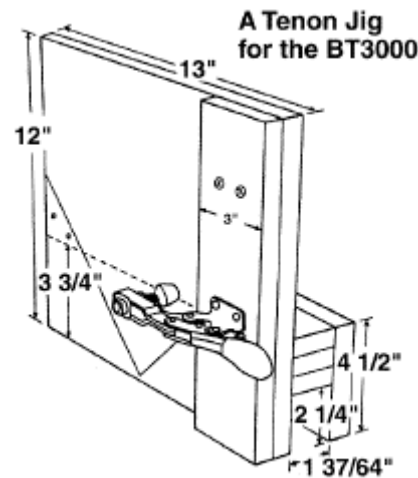


A Tenon Jig for the Ryobi BT3000 Tablesaw

A number of people have recently asked for a copy of the plan we published in our catalog a couple of years ago which showed how to build a simple tenon jig for the Ryobi BT3000 tablesaw. For your convenience, we are repeating it here in our electronic version of Wood News.

A multi-purpose tenon jig like the one shown here is easy to build and easy to use on the BT3000. The jig is designed to ride on the rip fence, providing the capability for sliding movement accurately parallel to the blade as well as very easy positioning for centered or offset tenons, lap joints and bridle joints. The vertical tenoning fence can be removed and replaced with a right-angle cradle for splining miters, either individual pieces or assembled frames. An H-2 toggle clamp (see the clamp section of our main catalog) secures stock quickly and releases it instantly after cutting.

3/4" birch plywood is a good choice of material for the jig and its fences. A triple layer of plywood works well for the bridge piece, providing plenty of surface for strong and rigid attachment to both faces. The width of the bridge must be established very precisely to insure the jig's smooth action with no play or looseness at all. Rip a piece of plywood 40" long and about 1-5/8" to 1-3/4" wide. Cut it into three 13" pieces and glue them together to form the bridge blank. Joint or rip one edge of the blank straight and square. Now thickness plane or rip the piece to fit snugly between two pieces of stock clamped to your fence faces; the bridge should come out about 1-37/64" wide. The other dimensions shown in the drawing may be varied as needed to suit your work; we've used the jig on 3' and 4' high work with no trouble controlling the stock.



This jig won't be worth using if it doesn't hold your work very precisely perpendicular to the saw table. Build the jig carefully, and then finish the job on your jointer or on the tablesaw to be certain the high face is perpendicular to the two bottom edges. The tenoning fence must also be mounted (and re-mountable) very carefully to hold your workpiece dead vertical. Be finicky; this part of the job will determine if your next hundred tenons fit right or not. Drill mounting screw holes in the fence (we used 1-1/2" screws to mount the toggle clamp so they also secure the fence), then clamp the fence to the jig and mark where to drill pilot holes in the jig face. Don't attach the fence yet; first you'll use it as a template to mark identical screw holes in the miter cradle.

The miter cradle can be cut from a piece of 3/4" plywood roughly 13" x 8". About 7" from one end (the back), mark a spot 1/2" up from the edge. With a miter square or combination square, mark 45 lines that intersect at that spot, making a 90 V. Saw to the lines with bandsaw or handsaw, then use the tenon fence to mark screw holes along the back edge. Drill another couple of screw holes to secure the front half of the cradle. Now both fences can be mounted using the same screw holes in the jig, and the toggle clamp works with both.

Note that screws used to mount the tenon fence (and the toggle clamp or any other hardware mounted on the fence) must be positioned at least 3-3/4" from the bottom of the jig to be absolutely sure you can't damage your saw blade (hence the dotted line drawn on the jig as a constant reminder).

A handle or knob mounted on the bridge will make the jig easy to handle. With a little bandsaw and rasp work we made a custom plane handle which works like a charm. Be sure to wax and buff the bottom edges of the jig and the inside faces that bear against the fence for easy sliding action.

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