

Makertech

Stage 07: Extruder

Axis extruder build instructions.

Written By: Makertech

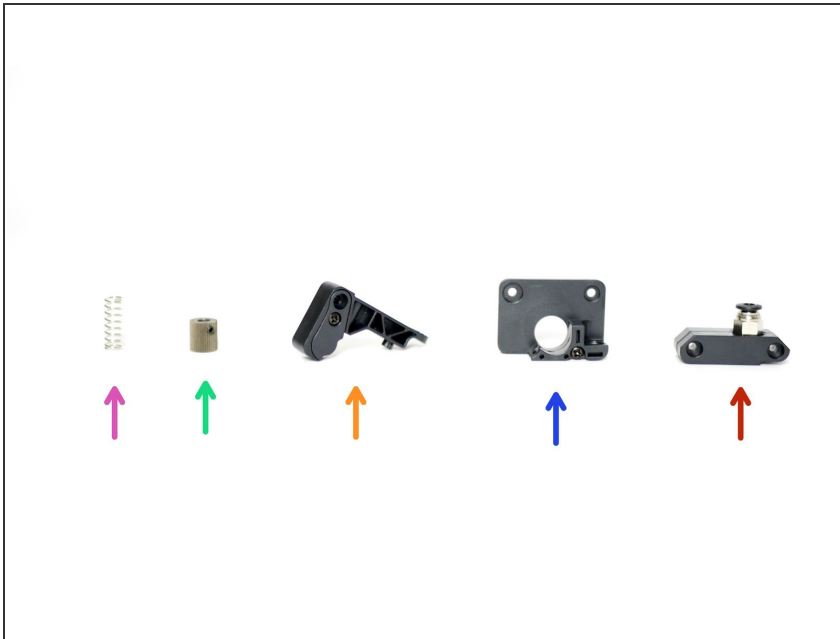




TOOLS:

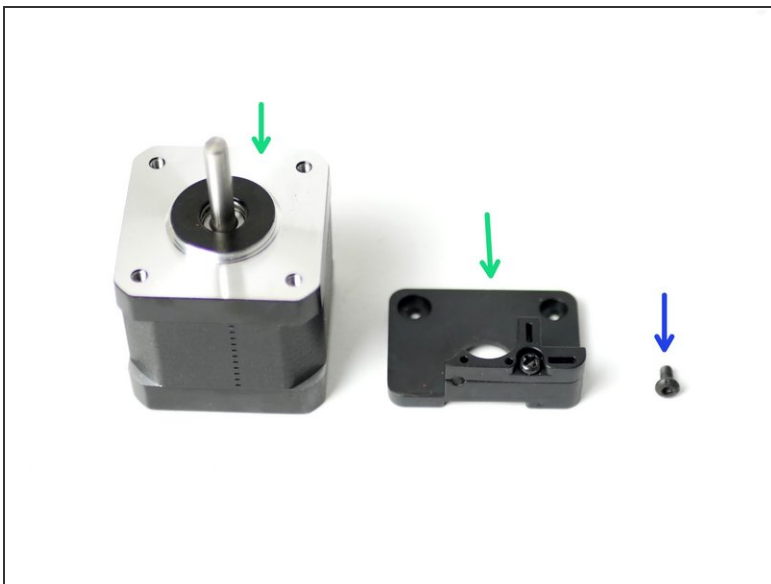
- [Allen Keys \(Included\)](#) (1)
- [Pliers](#) (1)
- [Cross Head Screw Driver](#) (1)

