MiniSB - Orbiter v1.5 Assembly Manual

About this manual

This manual will guide you through the assembly of the Mini-Stealthburner Orbiter v1.5 Extruder Mount.

This manual assumes that you already know how to build a standard Mini-Stealthburner. If you don't, read the V0.2 Assembly Manual first.

The pictures of the cowlings are from the first release, these are currently outdated, but the assembly is otherwise the same. So don't be confused if your parts look slightly different.

Printed Parts

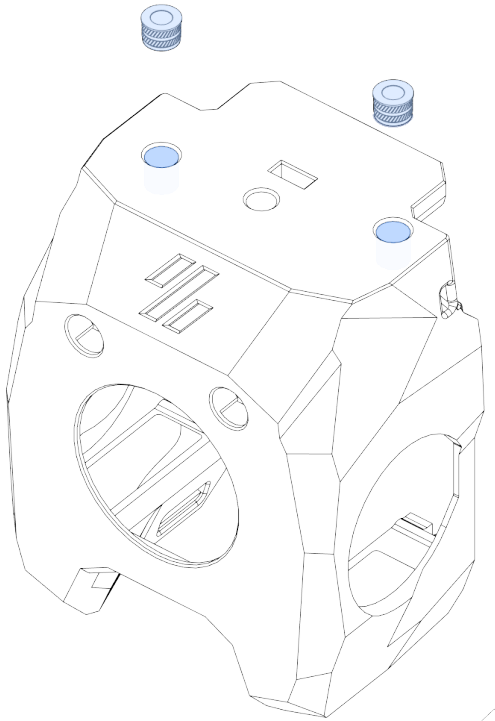
The STL-Files use the same naming system as the official Voron STLs, e.g. [a] denotes a part to be printed in accent-color, _xN denotes how many copies should be printed where "N" is the quantity.

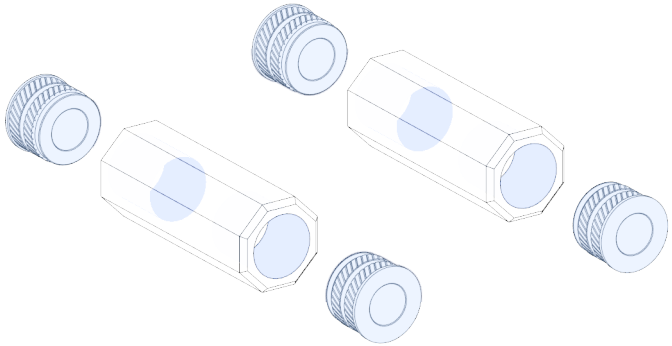
Depending on your setup you want the "standard" strain relief plate or the umbilical plate if you are using Timmit's umbilical PCB. The spacers are the same for both, however depending on which motor you use you will need a different top spacer length:

- LDO Motor: 17.60mm
- Moons Motor: 17.10mm

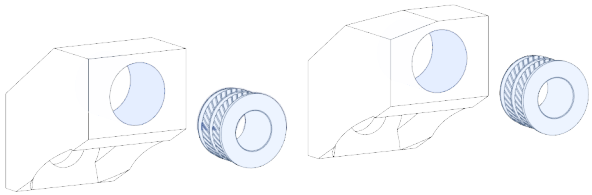
Spacers are provided in both a octagon shape and a round shape. The octagon spacers print along the layer lines and thereby have increased strength and are preferred over the round shape. Both Versions will work so choose whichever you like, this manual will only show octagon spacers for clarity. Additionally you will need 2 of the bottom spacer parts.

Part	Quantity	Notes
M3x5x4 Heatset	8	
M3x35 BHCS	2	
M3x20 BHCS	1	
M3x8 BHCS	2	
M3x6 BHCS	4	
M3 Hexnut	1	
3010 Axial Fan	1	
3010 Blower Fan	2	
Hotend	1	There are a number of supported Hotends, check the V0.2 GitHub for options
Orbiter v1.5 Extruder	1	
Additional Parts for standard strain relief		
M3x8 BHCS	2	
Additional Parts for Umbilical PCB		
M3x8 BHCS	2	
M3x6 BHCS	2	
Additional Parts for CAN-Toolheads		
M3x6 BHCS	4	





M3x5x4 Heatset



Round vs Octagon

The octagon spacers tend to be stronger than the round spacers. Because of this they are the recommended spacers and will be used throughout this manual.

