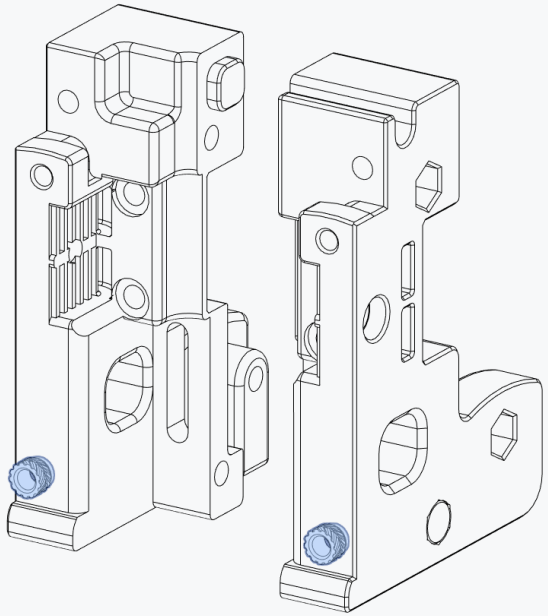
AFTERBURNER

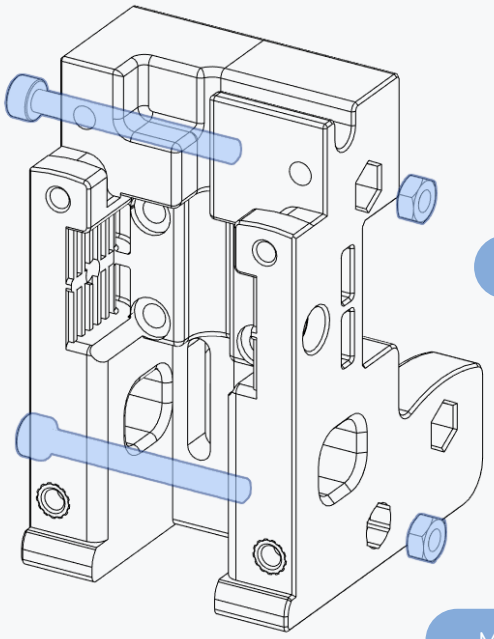
07-13-2021

VORONDESIGN.COM



Heat Sets

M3x30 SHCS

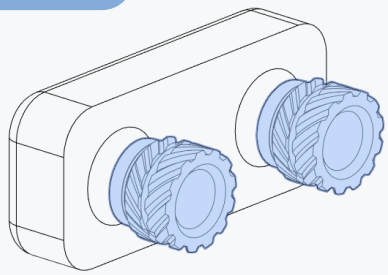


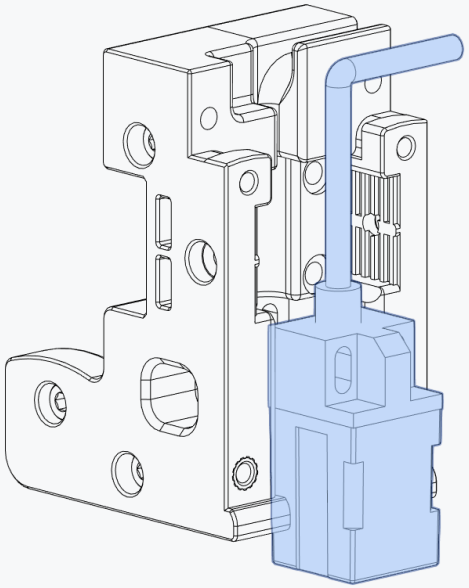
M3 Hex Nut

M3x30 SHCS

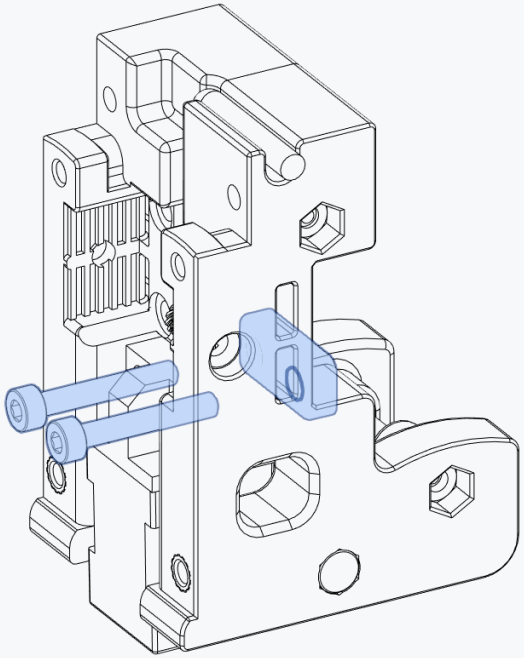
M3 Hex Nut

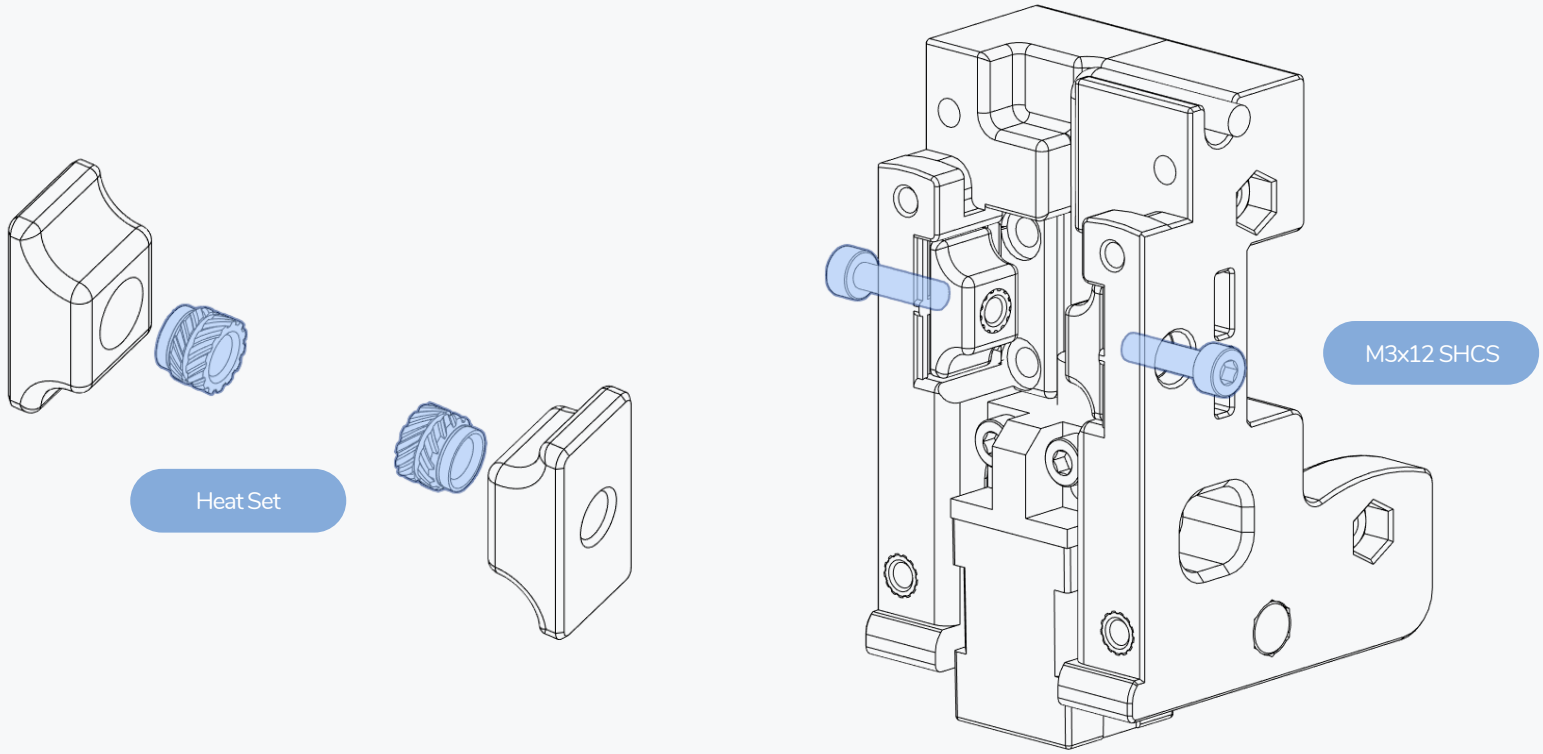
Heat Set

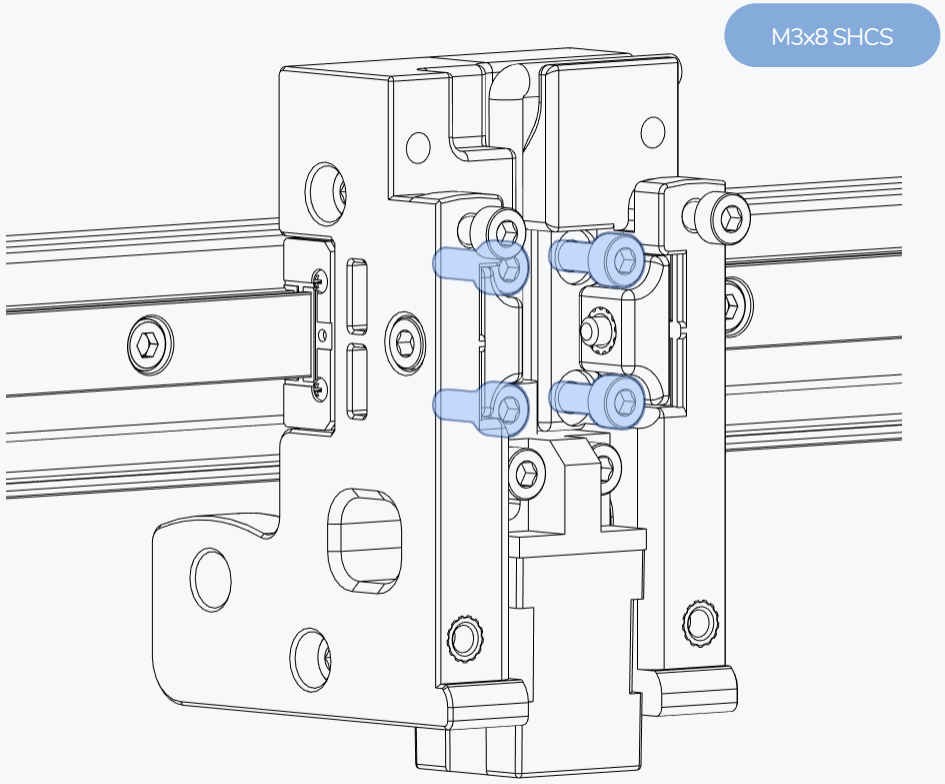




