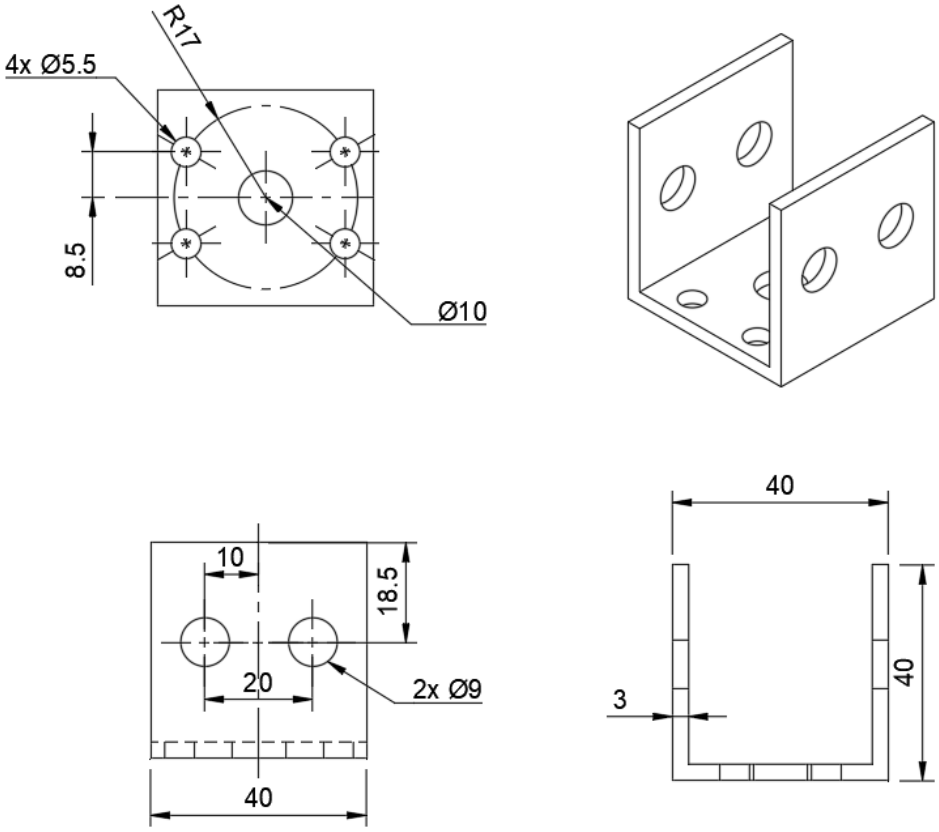
Assembly Manual

1: Leadscrew Assembly

1.1: Required:

- 40x40x3x40mm steel channel

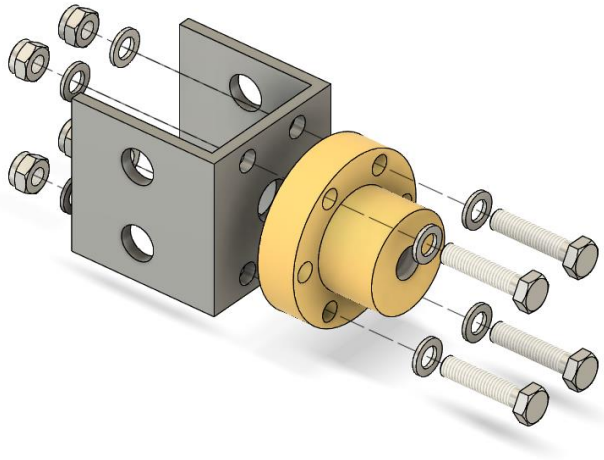
Create the moving leadscrew bracket using 40x40 c-channel.



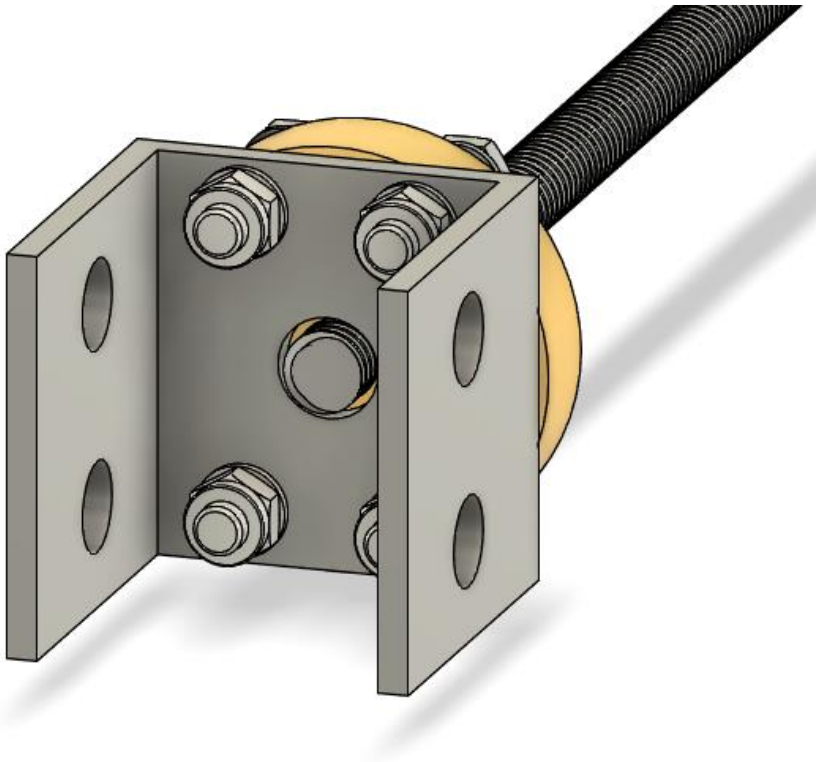
1.2: Required:

- 4x M5 x 22 hex bolt
- 4x M5 nylock nut
- 8x M5 9mm reduced diameter washer

Assemble the parts as shown.