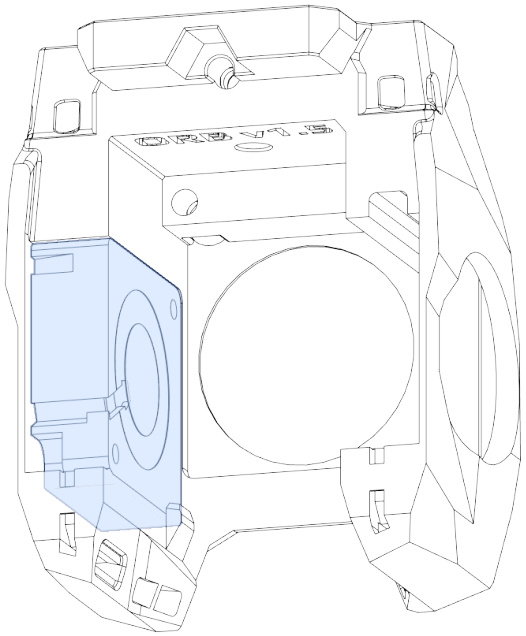
The assembly process is exactly the same with either variant.

M3 Hexnut

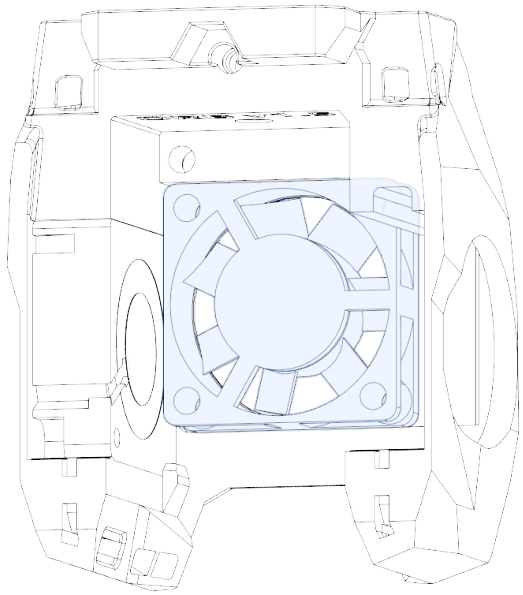
Different Cowling

This Manual will use the “minified” variant of the cowling for better clarity.

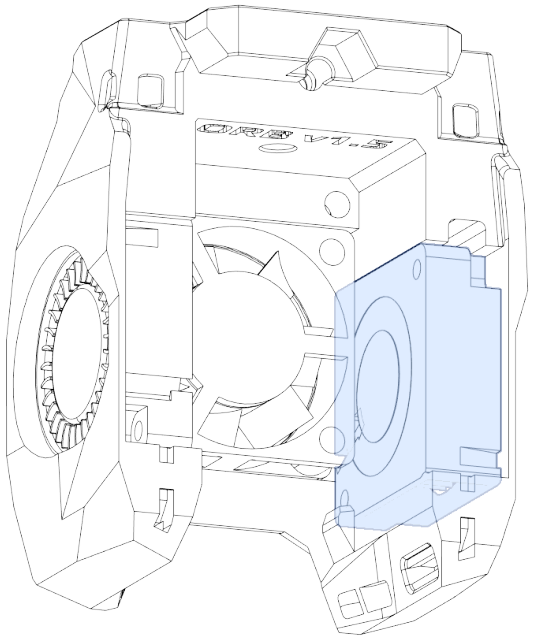
However the assembly process is exactly the same with the “standard” cowling.



