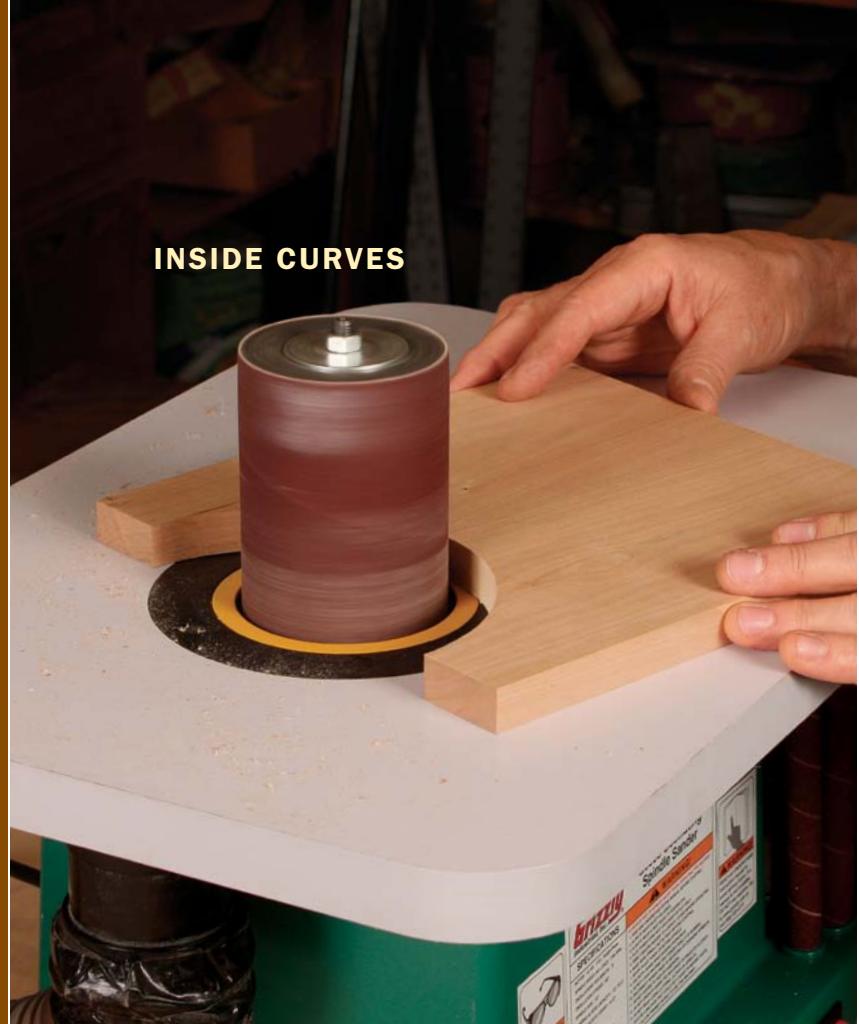


# Why You Need a Benchtop Sander

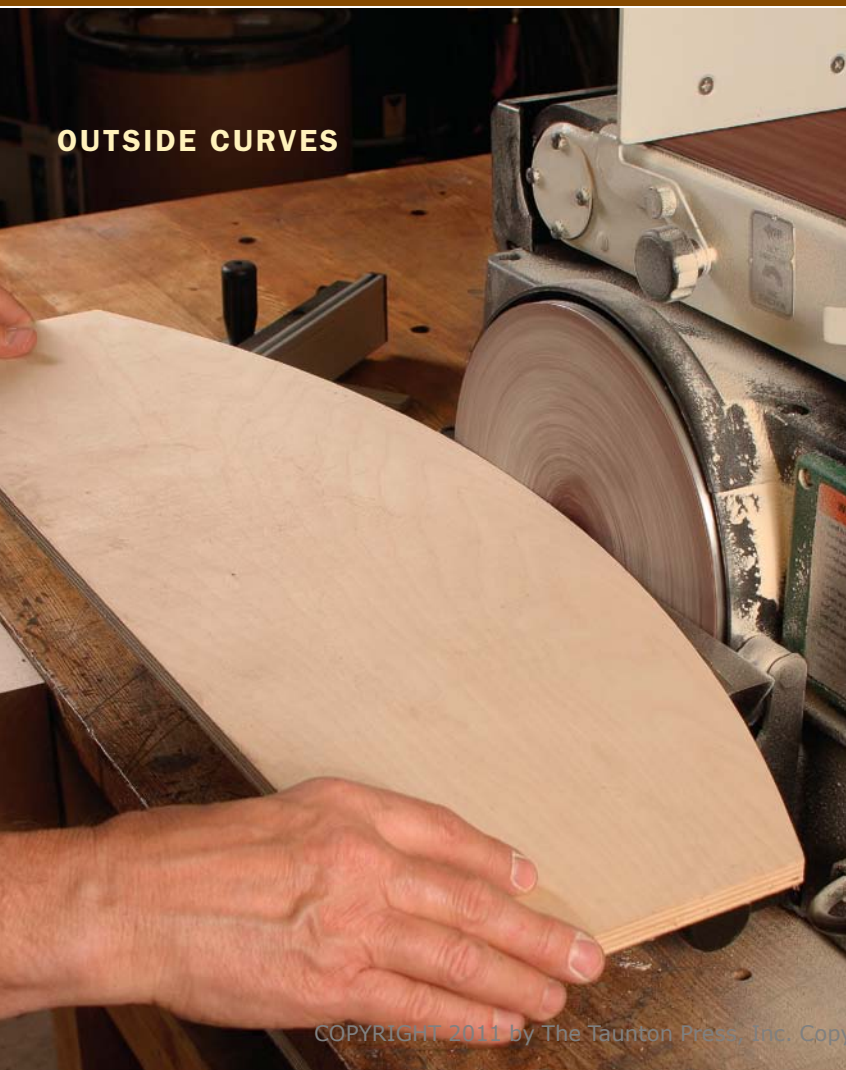
They tackle trimming  
and smoothing quicker than  
hand tools do—with no  
sharpening required

