# Router Gantry System

By TrueTrac

1.937.544.6855
truetracsaw.com

# Owner's Manual

# CAUTION

POWER TOOLS CAN BE DANGEROUS AND MISUSE CAN CAUSE SERIOUS INJURY OR DEATH. ALWAYS READ AND FOLLOW ALL POWER TOOL INSTRUCTIONS. DO NOT USE WITH WOOD THAT CONTAINS NAILS, SCREWS OR OTHER OBJECTS. TRUE TRAC IS NOT RESPONSIBLE FOR INJURY, ACCIDENTS, OR MISUSE.

Our goal is to provide exceptional service and excellent products. If at any time you have an issue, give us a call at 1.937.544.6855 or email directly to jacob@truetracsaw.com.

## A Special Note

Someone out there is going to do this, so we'll put it up front – If you've got the system with the threaded indexing, you can use a handheld drill to drive the router back and forth. However, this really wasn't the intention of putting that in the design.

The 1/2-10 Acme rods used in this system are not held to the same specifications as a ballscrew or other "rotary-to-linear motion" item you would use in a CNC mill or router. That's how it was feasible to include them price-wise, with the purpose of being able to easily move the router a certain set amount for consistent passes. Each turn of the knob is 1/10 of an inch, or 0.100", 10 turns is 1 inch of motion.

The threaded nuts are custom made in-house out of Acetal Copolymer plastic – This is an engineered plastic designed specifically for bearing and gear systems, so it should last theoretically forever while using the hand-crank. With the higher RPMs associated with an electric motor driving it, it'll last for a while. How long? No idea honestly. Depends on load, heat generated, etc.

Just being up-front and honest – Keeps things simple. Feel free to play with the system though!

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Thank you for purchasing a TrueTrac System!


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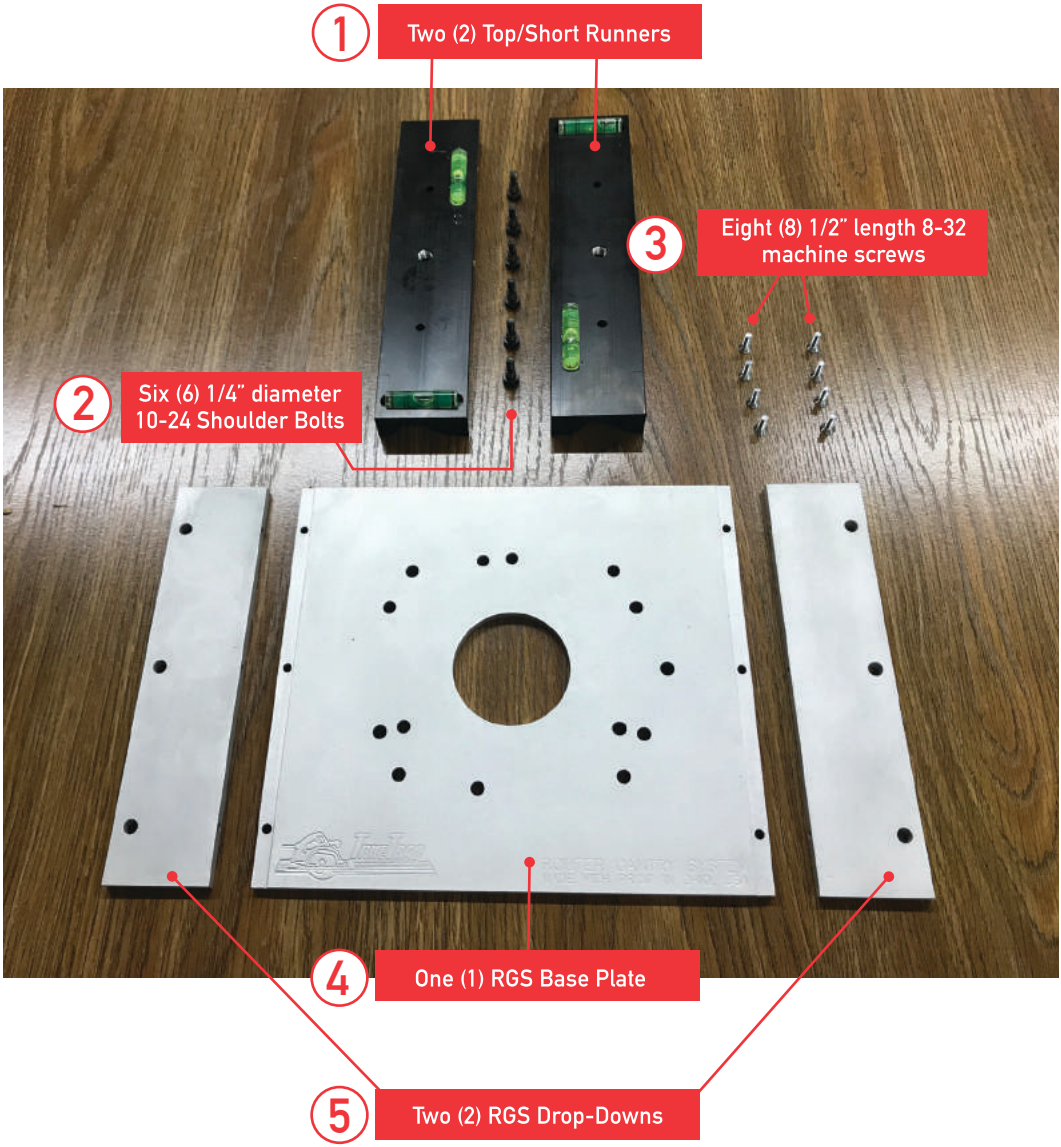
**A video version of these instructions can be found at our website:**
**truetracsaw.com/pages/installation-how-to-videos**

