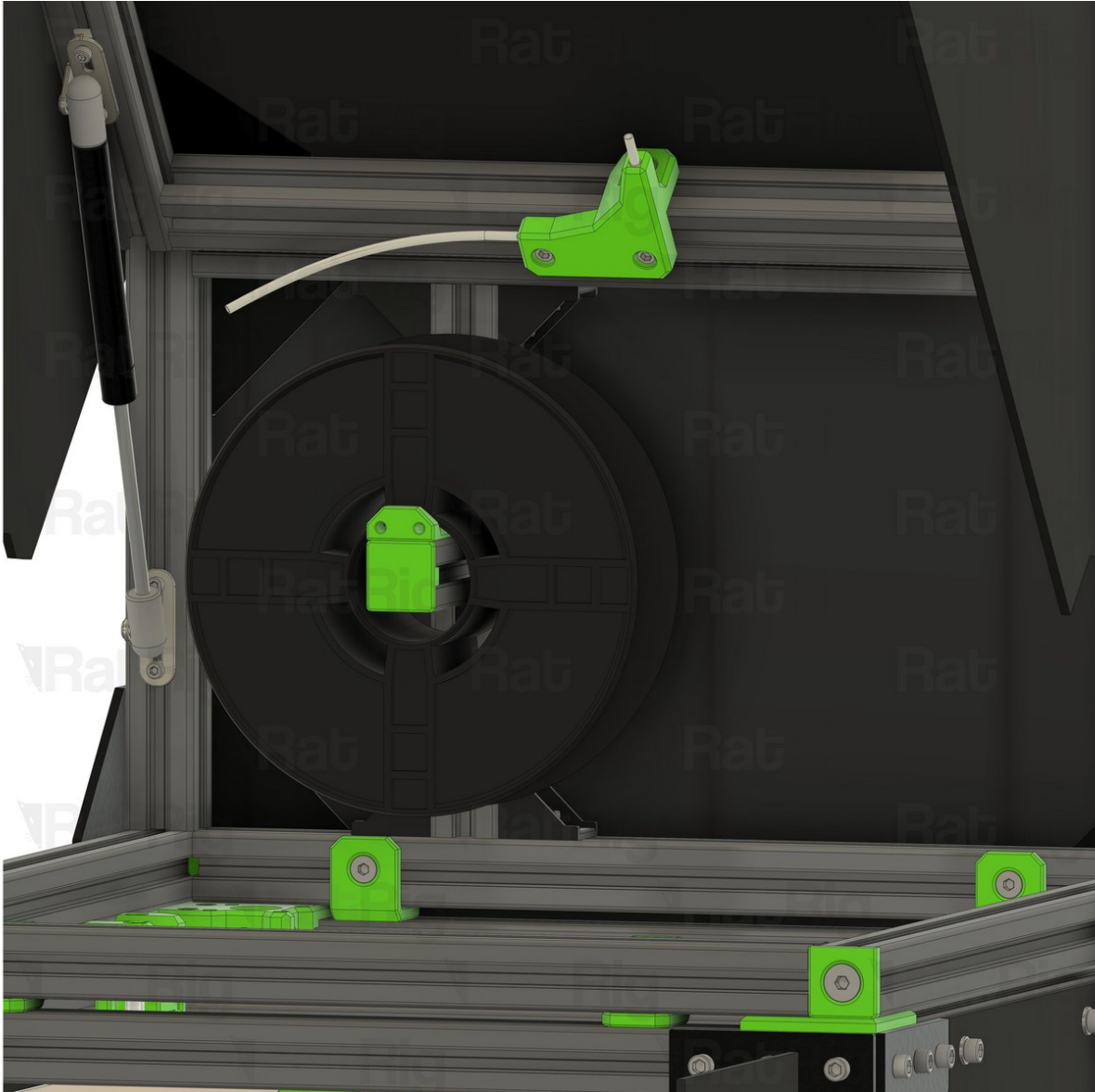


Rat Rig

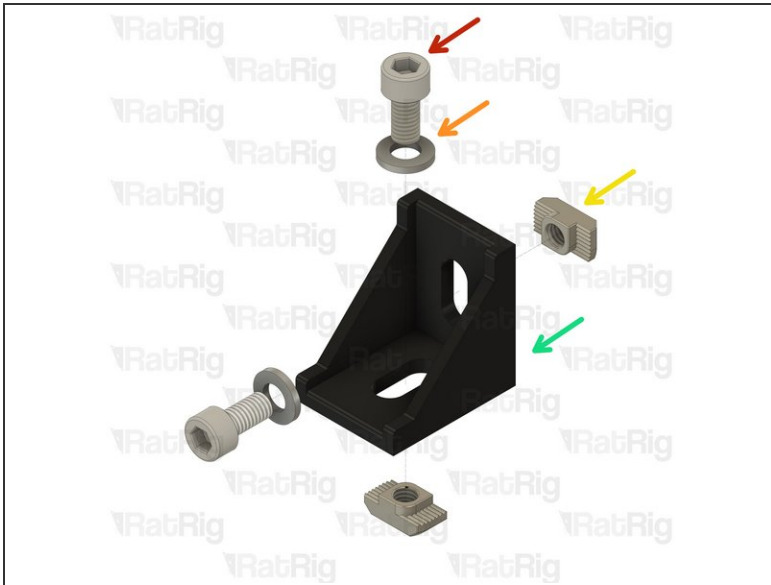
02. In-Lid Spool Holder

Written By: Simon Davie



INTRODUCTION

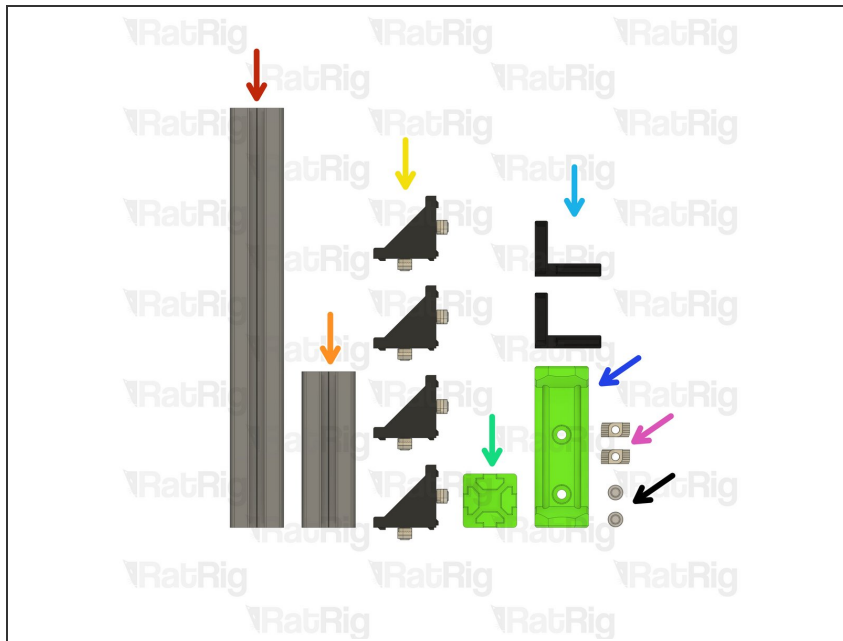
[video: <https://www.youtube.com/watch?v=-XLFaeRTB9k>]

Step 1 — Assemble the 90 degree corners (x4)

- M6x12 Cap Head Screw
- M6 Washer
- 3030 Drop-in T-Nut - M6
- Cast 90 Degree Corner Bracket for 3030