BY ROLAND JOHNSON

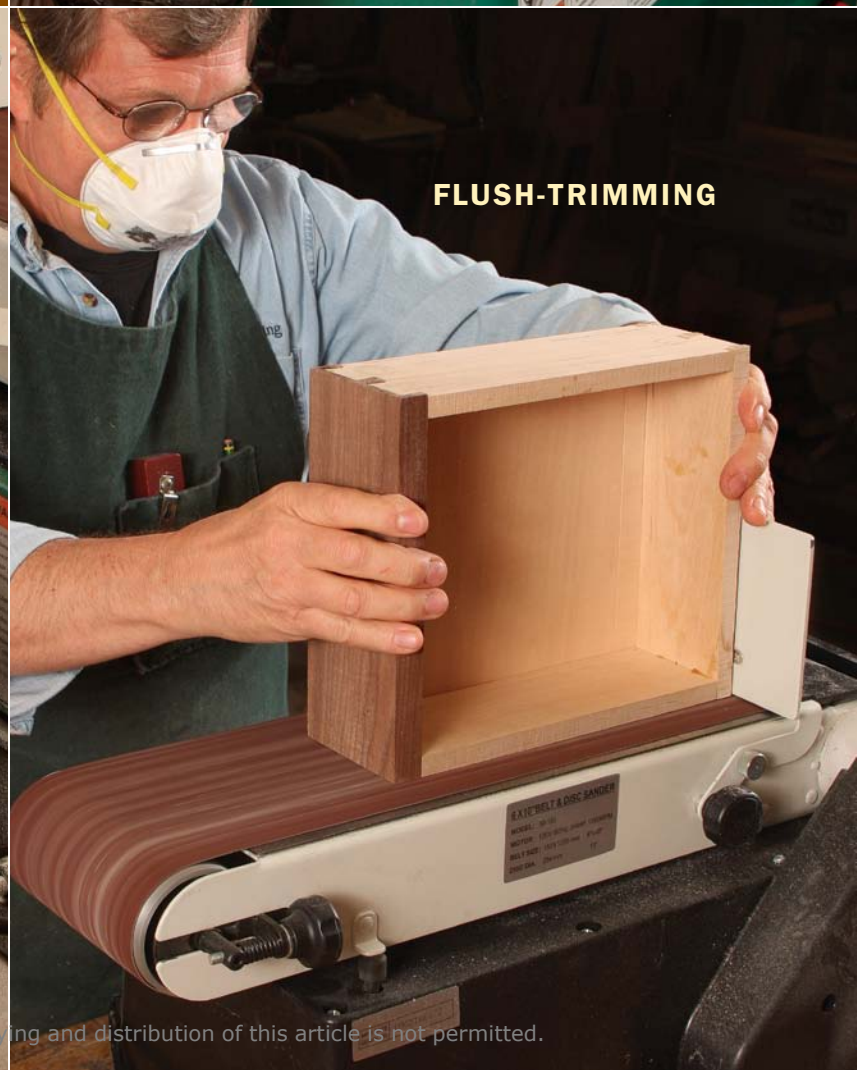
**INSIDE CURVES**



**OUTSIDE CURVES**



**FLUSH-TRIMMING**





A benchtop sander will never be the star of the shop, but there are a handful of jobs that it handles better than any other tool. I'll reveal a few of these tasks here, but once you have a disk, belt, or spindle sander, you'll discover many more odd jobs for it—and soon you'll wonder how you got along without one or more of these units. What's more, many of these versatile machines can be had for around \$100 to \$450.

