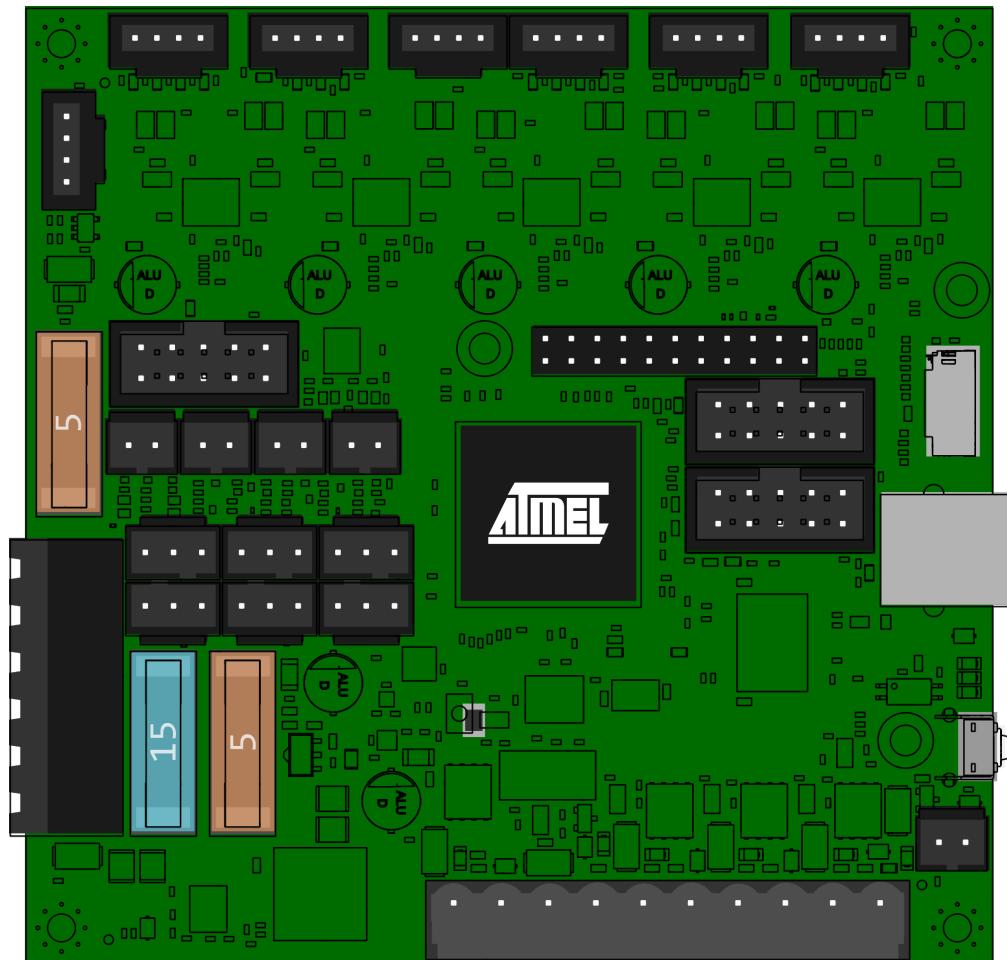
Front

**NOTE HEADING**

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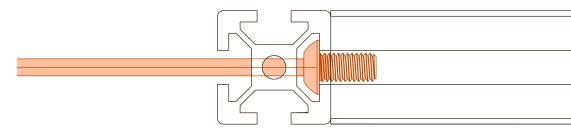
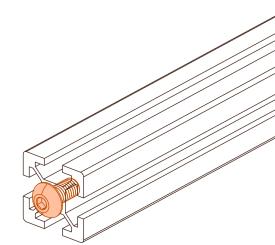
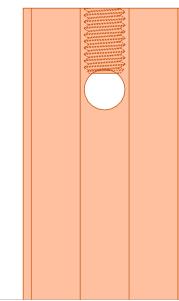
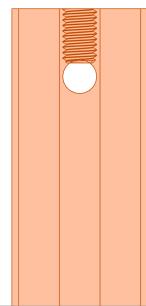
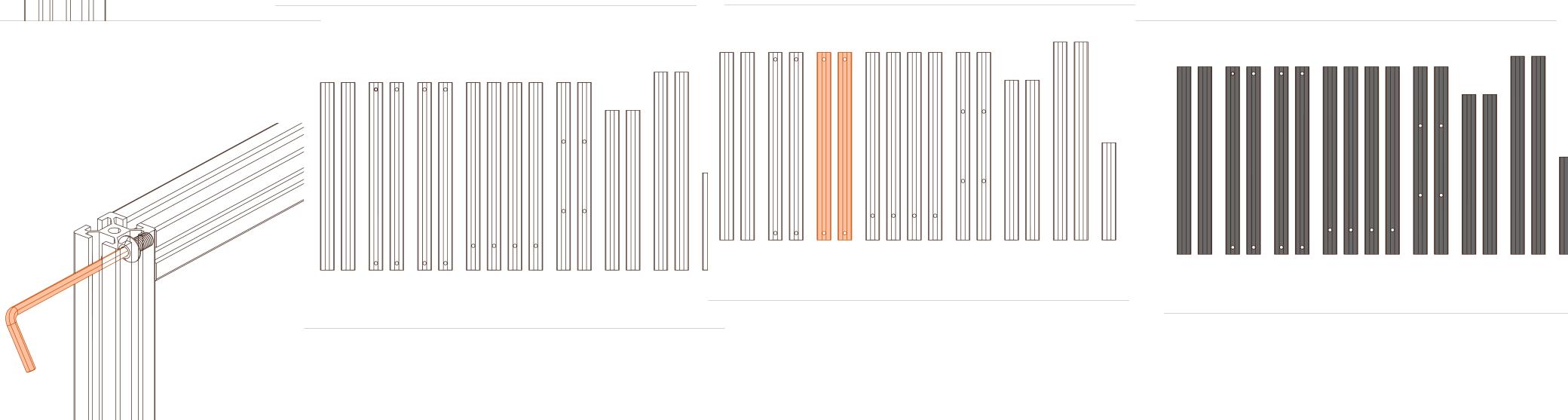
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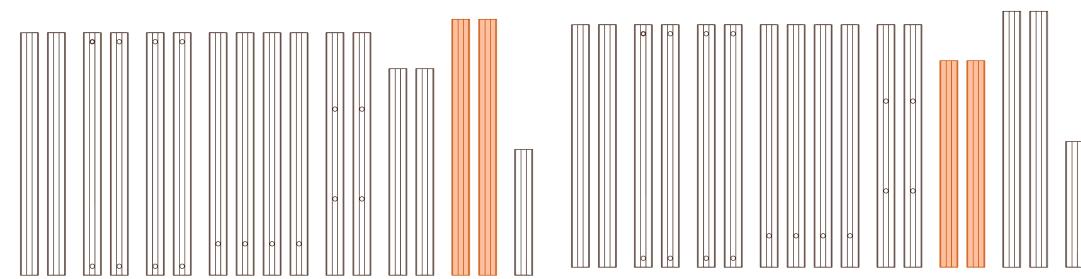
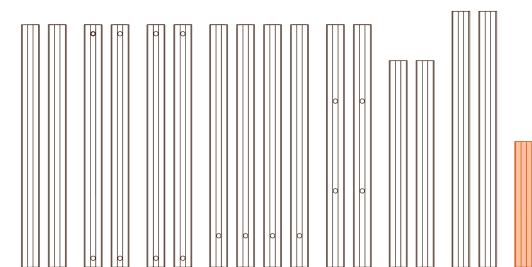
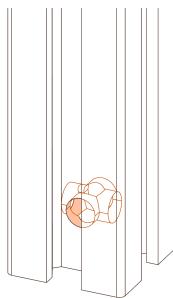
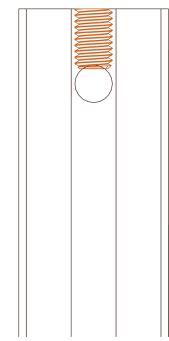
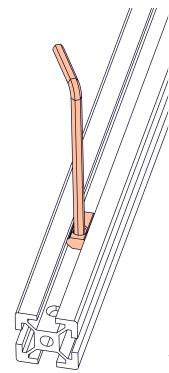
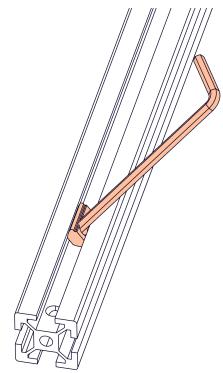
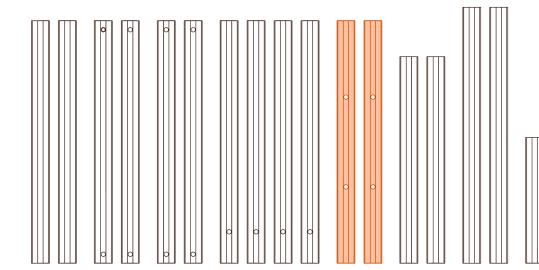


