



TOOL TEST

Cabinet Saws for the Home Shop

Compact models give you the power and accuracy of a full-size saw for less

BY ROLAND JOHNSON

It would be nice to have a full-size cabinet saw in your home shop. But there are roadblocks to purchasing one. Because they can cost more than \$3,000, it can be difficult to fit one in your tool budget. They also require a 240-volt circuit, which many of us don't have in our garage and basement shops. Finally, they can take up a lot of space.

Not too long ago, the only alternative to a full-size cabinet saw was a contractor saw, but they are fussy to adjust, have poor dust collection, and can be underpowered for furniture making. Now there's a new style of saw that will fit the bill for most

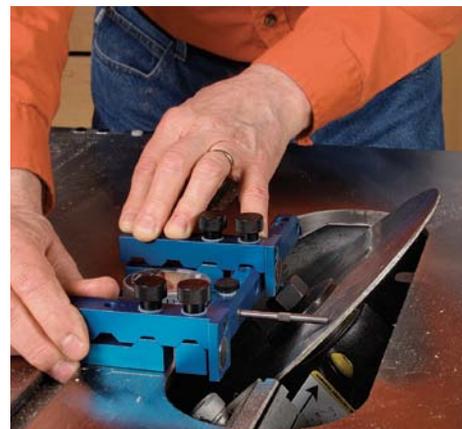
home shops. These compact saws give you all of the benefits of a cabinet saw—power, good dust collection, vibration-dampening mass, and easy adjustments—for less money. And they all can run on a 110-volt circuit.

Fine Woodworking asked me to compare these saws head to head. I checked them for accuracy, including arbor flange run-out, and whether the blade was parallel to the miter slot. I also looked at the sturdiness and accuracy of the rip fence, the saw's ability to hold settings for tilt and elevation, power switch placement, and the ease of changing blades. To gauge their

TESTED FOR ACCURACY, POWER, AND CONVENIENCE



No problem with runout. Johnson checked every saw for runout at the arbor flange (where it really matters) and found that none of the saws had any.



Parallelism at 45° and 90° was impressive, too. With the blade at each angle, most of the saws were close enough to parallel that cuts were not affected.



Plenty of muscle for furniture making. None of the saws had trouble ripping 8/4 hard maple, and all have enough power to cut just about anything you'd need to make furniture.

power, I ripped 8/4 hard maple and timed each rip. I repeated the process numerous times for each saw, using both a standard-kerf and a thin-kerf blade.

After the tests, it was clear that the Sawstop PCS175 was the Best Overall. It was dead accurate, has a top-quality fit and finish, is the most user-friendly saw, and has SawStop's flesh-sensing technology and blade brake. The Best Value among the saws is the Grizzly G0715P. It's heavy, accurate, has good power, and costs just \$825.

Roland Johnson is a contributing editor.



Safety features that are easy to use. The biggest recent improvement in tablesaws is the quality and convenience of the riving knife and blade guards that come with them. All of the saws have good knives and guards.



“It’s excellent. Throw in its safety device, and it’s tremendous.”

SAWSTOP PCS175

Price: \$2,299

Motor: 1¾ hp, 110v

Table size: 27 in. by 44 in.

Rip capacity: 30 in.

Arbor-flange runout: 0.000 in.

Blade-to-slot parallelism at 0°: 0.000 in.
at 45°: 0.001 in.

