

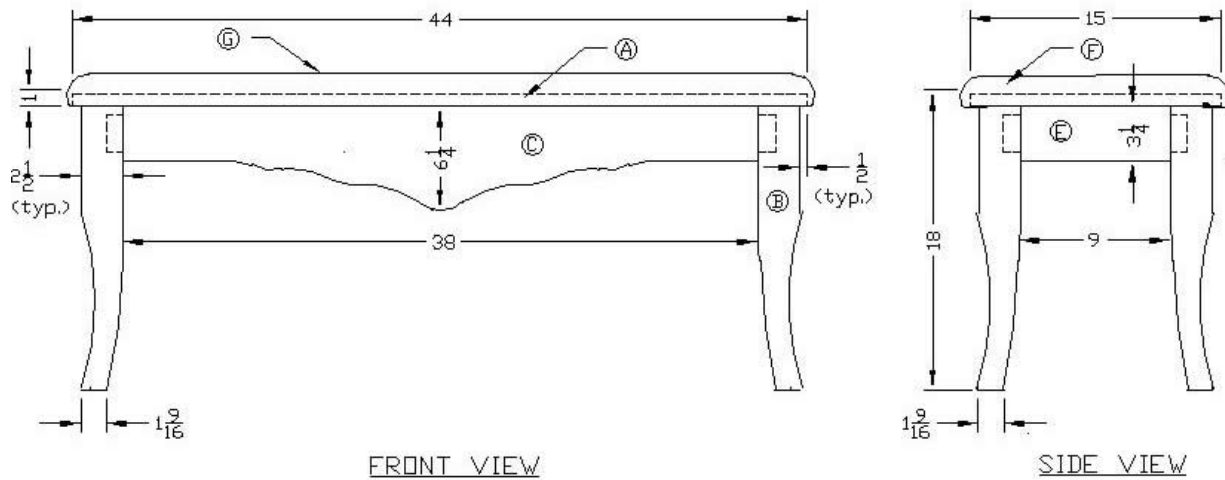
Build a Bed End Bench

A bed end bench is the perfect accent for the foot of the bed, entry, or hallway. Its large, thickly padded seat offers supreme comfort.

In addition, its curved legs lend delicate, yet sturdy support. This versatile piece of furniture has many uses, such as a place to sit while dressing, laying out clothes for the coming day, or just an inviting spot for relaxation.



BED BENCH



Technical Information for Making a Bed End Bench

A. Materials List:

QUANTITY	LETTER	NAME	SIZE	MATERIAL
1	A	Top	3/4" x 15" x 44"	Plywood
4	B	Legs	2 1/2" x 2 1/2" x 17"	Red Oak
1	C	Front Rail	1" x 6 1/4" x 40"	Red Oak
1	D	Rear Rail	1" x 3 1/4" x 40"	Red Oak
2	E	Side Rails	1" x 3 1/4" x 11"	Red Oak
1	F	Padding	2" x 19" x 48"	Foam
1	G	Cover	23" x 52"	Fabric

4	H	Corner Brackets		Steel
16	I	Wood Screws	#10 x 3/4"	Steel
8	J	Wood Screws	#10 x 1 1/2"	Steel
1	K	Applique		Wood

WOOD SPECIES



Red Oak

B. Pattern:

1. Scale Legs B to the drawing dimension size. This can be accomplished by measuring the print out of the project and dividing that size into the dimension size shown on the drawing, or listed in the Bill of Materials. This will give a "Multi-Factor" that can be used to figure the enlargement size for the pattern.
2. Take the drawing printout and the multi-factor to a printing company. Most printing companies that do duplicating can make the enlargement required for the pattern.
3. The same multi-factor can be used to determine the enlargements for the other shape C.
4. Trace the pattern enlargements onto poster board or Mylar and cut out the patterns with a pair of scissors.
5. Use these patterns to trace the shapes onto the wood stock.