3010 Blower Fan



3010 Axial Fan



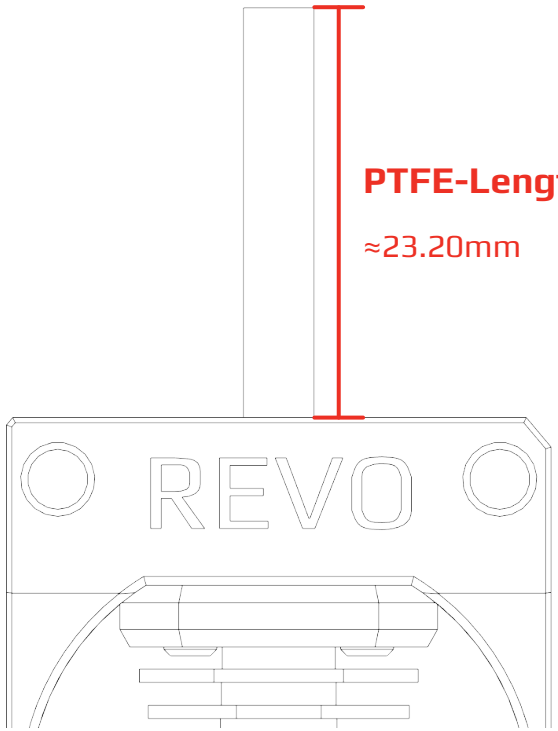
3010 Blower Fan

Fans

Install all the fans by sliding them in, just like with a normal Mini-Stealthburner.

Route the wires along their intended cutout.

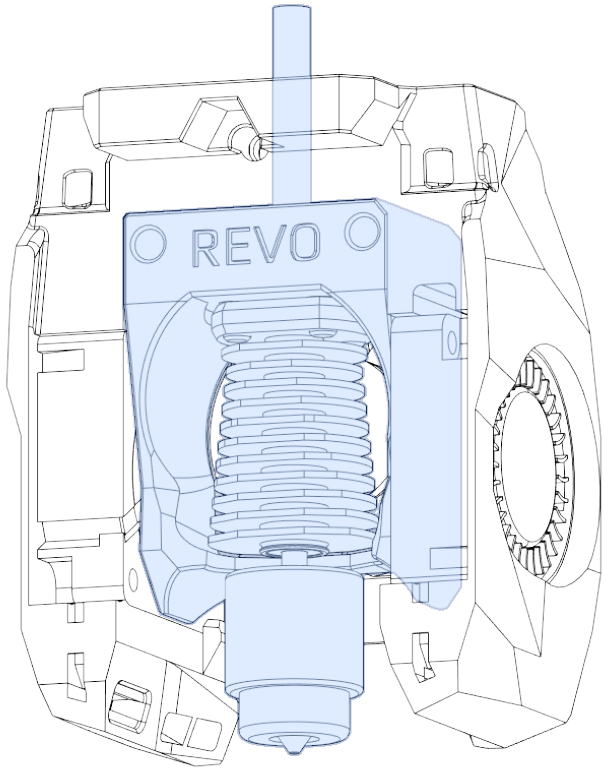
When in doubt check the Voron V0.2 Manual.

