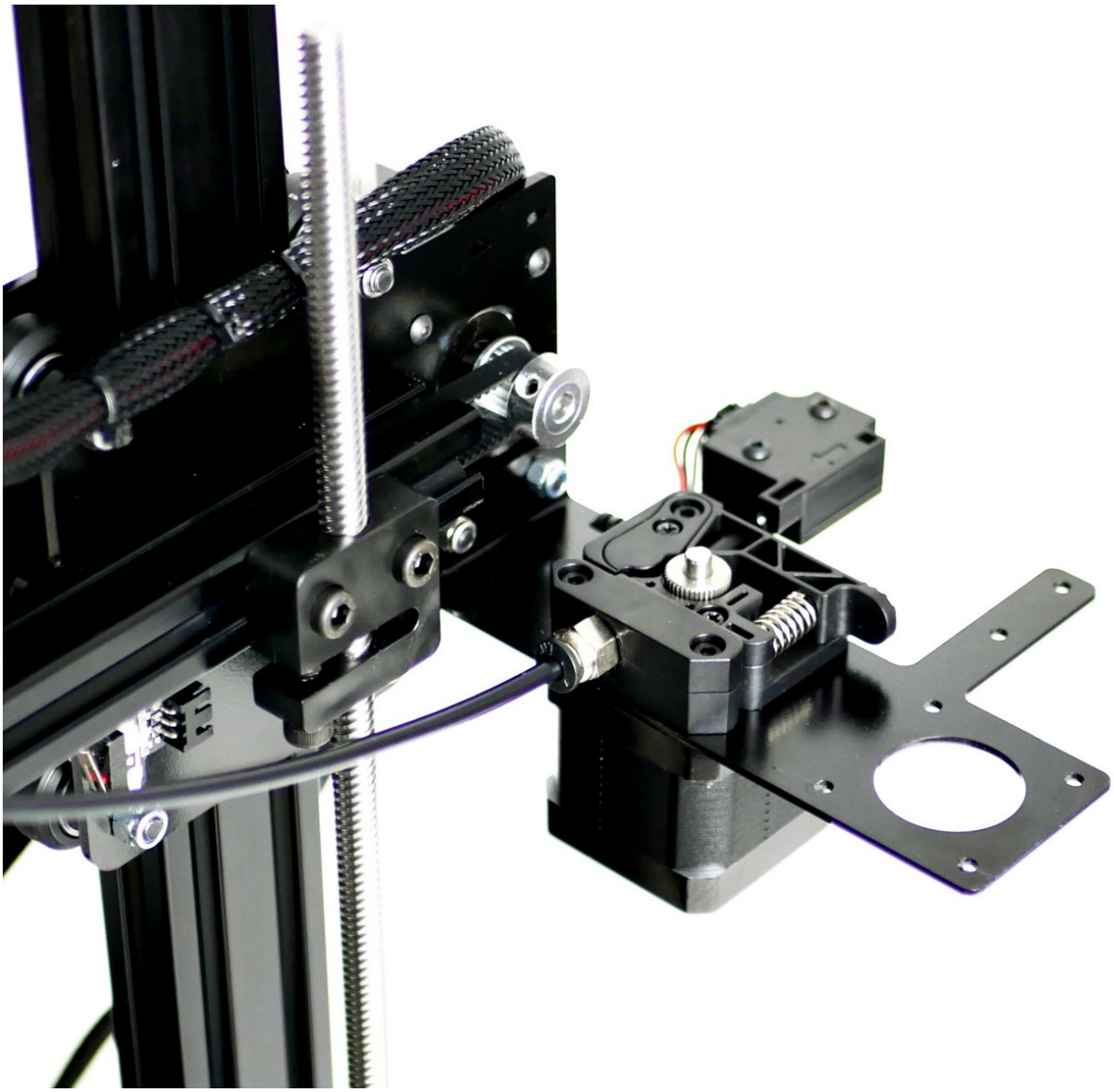
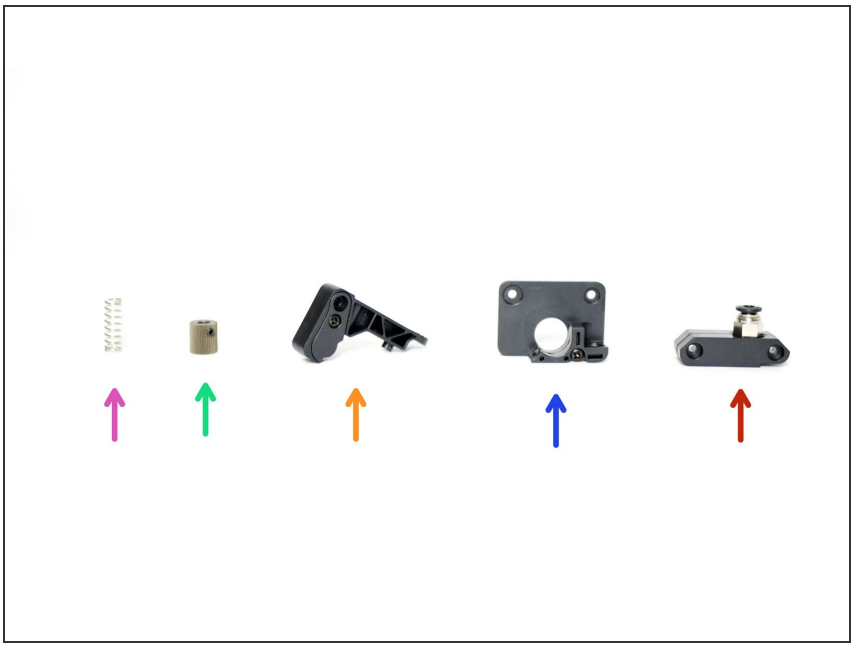
Makertech

