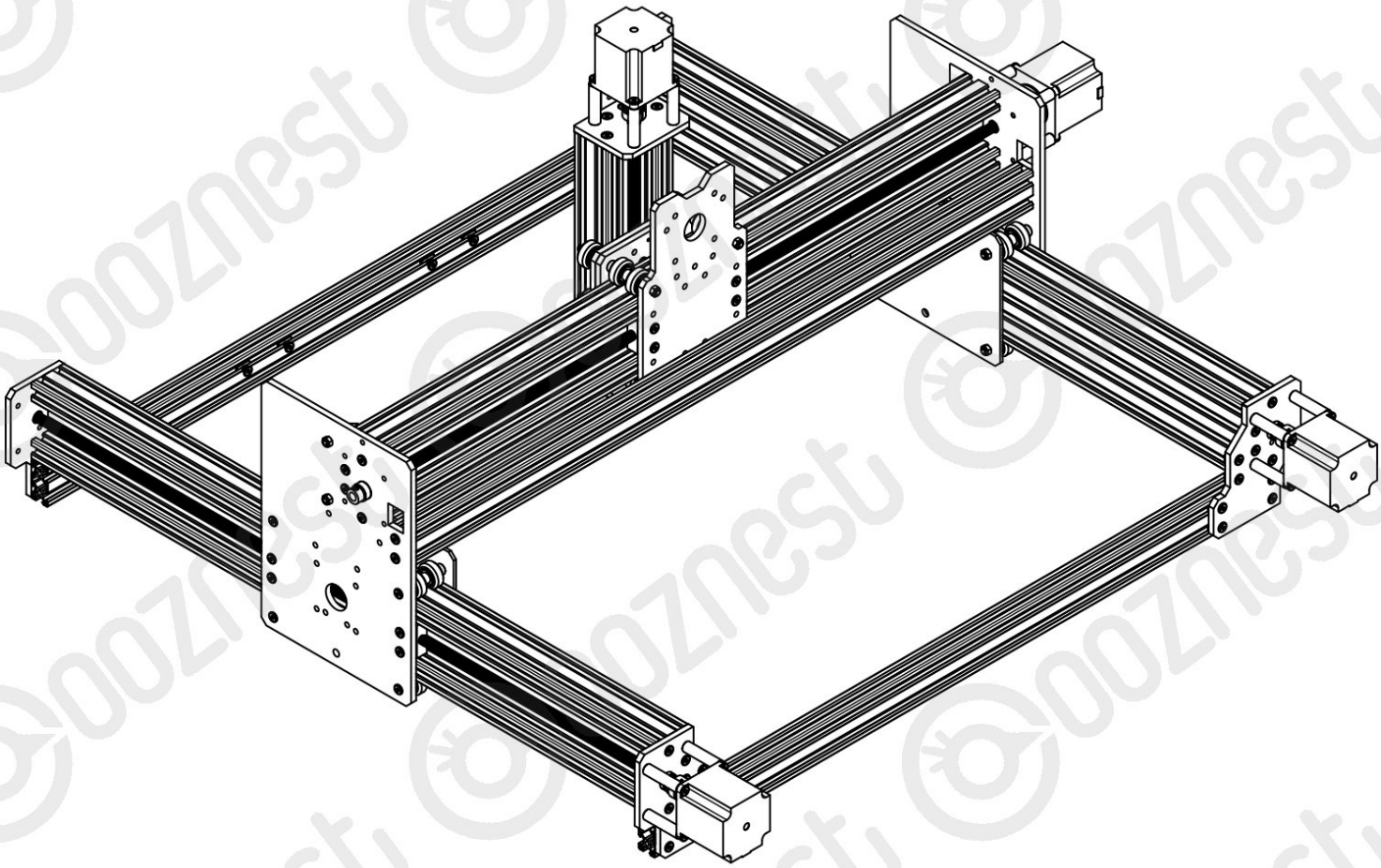
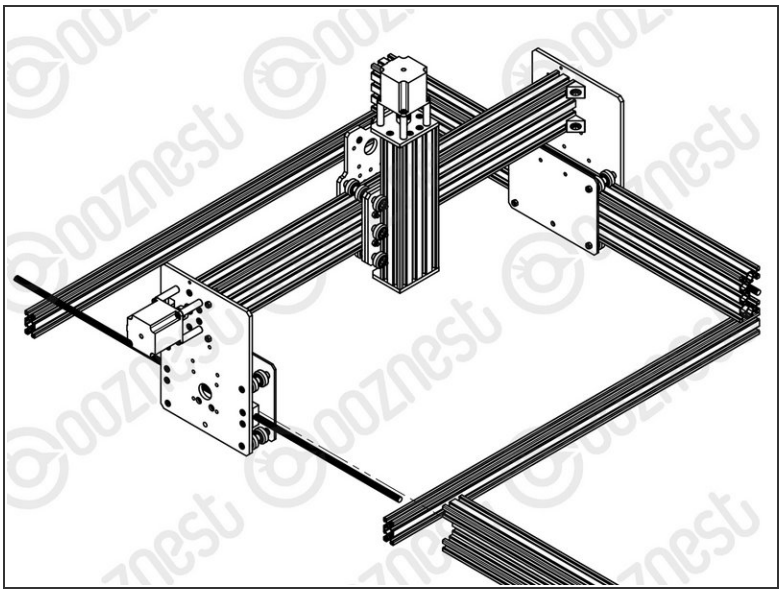
5. Base Assembly

