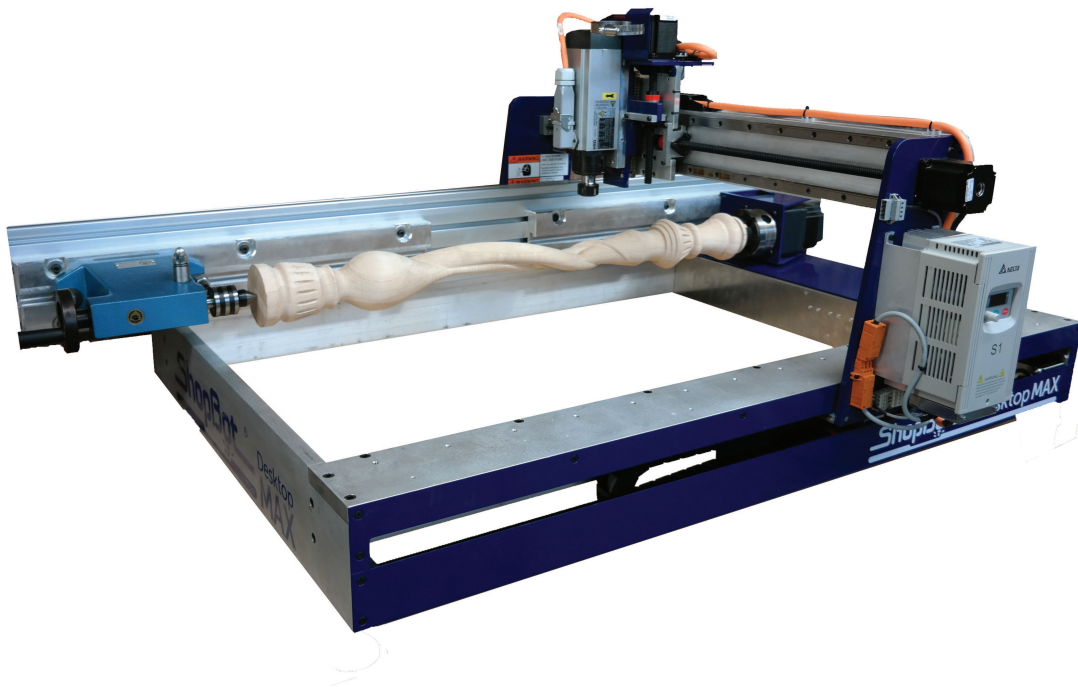




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# Desktop MAX 6" Indexer

005065

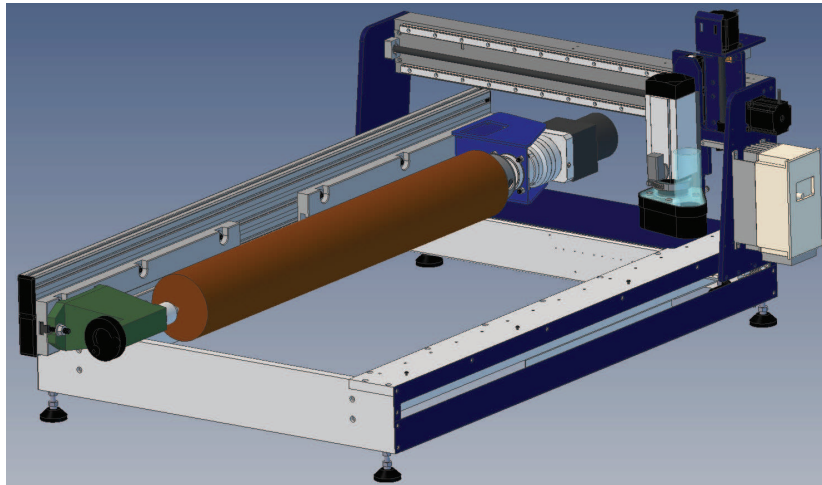