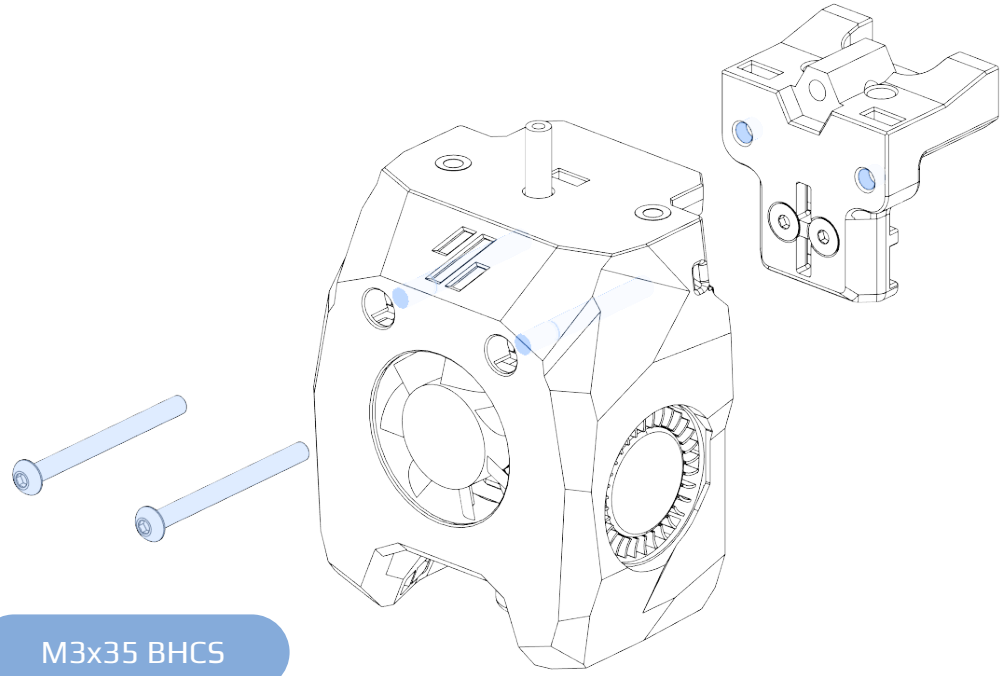


Hotend

Install your Hotend.

Make sure your PTFE-Tube is the right length.



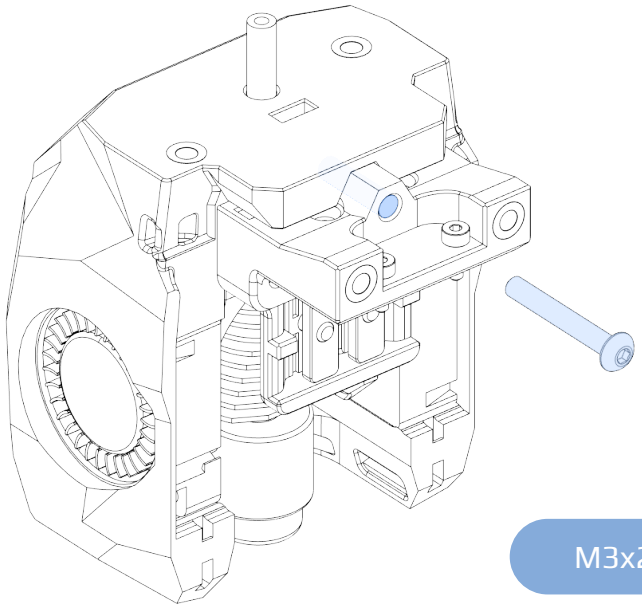


M3x35 BHCS

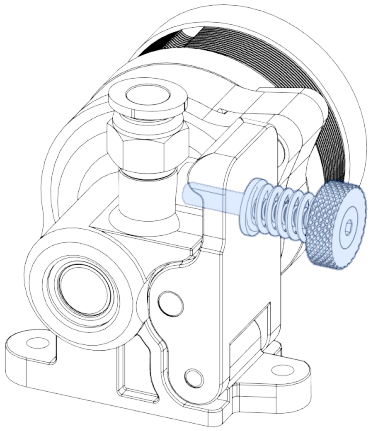
No X-Axis?
For better visibility and CAD-Performance the x-Axis is not depicted in this manual.

The X-Carriage should already be installed and the belts run and secured.

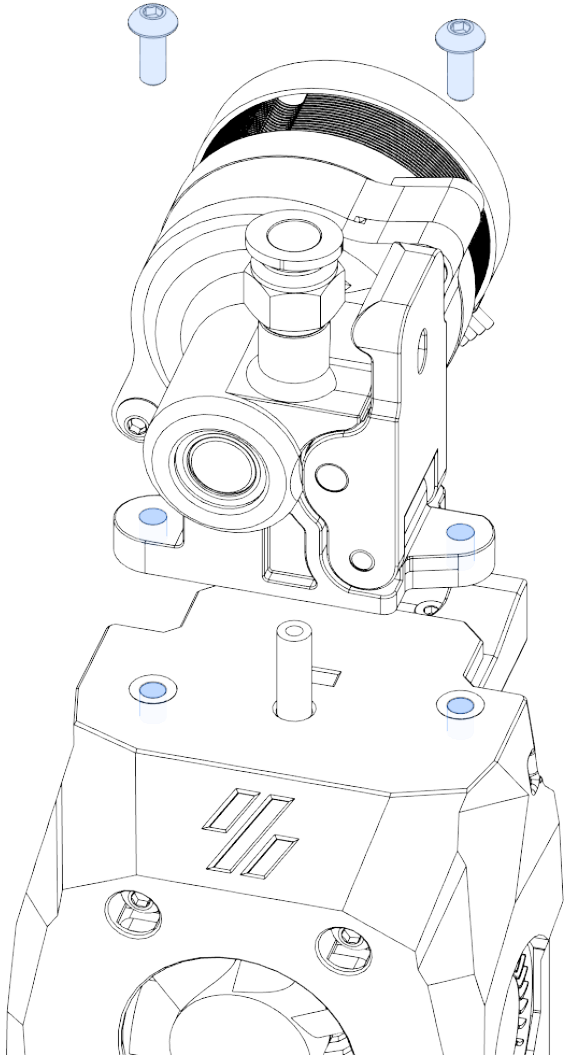
Out of M3x20 Screws?
If you don't have any M3x20 on hand a M3x25 BHCS plus a M3 Washer will also work.