Stage 08 - Extruder

Written By: Makertech

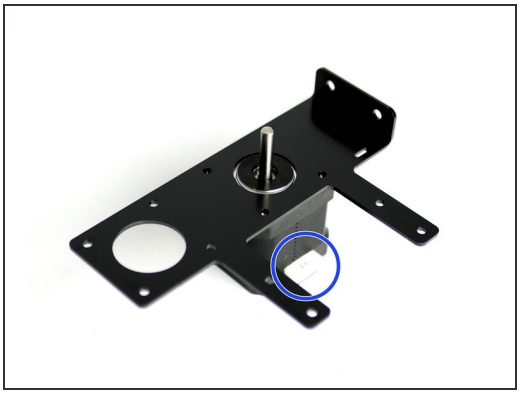


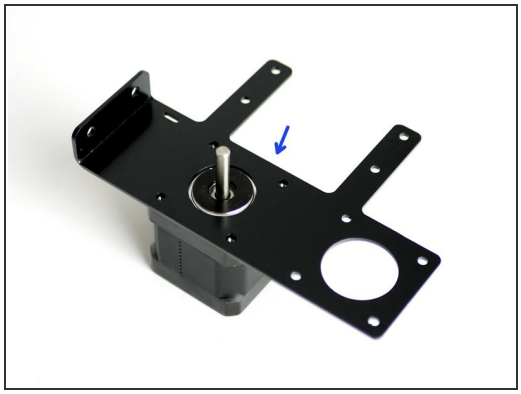
Step 1 — Extruder

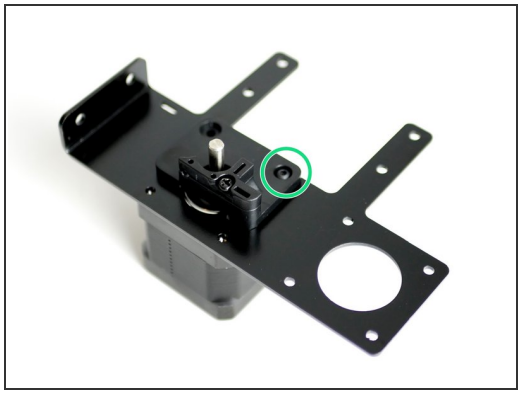


- Coupling Mount
- Back Plate
- Idler Arm
- Drive Gear
- Extruder Spring

Step 2 — Extruder Back Plate Install

