

Selecting a Circular Saw

We turned a professional crew loose with eight of the toughest sidewinders on the market, and here's what they found out

BY JOHN SPIER



Bosch 1655



DeWalt DW359



Hitachi C7SB



Milwaukee 6390



Here on the right-hand coast, circular saws, aka sidewinders, are still the workhorses of framing crews (photo left). In my 20-odd years as a professional carpenter, I've seen circular saws change a lot, mostly for the better. There have been some fancy new features added, but what still matters most is the basics.

My crew and I had manufacturers send us their best saws, and for the past few months, we put these saws through their paces on framing, finishing and remodeling jobs. Although most of the saws performed well, we quickly developed some preferences. I soon discovered that I had to leave certain saws in the shop to make sure the crew gave the others a fair shake.

Rules of the game

To limit the number of saws, we asked only for professional-level 7¹/₄-in. right-hand blade saws without brakes (sidebar p. 57). In the end, we looked at two saws from Makita (including a left-handed model, sidebar p. 58), and one saw each from Bosch, DeWalt, Hitachi, Porter-Cable, Milwaukee and Sears Craftsman. Here are the criteria we used to evaluate the saws.

SPEED AND POWER. All these saws are in the 13-amp to 15-amp range and run between 5000 rpm and 6000 rpm. With a sharp blade that suits the material being cut, every one of these saws has plenty of speed and power to stand up to the rigors of job-site framing.

CUTTING CAPACITY. Manufacturers have learned how to maximize the potential of a 7¹/₄-in. sawblade. All the saws tested cut close to a depth of 2¹/₂ in. at 90° and 1³/₄ in. at 45°.

DEPTH ADJUSTMENT. Professional framers need to be able to adjust blade depth quickly with a minimum of hand movement. Depth scales are helpful, but only if they're easy to see and read. Depth-adjustment levers were also mounted either to the right or to the left of the saw handle, which didn't seem to matter.

SETTING BEVELS. Just as with depth adjustment, setting bevels should be easy. Lever releases work better than knobs, especially here in the colder climes where we wear gloves for about four months every year. The ability to

cut beyond 45° is helpful, but an exact adjustable stop for 90° is more important.

TABLE CONSTRUCTION. The biggest problem I've had with circular saws over the years is bent or misaligned tables. A saw with a damaged table will make rough cuts, will not cut straight and will not adjust smoothly or accurately. The best saw tables are made of a sturdy alloy with reinforcing ribs, and they should be securely fastened to the saw body.

BLADE GUARDS. The blade guard on a circular saw needs to swing smoothly out of the way no matter what angle is being cut. It also needs to drop quickly back into place to protect you and your work. The guard needs a good long handle for manual retraction, and it needs to be strong because it's what the saw rests on most of the time.

WRENCH AND SPINDLE LOCK. A dedicated blade-changing wrench that stays with the saw and that is easy to use is a must. Once the adjustable wrench or locking pliers are used for blade-changing, the blade bolt is doomed. The spindle lock should be located so that you can lock the blade, retract the blade guard and hold the saw with one hand while changing the blade with the other.

COMFORT AND ERGONOMICS. As subjective as it may sound, my crew, both male and female ranging in height and build from 5 ft. 3 in. to 6 ft. 3 in., and ranging from two years to 20 years in experience, found little to disagree on when comparing the comfort level of these saws. And for a tool that spends a lot of time in your hands every day, ease of use is a top priority.

Ergonomic concerns start with a main handle that's balanced, comfortable and big enough to accommodate a gloved hand. The front handle should be far enough forward to provide some leverage. The trigger should be easy to reach with either of the first two fingers. The adjustment levers should also be easy to reach.

The line of sight to the cutting point of the blade and to the guide notches in the table needs to be clear. The sawdust and chip ejection should direct debris away from the face, and the exhaust airflow should keep the cut-line clear.



Makita 5037NBK



Makita 5007NHN



Porter-Cable 347



Craftsman 27516

Bosch 1655

(877) 267-2499

www.boschtools.com



Street price	\$135
Speed/power	5500 rpms/15 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Lever/50° maximum/stop at 45°
Table construction	Aluminum plate, light reinforcement
Weight	11.75 lb.
Comments	Good all-around saw, heavy but comfortable

Bosch's entry is a sturdy, well-made saw that is comfortable to use. The bevel adjustment has a stop at 45°, with a release lever that allows adjustment up to 50° (top photo). The Bosch table is flat alloy with minimal reinforcing. The height adjustment has calibrations for plywood and lumber thickness (center photo), although the numbers are small and hard to read. This saw is equipped with an auxiliary lever for retracting the blade guard, a nice feature for notching or for cutting steep compound angles (bottom photo).