**Visit using the code**




One (1) 1/8" L-Shaped Hex Wrench

Vials will be epoxied in place – Please let us know if any were damaged in shipping or were knocked loose. Hot glue works wonderfully, or gel based super glue.

## 4 x 4 Systems

For the basic 4ft x 4ft Systems, without indexing feed

1. Four (4) 55-inch length custom gantry extrusions
2. Eight (8) Bearing End Caps (installed on gantry extrusions)
3. Two (2) Bottom/Long Runners (with 4 brass inserts installed in each)
4. Eight (8) 1/4" diameter 10-24 Shoulder Bolts (entire kit has 14 of these)

## 4 x 8 Systems

For 4ft x 8ft Systems, add the following to the base 4ft x 4ft system

1. Two (2) additional 55-inch length custom gantry extrusions (6 total)
2. Two (2) 6-inch length dovetail/wedge shaped connectors (with set screws installed)

## 4 x 12 Systems

For 4ft x 12ft Systems, add the following to the base 4ft x 4ft system

1. Four (4) additional 55-inch length custom gantry extrusions (8 total)
2. Four (4) 6-inch length dovetail/wedge shaped connectors (with set screws installed)

## All systems with transverse/indexing feed

All systems with transverse/indexing feed, substitute/add the following:

1. One 55-inch gantry extrusion will have the threaded rod installed, along with required press-fit sealed/lubricated ball bearings and the Acme-threaded nuts in place.
2. System will also have a Bakelite handwheel that will attach via tightening a set screw

***** NOTE**

All systems larger than 4ft x 4ft will have some extrusions with only one (1) Bearing End Cap installed – This allows joining two extrusions together. You should only ever need eight (8) total end caps, regardless of system size. They can be moved around as needed.

## 1

Assemble the Top/Short Runners (Item 1, pg 2) to the RGS Drop-Downs (Item 5, pg 2) as shown to the right.

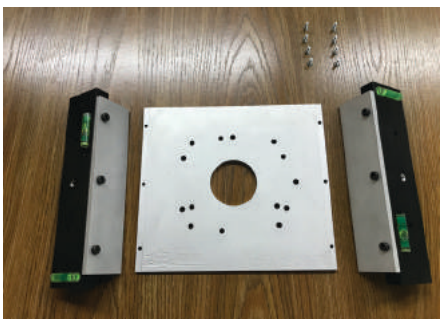
Brass inserts are included and installed in the Runners. Attach Drop-Downs using 3 of the provided 1/4" diameter shoulder bolts and 1/8" hex wrench.