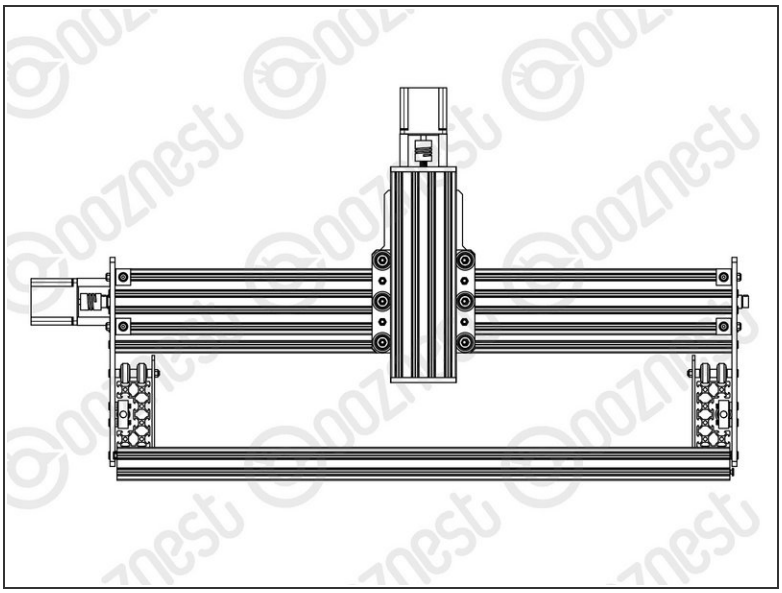
Written By: Ryan Christy



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Step 1 — Y Extrusions

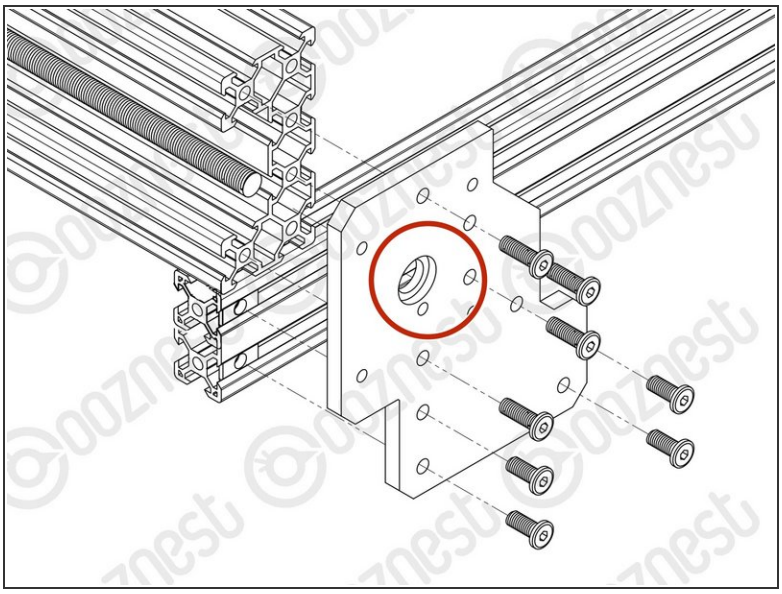


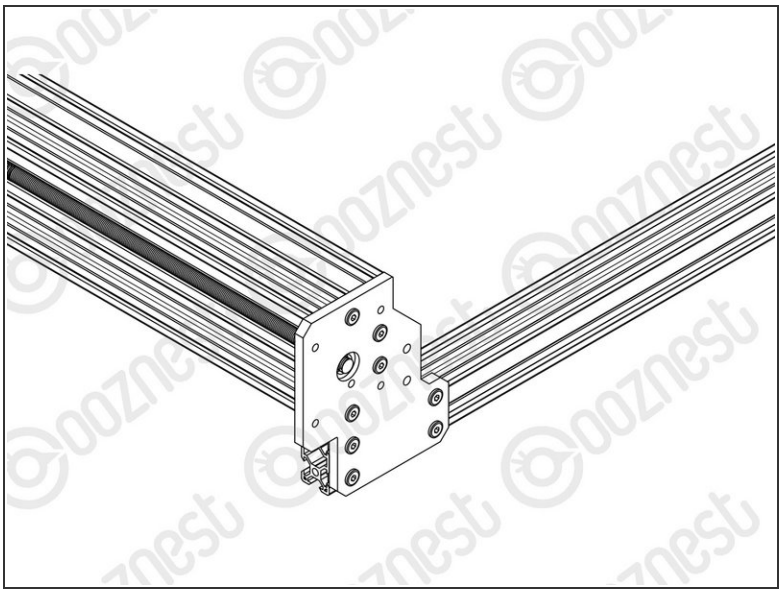


- Slide a C-Beam-750mm through each set of wheels on the X-Gantry-Assembly. The Y ACME-Screws go inside the ‘C’ Channel.
- Rest the ends of the C-Beam-750mm on 2 x V-Slot-2040-745mm’s. The ends of the extrusions should be flush with the sides of each other.