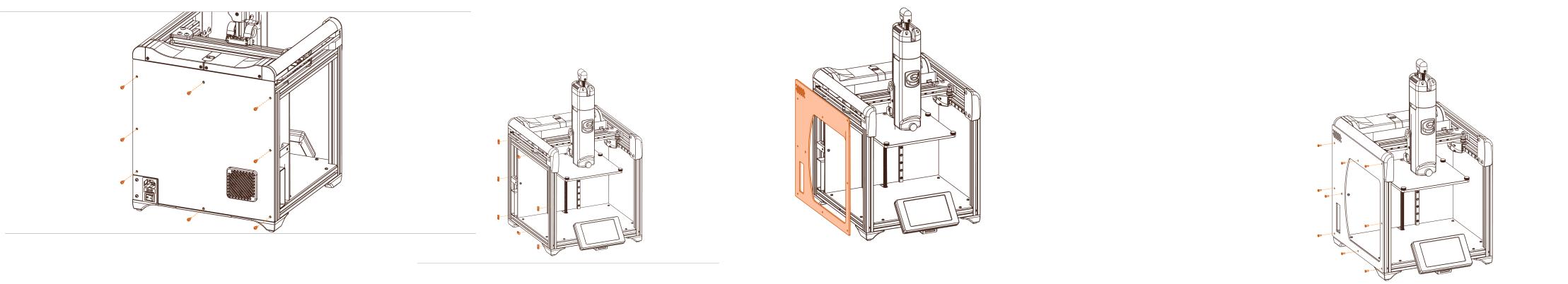
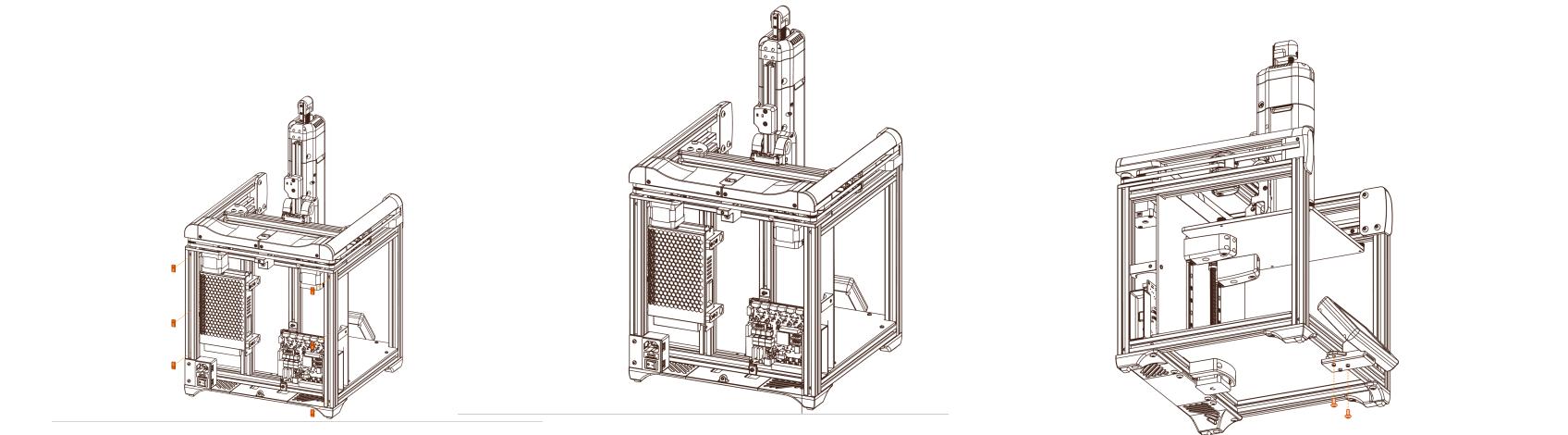
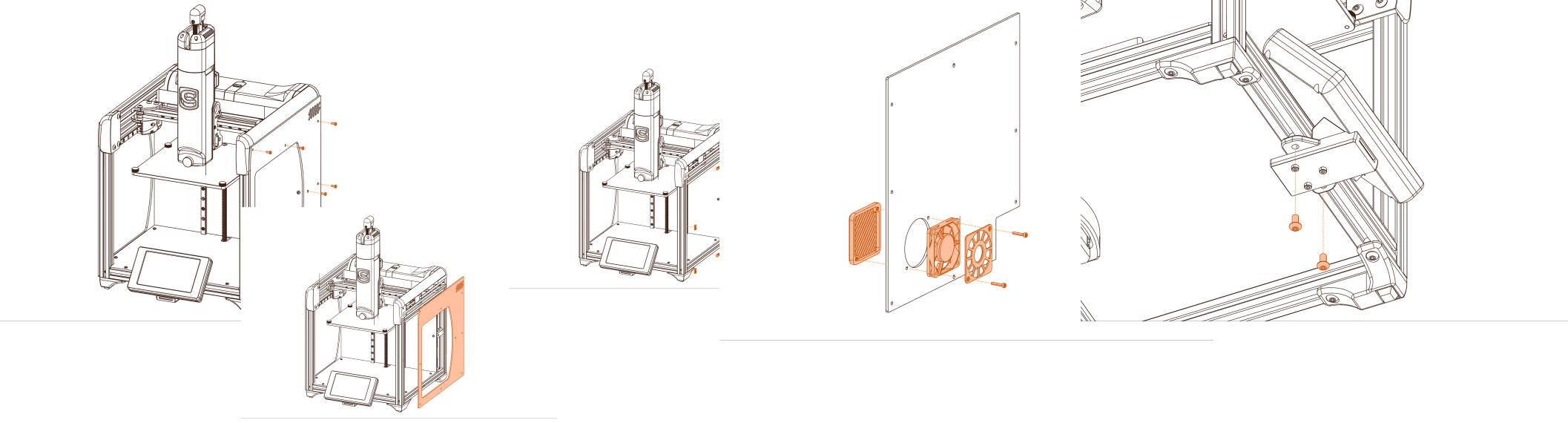


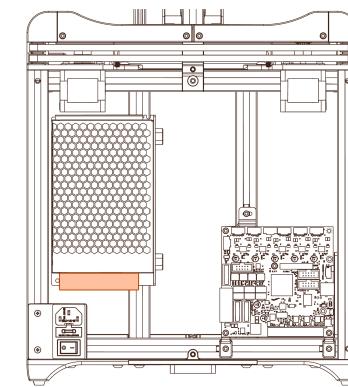
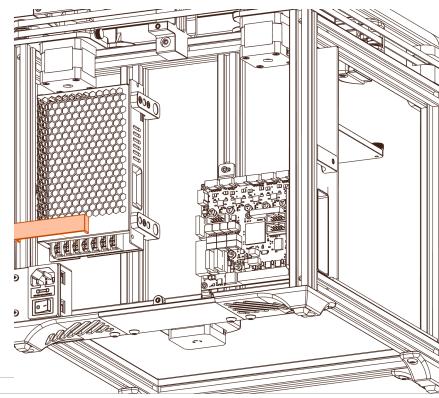
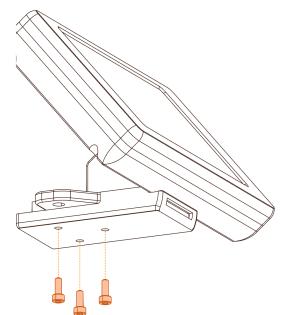
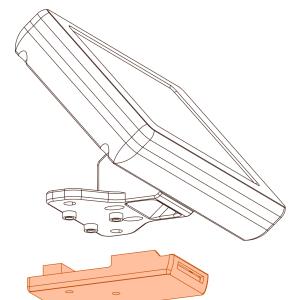
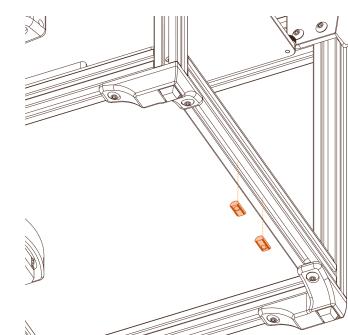
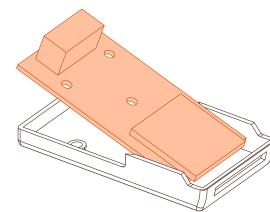
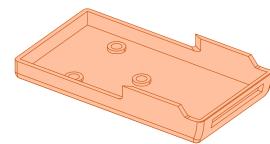
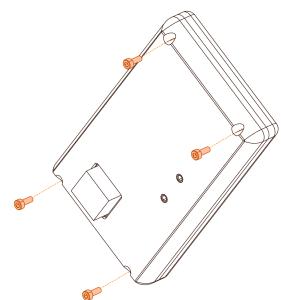
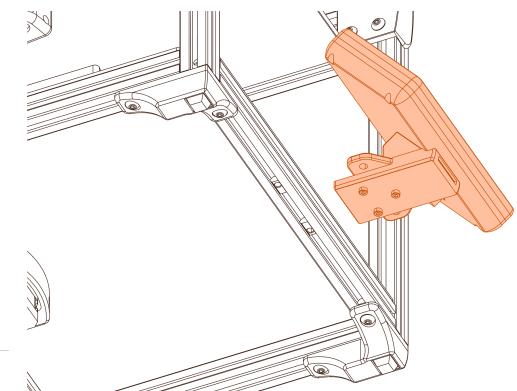
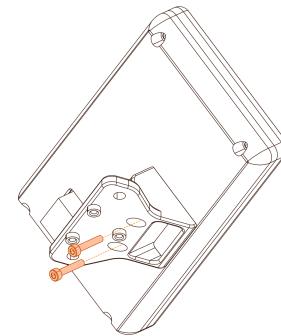
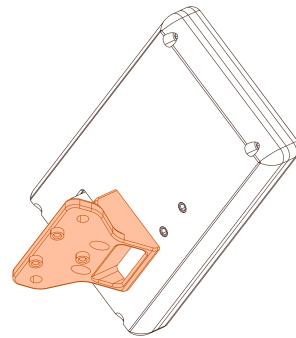
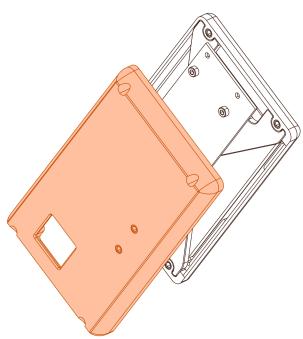
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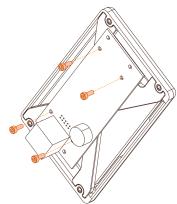
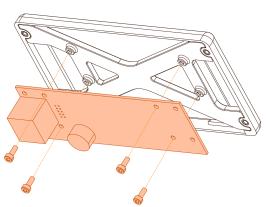
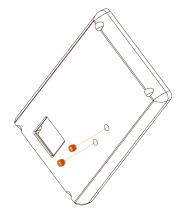
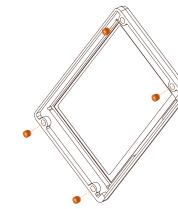
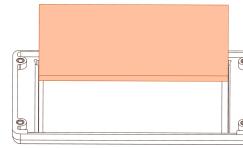
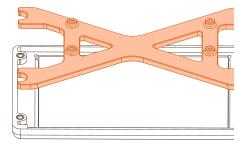
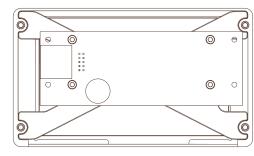
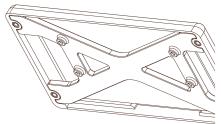
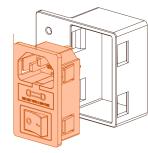
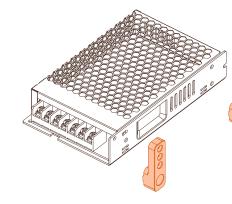
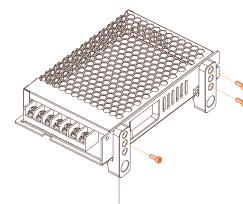
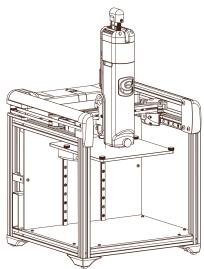


