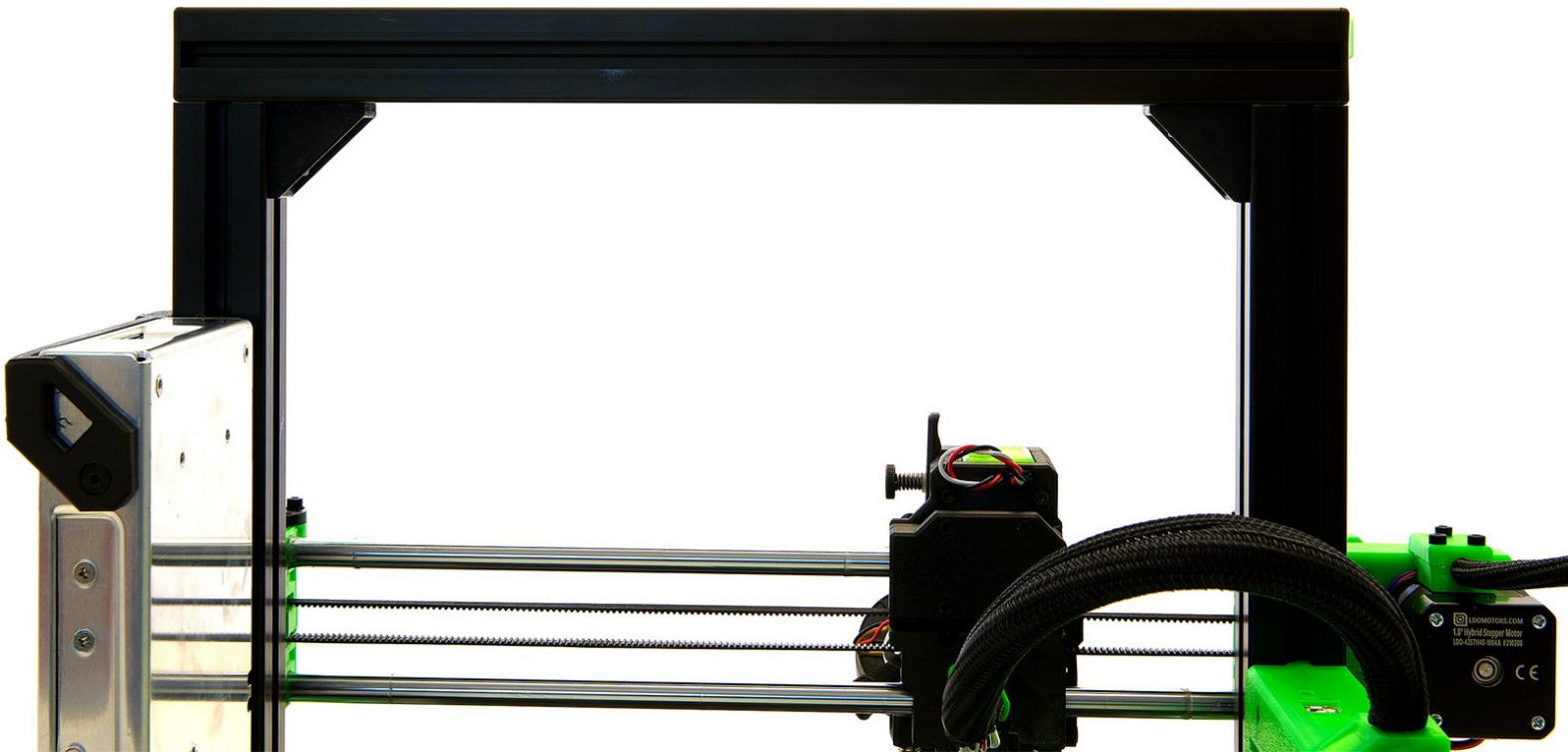


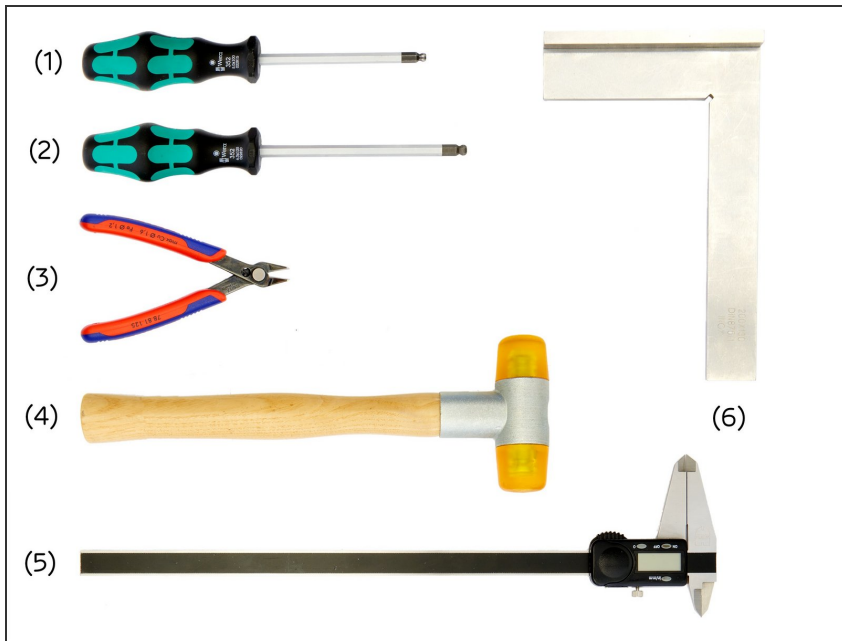
caribou3d

17. Installation of the Upper x-Profile

Written By: Katja Aller

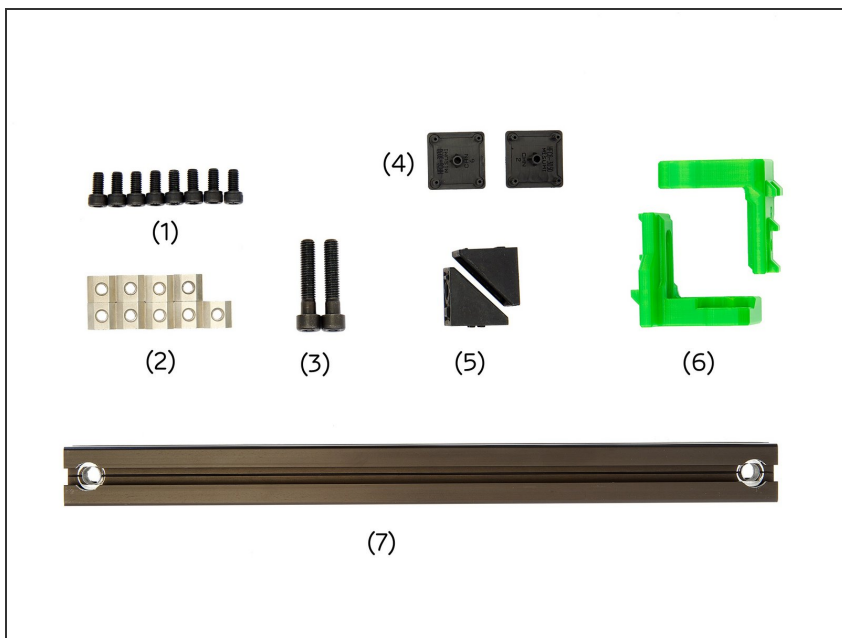


Step 1 — Required Tools



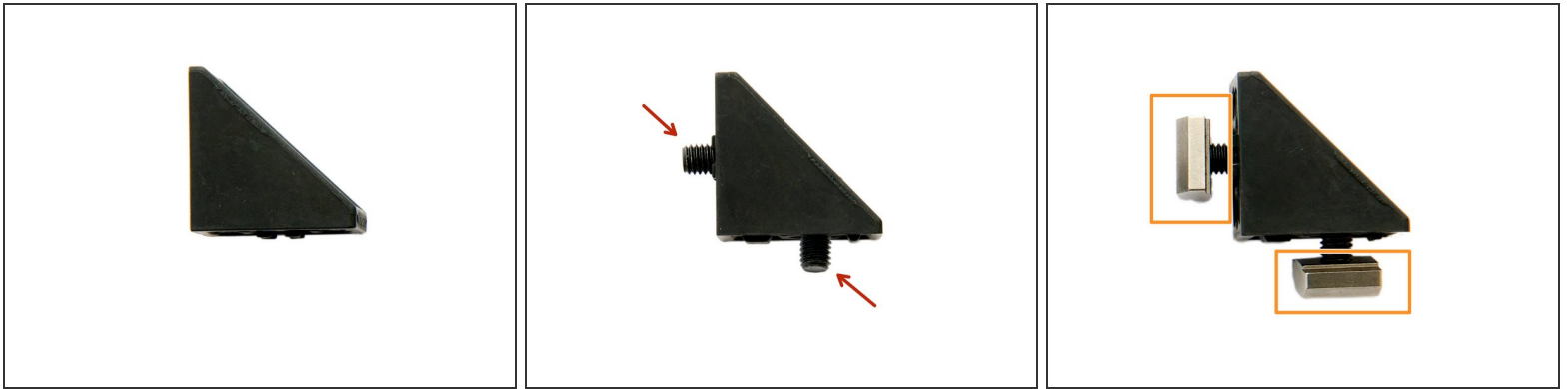
- (1) [5.0x100mm Hexagon Ballpoint Screwdriver](#)
- (2) [6.0x125mm Hexagon Ballpoint Screwdriver](#)