M3x20 SHCS

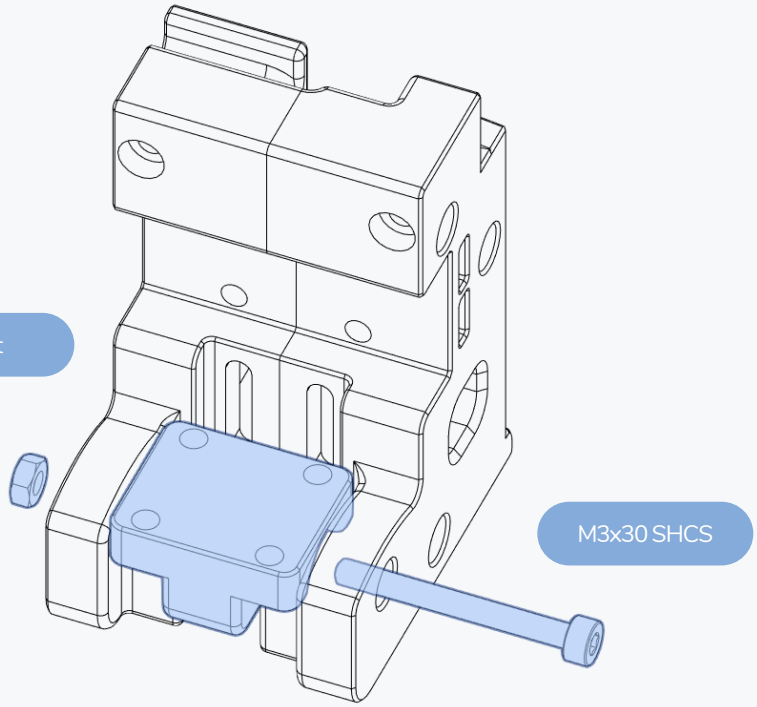


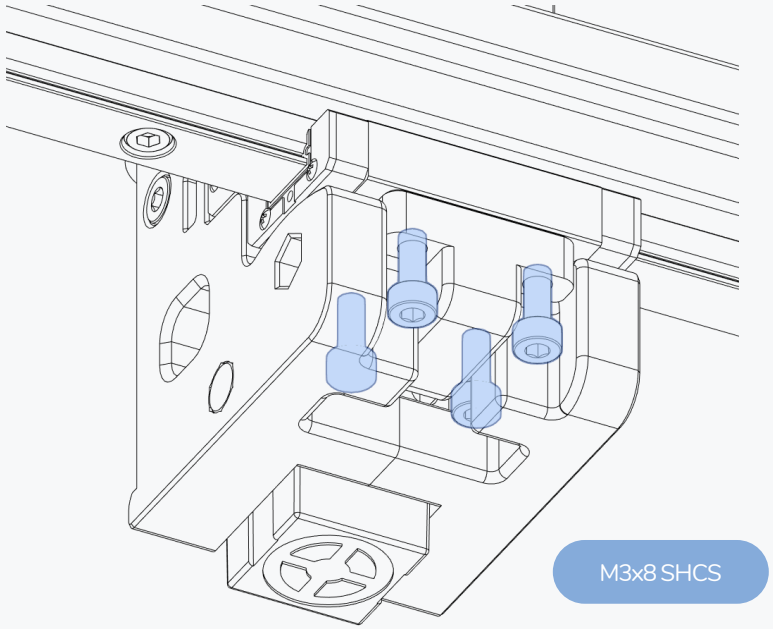

Heat Set
M3x12 SHCS



BUTTON HEAD OPTION

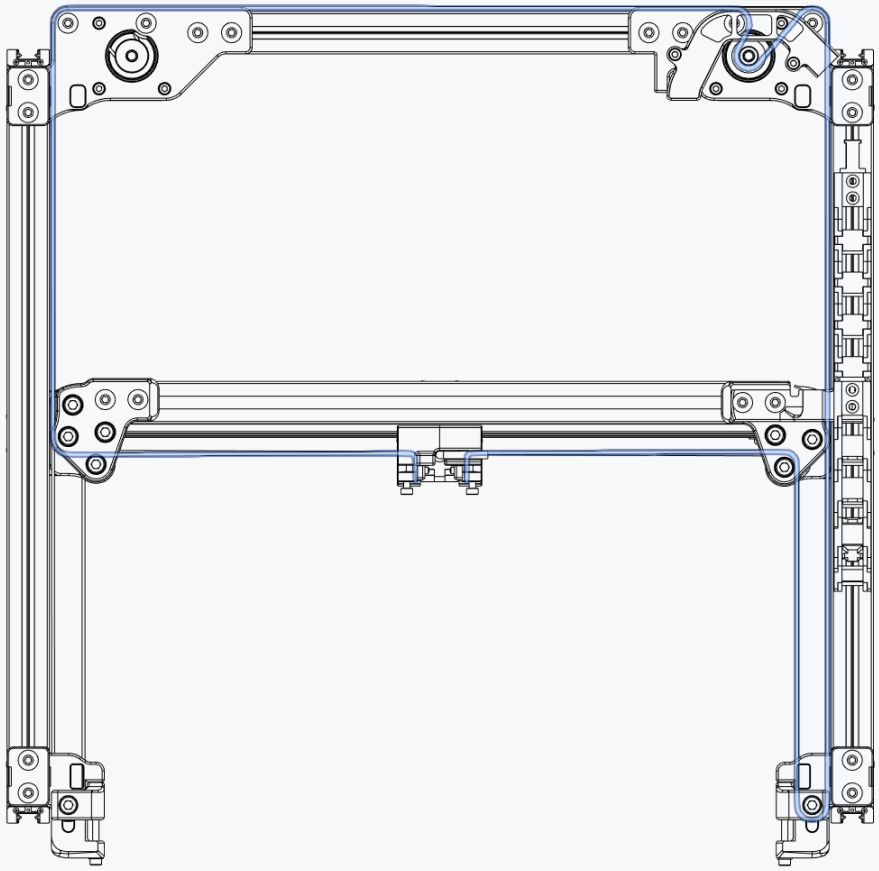
If you happen to have some M3x8 BHCS laying around you can use those here. It can make belting the gantry in later steps a little easier but it's not a big deal if you don't have them.





