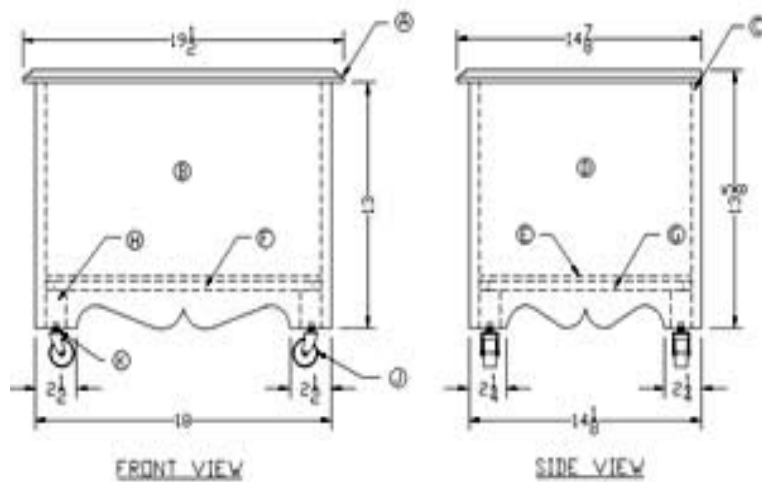


How to Build a Wood Storage Chest

This wood storage chest is made of solid oak, is easy to make, and is a convenient way to store houseware items where space is limited. Its portability allows it to be moved from room to room with ease when needed. The design and beauty of the chest will compliment other furniture items wherever it is placed.

PORTABLE STORAGE CHEST



Technical Information for Building a Wood Storage Chest

A. Materials List:

QUANTITY	LETTER	NAME	SIZE	MATERIAL
1	A	Lid	5/8" x 14 7/8" x 19 1/2"	Oak
1	B	Front	5/8" x 13" x 18"	Oak
1	C	Back	5/8" x 13" x 18"	Oak
2	D	Sides	5/8" x 13" x 14 1/4"	Oak
1	E	Bottom	1/4" x 12 7/8" x 16 3/4"	Oak Plywood
2	F	Front/Back Braces	1/2" x 1/2" x 16 3/4"	Oak
2	G	Side Braces	1/2" x 1/2" x 12 7/8"	Oak
4	H	Caster Supports	1 1/4" x 1 1/4" x 2"	Oak
4	I	Splines	1/8" x 1/2" x 12 3/4"	Oak
4	J	Casters	1 1/2" Diameter	Plastic
4	K	Caster Retaining		Brass

		Rings		
2	L	Butt Hinges	2"	Brass
1	M	Safety Lid Support		Brass
WOOD SPECIES				
				

B. Patterns:

1. Scale front (B), back (C), and sides (D) to the drawing dimension sizes. This can easily be accomplished by measuring the print out and dividing that size into the dimension size. This will give a multi-factor that can be used to figure the enlargement size for the pattern. Most companies that do duplicating can make the enlargement required for the patterns.
2. Transfer the pattern enlargement onto poster board, and use a pair of scissors to cut out the pattern.

C. Cutting Procedures:

1. Lid (A) can be made from a 3/4" x 8" x 40" board. The front (B) and back (C) will require a 3/4" x 7" x 75" board, and the two sides (D) will require a 3/4" x 7" x 60" board.
2. Use a radial arm saw and a table saw to cut lumber to proper sizes shown on the materials list.
3. Use a jointer to joint the edges of the lumber to remove the saw marks.