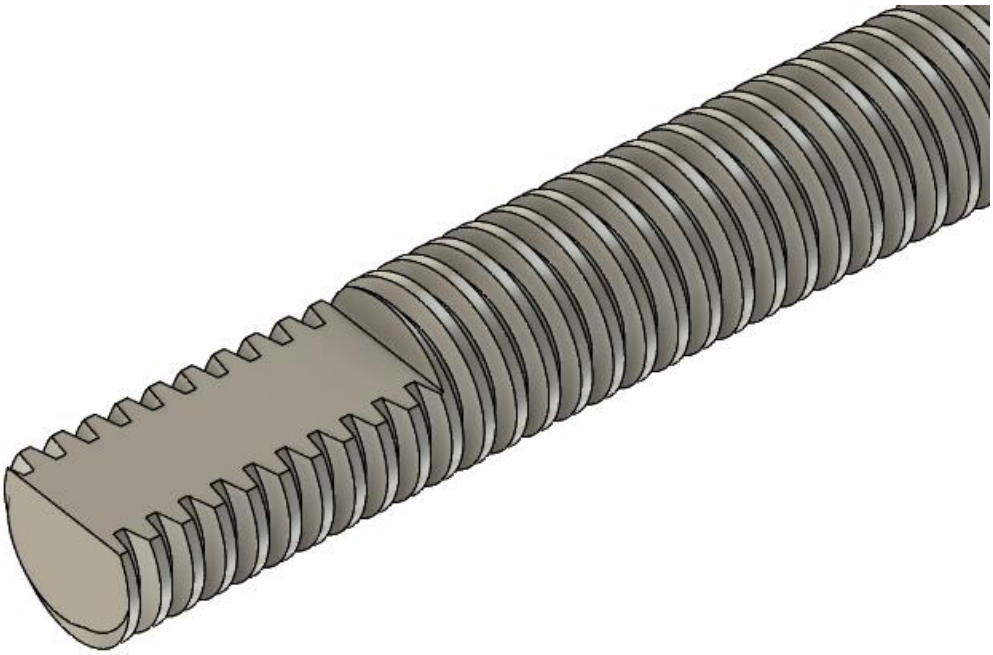
Ensure there is sufficient clearance where the leadscrew passes through the bracket.



1.3: Required:

- TR10x2 1000mm leadscrew

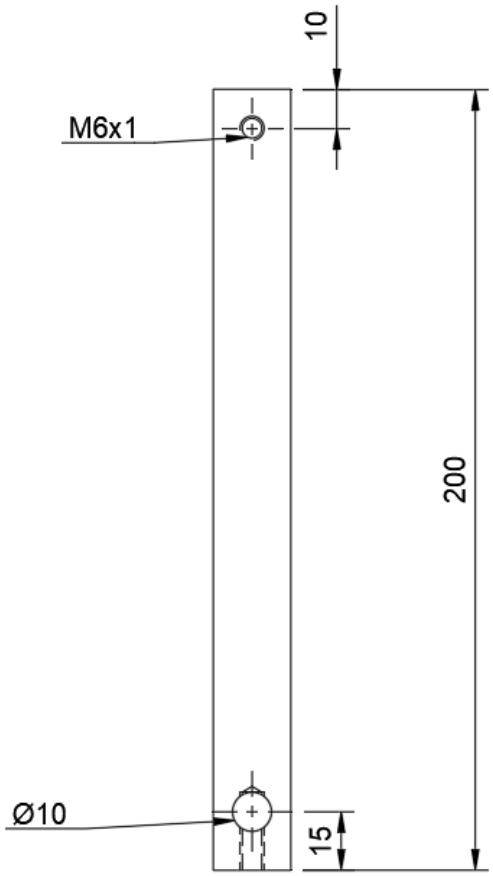
Prepare the leadscrew by filing a flat on one end. It should extend around 15mm from the end of the screw, and be just deep enough that the threads are not visible in the flat section.

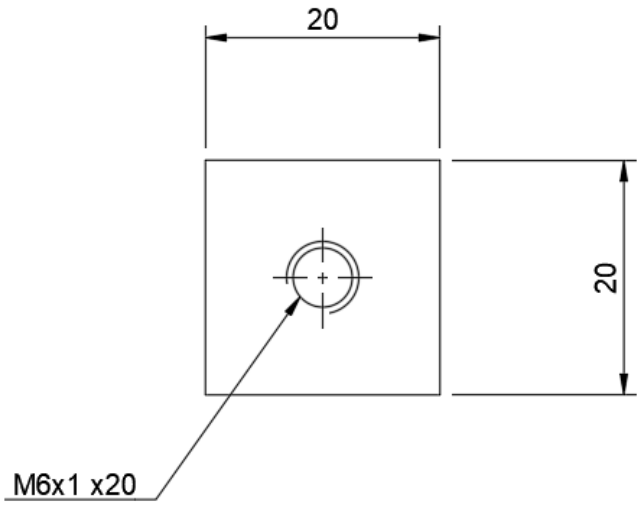


1.4: Required:

- 20x20x200mm aluminium square bar

Create the handle of the press. If using a 3D printed rotating handle, an additional M6 hole is required on the top. The depth of the threaded holes on the end is not critical so long as they intersect with the holes on the long face.

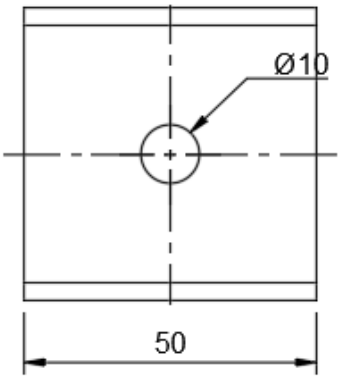


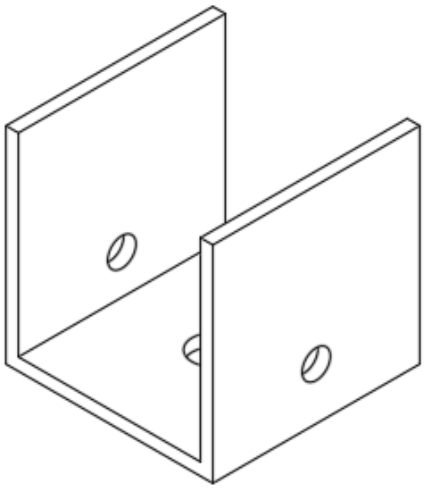


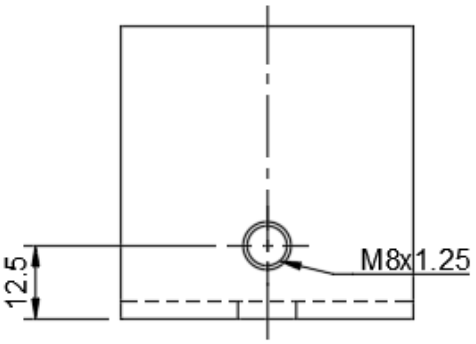
1.5: Required:

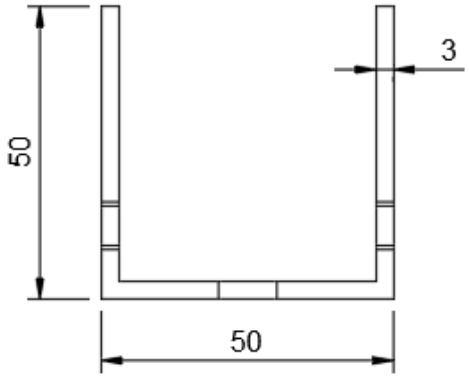
- 50x50x3x50mm steel channel

Create the static leadscrew bracket using the steel channel. Ensure the 10mm hole has sufficient clearance for the leadscrew.