Warranty: 2 years



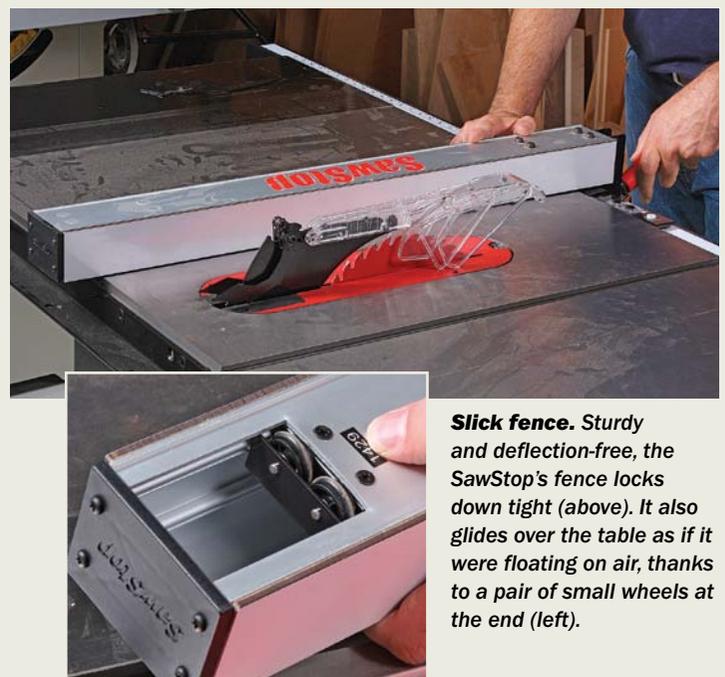
Even without its well-known blade brake, the SawStop is a great saw. It has very good ripping power. The dust collection was good, especially considering that the blade is enclosed only on one side to make room for the blade-brake cartridge. A 4-in. hose connects the blade shroud to a port in the cabinet. Everything else about the PCS175 is smooth. The fence locked tightly and glided like skates on ice, at least in part due to two small wheels on the underside of the fence at the end opposite the handle. You can move the fence with one finger. The tilt and elevation wheels had no backlash, and turned beautifully.

Switching from the riving knife to the blade guard took no time at all. And the guard is very good. There are three independent,

but connected, leaves on each side of the blade. Their light weight made it easy to push thin or light stock under the guard, and the leaves fall sequentially back into position. There is no locking device for holding the leaves off the table, but it was easy to lift the leaves manually above the fence for ripping narrow stock. When making a replacement insert plate, you have to do some extra work to make way for the safety gear, a small inconvenience that doesn't outweigh the safety aspect. Overall, the SawStop PCS175 is excellent. Throw in its safety device, and it's tremendous.



Quick exchange from riving knife to guard. A big, easy-to-reach lever is all you need to free them on the SawStop.



Slick fence. Sturdy and deflection-free, the SawStop's fence locks down tight (above). It also glides over the table as if it were floating on air, thanks to a pair of small wheels at the end (left).



“You get a lot of saw for well under \$1,000.”

GRIZZLY G0715P

Price: \$825

Motor: 2 hp, 220v

Table size: 27 in. by 40 in.

Rip capacity: 30 in.

Arbor-flange runout: 0.000 in.

Blade-to-slot parallelism at 0°: 0.009 in.
at 45°: 0.004 in.

Warranty: 1 year



With the Grizzly you get a lot of saw for well under \$1,000. Powered by a 2-hp motor, the G0715P has plenty of muscle and did very well in the ripping test. (It comes wired for 220 volts, but can be rewired for 110.) The T-square style fence is stout and locked down square with no deflection. Even though there is no blade shroud, dust collection was still quite good, and a big hinged door over the motor makes it easy to vacuum out any dust that falls to the bottom of the cabinet.

The release mechanism for the riving knife and blade guard was easily the most convenient in the test. You don't have to remove

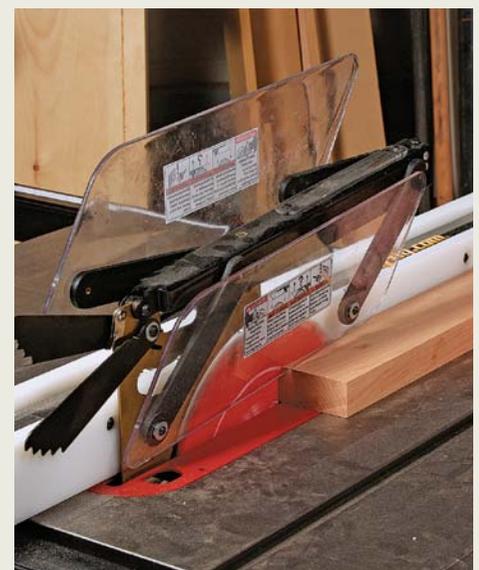
the throat plate to switch between the knife and guard. Just slide a thumbwheel back and to the side, and the riving knife is released. Slide in the guard, push the thumbwheel to the side and forward, and it locks the knife into place. Wonderful! The blade guard is good, with a leaf on each side of the blade. The leaves pivot up as wood is fed under them, and rise independently so that you can raise just one for thin rips. The arbor lock worked well and was easy to access, making single-wrench blade changes convenient. A minor downside is that the throat plate is very thin, which complicates making a zero-clearance insert for it.