- (3) [Electronic Super Knips](#)
- (4) [Soft-faced Hammer with Cellidor Head Sections](#)
- (5) Caliper 300mm
- (6) Tri Square

Step 2 — Assembling the Parts and Screws



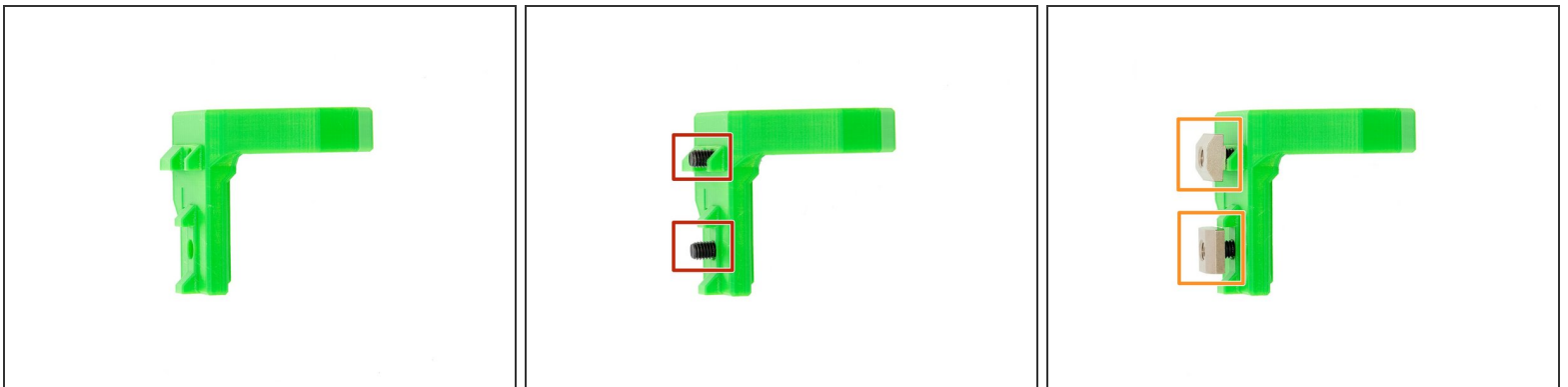
- (1) **8x** [M6x12mm Hexagon Socket Head Cap Screws](#)
- (2) **9x** [T-Nuts](#)
- (3) **2x** [M8x40mm Hexagon Socket Head Cap Screws](#)
- (4) **2x** [End Caps](#)
- (5) **2x** [Corner Brackets](#)
- (6) **2x** [z-Top Mount](#), left and right
- (7) [x-Aluminium Extrusion](#)

Step 3 — Preparing the Corner Brackets



- Insert **2x M6x12mm Hexagon Socket Head Cap Screws** into a corner bracket.
 - Screw them *loosely* to the corner bracket using **2x T-Nuts**.
- ⚠ Pay attention to the alignment of the T-Nuts (Fig. 3).
- Repeat this step for the other corner bracket.

