

PantoRouter™

Assembly Guide

Assembly guide for North and South America

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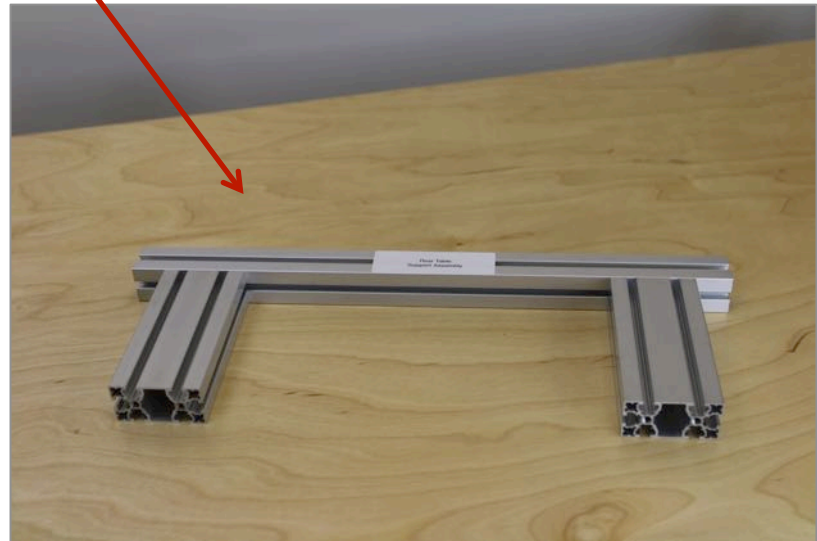
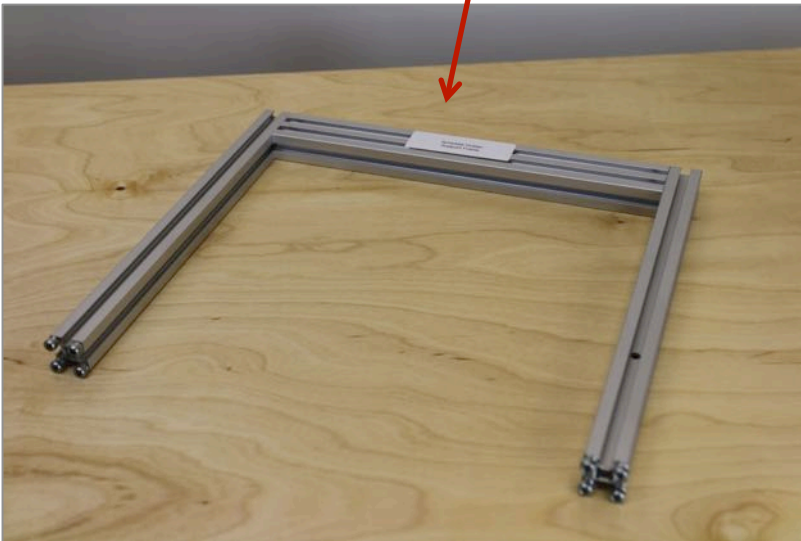
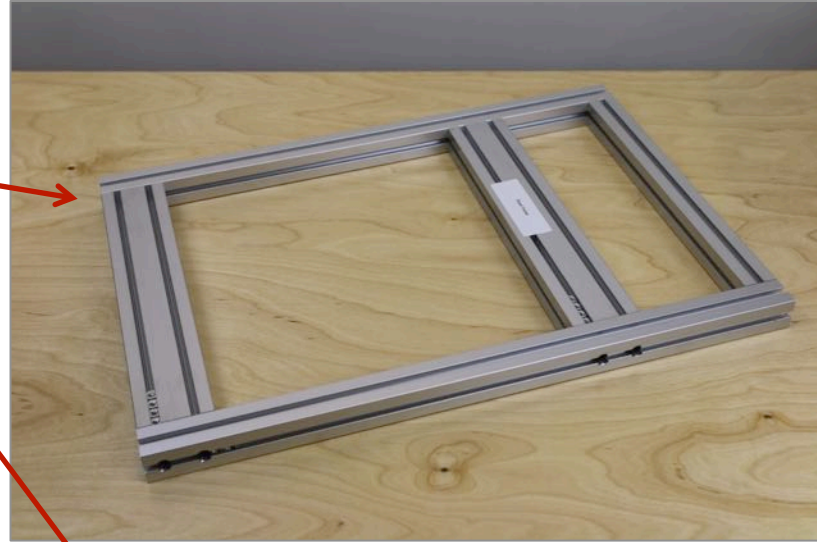
Inventory Parts

- The PantoRouter™ is packed in a single box with several smaller boxes and components inside.
- Lay out the bags and pieces for easy identification during the assembly process.
- There are some shots of the assembled PantoRouter™ at the end of this guide which might be useful as you put it together.
- There's also an addendum showing detailed shots of the Assembly Parts Box contents.



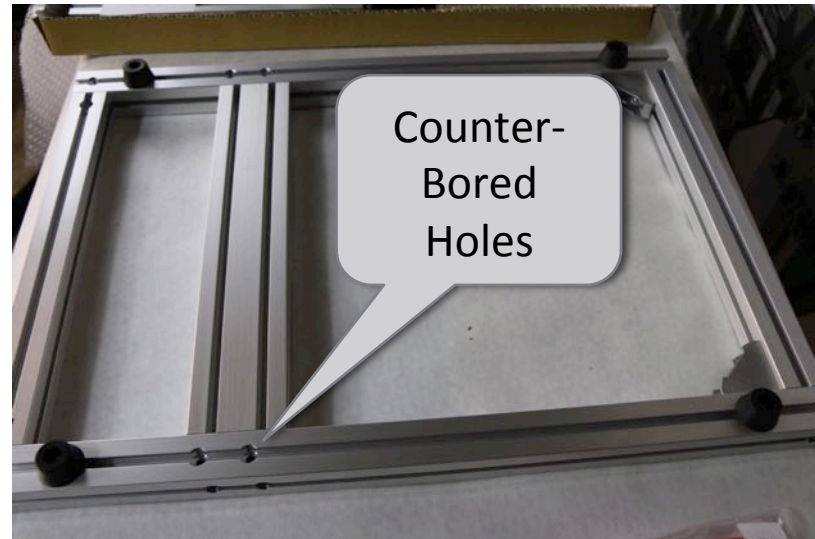
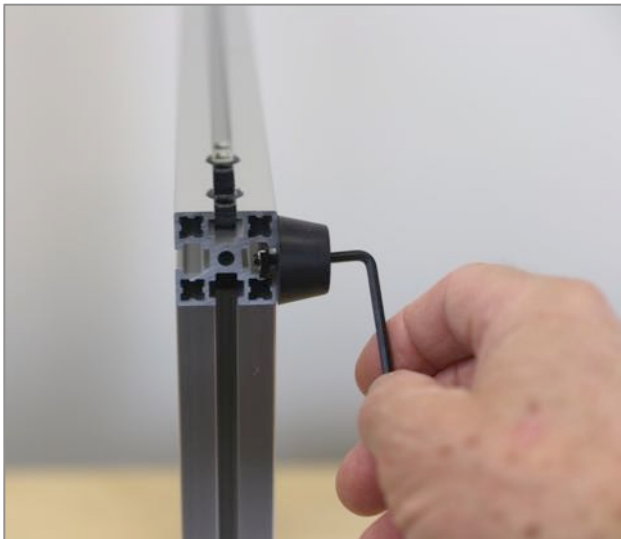
Pre-Assembled Parts

- Base frame with glide shaft mount nuts and depth stop nuts captive in the slots
- Rear table support assembly
- Template holder support



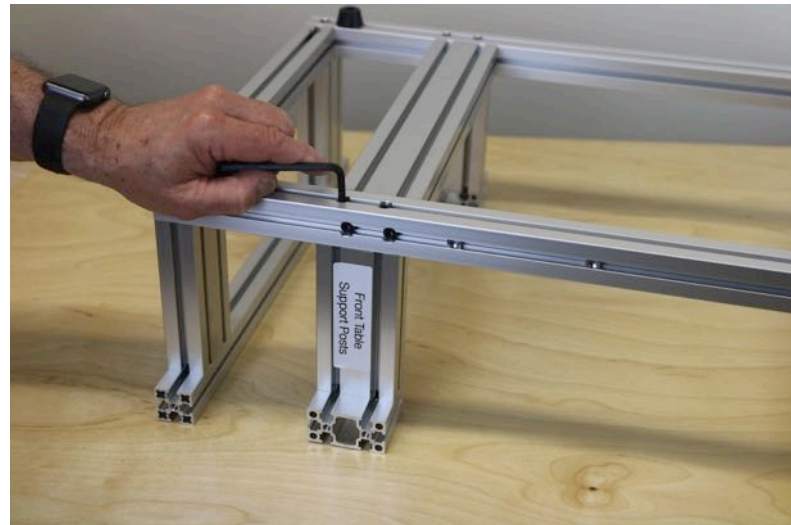
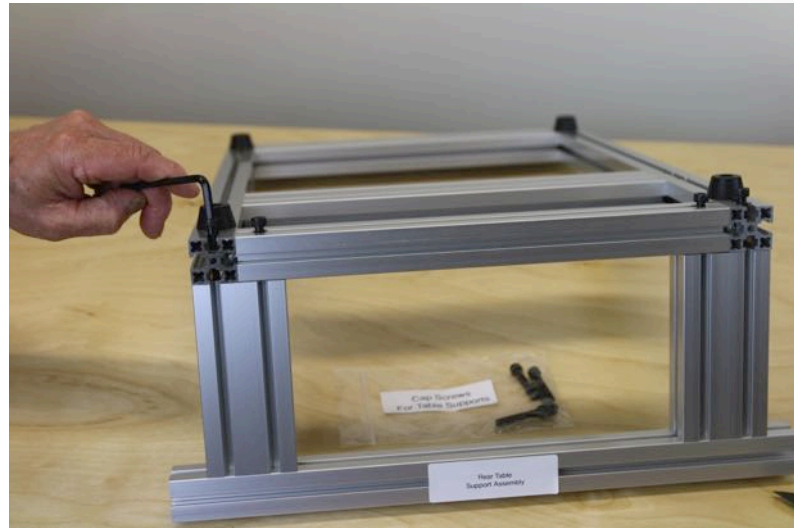
Install the Base Frame Cushions

- The bottom of the base frame has counter-bored holes for the table support posts.
- Install the base frame support cushions by sliding the nuts into the slot on the bottom of the base frame.