Power switch is hard to miss. The Grizzly's switch is easy to find while you keep your eyes on the blade and workpiece, making for safer transitions at the start and end of a cut.



Awesome riving knife removal. There's no need to remove the throat plate, and all you have to do is move a small thumbwheel to free the knife or guard.



Guard works for thin rips. One side can be rotated up above the fence, while the other side stays down to cover the blade.



“The only fence in the test that comes with a digital readout.”

BAILEIGH TS-1044H

Price: \$1,595

Motor: 1¾ hp, 110v

Table size: 27 in. by 44 in.

Rip capacity: 36 in.

Arbor-flange runout: 0.000 in.

Blade-to-slot parallelism at 0°: 0.006 in.
at 45°: 0.026 in.

Warranty: 1 year

Cabinet saws are heavy and difficult to move by yourself, which is something you might need to do in a home shop that doubles as a garage. Baileigh addressed the problem by mounting four wheels inside the TS-1044H’s cabinet. They allow you to roll the saw forward and back, but not side to side. To make turns, you can lift up on the fence rails and rotate the saw. When you don’t need the mobility, the wheels lock with thumbscrews.

The saw’s fence is T-square style and worked very well. It’s the only fence in the test that comes with a digital readout that displays the distance between the fence and blade down to

thousandths of an inch. It’s easy to zero out when you change blades and I found it to be accurate. Dust collection was fair.

The Baileigh did very well in the ripping test, but its miter slot was significantly out of parallel to the blade with the blade tilted to 45°. Fortunately, the trunnions are mounted to the cabinet, which makes it easy to fix. The power switch is very low on the cabinet, making it hard to reach with your hand or knee. Also, the riving knife and blade guard lock in place with the spin of a star knob. It’s not difficult, but it is less convenient than the locking mechanisms on the Grizzly, SawStop, and Powermatic saws.



Digital fence readout. The distance from the blade to the fence is displayed to a thousandth of an inch, and it’s accurate.



Built-in mobile base. Four wheels in the cabinet allow you to move the saw forward and back. The wheels lock with a few turns of a thumbwheel.



Long reach for the power switch. Located beneath the height adjustment wheel, the switch requires you to lean over too far.



“Powered through the ripping test better than any of the other saws.”

GENERAL INTL. 50-200R M1

Price: \$1,200

Motor: 2 hp, 230v

Table size: 20³/₁₆ in. by 44³/₁₆ in.

Rip capacity: 30 in.

Arbor-flange runout: 0.000 in.

Blade-to-slot parallelism at 0°: 0.001 in.
at 45°: 0.012 in.

Warranty: Limited lifetime

There's a 2-hp motor inside the cabinet of the 50-200R M1, and it powered the saw through the ripping test better than any of the other saws. It comes wired for 230 volts, but can be rewired for 115. Another highlight of the saw was how easy it was to switch between the riving knife and blade guard. Just flip a lever and pull up. Unfortunately, when the lever is in the locked position you cannot take a blade off the arbor, so you have to flip the lever up whenever you change blades. The arbor lock also made blade changes difficult because it requires you to push a small pin into a hole in the arbor. The pin barely fits into the hole and depressing the plunger for the pin wasn't easy.

