

Metabo TS 250 Table Saw

Up until about 10 years ago, it wasn't practical to rip full sheets of plywood on portable table saws, because most models couldn't rip more than 12 or 13 inches wide. That changed in 1997, when DeWalt introduced the DW744, the first model with telescoping fence rails. This design allowed for rips just over 24 inches wide — on a saw compact enough to be easily hauled and stored. Today, almost every company that makes portable table saws makes one with extendable rails.

Last year, at a trade show, I ran across a display of Metabo tools that included some unfamiliar benchtop models. Among them was the TS 250, a 10-inch portable table saw. Metabo is well-known for making handheld power tools, but this was the first time I'd seen its label on something bigger. Having already tested most of the other portable saws on the market ("10-Inch Portable Table Saws," 8/03), I decided to try out Metabo's.

The TS 250 — which was designed by Elektra Beckum, a German firm owned by Metabo — has a 15-amp motor, a 10-inch blade, and fence rails that extend to the right for rips up to 24 $\frac{1}{4}$ inches wide. The motor is equipped with soft-start circuitry and runs smoothly; it's powerful enough to cut anything that would be reasonable to cut on a portable saw. I used it to rip plywood, 5/4 maple, and 2-by framing stock. In terms of power, it performed these tasks as well as any portable model I've used.



Setting Wide Rips

Like the saws from Bosch and Ridgid, the Metabo has a split table; when the rails are extended, a 6-inch section of table (the extension) slides out with the fence to support the outboard edge of the stock.

There are two ways to adjust the width of rip on the Metabo. For rips up to 15 inches wide, you release the fence lock and move the fence sideways on the table, same as you would with any table saw. For wider rips, you clamp the fence at the 15-inch mark, loosen a lever under the table, and slide the table extension away from the blade. Bosch uses a similar approach to set wide rips on its 4000K, and on that saw the system works very well.

Metabo TS 250 Specs

Saw blade: 10", 5/8" bore

No-load speed: 3,950 rpm

Max. depth at 90 and 45 degrees:
3 $\frac{1}{8}$ " and 2 $\frac{1}{2}$ "

Maximum rip: 24 $\frac{1}{4}$ "

Bevel: -1.5 degrees to 46.5 degrees

Motor: 15 amps

Weight without stand: 70 pounds

Street price with/without stand:
\$549/\$499

Metabo

800/638-2264

www.metabo-usa.com



Toolbox | Metabo TS 250 Table Saw

It doesn't work as well on the Metabo, because there is enough slop in the rails that they can get cocked and stick slightly as they slide. You can remedy this by jiggling the extension, but that makes it harder to precisely adjust the rip.

Using the Rip Scale

Like all saws of this type, a scale on the front fence rail allows you to set rips without using a tape. Because of the telescoping rails, you have to use two different indicators (pointers) and a scale that reads in two directions. The scale reads 16 to 24 inches going left from the blade, and 0 to 15 inches going right.

The first pointer, which is on the fence, lands over the right-hand portion of the scale. It works like the pointer on a conventional table saw — as you slide the fence to the right, the numbers on the scale get higher.

The second pointer is screwed to a recess in the table. It lands on the left-hand portion of the scale and is used for rips more than 15 inches wide. When the table extension is all the way in, the pointer will be on the zero mark. If you slide the extension an inch to the right, the pointer will be on the 16-inch mark, because the fence — which is clamped on the 15-inch mark — just got an inch farther away from the blade.

The last full number on the left-hand scale is 24 inches; for the pointer to land on it, you have to slide the extension 9 inches to the right. The maximum rip is $24\frac{1}{4}$ inches.

It's easy to see which mark the indicator on the fence is pointing to, because it's directly over the scale. Since the indicator on the table doesn't lap onto the scale, it's harder to tell with wider rips (without measuring) if the fence is set exactly where you want it.

Graduations. The scales are graduated in $\frac{1}{16}$ -inch increments. Metabo got this

part right; the spacing is tight enough for precision cutting but not so tight that the increments are impossible to see.

However, the company got the next part wrong: Although the marks at full and half-inch increments are different lengths, the ones in between are the same length. This makes the scales much harder to read than they should be.

It's not a problem if you're making a 3-inch or $3\frac{1}{2}$ -inch rip; but if you want to make a $3\frac{5}{16}$ -inch rip, you have to count five graduations up from 3 inches.

The scales would be easier to read if the graduations varied in length, as they do on tape measures.

Other Features

The switch, the hand-wheel for setting blade height, and the lever for locking bevel settings are all large and easy to operate. A release lever on the front of the saw allows you to override the bevel stops at 0 and 45 degrees and go an extra 1.5

The telescoping rails on the TS 250 allow rips up to $24\frac{1}{4}$ inches wide. Part of the table slides out with the fence to support the outboard edge of the stock.

degrees in either direction. This is useful if you want to overcut a joint.

Bevel direction. Something else I don't like about the saw is that the blade tilts right, toward the fence. (On most saws, the blade tilts left.) This configuration makes it more likely that the captured piece will get burned by the blade or come flying back at you if you aren't using the blade guard.



