



questions from Our Readers

vertical-grain Douglas Fir

In issue No. 80, you featured a tool cabinet made out of Douglas fir. When I tried to buy Douglas fir locally, all I could find was framing lumber and it doesn't look anything like the wood you used. Why is this?

*Art Beauchamp
Baton Rouge, LA*



Whenever we build projects out of Douglas fir, we typically use ordinary framing lumber (commonly known as “two-by” stock). But for the heirloom tool cabinet in Issue No. 80, as well as the workbench on page 16 of this issue, we used *vertical-grain* Douglas fir.

Vertical-grain Douglas fir isn't a different species or type of wood. Instead, this wood gets its name from the way it's cut at the sawmill. If you take a look at the end of a piece of vertical-grain fir, you'll see that the growth rings run nearly perpendicular to the face of the board, producing a straight, even grain pattern.

On the other hand, most framing lumber has grain that runs almost parallel with the face of the board, typically resulting in a loose, wavy grain pattern. (See photos in margin at left for comparison.)

Growth Rings. Just as important as the grain direction is the tree that the wood comes from. The best-looking fir comes from trees that grow up in mature, established forests. These trees grow slowly because they're competing with neighboring trees for light, air, and soil nutrients. And the slower a tree grows, the closer the annual growth rings are spaced, resulting in a tighter grain pattern.

On the other hand, trees that are commercially planted and harvested tend to mature much quicker. And as a result, they have wider-spaced growth rings.

Sources. Vertical-grain Douglas fir isn't something you're likely to find at your local home center. You'll have better luck trying a traditional lumber dealer. And you may even have to special-order the wood. But be prepared for a little sticker shock. Because of the waste involved in sawing logs into vertical-grain boards, you can expect to pay three to four times more than you would for run-of-the-mill framing lumber. 🪚



◀ **Vertical Grain.** If you look at the end of this board, you can see that the grain runs vertically.

◀ **Horizontal Grain.** Most construction lumber has grain that runs horizontally or in arcs.

Technique: Grain Matching

Matching grain between boards is a concern whenever you're gluing up a panel. But when it came to gluing up the legs for the

workbench in this issue, I faced a different kind of challenge. I wanted all four faces of each leg to look similar. To do this, I selected boards with grain running *diagonally* to the face of the board. This way, the grain on the edges of the two leg halves looks the same as the grain on the faces of the boards (see photo).



Sources

CABINET BASE WORKBENCH

You'll need to find a fair amount of hardware to build the cabinet base workbench on page 30. Most of the basic items can be found at your local hardware store. But there are some items you'll probably need to order to complete the project.

The 2" x 1³/₈" antique, ball-tip hinges (00E08.05) I used to hang the center doors on the cabinet came from *Lee Valley*. And *Rockler* carries the cross dowels (31823) and shelf supports (33902) you'll need. The cherry knobs (88783) and magnetic catches (26559) came from *Rockler* as well.

You'll need a pair of vises for the workbench. The *Veritas* tail vise (70G09.01) and face vise (70G08.02) were both ordered from *Lee Valley*. The vises don't come with handles. So you'll need to make them or order them from *Lee Valley* (05G12.03). The *Woodsmith Store* also has these handles and vises.

To round out your workbench, you'll need to get some bench dogs. I used bench dogs (114141) that came from *Highland Hardware*. But you'll find that *Lee Valley* also carries bench dogs (05G02.01) that work well. It's a good idea to have the bench dogs in hand before you start work on the holes. That way, you can be sure they fit properly.

ANTI-FATIGUE MATS

Anti-fatigue mats are available from at many hardware stores and home centers. In fact, at many home centers, the matting is on a big roll and you simply pay by the foot for the length you need.

But if you want to choose from a wider variety of materials, styles, and sizes, or order the *Dri-Dek* tiles to customize the matting in your shop, check out the sources listed in the margin at right.

10 MUST-HAVE ROUTER BITS

You'll be able to find the "must-have" router bits on page 8 at most woodworking stores. Many hardware stores and home centers will carry some of the basic bits also. If you have trouble locating a few of the bits, check out the margin for a number of mail-order sources.

ROUTER JIGS

In the router jig article on page 16, we used spiral router bits to produce clean cuts with little (if any) tearout. These bits are available from a number of woodworking stores and a few of the sources listed in the margin at right.

SLIDING DOOR CABINET

You should be able to find most of the hardware needed to build the

sliding-door storage cabinet on page 22 at a local hardware store or home center. A couple of the items listed below may require a call to the manufacturer (or a check of their website) to locate a local distributor.

To allow the doors of the cabinet to glide smoothly on the track, I used sliding screen door rollers. The ones I used were spring tension rollers made by *Prime-Line Products* (B-522). I was able to find the rollers at a local *Ace Hardware Store* (5200662). You can also order them online at www.acehardware.com.

The storage bin rack is sized to accept small *Akro-Mils* storage bins (30210). These plastic bins (or similar ones) are available from many hardware stores and home centers.

If you decide to use another brand, it's a good idea to have them in hand before you start building. This way, you'll know they'll fit, or if you have to adjust the dimensions to suit.

TOGGLE CLAMPS

Many of the toggle clamps from page 12 can be found at the *Woodsmith Store*. Home improvement centers and woodworking stores also carry a variety of toggle clamps and levelers. You'll find the information for some other sources listed in the right margin. 🦊

MAIL ORDER SOURCES

Similar project supplies may be ordered from the following companies:

Woodsmith Store
800-444-7527

Bench Visers, Bench Dogs, Magnetic Door Catches, Shelf Supports, Spiral Router Bits, Toggle Clamps, Vise Handles, Wood Knobs

Rockler
800-279-4441
www.rockler.com

Bench Visers, Cross Dowels, Magnetic Door Catches, Router Bits, Shelf Supports, Wood Knobs

Amana Tools
www.amanatool.com
Router Bits

McMaster-Carr
630-833-0300
www.mcmaster.com
Anti-Fatigue Mats

Highland Hardware
800-241-6748
tools-for-woodworking.com
Bench Dogs, Bench Visers, Router Bits

Lee Valley
800-871-8158
www.leevalley.com
Door Hinges, Toggle Clamps, Veritas Bench Visers & Bench Dogs, Vise Handles

Dri-Dek
800-348-2398
www.dri-dek.com
Dri-Dek Products

McFeely's
800-443-7937
www.mcfeelys.com
Toggle Clamps

Prime-Line Products
800-255-3505
prime-line-products.com
Sliding Screen Door Rollers

Akro-Mils, Inc.
800-253-2467
www.akro-mils.com
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