

Makertech

Stage 02: Extruder

Extruder build for the Axis dual extrusion upgrade.

Written By: Makertech

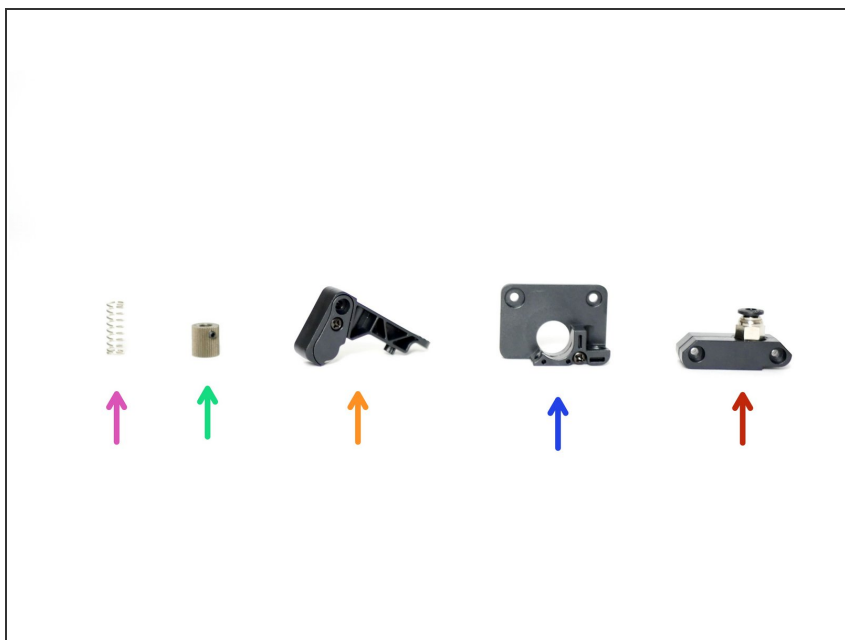




TOOLS:

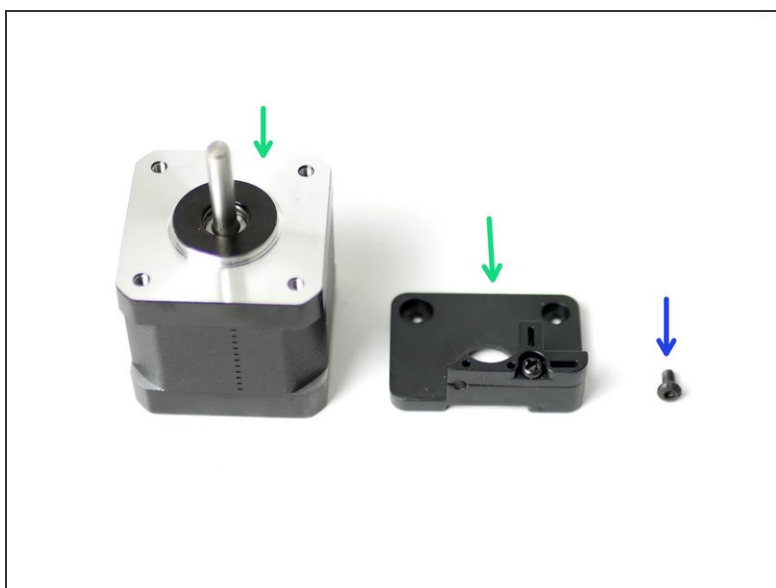
- [Allen Keys \(Included\)](#) (1)
- [Pliers](#) (1)
- [Cross Head Screw Driver](#) (1)

