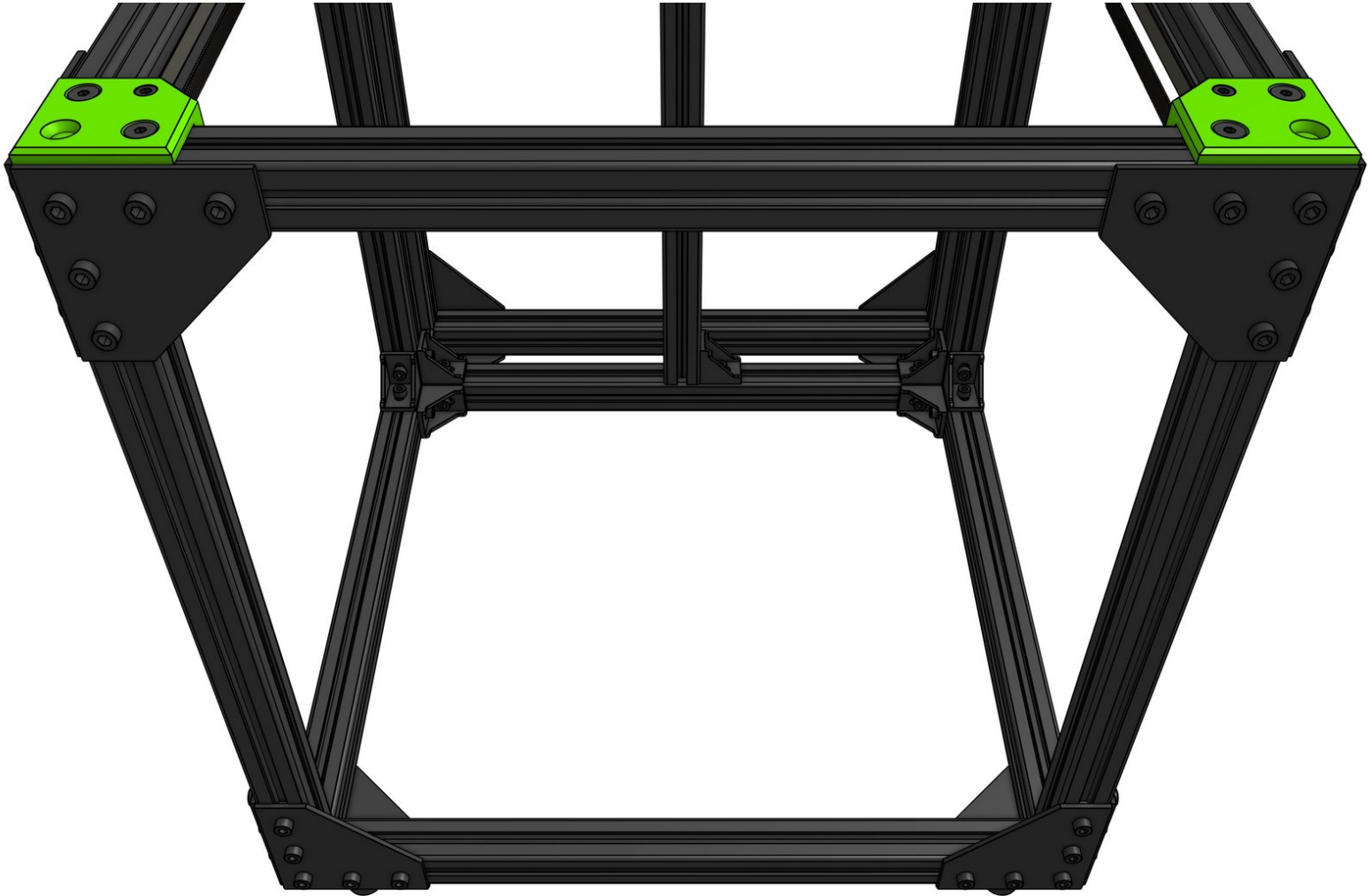


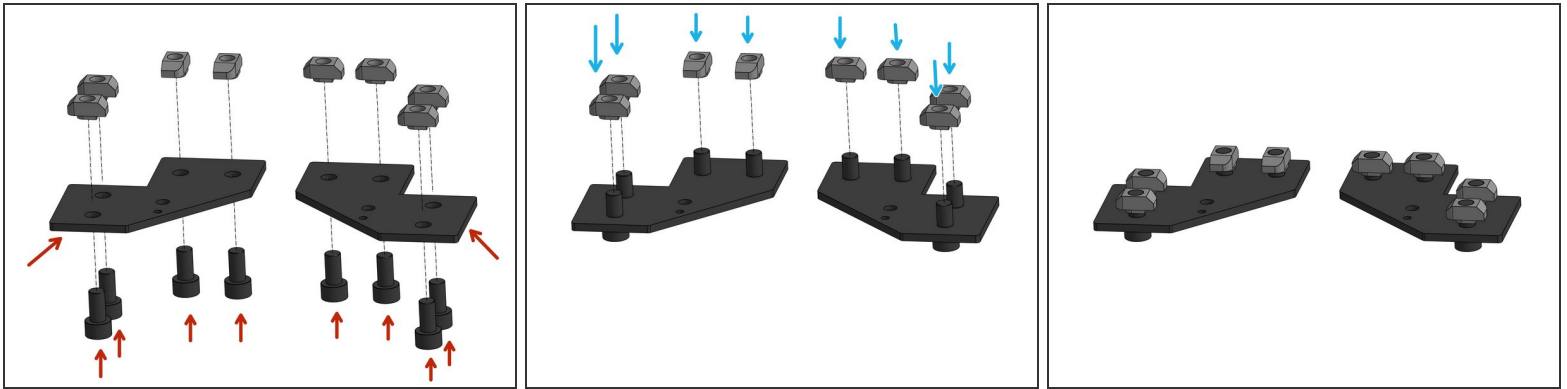
Rat Rig

03. XY Idler Assembly

Written By: Paweł Kucmus

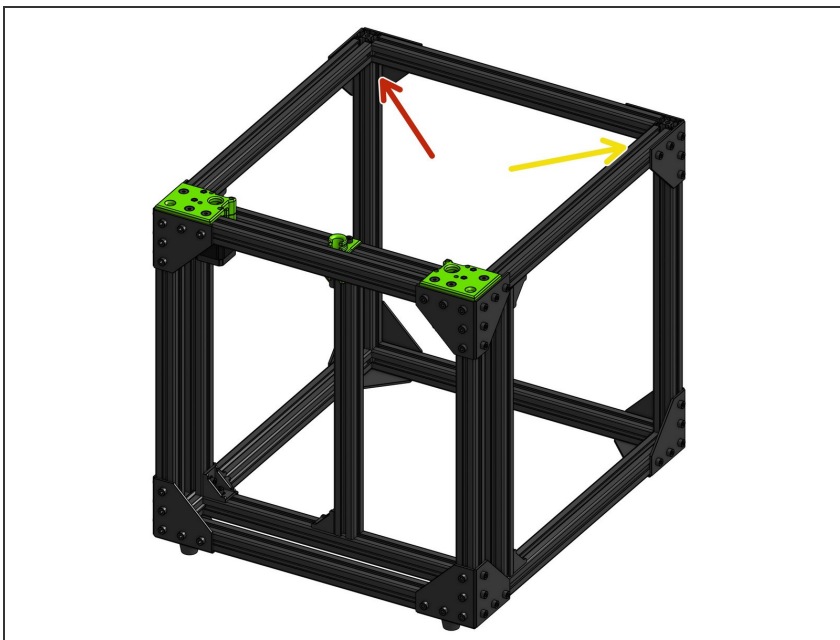


Step 1 — Assemble the XY Idler bases