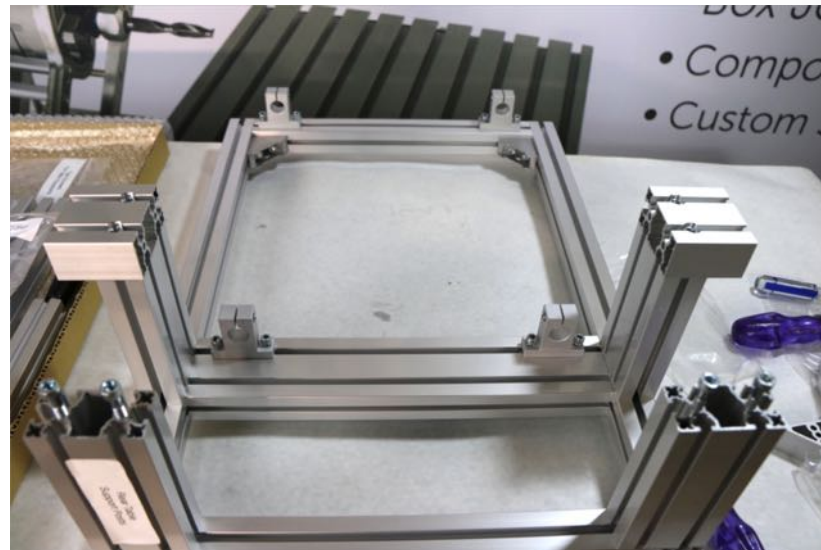
Install the Rear Table Support Assembly

- Use four black M-5 cap screws to secure the Rear Table Support Assembly to the Base Frame
- Use the four remaining black M-5 cap screws to secure the Front Table Support Posts to the Base Frame

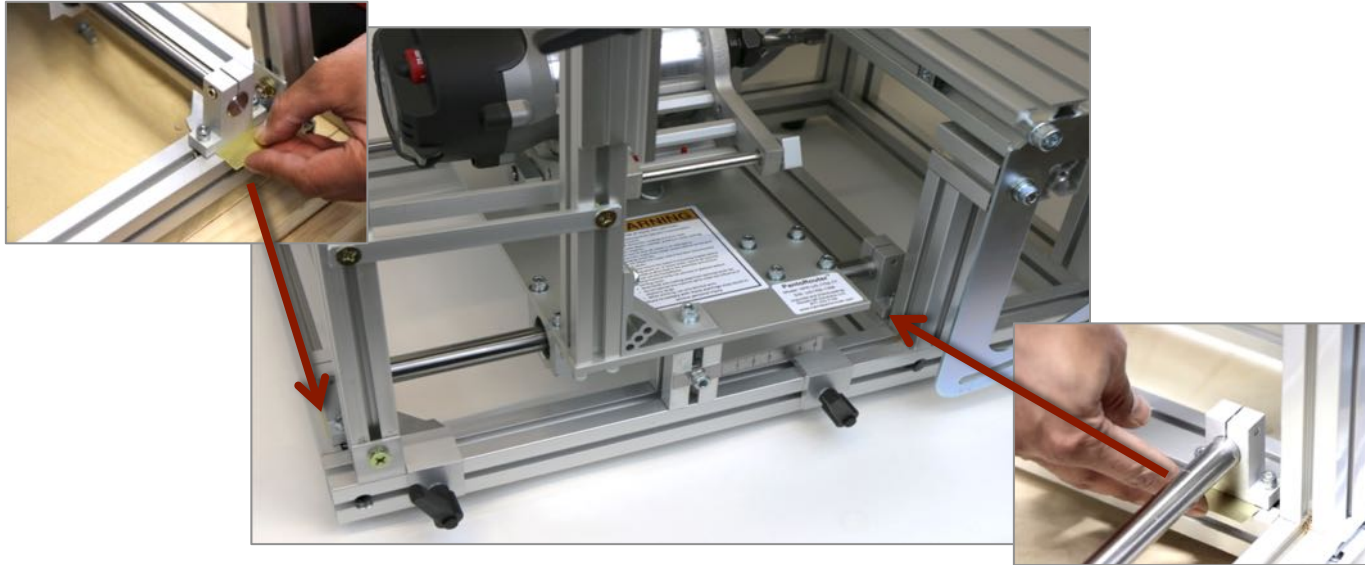


Install the Glide Shaft Mounts

- Install the four Glide Shaft Mounts using the M-3 cap screws from the bag and the nuts captive in the cross members of the Base Frame.
- The clamp screws in the side of each Mount should face the center.
- Leave the Mounts loose.
- Note: The new base frame no longer uses the corner braces.



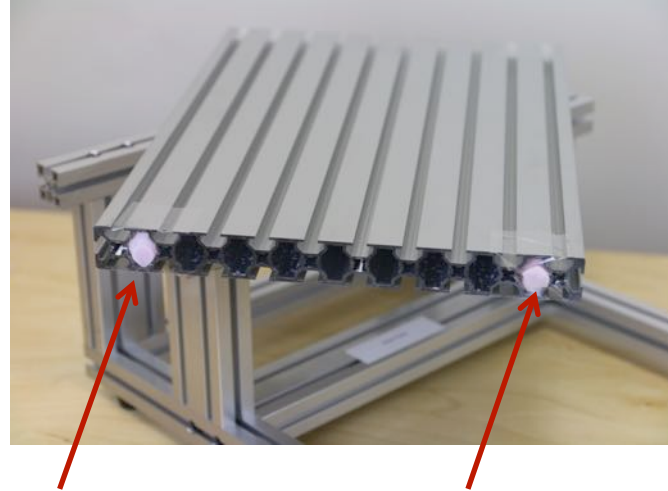
Install Brass Shims



- Please use these two brass shims under the operator side glide shaft support blocks only.

Table Assembly

- Remove the two Glide Shafts from inside the Table
- Locate the threaded holes in the table
- Prepare the Tilting Table Hardware and Protractors



Install the Protractor Pointer

- Slip the Pointer locking nut into the channel and hand-tighten.

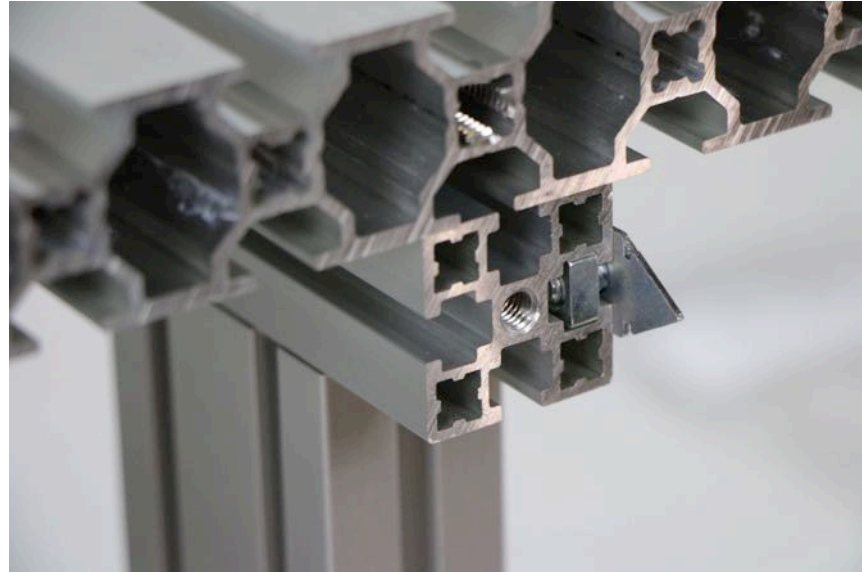


Table Assembly

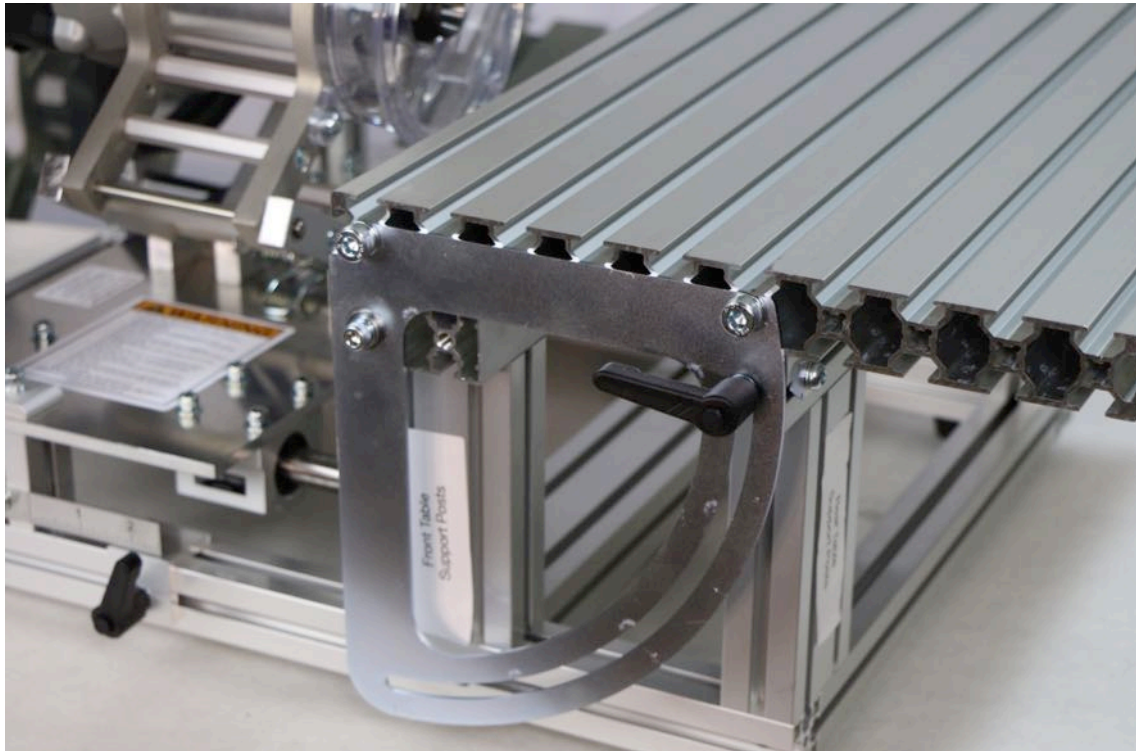
- The Protractors are left and right. Install the wider flange toward the support post with a washer.



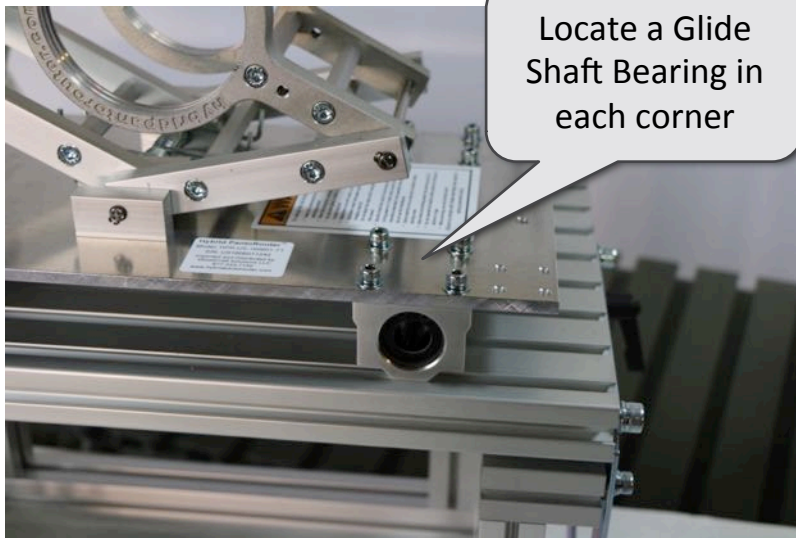
The wider flange goes toward the mount with a washer.

Table Assembly

- Secure the Table to the Front Table Support Posts using the M-5 cap screws with washers between the flange bearings and the support posts.
- Secure the Table to the Protractors with the M-8 cap screws
- Thread the ratchet-action lever knobs through the Protractors into the Rear Horizontal Supports. Put washers between the Protractors and Supports.
- Align the Protractor Pointer Arrow with the edge of the Protractor and tighten.