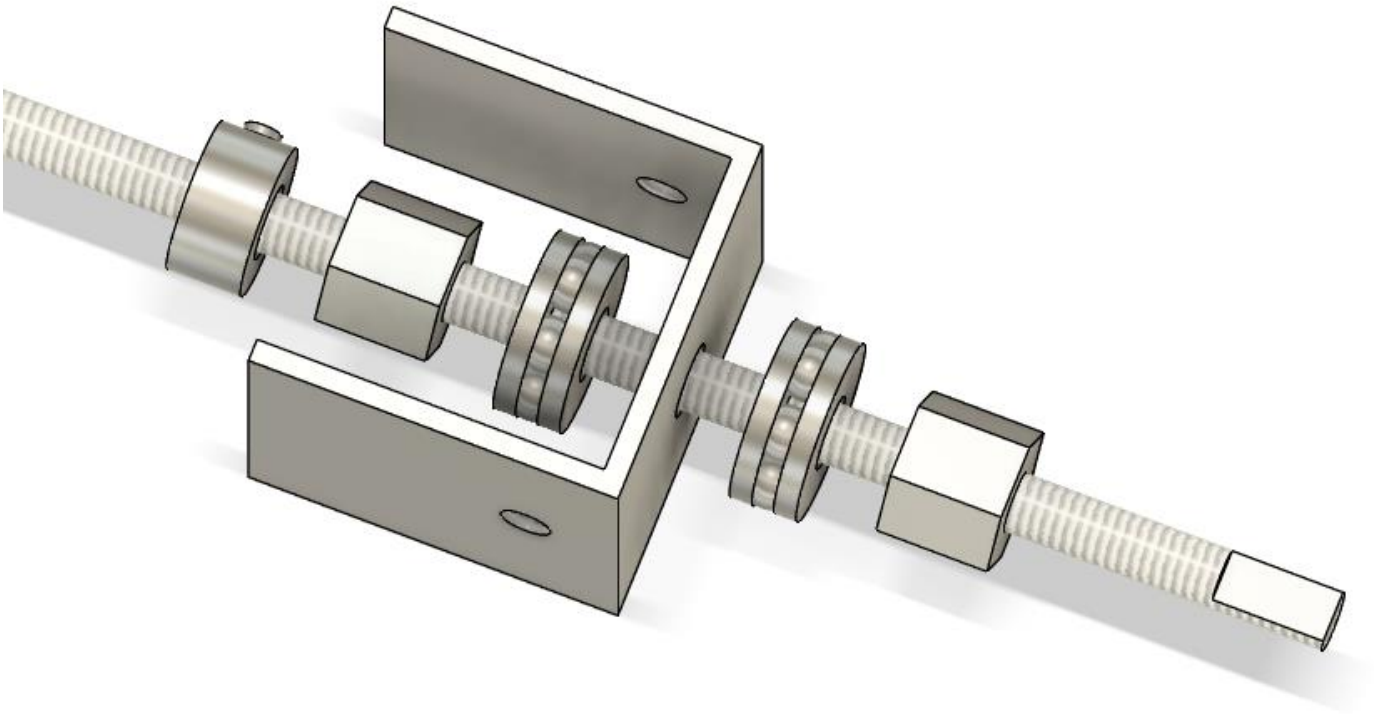
1.6: Required:

- 10mm adjusting ring
- 2x TR10x2 hex leadscrew nut
- 2x 51100 thrust bearing
- Static leadscrew bracket from 1.5
- Leadscrew

Add all of the parts to the leadscrew in the following order:

1. 10mm adjusting ring
2. TR10 hex nut
3. 51100 thrust bearing
4. Static leadscrew bracket
5. 51100 thrust bearing
6. TR10 hex nut

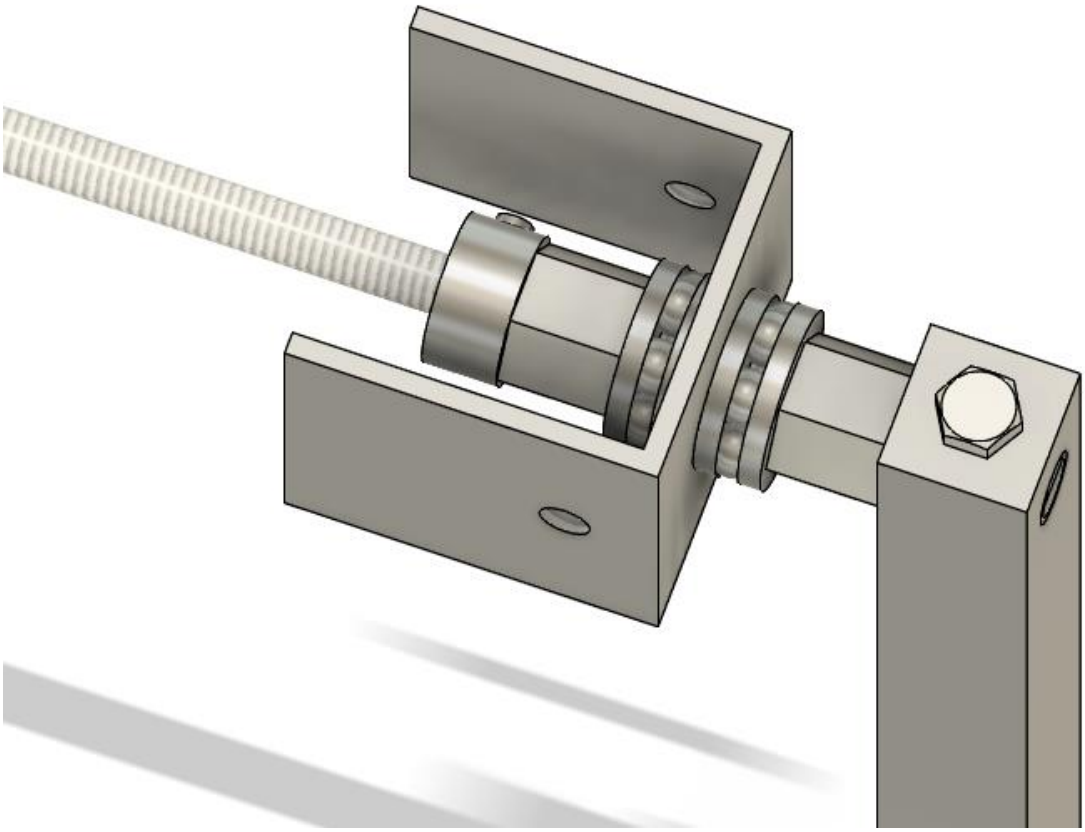
Do not tighten down the adjusting ring yet.