Step 4 — Preparing the Z-Top Mounts



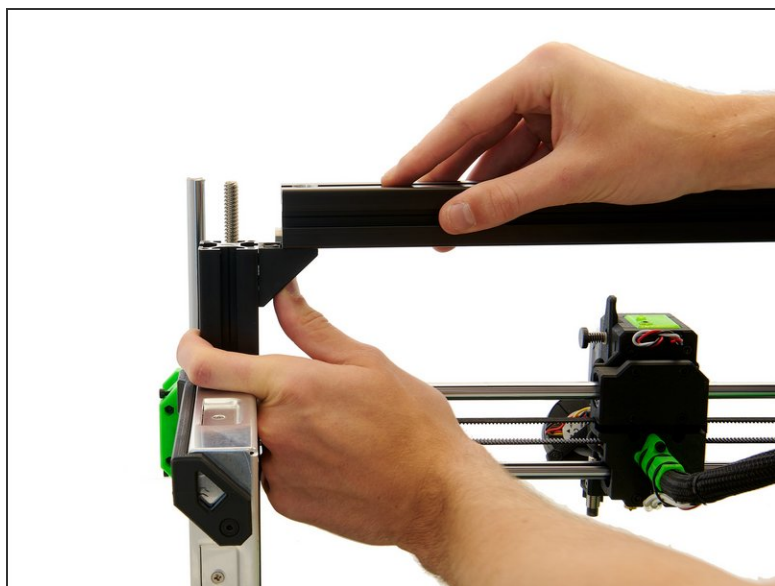
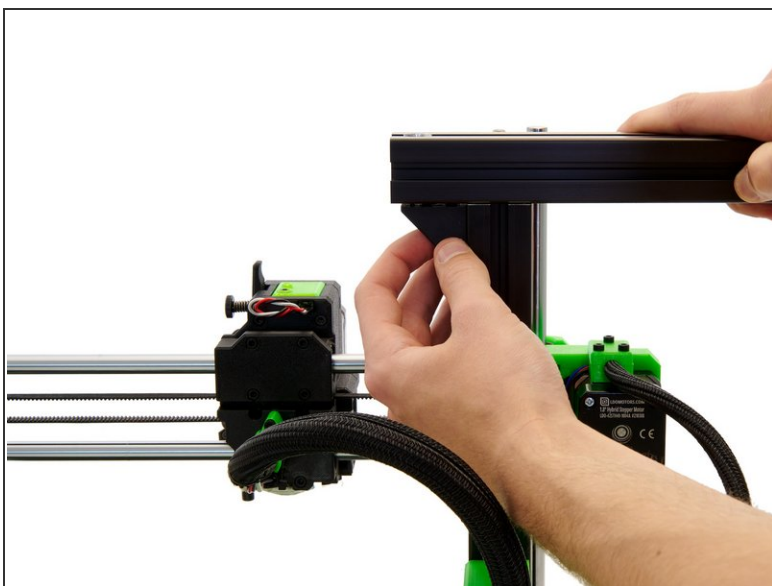
- Place **2x M6x12mm Hexagon Socket Head Cap Screws** in one of the z-top mounts.
 - Screw them *loosely* to the z-mounts with **2x T-Nuts**.
- ⚠ Pay attention to the alignment of the T-Nuts (Fig. 3)
- Repeat this step for the other z-top mount.

Step 5 — Installing the Corner Brackets



- Slide one of the corner brackets into the right slot of the left z-extrusion so that the end of the extrusion and the corner bracket are level.
- Now tighten the **M6x12mm Hexagon Socket Head Cap Screws** in the corner bracket on the Z-axis.
- Repeat this step on the right side.