The indicator on the fence is for rips up to 15 inches wide; since it lies directly over the scale, it's easy to read. The indicator on the table is for rips more than 15 inches wide; it's harder to read because it stops short of the scale.



Unlike the blades on most portable saws, the one on the TS 250 tilts toward the fence, increasing the likelihood that the captured piece will get burned by the blade or fly back at operators who don't use the guard.

Blade guard. The guard on the Metabo works as well as any, but it's not easy to remove or install, so it would be a rare carpenter who actually used it. To install it, you have to remove five screws from the throat plate, loosen an Allen key, position the guard, tighten the Allen key, and then reinstall the throat plate.

Nice details. Some of the small details on the tool are pretty nice — the well-made T-slot aluminum miter-gauge that stores on the saw's base, for instance. The saw also provides a storage place for an extra blade and wrenches and a place to wrap and clip

the cord.

The blade housing does a good job directing chips out the dust-collection port on the back of the machine. The saw I tested came with an optional stand that folds flat for transport and is very sturdy.

The Bottom Line

The TS 250 is well-made but not especially well-designed. The scales are hard to read, the blade tilts toward the fence, and the fence rails don't slide as smoothly as they do on competing models.

If this saw had come out in 1997 and was the first model with telescoping rails, I probably would have bought one. I wouldn't buy one now, though — not when I can get equally well-made but better-designed models from DeWalt, Bosch, and Porter-Cable. — *David Frane*

Senclamps: The Faster Fasteners

by Paul Allen

In our never-ending quest to find the latest and greatest tools, we carpenters sometimes fail to recognize the value of those that have been around for a long time. Senco's Senclamp joint fasteners (800/543-4596, www.senco.com) are a good example. I first used these highly specialized fasteners — which are driven by Senco's SC1 joint fastening tool — when I worked in a cabinet shop in the early 1980s.

Close cousins of the corrugated fasteners used in furniture factories, Senclamps are driven across —

rather than through — a joint. But here the similarity ends. Unlike corrugated fasteners, Senclamps can be driven into an inside corner, an outside corner, or a flat miter or butt cut. And whereas corrugated fasteners leave large gashes in the wood, Senclamps leave small entry slots that are easy to fill. As a result, they can be used in narrow edges and where they might be seen.

The key to this versatility lies in the unique design of the Senclamps: Each fastener is slightly tapered, with gripping edges that pull the joint

together as they enter adjoining pieces.

Made from 25-gauge steel, Senclamps are $\frac{7}{16}$ inch wide at the crown. They come in $\frac{5}{16}$ -, $\frac{7}{16}$ -, and $\frac{9}{16}$ -inch lengths.

Applications

You have probably installed millwork or cabinets containing these fasteners without even knowing it. Door shops often use Senclamps to pinch the miters together on casings for prehung doors.

When I made cabinets, we used them to assemble face frames and to attach the frames to carcasses. Many car-

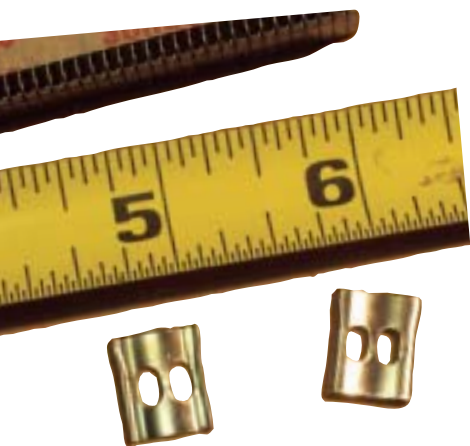


penters now perform these tasks with pocket screws. I prefer Senclamps because the strength of a pocket screw isn't necessary for these types of connections and Senclamps are easier to hide and much faster to install.

Casings. We often use Senclamps to hold both edges of mitered casing joints together and flush. The best you can do with nails is cross-nail the outside corner of the joint; nails don't hold as well as Senclamps, and there's no way you can cross-nail the inside corner. The Senclamps span the joint and are driven in from either edge, which is easy to do because the nose of the gun is designed to fit over outside corners and into inside ones.

When trimming picture-framed windows, we pre-assemble casings on the bench or floor. We apply glue to the joint, hold the pieces together, and shoot $\frac{9}{16}$ -inch Senclamps in from the outer edges of the miter. If the pieces are flat, we place them face-down on the bench and, depending on the thickness, join them from behind by spanning the joint with several $\frac{5}{16}$ - or $\frac{7}{16}$ -inch fasteners.

Outside miters. We also use Senclamps to align and fasten long outside miters, such as the joints between skirts and risers. This holds better than cross-nailing



Senclamp fasteners are designed to be driven across the face or edge of a joint (far right). Their tapered shape and gripping edges (above) pull the joint tightly together.



The SC1 gun's tip is notched at the center to fit over the outside corner of a miter joint and chamfered at the edges to fit the inside corner of a miter or butt.



The author preassembles molded casings on the bench by driving Senclamps into the edge of the miter. The first fastener goes in from the outside corner and the second from the inside.

and practically eliminates “blowout.” The entry slots are small and easy to fill on paint-grade work, and are generally no more noticeable on stain-grade work than nail holes would be.

