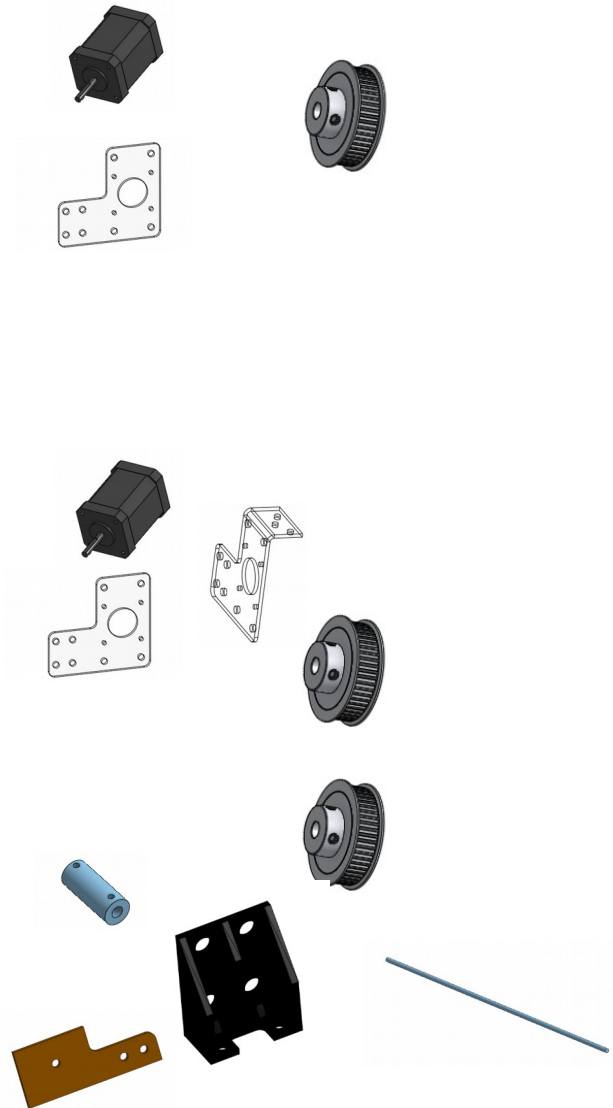# X and Y Motor Assembly

The motor assemblies are to hold the motors that move the axes in place on the rails. The brackets also double as a cable chain holder. Finally this assembly includes the shaft coupler and the slave secondary Y axis pulley.

Parts

| |
|---|
| Y Axis Motor |
| 50 tooth pulley with set screws |
| *Y Axis Bracket 2 pcs* |
| 5mm T nuts 8 pcs |
| 5mm x 10mm pan head screws 8 pcs |
| 5mm x 30mm screws 4 pcs |
| 5mm nuts 4 pcs |
| 3mm x 6mm screws (motor) |
| X Axis Motor |
| *X Axis Bracket and cable chain holder* |
| X Axis *Bracket straight* |
| 50 tooth pulley with set screws |
| 3mm x 12 mm pan head screws 4 pcs |
| Brass Slave Bracket |
| 50 tool pulley with set screws |
| Shaft coupler |
| *5mm diameter Shaft 469 mm in length. (SUS)* |
| *Black 3D printed bracket* 4 pcs |
| *Brass bracket* |
| 5 mm T nuts 2 pcs |
| M5 x 6mm screws |