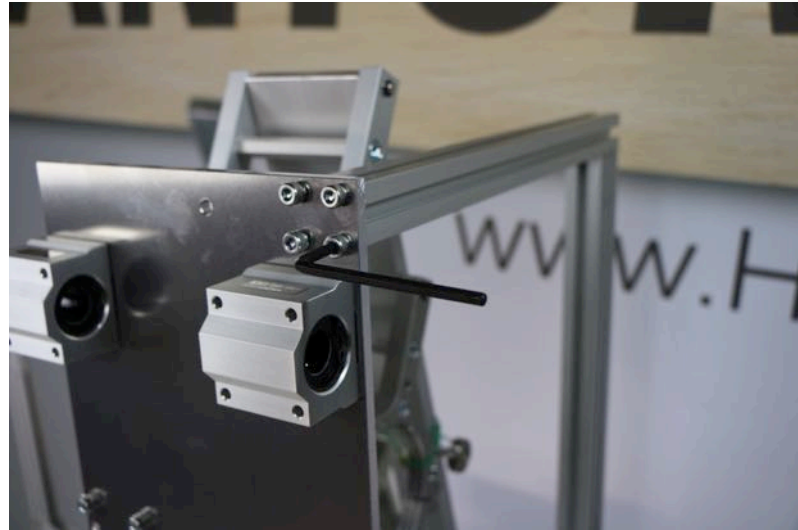


Mount the Glide Shaft Bearings

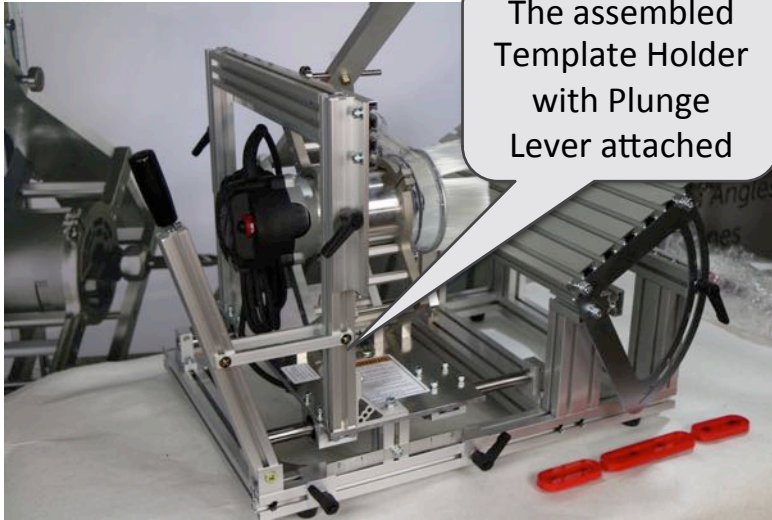


Mount the Template Holder

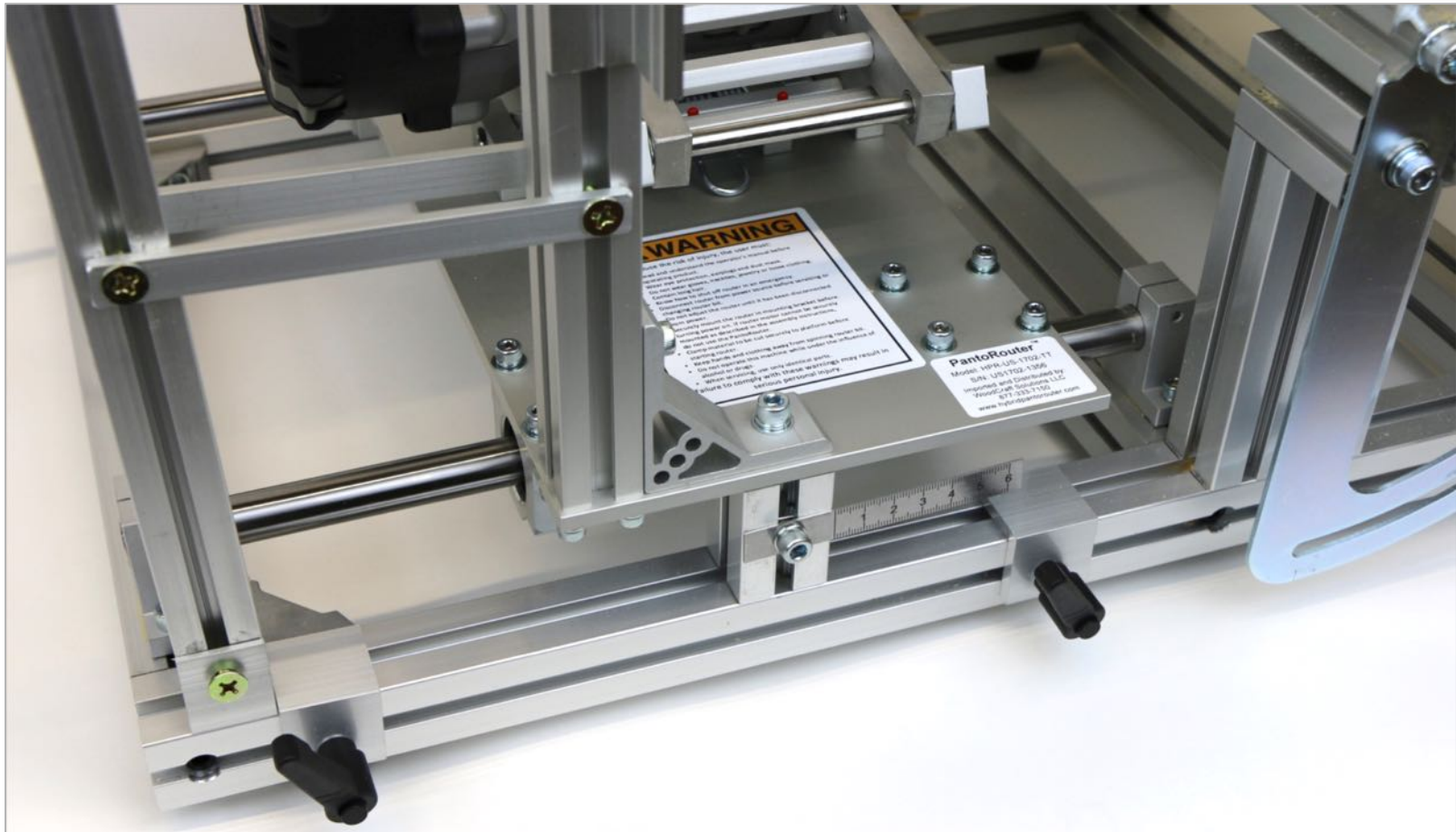
- Mount the Template Holder assembly to the Pantograph base
- Slide the Angle Bracket keeper nut down the slot in the post on the operator's side.



Assemble and Install the Template Holder

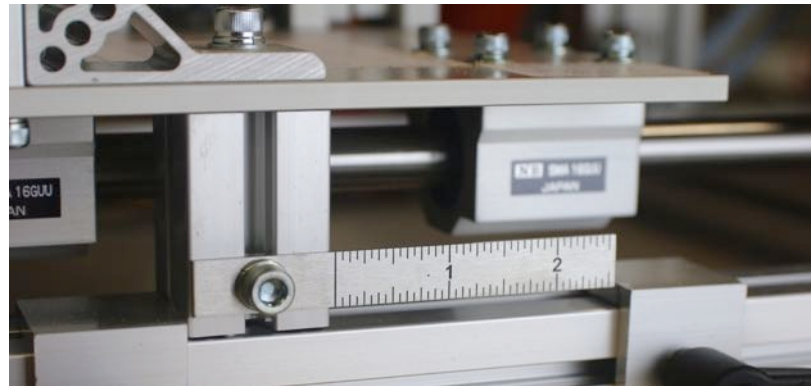


PantoRouter™ Depth Stop and Scale



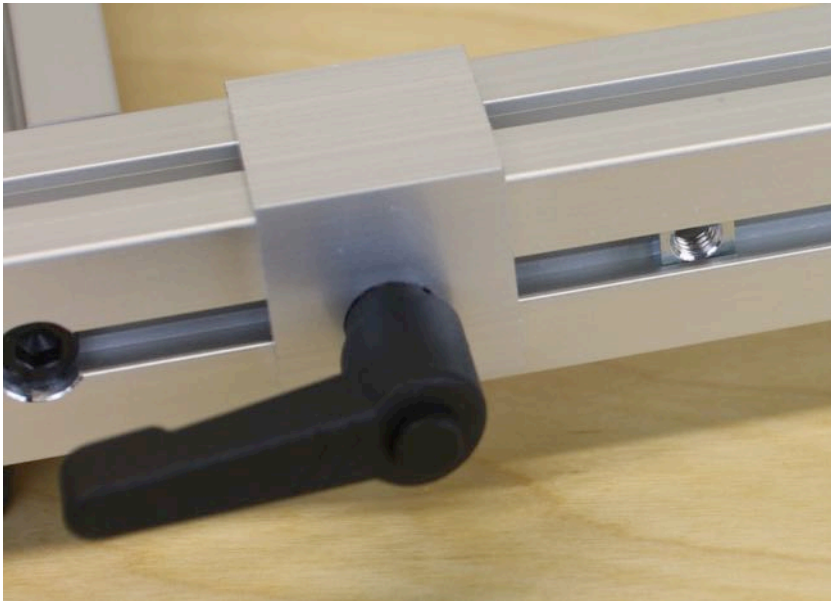
Assemble the Depth Stopper

- Secure the short Depth Stopper post to the bottom of the Pantograph base using the cap screw through the Angle Bracket.
- Mount the depth stop Scale on the post. Use either inch or metric scale.



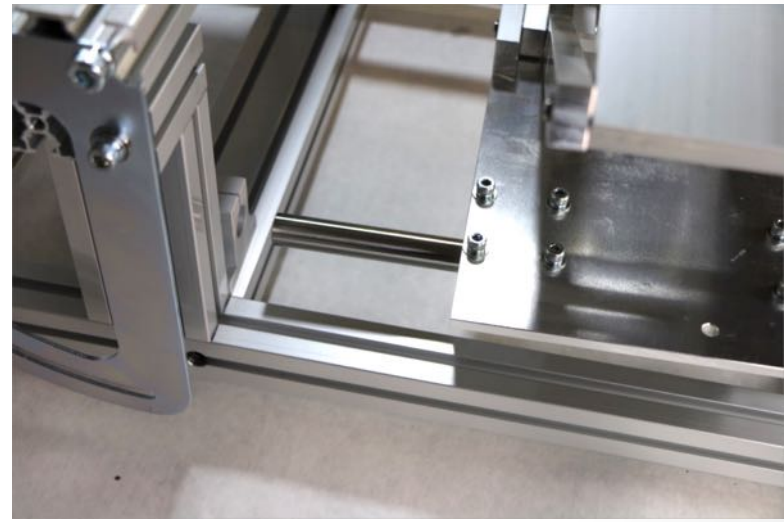
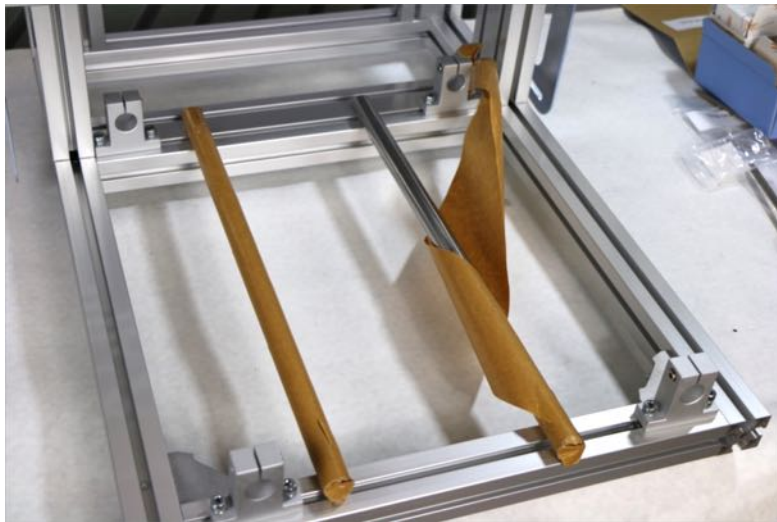
Assemble the Depth Stopper

- There are two nuts captive in the side slot on the operator's side of the base base frame for the depth stoppers.
- Thread the ratchet action lever knobs through the depth stop angles and into the captive nuts on either side of the depth stop post with the scale.