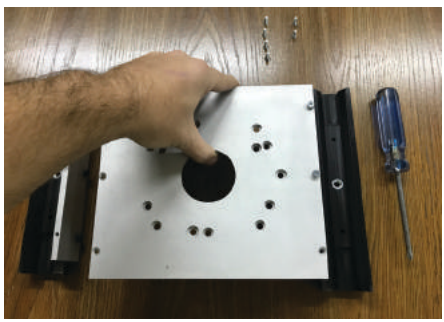
Bolts will squeak when tightening them. Tighten until they stop moving and everything feels solid.

Repeat for second pair of Runners/Drop-Downs

## 2

Once the Top/Short Runners and Drop-Downs are assembled, locate the RGS Router Base Plate – Flip it over so the counterbore and countersunk holes are facing upwards, and install the Runner sub-assemblies from Step 1 to the RGS Base Plate using the provided 8-32 machine screws. They use a standard #2 Phillips screw driver.

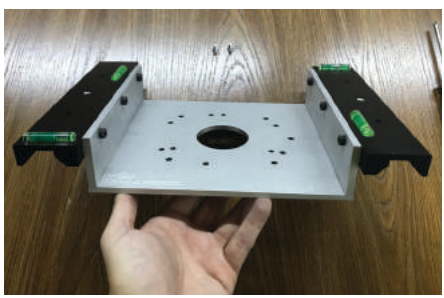




## 3

The Runner sub-assemblies should form "wings" or "hangers" and look like the photo to the right once assembled.

**You'll only need 6 of the 8 provided 8-32 machine screws. Drop the spares into your magical bolt bucket/bin/coffee can for later use on some project down the road. Your future self is welcome.**



**The RGS Router Base Plate is now assembled. Next are the Gantry Rails that create the "Bridge Assembly" of the system.**

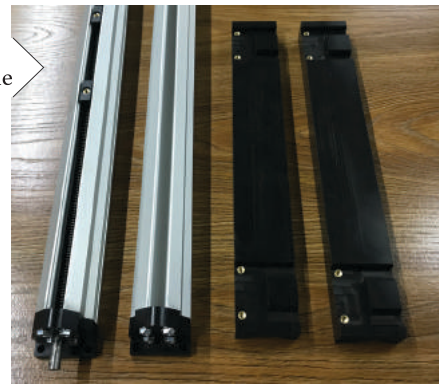
This set of instructions assumes a system with the indexing rod. Ignore references to finding the Gantry Rail with the installed rod for pure “manual” systems.

1

Locate the **Gantry Rail** with the installed threaded rod.

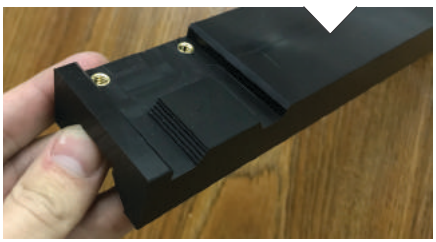
2

Find the second Gantry Rail that has Bearing End Caps installed on both ends, as well as the two Long Runners.



3

The **Bearing End Caps** will “snap” into place on the Long/Bottom Runners. The pyramid shape machined on the surface will mate with the underside of the Gantry Rails and help provide stabilization.

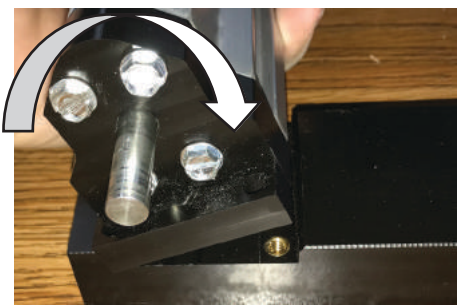


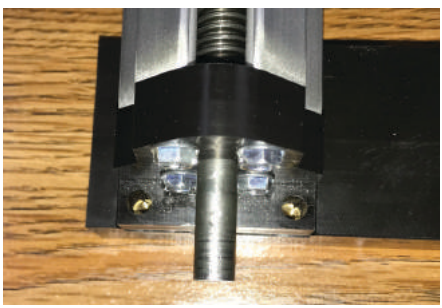
4

Roll the assembled rail from one side to the other in order to allow the Bearing End Cap to seat into the Runner. This is a tight fit – There should be some resistance. It should quite literally “snap” or “pop” into place.