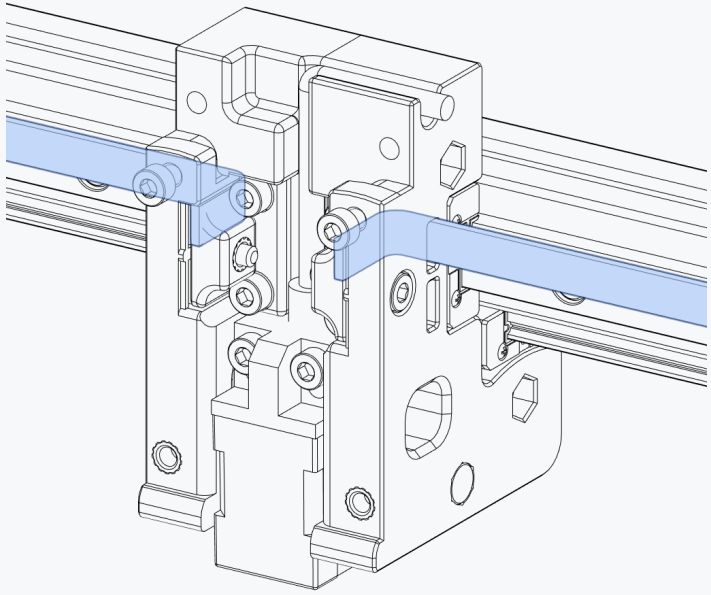
DO NOT TIGHTEN (YET)

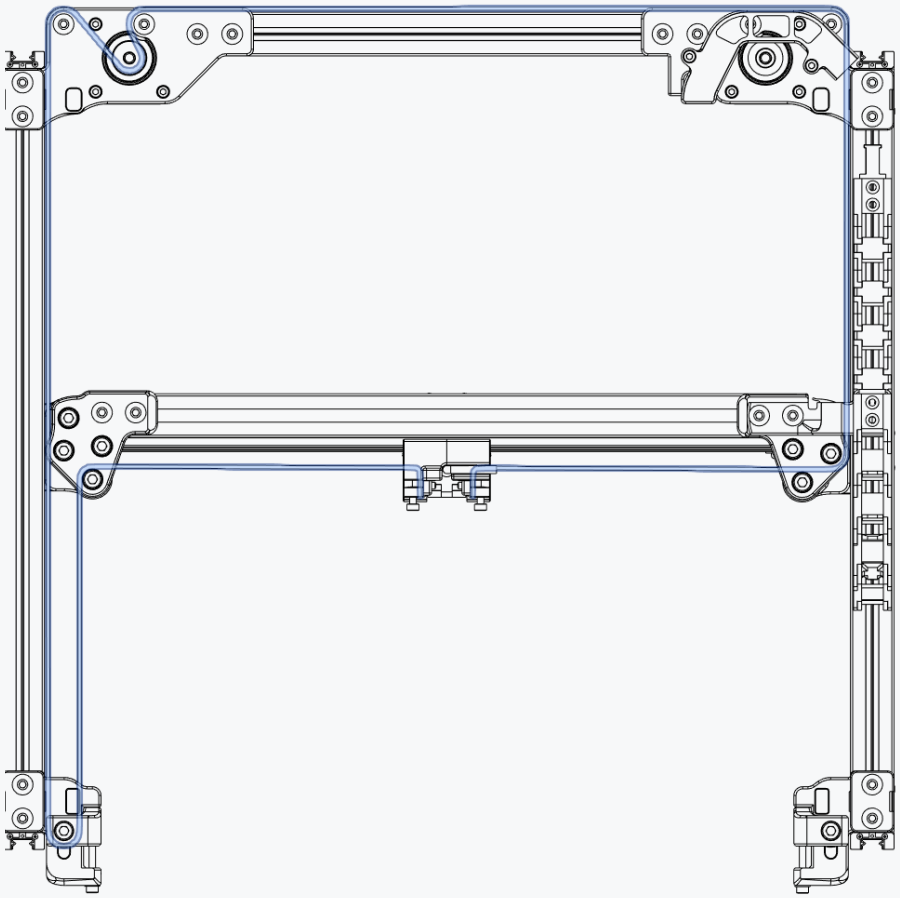
Leave these loose. You'll need to aslign the rail before tightening. See discord if you need help with the correct procedure.

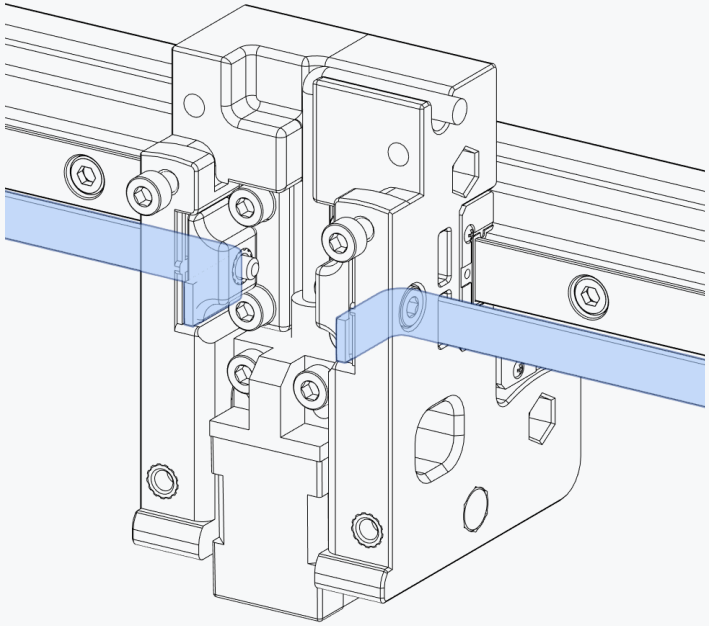


CUTTING BELTS

Best practice is to cut both XY belts the same length. You can pre-run one length and then cut the other using it as your guide.