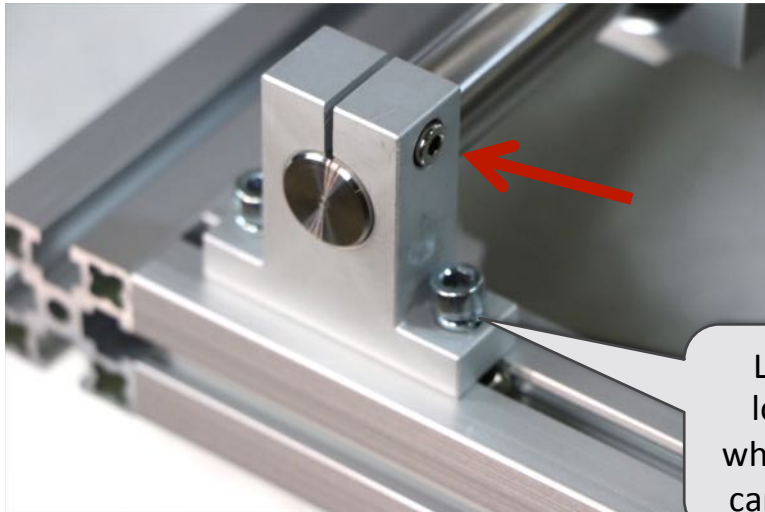
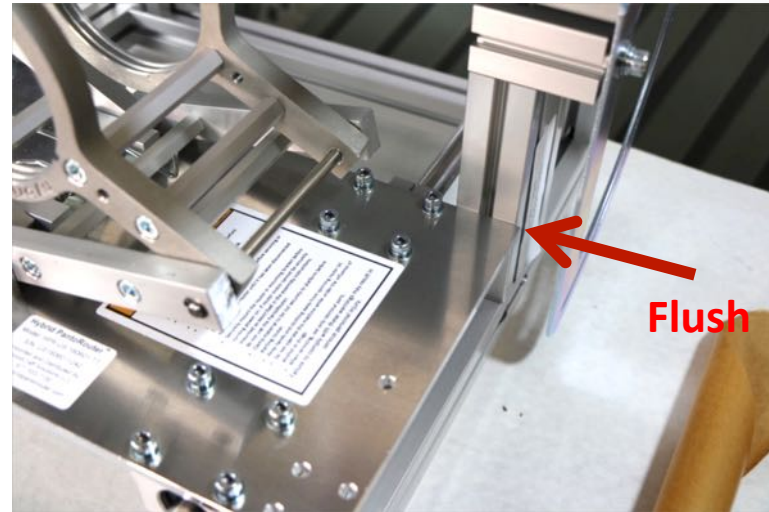
Install the Pantograph Base

- Unwrap the Glide Shaft Rods and insert them in the Glide Shaft Mounts
- Slide the Glide Shaft Rods through the linear bearings on the Pantograph Base and into the rear mounts

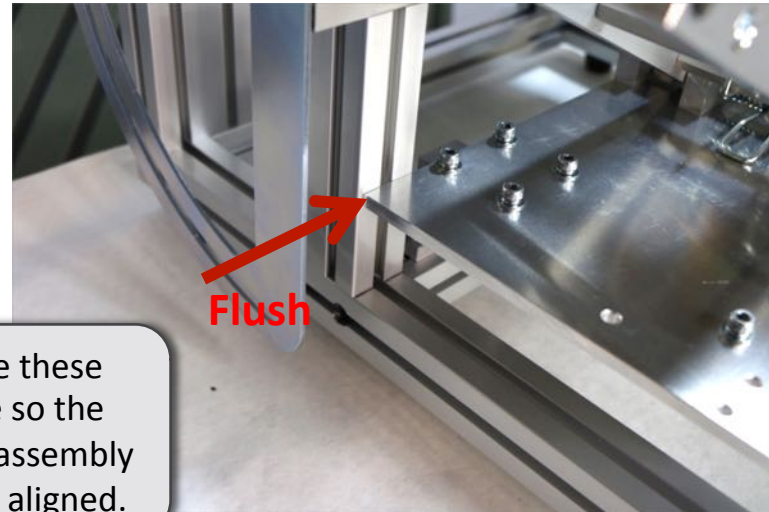


Install the Pantograph Base

- Tighten the Glide Shaft Mounts around the rods but leave them loose on the Base Frame
- Slide the Pantograph to contact the Front Table Support Posts. Align both sides so they're flush side-to-side and with the face of each post.

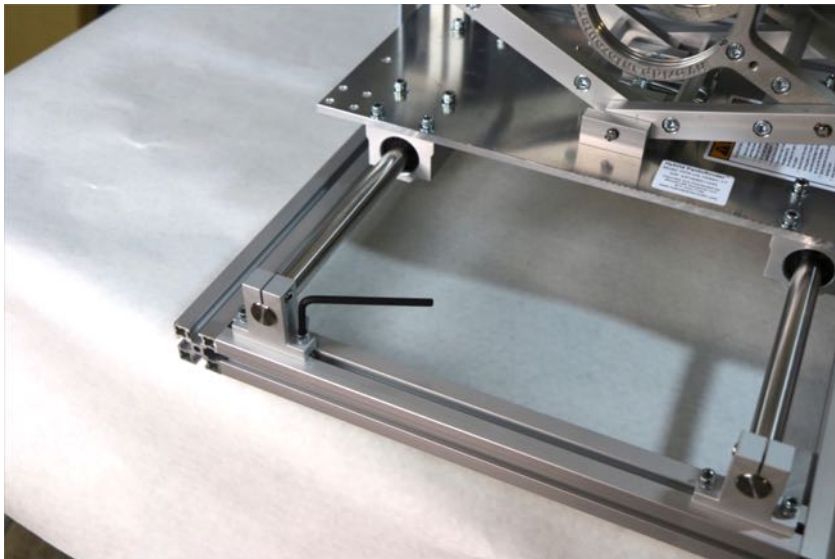


Leave these loose so the whole assembly can be aligned.

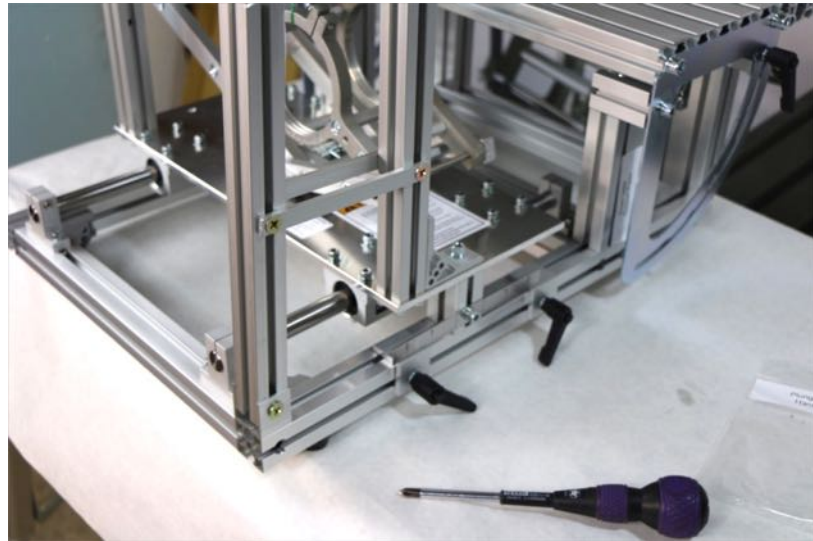
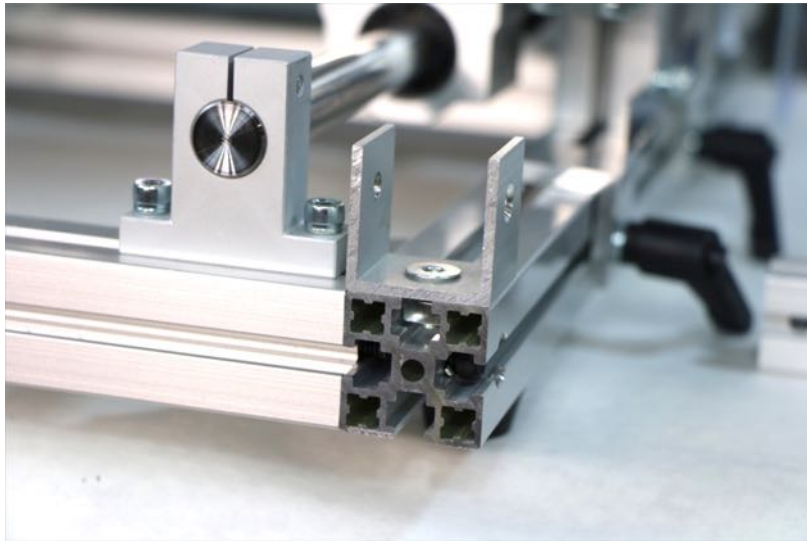


Secure Pantograph Assembly

- Tighten the Glide Shaft Mounts once the Pantograph sled is aligned to both front posts

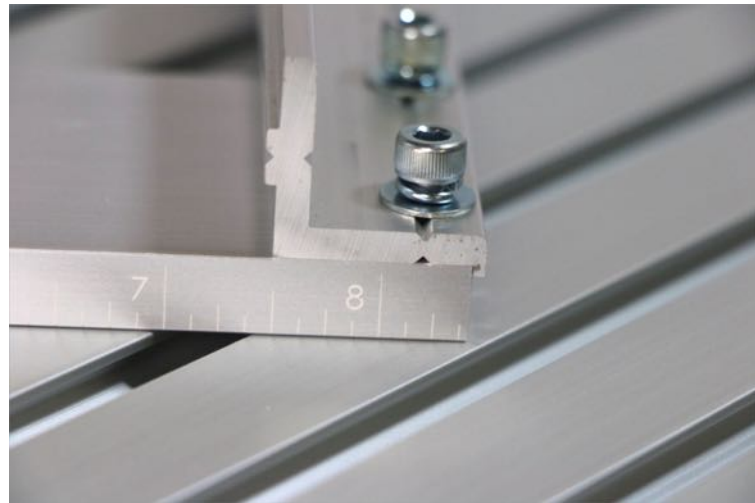
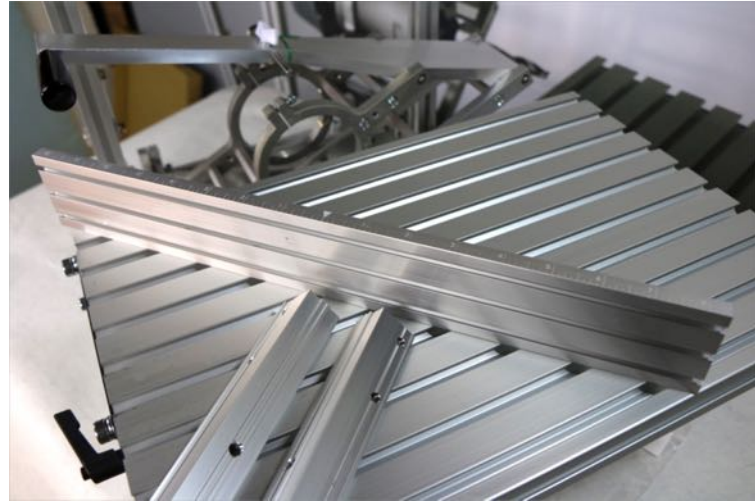


Install the Plunge Lever



Assemble the Template Holder

- The Template Holder glide angles are left and right.
- Decide which scale you prefer and locate the left and right so either the inch or metric scale is up.
- Align the lip on the edge of the angle with the end of the Template Holder.
- Hand-tighten the cap screws.

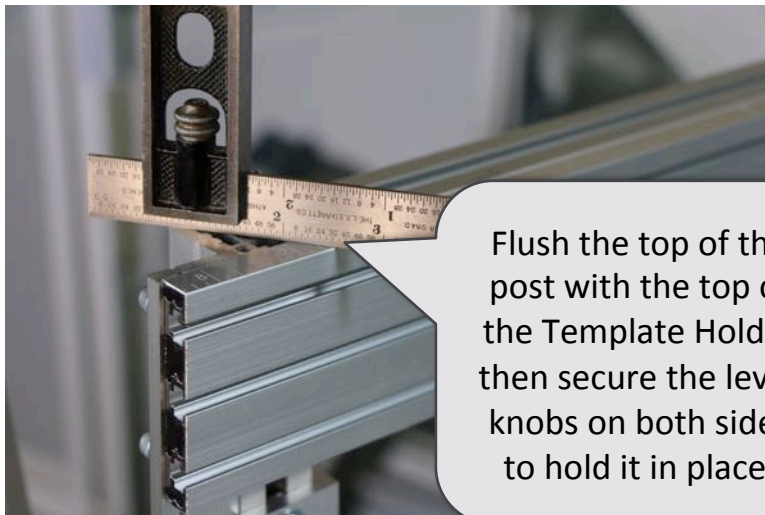
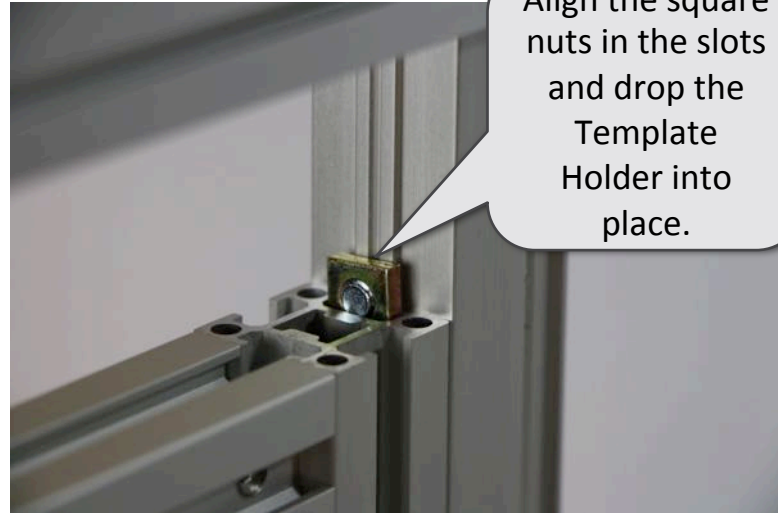


Install the Template Holder

Install a washer between the lever knob and angle.