5

Once seated, align the through holes with the brass inserts in the Long/Bottom Runner.





7

Install the remaining 1/4" diameter shoulder bolts to lock the Gantry Rail to the Long/Bottom Runner.

8

Repeat for remaining connections from upper rails to Long/Bottom Runners.

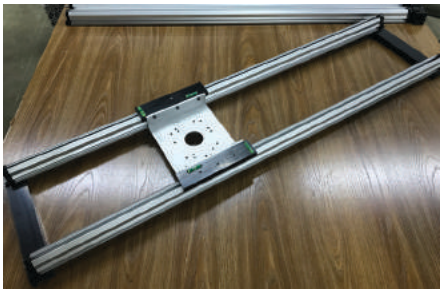
Install Bakelite Handwheel by sliding it over the exposed portion of the threaded rod. Tighten installed set screw with 1/8" hex wrench.

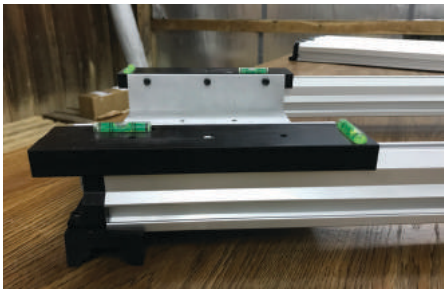
9

Result should look something like the photo to the right.

10

Double check the fit of the assembled RGS Router Plate on the assembled "Upper" Gantry Rails you just completed. The Router Plate should overhang the Bearing End Caps and hit a positive stop in a position similar to the bottom right photo here.





1

Once the Top Gantry Rails are assembled onto the Long/Bottom Runners, the Bottom Gantry Rails need to be laid out on a support structure of some type.

a. In our shop, we use metal saw horses rated for 1500lbs each and create a lattice of 2x4s to create a table top to set the rails up on.

2

Lay the Bottom Gantry Rails out on your support surface and use the assembled Top Gantry Rails as a template for spacing and parallelism.

3

Before permanently fastening the Bottom Gantry Rails to your support surface, you'll want to make sure the system is level – Simply throw the assembled RGS Base Plate onto the top rails and use the four included leveling vials to level the entire gantry system. Simply shim under the Bearing End Caps as required to level the system.

4

Once the Gantry Rails are located and leveled properly, either fasten down through the Bearing End Caps with wood screws, 1/4" diameter or smaller bolts, or even simple bar clamps on the lip of the Bearing End Caps work well.

## Installing Your Router

**Find your specific router's hole pattern in the appendices section, starting on page 10**

1

Remove the plastic base plate from the base of your router. Hold on to mounting hardware.

2

Lay RGS Base Plate onto your router and rotate until hole patterns match up.
Use originally used hardware to install your router onto the RGS Base Plate.

**Pre-drilled holes are included for the following routers:**

Bosch 1617-1618, Makita 1100, DeWalt 616 & 618, Milwaukee 5616-5624, Ridgid 2930, Porter Cable 690, 890, 7529, 97529 & 8529, Hitachi M12VC

Porter Cable 7518, 7519, 7538, 7539, Milwaukee 5625-20, Triton TRA001 & MOF001, Bosch 1619-1619EVS, DeWalt 625, Trend T11

Blank plates available upon request with 1/4" through-hole drilled in center – Plates are 6061-T6 aluminum, so the opening can be drilled out with a metal cutting hole saw to facilitate larger spoilboard style facing bits once your hole pattern has been transferred.