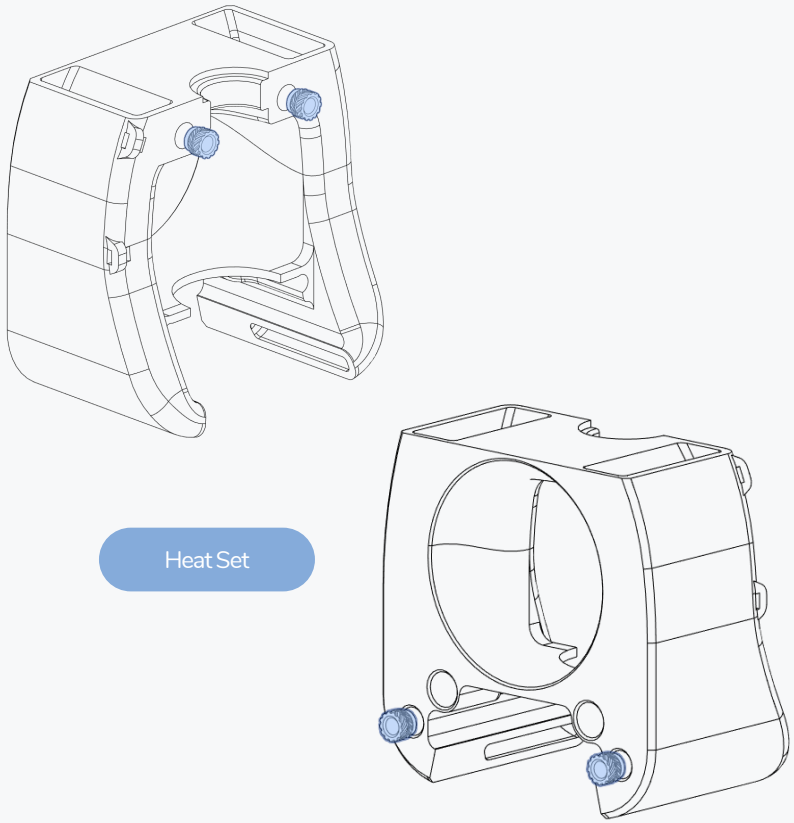






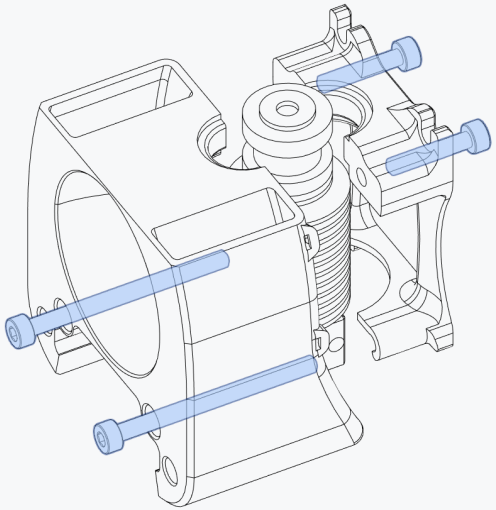
SECURING BELTS

Pick one side of the carriage and tighten the belts down flush with the front face. This allows you to pull the belts on the other side an equal length to help keep things square.



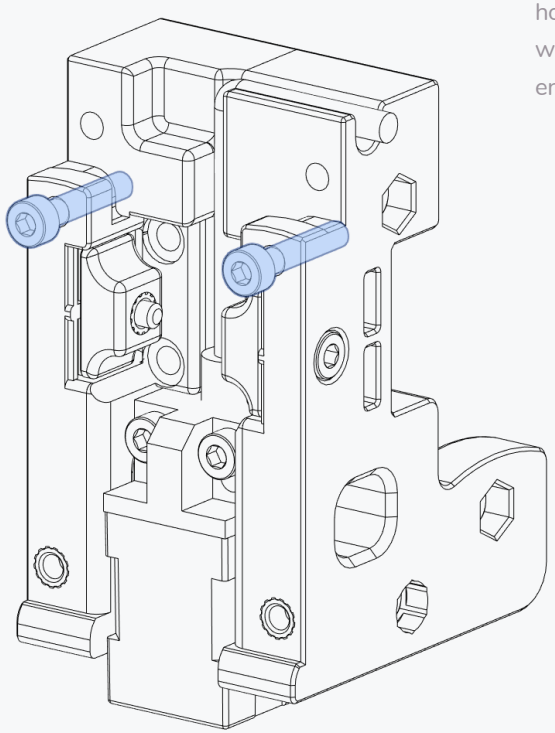
Heat Set

M3x16 SHCS



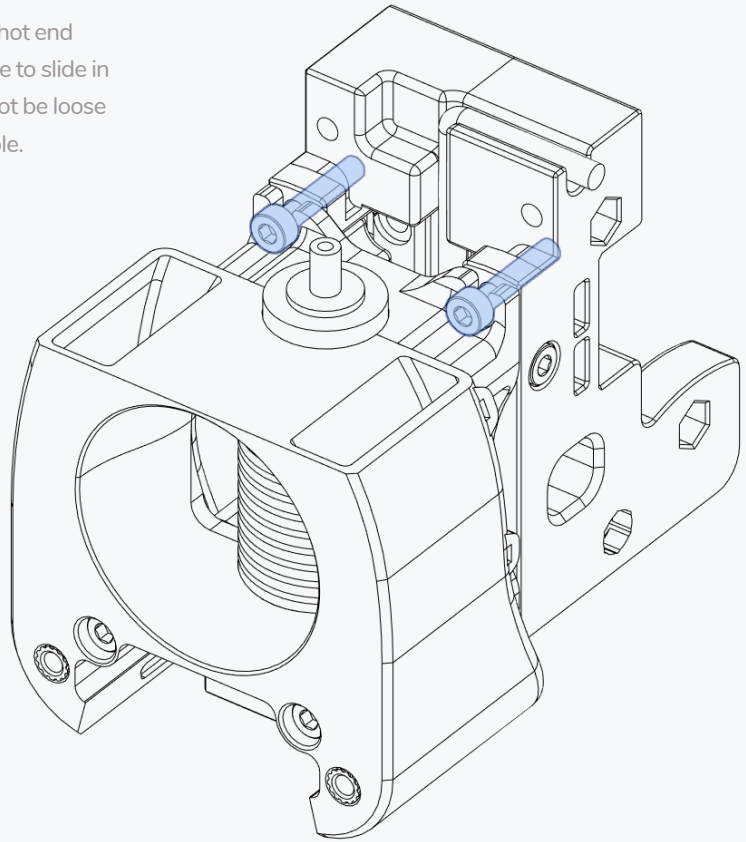
M3x40 SHCS

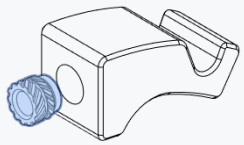
M3x16 SHCS



TEST FIT HOUSING

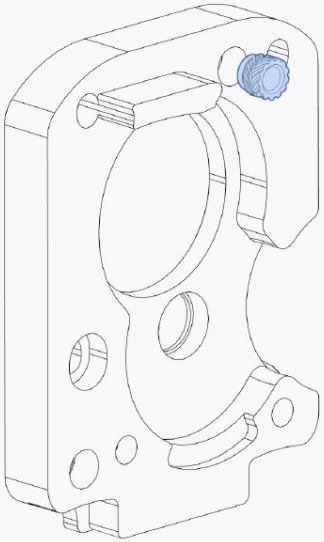
Make sure to test fit the hot end housing. It should be able to slide in with firm pressure but not be loose enough that it can wobble.

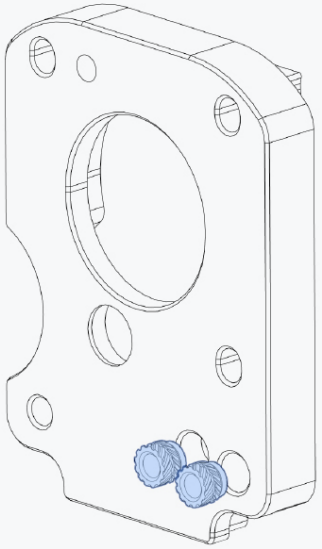


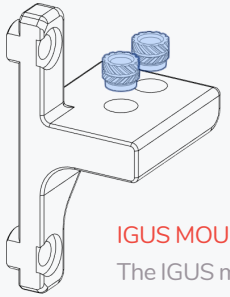


INSTALL HEAT SET INSERTS

You will need to install heat set inserts into the locations shown on this page. Take note of the different cable chain mounts and use the one that best fits your build.

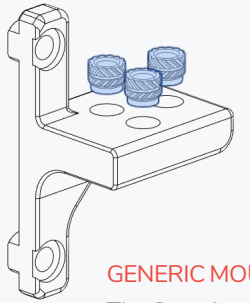






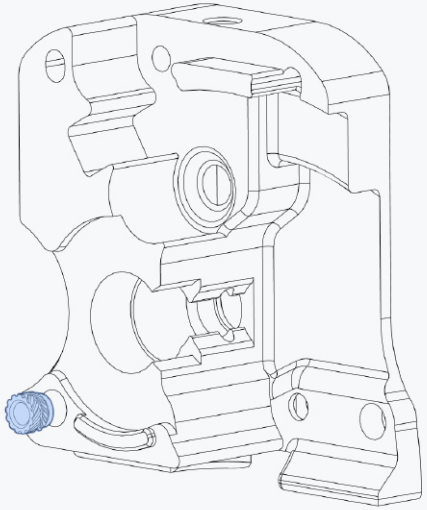
IGUS MOUNT

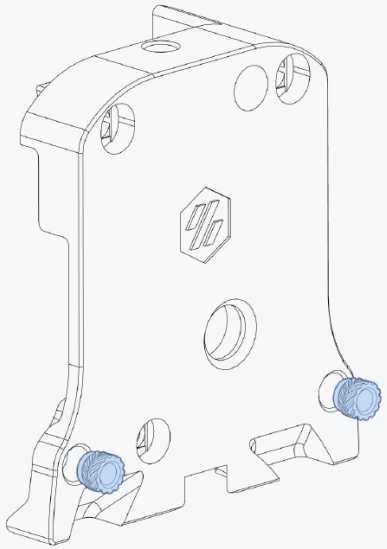
The IGUS mount is identifiable by its 2 mounting holes.