Align the square nuts in the slots and drop the Template Holder into place.



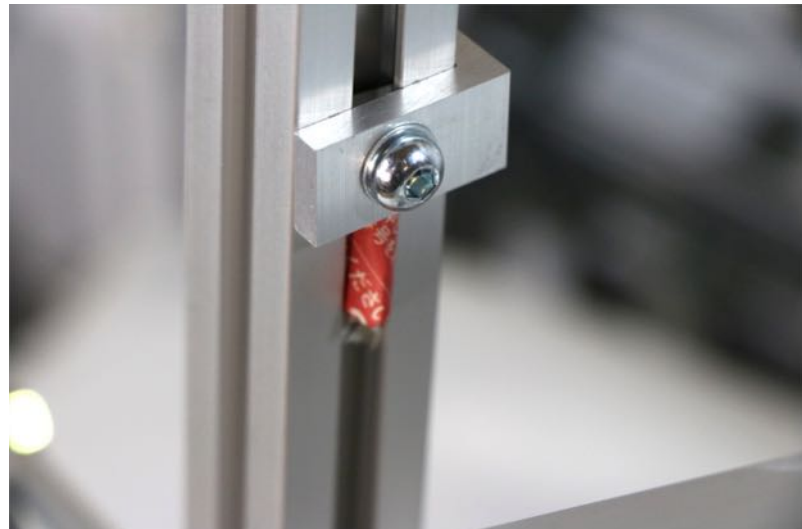
Flush the top of the post with the top of the Template Holder then secure the lever knobs on both sides to hold it in place.

Tighten the cap screws



Install the Thickness Gauge

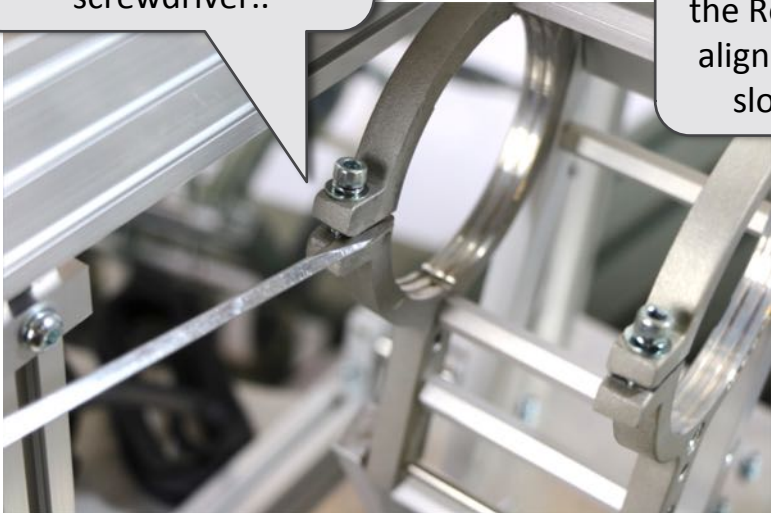
- Fold a small piece of paper and insert it into the slot facing the table on the operator's side of the template holder.
- Drop the square nut into the slot from the top and install the thickness gauge. Move it down out of the way for now and once the PantoRouter™ is fully assembled, watch the video about adjusting it.
- [Click here to watch](https://youtu.be/lxpHJZoNBjI?t=1m50s) If the video doesn't start automatically, copy and paste this link to your browser: <https://youtu.be/lxpHJZoNBjI?t=1m50s>



Install the Router Motor



Loosen the cap screws and open the Router Mount flange with a screwdriver..

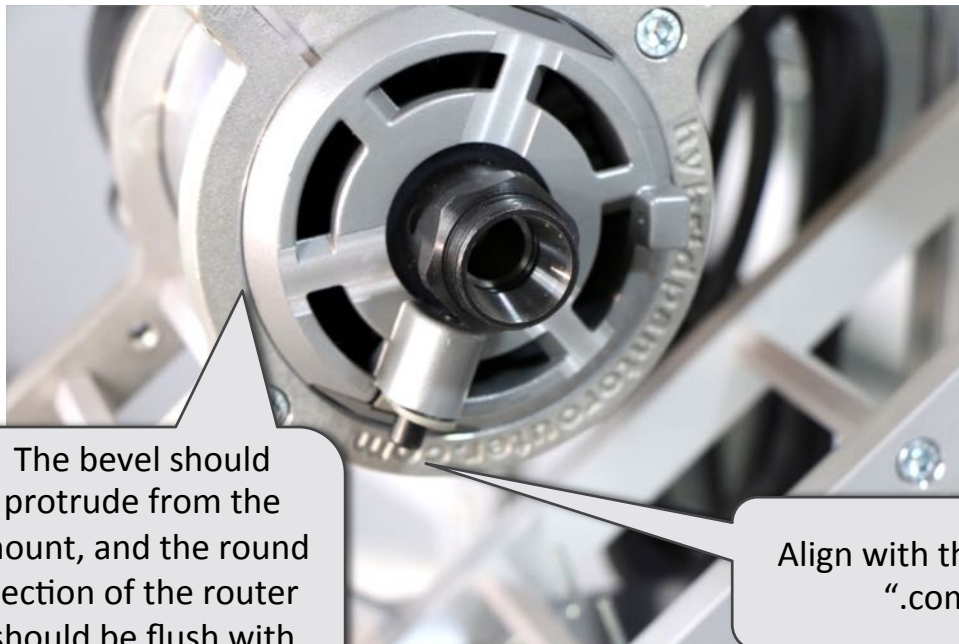


Slide the router into the Router Mount and align the pin with the slot in the Mount.



Install the Router Motor

- It's helpful to use the 3mm hex wrench to hold the Router Mount open as you slide the Router Motor through.
- Align the push button for the rotor lock with the "m" cast into the Router Mount and bring the Router forward as shown
- Secure both Router Mount cap screws.



The bevel should protrude from the mount, and the round section of the router should be flush with the router mount.

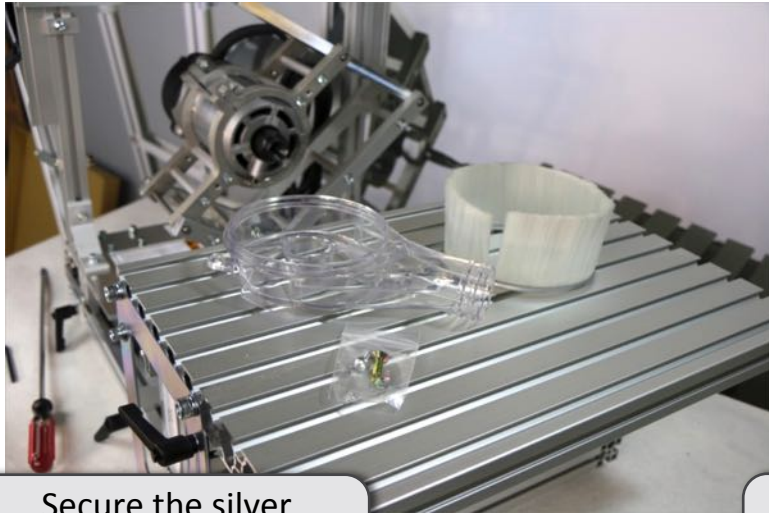
Align with the "m" in ".com"



The cord should be in this position.



Install the Optional Dust Collector Hood



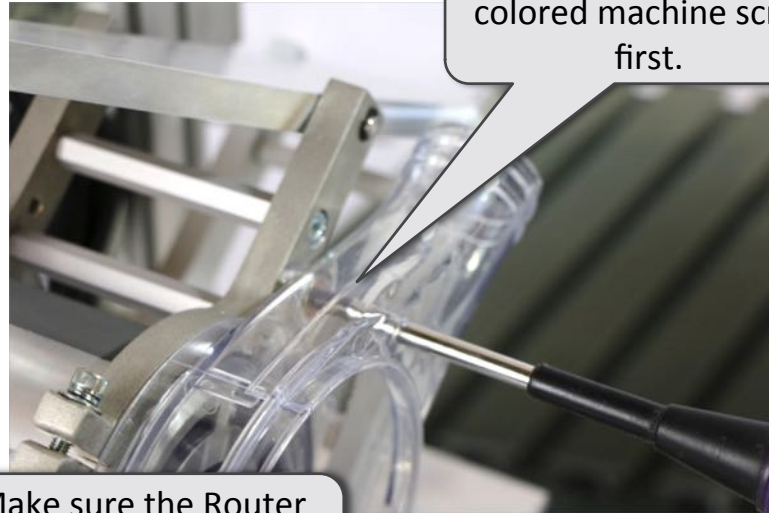
Secure the silver colored machine screw with a washer.



Make sure the Router Mount cap screws are secure.



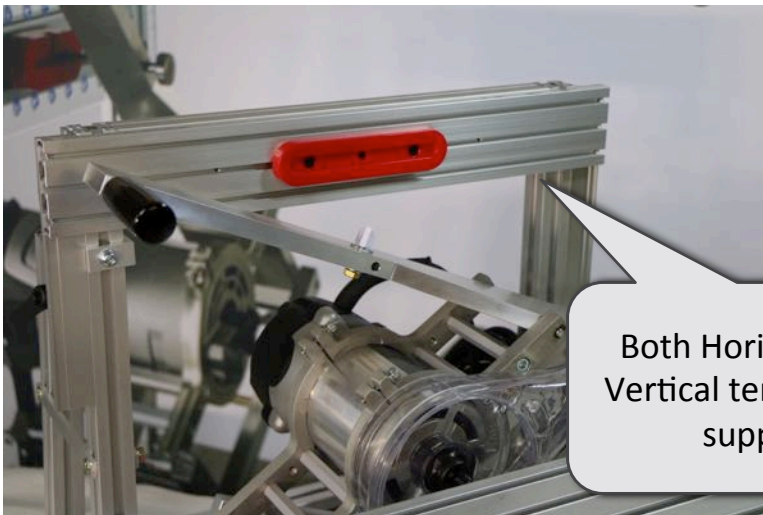
Secure the brass colored machine screw first.



Templates



Thread the black screws through the templates and attach the square nuts



Both Horizontal and Vertical templates are supplied.

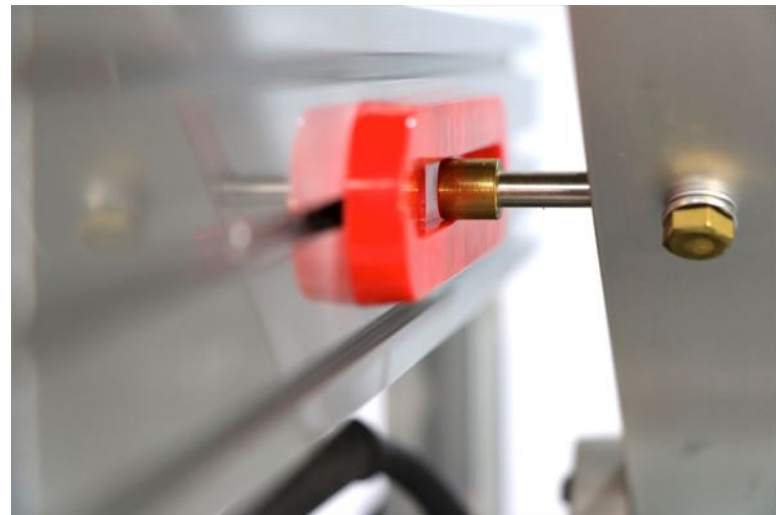
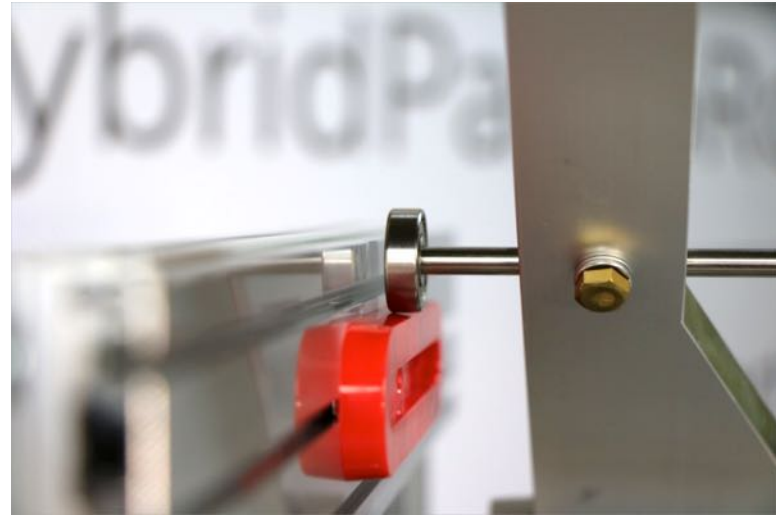
Tapered Shaft

- The Tapered Shaft is used to center the bit during setup of the thickness gauge and locating the position of a joint.
- The Tapered Shaft can also be used as a Guide Bearing for slot mortises. The templates can be used as stops.