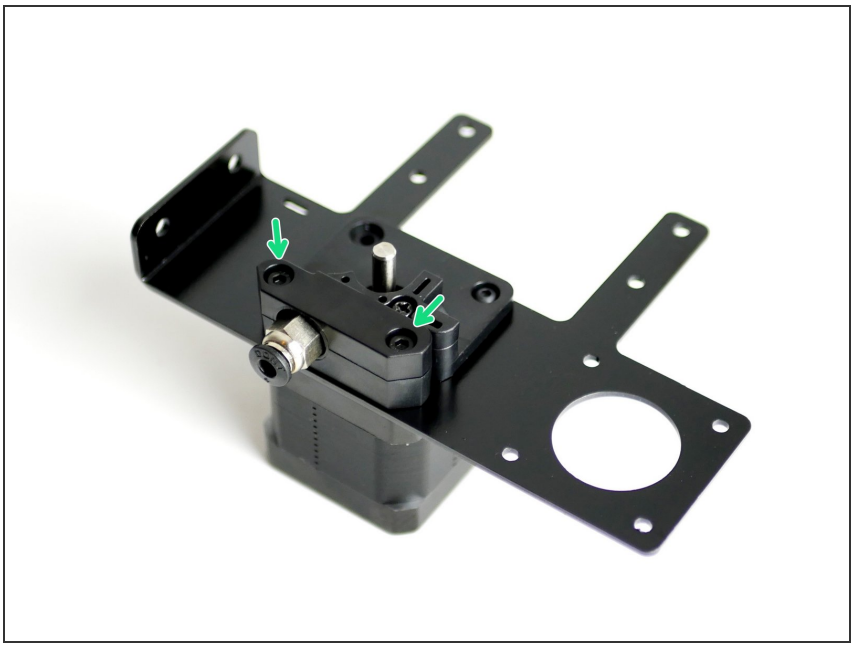






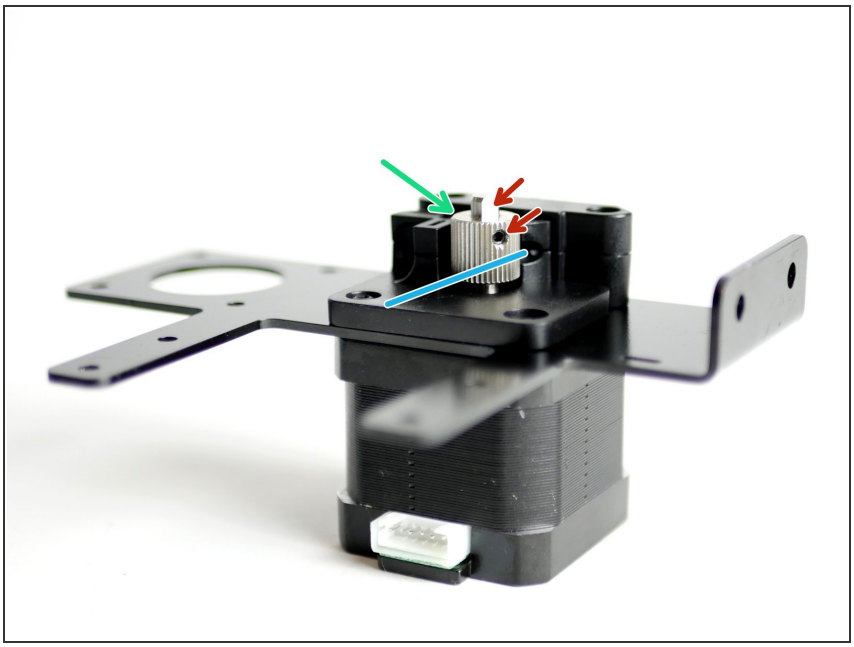
- Place the Extruder Mounting Bracket onto a motor. The motors pin connector should be pointing to the back of the bracket like shown.
- Secure the extruder back plate with a single M3 x 8mm bolt through the top **right** hole.