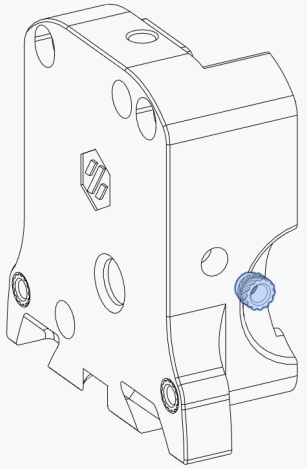


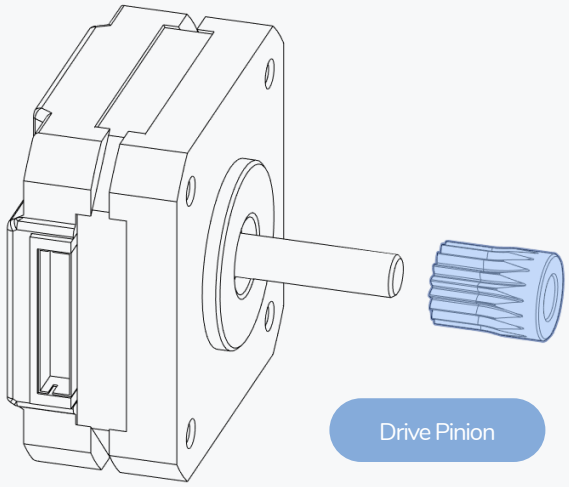
GENERIC MOUNT

The Generic mount is identifiable by its 3 mounting holes.



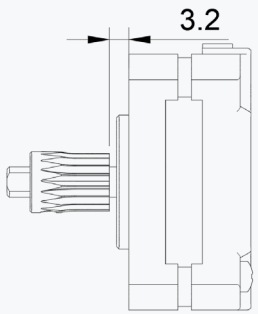






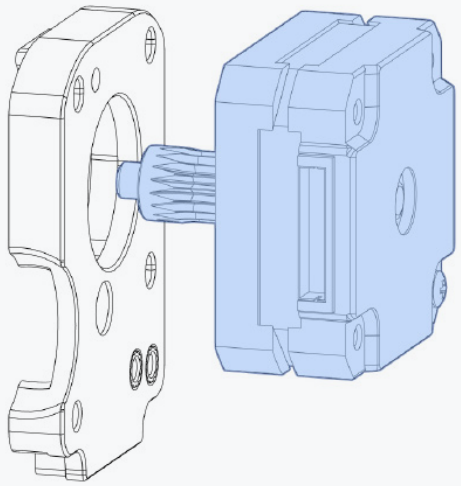
DRIVE PINION SPACING

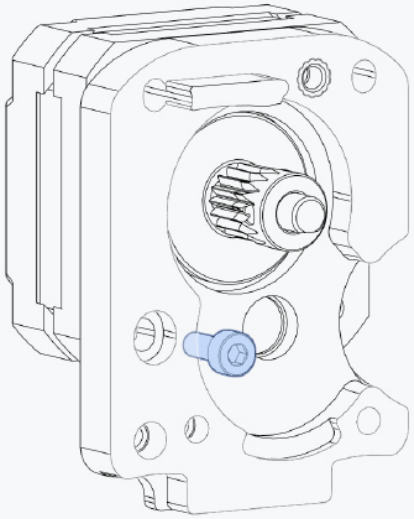
Take care when installing the drive pinion on the extruder motor. It should be spaced 3.2mm from the main body of the stepper motor.



STEPPER MOTOR ORIENTATION

Make sure to orient the motor on the drive plate so that the wires are on the left side. This will allow correct routing through the cable cover that will be installed later.

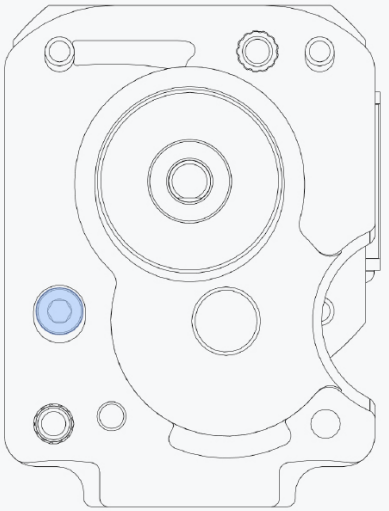


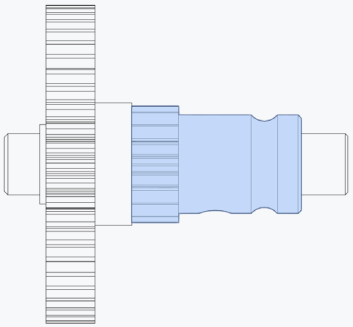


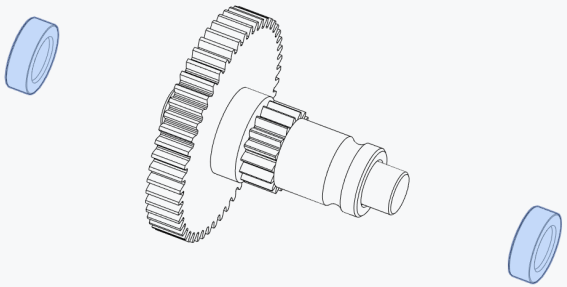
M3x8 SHCS

ADJUSTABLE MOTOR POSITION

The motor position is adjustable to allow for properly meshing of the drive gears. We recommend you start in the top most position of the slot, but check Discord if you have questions on how to properly adjust this.







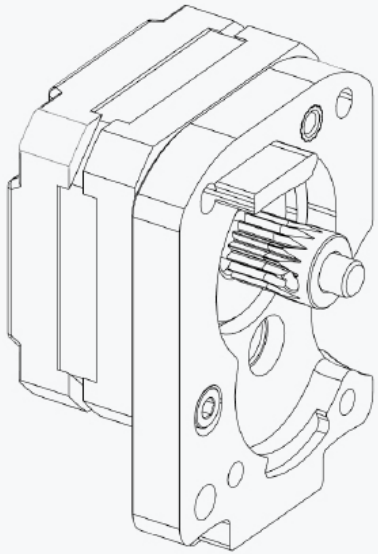
CHECK PLACEMENT

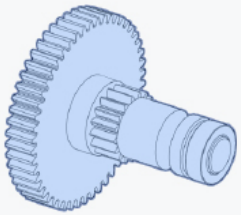
Ensure the filament drive gear is fully seated against the drive shaft gear.