M3x20 BHCS

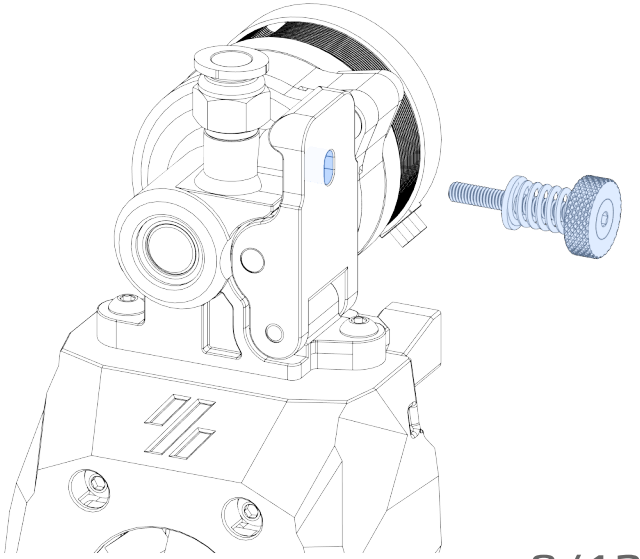


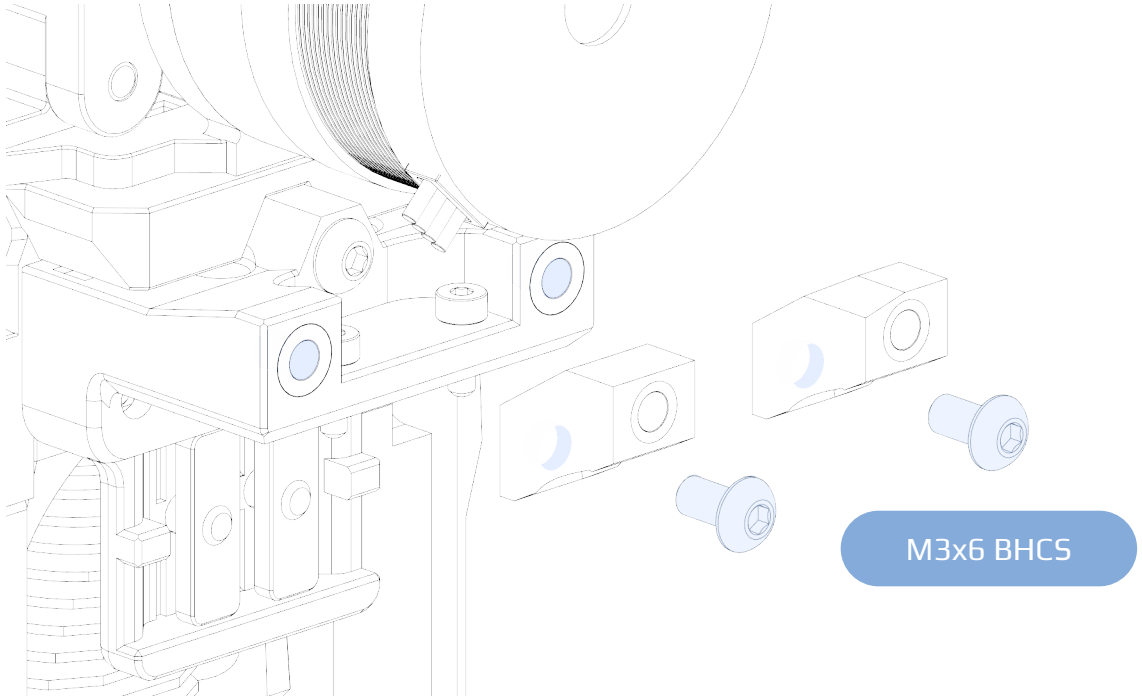
M3x8 BHCS



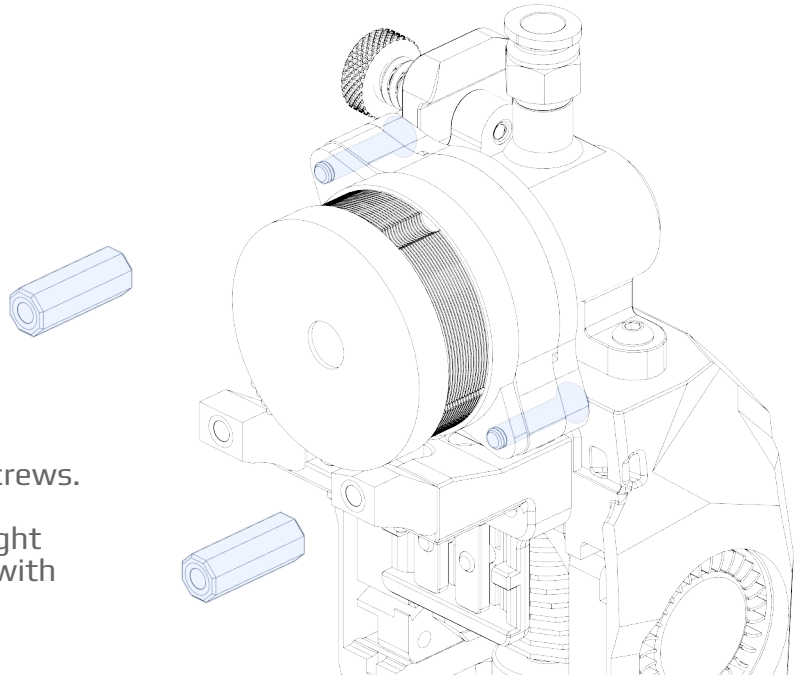
Get your Thumb out the way
Remove the Thumbscrew temporarily to allow you to screw down the Extruder.

Reinstall after you attached the Extruder.





M3x6 BHCS

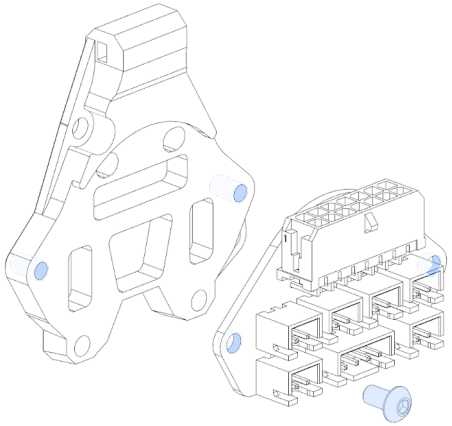


Spaceman

Attach the spacers to the motor screws.

If you can't screw them on, you might need to replace the motor screws with longer ones.