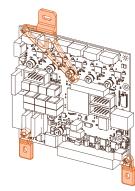
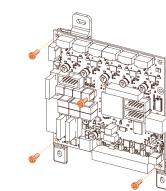
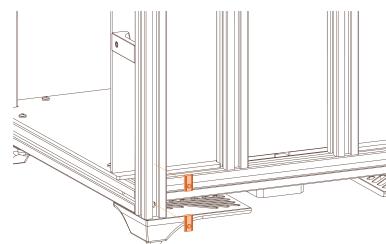
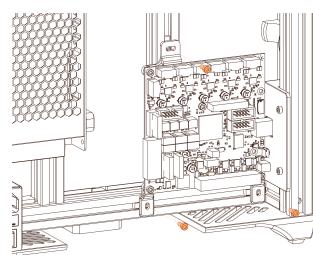
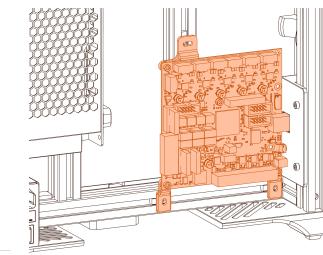
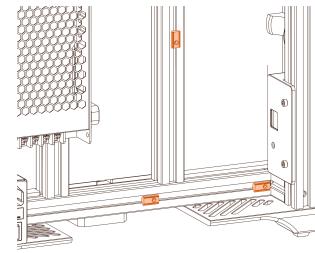
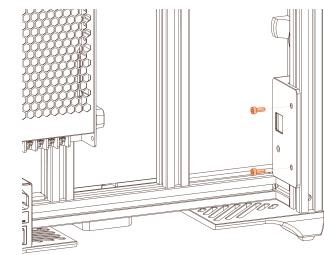
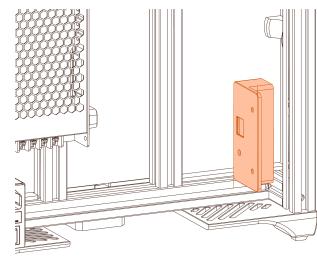
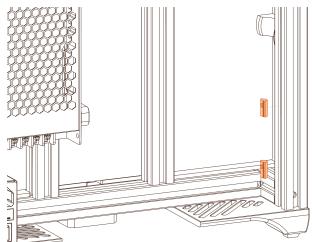
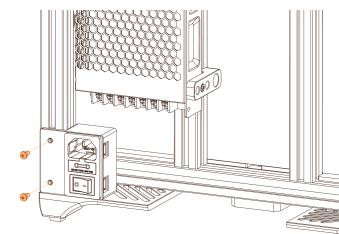
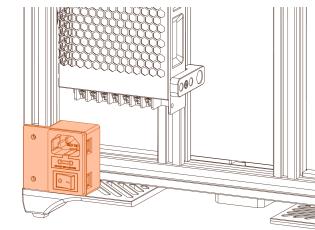
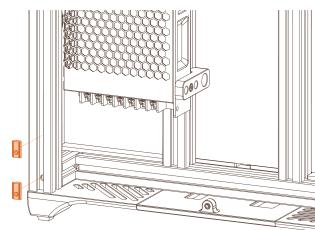
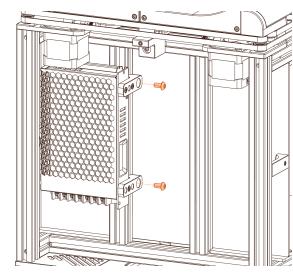
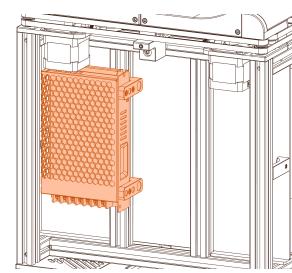
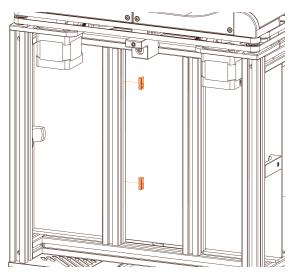
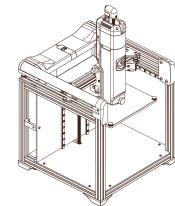
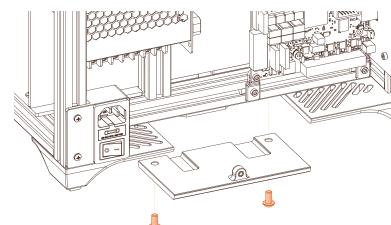
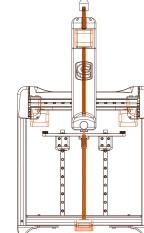
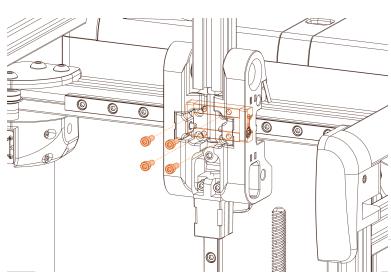


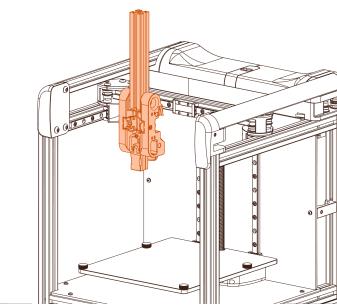
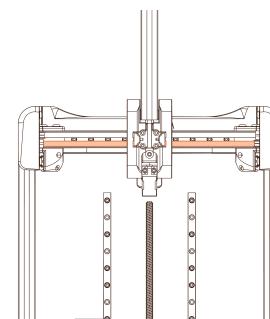
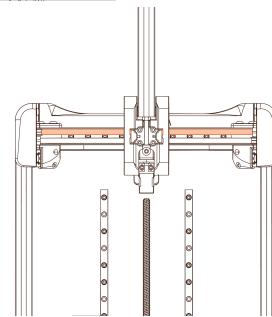
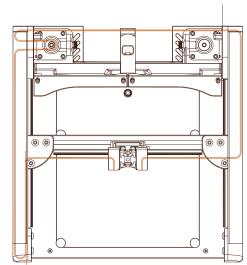
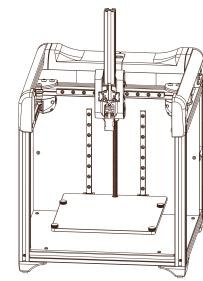
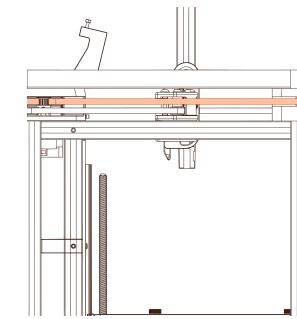
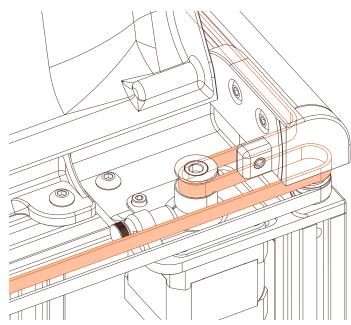
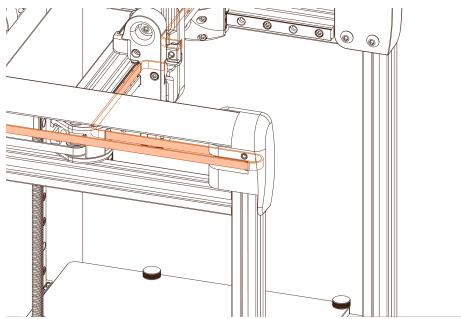
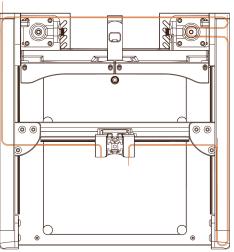