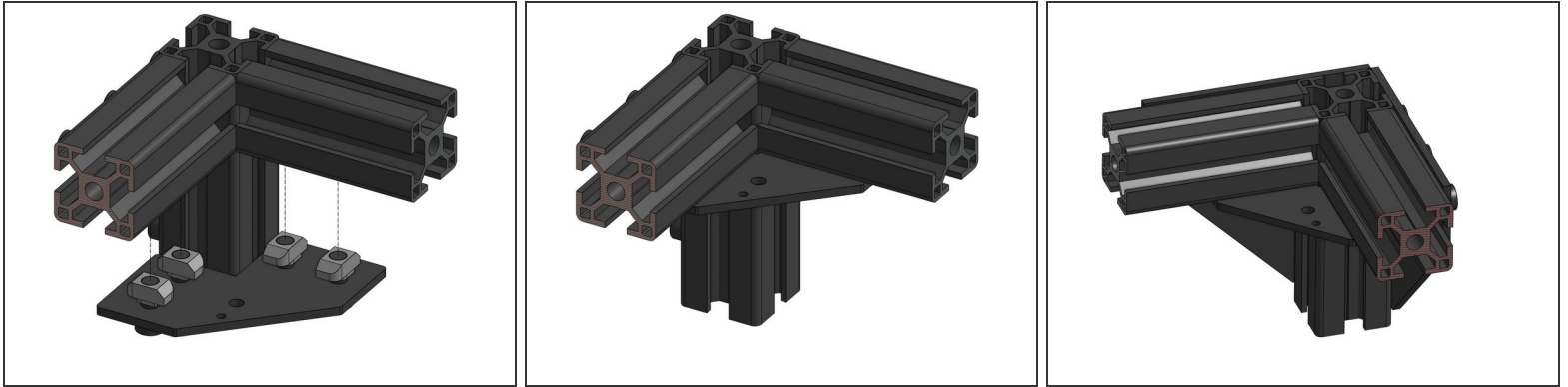
- Thread the **Cap Head Screws M6x12** through the **idler plates**. Four screws per plate
- Attach the **3030 M6 T-nut** to the screws. Don't tighten yet

