

# Cast-Iron Legs

Workbench 05K45.01  
Table 05K46.01

## Base Construction

Truss-rod construction ensures a rigid structure by minimizing joints and balancing the applied forces that affect a table's stability. While the wooden stretcher provides the required extension, the truss rod provides compression, producing a rigid and balanced structure. The major benefits include long-term stability, simplicity of construction, and ease of disassembly.

## General Assembly

The kit includes legs, truss rods, and hardware. **Figures 1a** and **1b** show general assembly. See **Figure 2** for stretcher designs and **Tables 1 to 3** for workbench, table, desk and stretcher dimensioning.

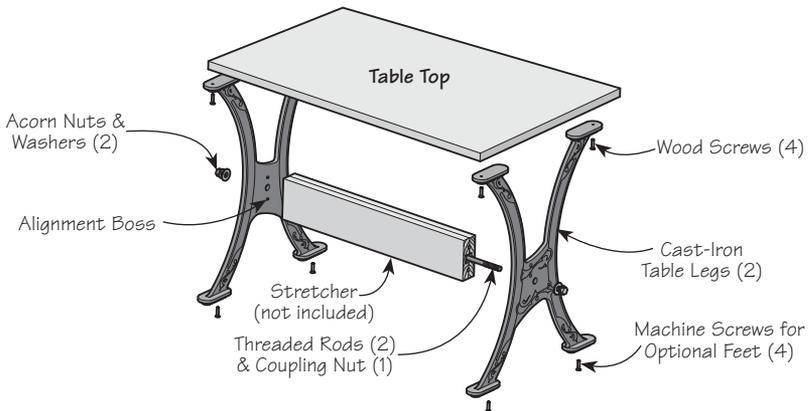


Figure 1a: General assembly, table legs.

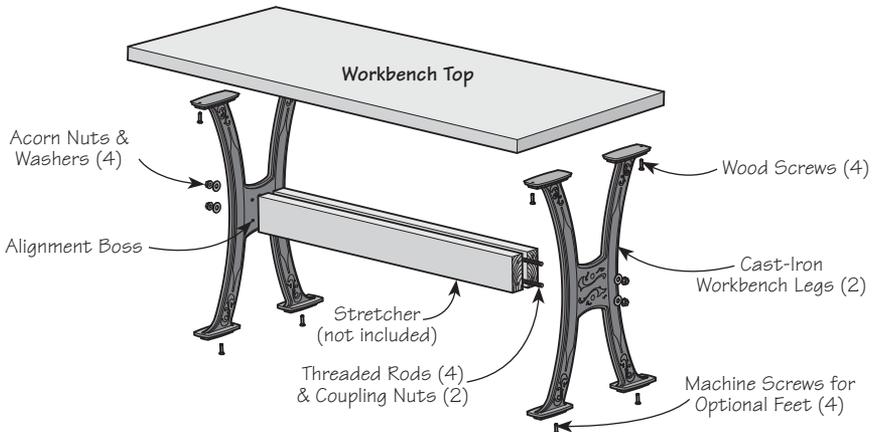
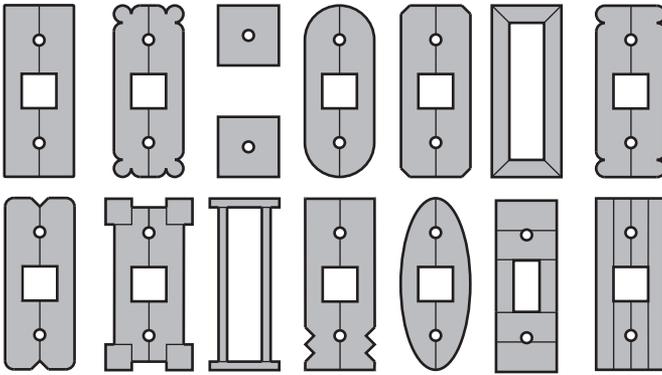


Figure 1b: General assembly, workbench legs.

## Stretcher Design

The leg assemblies are based on a stretcher that is approximately  $1\frac{1}{2}'' \times 4''$  by the required length. This can be a solid piece, or laminated from available stock. See **Figure 2** for examples.

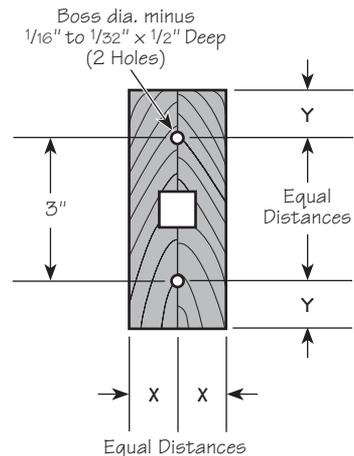


*Note: Center void required only for table legs.*

**Figure 2: Stretcher designs.**

After you have decided on a particular type of stretcher, it should be made oversize and then the ends should be cut square to the appropriate length.