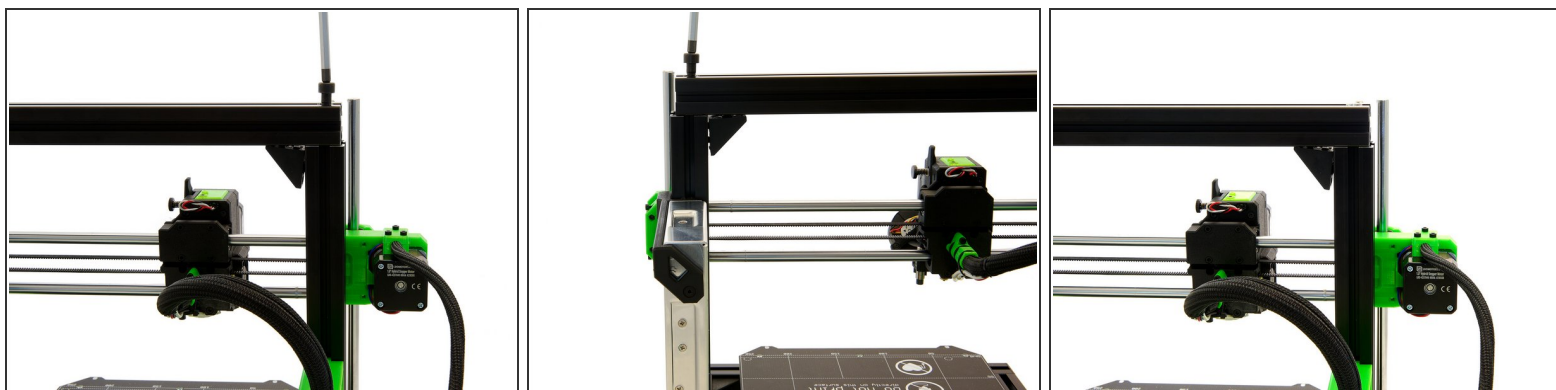
Step 6 — Installing the X-Axis (1 / 3)



- Push the x-extrusion through the two T-Nuts.

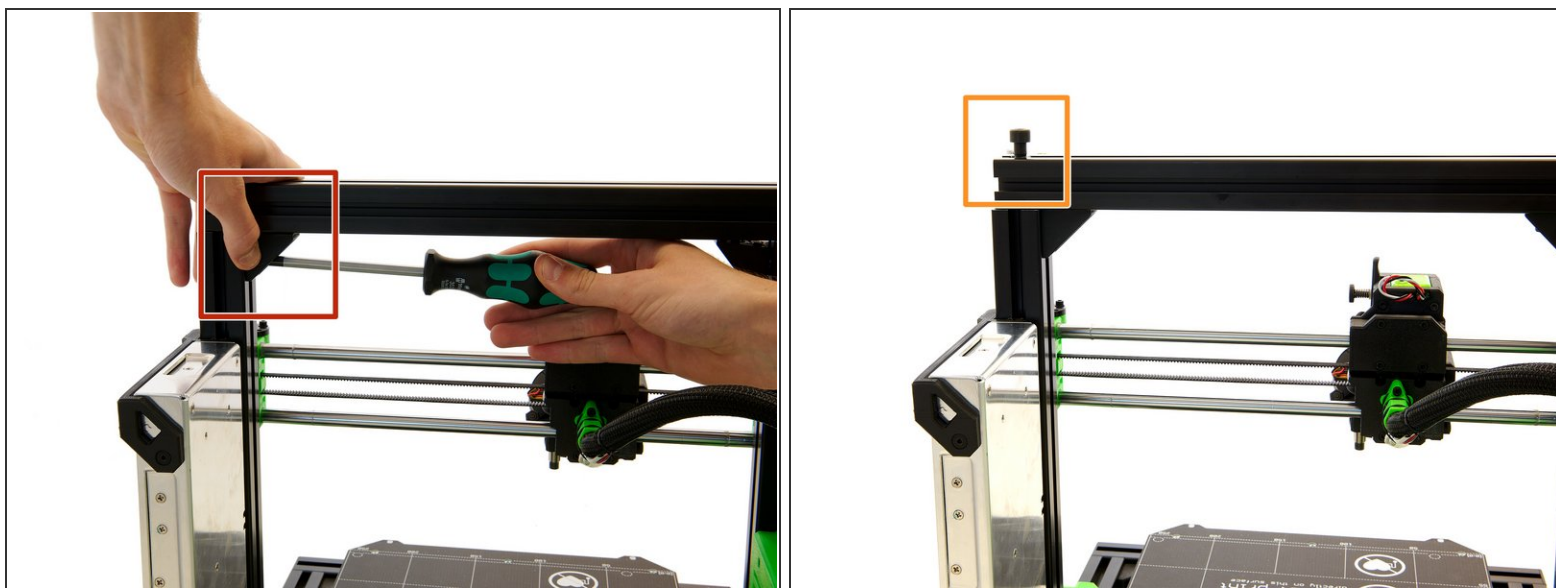
⚠ Make sure that the large holes in the x-extrusion are pointing up and the small holes are pointing down.