Step 1 — The Extruder Components



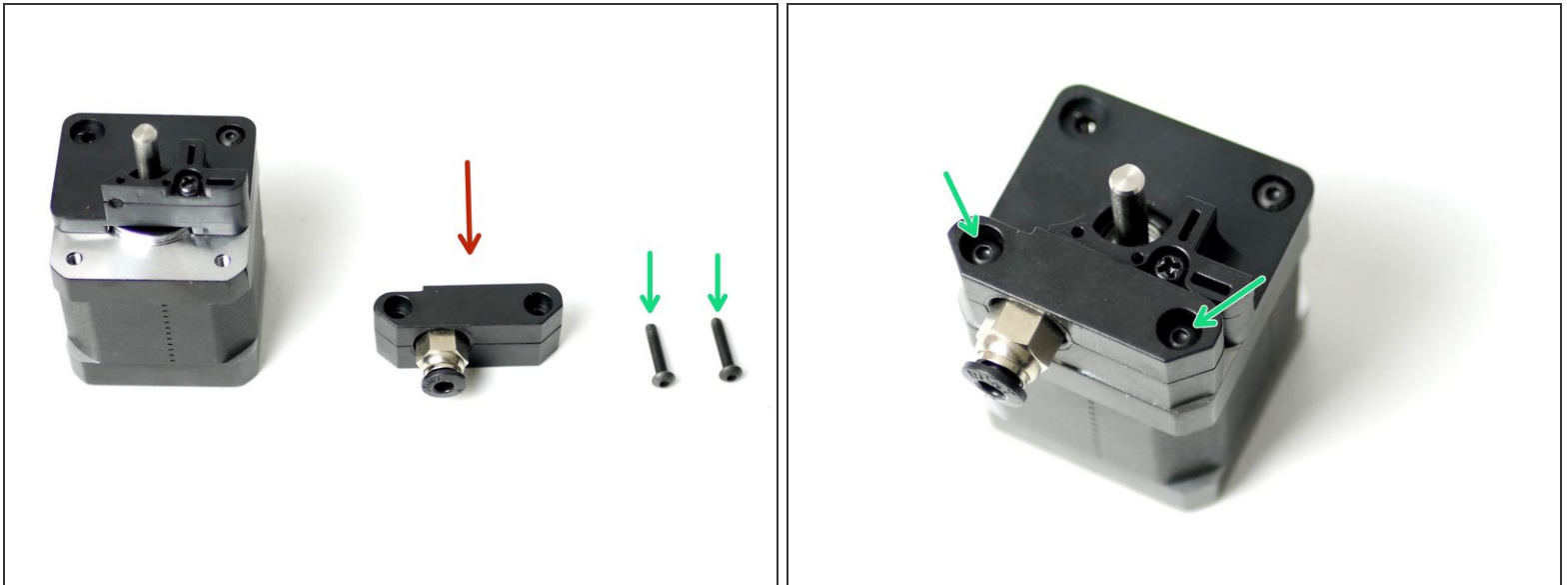
- Extruder Spring
- Drive Gear
- Idler Arm
- Back Plate
- Coupling Mount

Step 2 — Back Plate to Motor



- Fix the back plate to the motor face.
 - M3 x 6mm bolt
- Match the orientation of the motors connector.

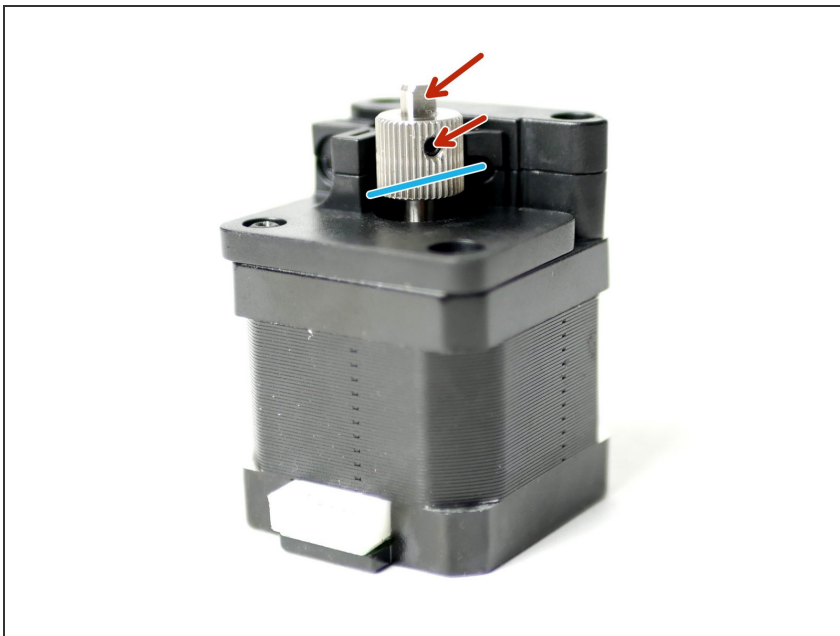
Step 3 — Coupling Mount



i Fix the coupling mount to the face of the motor.

