



Laminated *Bud Vase*

If you like the kind of woodworking project that teaches a technique, you've come to the right place. While building the eye-catching bud vase shown here, you'll learn how to laminate contrasting woods for an exciting visual impact. For the waterproof container within the vase, we used a piece of copper pipe and cap. Later, try these techniques on a creative design of your own.

Form the Core Of the Vase

1 Using tubing cutter, a hacksaw, or a bandsaw fitted with a metal-cutting blade, cut a length of $\frac{3}{4}$ " I.D. (inside diameter) copper pipe to $7\frac{3}{4}$ " long. Solder or epoxy a $\frac{3}{4}$ " copper cap onto one end. Later, fill the capped pipe with water to check for leaks.

2 To make the core base (A) and the core top (B), first laminate two $1\frac{1}{2}\times 6$ " long pieces of $\frac{3}{4}$ " oak face-to-face. Rip the resulting block to $1\frac{3}{8}$ " square. Then, cut the base to $2\frac{1}{2}$ " long and the top to 2" long.

3 Draw diagonals to find the center of each block, and drill a 1" hole $1\frac{5}{8}$ " deep at this location in the core base. Drill a $\frac{7}{8}$ " hole through the center of the core top.

4 With the ends of the core top and the top end of the copper tube flush, use epoxy or gap-filling instant glue to adhere the core top to the top end (opposite the capped end) of the copper tube.

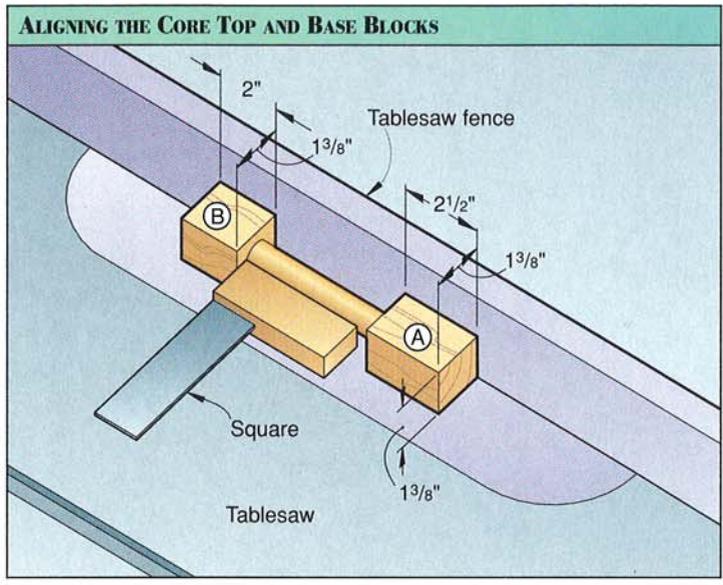
5 Coat the walls of the hole in the core base with panel adhesive or caulk. Slide the capped end of the copper pipe into the hole. Place the assembly on your tablesaw fence or some other straight edge to align the outside faces of the core top and base. Use a square to check that the blocks are square to the tube as shown in the Aligning the Core Top and Base Blocks drawing.

6 From $\frac{1}{4}$ " stock (we planed thicker stock to this thickness), cut the nonlaminated front (C) and the back (D) to size. (We cut one piece from cardinal wood and the other from wenge. See the Buying Guide for our source of hardwoods.) Keeping the edges and ends of each piece flush with the core top and base (check with a square), glue and clamp the front and back pieces to the vase core assembly (containing the copper pipe and cap).

Here's How To Laminate the Decorative Sides

1 Start with six pieces of maple measuring $1\frac{1}{8}\times 2\times 12\frac{1}{4}$ " for the light side strips (E) and six pieces of walnut the same size for the dark side strips (F). (Using a tablesaw, we resawed the thin strips from thicker stock. And, although we used walnut and maple, any contrasting woods, including exotic hardwoods, will work.)