Strain-Relief/Umbilical

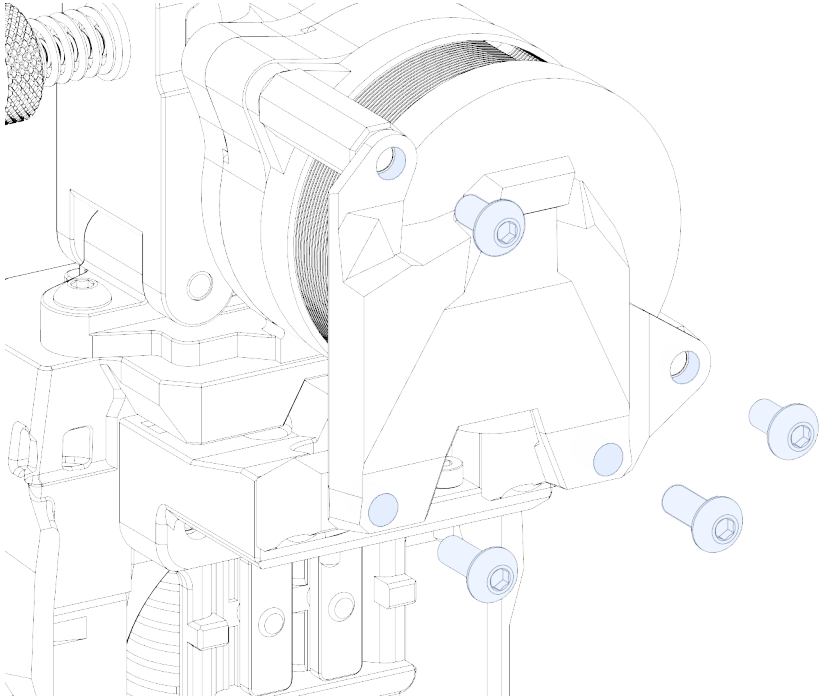


Umbilical PCB

If you are using Timmit's Umbilical PCB secure it to the Umbilical Plate with 2 M3x6 BHCS.

These screws go directly into plastic so don't over tighten these!

M3x6 BHCS



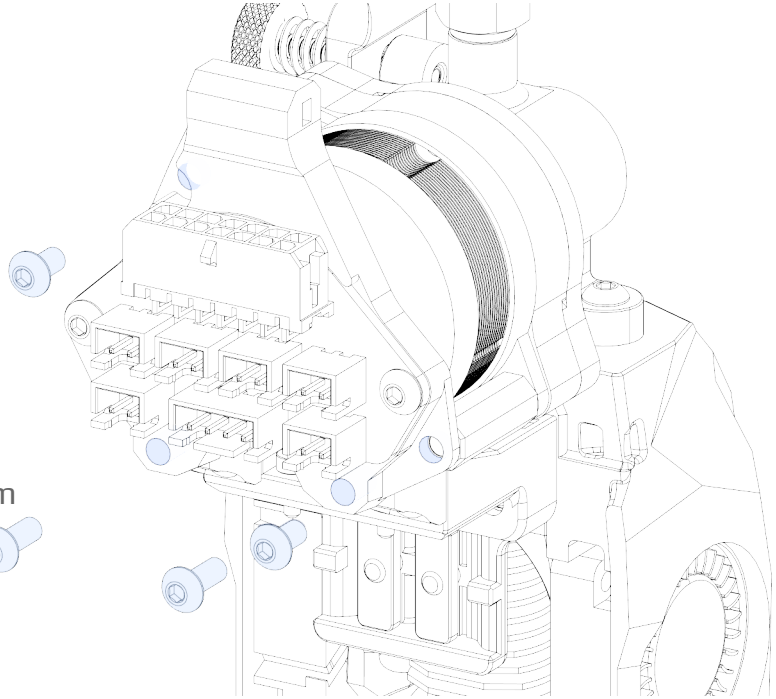
M3x6 BHCS

Screws

M3x6 BHCS into the top spacers.

