

Tool Chest

Create a classic favorite for your own storage or to give as a gift.

Wooden machinist's chests are just as popular today as when they were first manufactured in the early 1900s.

It's ironic that these chests were made of wood and not metal—the chosen material of the machinist. But shortages during the first half of the 20th century forced companies to substitute wood for metal, and after the shortage was over wooden chests had gained such a following that companies continued making them. Today, these chests are favored by machinists and woodworkers alike.

Instructions:

General: Cut and label the parts as needed, using the Cut List as a guide and adjusting for fit. Use glue and appropriate-length nails for assembly unless otherwise specified.



PHOTOS: JOHN O'HAGAN/SPC

Step 1: Build the case. After cutting the (01) sides, (03) back, and (05) front, determine and mark the outside face and the top of each piece.

a. Mark the area you'll cut to separate the lid from the chest by scribing a line at $\frac{3}{4}$ inch and at $1\frac{1}{4}$ inch down from the top edge of the (01) sides, (03) back, and (05) front. Note: Do not nail between these lines.

b. Using a router fitted with a $\frac{1}{4}$ -inch rabbeting bit, cut a $\frac{1}{4}$ - x $\frac{1}{4}$ -inch rabbet along the inside top edge of each (01) side, stopping $\frac{1}{4}$ inch in from each end. Square up the rabbet ends with a chisel.

c. Using a router with a $\frac{1}{4}$ -inch straight bit, cut a $\frac{1}{4}$ -inch-deep

groove in each side 5 inches from the top inside edge, stopping $\frac{1}{2}$ inch in from each edge. Square up the ends of these dados with a chisel.

d. To make it easier to insert the drawers, chamfer the front ends of the (02) drawer guides, and sand them round as shown in the drawer guide detail.

e. Attach the (02) drawer guides to the (01) sides, $\frac{3}{4}$ inch in from the back edge and spaced apart as shown in Figure 1.

f. To conceal the plywood edge and create a rabbet for the top, attach the (04) trim to the top edge of the (03) back so it's flush with the back edge. Then cut a $\frac{1}{4}$ - x $\frac{1}{4}$ -inch groove 5 inches down from the top edge of the (04) trim.

g. Cut a $\frac{1}{4}$ - x $\frac{1}{4}$ -inch rabbet along the top edge of the (05) front, and cut a $\frac{1}{4}$ - x $\frac{1}{4}$ -inch groove 5 inches down from the top edge.

h. Attach the (03) back, (05) front, and (06) bottom to one (01) side with glue and nails. Apply glue to the grooves for the (07) floor (see Figure 1), and slide it into place.

i. Apply glue to the grooves of the remaining (01) side, and attach it to the assembly. Apply glue to the top rabbets, and install the (08) top.

TOOLS YOU'LL USE

Read more about these tools in Shop Smart on pages 12–13 of the Winter 2006 issue of *The Wood Post*.



router



drill



miter saw



power sander



j. After the glue cures, separate the lid from the chest assembly. Position the fence on your table saw to 1 inch. Place the top of the chest against the fence, and make a cut. Rotate the chest 90 degrees, and make the second cut. Continue rotating and cutting until you've separated the lid.

Step 2: Build the drawers. To determine the length of the (09) drawer fronts and (11) drawer backs, measure the opening between the (01) sides and subtract 1½ inch.

a. Cut ¼- x ¼-inch rabbets along the bottom inside edges of the (09) drawer fronts and

the (10) drawer sides to accommodate the (12) drawer bottoms.

b. Cut ½-inch-wide x ¼-inch-deep grooves centered on the width of the (10) drawer sides for the (02) drawer guides.

c. Flip the drawer parts upside down, and attach the (10) drawer sides to the (09) drawer fronts and (11) drawer backs with glue and brads.

d. Check for square, and then attach the (12) drawer bottoms with glue and brads.

e. Drive two ½-inch pan-head screws into the back of each drawer assembly at opposite ends, leaving about ¼ inch exposed.

These screws serve as adjustable drawer stops so that you can align the (09) drawer fronts with the (05) front.

f. After the glue cures, label the drawers on their bottoms or sides, and insert them into the chest assembly.

g. To attach the faces to the drawers, first apply double-sided tape to each (09) drawer front. Then, starting with the bottom drawer, insert shims to center the drawer box in the drawer opening. Once it's centered, press the (13) large face against the (09) drawer front, using shims if necessary.

h. Slide the drawer out of the chest, and secure the (13) large face to the (09) drawer front by driving ¾-inch pan-head screws

TOOL LIST

- table saw (or circular saw with a straightedge guide)
- power miter saw (or miter box and handsaw)
- router with ¼- and ½-inch straight bits, and ¼-inch rabbeting bit
- power sander and various grits of sandpaper
- drill/driver with drill bit set
- pneumatic nail gun (or hammer)
- chisel
- clamps
- tape measure
- pencil