Step 3 — Coupling Bracket



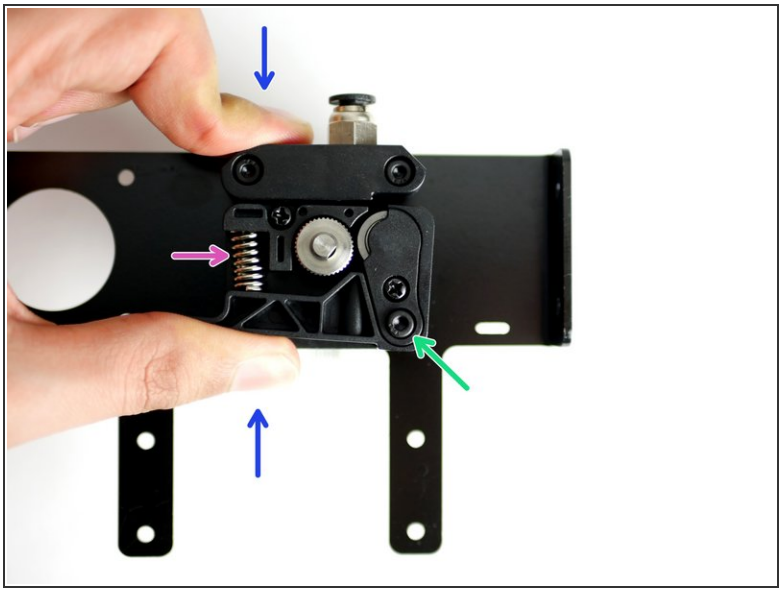
- Fix the Coupling Bracket onto the motor with two M3 x 18mm cap head bolts.

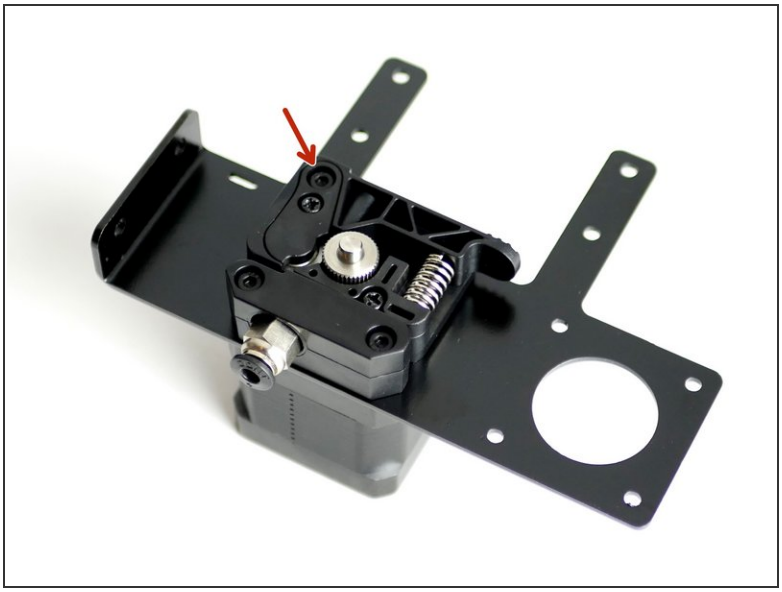
Step 4 — Drive Gear



- Align the drive gear so that it runs with the filaments path.
  - Filament path
- Fix the Drive Gear to the shaft of the motor.
  - Tighten the set screw onto the flat of the shaft. Tighten firmly.