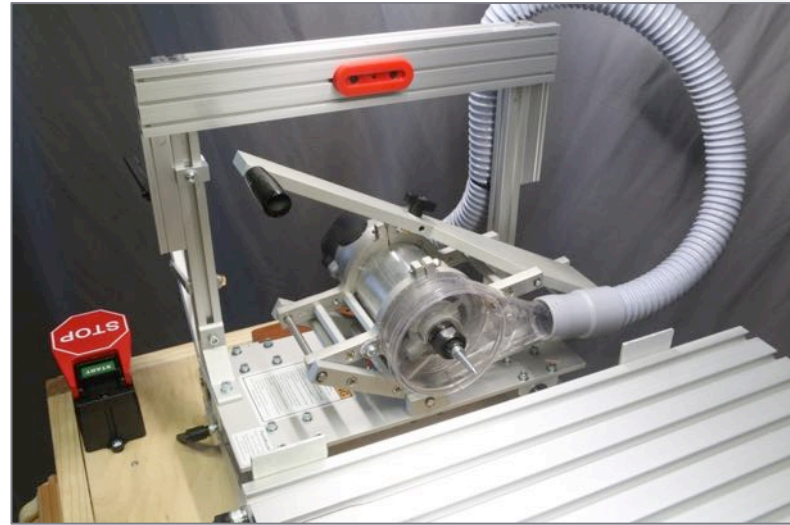
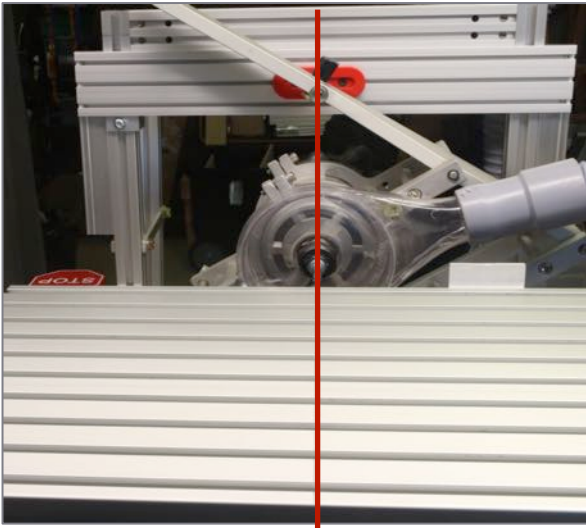
Guide Bearings

- Guide Bearings are used to follow the outside of the templates for tenons or male parts and the inside of the templates for mortises or female parts.
- Both outside and inside of the factory supplied templates are tapered to allow micro-adjustment of the fit of the joint. Running the Guide Bearing higher on the taper creates a larger tenon and lower creates a smaller tenon.
- Our website has Tech Tips and sizing assistance. www.hybridpantorouter.com
- For the supplied Mortise and Tenon Templates:
 - 22mm GB outside with $\frac{1}{2}$ " bit = $\frac{1}{2}$ " tenon
 - 15mm GB outside with $\frac{1}{2}$ " bit = $\frac{3}{8}$ " tenon
 - 10mm GB outside with $\frac{1}{2}$ " bit = $\frac{1}{4}$ " tenon
 - 10mm GB inside with the corresponding bit size for all mortises.



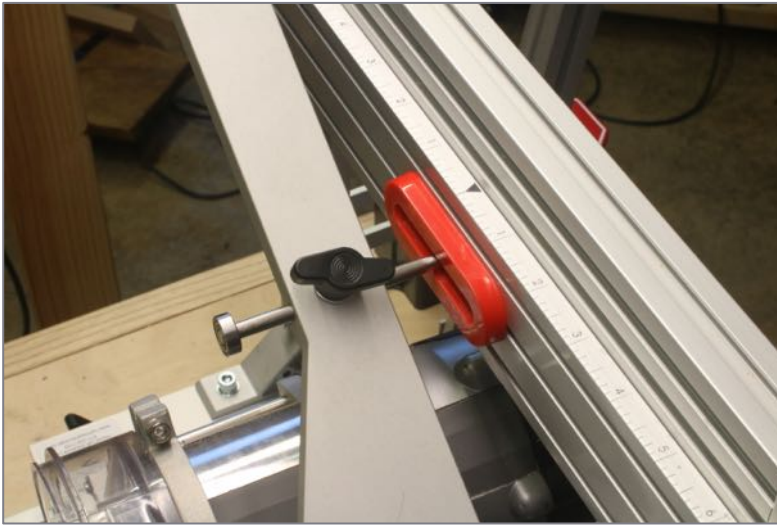
Finding and Marking the Table Centerline

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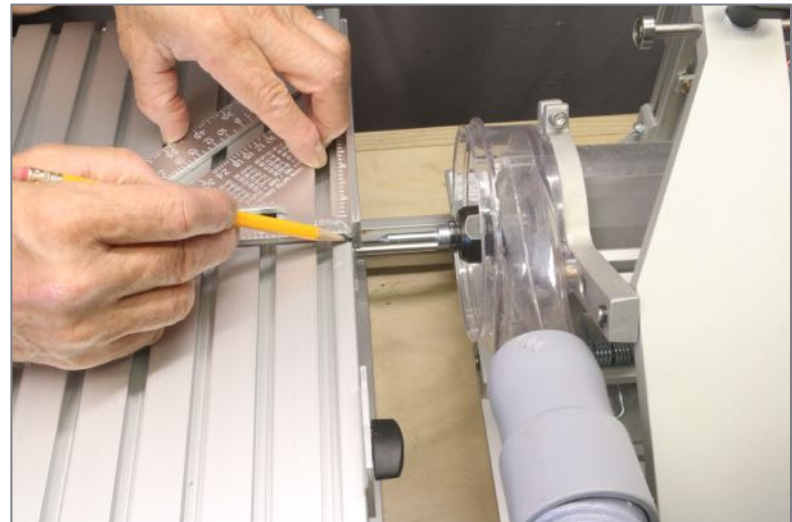
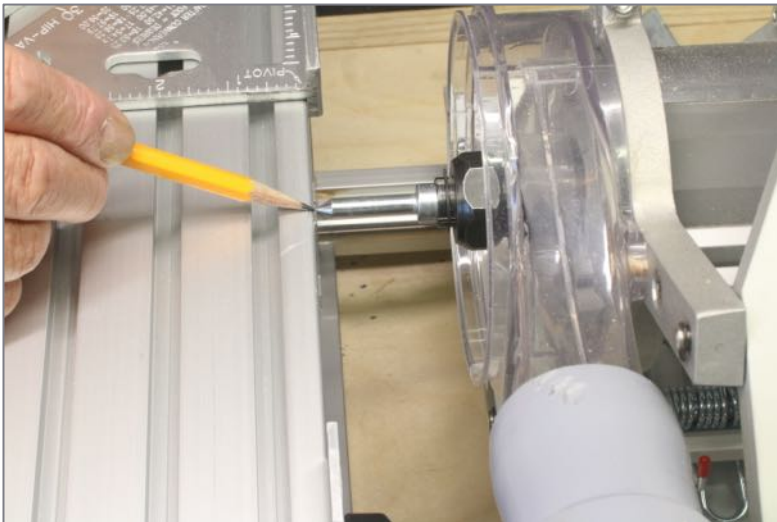


The PantoRouter™ transfers the shape of the template mounted on the template holder to the workpiece located on the table. Marking or scribing a line on the tabletop as a reference guide is very useful, especially when using the Centering Scale Fence. Start by mounting an MT-3H template near the center of the template holder. Use one or two squares to locate the sides of the template equidistant from the center mark on the top of the template holder. When the template is perfectly centered, lock it in place with the two black hex screws.





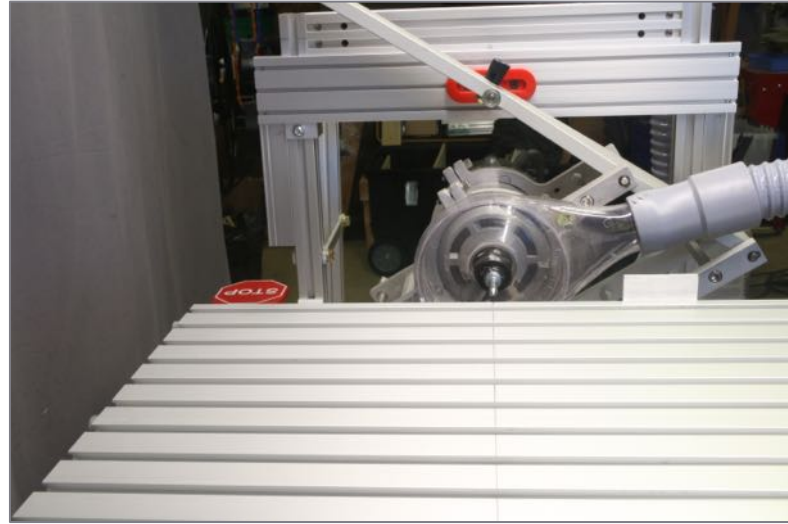
Insert the tapered guide bearing into the center hole of the MT-3 template and mount the centering jig in the router collet. Plunge the pantograph carriage forward and lower the template holder so the tip of the centering jig rests gently on the top edge of the table. This is dead center so carefully mark this position and use a square to draw or scribe a line from this point down the center of the table.





Continue the marked or scribed line to the end of the table.