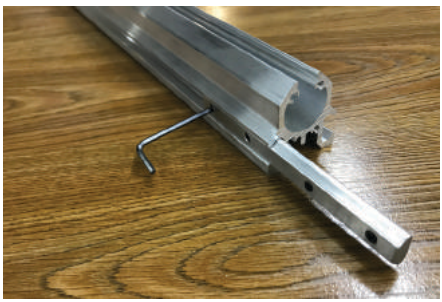
## Expanding The Rails / Connecting More Than One Extrusion Together

1

Simply slide the self-aligning dovetail/wedge shaped connector into the groove along the edge of the Gantry Rail roughly half-way. Tighten down set screws.

2

Install second connector similarly on the opposite side of the same extrusion.

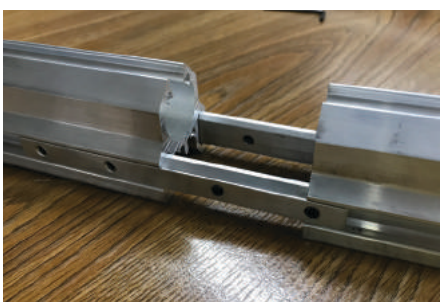


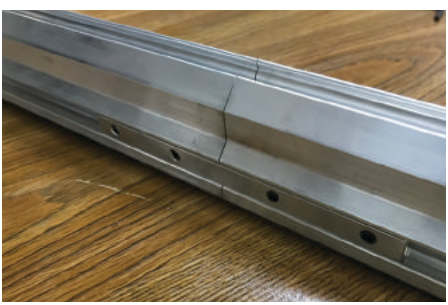
3

Locate second Gantry Rail you wish to add, and slide into place until the faces contact.

4

Tighten down remaining set screws on each side. You're good to go.





## Linking Router Base Plate to Threaded Index Rod

1

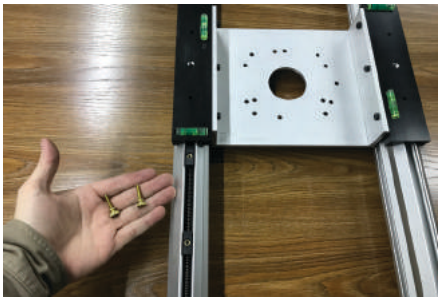
Align the two through-holes on the Top/Short Runner with the Acme Threaded Nuts installed on the threaded rod.

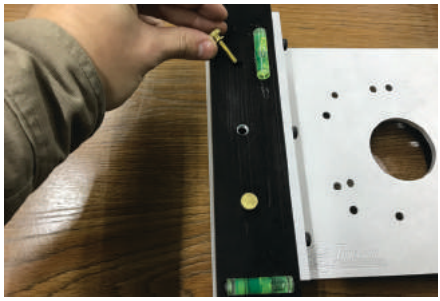
2

Use the two provided brass thumb screws to connect the Top/Short Runner to the Acme Threaded Nuts

3

The Router Plate is now able to be moved by rotating the threaded rod.



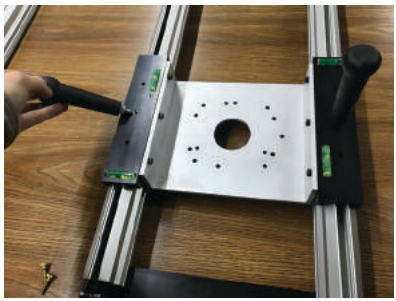


4

The Top/Short Runners also have an embeded nut to faciltate the use of larger handles for manual movement.