Y Axis Motor Assembly

Start with screwing the motor to the *bracket* with 4 M3 x 6mm screws.
Then screw the bracket to the 4 5 mm T Nuts in the channel with M5 x 6mm screws.
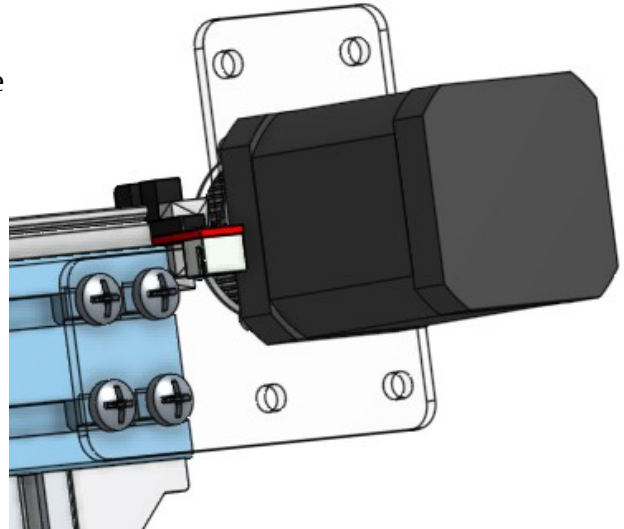
From the other side, add the 50 tooth pulley with the set screws toward the motor. Then add the *shaft coupler* and the *shaft* to drive the slave axis.
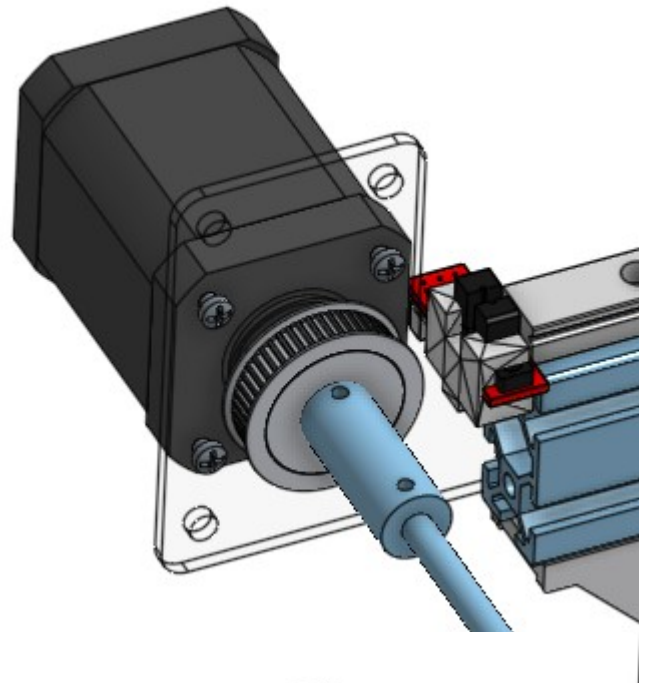
Then add the second bracket with the 4 bolts and the spacer between the brackets. Finally add the 5 mm screws to the T – Nuts in the Y axis.
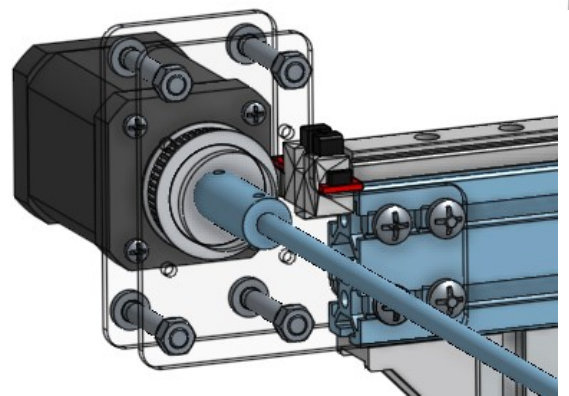
The same drill on the other side here for the slave axis. First attach the 50 tooth pulley. Then the join the *brass bracket* to the shaft. Lastly attach the 2 M5 x 6mm screws through the Brass bracket into the 2 M5 T nuts.
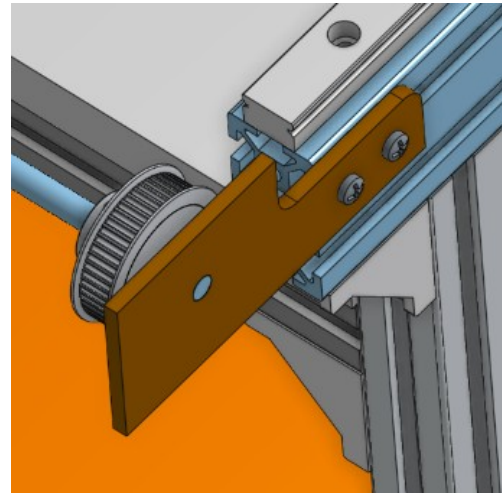
Here is a picture without the shaft coupler installed yet.
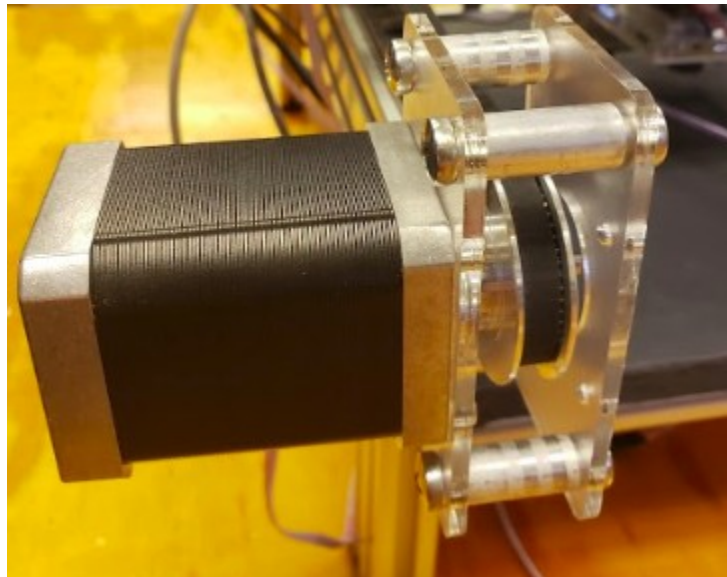
X Motor Assembly