Step 5 — Idler Arm

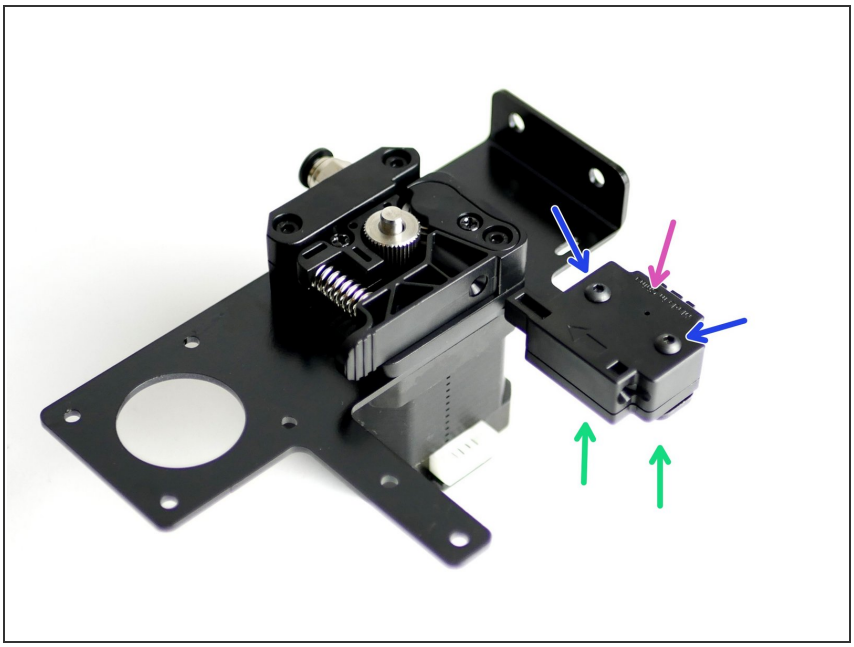




- Place in position the Extruder Spring on the Back Plate.
- Drop in a M3 x 18mm cap head bolt
- Compress the spring with the Idler Arm as shown in the first image.
- Tighten down the M3 x 18mm bolt

⚠ Do not over tighten, the arm should still be able to pivot.

Step 6 — Filament Sensor

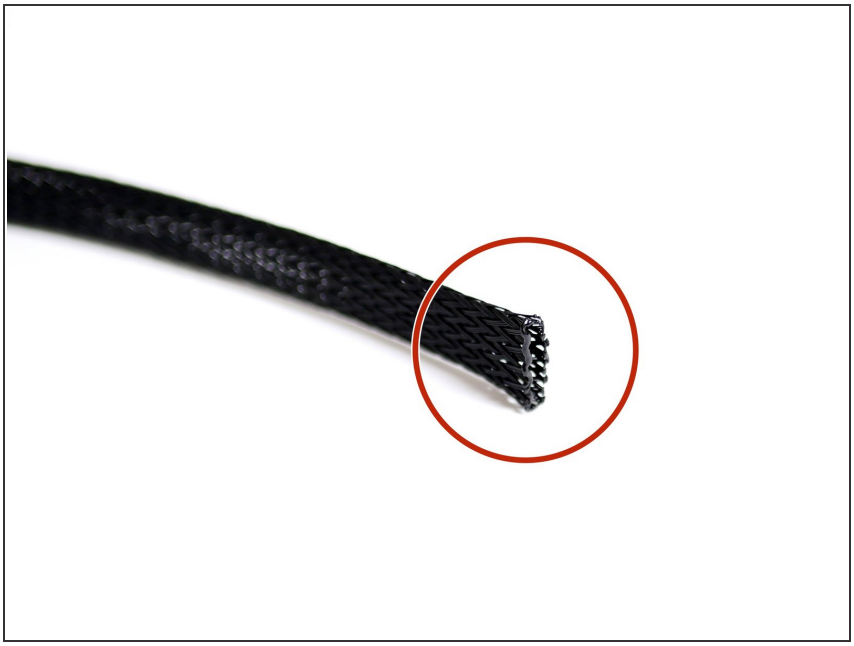


Fix the filament sensor to the Extruder Mounting Bracket:

- Filament Sensor
- Two M3 x 20mm bolts
- Two M3 Nyloc Nuts

Match the orientation of the Filament Sensor as shown in the photo.