Stair rails. Conventional handrail bolts are very strong, but using them to align the joint can be maddening. One of my favorite uses for Senclamps is to align joints prior to tightening bolts. I shoot a couple of them in from the bottom and one on each side. Although they're not strong enough to be the sole fastening method, they keep the pieces aligned while I'm tightening the bolt. The entry slots are visible, but once they're filled you'd never know they were there.

Butt joints. In cabinet and millwork shops, Senclamps are often used to assemble face frames for cabinets and wainscot paneling. Since one side is hidden — against the wall or in the cabinet — fasteners can span the back of the joint where no one will see them.

Senclamps work equally well at inside corners, so they can be used to attach face frames to cabinet carcasses from inside the box; this should be done with glue and $\frac{5}{16}$ -inch fasteners. The process is very fast, and there's no need to drive finish nails through the face of the frame.

Limitations

While Senclamp fasteners can save time and are well-suited for many applications, they do have limitations. Unlike pocket screws, they are not strong enough to hold joints together permanently unless the pieces are attached to something solid, like a cabinet or a wall.

Also, Senclamps hold much better in hardwood than in softwood and don't work well in MDF. Unless the fastener is in a concealed area, it should be driven with — rather than across — the grain, because that will make for a less visible entry slot.

The Bottom Line

I bought my SC1 gun 10 years ago and paid \$375 for it; today the tool costs about \$450. A box of 3,000 fasteners costs \$60 to \$80, depending on where you get it.

The gun itself isn't cheap — but convenience has a price. I knew I had to have this fastening system when I saw a professional stair builder using it to build a set of stairs. It's not the only tool I use to fasten joints, but it has certainly earned its place in my toolbox.

Paul Allen is an interior trim contractor in east Tennessee.



Flat casings are preassembled face-down on the bench. The fasteners aren't visible on the final installation because the author drives them across the back of the joint.



Using Senclamps to fasten long miters is faster than cross-nailing and holds better.



Enclosure. Most contractors who've used the ZipWall agree that it's an easy and effective way to cordon off a small remodeling job, but some feel the components are simply too expensive. Those of you who subscribe to the latter view will be heartened to hear that the *4 Pack Plus* — four ZipWall poles, two foam rails, four grip disks, two zippers, and a carrying case — costs \$279, about \$100 less than buying the products separately. **ZipWall**, 800/718-2255, www.zipwall.com. **Circle #16**

Particle Decelerator. Homeowners often worry about how dirt from remodeling will affect the rest of their home. Imagine how reassuring — to both clients and prospects — the sight of a *Predator 1200* would be. With its airtight cabinet, two prefilters, and true HEPA filter, this portable air scrubber cleans the air in up to 10,000 cubic feet of space. In addition to offering what one *JLC* reader described to me as “amazing filtration,” it keeps dust from spreading throughout the house by creating negative air pressure within the workspace. The Predator 1200 — with a supply of filters and a length of exhaust hose — costs about \$2,000.

Abatement Technologies, 800/634-9091, www.portableairscrubbers.com. **Circle #17**



Small Sucker. Dragging out a big shop vac for a small mess can take longer than the actual cleanup, which is why contractors who do a lot of little handyman-type jobs might want to consider getting a *DC515K*. The DustBuster-sized wet/dry vac runs off a standard 18-volt DeWalt battery pack and uses a washable fabric filter that the company claims traps 99.97 percent of particles. The device boasts a half-gallon capacity and a unique nozzle with a removable hose for getting into corners and inside cabinets. With a battery and charger, it sells for \$130.

DeWalt, 800/433-9258, www.dewalt.com. **Circle #18**



Toolbox | Gutter & Sheet-Metal Tools

Plunge-Cutter. If you're currently using aviation snips to cut holes for downspouts, check out the very cool *Gutter Outlet Punch* from Malco. The tool's base aligns with the front edge of the gutter in both "A" and "B" orientations for easy and accurate placement of holes. The punch can be used with gutters up to .032 inch thick; cutters are offered for both 2x3 and 3x4 downspouts. With either size cutter and die, the tool sells for about \$166 on the Web.

Malco, 800/328-3530, www.malcoproducts.com. **Circle #19**



Spiral Cutter for Metal. At just \$20 apiece, the *Metal Cutting XBit* promises to be a fast, easy, and inexpensive way for contractors to cut metal studs and sheet metal of up to 18-gauge thickness. The 5/32-inch solid carbide cutter fits RotoZips and other, competitive rotary saws and has a drill point for plunge cuts.

Bosch, 877/768-6947, www.rotozip.com.
Circle #20



Copper Torch Kit. Soldered copper is a great way to solve difficult flashing problems and differentiate yourself from the many tar-covered Neanderthals doing roofing. My grandfather used a pair of irons and a blowtorch to join sheet copper, but modern propane torch kits — like the ones made by Sievert — make the process much easier. The company's *ProMatic SIK2-30* consists of a torch with electronic ignition and a wind screen, along with a copper tip, a hose, a regulator, and a carrying bag. The kit lists at \$465.

Sievert, 877/639-1319, www.sievert.se/us.
Circle #21