Step 7 — Installing the X-Axis (2 / 3)



- Loosen the **2x M6x12mm Hexagon Socket Head Cap Screws** in the corner brackets on the z-axis.
- Insert **2x M8x40mm Hexagon Socket Head Cap Screws** into the x-axis and tighten them hand-tight.

Step 8 — Installing the X-Axis (3 / 3)



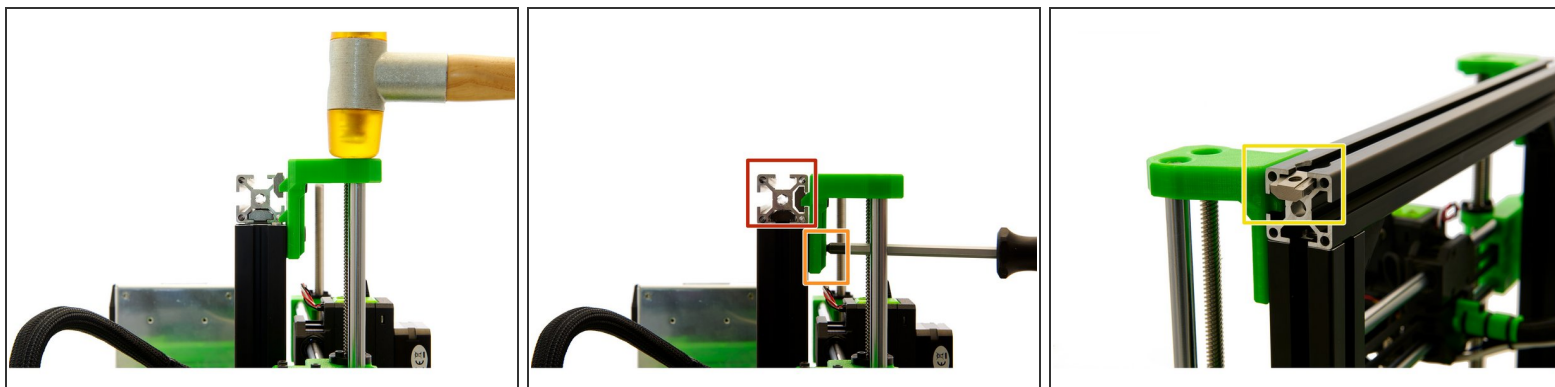
- Then press the two corner brackets against the x-axis and retighten the **2x M6x12mm Hexagon Socket Head Cap Screws**.
 - Remove the **2x M8x40mm Hexagon Socket Head Cap Screws** from the x-axis.
-  The x-axis should now be movable to the right and left.

Step 9 — Installing the Z-Top Mounts (1 / 2)



- Move the x-axis to the right.
- Slide the left z-top mount into the front slot of the left z-axis using the lower T-Nut.
- Carefully position the left hole in the z-top mount over the z-rod.

Step 10 — Installing the Z-Top Mounts (2 / 2)