1.7: Required:

- Bow press handle
- M6x22 hex bolt

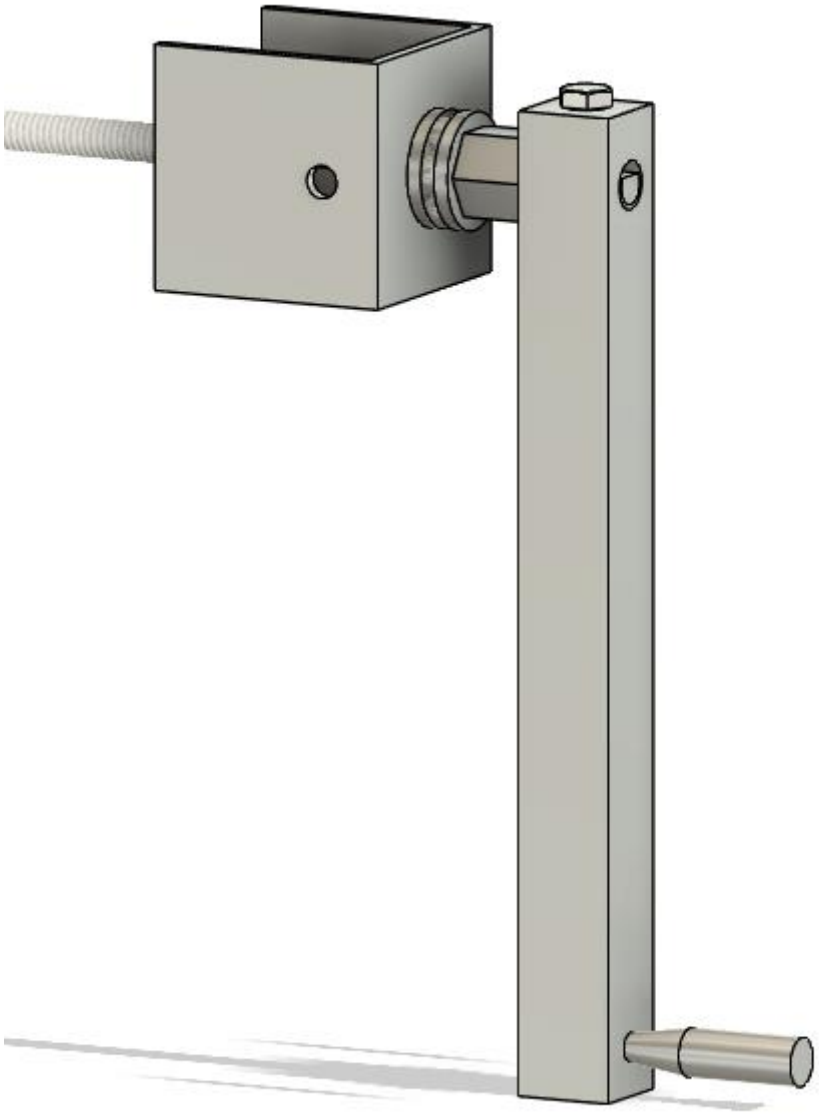
Attach the handle flush with the end of the leadscrew using the M6 bolt, then move the parts from 1.6 up towards the handle. The bracket should be sandwiched between the two thrust bearings just tightly enough that it cannot rattle. Tighten down the adjusting ring once everything is in place.



1.8: Required:

- M6 rotating handle

Attach the free-spinning handle to the end of the handle bar.



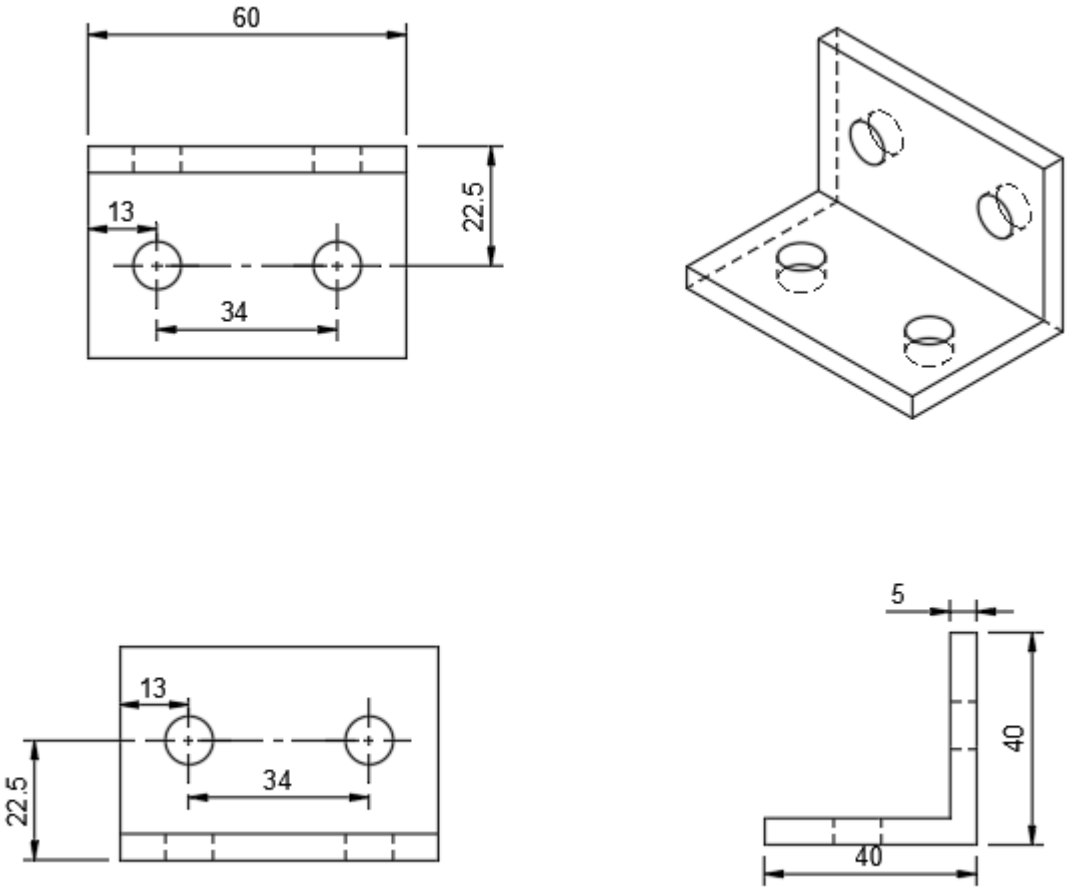
The leadscrew assembly should now be completed.

2: Main Mody Assembly

2.1: Required:

- 4x 40x40x5x60mm steel equal angle

Create four finger mount brackets according to the drawing. Both sides of the bracket are symmetrical.



2.2: Required:

- 4x Finger mount brackets from 2.1
- 4x Fingers
- 8x M8x30 hex bolts
- 8x M8 thin nuts
- 16x M8 washers

Create four finger assemblies. These are symmetrical – create two left variants and two right variants. Exact alignment of the fingers is not critical right now, this will be adjusted later.