5

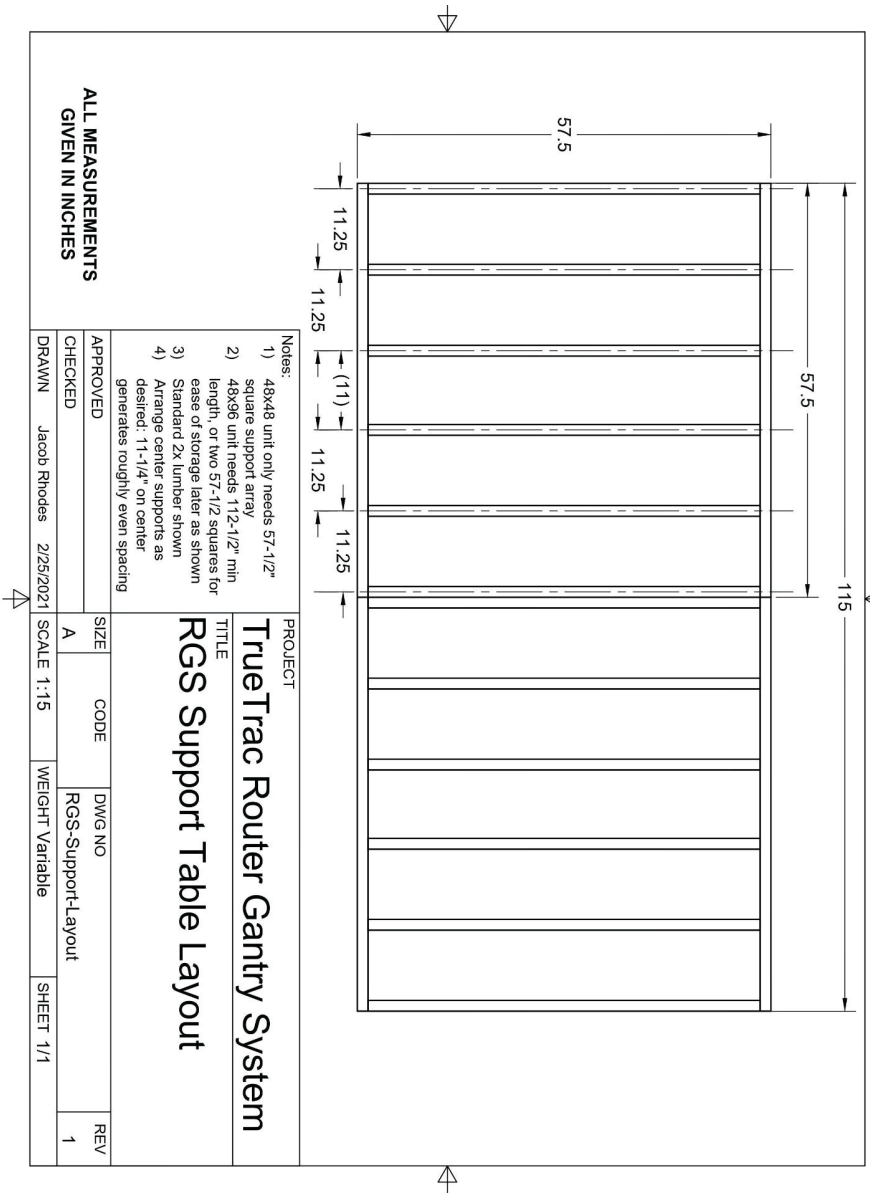
To install these included handles, simply screw them into the center hole of the Top/Short Runners until tight.



6

Remove the brass thumb screws to allow free-moving motion.

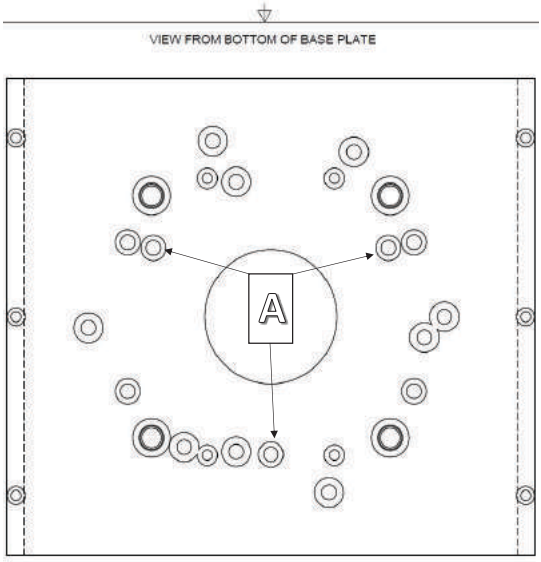
## Support Table Layout Drawing/Dimensions (48x48 and 48x96 units)



## Group A Router(s):

Makita 1100, Bosch 1617(EVS) & 1618, DeWalt 616 & 618, Milwaukee 5616-5624
Rigid 2930, Porter Cable 690, 790, 890, 7529, 97529 & 8529, Hitachi M12VC

**NOTE:** Some routers, like the 1617EVS, will have a secondary hole pattern in the base that will match this layout but be different than what the OEM plastic base uses. Different hardware may be required to attach, as diameters or threads may differ.