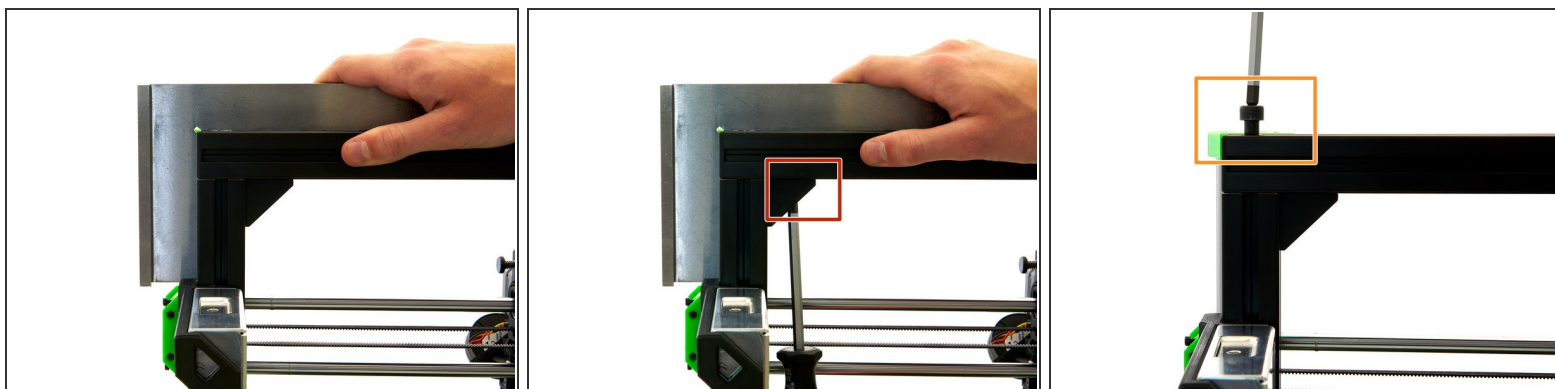
- Gently tap the z-top mount with a hammer so that it is at the same height as the z-axis.
- Slide the x-axis over the **T-Nut** and make sure that the Nut and the T-Nut are at the same level.
- Now, tighten only the lower **M6x12mm Hexagon Socket Head Cap Screw**.
- Repeat these two steps for the right z-top mount.
- Place a **T-Nut** in the upper slot of the x-axis.

Step 11 — Attaching the End Caps



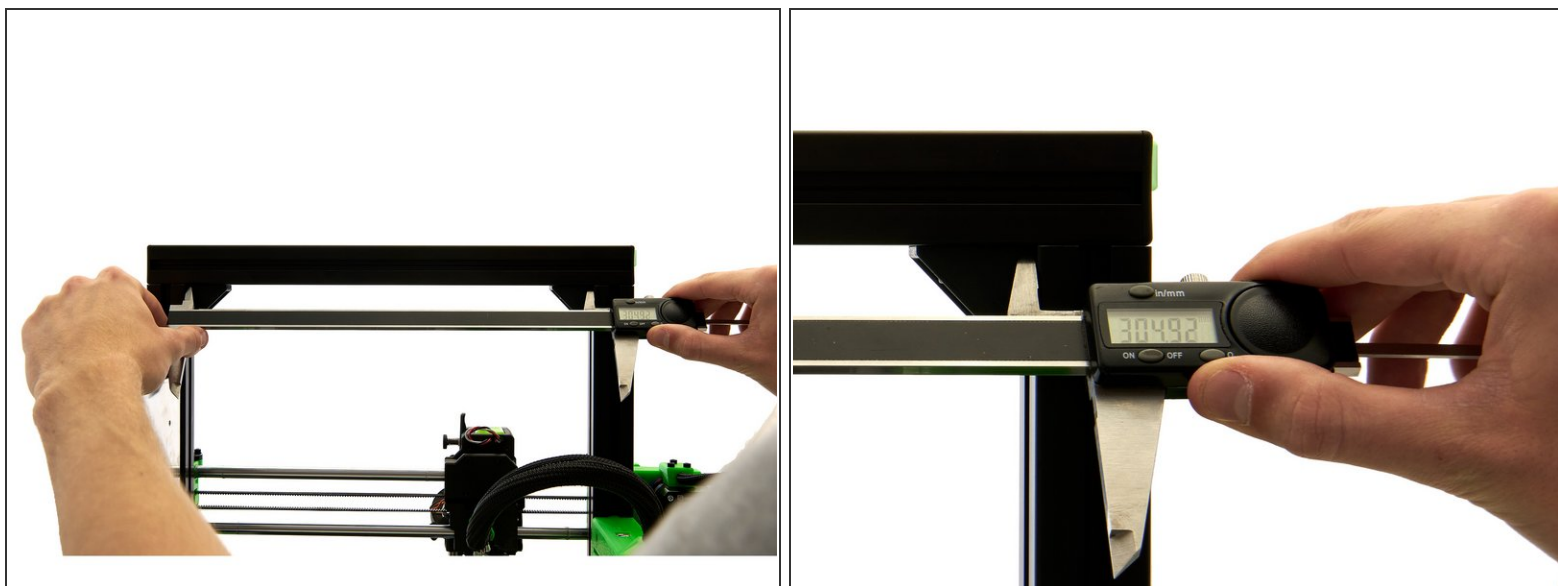
- Now, prepare the **2x End Caps** by shortening the center part by half (e.g. using a side cutter).
 ⚠ Be careful not to cut off too much or the end caps will not hold on the axis.
- Finally, attach both end caps to the ends of the x-axis.