C. Cutting Procedures:

1. Use a table saw and a radial arm saw to cut top (A) to proper size.
2. Use a table saw and a radial arm saw to cut all Oak hardwood lumber to proper sizes.
3. Joint both edges of each piece of lumber.
4. Trace pattern #2 onto the leg stock. The pattern should be traced on both the front and side of each leg stock. Label the legs front/right, front/left, etc. to help eliminate errors.
5. Use a band saw to cut the legs (B) to the proper shape.
6. Trace pattern #1 onto the front (C) and cut out shapes with a band saw.
7. Lay out width of mortise joints on each leg (B) $\frac{3}{8}$ " from the top and extend down $2\frac{1}{2}$ ". Also the layout the thickness of each mortise joint $\frac{1}{2}$ " in from the outside faces of each leg. The mortise for each leg should be $\frac{3}{8}$ " x $2\frac{1}{2}$ ".
8. Use a mortiser machine with a $\frac{3}{8}$ " mortise bit to drill the square holes $1\frac{1}{16}$ " deep. When finished there should be two rectangular mortise holes drilled in each leg $\frac{3}{8}$ " x $2\frac{1}{2}$ " x $1\frac{1}{16}$ ".
9. Install dado blades on a radial arm saw and cut tenons on both ends of each rail (C), (D), & (E). The tenons should be $\frac{3}{8}$ " x $2\frac{1}{2}$ " x 1". Each tenon should be cut down $\frac{3}{8}$ " from each edge and $\frac{1}{2}$ " in from the outside face on each rail. Use a belt or disk sander to slightly bevel the corners of the tenons, so that each mortise and tenon joint fits properly.

D. Sanding Procedures:

1. Use a spindle sander to sand the shapes of the front (C).
2. Rough sand all parts using an orbital hand sander with 80 grit sand paper.
3. Intermediate sand using an orbital hand sander with 120 grit sand paper.

4. Finish sand using an orbital hand sander with 220 grit sand paper.
Note: Complete this step during the finish procedure.
5. Hand sand all edges to desired finish.

E. Assembly Procedures:

1. Place wood glue on each tenon and in each mortise, and then assemble the legs and rails together. Use four bar clamps to secure the legs and rails. Measure diagonally across the top to make sure the assembly is square. Clean up excess glue and allow to dry for 24 hours.
2. Place the corner brackets (H) on the inside of each corner and mark for screw holes. Use a hand drill and a #10 x 3/4" countersink to drill screw holes. Use flat head screws to install the corner brackets for reinforcement.
3. Center the leg/rail assembly upside down on the top (A).
4. Use a hand drill and a #10 x 1 1/2" countersink to drill screw holes diagonally into the inside of the rails and into the top. Secure the top to the leg/rail assembly with flat head screws. **Note:** Be sure the screws do not penetrate through the top side of top (A). Temporarily remove the top from the leg/rail assembly.
5. Purchase wooden appliqué (K) and secure it onto front rail (C) with glue and brads. Use a nail set to set the brads below the surface.
6. Use a pair of scissors to cut the foam padding (F) to proper size. The padding should wrap around the front, rear, and ends of the top (A).
7. Lay the fabric (G) out upside down. Center the padding (F) on top of the fabric. Center the top (A) on top of the padding. Use a staple gun to staple the fabric to the top on one end. Next, stretch the fabric and staple it to the front edge of the top. Next, stretch the fabric and staple the opposite end. Last, stretch the fabric and staple it to the rear edge.

8. Use a utility knife to trim off any excess fabric.
9. Reinstall the top assembly to the leg/rail assembly.

Note: Step #8 should be completed after the finish procedure!

F. Finish Procedure:

1. Use plastic wood dough to fill all holes, cracks and imperfections.
2. Use an orbital hand sander and 220 grit sandpaper to finish sand the legs/rail assembly.
3. Hand sand all edges with 220 grit sandpaper.
4. If stain is desired, apply with a brush and allow to dry penetrate for 5-10 minutes, and then remove with a clean rag.
5. Allow stain to dry 6 hours and then repeat with a second coat.
6. Apply a clear finish coat such as Varathane, Polyurethane, etc. using a pure-bristle brush. Allow to dry 12 hours.
7. Lightly hand sand finish with 220 grit sandpaper.
8. Apply second coat of clear finish.
9. Allow to dry 24 hours before using bench.

***Congratulations, your wood bed end bench is finished and ready to use!**