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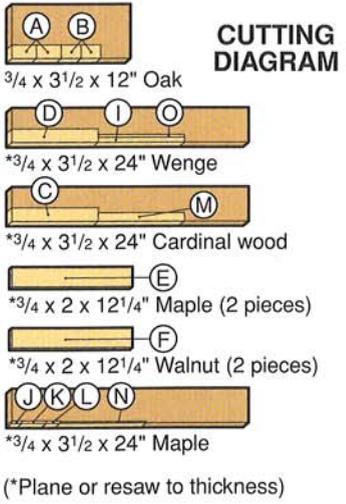
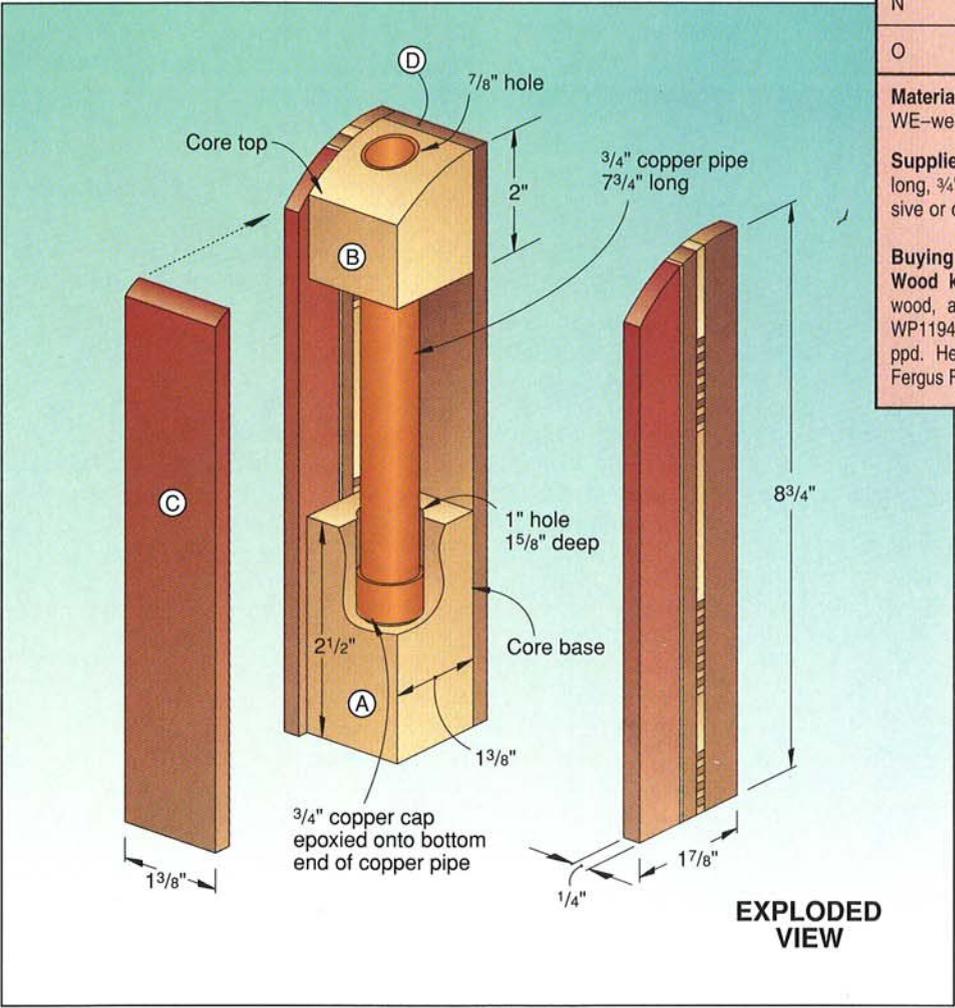


BILL OF MATERIALS					
Part	Initial Size			Mati.	Qty.
	T	W	L		
A core base	1 3/8"	1 3/8"	2 1/2"	LO	1
B core top	1 3/8"	1 3/8"	2"	LO	1
C front	1/4"	1 3/8"	8 3/4"	C	1
D back	1/4"	1 3/8"	8 3/4"	WE	1
E	1/8"	2"	12 1/4"	M	6
F	1/8"	2"	12 1/4"	WA	6
G	1/8"	1 1/2"	3/4"	L	2
H	1/8"	1"	3/4"	L	1
I	3/4"	9/16"	8 3/4"	WE	1
J	1/8"	3/4"	7/8"	M	1
K	1/8"	3/4"	2 1/2"	M	1
L	1/8"	3/4"	1 3/8"	M	1
M	3/4"	7/8"	8 3/4"	C	1
N	3/4"	1/16"	8 3/4"	M	1
O	3/4"	1/4"	8 3/4"	WE	1

Materials Key: LO—laminated oak, C—cardinal wood, WE—wenge, M—maple, WA—walnut, L—lamination

Supplies: 3/4" I.D. (inside diameter) copper pipe 7 3/4" long, 3/4" copper cap, epoxy or instant glue, panel adhesive or caulk, clear finish.

Buying Guide
Wood kit: Enough oak, walnut, maple, wenge, cardinal wood, and copper pipe with cap for one vase. Kit no. WP11941, \$15.95 ppd. Five vases, kit no. WP11945, \$39.95 ppd. Heritage Building Specialties, 205 North Cascade, Fergus Falls, MN 56537 or call 1-800-524-4184 to order.

