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D – Tower Assembly

Written By: HKBay



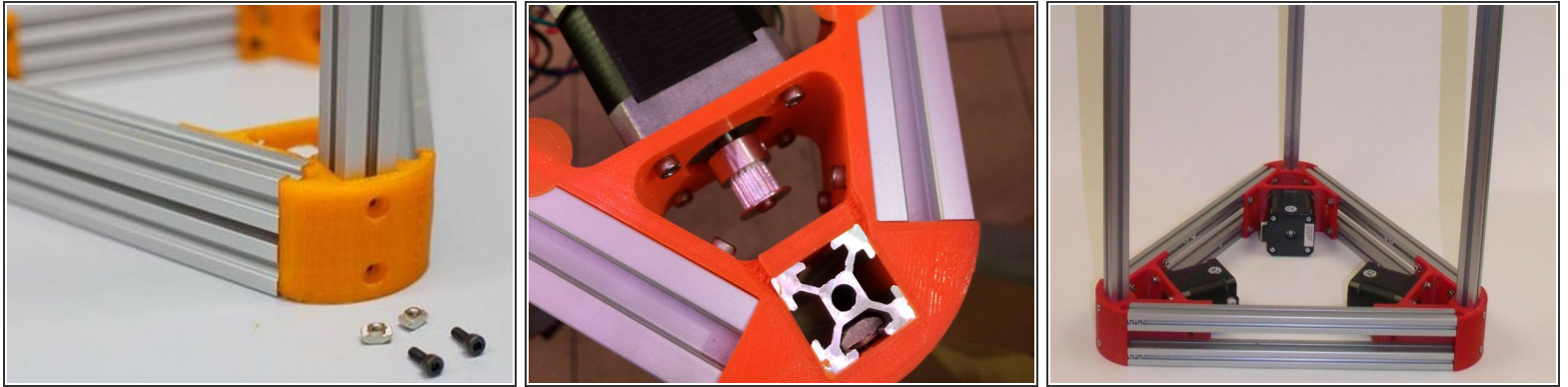
 **TOOLS:**

- Hex key; ball ended, long arm, 2.5mm (1)
- Hex key; ball ended, 2.0mm (1)
- Mullet (1)



 **PARTS:**

- Assembled base (1)
- Long Alu frame profiles (3)
- M3x8 screws (27)
- t-slot nuts (27)
- Endstop holders (6)
- Side rails with slides (3)
- Micro-switches (the ones with 2 cables only) (3)
- M2.5x12 screws (6)

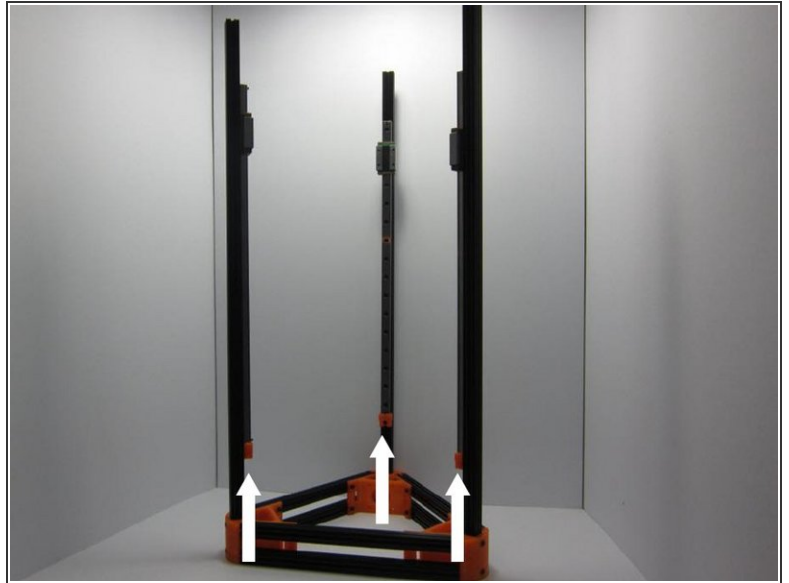
Step 1 — Fit towers to base



 It is advisable to put the printer on a solid floor for this step!

- Fit two M3x8 screws and t-slot nuts to each of the 3 motor brackets and tighten them finger-tight. Align the nuts vertically and slide in one of the profiles.
-  Use the mullet and adjust the upper nut if necessary. If the profiles don't fit, try to turn the base over.
-  You can also try to adjust the screw slightly using a hex key.
- Once the tower has been pushed down in the bracket and reaches the second nut, invert the frame, align the second nut if necessary, and push the frame profile into flush alignment with the bottom of the motor bracket. Tighten the two screws and repeat for the other 2 towers to complete the build.

