



GRS-16 and GRS-16 PE User Guide

Basics

The Track Saw is a wonderful tool for “breaking down” sheet goods: plywood, MDF, Melamine coated particle board and more. But if you are relatively new to Track Saw usage we recommend first reading fully the documentation provided by the saw’s manufacturer. FESTOOL USA has an excellent expanded, 25-page color illustrated **“Guided Circular Saw Supplemental User’s Manual”** downloadable and not supplied as a hard copy with the saw – only available as a free download. Print out a color copy and have it spiral bound for a handy look-up reference in your shop.

<https://www.festoolusa.com/service/owners-manuals#Saws>

Guide Rails are a very critical component for successful precision cutting. Don’t assume they are straight and flat. Check your Guide Rails carefully anytime you encounter straightness or squareness of cut problems. More on that further on.

Making cuts with a track saw and GRS-16 or GRS-16 PE

Difference in use GRS-16 or GRS-16 PE:

The GRS-16 PE model can do everything the GRS-16 version can do – but not the other way around. The GRS-16 is completely capable of performing all squaring operations from the starting edge of the cut but it cannot be used for squaring from the far end of a sheet of material.

The following describes the use as it applies to both models unless noted.

1. Practice your set-up and technique on MDF or other low-cost flat sheet goods before attempting to cut production material.
2. Slide a track clamp into the lower t-slot on the guide rail before attaching the GRS-16. Use of the track clamp is recommended at least until your technique is developed to your satisfaction.
3. Attach GRS-16 or -PE : normally on the guide rail end from which you start the cut. Slide the GRS-16 FULLY onto the guide rail before engaging the Latch on the T-slot of the guide rail.
4. Mark your cut-line with a thin pencil, or better yet, a Marking Knife.
5. Position the guide rail/GRS-16 combination on the workpiece so the trimmed Splinter Guard edge aligns with your cut line mark while keeping the long reference edge of the GRS-16 fully butted up against the edge of the workpiece. Make sure there is no stray wood chip or saw dust between the GRS-16 and the workpiece to throw off the squaring alignment.
6. To move the guide rail and GRS-16 left or right for precise alignment with the cut-line, it helps to raise the far end of guide rail by pressing down at the GRS-16 end of the rail. This makes it easier

to reposition the guide rail by relieving some of the anti-slip strip contact with the workpiece to a degree.

7. When satisfied with alignment, tighten any clamp at the starting end of the cut. Consider adding a second clamp in the lower t-slot at the far end of the guide rail as well – especially on long cuts and when connected guiderails are used.
8. To prevent slippage of the guide rail on pre-finished material: Suction Handle (Festool 493507 “Gecko”) accessory or clamps. Also make sure there is no sawdust between the guide rail and the prefinished material to interfere with the anti-slip strip effectiveness.
9. Make sure your guide rail length is at least 7 inches longer than the material being cut
10. If two guide rails are joined, verify they’re in perfectly straight alignment immediately before starting the first cut. Use a 48” or longer STABILA level or the equivalent straight edge to verify guide rail straightness.
11. Use the raised Guide Rail profile which guides the saw, as the reference for alignment check.
12. Compare two guide rails to verify rail straightness. The 2 rails when placed spine-to-spine should not exhibit any daylight between them.
13. Be aware of your body position and stance while pushing the track saw to prevent any side loading of the saw or the guide rail.
14. Ensure the dust collection hose and power cord follow you freely entire length of cut
15. Start the saw and plunge to selected depth before moving the blade into the material

Correct cut sequence for breaking down sheet goods using a track saw:

1. Straight line cut to trim the 8ft factory edge of the sheet of material. Important: keep saw blade buried in the material for this cut.
2. Make the first crosscut with a GRS-16 by squaring off the straight-line trimmed edge.
3. Make all crosscuts with a GRS-16 only from a previously straight-lined edge
4. Check parts for squareness using precision squares or TSO Precision Triangles and measurement methods using the Pythagorean Theorem. Free digital calculators can be found on the internet: <https://ncalculators.com/number-conversion/pythagoras-theorem.htm>
5. IMPORTANT: Drywall squares and “SpeedSquare” sold at big box stores don’t qualify!

GRS-16 and GRS-16 PE Troubleshooting Guide

1. 4-cut or 5-cut method for accuracy check. View this detailed user test-cut demonstration: <https://www.youtube.com/watch?v=AmNyPvsfSCo>
2. Use the Pythagorean Theorem formula to verify squareness of cut by calculating the length of the hypotenuse vs. actual cut (online calculator link for formula) <https://ncalculators.com/number-conversion/pythagoras-theorem.htm> is very helpful for checking actual workpieces.
3. If cut is not square, identify which of the above recommendations, you did not follow exactly. This time follow all the instructions explicitly. If you are still not getting excellent results: Repeat and practice. Repeat and practice until your results are consistently spot on.
4. What about the GRS-16 accuracy?
TSO monitors the Process Capability of our CNC machining operations continuously. We keep the angular tolerances very, very tight and check conformity continuously. We machine Lot codes into the GRS-16 for traceability to production records. Three small digits are machined into the area between the 6-inch reference edge and the pointed feature which locks into the underside t-slots on rails.
5. Most problems are technique related. Only a very small number have been traced to guide rail product defects or handling damage after leaving the factory.

For further assistance: email us info@tsoproducts.com

This User Guide is available online for download with revision updates as they occur.

We welcome your comments or suggestions.

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