Step 2



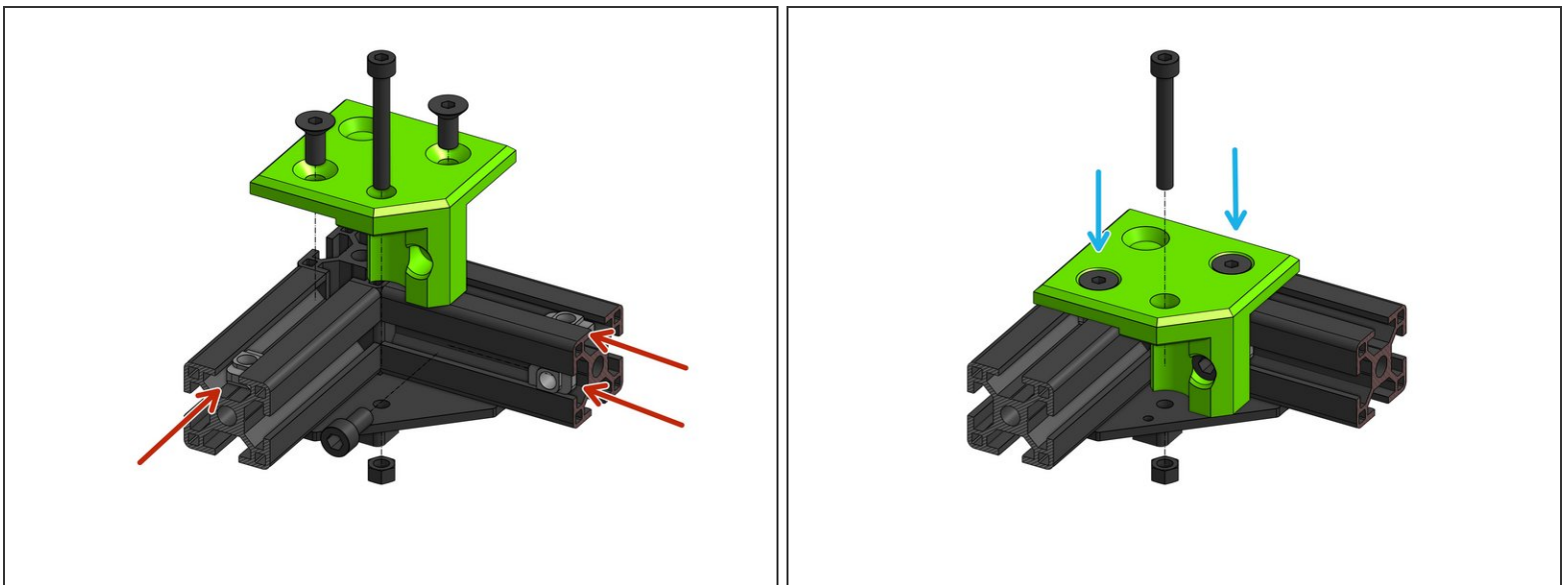
- Looking from the back of the printer we will now focus on:
 - The right XY idler
 - The left XY idler