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Step 2 — End Plates





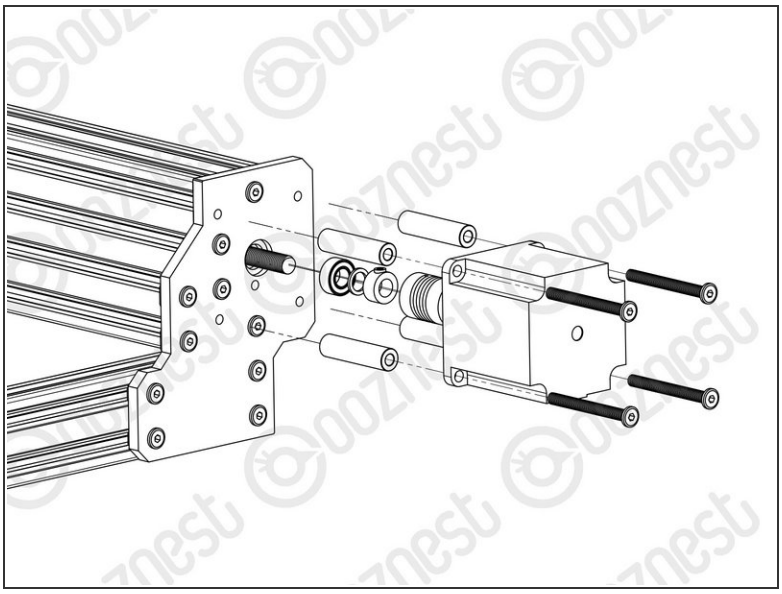
- Double check you have identified the correct plates. The Y-End-Plate-Left oriented like the picture has the bearing recess facing outwards. The Y-End-Plate-Right is a mirror of this.

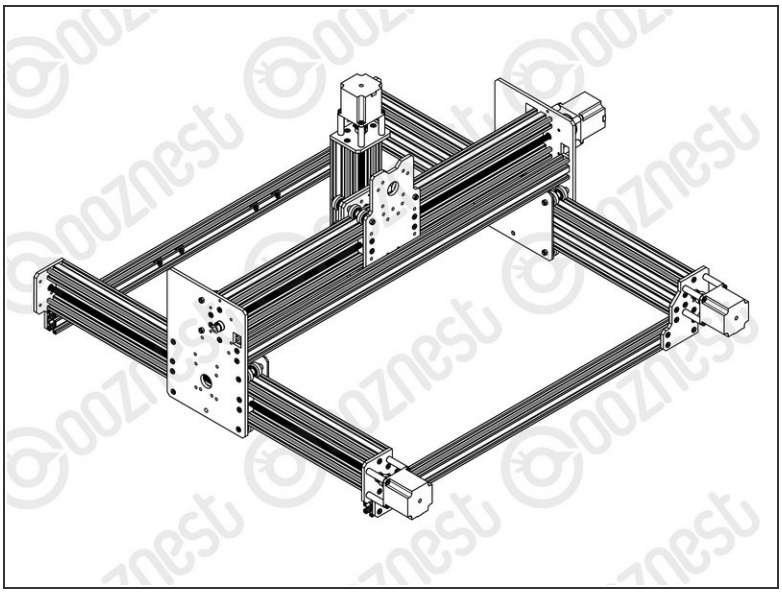
ⓘ If possible while carrying out the below steps get a second person to hold the machine square.