## Introduction

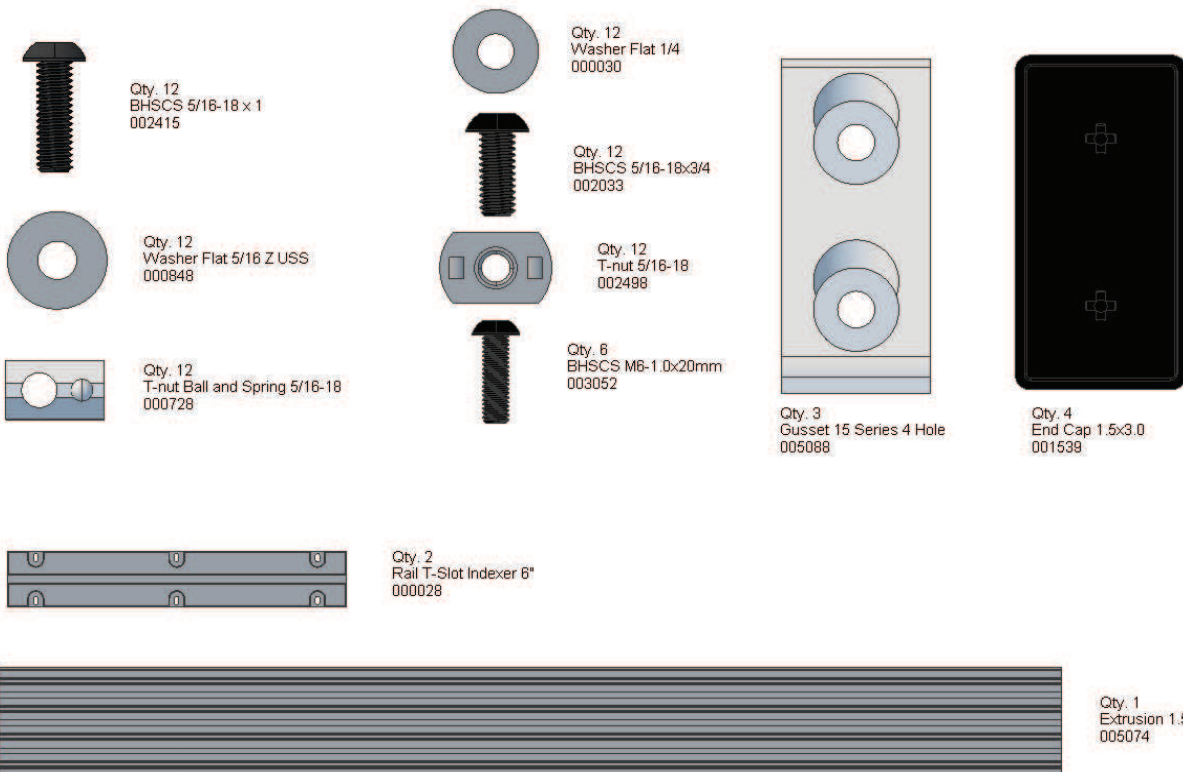
The 6" Indexer allows for the ShopBot Desktop MAX to turn parts up to 8" in diameter and 36" in length.

