

Installing the Indexer Hanging Mount



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Overview

The hanging indexer mount allows the mounting of a rotary indexer onto the end of a ShopBot gantry tool. In order to turn the full 9.8" allowed by the ShopBot Rotary Indexer (6" version), it will be necessary to add table extensions to the table. For larger indexers (such as the 12" version) it may be necessary to have even more travel. Contact ShopBot Tools to discuss the best options.

Mount Hanging Brackets

Mount the hanging brackets to the rails using a ½" wrench and the provided hex screws, lock washers, washers and t-nuts. For most situations the ideal placement is 3.75" from the rear table legs. This can be changed later if desired.



Mount T-Slot Plates to Beam Assembly

Attach the aluminum t-slot plates (that came with the indexer) to the beam assembly using the provided button head cap screws, washers, t-nuts and the provided 5/16" wrench. Mount the plates about a half inch from the edge of the extrusion.

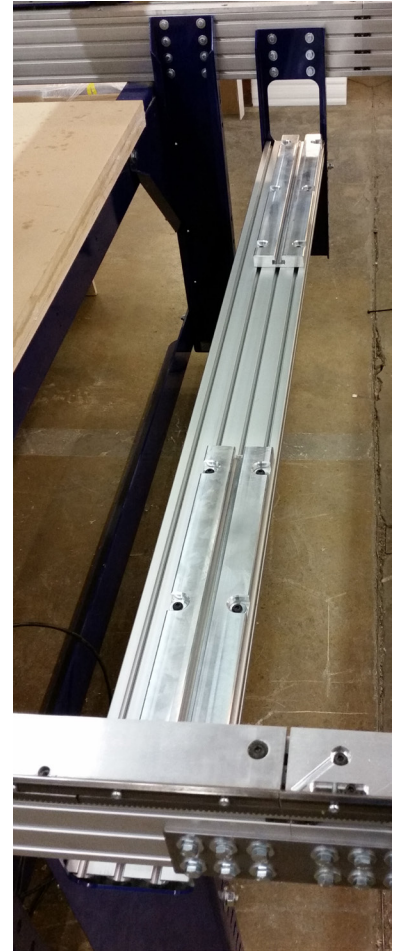
NOTE: press the plates toward the center of the extrusion when tightening.



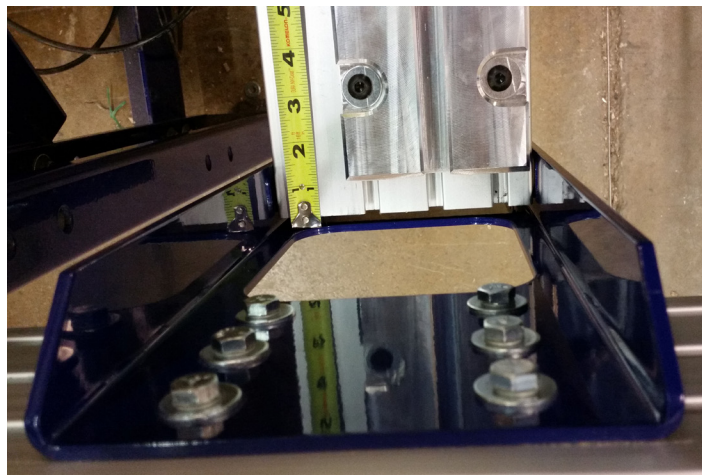
Mount Cross Beam



Attach the cross beam using carriage bolts, washers and nuts. For the 6" indexer, the 3rd slot from the top is typically ideal; for the 12", the 7th slot from the top. **DO NOT TIGHTEN BOLTS** - just thread them by hand.



After the carriage bolts are in place, adjust the beam left-right so that it is an equal distance from hanging bracket on either end. There should be about a 1/4" gap.



Use a 9/16" wrench and tighten the two nuts farthest from the table legs first, to pull the extrusion to one side of the hanging brackets, then tighten the other two nuts.

Mount Indexer Headstock and Tailstock

When mounting the headstock, push it laterally against one side of the aluminum t-slot plate to align it to the plate.



Alignment

The following instructions will help align the indexer to the travel of the tool. It's important to first become familiar with the shopbot control software and the keypad before proceeding. This routine is made easier with the help of a partner, as one person can sit by the indexer, the other at the control computer.

Insert 1/4" drill rod into the spindle collet, leaving at least 2" protruding.

Use the keypad to bring the drill rod to the outside of the live center in the tailstock (insert the live center if you haven't done already). To do this precisely, click on the "fixed" button in the shopbot keypad, and enter move increments of increasingly smaller values as you get closer to the edge of the live center (down to .002"). Bring the drill rod until it is in the position shown, almost touching the edge of the live center but with just enough room for a piece of paper to slip in between.



Exit the keypad, and zero the x axis by typing in ZX.

Reopen the keypad, and repeat this procedure on the outside of the chuck of the headstock (except do NOT zero the X-axis).

Look at the readout in the red-position window. The x-value should be about 0.92" (for 12" indexers, about 0.78"). If the readout gives a value of more than .02" different than this, adjust the headstock laterally by loosening the bolts holding the hanging bracket in place and tapping it with a mallet in the necessary direction.



Use the same technique to align the indexer vertically, by bringing the drill rod down from above rather than from the side.



For very precise vertical alignment, shims can be inserted on the underside of the beam.