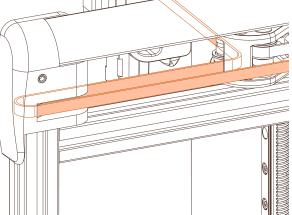
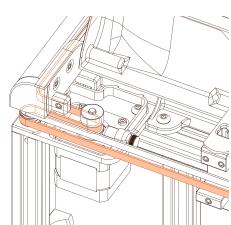
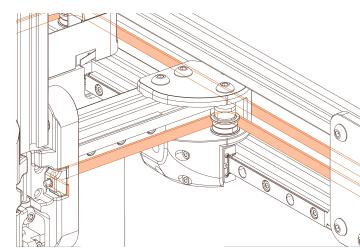
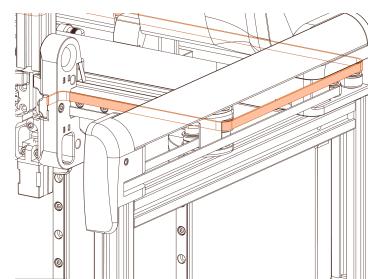
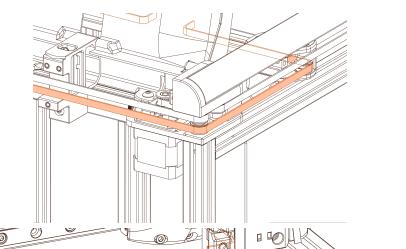
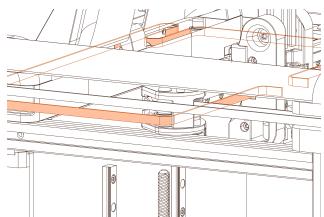
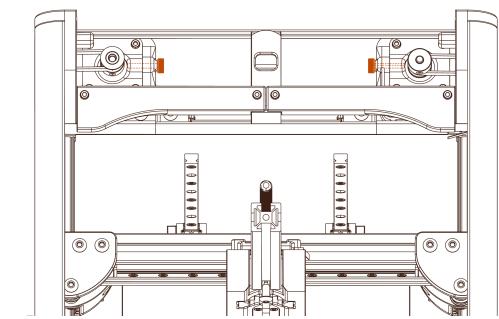
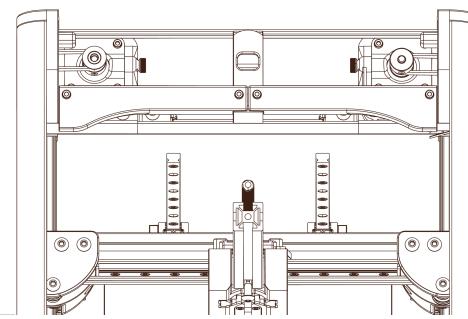
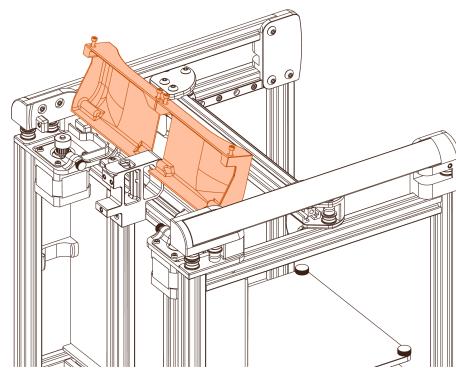
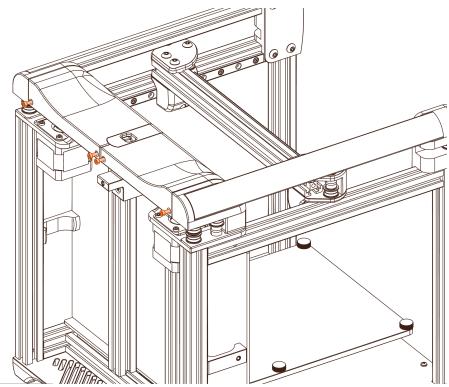
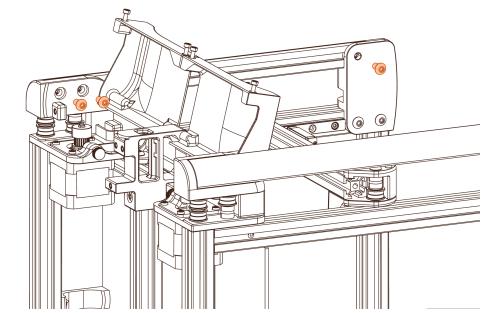
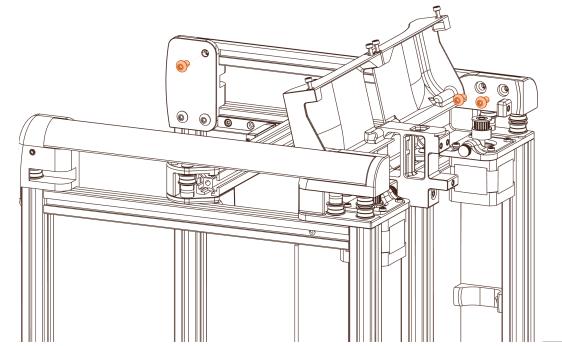
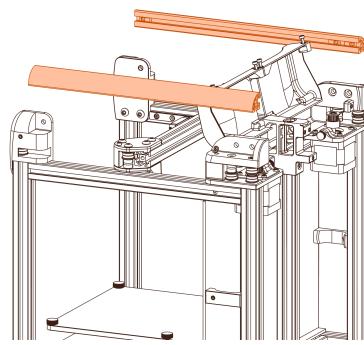
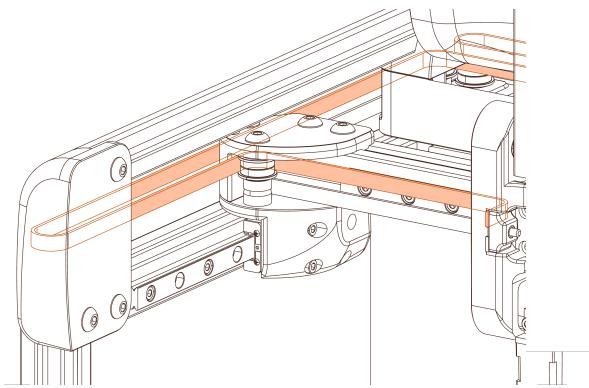


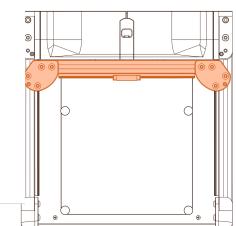
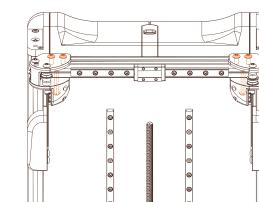
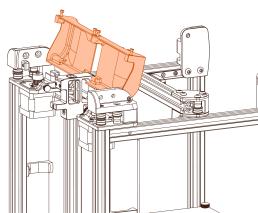
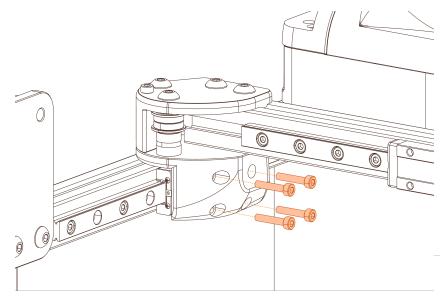
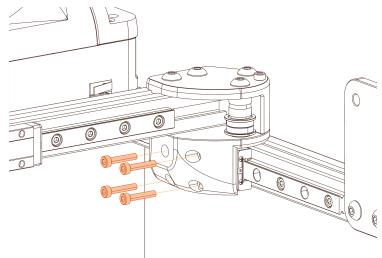
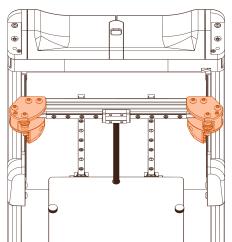
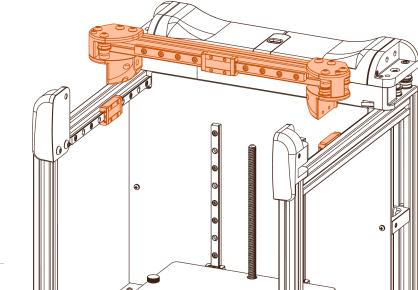
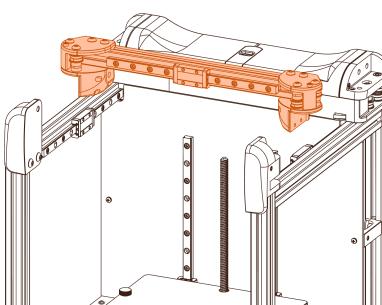
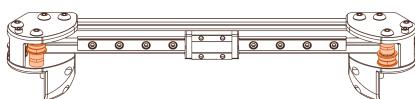
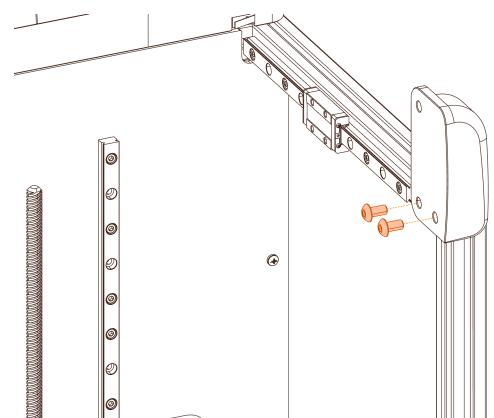
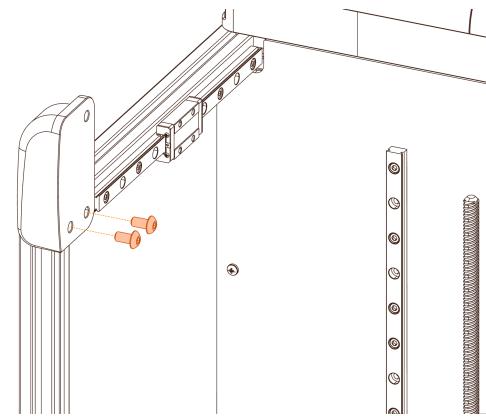
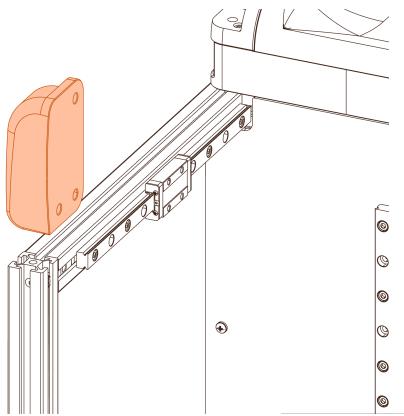
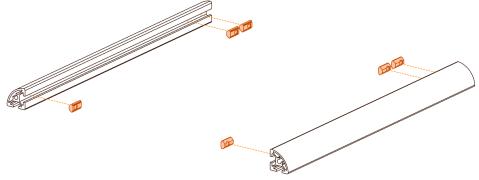