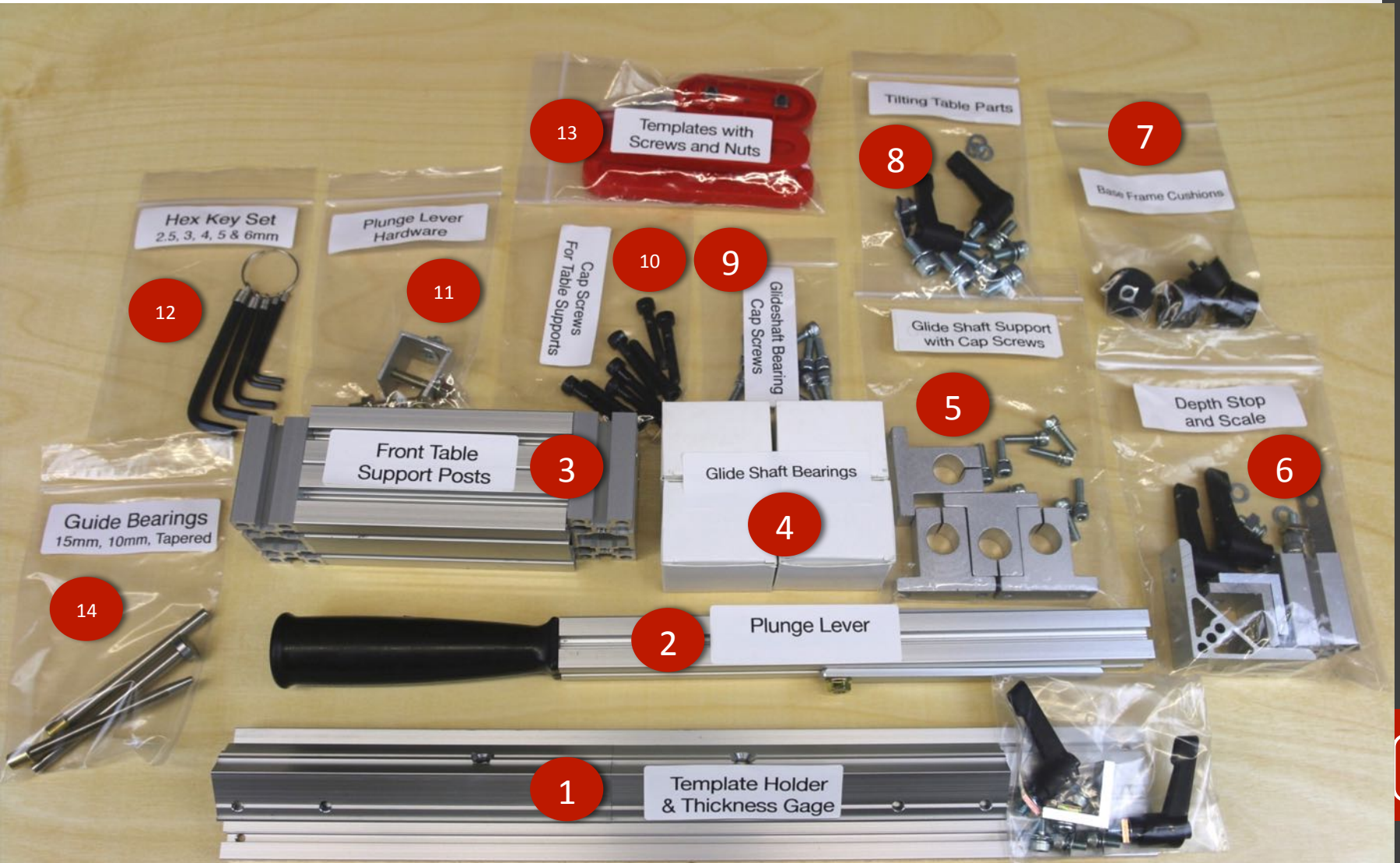
To center your workpiece on the table you can mark the center of your workpiece then locate it on the marked or scribed centerline. You can also use the centering-scale fence accessory to reference the centerline, which auto-centers the workpiece.



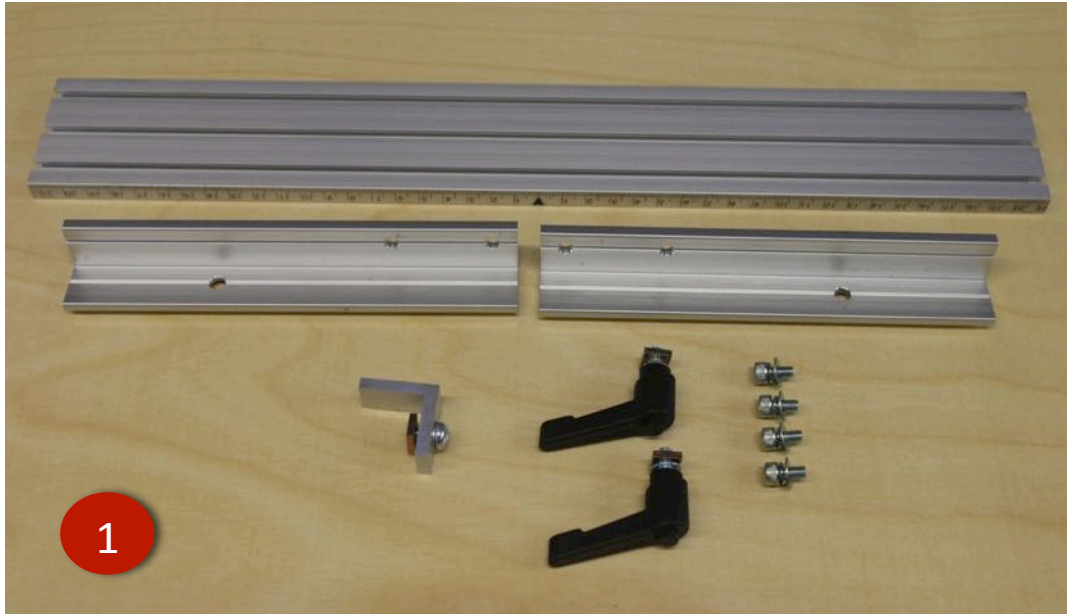
Centering-Scale Fence Accessory

Assembly Box Small Parts

All parts in Assembly Box



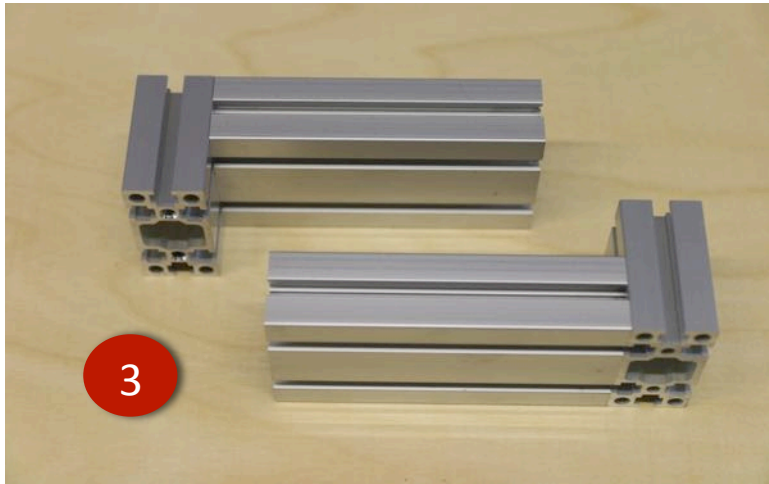
Number	Description
1	Template Holder & Thickness Gage
2	Plunge Lever
3	Front Table Support Posts
4	Glide Shaft Bearings
5	Glide Shaft Mounts with Cap Screws
6	Depth Stop and Scale
7	Base Frame Cushions
8	Tilting Table Parts
9	Cap Screws for Glide Shaft Bearings
10	Cap Screws for Table Supports
11	Plunge Lever Parts
12	Hex Keys 2.5, 3, 4, 5, 6 mm
13	Templates with Screws and Nuts
14	Guide Bearings 10mm, 15mm, Tapered



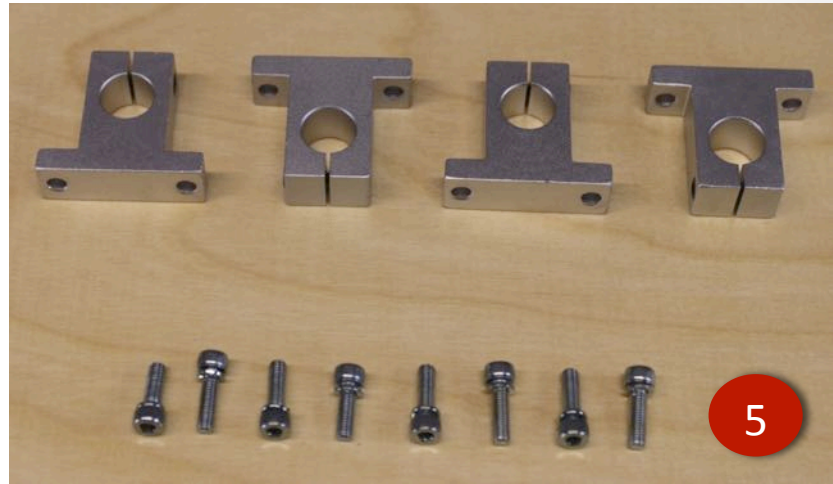
Template holder
and thickness gage.
(These parts come
shrink-wrapped
together)



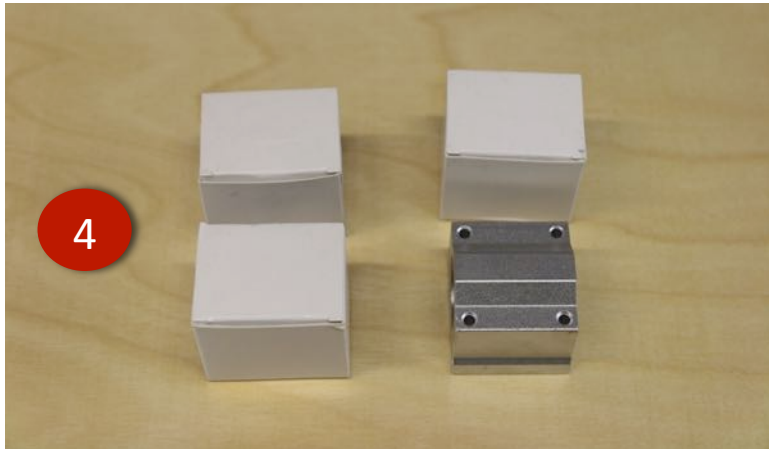
Plunge lever
assembly
(This assembly is
shrink-wrapped)



