

Circular Saws

Key buying points for a “must-have” tool

Sometimes, it's easier to take the tool to the work than the other way around. For large built-in-place projects, such as a deck, a circular saw is worth its weight in gold. In the shop, it earns its keep by helping break down sheet goods.

You'll find two basic varieties of circular saws—helical-drive models

(sometimes called “sidewinders”) and worm drive (see the box at *right*).

Most corded circular saws suitable for the home shop have 7¼" blades, while cordless saws usually have smaller blade diameters: 5⅜" and 6½" are typical. In addition to wood-cutting blades, you'll find specialty blades for non-wood materials, such as concrete, tile, and metal.

What to look for in a good circular saw

POWERFUL MOTOR When you start looking at circular saws, you'll discover a wide price range. At the low end, you'll find saws where virtually every design and engineering decision is dictated by cost accountants. There are times when buying the least expensive tool makes sense, but if you choose that path, keep your expectations even lower than the price tag.

A corded saw with a 7¼" blade and drawing 13 to 15 amps provides an excellent balance of power, price, portability, and versatility. For a cordless saw, look

at models with batteries rated at 18 volts or more. Less than that, and you run a serious risk of being disappointed by wimpy performance.

A circular saw's ampere rating tells you how much electrical current the motor uses, and is generally a more reliable guide to power than horsepower. However, amperage isn't necessarily an absolute indicator of how fast a saw will cut. For example, a 13-amp saw that uses power efficiently can outperform one with a 15-amp motor. The bottom line is that a saw rated at 13 amps or more should provide enough power to handle virtually every job around your home and shop.

By the way, avoid starving your saw by using a heavy-duty extension cord, and make sure it's no longer than necessary. (See the handy chart on *page 12*.) Some Bosch saws eliminate the hard-wired cord on the saw, and feature a port where you directly plug in the extension cord. That way, accidentally damaging the cord doesn't involve a trip to the repair shop.

CHECK THE FEEL, LOOK FOR EASY CUTTING-DEPTH ADJUSTMENTS

Pick up a circular saw, and you'll immediately appreciate handles with soft-grip material. In addition to comfort, a slip-resistant grip can significantly reduce the

amount of energy you expend to simply hold onto the tool. It may seem like a small point while you're reading this, but it can make a big difference at the end of a day of deck building.

Next, make a depth adjustment to check the location of the mechanism and its ease of operation. Most people find a lever adjustment easier to manipulate than a thumbscrew.

Many saws have a depth-of-cut scale, but some are easier to read than others. If you work to metric specifications, you'll appreciate having a dual (metric/standard) scale.

CONVENIENT BEVELING Virtually every circular saw will bevel to at least 45°, and most can go beyond. Getting past the 45° stop (on those saws that have them) can be as simple as slipping past a ball-bearing detent or as awkward as a bevel-stop sleeve.

Most saws let you zero-out the bevel stop for right-angle cuts, but calibration screws for the 45° stops don't exist on some saws. If beveling is a rare procedure for you, this could be an insignificant consideration. But if you frequently make bevel cuts, this feature could be a real decision point. Again, you'll probably find a lever adjustment more convenient than a thumbscrew. Check the bevel

scale, and you'll find that some saws have single-degree markings, while others make you guess between 5° increments.

BE SURE YOU DON'T OVERLOOK GOOD SIGHTLINES

A blade mounted on the right side of the motor is the typical sidewinder setup, although some manufacturers also offer blade-left models. With a blade-right model, right-handed users must sight the cutline through a gap between the body of the saw and the blade guard. Righties get an unobstructed view of the blade with a blade-left model, but this configuration can place the wide part of the foot and the weight of the tool on the waste piece during cutting instead of the "keeper" piece, which can contribute to inaccurate cuts.

Some saws project a laser line to assist in guiding the saw freehand. To use this feature correctly, you'll need to always remember which side of the blade the laser line represents. Otherwise, you could make cuts that are one blade width too large or small. Also, bright sunlight can wash out the laser beam when using the saw outdoors. 🌳

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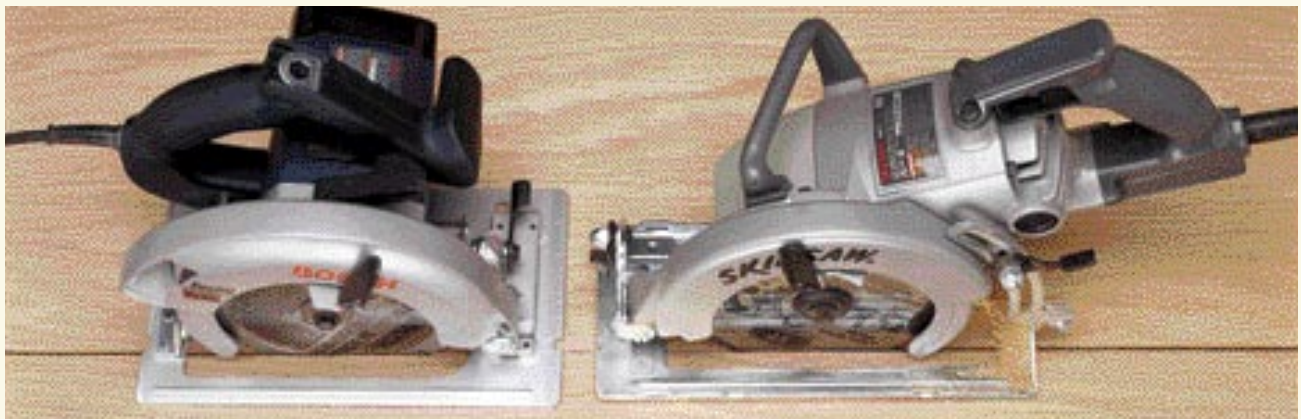
What about worm drives?

Sidewinder saws typically employ helical gearing, but worm-drive saws, such as the Skil 77 shown *below right*, put the motor more behind the blade than beside it. The name "worm drive" comes from the worm gear on the motor shaft that transfers the power to the blade arbor. Makita makes a saw that outwardly resembles a worm drive, but it uses hypoid gearing, the style typical in the differential of rear-wheel drive cars and trucks.

Worm-drive saws are popular with contractors because their slower speed (usually around 4,000 rpm, compared to

the 5,000–5,800 rpm of a helical-gear saw) means higher torque. The long, narrow body of the tool also gives the operator a longer reach and allows the saw to get into spots too tight for a sidewinder, where the motor sticks out to one side.

However, worm-drive saws usually weigh 3–8 pounds more than sidewinders. And their price tags are no lightweights either—expect to pay about 30 percent more for a worm-drive saw. All in all, a sidewinder makes more sense for woodworking and occasional remodeling.



With its motor shaft perpendicular to the blade arbor, rather than parallel to it, a worm-drive saw (*right*) is longer and narrower than a helical-gear saw (*left*).