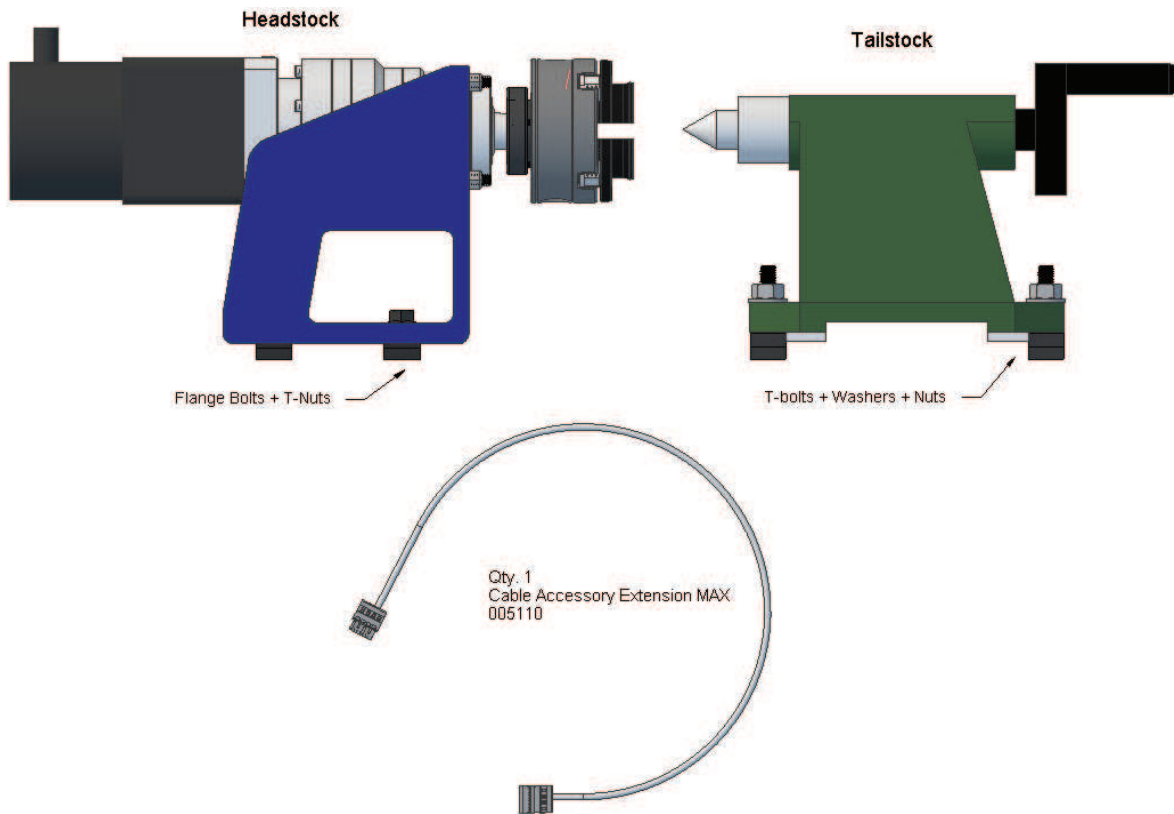
This document will cover the installation of the 6" Indexer when mounted directly to the frame of the tool (after the removal of the aluminum deck and spoilboard). In this configuration, the tool will not be usable for cutting sheet goods. When mounted directly to the frame of the MAX, the limiting factor when turning large diameter stock will be the tool's Z-travel, and bit length. Turning 8" diameter stock allows for 1/8" in clearance height with a 1.5" length bit.



If turning parts less than 4.5" in diameter, the indexer can be alternatively mounted directly to the aluminum T-slot extrusion deck, where the limiting factor will be distance from the axial center of the indexer to the deck (2.25"). An extra set of 6x screws (002033) and T-nuts (002498) are provided for mounting in this configuration.

### Parts:





In addition, the indexer has been packaged with a 4mm Hex Key and 3/16 Hex Key for assembly. Also included are both inside and outside jaws for the indexer headstock, as well as a live and dead center for the tailstock.

### Install Driver and Cable:

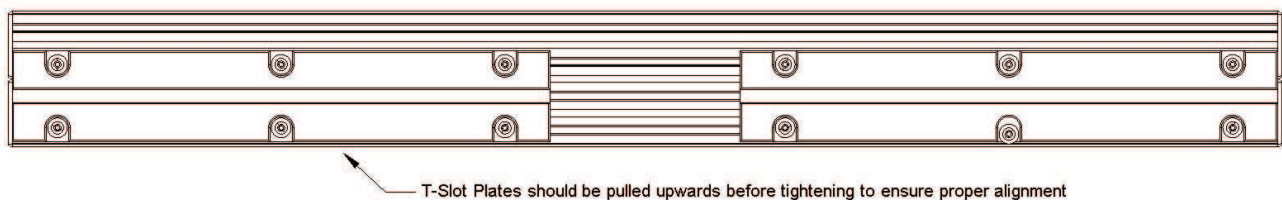
Note: This step should be skipped if the indexer was purchased with a tool.

If the indexer was purchased independently of a tool it will be necessary to install a 5th driver to operate the indexer headstock. See document: "SBG00268 DT MAX Indexer Driver Installation" for full instructions.

