

## Dust off your dividers

DIVIDE AND CONQUER DISTANCES  
WITH SPEED AND PRECISION

BY STEVE LATTA

**D**ividers may not get a lot of attention, but these simple little tools bring a lot to the table. For layout, stepping off distances, and comparing gaps and openings, they save time and increase accuracy, and that's a combination that can't be beat.

Dividers are easy to adjust, so you won't be wasting time with scratch paper and a calculator, or squinting to count off tiny increments on a rule. And here's the best part: You can pick up a pair at any flea market for just a few bucks.

Here I'll show you the most common ways I use dividers. Once you've mastered these jobs, I'm sure you'll think of more ways to use them in your own work.

### What types, sizes to buy

The two main types of dividers are spring dividers and wing dividers. Spring dividers have a C-shaped spring or "bow" at the top, and are adjusted by a knurled nut. Spring dividers can open to about 60°. In practical terms, this means that the maximum possible setting of a pair is equal to the length of its legs.

A more versatile option are wing dividers, which are named for their wing-shaped adjustment arm. They open much wider than spring dividers, making them useful for larger arcs and distances.

Both types come in a variety of sizes ranging from 4 in. to 12 in. I own multiple spring dividers sized at 4 in., 5 in., and 6 in., along with wing dividers sized at 6 in., 8 in., and 10 in. But if you don't own any, I recommend starting with a pair of 4-in. and 6-in. spring dividers and a pair of 8-in. wing dividers.





## Pick a pair

Spring dividers are much more plentiful in the smaller sizes, so it's easy to get them on the cheap. Winged types are usually bigger, and much heavier and bulkier, which makes them tougher to use for small, delicate measuring but perfect for large-scale jobs.

Though dividers are available new, you often can find them at flea markets, collectibles stores, or online markets such as eBay, usually at well below retail cost. Look for a pair with straight legs and a taut spring, with a reputable name like Starrett or Brown & Sharpe. Other names worth watching for are Pexto, and Peck, Stow, and Wilcox. These manufacturers typically used the best steel, which means that even with a little minor rust, the tool will clean up nicely for another generation or two of service.

To clean up the dividers, use a little 0000 steel wool to remove major rust, and add a drop of light machine oil to the moving parts. Dull, blunt points should be reground—a good sharp tip is more accurate, because it's easier to put right on your mark. I grind both tips to a point using an edge sander. After the tune-up, the dividers are ready to go.

### Space dovetails perfectly

Using dividers, you can quickly lay out the proper spacing for your dovetails,



**A good starter set.** Spring dividers are more readily available in the smaller sizes, and are great for small work. Because of their larger size and heavy construction, wing dividers (far left) are ideal for measuring larger distances.



**Wings reach farther.** These wing and spring dividers are the same size, but the wing design opens much wider.



### SHARP TUNE-UP



**Make a point.** Latta uses a belt sander and a light touch to sharpen the points on an old pair of dividers. Equipped with a nice set of fine points, your dividers can easily be placed right on the mark, making very fine divots for exact measurements.

## Dividers speed up layout



### FAST, ACCURATE DOVETAILS

Mark the first pin and set the dividers to the approximate width of a pin plus a tail. The pin mark is the starting point (1). Step, or walk, the dividers across the board to the other side (2). Adjust the dividers until you land exactly at the edge (3). Start back at the first edge and step it off again to lay out the other side of each tail (4). Now pencil in the lines using an angle gauge and a combination square (5), and you're ready to cut some dovetails.



and at the same time, mark each side of the pins and tails.

First, use a combination square and a pencil to mark the width for the first pin at the edge. Decide how many tails you want, and set the dividers for roughly that number of steps across (the actual distance is the width of a tail plus the width of a pin). The first divider setting is a rough estimate, so just take your best guess. Starting at your mark for the first pin, step, or walk, across the drawer side. Adjust the dividers in or out until they land exactly on the opposite edge. Mark these points with a pencil—they will become one side of each tail.

Now start again at the beginning, this time at the very edge. Step off the dividers a second time, and you should end up with an equal-sized pin at the final edge. These points will be the other side of your tails. Now you can finish laying out your dovetails, marking in the lines with a square and angle gauge.

### Nail shelf-pin holes

When drilling holes in a line, say, for shelf pins, dividers will help you get perfect spacing. Use a combination square to mark a light pencil line down the length of the piece. Set your dividers to the spacing that you need, then start the dividers at the top and step off the part, leaving precise divots with each step.

The divots made by the divider points also make it easy to get the drill bit started without wandering.

### Compare sides of a drawer opening

To compare the sizes of two things, most of us measure the two and then look at the measurements. A better way is to set a pair of dividers to



## SHELF-PIN HOLES WITHOUT A JIG



**Line 'em up.** Use a combination square to locate the first hole. With the dividers set at your desired spacing, step off the length of the board. Pushing the tips into the wood gives your drill a solid starting point.



one side of the opening, and then move it to the other side. The differences will become immediately obvious. This is a quick way to make sure things are lined up during a glue-up, and makes it easy to figure out if things are not coming together square.

### Divide circles, too

It's very convenient to divide a circle into six or three even segments, because walking a set of dividers set to the radius (the distance from the center to the edge) will break the circumference into six equal parts. This is great for laying out the legs of a tripod candlestand table, or any six-sided decorations, like the line-and-berry inlay on a spice chest. To do this, set the dividers to the radius of the circle and step the dividers around it. When you get back to your starting point, you should have six even sections, having landed exactly on your first mark.

This works for other configurations, too. Just estimate your settings to get started, and adjust the dividers each time until it's just right. Try this method out, and you'll find that it takes only a few adjustments to divide a circle into any number of segments.

Worried about making too many marks on the final piece? To keep the small dimples from showing up again when the finish is applied, first practice on a piece of scrap to get the right settings, and then lay out the final piece. □

*Contributing editor Steve Latta teaches woodworking at Thaddeus Stevens College of Technology in Lancaster, Pa.*

## SIZE A DRAWER OPENING



**Compare the two sides.** Set the dividers to one side of the opening. Now check the other side of the opening. It's a quick way to make sure things are correct just before, or during, a glue-up.



## DIVIDE ANY CIRCLE

**Simply step it off.** Dividers are the fastest way to divide a circle evenly, and are perfect for stringing details, like the line-and-berry inlay on this spice chest.