- Coupling mount
- M3 x 16mm bolt

Step 4 — Drive Gear



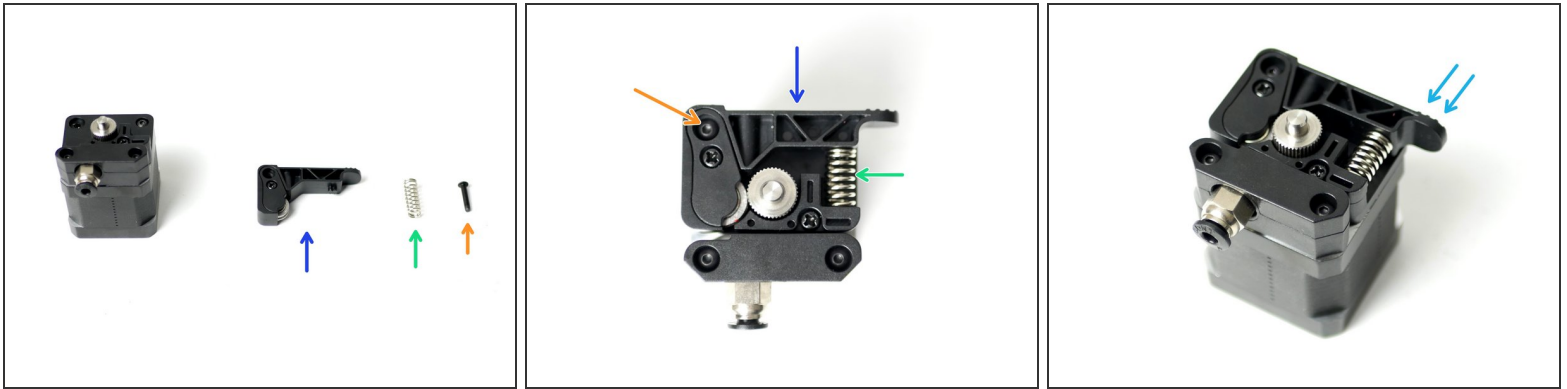
i Align the drive gear so that it runs with the filaments path.

- Filament path

i 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



i Take the Idler arm and attach it to the assembly.

- Idler arm
- Extruder Spring
- M3 x 16mm bolt

⚙ Put the spring in place and hold the arm in position before dropping in the M3 x 16mm bolt.

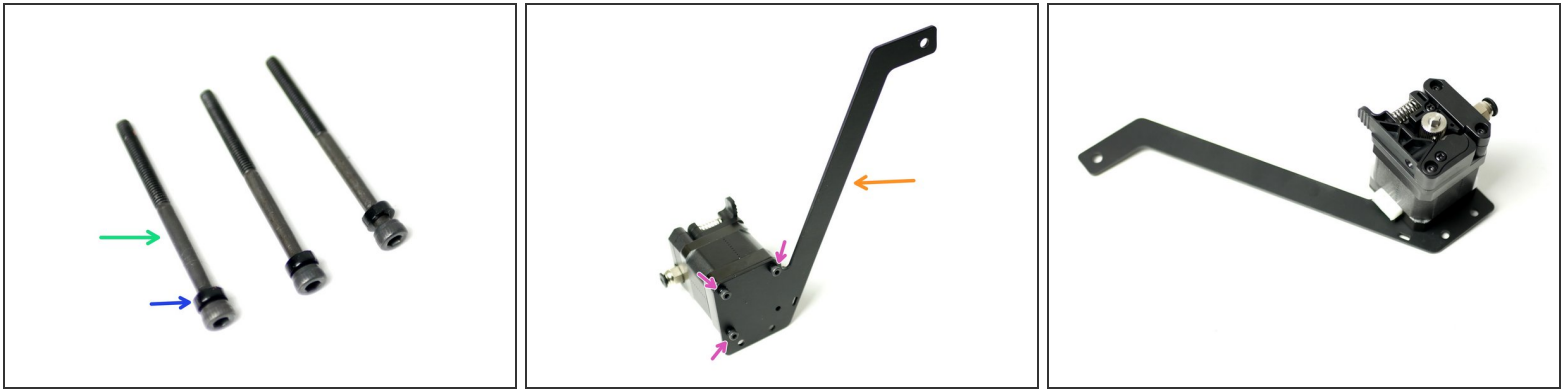
- Do not over tighten, the arm should still be able to swivel when pressure is applied.