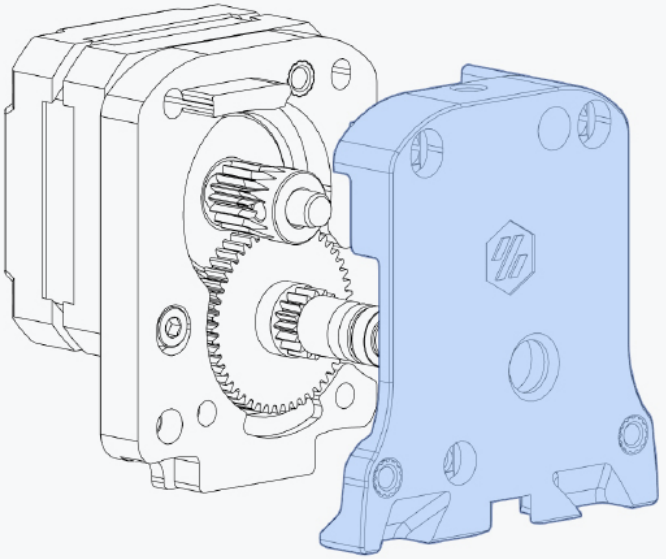
BEARING FIT

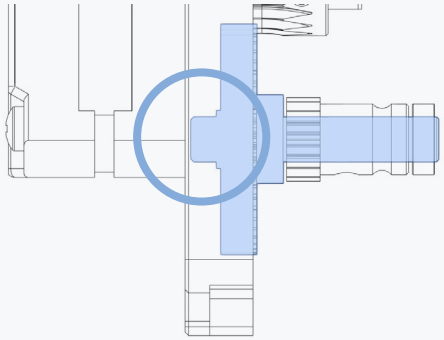
The MR85 bearings should slip on to the drive shaft easily allowing the assembly to self center itself in relation to the filament.

If you find that they are too tight, you can lighty sand the drive shaft.



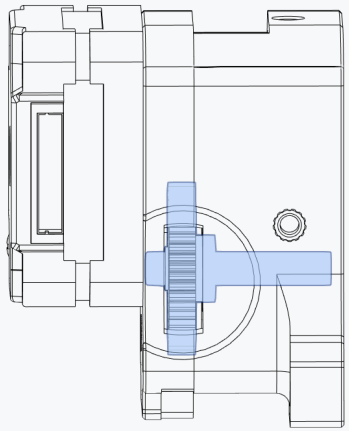






CHECK CLEARANCE

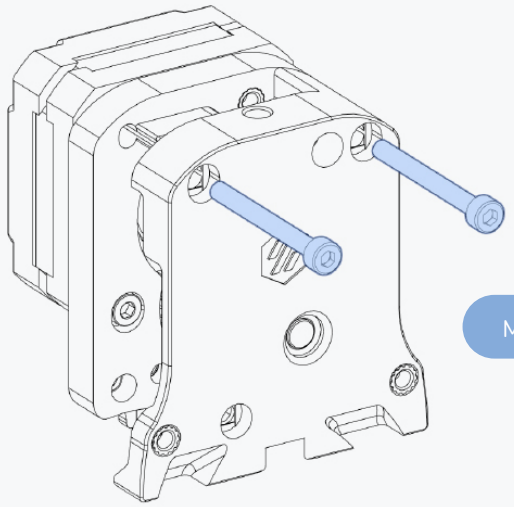
Make sure the drive shaft is not rubbing on the extruder motor. You can sand the face of the drive shaft if required.



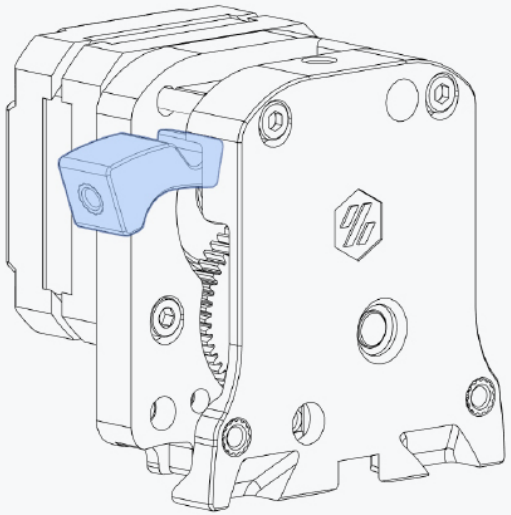
DRIVE SHAFT CHECK

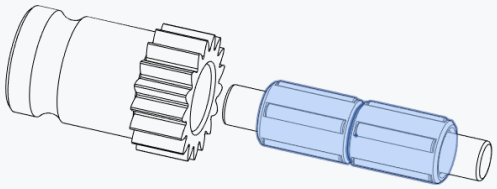
Now is a good time to check that the drive shaft assembly is moving as it should. The engagement of the gears should be smooth throughout the full rotation and the drive shaft should be able to move forward and back slightly to aid in filament alignment.

If required, adjust using the fastener on page 71.



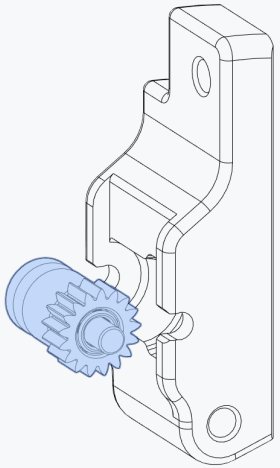
M3x30 SHCS

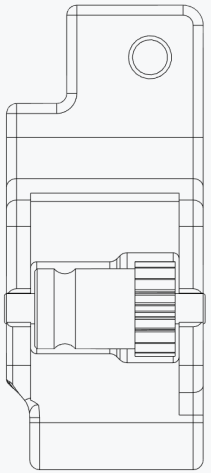


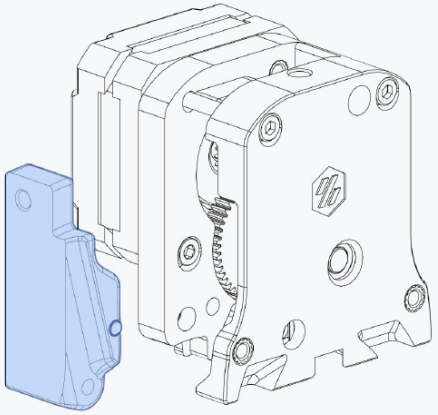


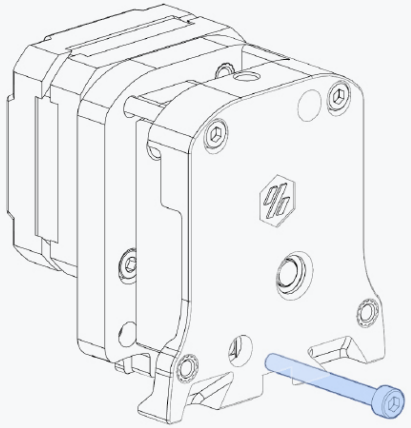
LUBRICATION

The idler assembly requires lubrication to ensure smooth operation and longevity. Refer to the BOM for lubricant options.