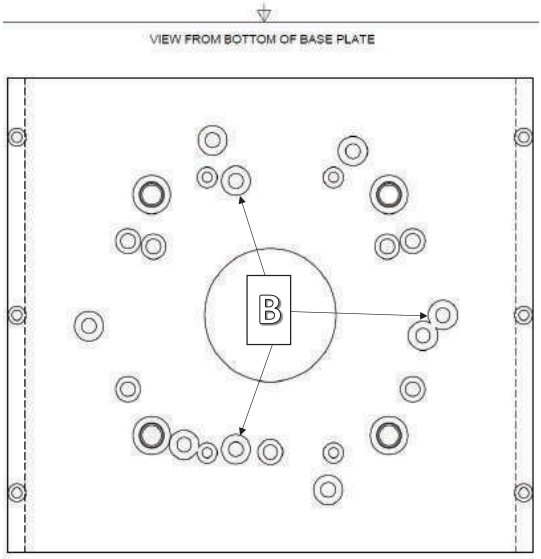



RGS Router Base Plate Hole Pattern Layout - 4/26/21

## Group B Router(s):

DeWalt 625

**NOTE:** Some routers, like the DeWalt 625, will have a secondary hole pattern in the base that will match this layout but be different than what the OEM plastic base uses. Different hardware may be required to attach, as diameters or threads may differ.

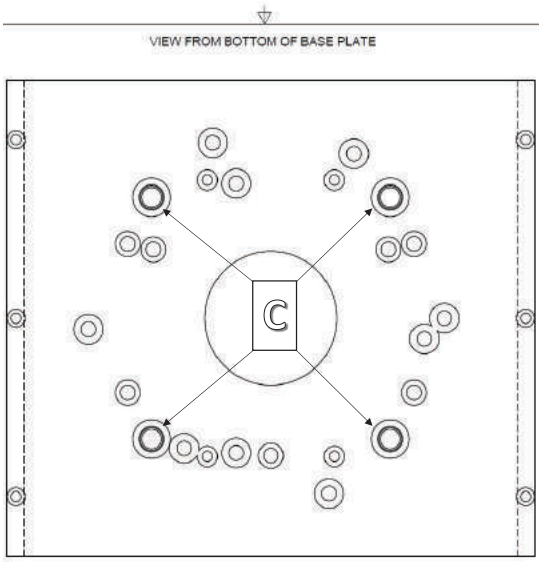



RGS Router Base Plate Hole Pattern Layout - 4/26/21

## Group C Router(s):

Porter Cable 7518, 7519, 7538 & 7539, Milwaukee 5625-20, Triton TRA001 & MOF001

**NOTE:** Some routers, like the DeWalt 625, will have a secondary hole pattern in the base that will match this layout but be different than what the OEM plastic base uses. Different hardware may be required to attach, as diameters or threads may differ.