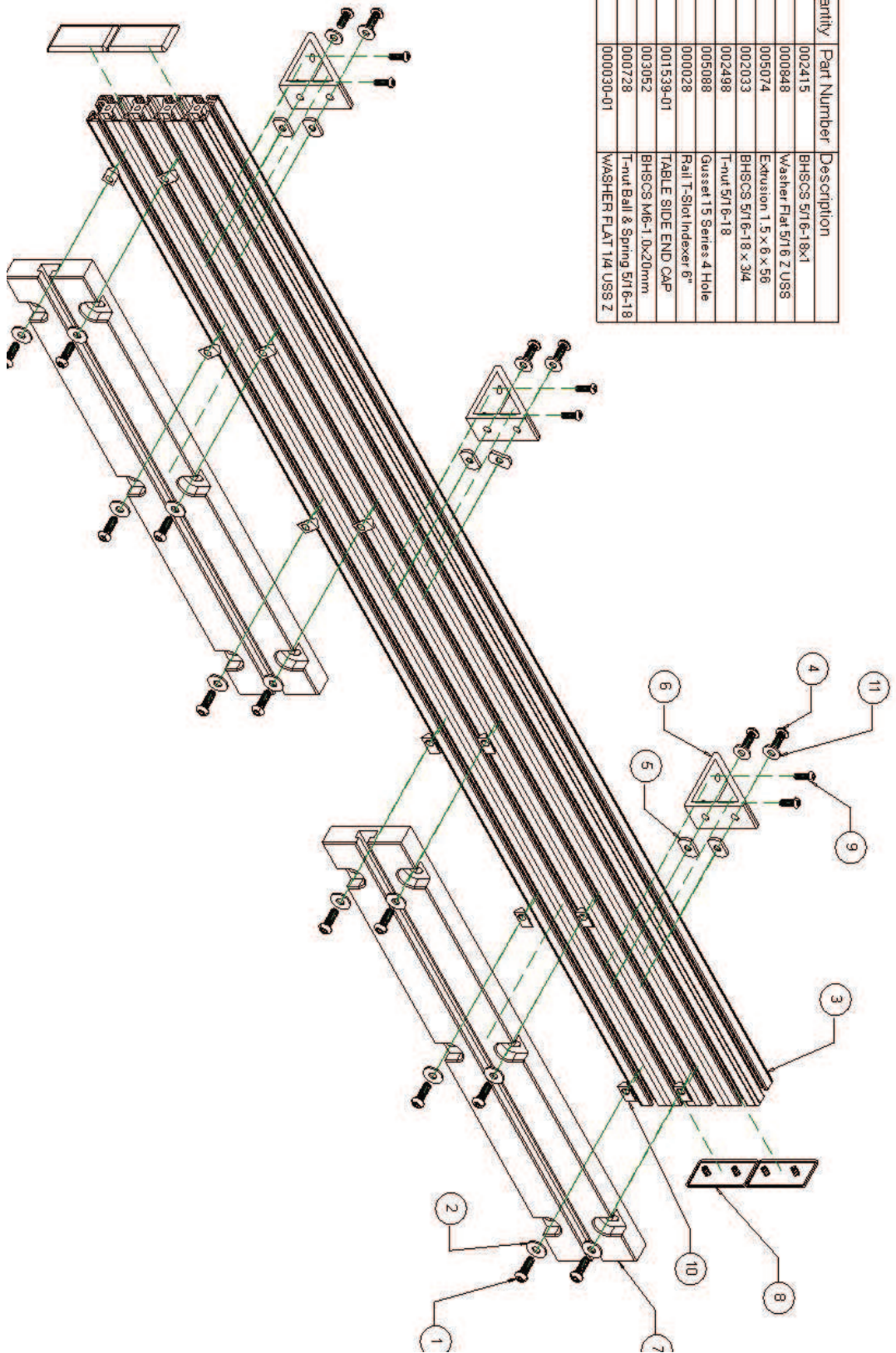
### Mount T-Slot Plates to Extrusion

See the following page for an exploded view on Extrusion Assembly.

Loosely mount the plates so that ends are flush with the end of the extrusion. It is important that the plates are pulled towards the center of the beam assembly.