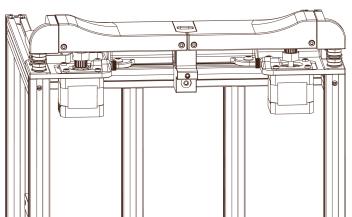
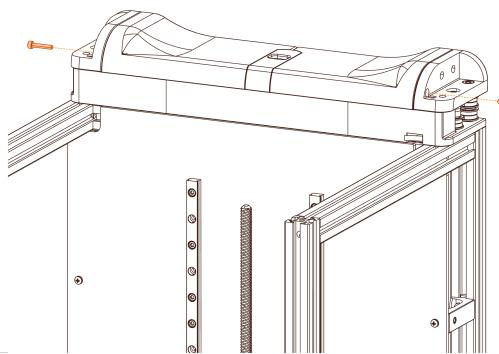
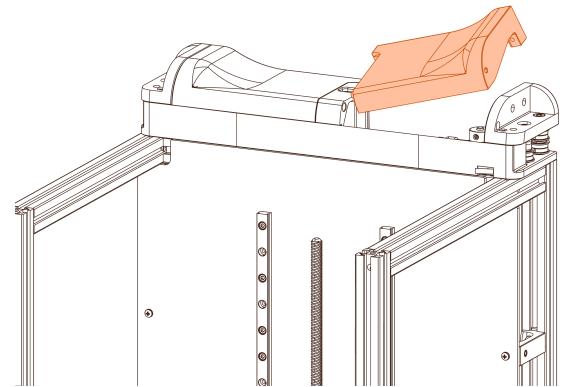
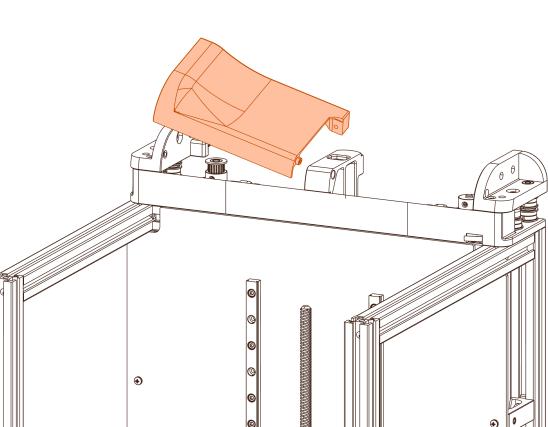
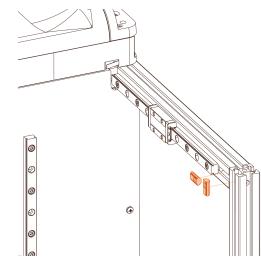
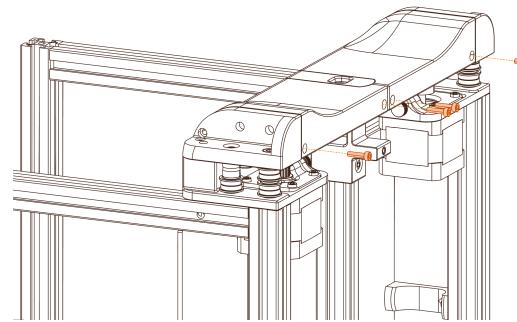
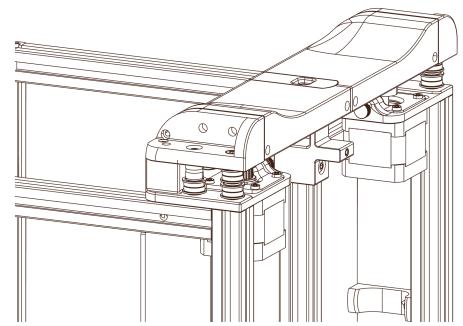
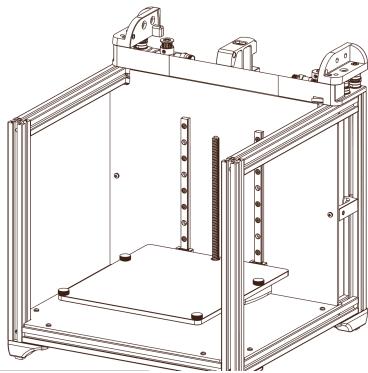
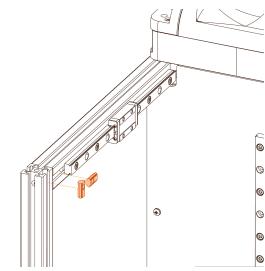
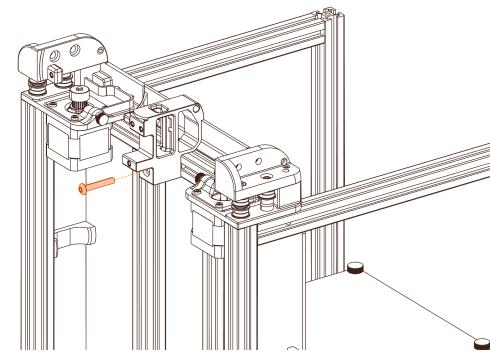
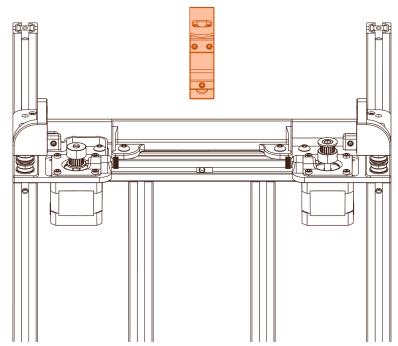
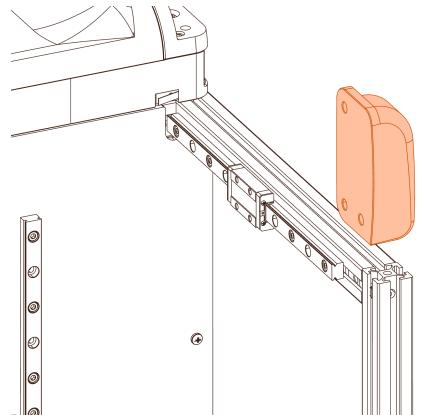


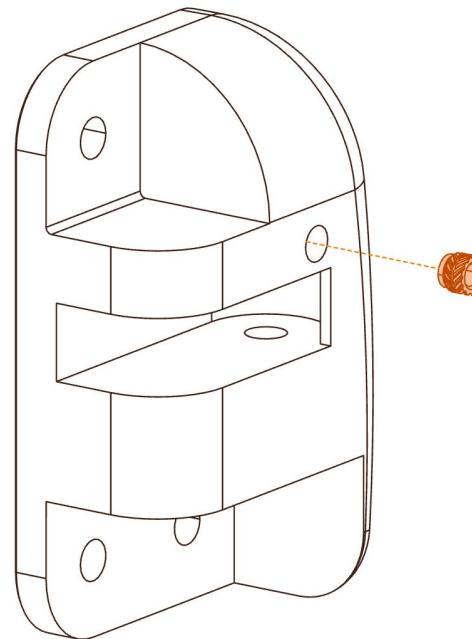
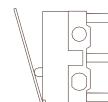
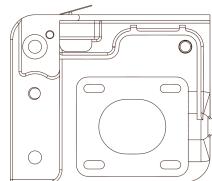
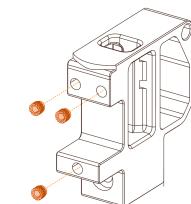
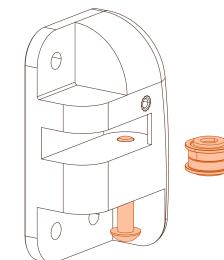
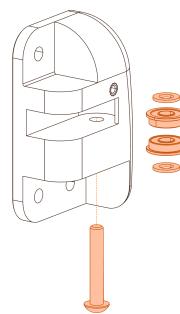
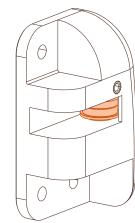
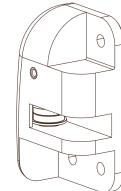
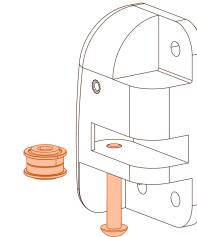
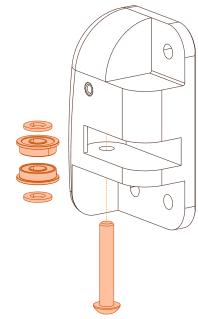
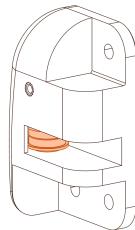