4. To get the lumber width needed, you will need to dowel two boards together for each piece (A), (B), (C), & (D).
5. For the lid (A) place two boards edge to edge and with a framing square and a pencil draw two lines, 3" from each end. Use a dowel jig, and align the 5/16" hole with each mark and drill a 5/16 diameter holes 1 1/8" deep. Place wood glue in the holes and pound the dowels in with a wooden mallet. Next, place glue on the edges and the exposed dowels and clamp the two boards together with two bar clamps. **NOTE: Be sure the grain pattern is opposite with each board to prevent warpage.**
6. The same procedure should be followed for front (B), back (C), and sides (D).
7. When the glue has dried, place each board in the planer and plane trim cuts on each side. The boards should be 5/8" thick when completed.
8. Adjust the table saw blade to 45 degrees and cut miter joints on the left and right edges of the front (B), back (C), and sides (D).
9. Use the table saw to cut 45 degree, 1/8" x 12 3/4", blind spline grooves into the miter joints previously cut in step #8. Start the spline grooves at the bottom edges so the splines will not show at the top edges.
10. Place a 2 3/8" x 12 3/4" oak board on top of a slightly larger board and plane the top board to 1/8" thick. Adjust the table saw fence 1/2" away from the blade and rip the board three times to get the four splines (I) required.
11. Trace the patterns for the front (B), back (C), and sides (D) onto the pieces. Use a band saw to cut out the shape of each piece.
12. Use a spindle sander to sand the shape of each piece smooth.
13. Use a portable hand router and a 1/2" Roman-Ogee Bit to route the front and the side edges of lid (A).

14. To make the caster supports (H), glue and clamp two 3/4" x 1 1/4" x 12" boards together, face to face. When the glue has dried, plane the boards to 1 1/4" x 1 1/4" square. Use a radial arm saw to cut the four caster supports to 2" length. Use a drill press and a 1/4" drill bit to drill a 1/2" deep hole in one end of each caster support.
15. To make the braces (F) and (G), plane a board 1/2" thick. Use a table saw to rip the braces 1/2" wide. Use a radial arm saw to cut each brace to the proper length.
16. Cut two butt hinge gains 1/16" x 2" into the top edge of the back (C). The gains should be 3" from each end.

D. Wood Storage Chest Sanding Procedures:

1. Rough sand all parts with an orbital sander and 80 grit sandpaper.
2. Intermediate sand all parts with an orbital sander and 120 grit sandpaper.
3. Rough and intermediate, sanding should be completed before assembly procedure.
4. Finish sand all parts with an orbital sander and 220 grit sandpaper **after the assembly procedure.**
5. Hand sand all edges, details, with 220 grit sandpaper just **prior to the finish procedure.**

E. Assembly Procedures:

1. Place wood glue in each spline groove of front (B), back (C), and sides (D). Use a wooden mallet to tap each spline (I) into place. Place wood glue on the mitered edges of each piece and clamp them together with two band clamps. Use a framing square to make sure the assembly is perfectly square. Allow glue to dry over night.
2. Glue the four caster supports (H) into place, flush with the bottom of the assembly, and use hand screw clamps to hold them in

place. When the glue has dried, use a nail gun and 1 1/2" nails to secure the caster supports. NOTE: Make sure the holes in the caster supports are on the bottom.

3. Use a wooden mallet to pound the caster retaining rings (K) into bottom of each caster support (H). Be sure to align the hole in the retaining rings precisely with the holes in each caster support.
4. Place wood glue on the braces (F) and (G) and use a nail gun with 1" nails to secure the in place.
5. Position bottom (E) in place and secure it to the braces with 1/2" nails.
6. Force the shank of each caster (J) into the caster retaining rings (K).
7. Using the wood screws that come with the butt hinges (L), screw the hinges onto the back (C). Properly align the lid (A) with the back (C), and screw the hinges onto the lid.
8. Attach the safety lid (friction type) support (M) with flathead screws provided in the package. The support mounts under the lid (A) and to the interior of the side (D).

NOTE: Steps #6 through #8 should be performed after the finish procedures are completed.

F. Finish Procedures:

1. Use plastic wood dough to fill all holes, cracks and imperfections.
2. Hand sand all edges with 220 grit sandpaper.
3. If stain is desired, apply with a brush and allow to dry penetrate for 5-10 minutes, then remove with a clean rag.
4. Allow stain to dry 6 hours and then repeat with a second coat.
5. Apply a clear finish coat such as Lacquer, Varathane, Polyurethane, etc. using a pure-bristle brush. Allow to dry 12 hours.
6. Lightly hand sand finish with 220 grit sandpaper.

7. Apply second coat of clear finish.
8. If additional clear coats are desired, be sure to allow the finish to dry properly, then lightly hand sand with 220 grit sandpaper between coats.
9. Allow final coat to dry 24 hours before using the wood storage chest.
10. If stain is not desired, continue with steps # 5-9 after step #2.

Congratulations, your wooden storage chest is finished and ready to use!