Item Number	Quantity	Part Number	Description
1	12	002415	BHSCS 5/16-18x1
2	12	000948	Washer Flat 5/16 Z USS
3	1	005074	Extrusion 1.5 x 6 x 58
4	6	002033	BHSCS 5/16-18 x 3/4
5	6	002498	T-nut 5/16-18
6	3	005088	Gusset 15 Series 4 Hole
7	2	000028	Rail T-Slot Indexer 6"
8	4	001539-01	TABLE SIDE END CAP
9	6	003052	BHSCS M6-1.0x20mm
10	12	000728	T-nut Ball & Spring 5/16-18
11	6	000030-01	WASHER FLAT 1/4 USS Z





## Mount Gussets to Extrusion

As shown in the exploded view, slide six T-nuts (002498) into the two lower slots on the opposite side of the extrusion and loosely attach the three gussets with six screws, washers and 3/16" hex wrench.

For mounting directly to aluminum decking, an extra set of 6x T-Nuts (002498) washers (000030) and screws (002033) have been provided.

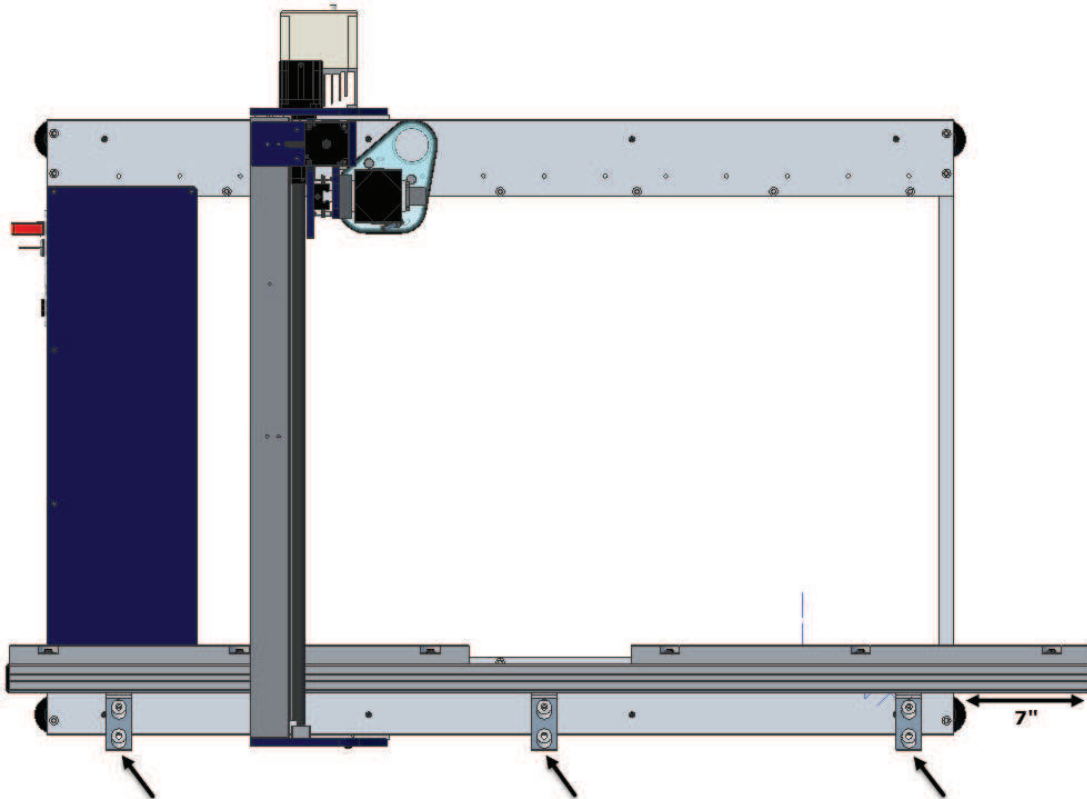


## Mount Extrusion Assembly to MAX Frame

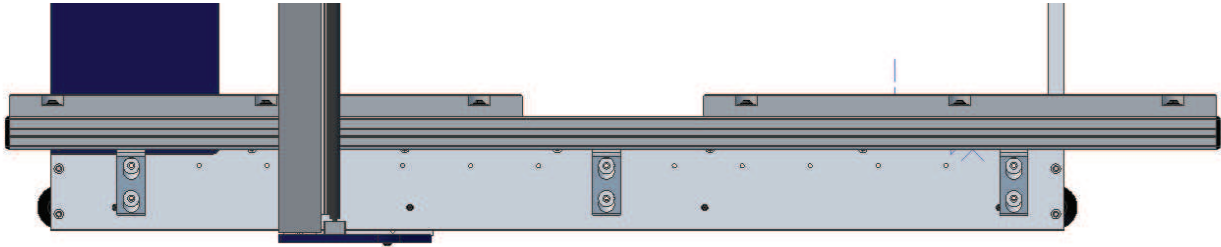


Use an M4 hex wrench to remove the spoilboard and aluminum decking and from the Desktop MAX.