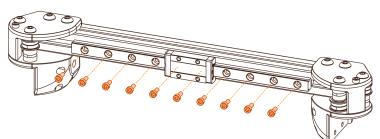
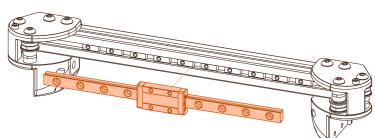
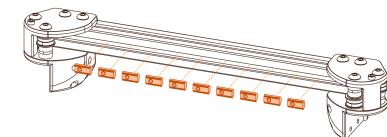
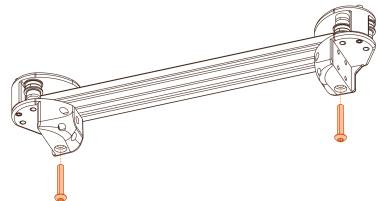
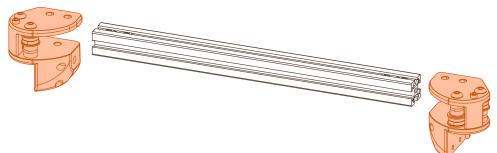
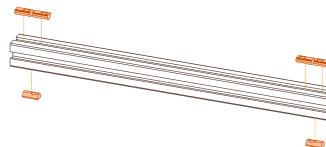
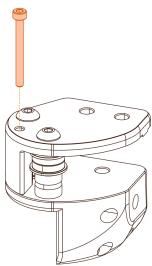
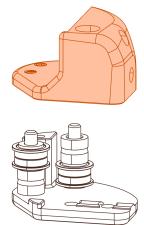
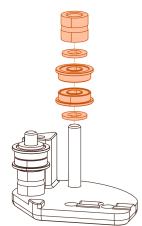
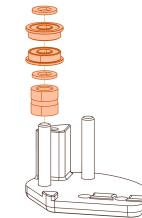
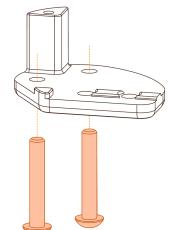
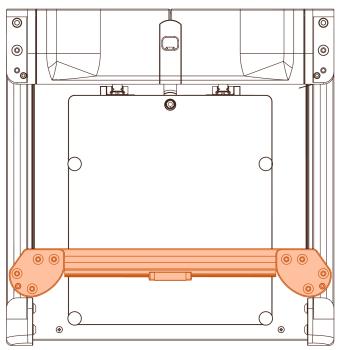
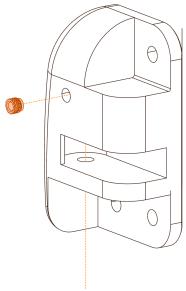


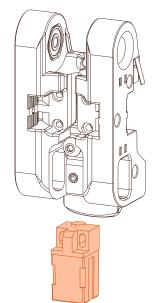
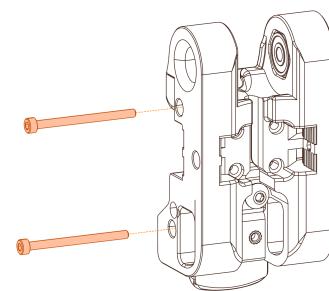
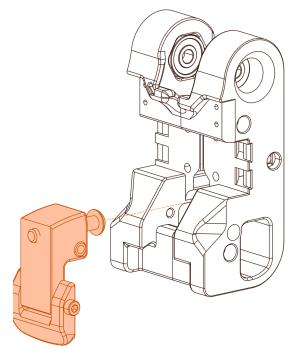
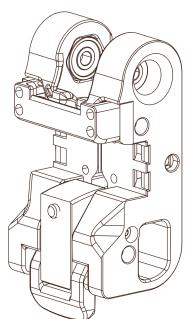
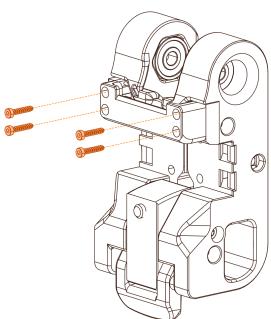
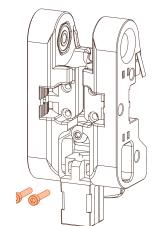
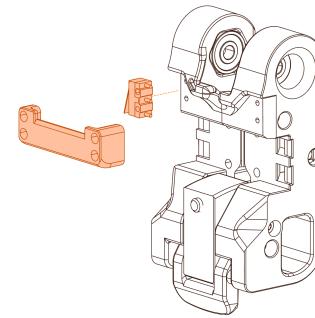
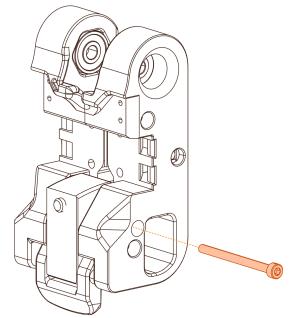
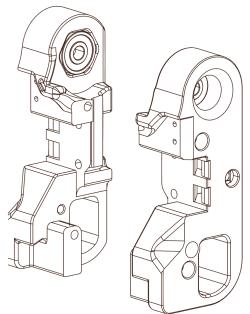
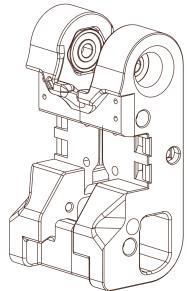
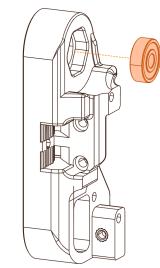
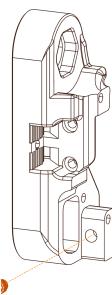
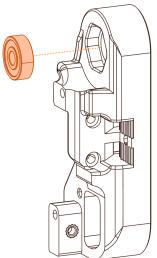
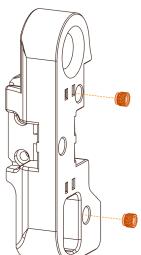
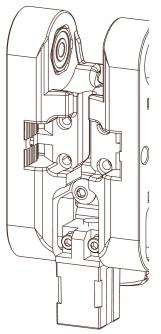


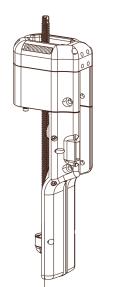
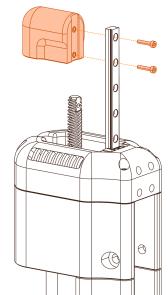
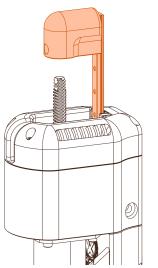
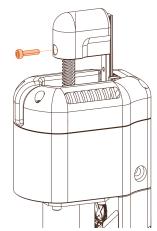
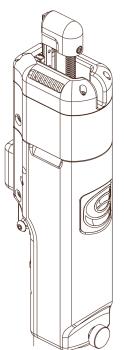
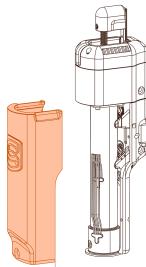
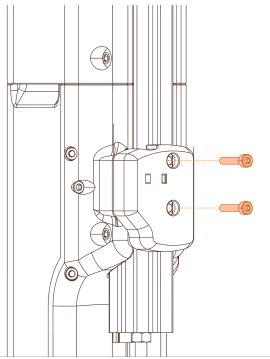
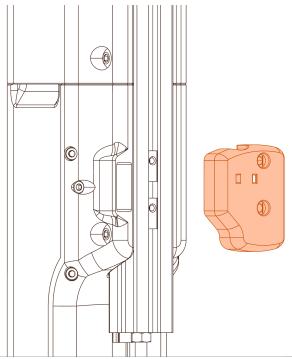
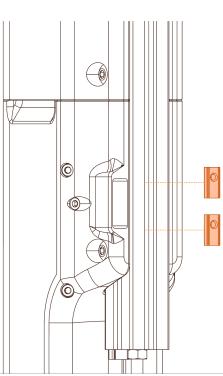
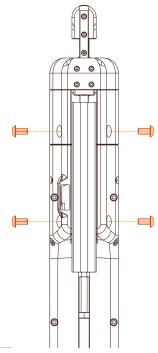
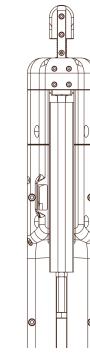
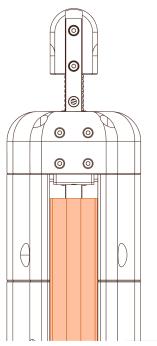
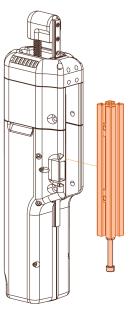
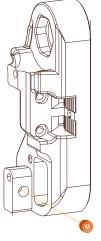