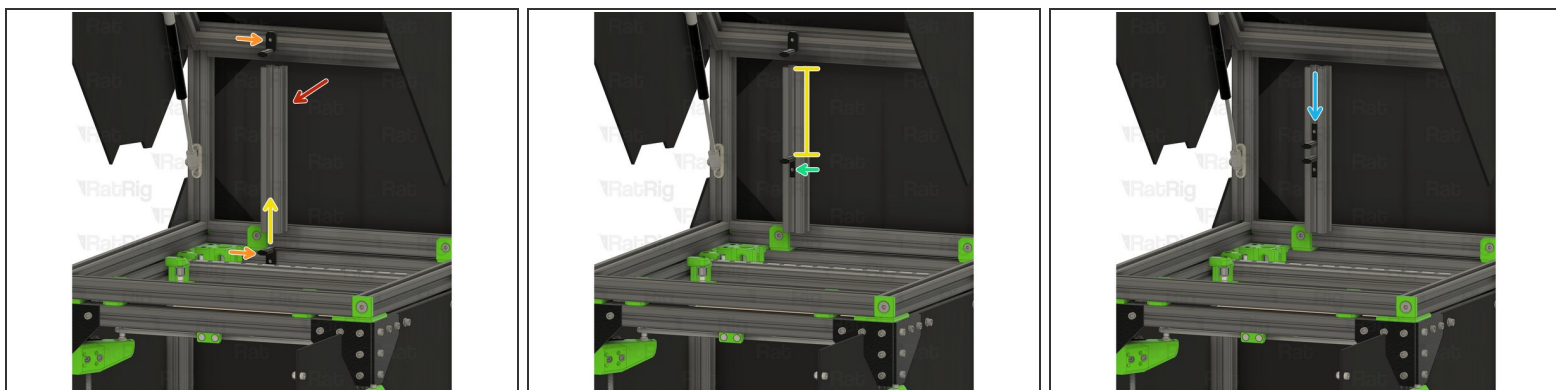
i Loosely thread the 3030 T-Nuts onto the M6x12 screws. Do not tighten them at this point.

Step 2 — Prepare the spool holder parts



- 1x 234mm 3030 Extrusion
- 1x 87mm 3030 Extrusion
- 4x 90 Degree Corner
- 1x 3030_endcap printed part
- 2x 3030 Inside Hidden Corner Bracket
- 1x 3030_spool_holder_mount printed part
- 2x M5x10 Cap Head Screw
- 2x 3030 Drop In T-Nut M5

Step 3 — Assemble the spool holder arm - Part 1



- 234mm 3030 Extrusion

- 3030 Inside Hidden Corner Bracket

i Check that the grub screws on the inside corners are retracted to allow installation into the 3030 extrusion.