Release lever allows for additional bevel. Bosch's bevel adjustment stops automatically at 45°. A small lever (under the thumb) allows a maximum bevel of 50°.



Eye strain from depth adjustment. The numbers for setting the depth on the Bosch saw are small and have to be viewed through the saw handle, making them difficult to use.



Get that guard out of the way. For angled cuts, a thumb-operated lever allows the blade guard on the Bosch saw to be retracted without the operator taking his hands off the saw handle.

DeWalt DW359

(800) 435-9258

www.dewalt.com



Street price	\$140
Speed/power	5500 rpms/15 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Knob/50° maximum
Table construction	Ribbed aluminum plate, very thin
Weight	10.9 lb.
Comments	Big, light, easy to use, table is a bit flimsy

DeWalt's saw was one that I had to leave at home early on to let the other saws get more use. It's comfortable, powerful and easy to use, especially for people with big hands who like big handles. The blade-guard retraction lever is long, but it takes big hands to hold the blade guard open and to depress the spindle lock while changing blades (bottom photo). I found that the bevel knob was too small and prone to creeping as it is being tightened (top photo). The table came out of the box with a slight fore and aft bend, which seemed to get worse over a month's use, although the bend didn't seem to affect the saw's cutting ability.



Knobs are harder to turn than levers. Bevel-adjustment knobs such as DeWalt's are harder to operate than levers, especially with gloves on.



Big hands required. To hold the saw, depress the spindle lock and retract the blade guard on this DeWalt saw with just one hand, you'd better have long fingers.

Hitachi C7SB

(800) 829-4752

www.hitachi.com



Street price	\$110
Speed/power	5500 rpms/13 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Knob/45° maximum
Table construction	Aluminum
Weight	10.6 lb.
Comments	Compact, good for small hands, best of the bargain-priced

Although the Hitachi is one of the smallest and one of the least expensive of the bunch, it was surprisingly popular. My wife, Kerri, who has been a carpenter for almost 15 years, quickly pronounced the Hitachi one of her favorites, leading the rest of us to nickname it the “girl saw.”

But this name is not a reflection of the saw’s performance. Light and compact, the Hitachi is great for tight spaces as well as for overhead and repetitive cutting. The saw is easy to adjust with a clearly marked bevel scale. Bigger crew members thought the front handle was too close to the rear (photo below), and although the spindle lock works well, the blade wrench is too short. The cord is also short, and space in the carrying case is extremely tight.



Hand position determines saw control. The handles on Hitachi’s saw keep the hands high and close together, giving the operator less control over the saw, although it’s less a factor because this saw is so lightweight and compact.

Milwaukee 6390

(800) 729-3878

www.mil-electric-tool.com

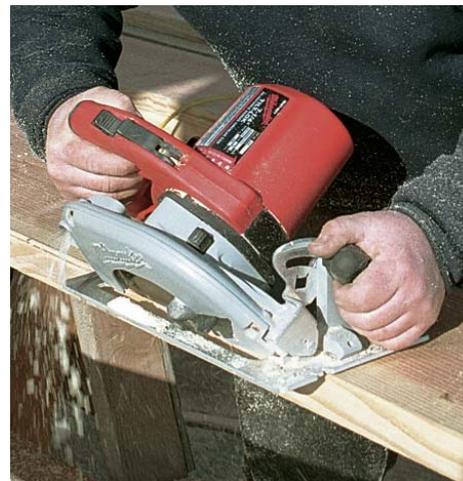


Street price	\$140
Speed/power	5800 rpms/15 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Lever/53° maximum
Table construction	Heavy aluminum
Weight	10.4 lb.
Comments	Best of the best; fast, accurate, one-handed bevel adjustment

When I first brought this saw to the job, the mason looked at it and said, “That saw’s no good; it’s gonna grow legs and walk right out of here.” This saw is terrific. The handles and adjustments are all well engineered, and the bevel reaches about 53°, a nice feature in this area where we cut a lot of steep roofs.

The front handle is attached to the saw table instead of to the saw body (photo below), which gives the operator more leverage and control when making difficult cuts. The table, while not reinforced, is thick and strong. The cutting-guide notches allow for the difference in blade-kerf width between 0° and 45°. The case is large and sturdy, and the saw fits in easily without jamming.

I have only two reservations about this saw. The first is the Tilt-Lok handle, which allows you to adjust the handle angle front to back. This feature seems like an unnecessary complication; everyone pretty much left the handle in a neutral position. The other reservation is the blade wrench. I’d like it better if stored on the saw.