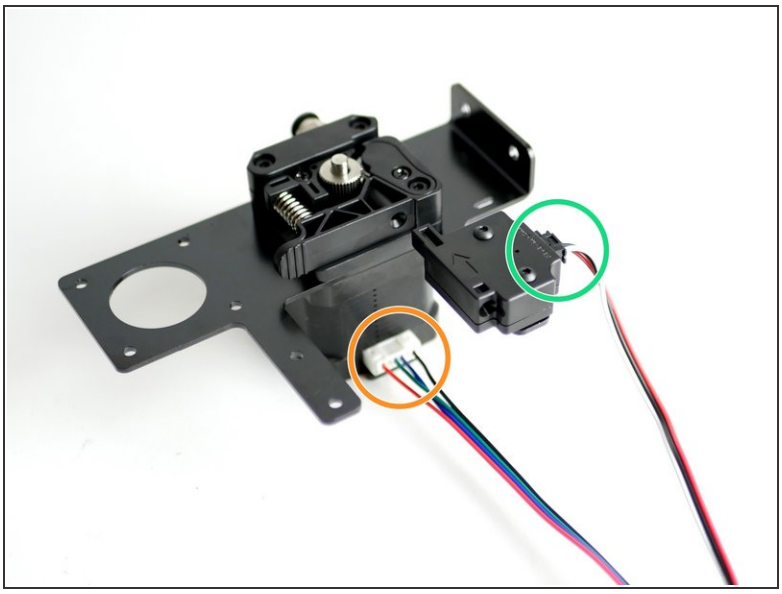
Step 7 — Cable Sleeving

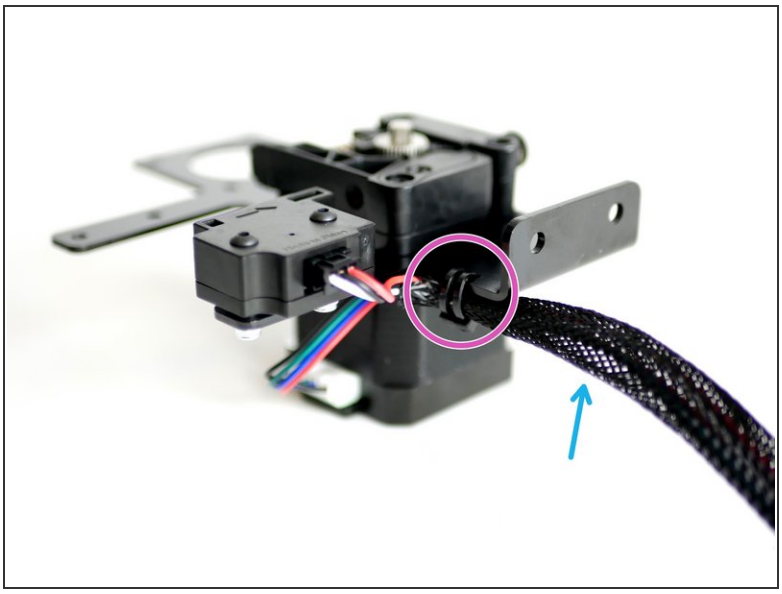


Cut 60CM of Braided Cable sleeving

- Melt the ends with a lighter to prevent them from fraying out.