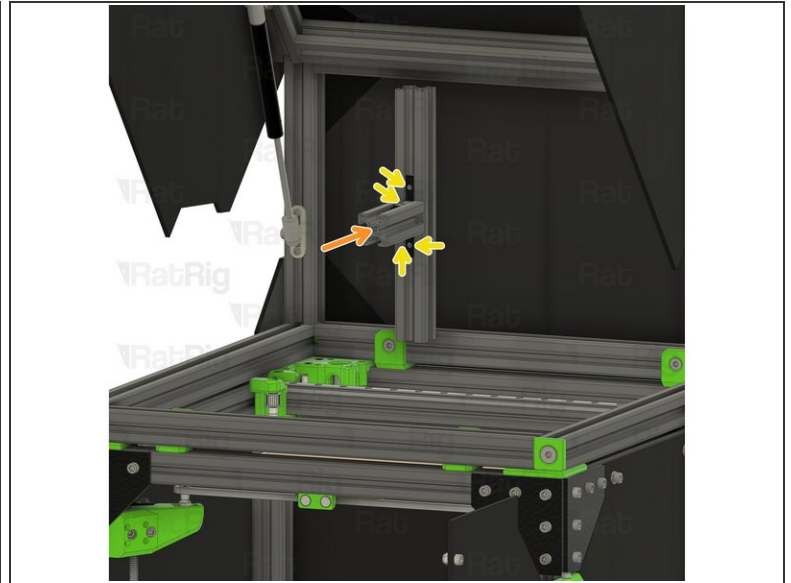
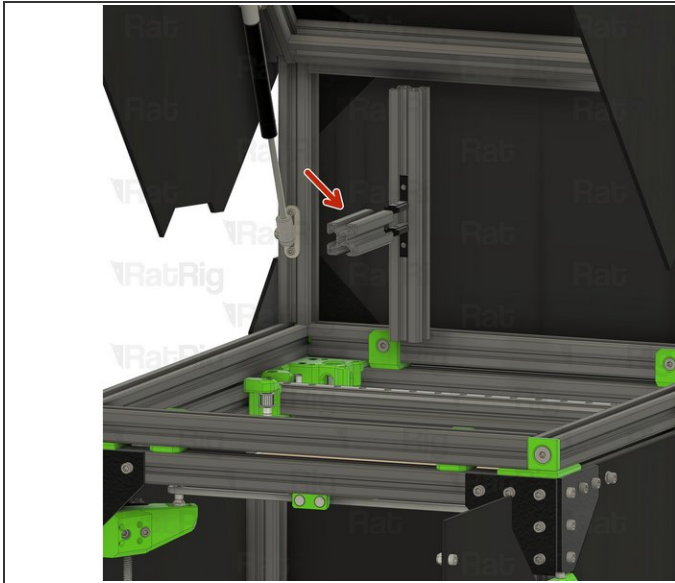
- Slide one inside corner into the 3030 extrusion. Position it so that there is a measurement of 130mm from the top of the inside corner, to the top of the extrusion.

- Tighten the indicated grub screw, securing the corner into place.

- Slide the remaining inside corner into the 3030 extrusion. Make sure the orientation mirrors that of the previously installed lower corner.

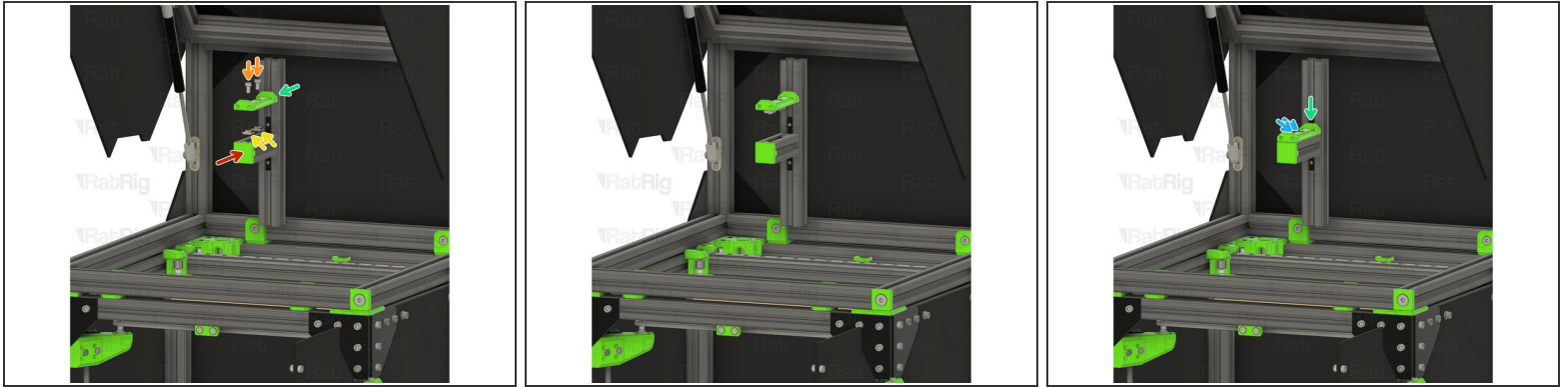
⚠ Do not fasten the grub screw on the second inside corner just yet.

