ASSEMBLY INSTRUCTIONS
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Workbench

The bench legs and rails are made from 2 x 4s, while the heavier 2 x 6 stretchers add rigidity to the frame. If you don't have a power miter saw or radial-arm saw, guide your circular saw with a rafter-angle square such as a Speed Square when crosscutting the stock to finished size. Cut the top strips oversize in length.

Remember that building your own bench gives you the opportunity to customize it to match your height, your space and the work you plan to do. For a stouter top, or for a bench that's much longer, consider replacing the 1 x 2s with 1 x 3 stock.

1

2X4 RAILS + LEGS
3/8" THREADED ROD
1 1/4"
45"-LONG 2X6 STRETCHER
RECESS FOR LAGSCREW
VISE BLOCKING
3/8" LAGSCREW
1" DIA. DOWEL
3/4" RAD.
24"
3/4"
3" OVER-HANG
54"
1X2 TOP (32 STRIPS)
36
26 3/4"
3/8 x 4 1/2" LAG-SCREW
3 1/2"
1X2 FEET
18"

2

2X4 RAIL
7/8"
1/2"
3/8 X 4 LAGSCREWS AND WASHERS (LEGS TO STRETCHER)
1"-DIA. HOLE
3/8 X 6 1/2" LAG SCREW AND WASHER
3/16"-DIA. PILOT HOLES (EXTENDING INTO DOWELS)
1/4"
2X6 STRETCHER
1 1/2"-LONG X 1"-DIA. DOWEL (TYP.)
2X4 LEG

3

3/8" THREADED ROD, WASHERS + NUTS
1X2
12 1/2"
2"
THREADED ROD SPACING

With the top strips cut uniformly oversize, lay out and bore 3/8-in. holes for the threaded rods. Cut the rods slightly long, install a washer and nut on one end of each and feed each strip onto the rods. When they're all in place, add the remaining washers and nuts, tighten and trim the benchtop ends and hacksaw the rods to length.

4

TOP
3/4
9 1/2
2/4
6 1/2
1 1/2
3/4
3" NO. 10 FH SCREW

The vise we installed required a 2-in. spacer to bring the vise top flush with the benchtop, which we made from three layers of wood. Depending on the kind of work you do most often, you could install a top-mounted mechanic's vise, instead.

Lagscrews driven into endgrain don't hold that well, especially in softwood. To solve the problem, glue 1-in.-dia. dowels in the paths of the lagscrew threads. Cut the dowels slightly oversize with a handsaw, then plane them flush once they're in place. You can use a spade bit to bore the dowel holes, but a multispur bit will make a cleaner hole. Bore 3/8-in. thread-clearance holes in the adjoining pieces, then bore 3/16-in. pilot holes for the lagscrew threads.

BORING ALIGNED HOLES

A doweling jig is the best tool for aligning the threaded-rod holes across the top strips. If there's any misalignment after assembly, simply trim the high points with a block plane.

Tools & Materials

WOOD:
We used construction-grade lumber, but bear in mind that this stock can vary in quality. Try to pick straight, dry pieces with a minimum of knots or other defects. And, while we used budget materials, it doesn't mean clear hardwood wouldn't work, too.

BASIC TOOLS:
Circular saw
Handsaw
Hacksaw
Drill/driver
Block plane
Doweling jig
Tape measure
Square
9/16-in. wrench
1-in. spade or multispur bit
Twist bits

HARDWARE AND SUPPLIES:
3/8-in. threaded rod
3/8 x 4-in. lag-screws,
3/8 x 6 1/2-in. lagscrews,
3/8 x 4 1/2-in. lagscrews
3/8-in. washers
3-in. No. 10 fh woodscrew
Glue
Vise shown: 9-in. quick-release vise (No. 10G0412), available from Lee Valley Tools (leevalley.com)