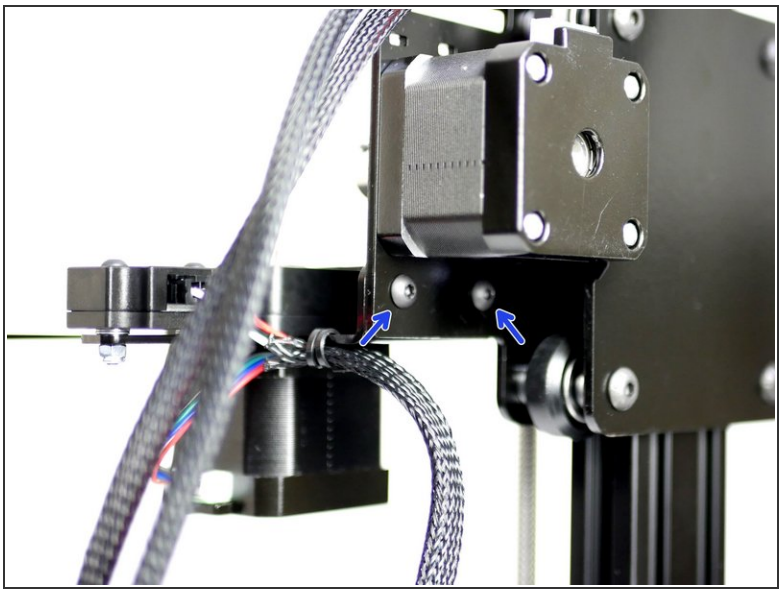
Step 8 — Cables

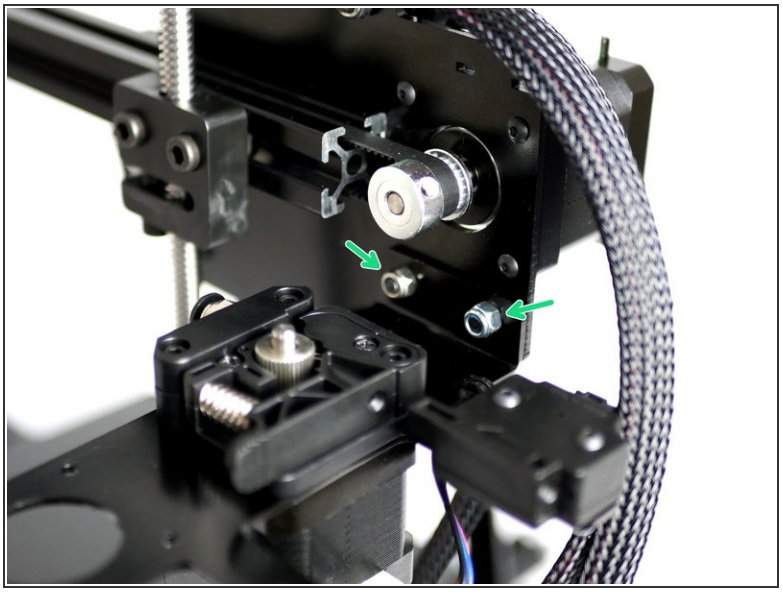




- Connect the filament sensor cable to the filament sensor.
- Connect a motor cable to the motor.
- Feed onto both of the cables the braided cable sleeving.
- Cable tie the cables to the mounting bracket.

Step 9 — Installing the Extruder Assembly





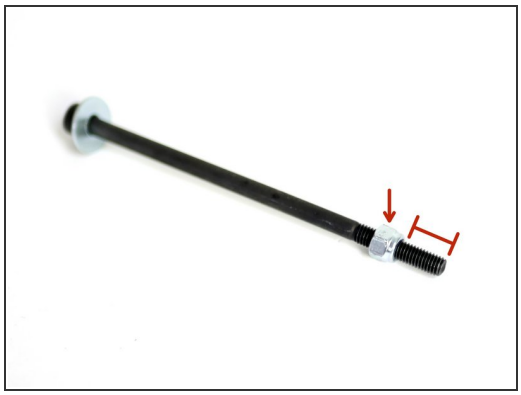
Fix the Extruder Assembly onto the Z-Carriage