- Slide the X-Gantry-Assembly to the front, and attach a Y-End-Plate-Left to the front left corner, first using 4 x M5-Low-Profile-15mms, which screw into the tapped holes on the C-Beam-750mm.
  - Insert 2 x Tee-Nuts into the front facing top and bottom slots of the V-Slot-2040- 745mm. Adjust the Tee-Nuts so they line up with the holes on the Y-End-Plate-Left.
  - Secure the Y-End-Plate-Left to the V-Slot-2040-745mm using 4 x M5-Low-Profile- 12mms. Ensure the end of the V-Slot-2040-745mm is flush with the side of the C Beam-750mm.
  - Square the base, and repeat for the Y-End-Plate-Right on the opposite end of the front V-Slot-2040-745mm.
- Slide the X-Gantry-Assembly to the back. Square the base, and repeat all the above for the back V-Slot-2040-745mm.

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Step 3 — Stepper Motors



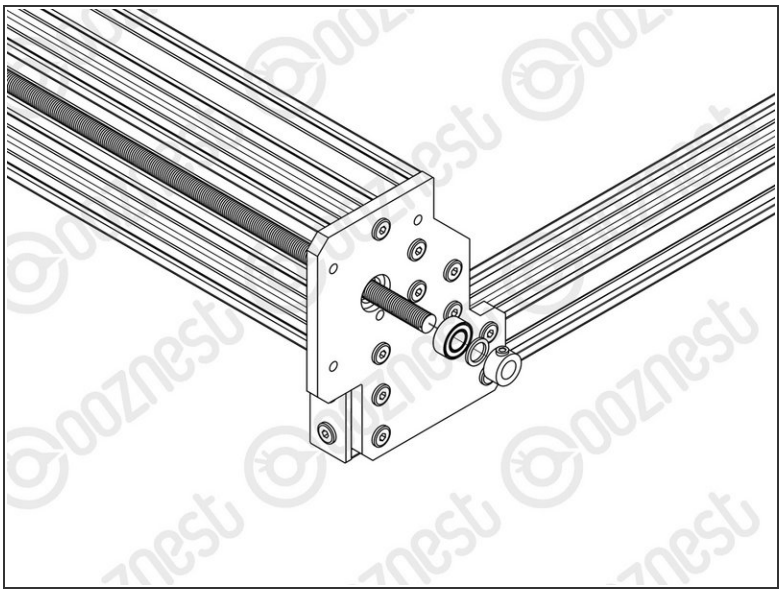


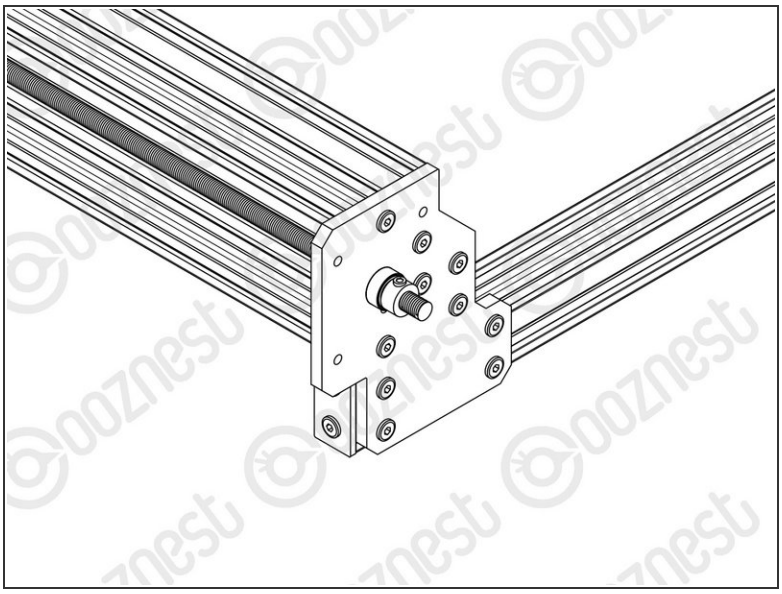
- Adjust the left Y-ACME-Screw (as if looking from the front) so roughly 10mm is protruding from the Y-End-Plate-Right at the back of the machine. Slide onto the end a 688zz-Bearing, 8mm-Shim and 8mm-Clamping-Collar, and inset the 688zz-Bearing into the recess on the Y-End-Plate-Right.
  - Slide the 1/4” side (the side with the smallest hole) of the Flexible-Coupler onto the shaft of the NEMA23-Stepper-Motor. Don’t tighten it down at this point.
  - Attach the NEMA23-Stepper-Motor to the threaded holes on the Y-End-Plate-Right using 4 x M5-Low-Profile-50mm bolts and 4 x Aluminium-Spacer-40mms. Adjust the Y-ACME-Screw so it is touching the NEMA 23-Stepper-Motor shaft.