Step 1 — The Extruder Components



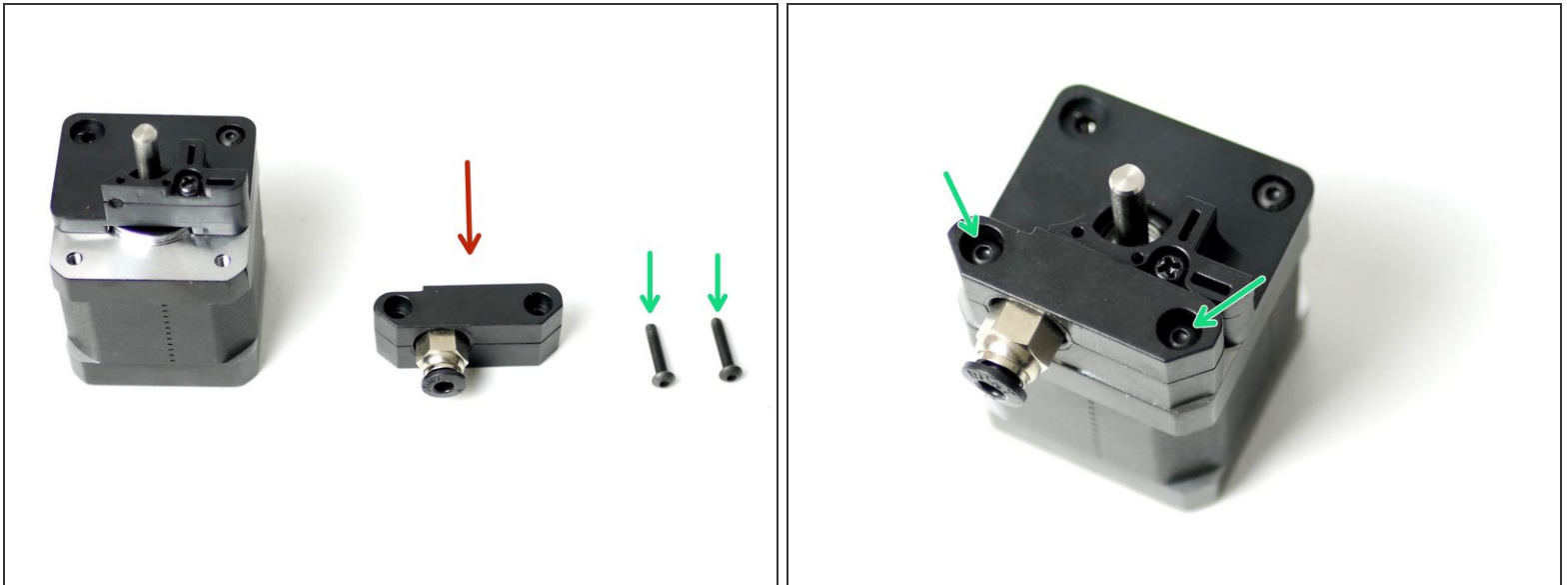
- Extruder Spring
- Drive Gear
- Idler Arm
- Back Plate
- Coupling Mount

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.