Step 4 — Assemble the spool holder arm - Part 2



- 87mm 3030 Extrusion
- Slide the 87mm length of 3030 extrusion onto the inside corners.
- Tighten all four grub screws on the inside corners to secure the arm in place.

Step 5 — Install the printed spool holder & end cap



- 3030_end_cap

- ❗ Install the 3030 extrusion end cap by carefully pushing it into place

- M5x10 Cap Head Screw

- 3030 Drop-in T-Nut M5

- Install the printed assembly onto the arm of the spool holder, making sure that the M5 T-Nuts drop into the 3030 extrusion slot

- Gently tighten the two M5x10 cap head screws

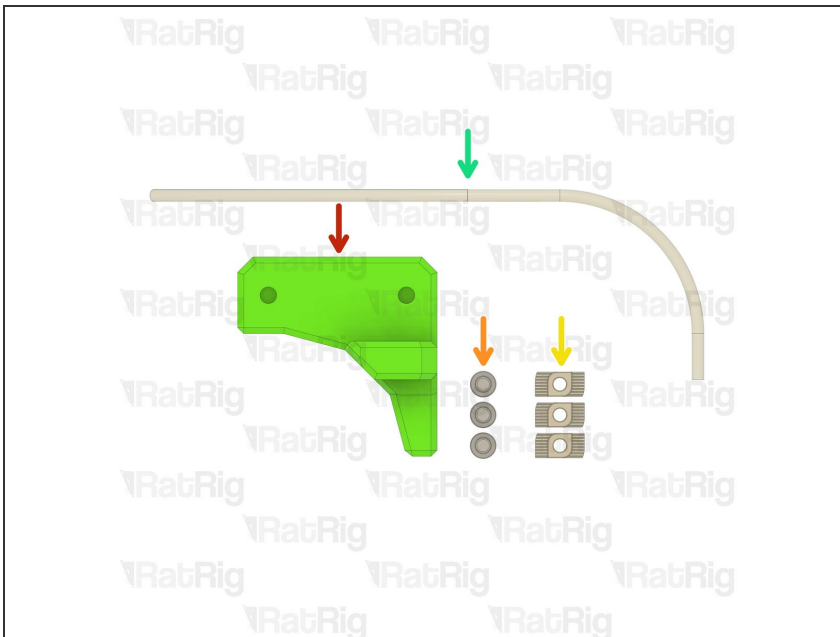
⚠ Do not over tighten these screws as doing so could cause damage to the printed part

Step 6 — Assemble the spool holder to the lid



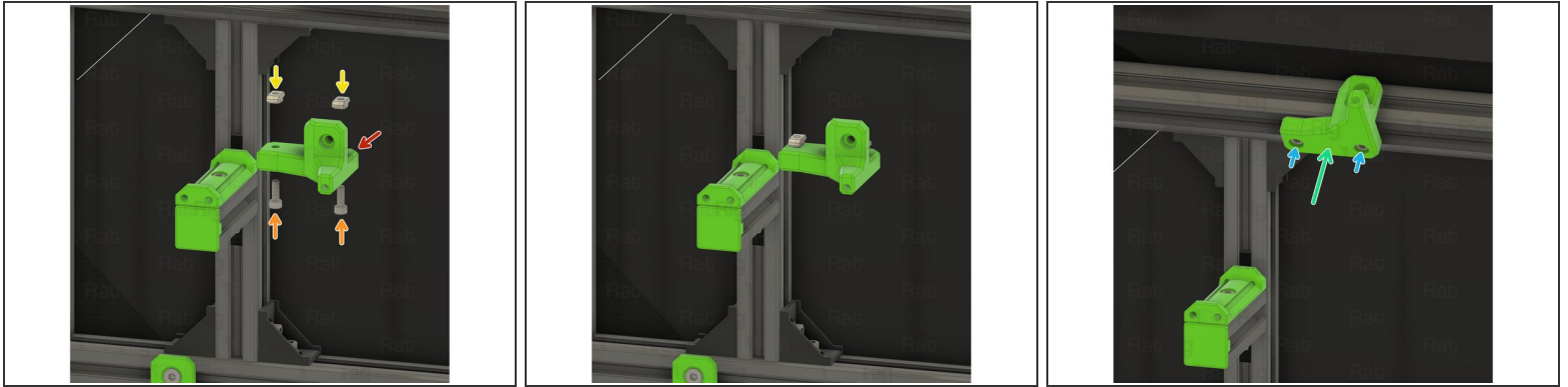
- Assembly from **Step 5**
- Position the spool holder as shown. The gap should measure around 105 mm.
- Install all four 90 degree corners as shown
- Tighten all eight M6x12 cap head screws to fully secure the spool holder to the lid