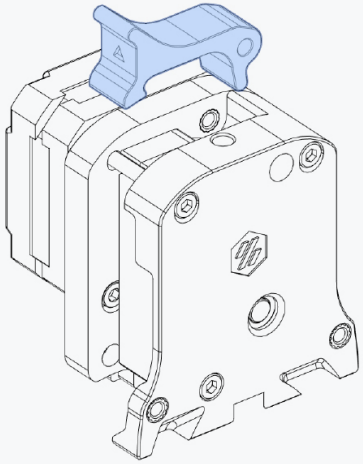


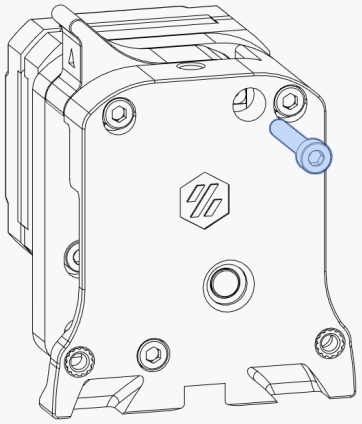




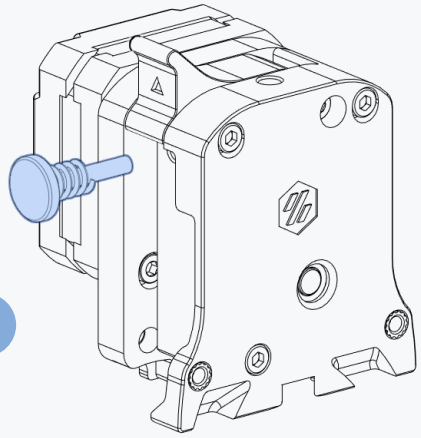


M3x30 SHCS

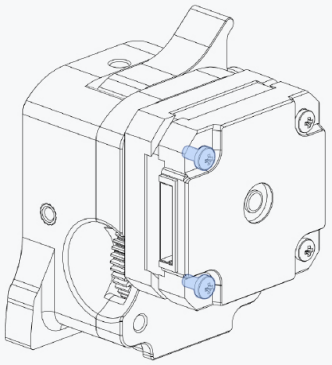




M3x20 SHCS

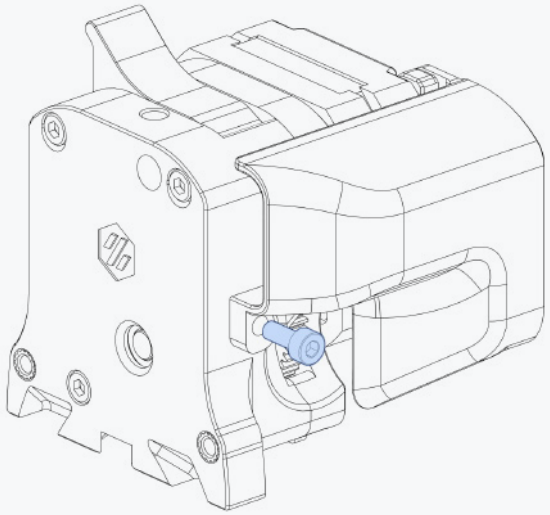


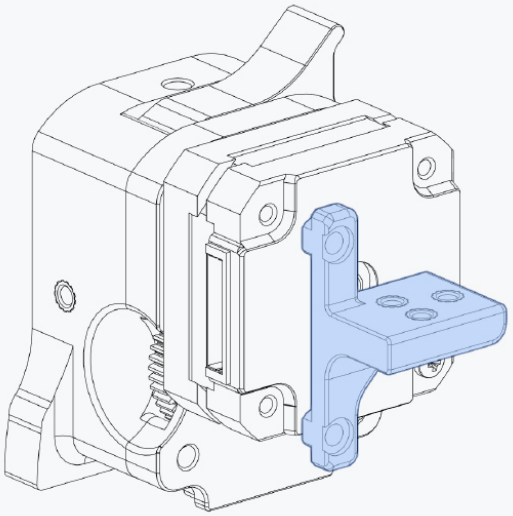
Tension Knob

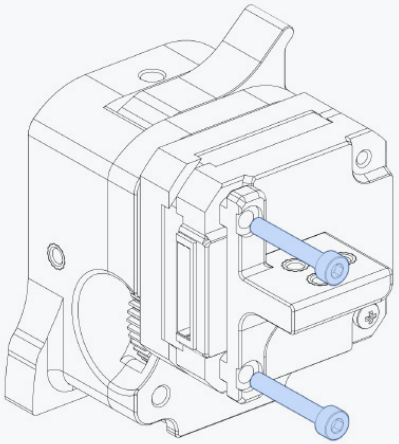


REMOVE SCREWS

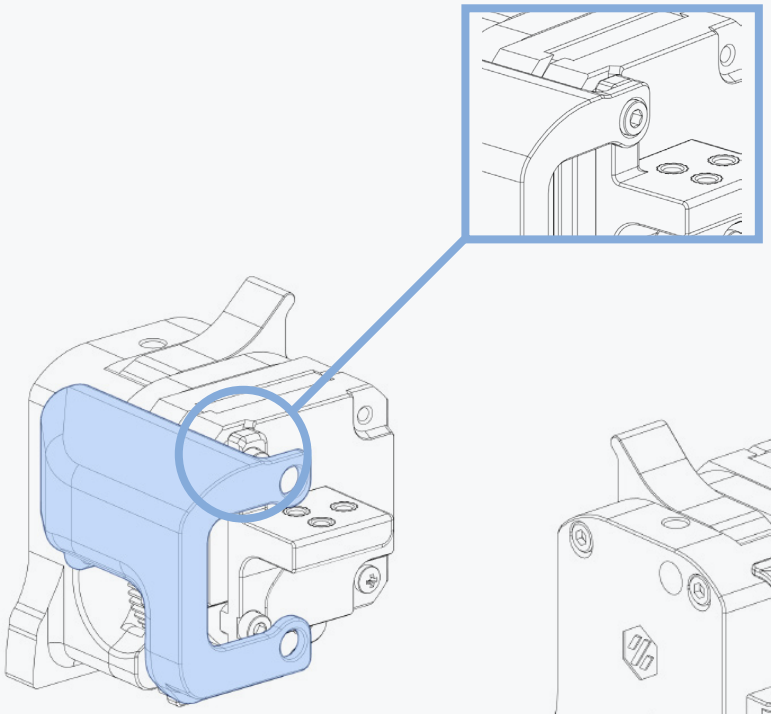
Carefully remove the two screws on the left side of the extruder motor. We are going to be replacing these in further steps.