Handle on the table. The front handle of the Milwaukee saw is on the table instead of the motor, which maximizes control while giving the operator better leverage when making bevel cuts.

PUTTING ON THE BRAKES

An electric brake is an internal switch that slows the blade abruptly when the trigger is released. For people who don’t use circular saws on a daily basis, brakes are a good safety feature. They help to prevent kickback and help to protect users from serious injury, and brakes are a second line of defense for those times

when the blade guard jams. Most of the carpenters I’ve worked with prefer saws without brakes for a number of reasons.

First, job-site environments are already tough on electrical switches, so adding another switch is just one more thing to break or wear out. Brakes also cause brushes and bearings to wear out sooner, so saws don’t last as long.

Last, for professional carpenters, brakes just aren’t necessary. We generally release the trigger before the end of a cut to slow the blade. Instinctively, professional carpenters don’t set a saw down if the guard has hung up. And we’ve learned to cut in ways that minimize kickback.

—J. S.

Makita 5037NBK

(800) 462-5482

www.makitatools.com



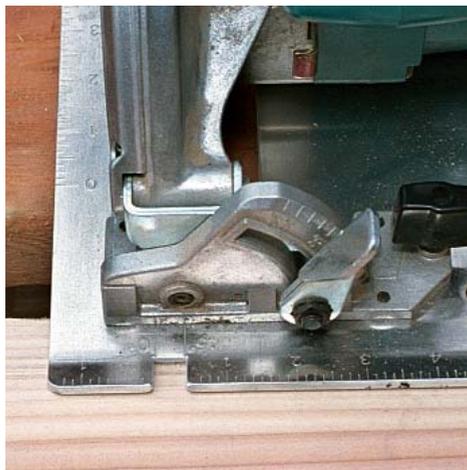
Street price	\$170
Speed/power	5200 rpms/14 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Lever/51° maximum
Table construction	Light aluminum
Weight	13.2 lb.
Comments	Heavy and expensive; buy it only if you need the vacuum pickup

I owned a couple of Makita sidewinders back in the '80s, and the problem they had is still common to today's Makita saws: poor tables. Makita's saw tables are made of flat, lightweight aluminum alloy, largely unreinforced and prone to bending. The 5037NBK, the first of two that Makita sent me, has this same table trouble, but Makita has added bigger handles and better adjustments than its earlier models. The saw adjusts to a 51° bevel, and the bevel is marked in 1° increments (bottom photo). The bevel markings on most of the other saws are in 5° increments.

This saw is one of two saws with a decent shop-vac hookup, which might be an asset for cutting solid-surface materials or for shop work. Specific complaints about this saw include a trigger-finger hole that's too small (top photo), with plastic edges that are rough even for a carpenter's hands. Also, the handle for retracting the blade guard is too short to reach easily with the thumb of your leading hand. And with a price tag much higher than the other saws in the survey, this saw isn't such great a deal.



Tight fit for a gloved finger. Makita's trigger hole is too small for a gloved finger to fit into easily. The sharp plastic edges around the hole can be tough on bare hands as well.



Single degree markings for fine adjustment. Makita's bevel adjustment is in single degrees, making fine bevel adjustments easier to dial in.

Makita 5007NLK

(800) 462-5482

www.makitatools.com



Street price	\$170
Speed/power	5800 rpms/15 amps
Depth of cut 90°/45°	2½ in./1¾ in.
Bevel adjustment	Lever/50° maximum/stop at 45°
Table construction	Light aluminum
Weight	10.1 lb.
Comments	Good power to size/weight ratio, but still very expensive

I almost sent this saw back because it was the only left-handed saw that I received. Then I realized that although lightweight and compact, the 5007NLK has big-saw features and power. It is a mirror image to the right-hand version, 5007NHK (shown on p. 55). And because it's useful to have a left-handed saw on the job, we let it stay and ended up liking it (sidebar below).

Rating the comfort of this saw isn't really fair because most of us don't use left-handed saws enough to get used to their mechanics, but the saw cuts well with its combination of small size and big motor. The adjustments are good, beveling from 0° to 50° with a neat little switch that sets the stop at 45°. The saw does have the same Makita table, which is not as much of a liability in a smaller, lighter saw. Blade changing is easier than on most saws, and the saw fit neatly in its case. At \$170, it's the most expensive saw in the bunch.

SOUTHPAW SAWS

So-called left-handed saws have the blade mounted on the left side of the saw, and because they're indispensable for certain types of cutting, such as making miter cuts on a stair stringer (they're always going the wrong way, aren't they?) or making a cut in an otherwise unreachable spot, I like to keep a couple of these saws on the job site (photo above). In addition to the Makita 5007NLK, Milwaukee and Porter-Cable also make left-handed versions of their top-end sidewinders.