There are a lot of benchtop sanding machines out there, but I'll focus on the types best suited to furniture makers: disk sanders, combination belt-disk sanders, and oscillating spindle sanders. These tools will have even more appeal to those who favor power tools over hand tools, as the sanders can step in to do jobs normally reserved for rasps, files, spokeshaves, and handplanes.

But remember that these machines are not the last word on surface prep. They all are very aggressive, and any surface that will be visible will require some final hand-sanding to perfect it. Also, these sanders require a light touch, or you risk sanding over the line—quickly and deeply.

Last, these sanders spew lots of fine dust, even when connected to a dust collector or shop vacuum. That means you need to wear a high-quality dust mask when using these machines.

Now let's take a look at the most basic of the bunch, disk sanders.

### Disk sanders: Useful, but limited

Most disk sanders come with a 12-in.-dia. disk, a table to support the workpiece, and a miter gauge. This sander is very adept at shaping or trimming end grain, like when you need to take a bit off the end of a tenon—a job normally reserved for a sharp handplane—or when you need to quickly chamfer the ends of a tenon or dowel.

Disk sanders also can be used to clean up and fair convex curves on templates to create a perfect path for a router to follow. The downward sanding motion is your friend here, making it easy to control the workpiece. You also can use this machine to smooth bandsawn convex curves on actual furniture parts, but because the disk cuts across the workpiece, you'll have obvious scratch marks to remove with a hand-sanding block.

The disk sander has its limits. It cannot sand inside a concave curve and it's not great for sanding long, straight edges. The big problem there is that the disk cuts in two directions along the support table, up off the table on the right side and down on the left, making it hard to control the workpiece and to use the full face of the disk. Also, very small parts can be tough to shape, because they can be grabbed and pulled into the gap between



## Disk sander ROUGH AND READY

Disk sanders are capable of trimming parts and smoothing templates in a jiffy. But their PSA-backed disks can be tough to remove, so it's best to keep a coarse grit on the disk and dedicate the tool to aggressive jobs.



**Quick trim.** A disk sander trims tenons quickly. Use the miter gauge to keep the workpiece square to the disk.



**Different approach.** With the miter gauge angled, you can chamfer dowels and through-tenons. Just use a light touch.

### GETTING UNSTUCK



The PSA-backed sanding disks often require a fair amount of scraping to get the paper off, and leave a bit of residue behind. You can remove any adhesive residue with a solvent, such as naphtha.





## Belt sander WHO NEEDS A HANDPLANE?

With a combination belt-disk machine, you can keep an aggressive grit on the disk and use the belt sander for jobs that require you to sand through various grits, from 60 up to 220. With this tool you can handle almost any flush-trimming job, and more.



**Some come with a disk.** Along with a belt sander, a combination machine includes a disk for sanding curved templates and for trimming parts (see p. 41).



the table and disk. And disk changes can be a bear, because they all use PSA (pressure sensitive adhesive)-backed disks, which can be tough to remove. The disks also cannot be reused.

If you're interested in this type of machine, look for a model that has a 12-in. disk and a large table to support different-size workpieces. Expect to spend anywhere from \$150 to nearly \$400. A more economical and versatile approach may be to buy a combination belt-disk sander.

### Belt-disk sanders: A versatile combination

Many woodworkers come up with creative ways to hold their handheld belt sander so they can take a workpiece to the belt. It's much more convenient to use a benchtop belt sander, and a combination belt-disk sander gives you two machines for the price of one. These sanders typically have either 6-in.- or 10-in.-dia. disks, with 4-in. by 36-in. or 6-in. by 48-in. belts, respectively, and come in a wide range of prices (from about \$150 to more than \$500), depending on the size of the belt and disk.

The belt increases the tool's versatility. It will flush-trim door and drawer parts quickly. It's also handy for boxmakers, making it easy to trim miter splines or dovetails flush. And it will chamfer dowels, refine door and drawer pulls, and facet the end of through-tenons in a flash. It can be used on outside, convex curves of course, but it can also reach into concave curves (see photos, opposite page). Be careful with small parts, as they can easily be grabbed and pulled into the gap between the belt and the table.

Although the disks are PSA-backed and harder to remove, the belts are easily changed, so it's easy to sand from rough to finer grits. Keep an aggressive grit on the disk and use the belt sander when you need to sand through various grits, from 60 up to 220. Again, these machines are

### BELT CHANGES ARE A SNAP

You flip a tension lever to release the belt. Once you have the new belt on, re-tension the lever and then adjust the belt tracking so it remains centered.







