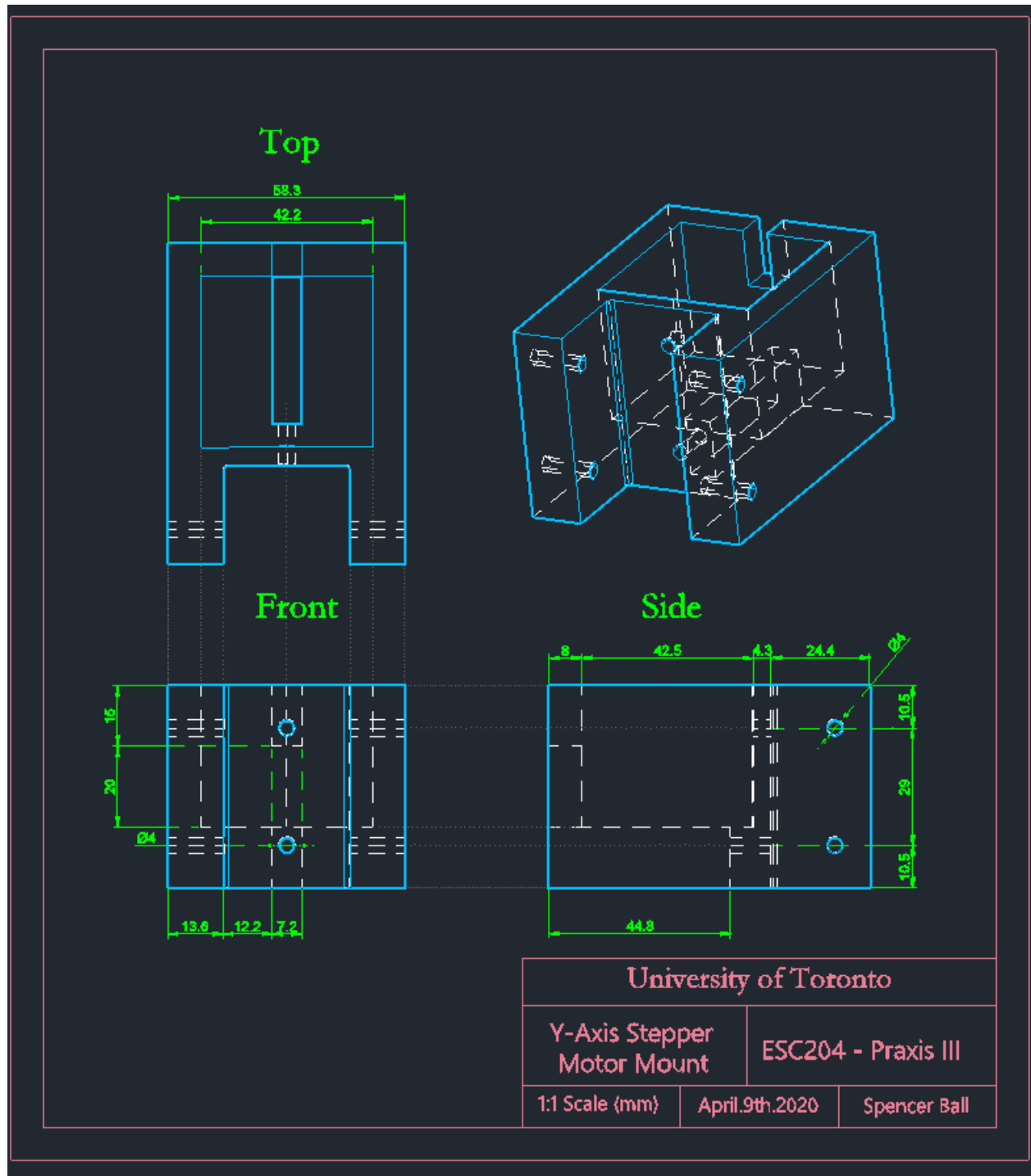


ESC204 – Individual Skill Building Assignment: 1.1 Engineering Drawing

Spencer Ball | #1004762599 | April.9th.2020

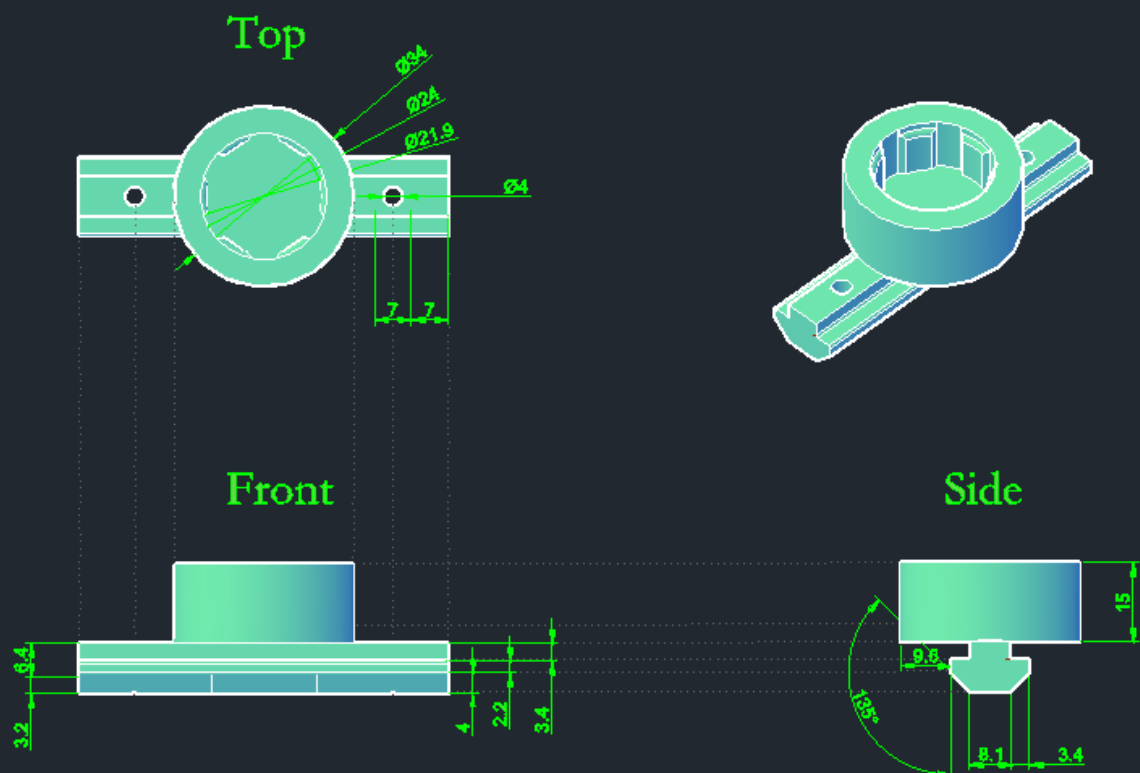


Material: PLA

Fabrication: 3D Print

Tolerance: Accuracy within half a millimeter required to fit onto aluminum t-slotted framing. Any further deviation tended to cause issues.

Assembly Steps: Attach to aluminum t-slotted framing with screws and 3-D printed fixtures we call 'non-sliders' (pg.X).



University of Toronto

Bearing Mount

ESC204 - Praxis III

1:1 Scale (mm)