Step 12 — Aligning the X-Axis



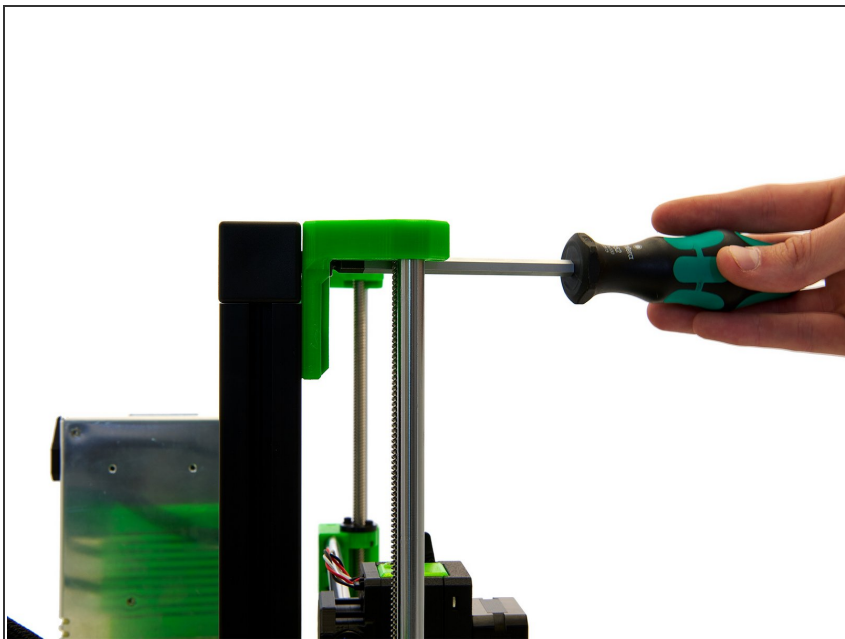
- Use a stop angle to ensure that the x- and z-axes are at a 90° angle to each other.
- Tighten the **M6x12mm Hexagon Socket Head Cap Screw** in the corner bracket on the x-axis.
- Tighten the **M8x40mm Hexagon Socket Head Cap Screw** in the x-axis.
- Repeat this step on the other side.
- ⚠ Then re-check to make sure that the x- and z-axes are at a 90° angle to each other.
- ❗ If this is not the case, you have to align the x-axis again.

Step 13 — Measuring the Frame



- Once you have successfully aligned your x-axis, use a caliper to measure the distance between the two z-axes.
- To do this, place the caliper at the corner brackets.
- ⓘ The distance between the two z-axes must range between $304.90 - 305.50\text{mm}$.
- ⓘ The measured value between the two z-axes and those of the xy-frame, must not exceed a difference of 0.05mm .
- ⚠ If the difference of their values is $> 0.05\text{mm}$, you have to re-align the frame (see Step 11).
- If the difference of their values is $< 0.05\text{mm}$, insert and tighten the **2x M8x40mm Hexagon Socket Head Cap Screws** into the x-axis.
- ⓘ If necessary, tighten these two screws with a torque wrench set to 2.5NM .
- To check this, measure the distance between the z-axes again. If these values are $< 0.05\text{mm}$, continue with Step 13. Otherwise, you have to loosen the **2x M8x40mm Hexagon Socket Head Cap Screws** again and re-align the x-axis (see Step 11).

Step 14



- Lastly, tighten the top **M6x12mm Hexagon Socket Head Cap Screws** on the left and right z-top mounts.

Step 15



- ① The installation of the upper x-profile is completed now.
- ① Continue with instructions [18. Assembly and Installation of the Spoolholder](#).