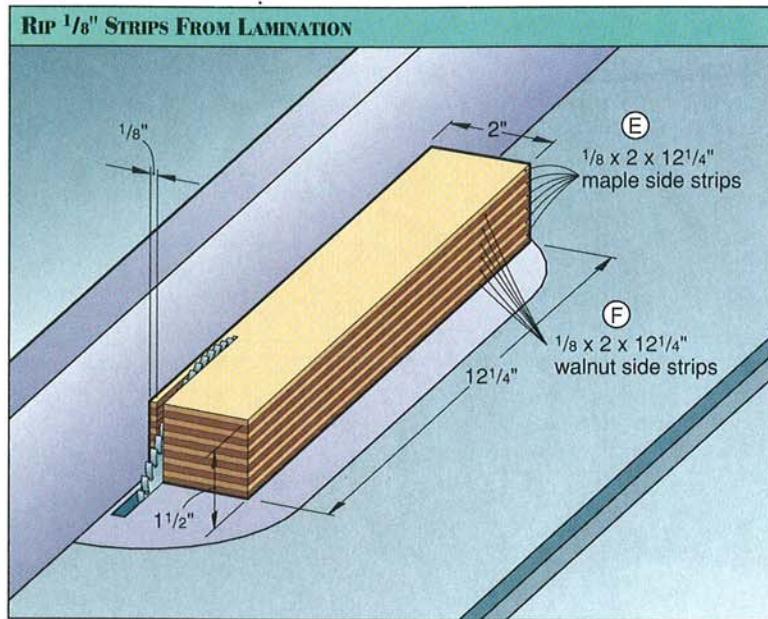


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2 Spread even coats of glue, and clamp the thin maple and walnut pieces face-to-face for an alternating light/dark look, keeping the edges and ends flush. Let the glue dry.

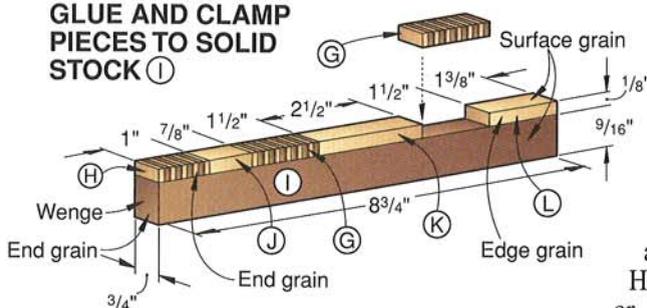
3 Scrape one edge (not face) of the lamination to remove the glue squeeze-out, and then plane or joint that edge flat.

4 Using your tablesaw, saw a $\frac{1}{8}$ "-thick by $12\frac{1}{4}$ " strip from the laminated block as shown below. (Saw more strips if you plan to make several vases—up to six.)

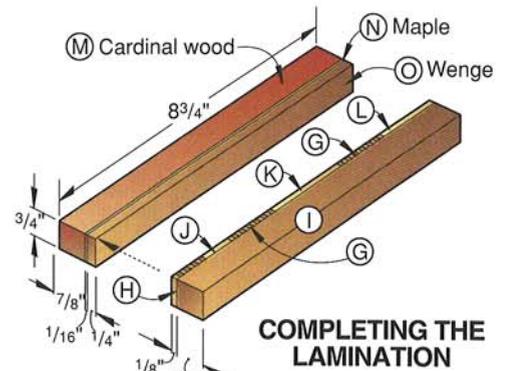


5 Now, crosscut three $\frac{3}{4}$ "-long sections from the laminated strip you just cut. Using your bandsaw, cut along the joint line of one of the three sections to create a 1"-wide section. We'll call the two wider side laminations G, and the remaining 1"-wide lamination H. (See the drawing below for reference and to later help you join all the pieces together.)

GLUE AND CLAMP PIECES TO SOLID STOCK (I)



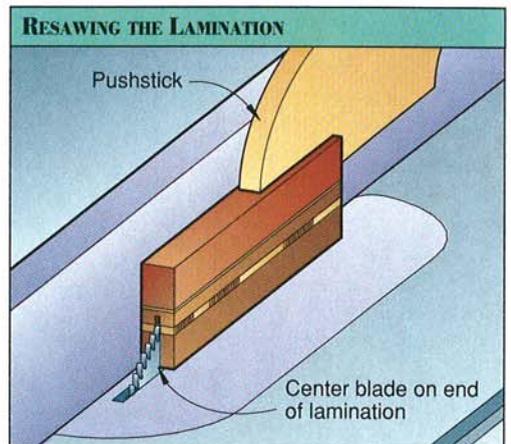
6 Cut a piece of wenge (I) to $\frac{3}{4} \times \frac{9}{16} \times 8\frac{3}{4}$ ". Then, cut three pieces of $\frac{1}{8}$ "-thick maple to the sizes shown at left and in the Bill of Materials for parts (J,K,L). Glue and clamp pieces G, H, I, J, K, and L together (we used spring



clamps and made sure that all joints were tight). Later, remove the clamps and lightly sand the laminated edges flat.

7 Cut to size the remaining pieces (M, N, O) using cardinal wood, maple, and wenge. Then, glue and clamp them to the other pieces where shown in the drawing above.

8 Resaw the lamination in half as shown in the illustration below.



9 Glue these two laminated strips to the vase assembly. Using a stationary belt/disc sander, sand the four faces smooth and to the same thickness. Be careful not to round over the corners.

Finishing Up

1 Using a bandsaw fitted with a $\frac{1}{8}$ " blade, a hacksaw, or your belt or stationary belt/disc sander, contour the top end of the vase.

2 Finish-sand the vase, and add a couple coats of satin polyurethane. Later, fill the copper pipe about half-full of water, insert the flower of your choice, and give it to someone special to cherish always. ■