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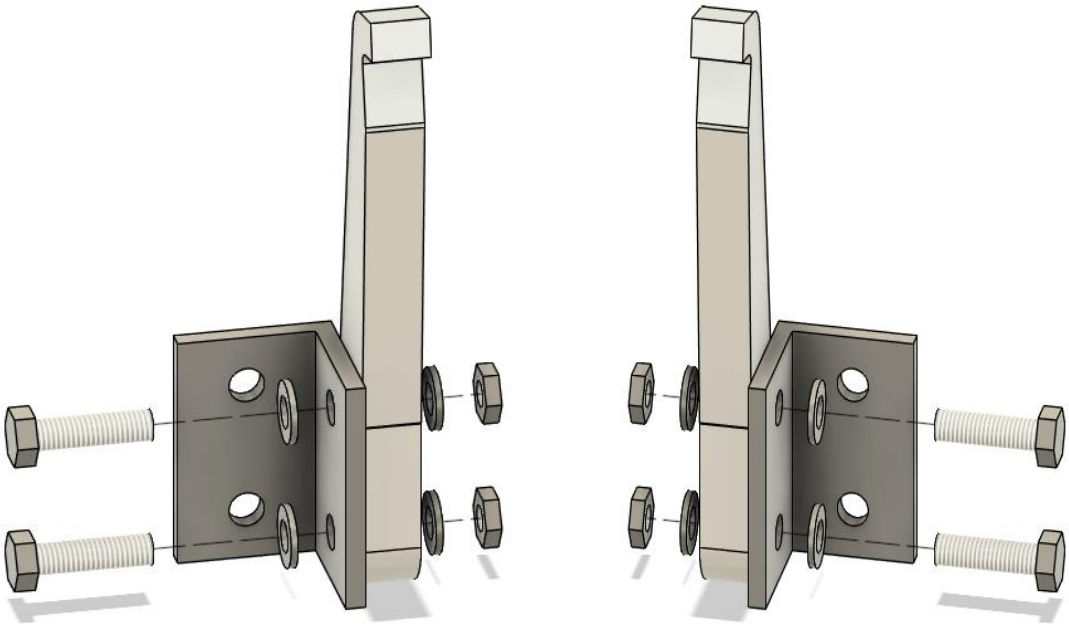
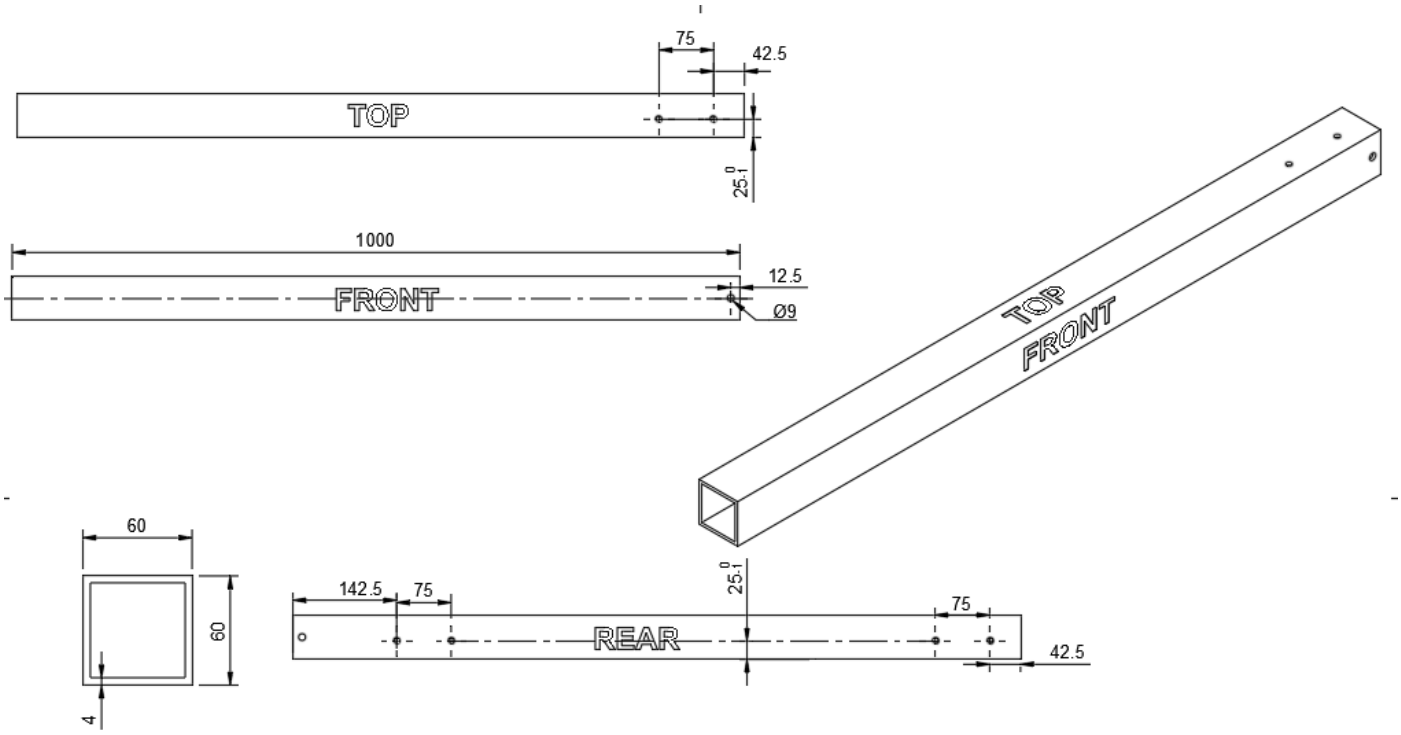


2.3: Required:

- 60x60x4x1000mm square box section steel

Create the main body of the press. I recommend labelling the top, front, rear and bottom faces of the workpiece first to match the drawings. Note that the centreline in the top is 25mm from the front and the line on the rear is 25mm from the bottom. The centreline on the front is in the centre (~30mm from each side). Note the tolerances on the 25mm dimensions – do not place the holes more than 25mm from the edge, or additional filing will be required during assembly

