



02 | Z Frame Assembly

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 **TOOLS:**

- 6 mm Hex Key (1)

Allen Wrench

- 5 mm Hex Key (1)

Allen Wrench

- 3 mm hex key (1)

Allen Wrench

**PARTS:**

- 3030 Aluminium Extrusion - 430mm (2)

- 3030 Aluminium Extrusion - 354mm (1)

- Blind L Brackets (2)

- Misumi T-Nut (10)

- M6 x 12 (4)

Socket Head Screws

- M6 x 14 (6)

Socket Head Screw

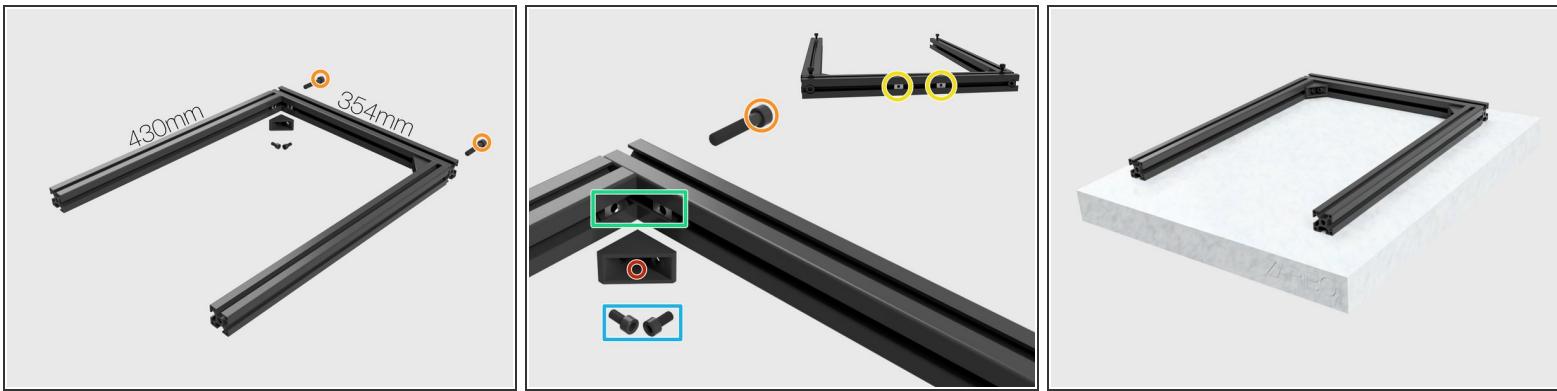
- M3 x 10 (8)

Socket Head Screw

- M3 (8)

Washers

Step 1 — Assembling aluminium extrusions



- Align [aluminium extrusions](#) as seen in the picture. 2 x [M8 socket cap screws](#) for top corners of the X frame. Do not full tighten them yet. Just to keep the frame in shape. (Do not forget to insert the T-Nuts before tightening M8)
- 2 x [T-Nuts](#) for every corner.
- Black metal L brackets for each corner.
- 2 x [M6 socket cap screws](#) for each corner.
- Insert 2 x [T-Nuts](#) to the top extrusion as seen in the picture in order to be able to mount the spool holder later.

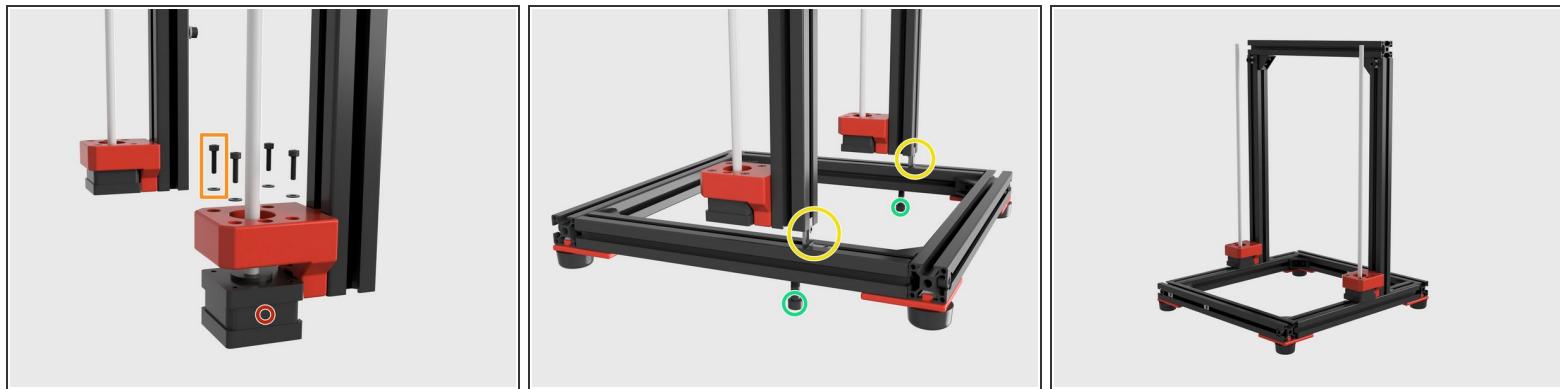
ⓘ Put your Z frame on a flat surface like glass or marble and then tighten the screws.

Step 2 — Mounting Z motor holders



- Insert 2 [T-Nuts](#) in front and 2 [T-Nuts](#) in back. Position of the screws is not important at the moment. Slightly tighten with [M6x14](#) screws just to keep them in place.
- [Printed Z motor holders](#) should be mounted directional. Smooth rod holes should be positioned on sides as seen in the picture.
- Insert 2 more T-nuts and mount 2 x [Printed Z motor holders](#)
- Align the Z motor holders with the extrusion ends and tighten the [M6x14](#) socket cap screws.

Step 3



- Insert and seat the Z motors into the [Z motor holders](#).
- Use 4 x [M3x10](#) screws and 4 x [M3 Washers](#) to mount each motor in it's place.
- Insert the blind L brackets to Z frame extrusions.
- Attach [M8x40](#) screws but do not fully tighten them.

(i) While assembling multi point screw joints, it is better not to fully tighten any screws before others in order to ensure proper alignment. Tighten them in order like after slightly tightening M8 screws, tighten the L brackets and tighten the M8 screws again and final tighten the brackets after that.

To reassemble your device, follow these instructions in reverse order.