Lift the extrusion onto the tool and position the gussets so that they are in line with the three sets of holes running along the left side of the frame as shown in the figure below. The extrusion should protrude 7" past the front of the tool.



Due to the drop in the electronics tray cover, the extrusion will rock when placed unsecured in its final position. To ensure proper gusset alignment, position the extrusion in the position above, such that the furthest gusset hole is aligned with the the closest corresponding hole on the MAX frame. Tighten the gussets to the extrusion at this time.



With the gussets aligned and square to the extrusion, slide the extrusion assembly forward such that the two holes in each gusset are aligned with their respective two holes on the MAX frame.

Attach the extrusion gussets to the tool frame with six screws (003052) and an M4 hex wrench, making sure to align the extrusion so that it is running parallel to the tool's X-axis.

### Attach End Caps to Extrusion

Use a mallet to tap four end caps (001539) into the ends of the extrusion.



### Align Extrusion to X-axis

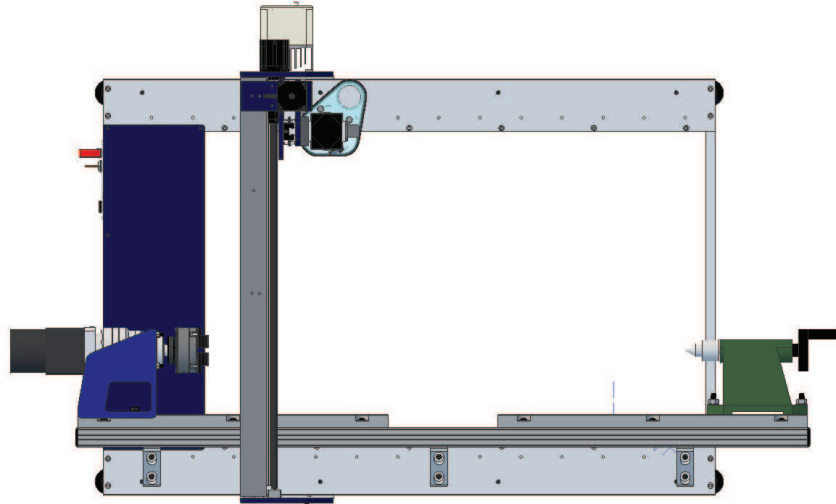
If available, attach a dial indicator to the tool's YZ car and run a dial indicator along the length of the extrusion (x-axis) to check for alignment. If needed, loosen the 6 gusset screws connecting the gusset to the frame and gently tap the extrusion with a mallet to bring it into alignment. For best results, the dial indicator should not read a difference greater than 0.01" over 36".

To align the extrusion without a dial indicator, insert a a dowel or end mill into the spindle and touch off on the vertical edge of the T-slot rails at X = 0 and X = 36. The tool's Y-values at these points should be a minimum of 0.01" between both extremes.