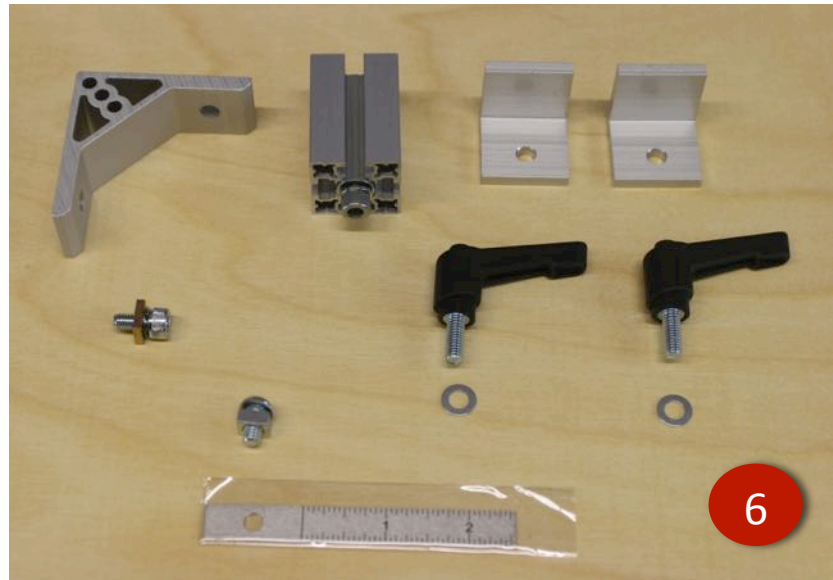
Front table support posts



Glide shaft mounts with cap screws



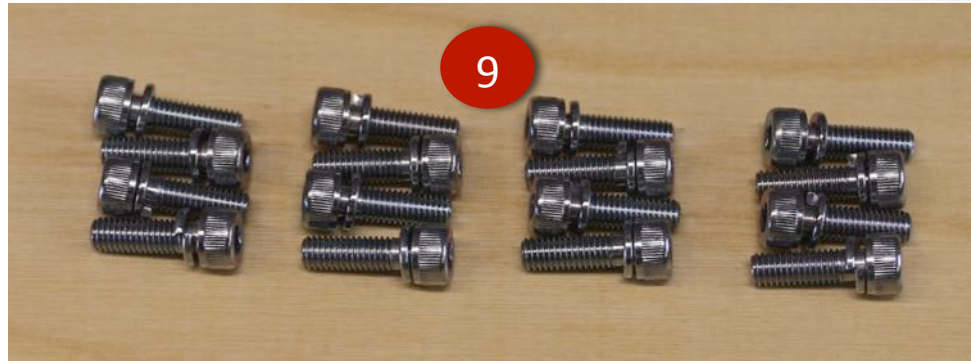
Glide shaft bearings



Depth stop and scale



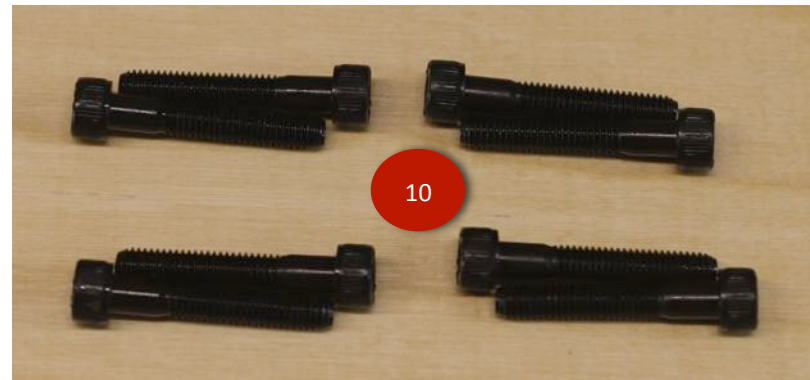
Base frame cushions



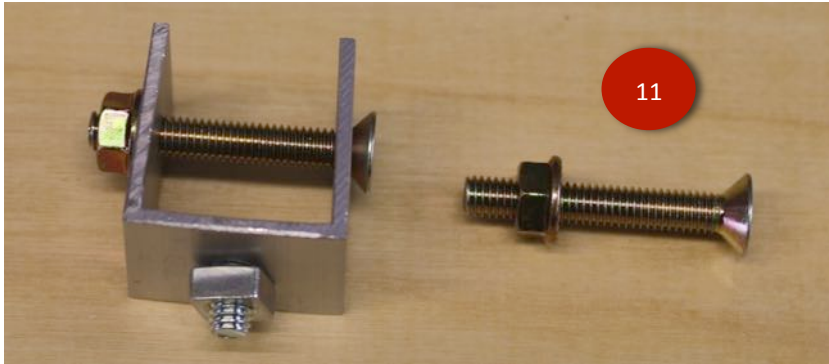
Cap screws for glide shaft bearings



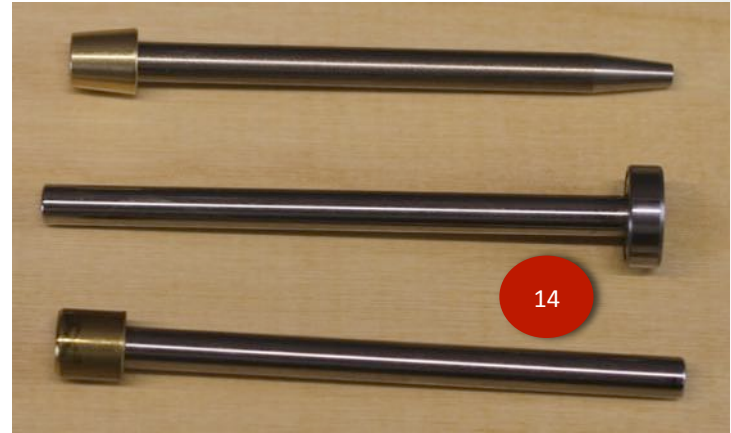
Tilting table parts



Cap screws for table supports



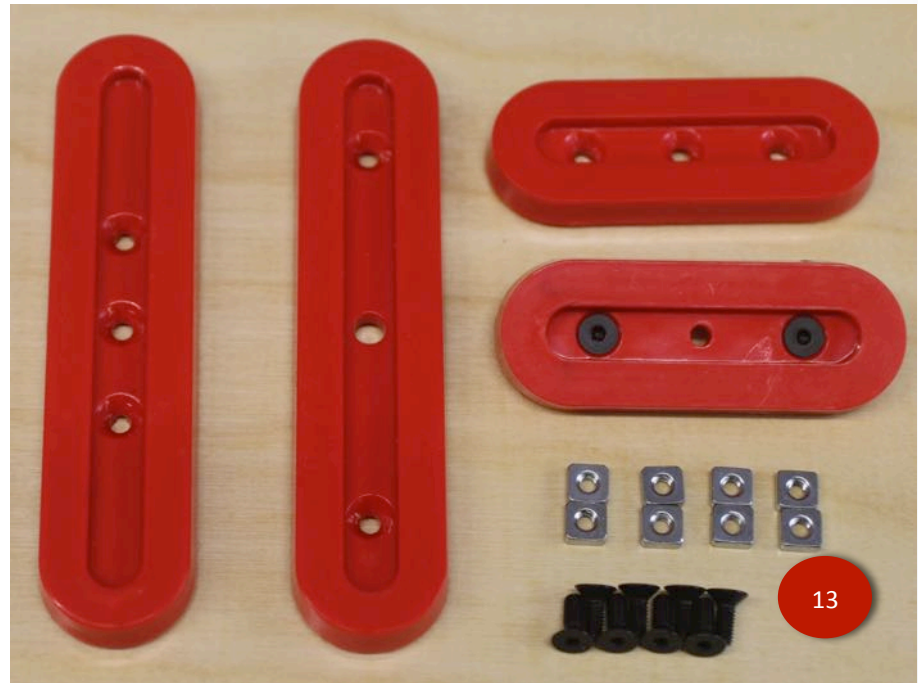
Plunge lever parts



Guide bearings 10mm, 15mm and tapered

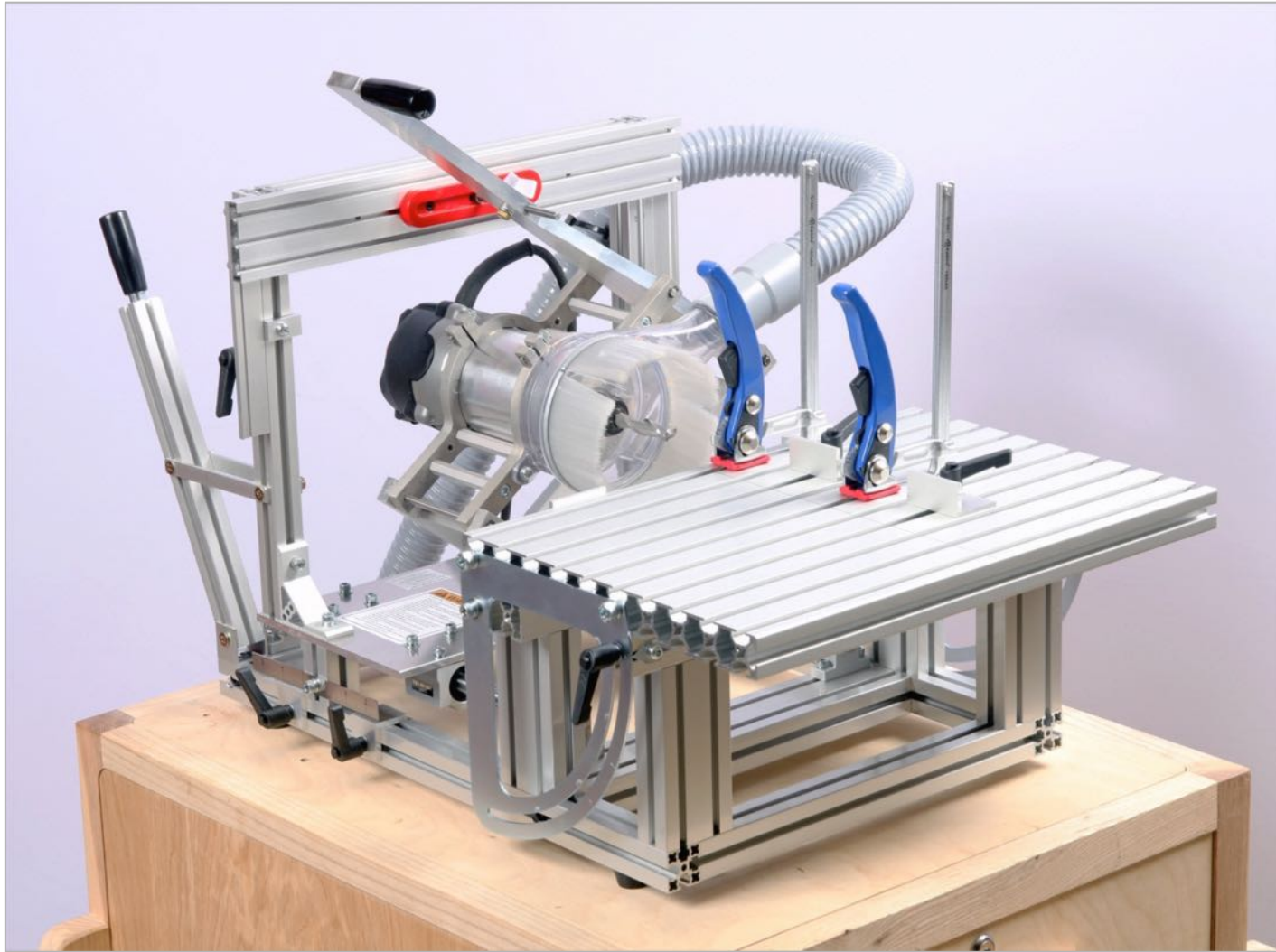


Hex Keys

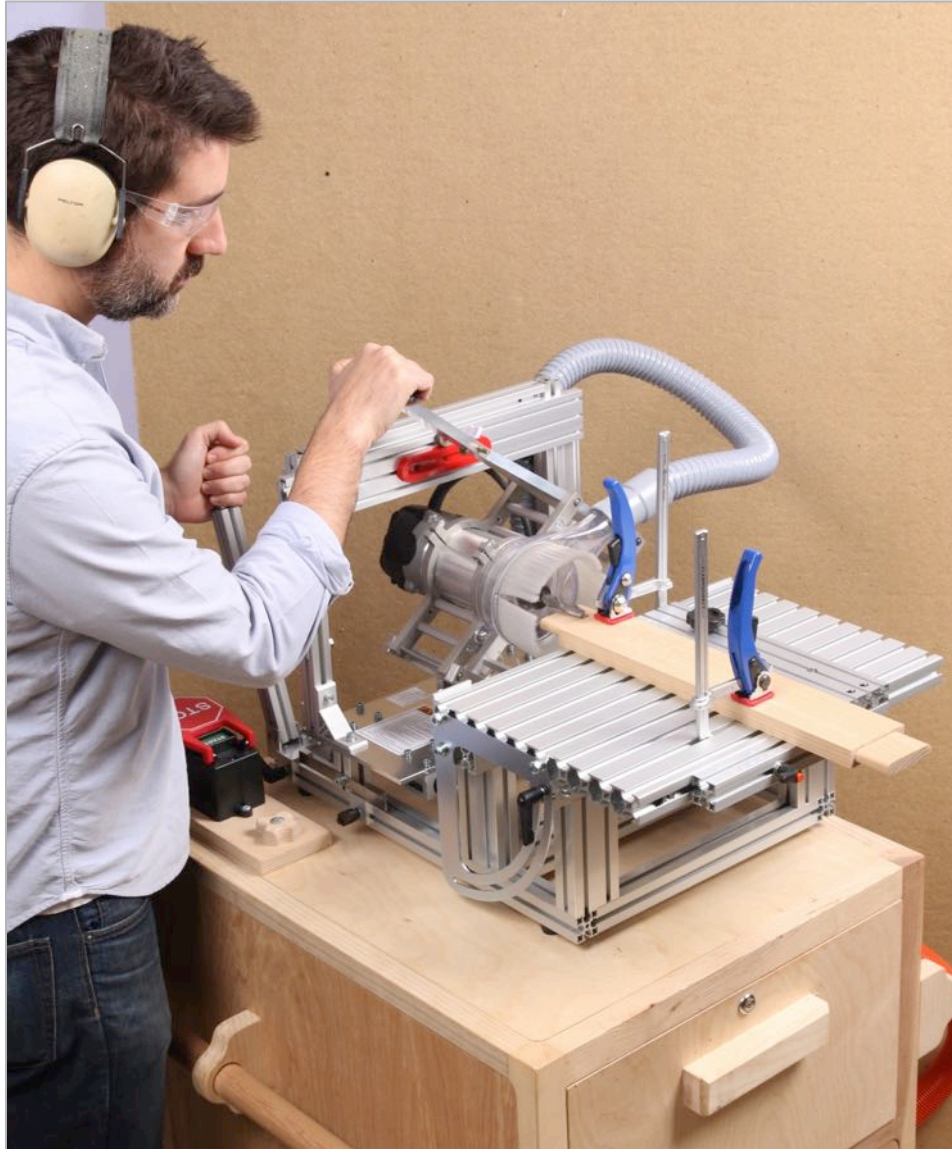


Templates with screws and nuts

Assembled PantoRouter™



Assembled PantoRouter™



The ALL-IN Package

