

Large Drawing Compass

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Summary

Draw circles and arcs up to 40" (1 meter) in diameter

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This compass will allow drawing arcs and circles up to 40" or 1 meter in diameter.

Additional parts required are, 1 @ standard pencil, 1 @ 1/4" or equivalent bolt, 1 @ nut to fit (system is designed for 1/4 x 20 bolt and nut), 1 @ #8 or equivalent 3 inch wood screw (I used a deck screw).

It is suggested to print with 4 or more perimeters for best strength and to allow slight enlargement of holes if needed. Normally .20mm layer height is adequate.

Supports are only suggested for nut insert holes if parts are printed in orientation shown.

Bottom halves should be glued to the arms using the joiners for strength and alignment. Remember to print 2 joiners.

2 types of knobs for tightening on the pivot point are provided. The round style is shown in the photo. I prefer the triangular style.

Since PLA is inherently slippery I will be looking into some thin higher friction material to place between the sliding surfaces of the arms to reduce the torque required for tightening.

I suggest inserting the shim to hold the pencil from the bottom. This will be more effective for keeping the pencil from sliding upwards during use and allow the pencil to be repositioned by pushing the pencil downwards.

Model files



pencil-half.stl



knob.stl



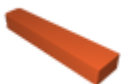
pointer-half.stl



pencil-half-bottom.stl



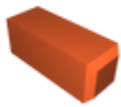
pointer-half-bottom.stl



shim.stl



triangular-knob.stl



joiner.stl

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