I framed for years in the Southwest nothing but worm-drive saws, which also are also left-handed. But the differences in body mechanics between using a worm drive and a sidewinder are such that comfort with one doesn't translate into comfort with the other. I don't have any southpaws on the crew, but I suppose that a left-handed saw would better suit a left-handed carpenter.

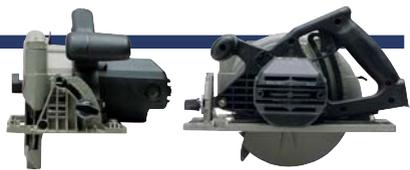
When a right-handed carpenter uses a left-handed saw, the blade visibility improves, but the leverage and support are not as good. And last but not least, on those rare occasions that I do find myself using a left-handed saw, I find that the saw's dust chute usually fills my tool belt with sawdust.

—J. S.

Porter-Cable 347

(800) 487-8665

www.porter-cable.com



Street price	\$125
Speed/power	5800 rpms/15 amps
Depth of cut 90°/45°	2½ in./1⅞ in.
Bevel adjustment	Knob/48° maximum
Table construction	Cast magnesium; flat and strong
Weight	10.25 lb.
Comments	Well-built, powerful, no-frills workhorse; a crew favorite

This saw had an unfair advantage in this test because many of my crew (myself included) have been using this model since it came out a few years back. On the other hand, having worn out a few, I also know its weaknesses.

There are no fancy features on this saw, but it does have the strongest, flattest table in the bunch (bottom photo). And Porter-Cable puts an odd shape to the leading edge of its blade guard that lets it retract on most compound angles without having to retract the blade guard manually with its lever (top photo). Only the Milwaukee shares this feature.

The blade wrench stores in a convenient slot in the handle, where it lives at least for the first year, after which it tends to fall out and disappear. The other recurrent problem is that the bevel-adjustment knob (not a lever) has stripped out on several of the Porter-Cable saws I've owned.

Although purchased separately, the rip fence is about the best available. This saw is also the only one besides the Makita with a dust-collection attachment. The Porter-Cable case is so tight that it's almost too frustrating to use.



Weird-looking blade guard. The tip of the blade guard on the Porter-Cable saw may look strange, but it's shaped to allow the blade guard to retract on its own so that no one has to touch the retraction lever.



Tough table. Reinforcing ribs make Porter-Cable's table resist bending and breaking, making this table the strongest of all the circular saws tested.

Sears Craftsman 27516

(800) 948-8800

www.sears.com



Street price	\$99.99
Speed/power	5000 rpms/14 amps
Depth of cut 90°/45°	2¼ in./1¾ in.
Bevel adjustment	Knob/46° maximum
Table construction	Sheet metal, stamped
Weight	13.3 lb.
Comments	Saw cannot be purchased without an electric brake

When contacted about participating in this survey, Ryobi declined because its top-of-the-line saw had power and features aimed more toward homeowners rather than professional carpenters. However, when Sears sent its Craftsman Professional saw, it arrived in a Ryobi box, and the saw did little to live up to its title.

I struggled with this saw for a day or two before I realized that the centerline of the handle is an inch farther from the blade than any of the other saws (photo below). This extra inch upsets the saw's balance and creates more twisting action, which perhaps partly explains why the saw is so much less comfortable to use.

The table is stamped steel with rolled-up edges, and in general, the saw didn't seem to be in the same league with the rest of the group. Despite the fact that it is the only saw to break the \$100 barrier (\$99.99 at my local Sears store) and that it comes with the legendary Craftsman warranty, I'd advise even the home handyman to spend another \$10 to \$20 and upgrade to one of the other saws.



Within an inch of perfect balance. The blade on the Craftsman saw (left) is an inch farther away from the handle than the other saws, which upsets the saw's balance and gives it more of a twisting motion.

WHICH SAW WOUND UP ON TOP?

In my dreams, saw manufacturers would read my review, combine the best features and fix the few problems, leaving us with a fleet of perfect saws. In reality, they'll probably black-list me.

If I were asked to recommend one saw as a Father's (or Mother's) Day present, I'd say you couldn't go wrong with the Hitachi. But for full-time professional carpenters, the Porter-Cable and Milwaukee saws are the cream of the crop. Specific features on some of the other saws, like the Bosch or the Makita 5007NHK, might suit certain carpenters. But because it's just not possible to own too many tools, I think I'm going to treat myself to a new Milwaukee to supplement the Porter-Cable saws already in my arsenal. □

John Spier and his wife, Kerri, build and renovate houses on Block Island, RI. Photos by Roe A. Osborn.