April.9th.2020

Spencer Ball

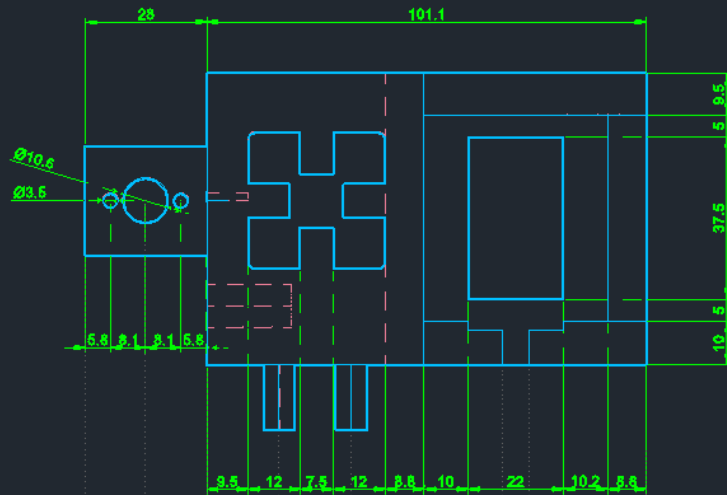
Material: PLA

Fabrication: 3D Print

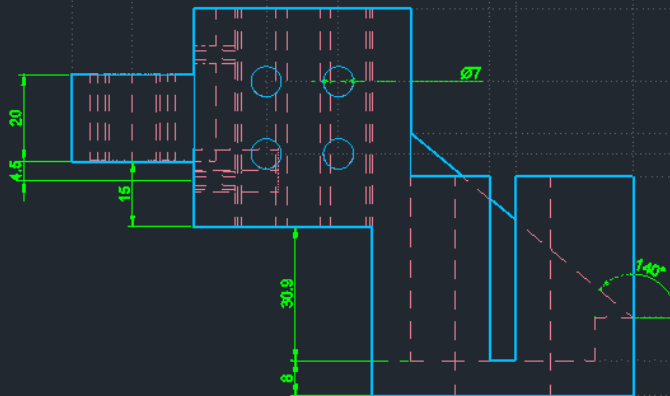
Tolerance: Accuracy within half a millimeter required to slide properly in t-slot in aluminum rails.

Assembly Steps: This part is printed with a 'non-slider' attached to it. To attach it to our robot, we simply slide the non-slider into the t-slot (side view enters t-slot) and put a screw with a nut through each of the two holes.

Top



Front



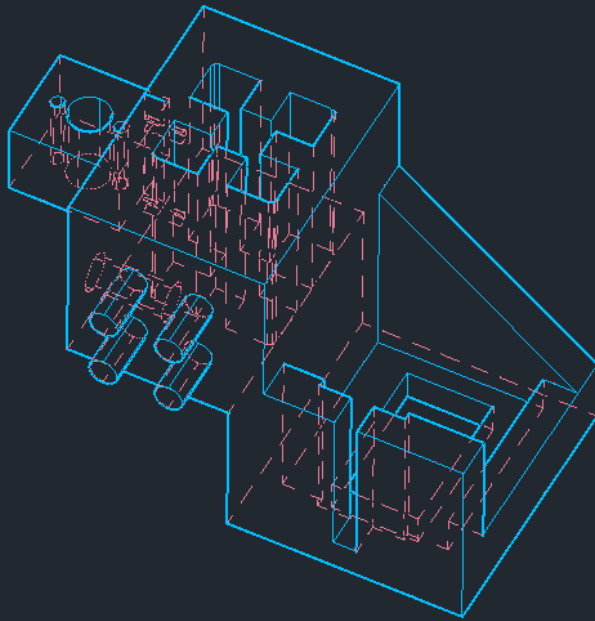
Material: PLA

Fabrication: 3D Print

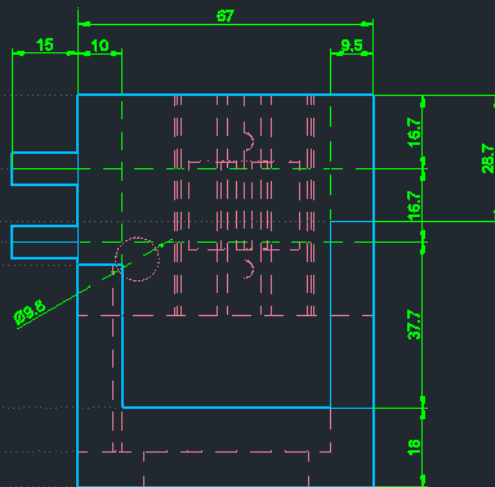
Tolerance: Accuracy within half a millimeter required to fit onto aluminum t-slotted framing.

Assembly Steps: The top view shows a negative of the cross-section of the t-slot framing. This slides onto the aluminum framing easily. The four 7mm diameter pegs are attached to wooden triangles with wood glue. These wooden triangles support two polished stainless steel rods which carry our end effector.