Step 7 — Prepare the filament guide parts



- enc_3030_spool_holder_guide printed part
- 3x M5x12 Cap Head Screw
- 3x 3030 Drop In T-Nut M5
- 1x Length of PTFE Bowden tube

Step 8 — Install the printed filament guide - Part 1



- enc_3030_spool_holder_guide printed part

- M5x12 Cap Head Screw

- 3030 Drop In T-Nut M5

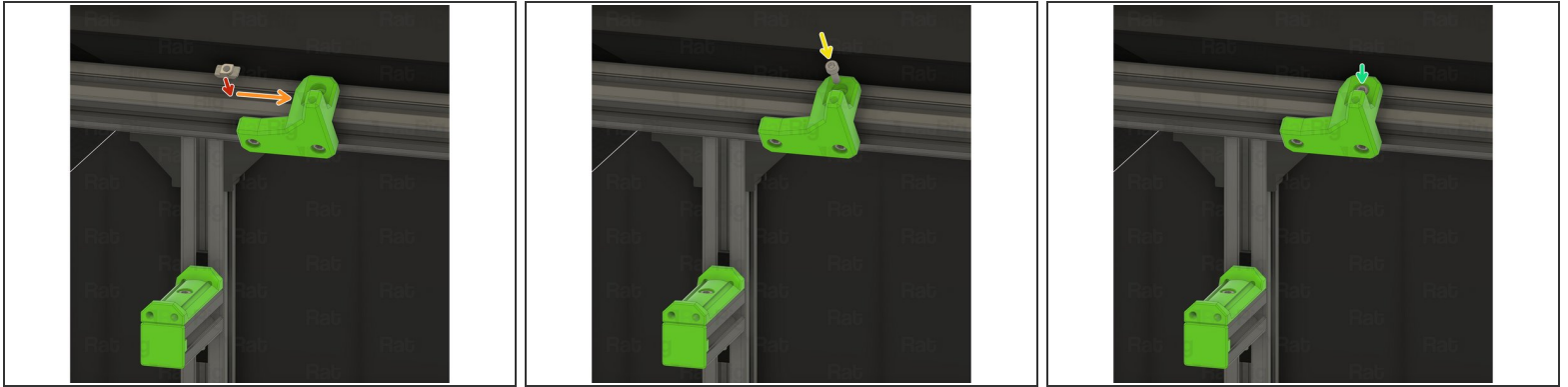
i Loosely thread the 3030 T-Nuts onto the M5x12 screws. Do not tighten them at this point.

- Install the spool holder guide assembly onto the rear 3030 extrusion of the lid as shown. Make sure that the M5 T-Nuts drop into the 3030 extrusion slot.

- Gently tighten the two M5x12 cap head screws

⚠ Do not over tighten these screws as doing so could cause damage to the printed part.