M3x8 BHCS into the bottom spacers

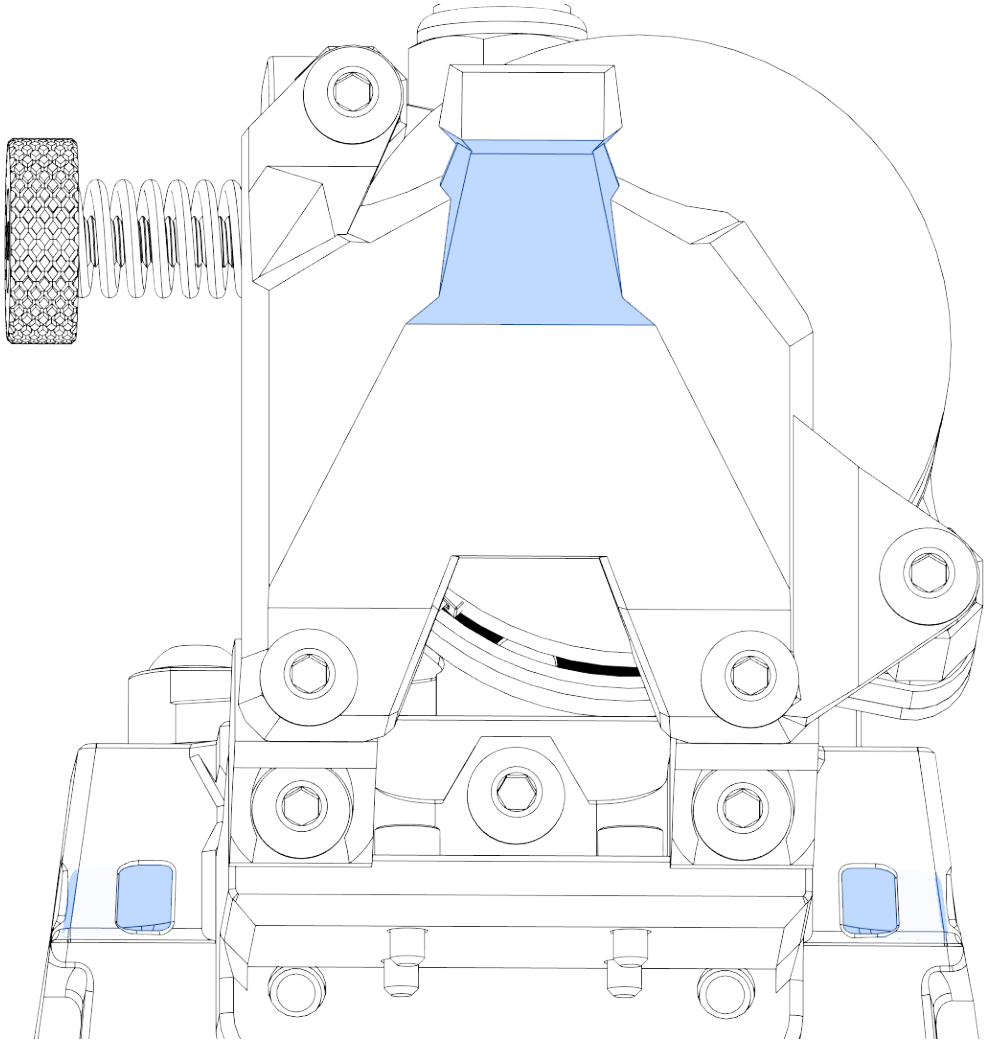
M3x8 BHCS

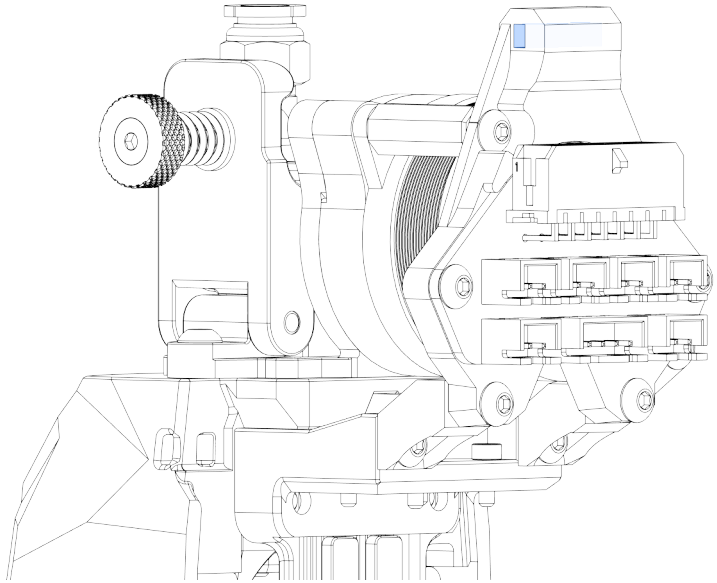


Tidying things up

Wire up your Extruder, Hotend and Fans.

Secure the wires using the zip-tie loops on the Cowling and the Strain-Relief/ Umbilical Plate





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