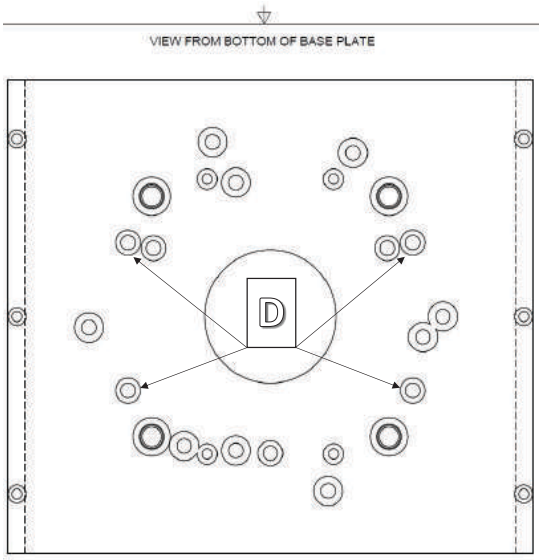



RGS Router Base Plate Hole Pattern Layout - 4/26/21

## Group D Router(s):

Bosch 1619, 1619EVS

**NOTE:** Some routers, like the DeWalt 625, will have a secondary hole pattern in the base that will match this layout but be different than what the OEM plastic base uses. Different hardware may be required to attach, as diameters or threads may differ.

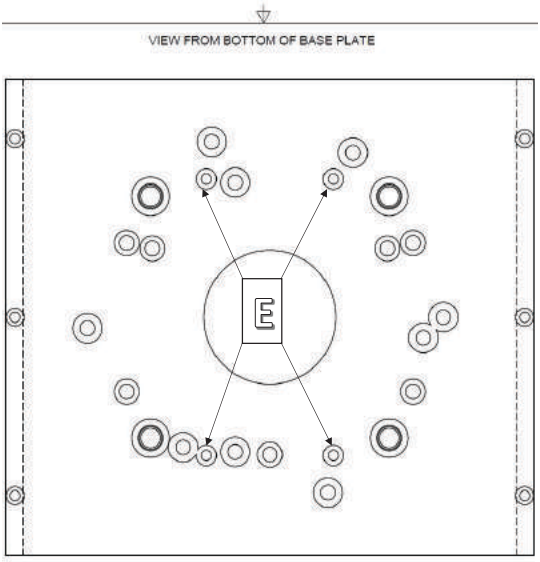



RGS Router Base Plate Hole Pattern Layout - 4/26/21

## Group E Router(s):

Festool OF1400

**NOTE:** You will only use 4 of 5 M4 sized OEM mounting bolts to attach the OF1400 to the RGS base.

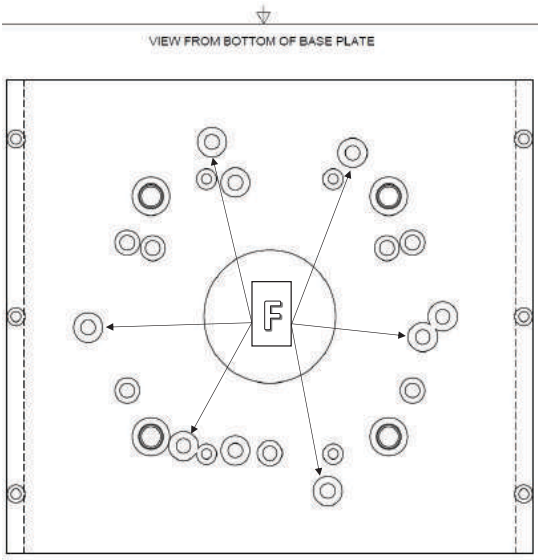



RGS Router Base Plate Hole Pattern Layout - 4/26/21

## Group F Router(s):

Festool OF2200

**NOTE:** The handles for the OF2200 will be clocked 34 degrees CCW relative to the short runners. This should not impede function with plunge action, as the OEM handles should be out of the way of the optional handles we provide that attach to the short runners of the router plate assembly.




RGS Router Base Plate Hole Pattern Layout - 4/26/21

# Thank you for purchasing the TrueTrac Router Gantry System!

A simple way to flatten bowed, twisted, warped, or uneven lumber using a hand-held router.

We've put some thought into the entire system and look forward to what projects you're able to complete with it, and look forward to both negative and positive feedback – The negative so we can fix it, and the positive so we know what we did right!

As with any of our products, please call or email if you have questions or have issues that pop up – You're covered with a lifetime money back guarantee on anything we sell and we go out of our way to make sure you're taken care of.

— All the best,
Richard, Darlene, and Jacob Rhodes

**MADE WITH PRIDE IN OHIO, USA**

1.937.544.6855
truetracsaw.com

Router Gantry System
By TrueTrac