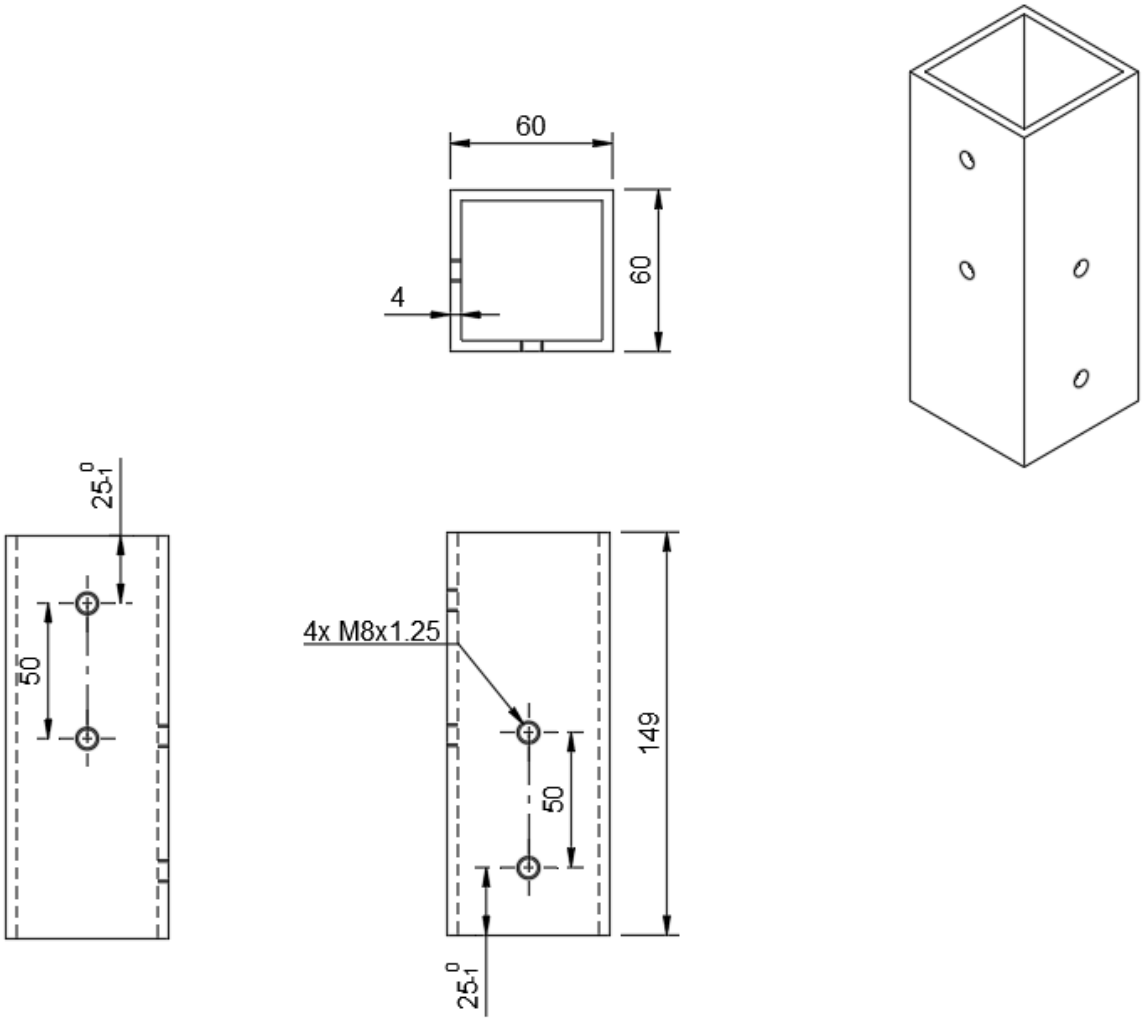
All holes are M8 tapped, except for the 9mm hole through the front and rear faces. Once all hole locations are marked, double check against the drawings and CAD before drilling and tapping any. This is probably the most complex and awkward component in the whole build.



2.4: Required:

- 2x 60x60x4x149 square box section steel

Create a pair of these which are mirror images. Note the tolerance on the 25mm dimensions. All four holes are M8 tapped.



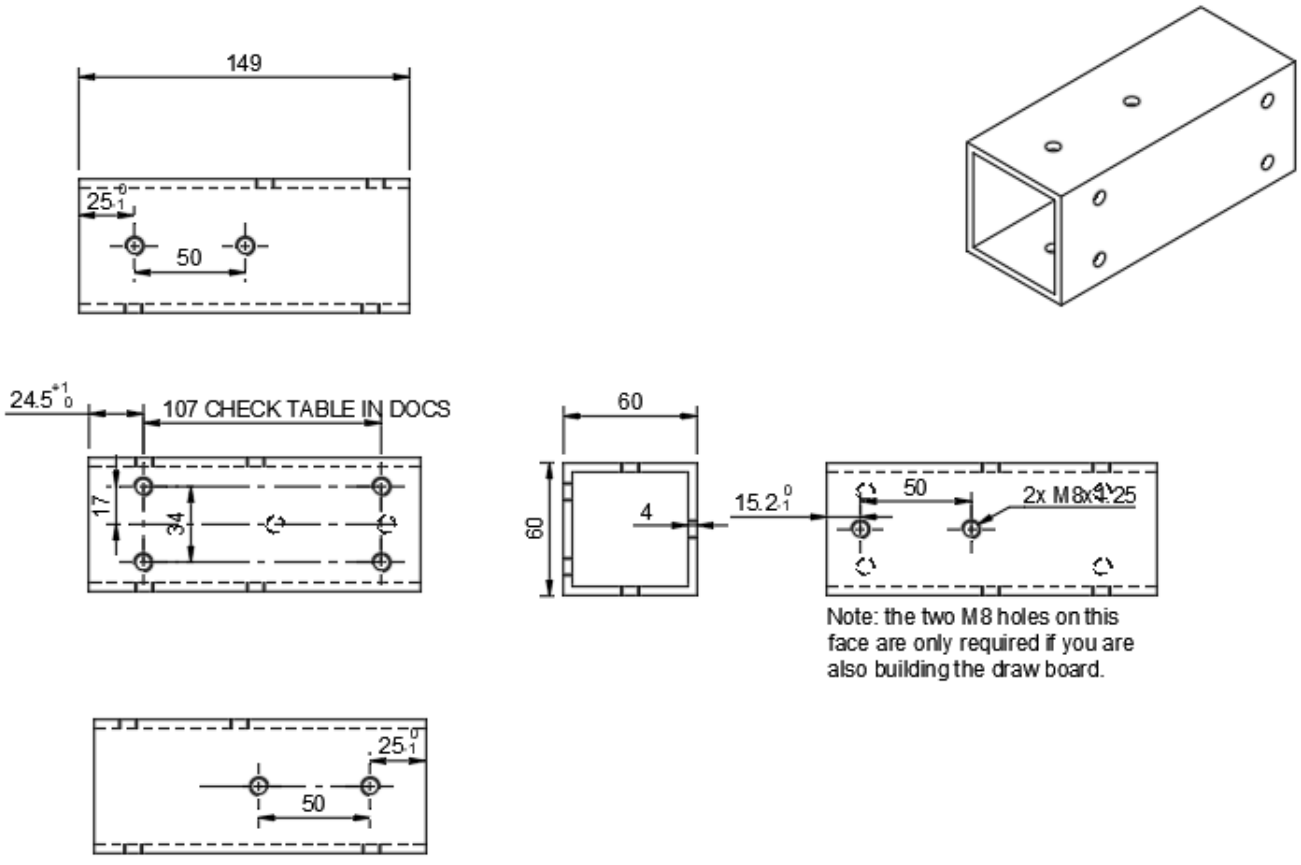
2.5: Required:

- 60x60x4x149 square box section steel

Create the mount for attaching the fingers. Note the tolerances on some of the dimensions. **The distance between the two pairs of holes must be selected to match the gap between your split limbs.** The default 107mm value corresponds to PSE Dominator Duo 30mm gap limbs.