    ⓘ Orient the NEMA23-Stepper-Motor so the wire is facing downwards.
  - While pushing the 8mm-Clamping-Collar against the 8mm-Shim and 688zz-Bearing into the recess on the Y-End-Plate Right, tighten the clamping bolt on the 8mm-Clamping-Collar.
  - Tighten the grub screws on the Flexible-Coupler. Make sure one is on the flat portion of the motor shaft.
- Repeat for the final NEMA23-Stepper-Motor attaching it to the Y-End Plate-Left on the back right of the machine.

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Step 4 — Y ACME Screws

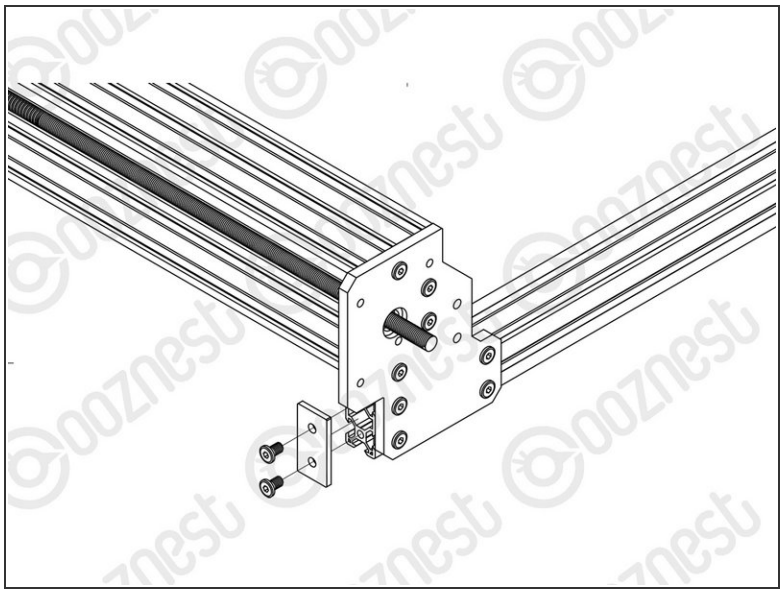


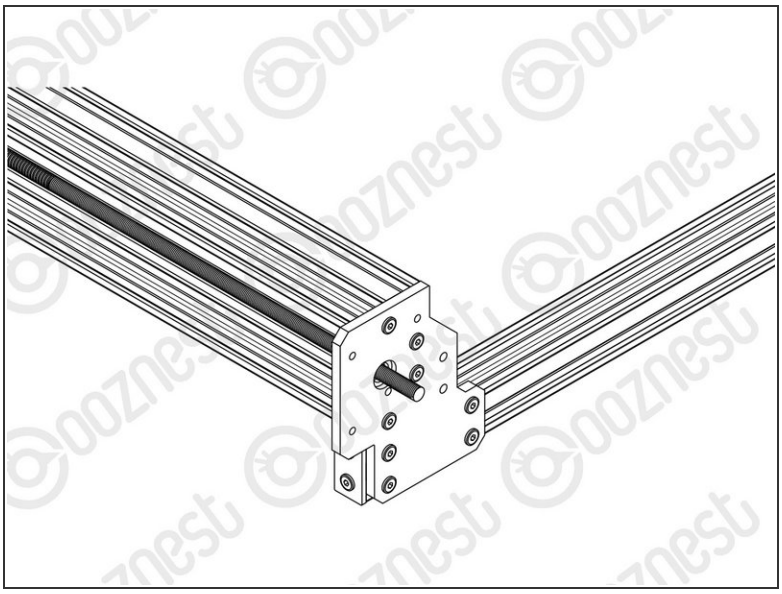


- At the front of the machine, onto the two Y-ACME-Screws protruding from the Y-End-Plates slide on a 688zz-Bearing, 8mm-shim, and a 8mm-Clamping-Collar.
  - While pushing the 8mm-Clamping-Collar against the 8mm-Shim and 688zz-Bearing into the recess on the Y-Plate-End-Plates, tighten the clamping bolt on the 8mm-Clamping-Collar.

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Step 5 — End Caps





- Attach an End-Cap to front left end of the V-Slot-2040-745mm using 2 x M5-Low-Profile-8mm bolts.
- Repeat this for the other 3 x End-Caps on the other bare ends of the V-Slot-2040-745mms.

Thanks for following the guide. Any issues, please contact us!

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