LOWE'S LIST

Lumber*

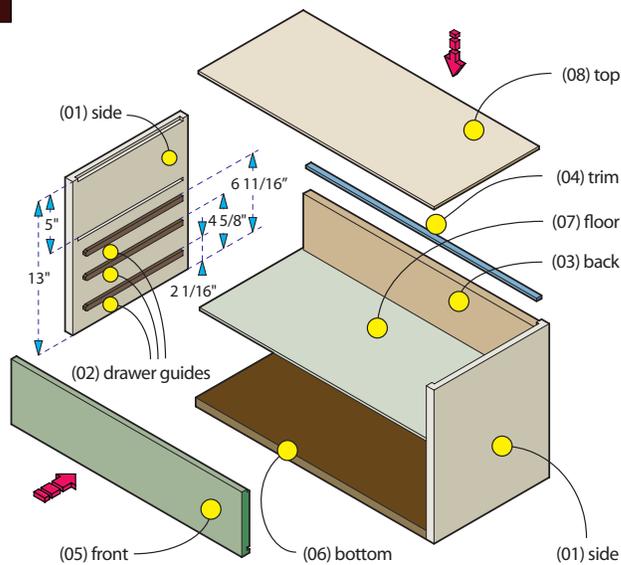
- 5 (4-foot-long) ½ x 2s, oak
- 1 (4-foot-long) 1 x 4, oak
- 1 (6-foot-long) 1 x 12, oak
- 1 (48- x 96-inch) sheet of ¼-inch oak plywood
- 1 (24- x 24-inch) sheet of ¾-inch oak plywood

Hardware & Supplies

- 2 (2-inch) non-removable pin hinges
- 1 (1¼-inch) safety hasp
- 2 (2¾-inch) chest handles
- 1 box (#18 x ¾-inch) wire brads
- 1 box 4d bright finishing nails
- 1 box (#8 x ½-inch) pan-head screws
- 1 box (#8 x ¾-inch) pan-head screws
- stainable wood filler
- wood glue
- double-sided tape
- satin-finish polyurethane

*Availability varies by market.

Figure 1



through the (09) drawer front and into the (13) large face. Attach the (14) narrow faces to the other two drawers.

i. Mount the (15) pulls to the drawers with glue and brads.

Step 3: Make finishing touches.

a. Fill all nail holes, sand all surfaces smooth, and then apply several coats of satin-finish polyurethane.

b. Attach the lid to the chest using two 2-inch hinges.

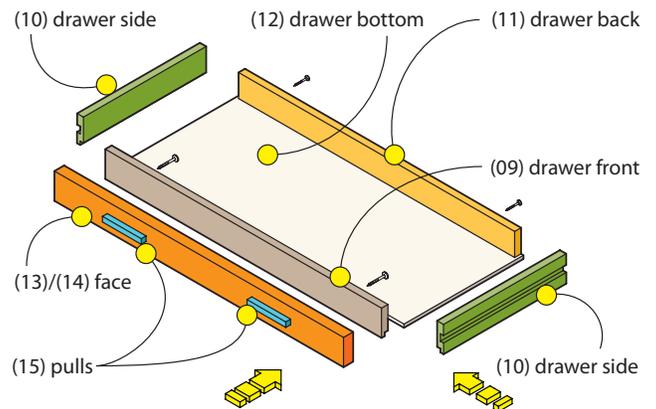
c. Install the safety hasp to the lid and the front of the chest.

d. Attach a 2 3/4-inch chest handle to each end of the chest.

e. If necessary, adjust the drawer stops to align all of the drawer fronts. ■

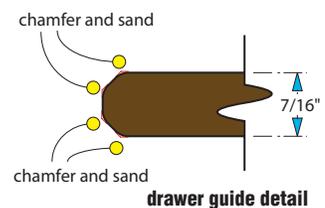


Figure 2



CUT LIST

| Part Name | Material | Size (in inches) | Quantity |
|---------------------|------------------|-----------------------|----------|
| Case | | | |
| (01) sides | 1 x 12 | 3/4 x 11 1/4 x 13 | 2 |
| (02) drawer guides | 1 x 4 | 1/4 x 7/8 x 9 1/2 | 6 |
| (03) back | 3/4-inch plywood | 3/4 x 12 3/4 x 22 1/2 | 1 |
| (04) trim | 1 x 4 | 1/4 x 1/2 x 22 1/2 | 1 |
| (05) front | 1 x 12 | 3/4 x 5 1/2 x 22 1/2 | 1 |
| (06) bottom | 1 x 12 | 3/4 x 10 1/2 x 22 1/2 | 1 |
| (07) floor | 3/4-inch plywood | 3/4 x 10 1/8 x 22 1/2 | 1 |
| (08) top | 3/4-inch plywood | 3/4 x 10 1/4 x 23 | 1 |
| Drawers | | | |
| (09) drawer fronts | 1/2 x 2 | 1/2 x 2 x 21 3/8 | 3 |
| (10) drawer sides | 1/2 x 2 | 1/2 x 2 x 9 1/2 | 6 |
| (11) drawer backs | 1/2 x 2 | 1/2 x 1 3/4 x 21 3/8 | 3 |
| (12) drawer bottoms | 3/4-inch plywood | 3/4 x 9 1/4 x 21 3/8 | 3 |
| (13) large face | 1 x 4 | 3/4 x 2 1/2 x 22 3/8 | 1 |
| (14) narrow faces | 1 x 12 | 3/4 x 2 x 22 3/8 | 2 |
| (15) pulls | 1/2 x 2 | 1/2 x 3/8 x 3 | 6 |



Finished Dimensions:

Height: 13 inches
Depth: 11 1/4 inches
Width: 24 inches



free plan