Large handwheels made adjusting the height and tilt of the blade smooth and easy. The power switch is mounted to the front fence rail and made it a breeze to turn the saw on and off. The off paddle is so big that you can easily push it in with your thigh, a good thing when you need both hands to hold a workpiece steady on the table. Dust collection was good, too. There's a 4-in. port on the outside of the cabinet. It splits inside, with a 2-in. hose running up to the blade shroud, and the other half open to suck in anything that falls to the cabinet bottom.



Big wheels and paddle switch. Adjusting the blade's height and tilt were quick and effortless on the General, and there was plenty of clearance for your hand as you spun the wheel. The stop paddle is big and easy to find with your hand or leg.



Tricky arbor lock. Located between the blade and throat opening—a tight squeeze for most hands—it took a fair amount of force to press the locking pin into a hole in the arbor.



“Plenty of power, and the fence slid easily and locked securely.”

LAGUNA FUSION

Price: \$1,300

Motor: 1¾ hp, 110v

Table size: 27 in. by 44 in.

Rip capacity: 36 in.

Arbor-flange runout: 0.000 in.

Blade-to-slot parallelism at 0°: 0.020 in.
at 45°: 0.019 in.

Warranty: 1 year

If you have a garage shop that doubles as a place to park your cars, then the Fusion’s built-in mobile base will come in handy. You can move the saw with ease and store it neatly against a wall when not in use. The saw has two casters. Pick up the fence rails like a wheelbarrow and the saw is ready to roll into action or back into storage. Thumbscrews lock the wheels so that it doesn’t roll during use.

The motor provides plenty of power, and the T-square-style fence slid easily, locked securely, and resisted deflection. The magnifying curser makes the fence’s scale easy to read. The

power switch attaches to the front fence rail with two T-bolts, and can be positioned anywhere along the fence that’s convenient, so you can get it in the exact right place for easy and safe use.

Although there was no arbor flange runout, the miter slot was significantly out of parallel to the blade at both 90° and 45°. Because the trunnions are mounted to the cabinet, it is an easy fix. Although it’s not exactly difficult to switch between the riving knife and blade guard (just spin a star knob a few times), the process took longer compared with the Grizzly, SawStop, and Powermatic. Dust collection was fair.

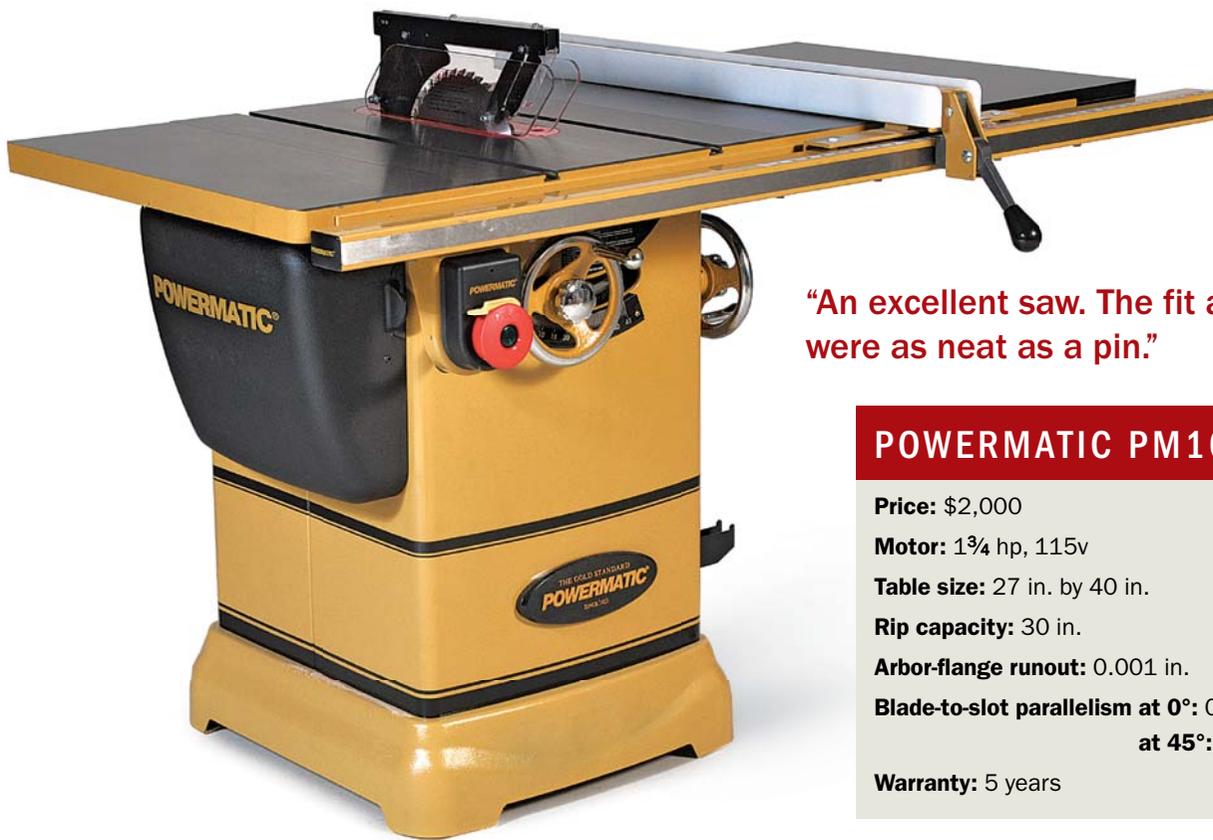
Lift and roll. The novel design of the Laguna’s mobile base (it works like a wheelbarrow) made the saw very easy to move around the shop.