This is almost the same deal but is is on the moving X axis. Instead of two of the same brackets one bracket has a bend in it to secure the cable chain. There are also some 3D printed X axis brackets that are assembled with the brackets.

Lets start with putting 4 M3 x 6mm screws though the X Axis Bracket and cable chain holder and into the motor. Then screw on the 50 tooth pulley with the hub away from the motor.
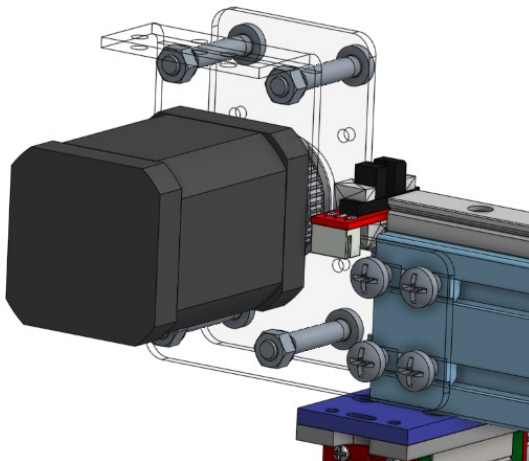
Now just like the idlers, you need to put the 4 M5 x 6 screws through the bracket and into the 5 mm T nuts. The T-nuts can be seen on this view.
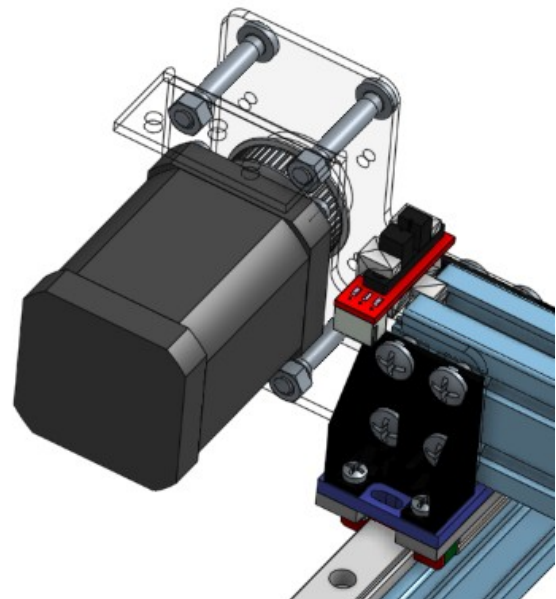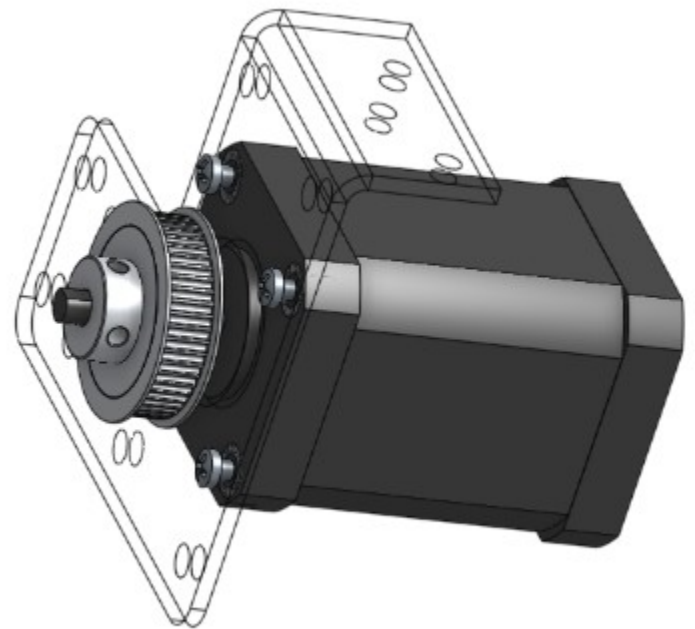
However, this time you need to add the black 3D printed bracket that holds the X axis to the slider assembly. Here is a picture with the bracket in place.