NOTE: The rest of this drawing is on the next page!



Side



University of Toronto

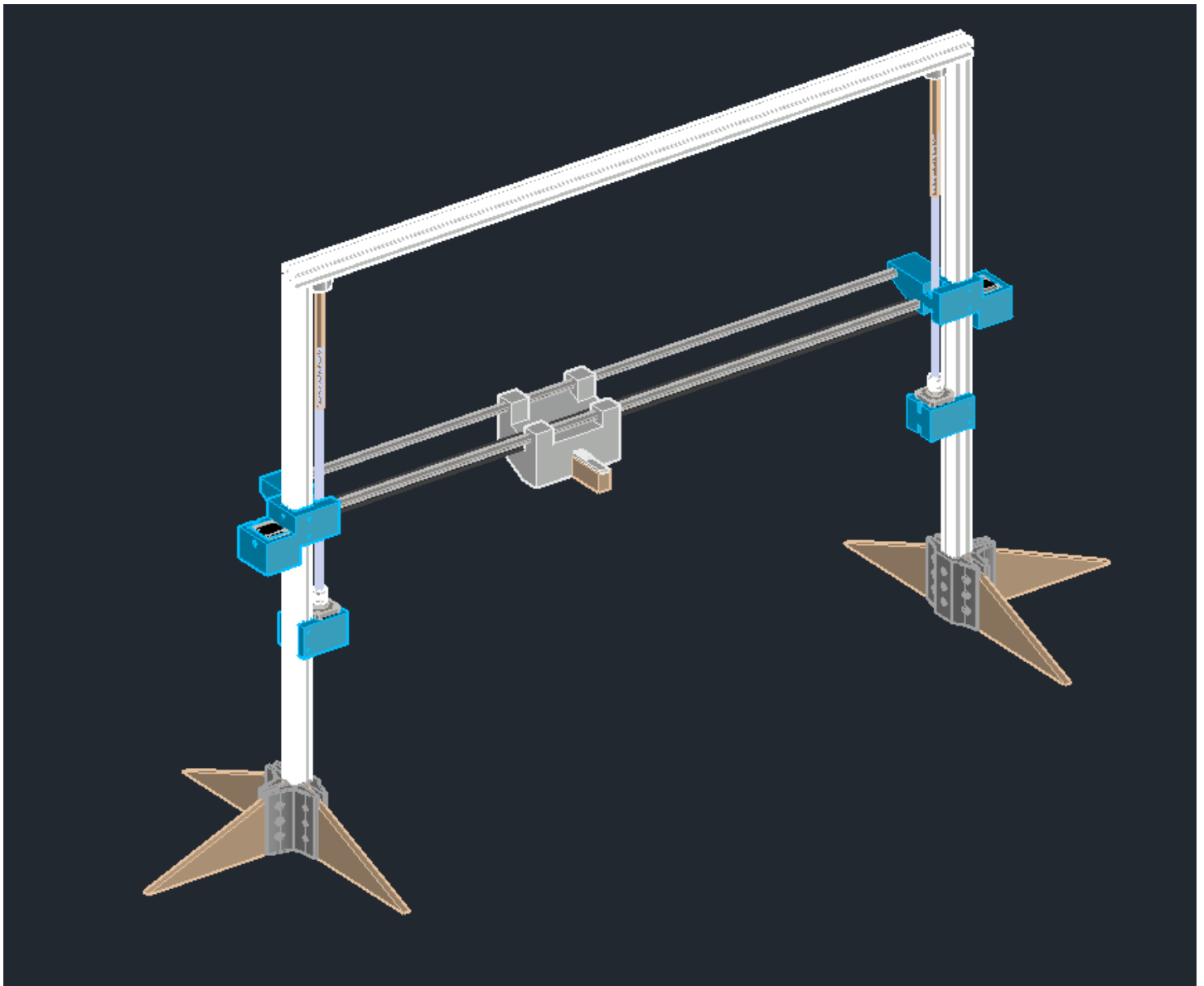
Lead Screw
Interface Block

ESC204 - Praxis III

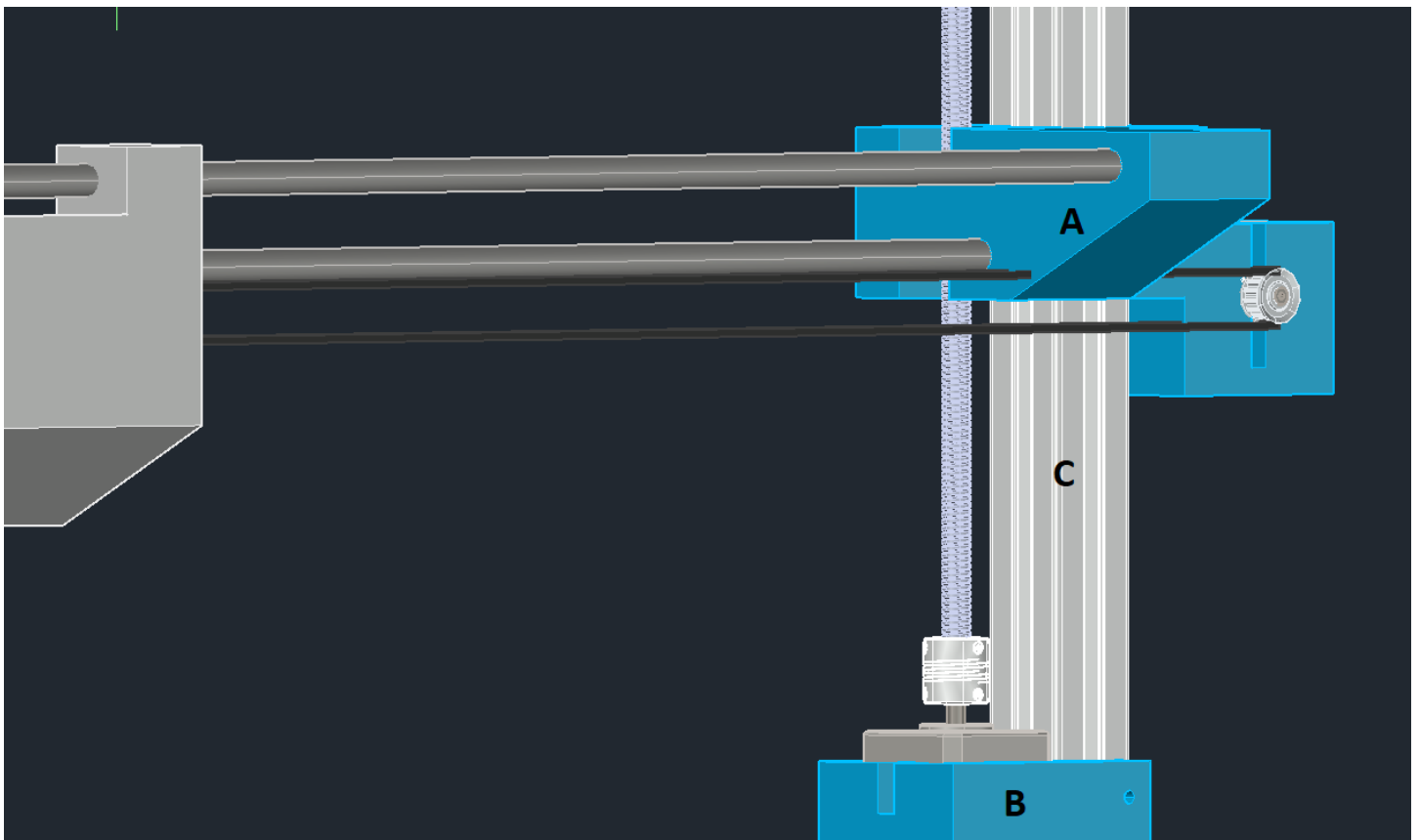
1:1 Scale (mm)

April.9th.2020

Spencer Ball



The full assembly!



A: This is an old version of the lead screw interface.

B: Here is the stepper motor mount.

C: The t-slotted aluminum framing.