You will also need to drill holes in the ends of the stretchers to accommodate the alignment bosses. The bosses are 3" apart. Measure the diameter of the bosses and drill the holes  $\frac{1}{16}''$  to  $\frac{1}{32}''$  **undersize** and  $\frac{1}{2}''$  deep, as shown in **Figure 3**. The holes are intentionally undersize to ensure the bosses will wedge into the holes to hold the stretchers securely once the tension rods are tightened. We recommend that you drill the holes equally spaced across the center line of the stretcher in order to balance the compressive forces on the stretcher.



**Figure 3: Holes drilled across center line of stretcher.**

## Adding Protective Feet

Cast iron can easily scratch hardwood flooring and kitchen tile. Using the  $\frac{3}{8}''$  diameter flat-head screws, you can easily fasten  $\frac{1}{4}''$  or  $\frac{1}{2}''$  thick wooden soles (not included) to the underside of each leg. For even more protection, felt or cork can be added to the soles.

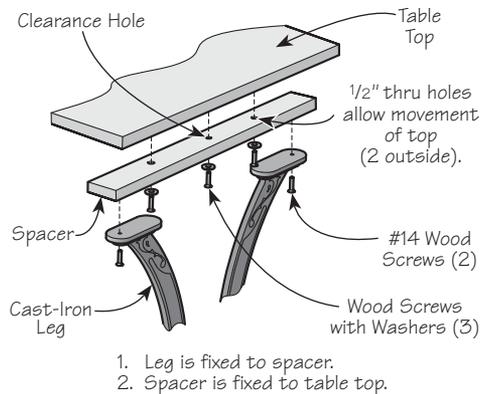
If required, the thickness of the wooden soles can be used to obtain a custom table height.

## Fastening the Table Top

After assembling the legs and stretcher(s), place the table top over the assembly. For plywood, particleboard, chipboard or fiberboard tops, you can screw the legs directly into the top. Mark the holes on the underside. Drill  $\frac{3}{16}$ " blind pilot holes, being careful not to drill through the top. Included are #14  $\times$   $1\frac{1}{4}$ " flat-head wood screws that are suitable for fastening tops not less than  $\frac{3}{4}$ " thick. Also included are #14  $\times$  2" flat-head wood screws for use with thicker table or bench tops.

If you are mounting the legs to a solid wood top, you may want to mount them to spacers with oversized holes, and attach the table top to the spacers (see **Figure 4**). This will allow the table top to move with seasonal movement. These spacers may be concealed by partially mortising them into the underside of the top, or they can be shaped and added as design elements.

*Note: Due to the weight of the legs, it is advisable to use the longest screws possible.*



**Figure 4: Spacers added for solid wood tops.**

## Finishing The Legs

Although the color of the legs provides a neutral base and emphasizes the depth of the details, painting the legs can alter the appearance, changing the overall look and feel of the table.

The simplest way to change the appearance of the legs is to paint the details a different color from the rest of the legs. You can use a medium artist's brush to get crisp lines. A lacquer-based paint will adhere best to the paint. If an acrylic paint is used, scuffing the details with a bit of sandpaper will improve paint adhesion.

Adding pinstripes will give the legs a Victorian feel. Most automotive stores sell inexpensive striping kits that will work well on the large, flat surfaces of the legs. Most paint and craft stores sell a variety of patina and faux-finishing kits that allow you to simulate metal and old-paint finishes.

**Table 1: Assembled Rod Length\* for Workbench Legs**

Workbench Sizing		
Workbench Top	Stretcher Length	Rod Length
24" min. x 60" typ.	45" typ.	48"
<i>Rod Length = Stretcher Length + 3"</i>		

**Table 2: Assembled Rod Length\* for Table Legs**

Dining Table Sizing				
# of Places		Table Top	Stretcher Length	Rod Length
2		24" x 30"	21½"	24"
4		32" x 48"	21½"	24"
6		36" x 66"	45½"	48"
8		36" x 86"	45½"	48"
<i>Rod Length = Stretcher Length + 2½"</i>				

**Table 3: Assembled Rod Length\* for Desk Sizing**

Desk Sizing			
Size	Desk Top	Stretcher Length	Rod Length
Small	24" x 42"	36½"	24" + 15"
Large	30" x 60"	45½"	48"
Computer	30" x 45"	39½"	24" + 18"

**\*Note:** Once you have completed your stretcher, you will need to cut the threaded rod to the proper length. Thread the coupling nut all the way onto the rod past the point where you are going to cut. Cut the rod with a hacksaw and clean up any burrs with a file. Remove the coupling nut to clean up the threads.

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