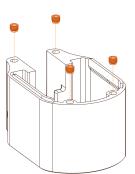
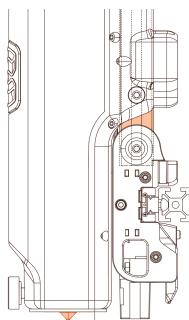
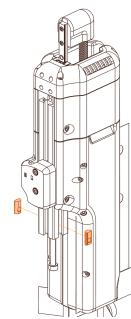
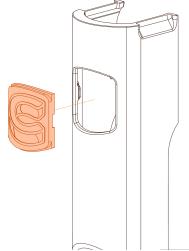
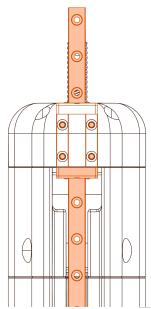
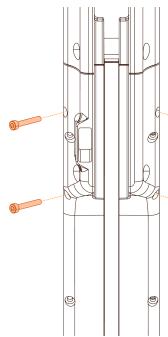
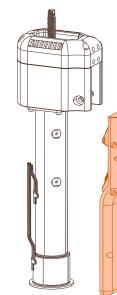
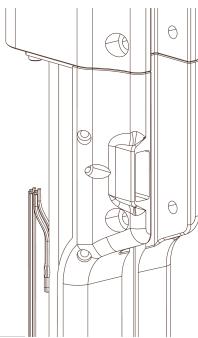
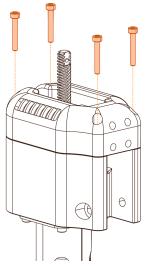
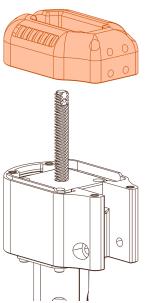
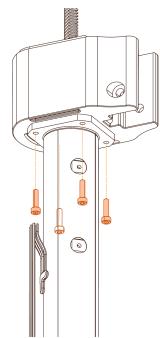
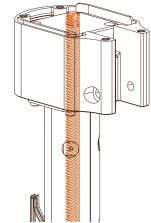
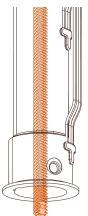
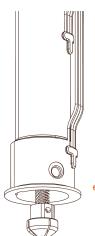
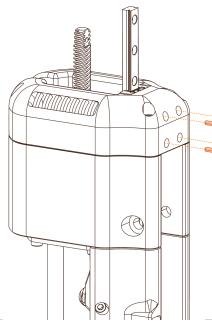


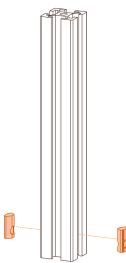
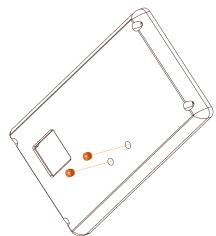
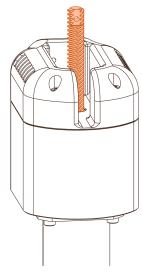
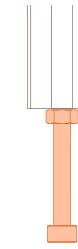
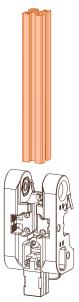
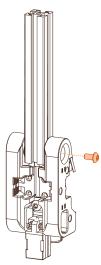
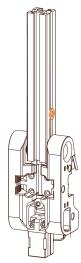
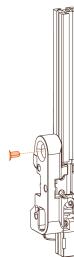
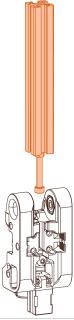
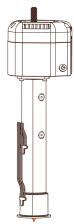


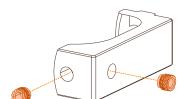
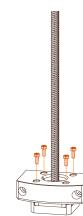
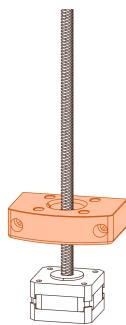
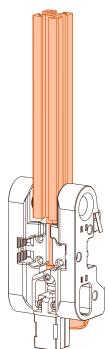
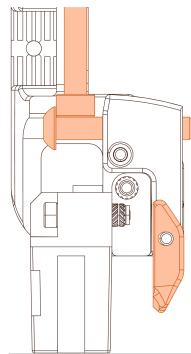
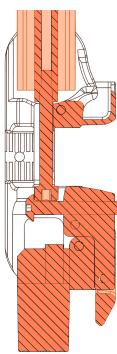
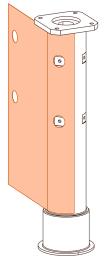
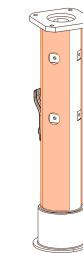
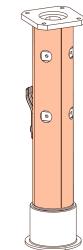
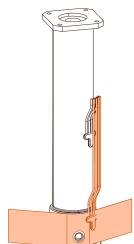
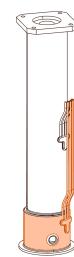
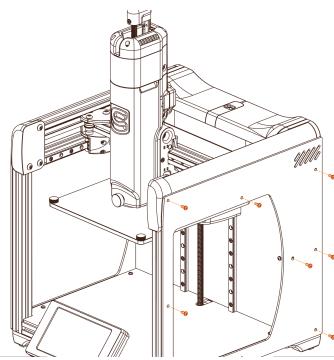
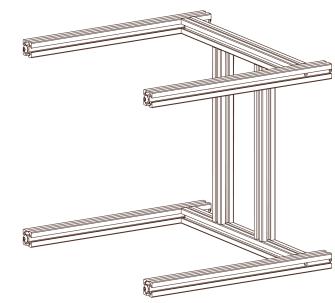
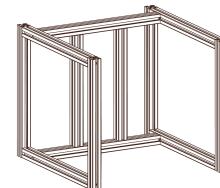
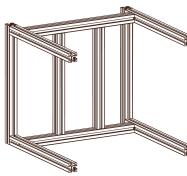
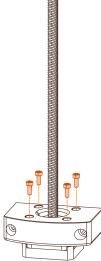
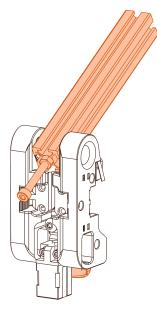


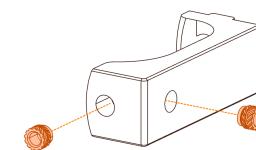
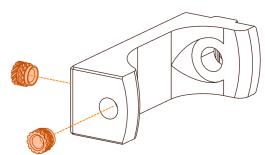
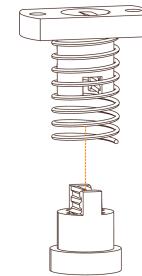
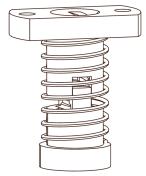


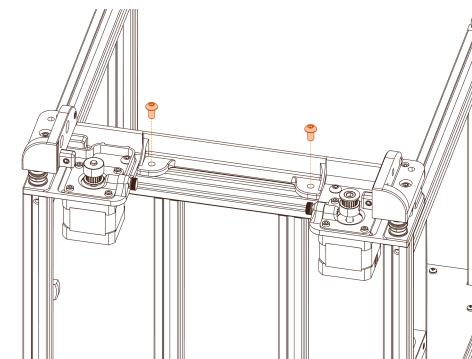
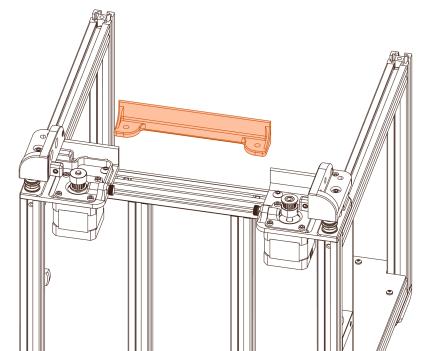
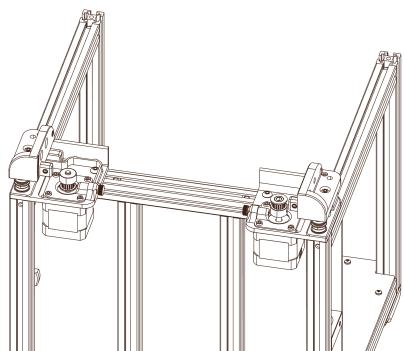
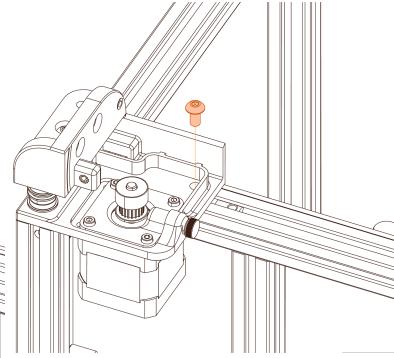
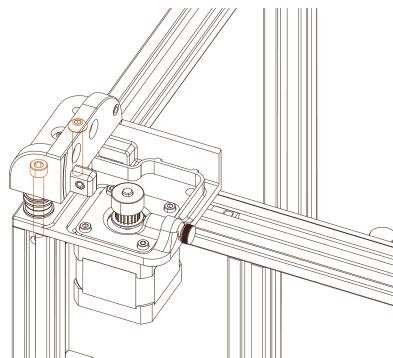
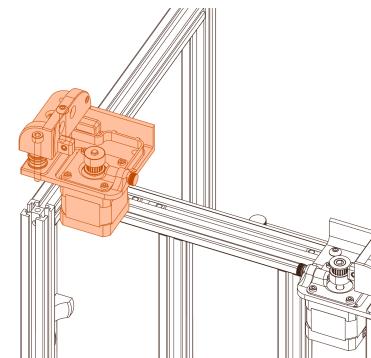
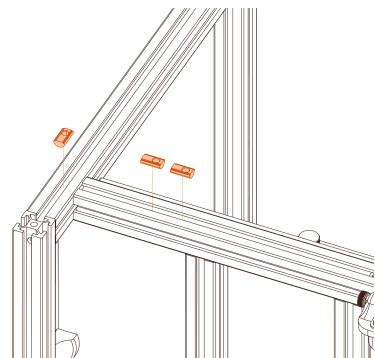
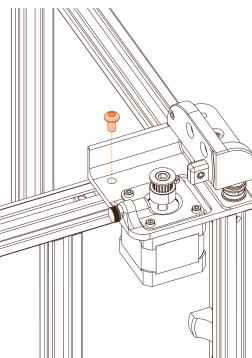
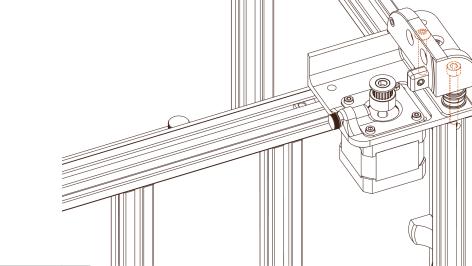
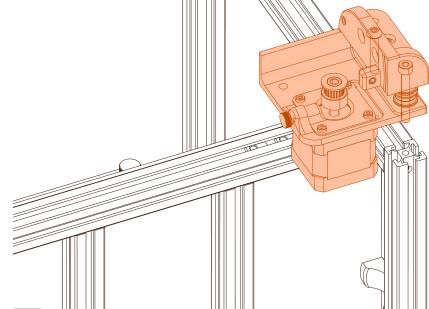
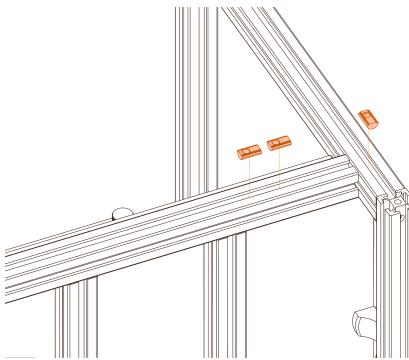
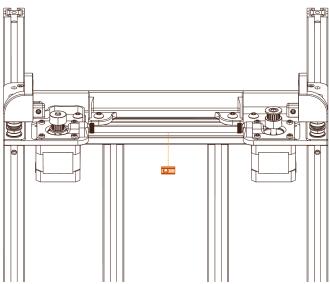
Might need a new image for
these for the updated stl