Power where you want it. The paddle switch can be positioned anywhere along the front rail, so no matter how tall you are or how long your arms are, it can always be within close reach.



Fence scale is easy to read. The large red line in the magnifying curser is perfectly sized to line up accurately with the lines on the scale.



“An excellent saw. The fit and finish were as neat as a pin.”

POWERMATIC PM1000

Price: \$2,000

Motor: 1¾ hp, 115v

Table size: 27 in. by 40 in.

Rip capacity: 30 in.

Arbor-flange runout: 0.001 in.

Blade-to-slot parallelism at 0°: 0.000 in.
at 45°: 0.002 in.

Warranty: 5 years

This is an excellent saw. It seems to me like a slightly smaller, but no less impressive, version of the PM2000, a cabinet saw that I've used in my shop for the last decade. The fit and finish were as neat as a pin. Equipped with a 1¾-hp motor, the PM1000 did very well in the ripping test. It's massive, too, weighed down by big cast-iron trunnions and a stout motor and arbor assembly. The T-square-style fence was solid, had the least amount of deflection, and was simply bigger and beefier than the other fences.

The riving knife and blade guard are locked in place by a cam clamp, making switches from one to the other quick and painless. There is a single leaf on each side of the blade guard, and they operate independently, so it's no problem to raise one above the fence for thin rips. A detent holds the leaf up. Blade changes are a breeze, too, thanks to an easy-to-use plunge lock on the arbor. The power switch is another great convenience, as it's perfectly positioned at hip height and easy to find with your hand or hip. Dust collection was good, too.

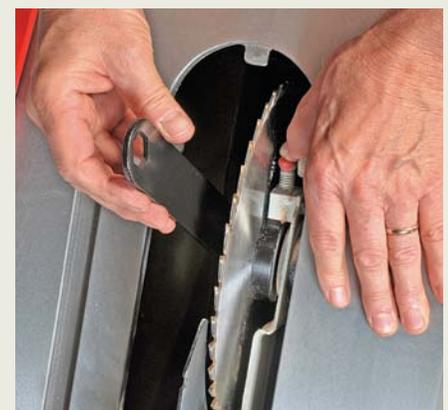
As good as the PM1000 is, it's a microscopically close second to the SawStop, only because it doesn't have a safety system that's equal to that on the SawStop.



Adjustment wheels roll easily. A few fingers on the knob is all it takes to spin the height and tilt wheels. The action is smooth with no lash in the gears.



Cam lever simplifies riving knife. The lever is within easy reach and can be opened and closed with just two fingers.



A great arbor lock. There's plenty of room for your thumb and it takes little effort to depress the lock.