Distance between inside limb edges (mm)	Distance value in drawing (mm)
20	97
25	102
30 (PSE Dominator Duo)	107

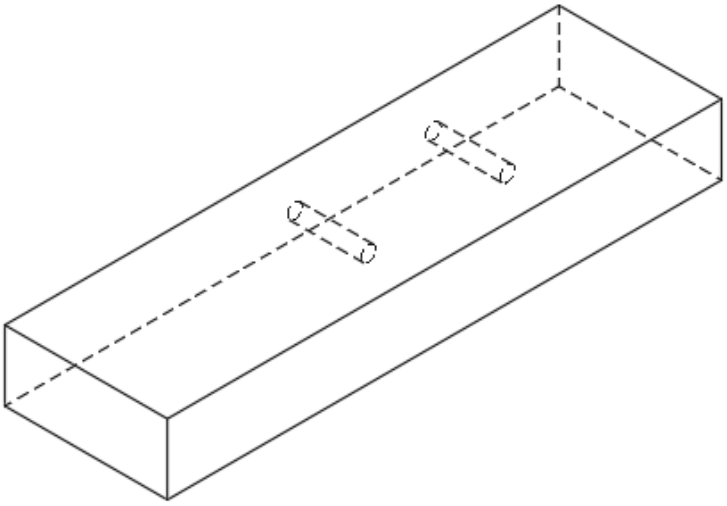
Once the holes are marked, double check against the CAD before drilling. All holes are M8 tapped.

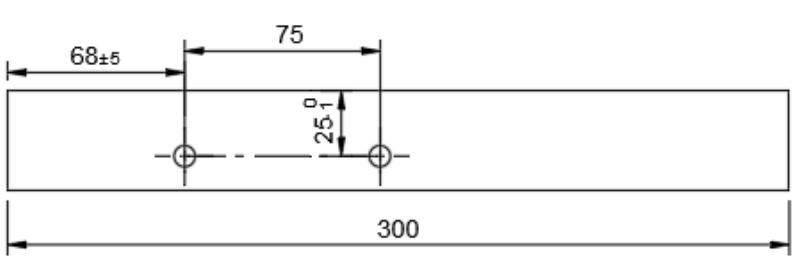


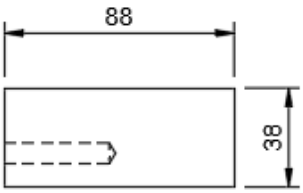
2.6: Required:

- 2x 2x4” 300mm timber

Drill the pilot holes according to the drawing. Check the required pilot hole diameter and depth for the specific screws you are using. Make two mirrored versions of this.



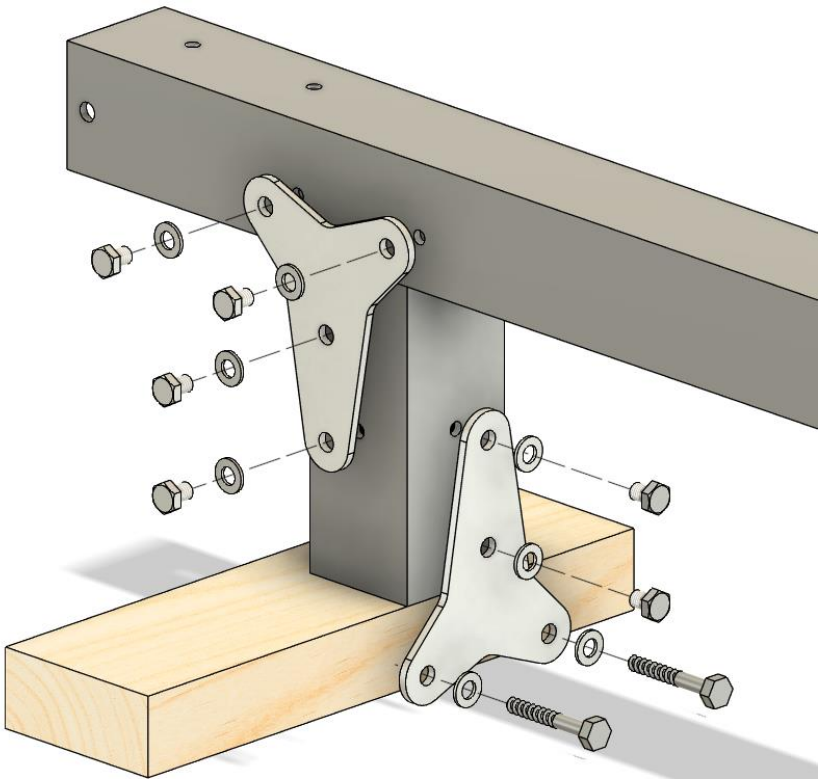


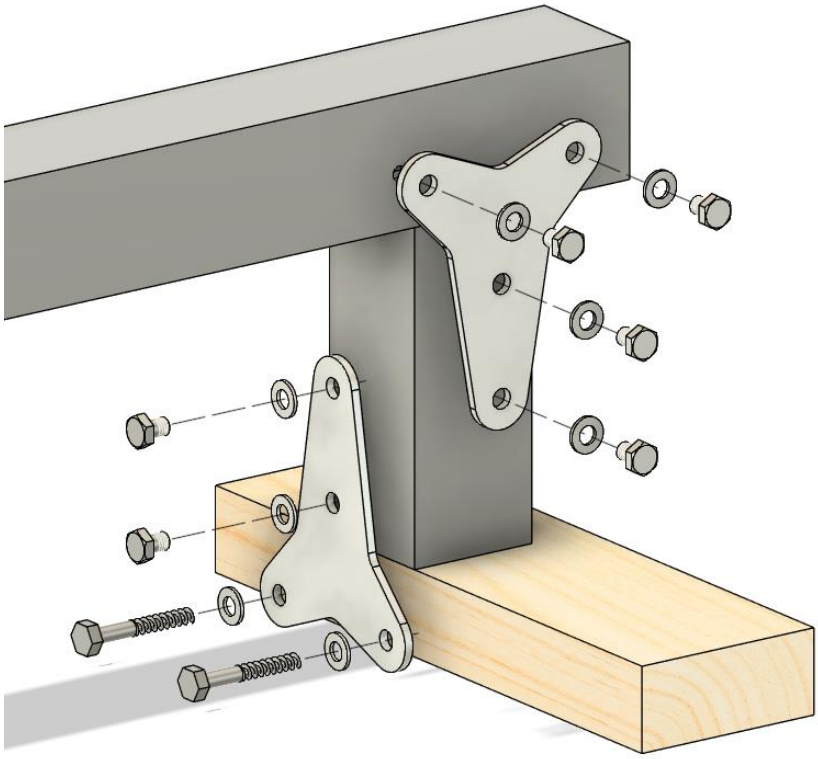


2.7: Required:

- 14x M8x10 hex bolts
- 4x M8x50 coach screws
- 20x M8 washers
- 4x T-brackets

Assemble the base according to the diagrams.