Step 6 — Extruder Motor Bolts



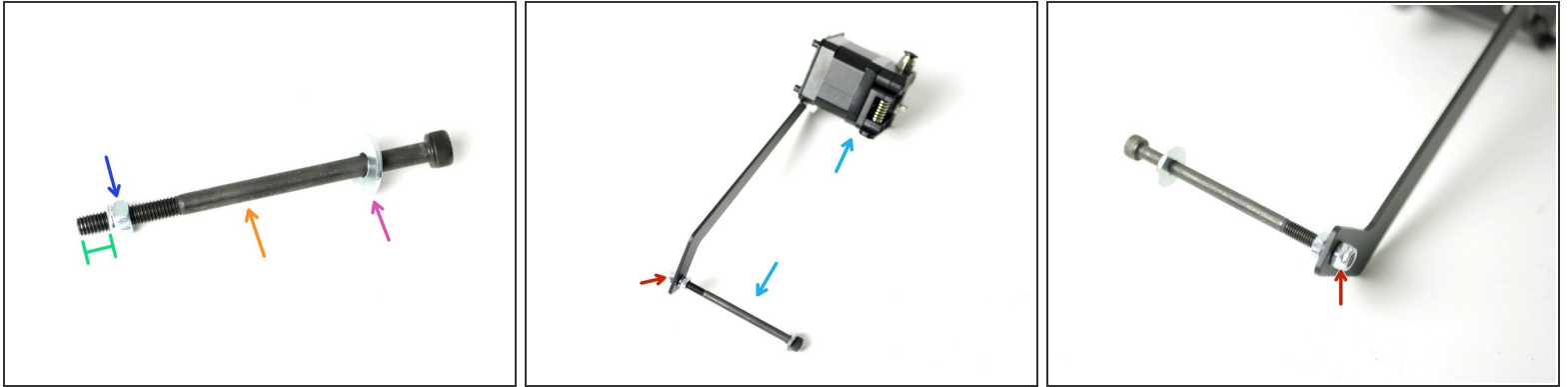
- Remove from the back of the extruder motor three of the bolts.

Step 7 — Extruder to Spool Holder



-  Take three M3 x 40mm bolts and slide onto each of them an M3x2mm spacer.
 -  M3 x 40mm bolt
 -  M3 x 2mm spacer
-  Fix these bolts onto the spool holder and fasten them into the back of the extruder motor, where the three bolts were removed in the previous step.
 -  Spool Holder
 -  M3 x 40mm bolt and spacer
-  Match the orientation of the spool holder shown.

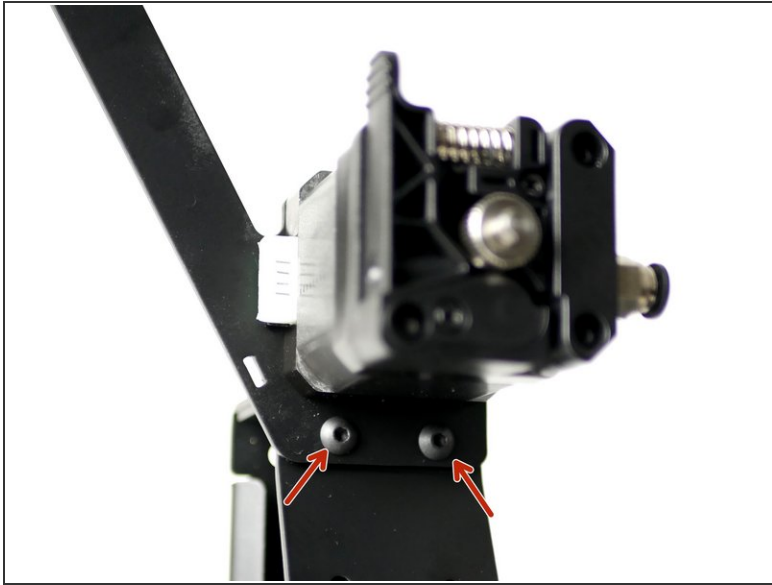
Step 8 — Spool Holder



Create the spool holder arm:

- M5 x 100mm bolt
- M5 penny washer
- M5 nyloc nut
- Approx 1CM
- Fix the arm onto the spool holder bracket with another M5 nyloc nut.
- Make sure that it is on the same side as the extruder.