- M4 x 10mm bolt
- M4 Nyloc Nut

Step 10 — Dual Switching Extruder Build

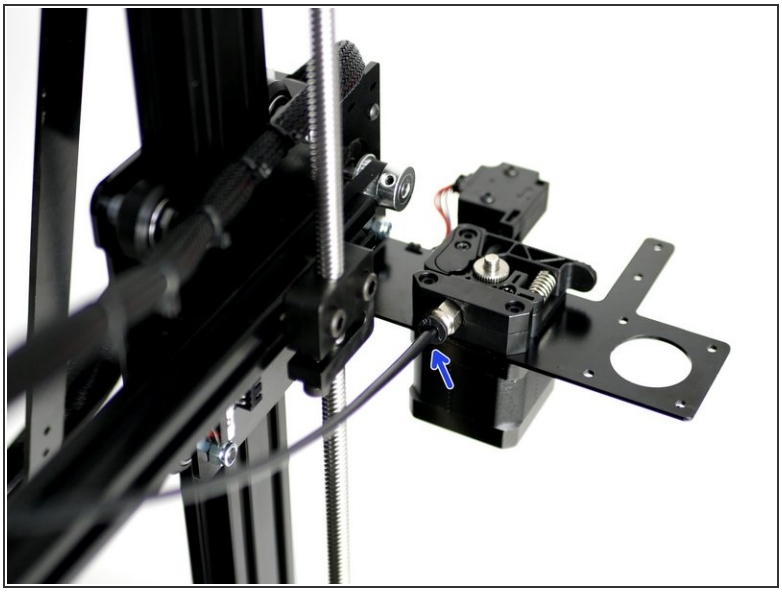
If you are building the Proforge 2/2S with the Dual Switching Extruder stop here and continue the build guide from the Dual Switching Extruder guides here.

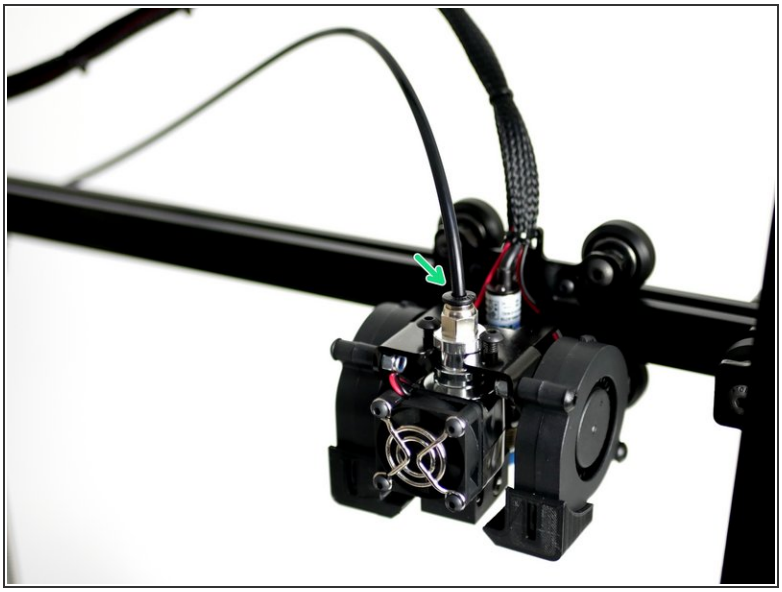
Step 11 — Spool Holder


- Slide onto a M5 x 100mm bolt an M5 15mm washer.
- Fix to the bolt an M5 Nyloc Nut about 1cm of the way up.
- Fix the bolt to the top of the Extruder Mount with another M5 Nyloc nut.

Step 12 — PTFE Tube





If you do not intend on installing the Dual Switching Extruder you can cut the tubing down to 50CM before installing.

- Insert one end into the PTFE Tubing into coupling on the Extruder.
- Insert the other end of the PTFE Tubing into the Hotend, make sure that it is fully inserted up to the nozzle.