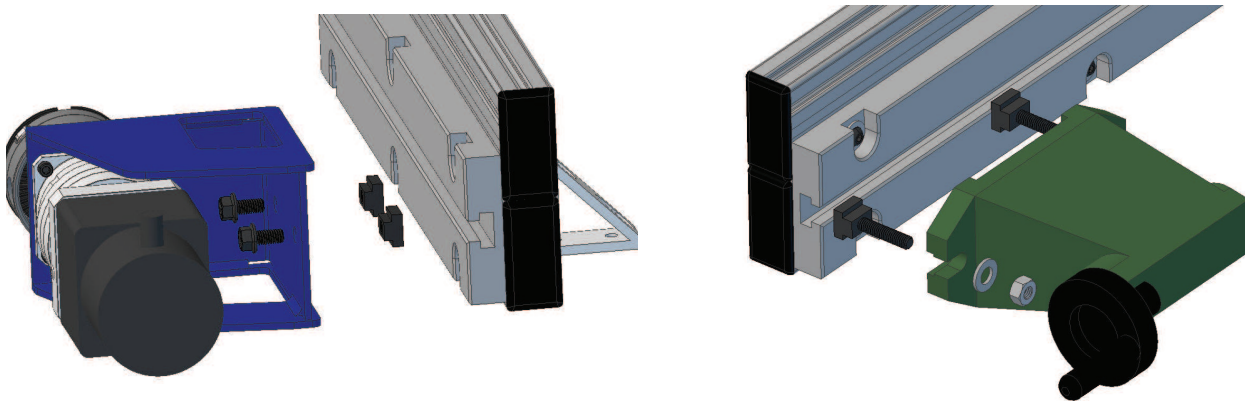


## Attach Headstock and Tailstock

The indexer headstock should be mounted at the rear end of the tool over the control box, while the tailstock should be mounted at the front of the tool facing the headstock. Both headstock and tailstock can be positioned anywhere along the length of their respective T-slot plates and tightened into place.

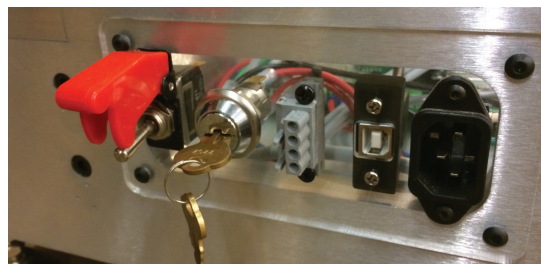


The headstock and tailstock have been shipped with their respective mounting hardware fastened to them. The headstock is mounted to a T-slot Plate with pair of T-nuts and flange bolts. The Tailstock is mounted with a pair of T-bolts with washers and nuts.



## Powering on the Indexer

Before plugging in the Indexer, cut power to the tool by flipping the red switch shown below to the off position. An Accessory Extension Cable (005110) is provided which should be run from the accessory cable Wago as shown in the picture above to the indexer headstock. Once connected, the headstock should maintain holding torque.





## Make Changes to ShopBot Software:

[VD] [D]isplay values

Parameter Name	Value	Required
Linear Units	0 - inches	
Units Type A Axis	0 - Linear	
Units type B Axis	2 - Rotary (deg)	
Number of Axes	5	
Main Display Type	0 - Standard/FULL	
Display File Comments	0 - Off	
KeyPad Fixed Distance	01	
KeyPad Remote	0 - Mouse	
KeyPad Switch AutoOff	0 - Off	
Write Part File Logs	1 - Write	
Write System Log	1 - Write	
Message Screen Loc X	-2500	
Message Screen Loc Y	-7455	
Message Screen Size X	8000	
Message Screen Size Y	4600	
Show File Progress	0 - Off	

Cancel OK

[VU] [U]nit values

Parameter Name	Value	Required
X Unit Value	4000	*
Y Unit Value	4000	*
Z Unit Value	4000	*
A Unit Value	4000	*
B Unit Value	40.00	*
Circle Resolution	0.05	
Resolution Multiples for alphaStep Drives		
X Resolution Multiple	5	*
Y Resolution Multiple	5	*
Z Resolution Multiple	5	*
A Resolution Multiple	5	*
B Resolution Multiple	5	*
Slow Speed Generation for Unusual Requirements		
Step Interval Divider	1	

Cancel OK

Open the control software and click Values > Display Values on the top menu bar. A yellow fill-in sheet will appear, as shown below. Change Display units B axis to degrees, and change Number of Axes to 5. Then click OK at the bottom of this sheet to save changes.

Select Values > Unit values. Change the B Axis Unit Value to 40.000. Do not make changes to any of the other values. Now click OK to save these changes.

### Application:

For an introduction on how to use your rotary indexer, see the document "Setting up a wrapping file for theShopBot rotary indexer" which can be found in the Upgrades and Accessories section of the ShopBot docs website:

<http://www.shopbottools.com/ShopBotDocs/files/WrappingRotaryIndexer.pdf>