**Down or up.** On many sanders, the belt can be used either horizontally or vertically. The horizontal position (left) is great for sanding long edges, such as for trimming door parts flush. For this job, use the support table to keep the piece square to the platen. Orient the belt vertically, and use the support table to sand small workpieces, like boxes (above).



**TIP**

With the belt at an angle, you can use the nose as a spindle sander to smooth inside curves.

## Narrow-belt sanders are special-purpose tools



You can buy belt sanders with a narrow belt (1 in. to 2 in.) as stand-alone tools or as combination belt-disk sanders. These tools offer less-robust sanding options for furniture makers, but they can be handy in the shop for sanding complex scrollsawn profiles (without the platen). With the appropriate-grit belt, these machines also

can be used to sharpen turning tools, such as gouges, and for rough grinding tasks.

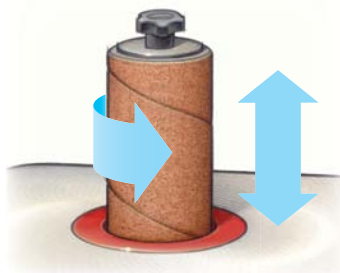




## Spindle sander INSIDE CURVES AND MORE



Oscillating spindle sanders offer plenty of versatility in a small package. This is the best sander for inside curves and, if you add a shopmade fence, it works like a belt sander for straight runs.



aggressive, so use a light touch. And you'll still need to remove the sanding marks by hand, using finer grits.

The 6-in. belt width provides a 6-in. by 16-in. sanding surface at the platen; the sanding surface for the 4-in. belt is about 4 in. by 12 in. at the platen. Among these combination machines, I'd recommend buying the bigger belt and disk, which offers more sanding area and typically has larger tables and more mass, which helps reduce vibration.

### Spindle sanders: Not just for curves

My first spindle sander was a drum-sanding kit that chucked into my drill press. Like the inverted belt-sander setup men-

**TIP**

You can extend the life of abrasives and get better performance with any of the sanders in this article by using a sanding-belt cleaning stick (\$5 to \$11).



**Match the spindle to the curve.** Use larger spindles for smoother results on wide curves, like that on the base of this Shaker step stool (above). Narrower spindles fit tighter curves, like the finger pull on this shop drawer (right).



### NO-FUSS SLEEVE CHANGES



To change grits, loosen the nut and washer on top of the drum and remove the old sleeve. Then just slip on a new one and give the nut a twist, which expands the drum so it grabs the inside of the sleeve.







**Outside curves, too.** To avoid a lumpy surface on outside curves, pass the work across the spindle quickly with light pressure and long strokes, and have a definite line to sand to. With a tilting table, you can handle beveled edges, too.



**Jig for straight edges.** To smooth straight edges, clamp a shop-made fence, at least 1½ in. thick, around the spindle. The sanding drum should protrude only enough to contact the workpiece. Any farther, and you can get a lumpy surface.

tioned before, this worked fine in a pinch. But there's no easy way to collect dust, and because the drum is stationary, it's hard to use the entire abrasive without tedious readjustments of the drill-press table. A better option is to buy a dedicated oscillating spindle sander, which ranges in price from around \$130 to \$450.

Of all the power sanders in my shop, the oscillating spindle sander sees the most use. It is the best tool for smoothing the concave areas on router templates, and you can always find another way to smooth outside curves: block plane, spokeshave, or sanding block. I also use this sander to smooth ornamental brackets, pulls, bandsawn boxes, and all sorts of curved parts. The oscillating action helps keep the abrasive cool and clean and allows use of a larger area of the drum, extending the life of the abrasive. It also makes for smoother results, with no deep, continuous scratch marks.

The tool isn't just for curves, either. You can fit a shopmade fence around the spindle and sand straight edges, too, just as you would use a belt sander.

The drums are available in a wide variety of diameters, typically from ¼ in. to 2 in., depending on the machine you buy. Swapping out the drums is easy, allowing you to match the drum size to the curve. Also, changing abrasive sleeves is a breeze, so you can sand through from rough to finer grits. But, as with all the other benchtop sanders mentioned here, you'll need to fine-tune the surface with hand-sanding to remove deep scratches before finishing. □

Roland Johnson is a contributing editor.

## Only sander you need?

The Ridgid benchtop sander is both spindle sander and belt sander. It oscillates in both modes, which makes sanding more efficient and lets you use almost the entire width of the paper. It's available at The Home Depot for \$200, making it a great value.



**Two ways to sand.** The Ridgid works well both as a belt sander and as a spindle sander. The oscillating action prevents deep, continuous scratches on a workpiece, which makes the final hand-sanding process less labor-intensive.

### QUICK CHANGEOVER, TOO



Switching from belt to spindle mode, or vice versa, takes less than a minute. The sanding drums fit over the spindle shaft and are held in place with a thumbscrew.