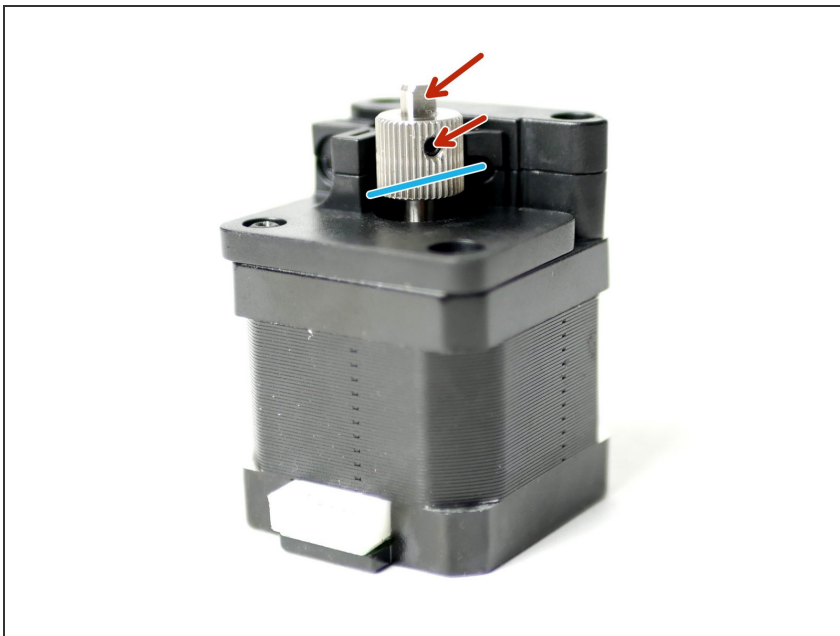
Step 3 — Coupling Mount



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

- Coupling mount
- M3 x 16mm bolt

Step 4 — Drive Gear



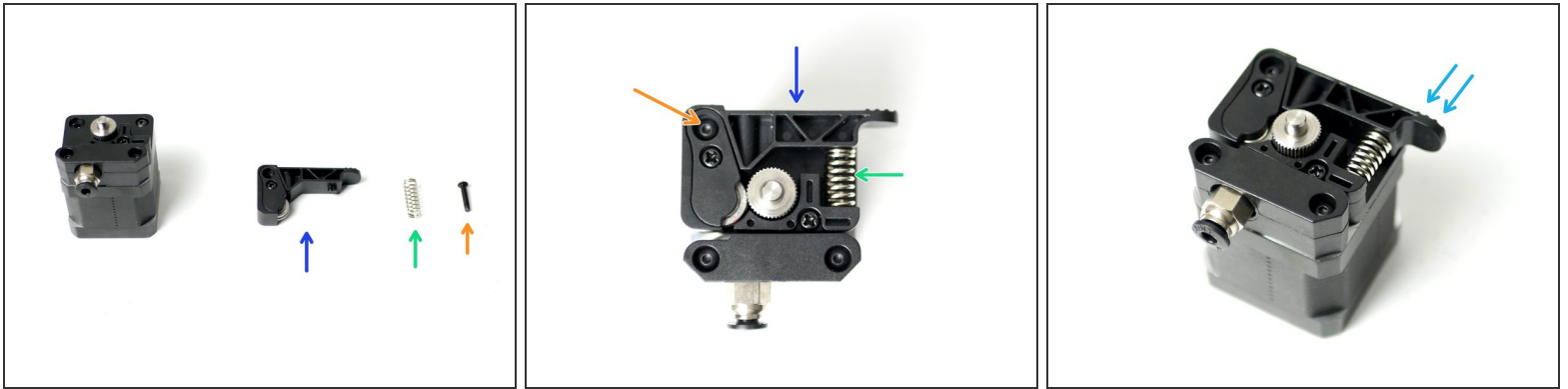
i Align the drive gear so that it runs with the filaments path.


- 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



 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.

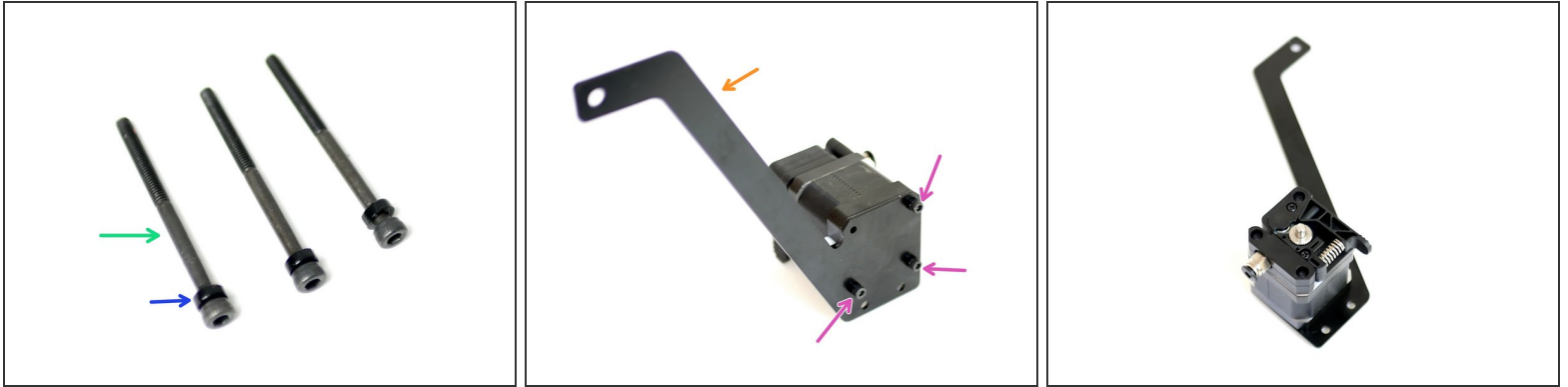
-  Do not over tighten, the arm should still be able to swivel when pressure is applied.