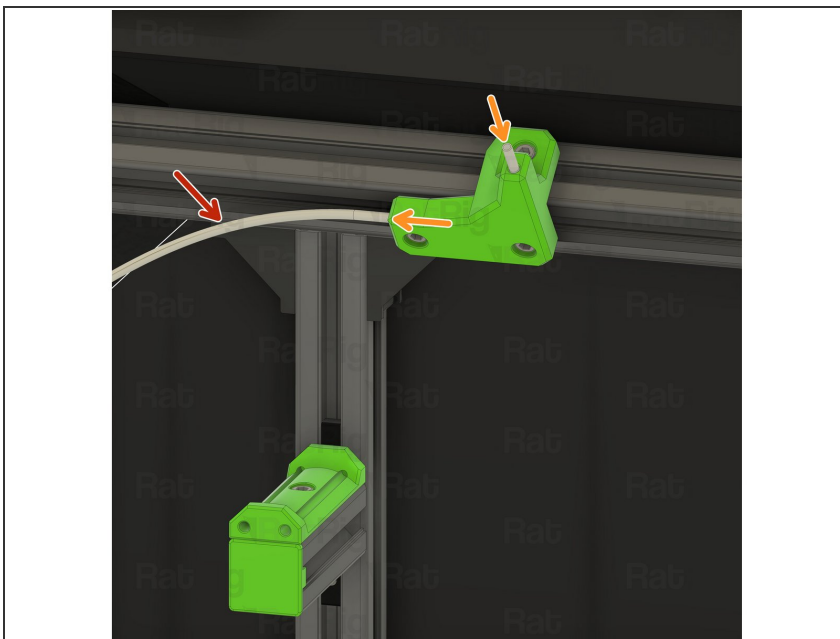
Step 9 — Install the printed filament guide - Part 2



- 3030 Drop In T-Nut
- Slide the 3030 T-Nut behind the filament guide printed part
- M5x12 Cap Head Screw
- Fasten the M5x12 screw into the 3030 T-Nut

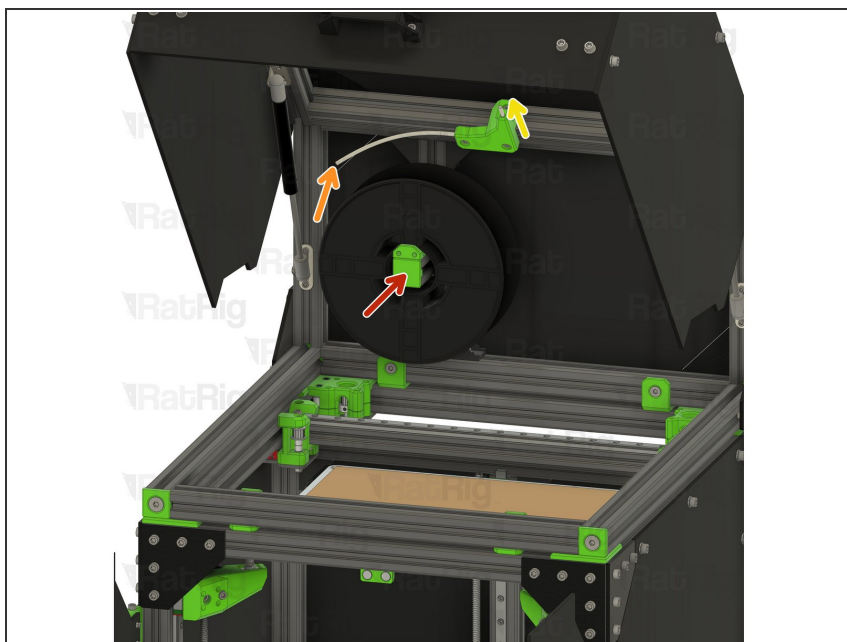
⚠ Take care not to over tighten the M5x12 screw as you can damage the printed part.

Step 10 — Install the PTFE filament guide



- PTFE Bowden tube
- Push the PTFE Bowden tube into the printed guide from the front. The tube will fit snugly to prevent coming out during printing.
- ⓘ The PTFE Bowden tube can either be used as shown, or can be installed directly into the extruder.

Step 11 — Using the spool holder



- Place your spool of filament on the filament mount
- Feed the end of your filament into the marked end of the Bowden tube...
- ...and it will appear out the other end, keeping your filament tidy and untangled