Here you put 4 M5 x 6mm through the bracket and into the 4 M5 T Nuts. Also use 2 M3 x 12mm screws down in to the slider bracket and attach it with 2 M3 nuts.

Add the X Axis Bracket straight bracket, Black 3D printed bracket, ,4 x M5 T nuts, 4 x M5 x 6L screws, and 2 M3 x 12mm screws. Then attached the 4 M5 x 30 L screws and M5 nuts to hold the brackets together to add rigidity.
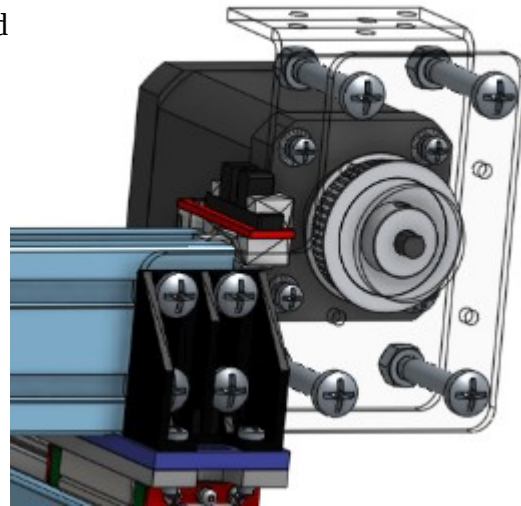
Here it is with the cable chain mounted on it.
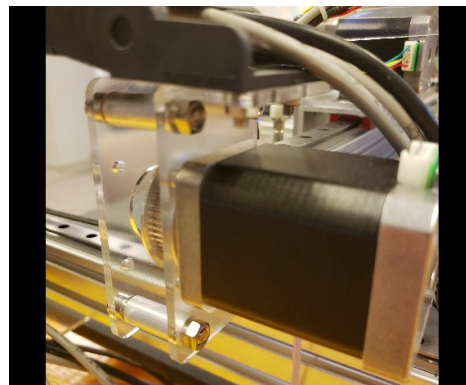
Don't forget to mount the Black 3D printed brackets on the other side of the X axis by the idler. It is the same process.