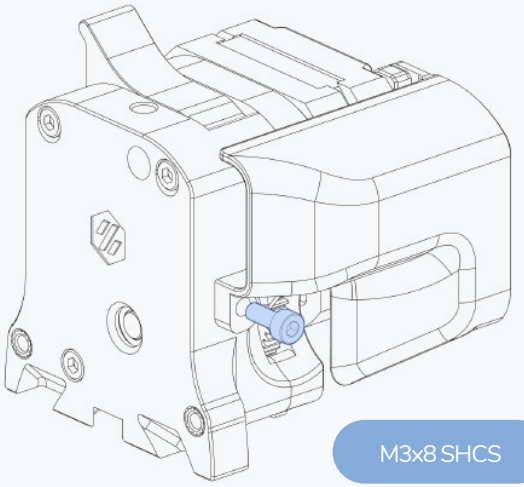


M3x20 SHCS

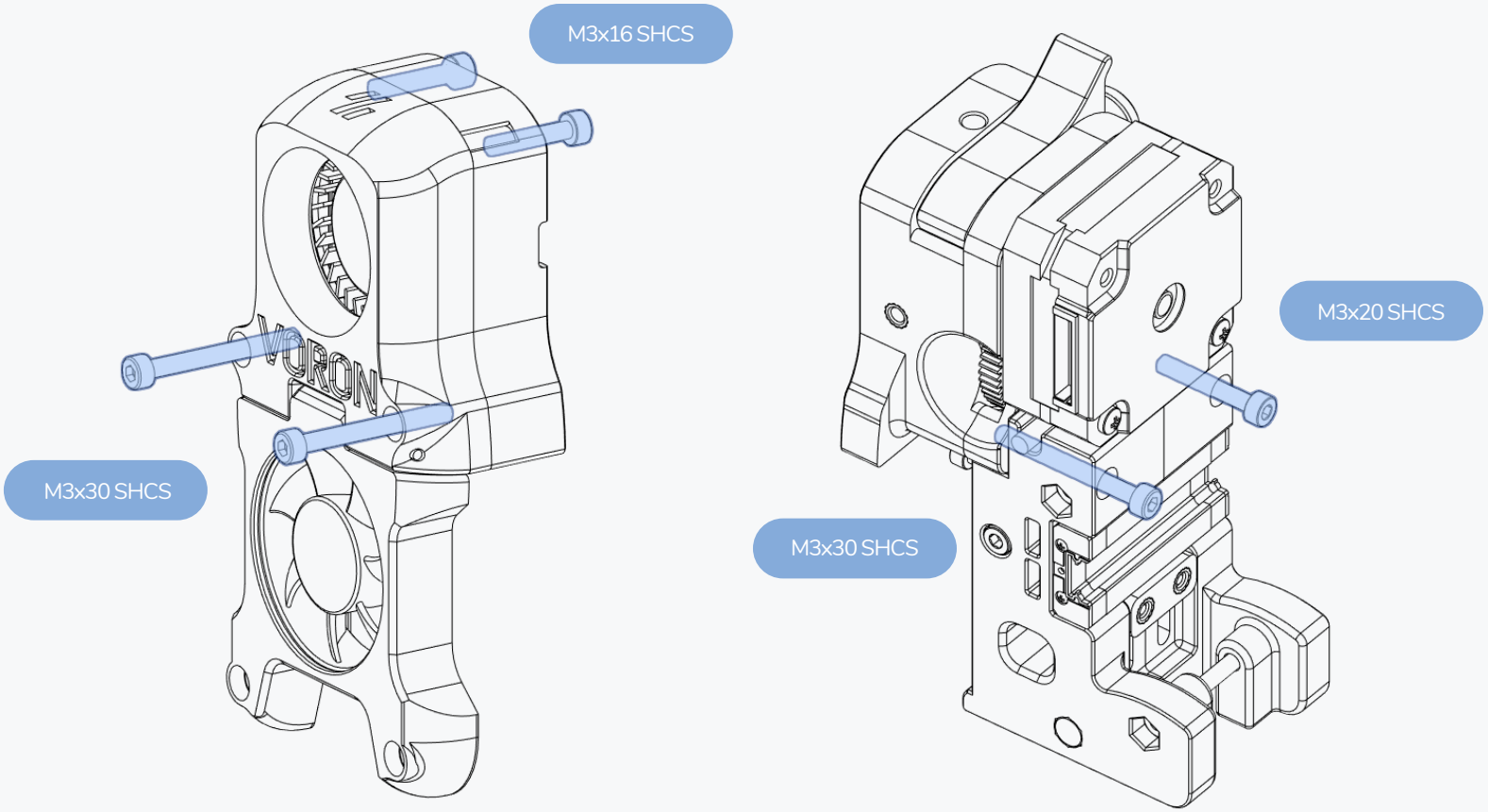


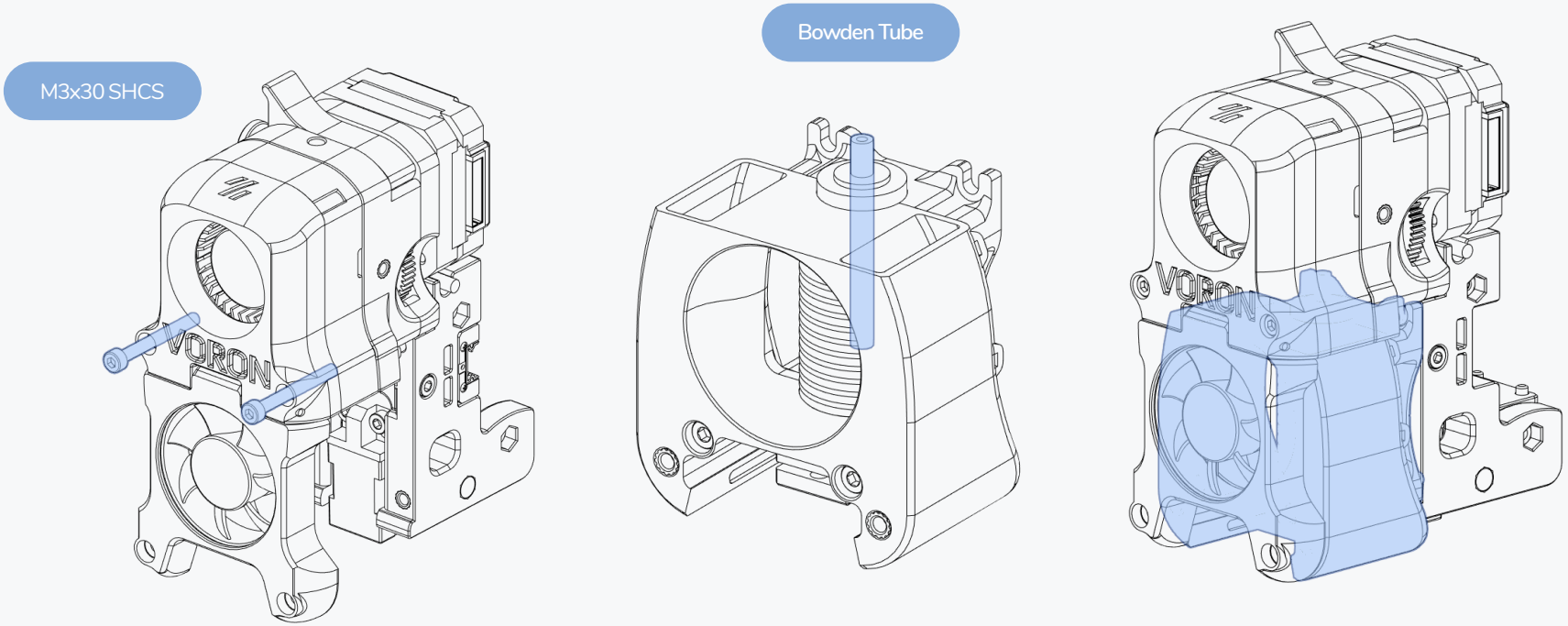
OVER NOT UNDER

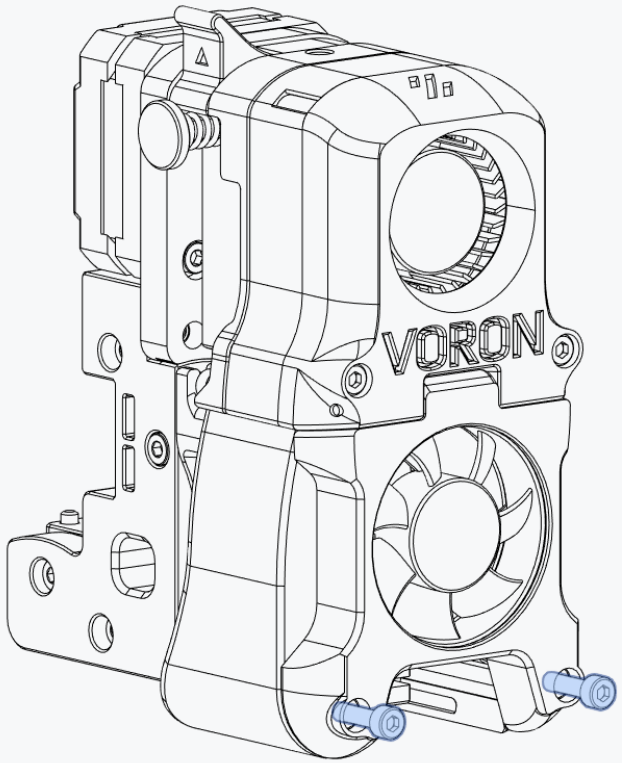
The cable cover simply hangs off the heads of the M3x20 fasteners so that it can be easily removed.



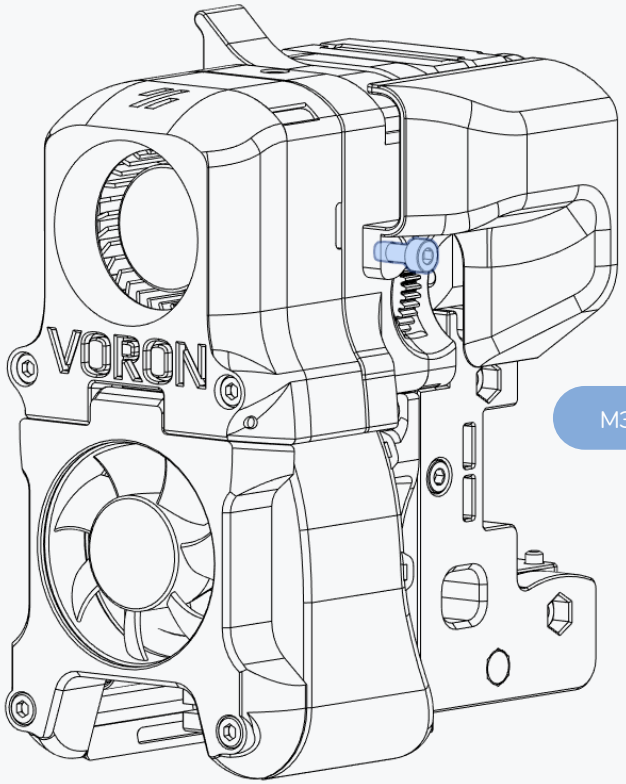
M3x8 SHCS


M3x16 SHCS
M3x30 SHCS
M3x20 SHCS
M3x30 SHCS


M3x30 SHCS
Bowden Tube
VORON
VORON



M3x12 SHCS



M3x8 SHCS