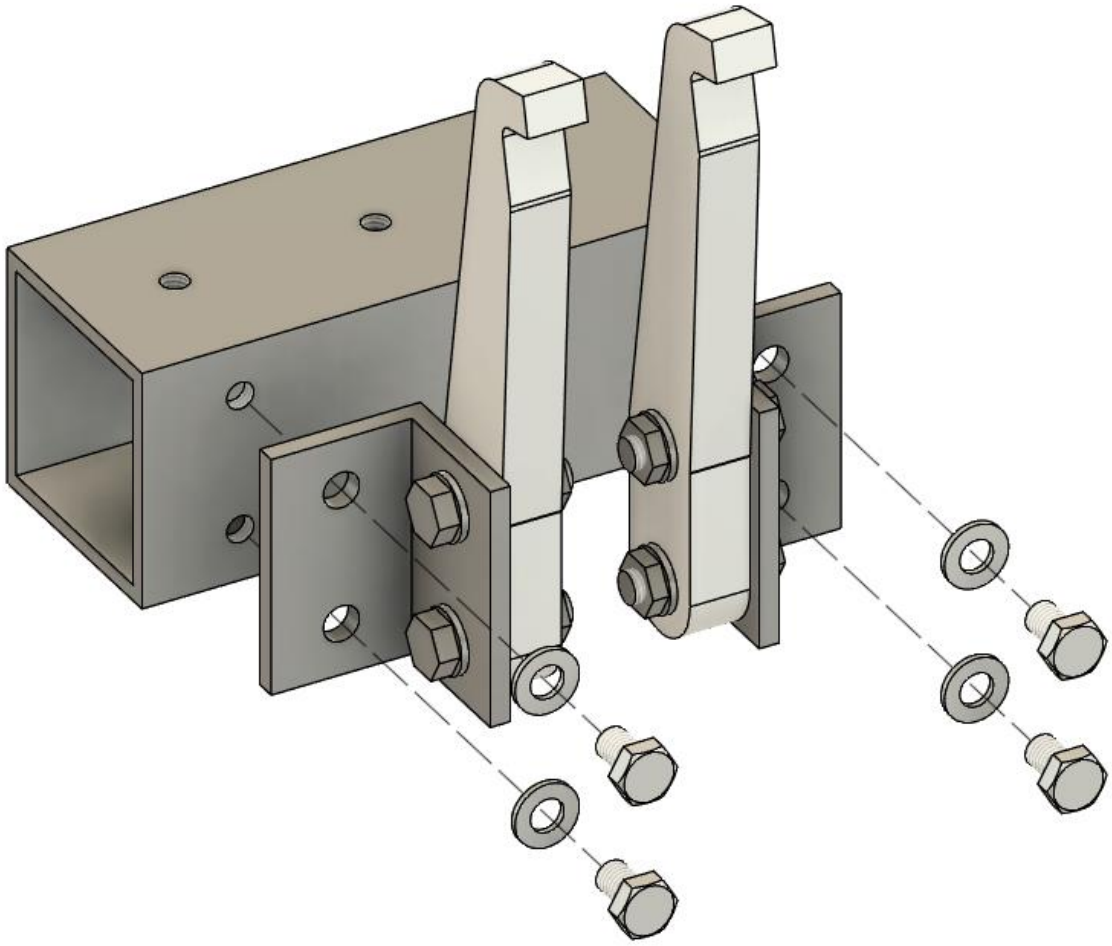




2.8: Required:

- 4x M8x12 hex bolt
- 4x M8 washers

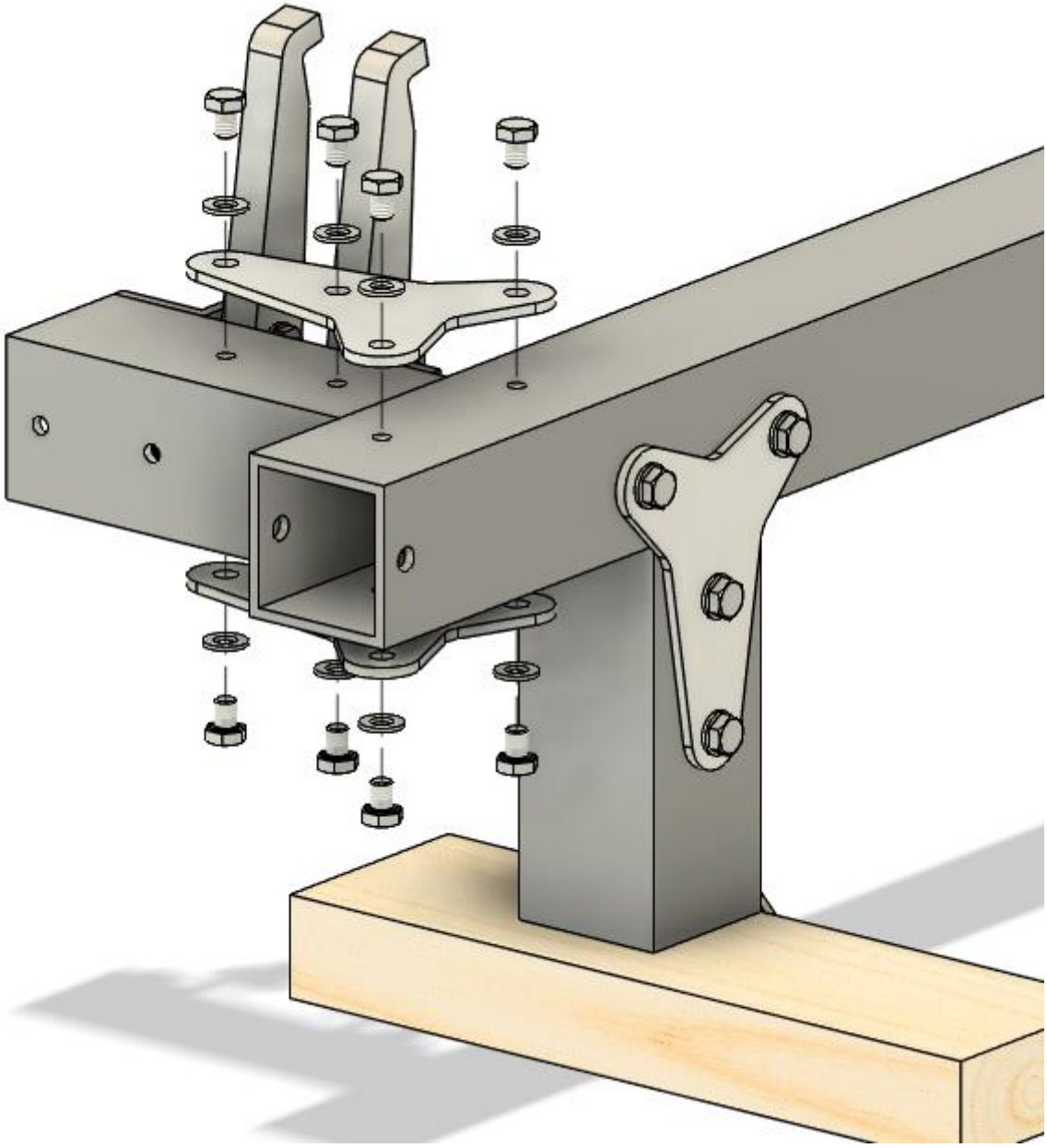
Attach the fingers to the mount using M8x12 bolts. After, loosen the M8x30 bolts slightly and ensure the fingers are aligned before retightening.



2.9: Required:

- 8x M8x10 hex bolts
- 8x M8 washers
- 2x T-brackets

Attach the finger assembly to the base using M8x10 bolts.



The main body assembly should now be completed.