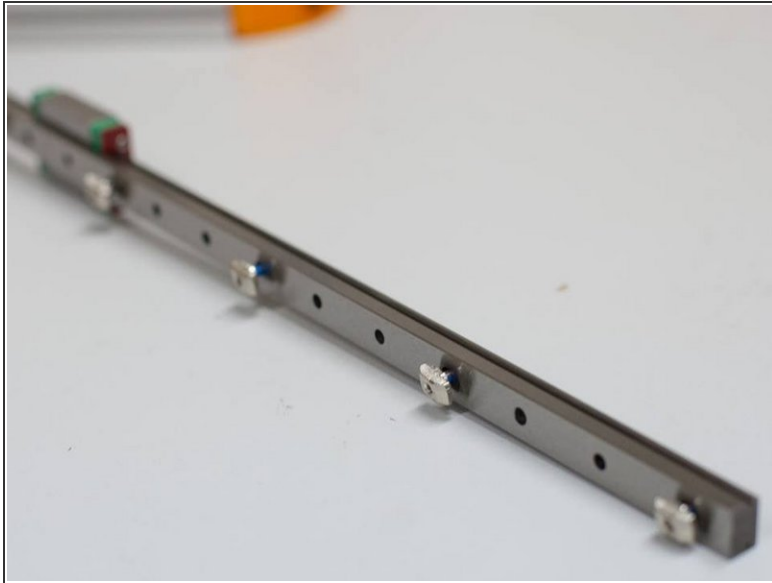
Step 2 — Attach bottom endstop holders



- First, attach one of the plastic endstop holders to each of the corner extrusions so that the top of the endstop holder is approx. 100mm away from the top of the base assembly.

⚠ It's not so important that they are EXACTLY 100mm away from the base. What's much more important is that all 3 are EXACTLY the same distance away from base distance and that they are positioned perfectly horizontal (not like the picture)! This is crucial for the accuracy of your printer.

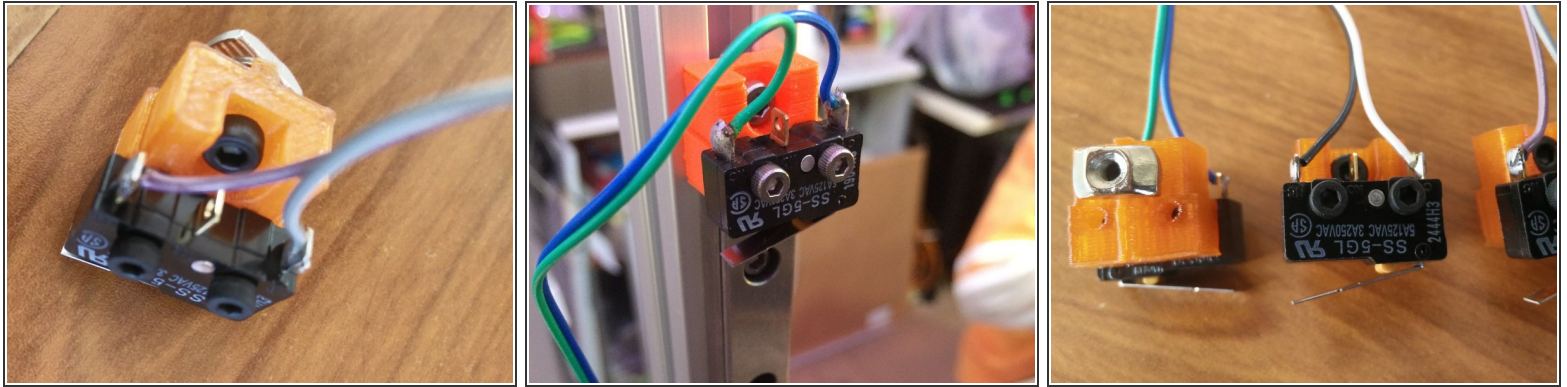
Step 3 — Fit ball-bearing side rails



⚠ Attention: Make sure the slides don't accidentally come off the side rails when pulling them out of their covers! If it happens, it is almost impossible to re-insert the tiny balls into the ball-bearings and we cannot exchange side rails with missing ball bearings!

- Fit 5 t-slot nuts onto the side rails, using five M3x8 screws, leaving 3 holes empty between each screw. Make them finger-tight and align them vertically.
- Then add side rail to tower, bottom of rail sitting firmly against endstop holder. Tighten.
- ⓘ Check that each t-slot nut is connected firmly inside the profile.
- ➡ Repeat for the two other corner profiles.

Step 4 — Upper endstop assembly



- Fit a M3 screw through the printed holder and add a nut. Slide the holder into one of the profiles from top and place it flush against the side rail. Tighten the screw and check if nut has connected properly with profile.
- ⓘ The central endstop connector tab gets in the way when tightening the capscrew. As it is not used, it can be bent slightly so the hex key can fit past it.
- Then fit a micro switch with 2 M2.5 screws onto the holder, with the blade hinged on the right.
- ⚠ The screws will cut their own thread in the plastic. Tighten enough to hold the switch firmly – but be careful not to over-tighten as this could strip the plastic thread.
- ⓘ Double-check that the micro switches are held firmly with no movement whatsoever, as this would negatively affect your printers' accuracy!
- ➡ Repeat for the other 2 endstops.