Step 6 — Extruder Motor Bolts



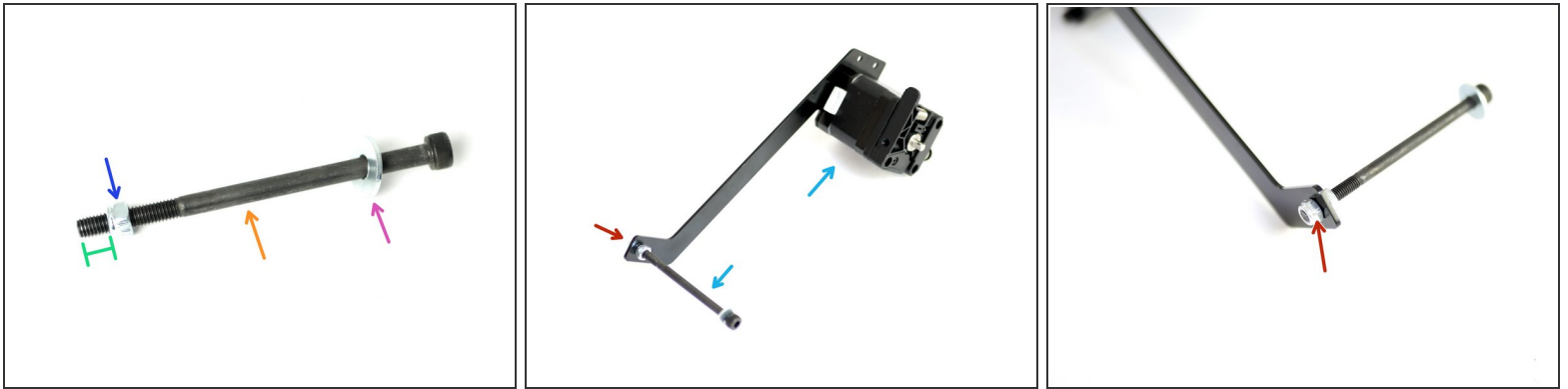
-  Remove from the back of the extruder motor three of the bolts.

Step 7



- i Take three M3 x 40mm bolts and slide onto each of them an M3x2mm spacer.
 - M3 x 40mm bolt
 - M3 x 2mm spacer
- i 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.

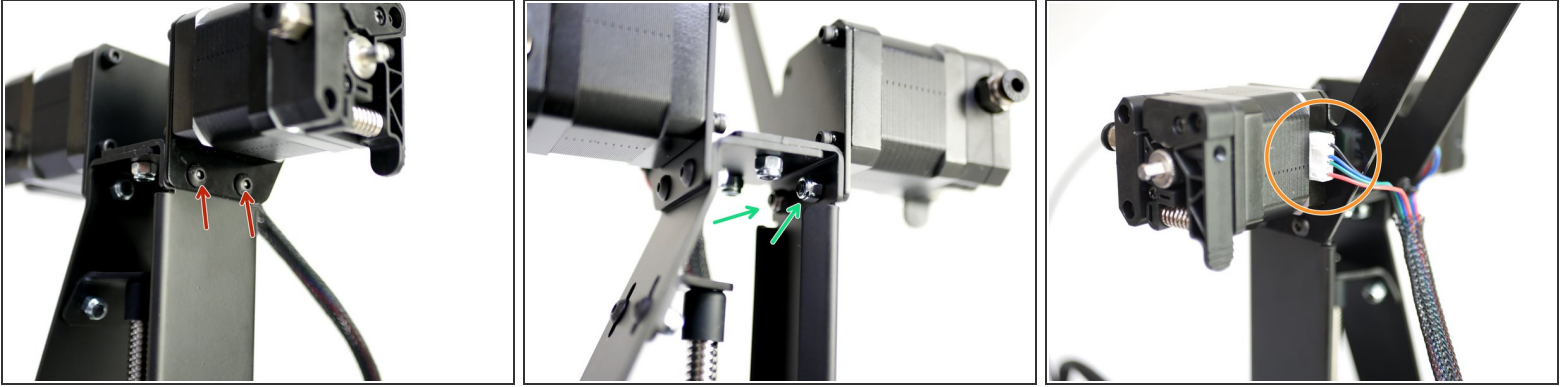
Step 8 — Spool Holder



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 right side of the of the Z-pillar.

- M4 x 10mm bolt
- M4 nyloc nut
- Also plug in the motor cable.