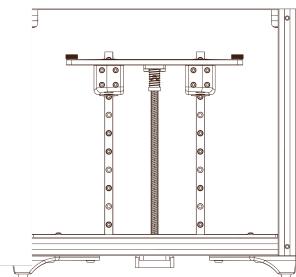
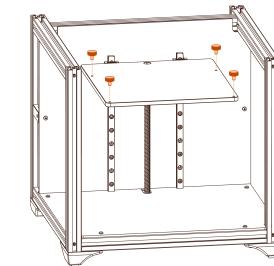
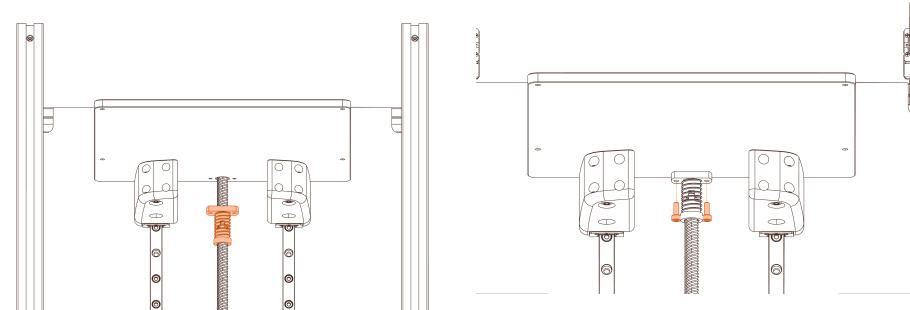
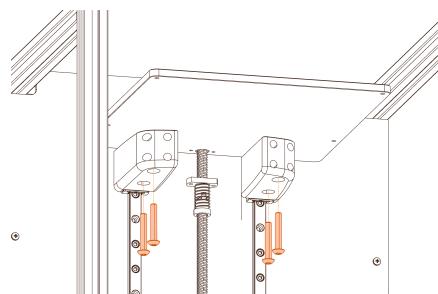
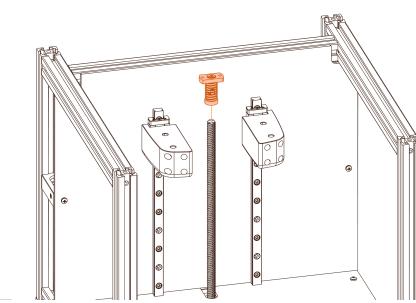
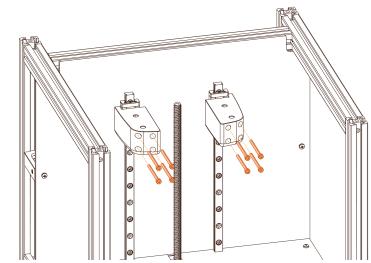
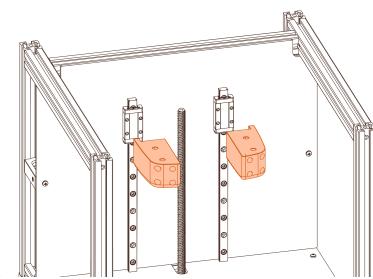
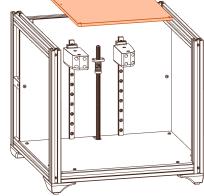
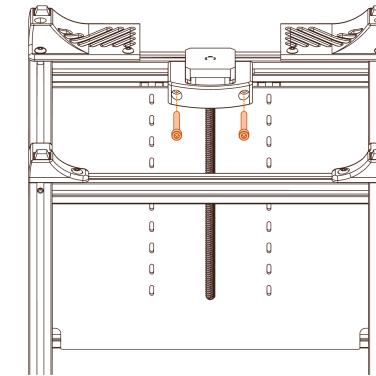
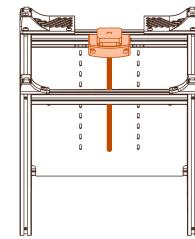
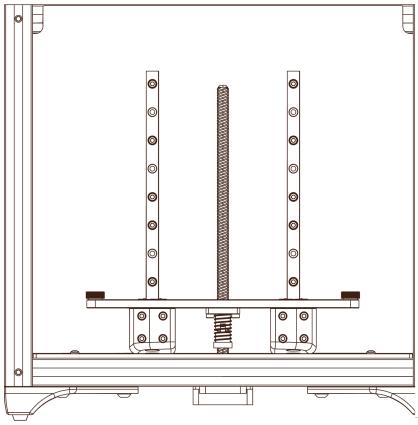


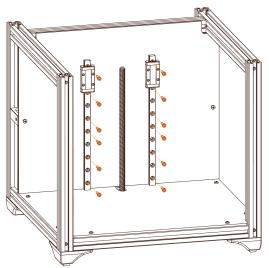
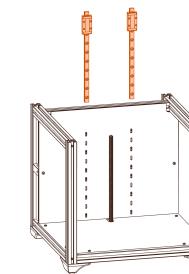
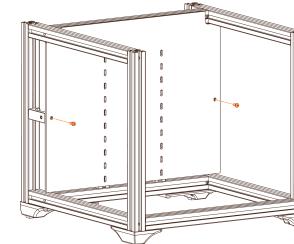
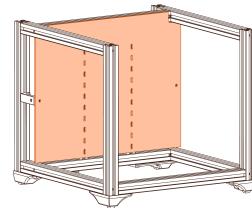
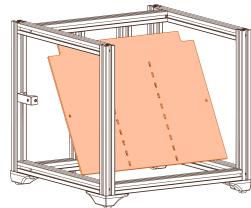
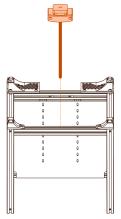




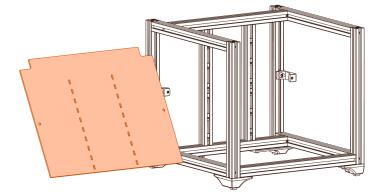
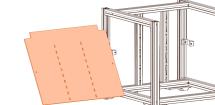
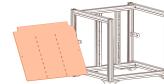
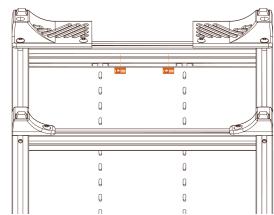
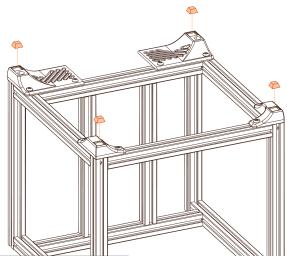
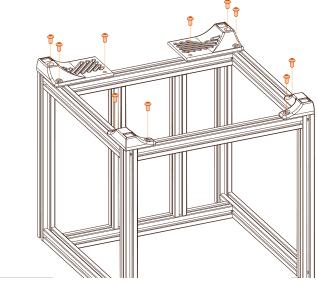
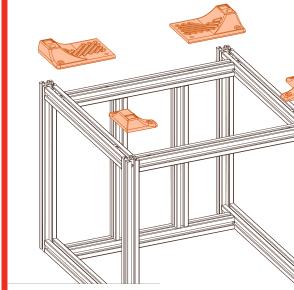
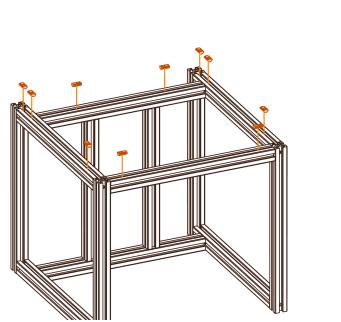








I'm fixing some of this inconsistent line width



Ok! Just let me know if you
want me to re-add things.
It's tedious but not too bad
haha