Step 3 — Attach the right and left plates to the frame



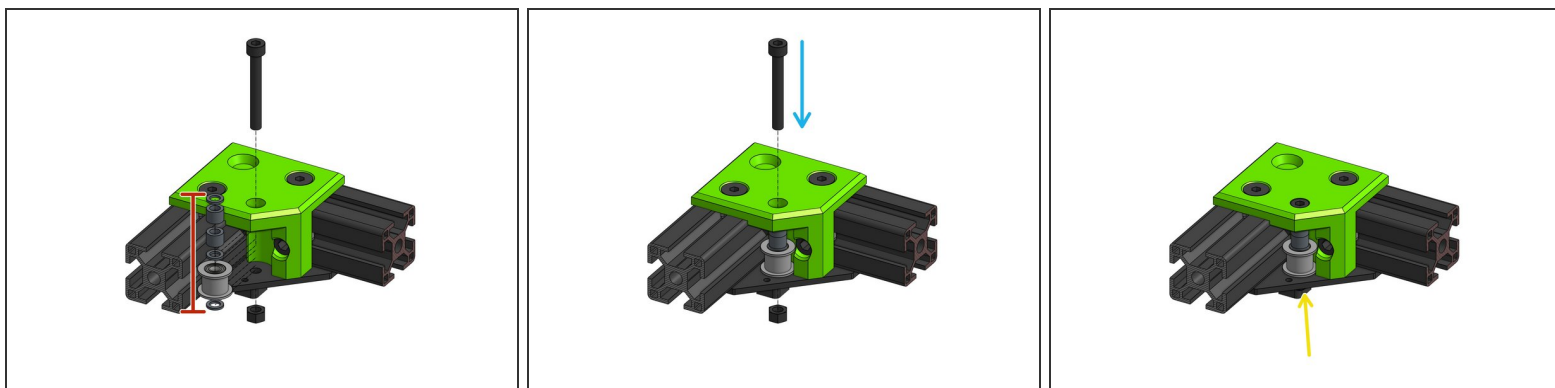
- Attach the right **XY Idler base** to the frame. Fasten the nuts firmly
- Repeat for the left side

Step 4 — Right XY Idler bearing stack



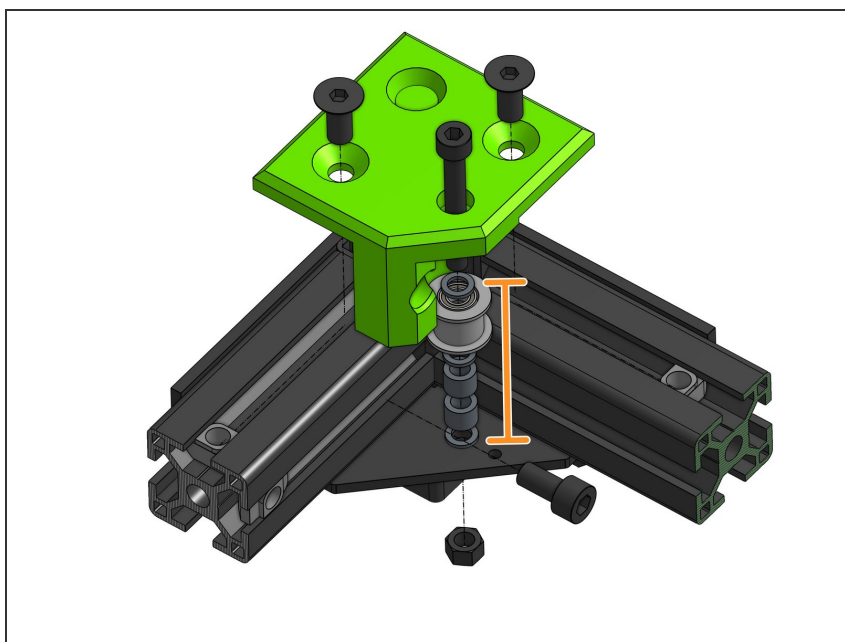
- Slide the **3030 M6 T-nuts** into their place in the extrusion
- Fasten the **xy_idler_right** to the frame with the two **Countersink Screws M6x14** and one **Cap Head Screw M6x12** that goes in from the side
- Prepare a **Cap Head Screw M5x40** but do not thread it in yet.

Step 5 — Finish Right XY Idler assembly



- The order for the bearing stack from the bottom is: shim, idler, shim, 2x 6mm spacer, shim
- Thread the bearing stack onto the **Cap Head Screw M5x40**
- Attach the M5 nut from the bottom, do not over tighten - it should be snug but should not prevent the idler from spinning

Step 6 — Complete the left XY Idler assembly



- Repeat the same steps for the left XY Idler assembly.
- The only difference (aside from it being mirrored) is that the bearing stack is upside down - from the bottom it's: shim, 2x 6mm spacers, shim, idler, shim

Step 7 — Confirm proper assembly



i This is how the XY Idler assemblies should look like looking from the back

Step 8 — Next guide...



- [04. Z motor mounts](#)