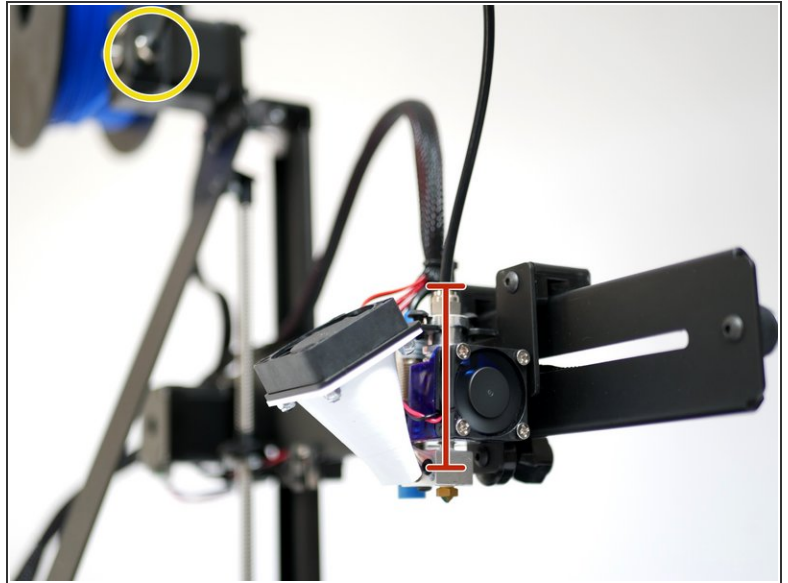
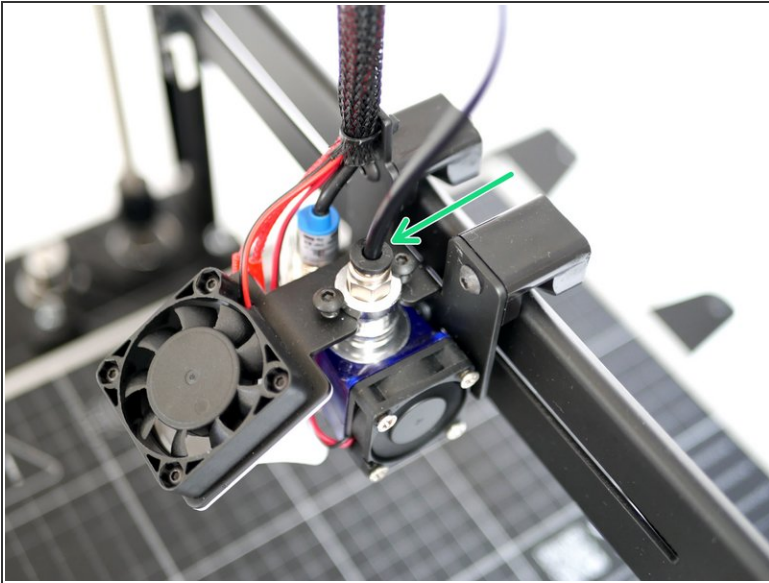
Step 9 — Mounting the Extruder Assembly



i Mount the Extruder assembly onto the left the of the Z-pillar.

- M4 x 10mm bolt
- M4 nyloc nut

Step 10 — PTFE Tubing



- Insert one end of the PTFE tubing to the extruder.
 - Insert the other end into the Hotend.
 - Make sure that it is fed all the way to the bottom of the hotend, this should be approximately 6CM.
- ⚠ Double check, as running filament through the hotend with the PTFE tube not all the way down will clog the Hotend.
- ★ If your hotend does get clogged you will have to disassemble it to remove the clogged plastic from the hotend throat.