

CORDLESS Circular Saws

New cordless circular saws have enough power and depth of cut to rival corded circular saws

Almost three years ago, *JLC* tested the most powerful cordless circular saws then on the market.

by Joe Harenski

The author of the resulting article ("Cordless Saw Update," 12/99) concluded that, although handy for small jobs, cordless saws were not up to the heavy-duty performance we expect from corded saws. Having used several of the earlier cordless models, I began this review with a healthy dose of skepticism, too. My goal was to determine whether cordless saws had improved to the point that we could set aside our corded saws for good.

I pressed the saws to their limits, using them for the same tasks I use my corded framing saw for. At the renovation company where I work, we take on many tasks

that are not typical in new construction. Cutting through nail-riddled, full-dimension joists and multiple layers of existing flooring or plunging through asphalt shingles and 1-by pine roof sheathing are probably not what manufacturers intended for these tools. But most of the saws I tested surprised me by performing well enough to warrant their regular use on our jobs — not having a cord to trip over and untwist was a bonus.



Selection and Testing

I picked the saws for the test by two simple criteria: saws that could cut 2-by material at a 45-degree bevel, and, based on my experience with smaller tools, saws with a minimum 18-volt platform. When manufacturers offered more than one model that fit our criteria, I picked the saw with the largest blade and the highest voltage. The saws I tested were the 24-volt Bosch 1660K, DeWalt DW007K, Hitachi C7D, and Makita BSS730SHK; the 18-volt Milwaukee 6310-22; and the 19.2-volt Porter-Cable 9845.

Before the actual testing, I used each saw for several days to familiarize myself with its balance and to break in its batteries. I then subjected all six saws to a series of crosscut and ripping tests to see how they compared.

Crosscuts. With freshly charged batteries, I ran each saw through as many straight cuts as it could handle. Manufacturers recommend that batteries be recharged when they start to show a drop in performance, so we ran the saws till they bogged down. We used the thin-kerf blades included with the saws because we assumed that manufacturers would select the most suitable blade to include with their saws. All but one of the saws were

consistently able to make 100 crosscuts before a noticeable drop in performance occurred.

In order to assess power, I also crosscut 2x10s at a 45-degree bevel; all saws handled the load easily. This is one of the greatest improvements in cordless-saw technology. Only a couple of years ago, few models had the depth of cut necessary to bevel 2-by stock at 45 degrees, and the models that could make the cut lacked the run time to get more than a few cuts per charge.

Ripping test. Even the most skeptical of our crew found these cordless saws useful for trimming roof sheathing in place. To compare the saws' ability to cut plywood, I timed each of them while ripping an 8-foot strip of 3/4-inch CDX plywood. The Bosch had the fastest time, but all the saws tore through the plywood in less than 11 seconds. All the saws also had plenty of power and enough run time to cut sheathing all day long.

Individual reviews. Following my testing, I distributed the saws among our crews for field use. Working with each saw for several weeks allowed us to subject each one to the variety of tasks on our job sites. While they all proved to be worthwhile and versatile tools, they excelled in different areas.

Cordless Saw Specifications

	Bosch 1660K	DeWalt DW007K	Hitachi C7D	Makita BSS730SHK	Milwaukee 6310-22	Porter-Cable 9845
Volts	24	24	24	24	18	19.2
Weight	9.2 lbs.	9.5 lbs.	10.0 lbs.	8.8 lbs.	9.2 lbs.	9.5 lbs.
Rpm	3,600	4,000	2,700	2,400	3,200	3,250
Blade	6 ¹ / ₂ "	6 ¹ / ₂ "	7 ¹ / ₄ "	7 ¹ / ₄ "	6 ¹ / ₂ "	6"
Depth of cut at 90 degrees	2 ¹ / ₈ "	2 ¹ / ₈ "	2 ³ / ₈ "	2 ⁹ / ₁₆ "	2 ¹ / ₈ "	2"
Depth of cut at 45 degrees	1 ⁵ / ₈ "	1 ³ / ₄ "	2"	2"	1 ⁹ / ₁₆ "	1 ⁹ / ₁₆ "
2x4 crosscuts at 90 degrees	112	169	143	113	130	92
Plywood rip time	8.0 sec.	9.0 sec.	9.5 sec.	9.5 sec.	10 sec.	10.5 sec.
Battery	NiCad	NiCad	NiCad	NiMH	NiCad	NiCad
Amp hours	2	2.4	2	1.7	2.4	2
Number of batteries	2	2	1	1	2	1
Case included	yes	yes	yes	yes	yes	yes
Street price of extra battery	\$140	\$109	\$135	\$140	\$70	\$65
Street price of saw	\$385	\$399	\$419	\$450	\$259	\$299

 Test results

Bosch 1660K

Though not the lightest in weight, this 6 $\frac{1}{2}$ -inch left-blade saw *felt* lighter than any of the other 24-volt saws tested. The quiet, high-pitched whine of the motor made me doubt its power, but my doubts were put to rest the moment the blade touched down. This saw rules when it comes to ripping sheets of plywood. Whether cutting through $\frac{3}{4}$ -inch CDX plywood, MDF,



The somewhat precarious battery placement on the Bosch 1660K and the charger's small footprint make the charger top heavy. More than once I found the charger knocked over with the battery pack lying next to it — a major pain when you're expecting a fresh battery.



or even melamine shelving, it was faster and smoother than any of the others. And although its run time is somewhat shy of that of the other 24-volt saws, this saw is a speed demon. The safety lock is comfortable for either right- or left-handed use, and the depth gauge on the guard housing is convenient. However, the bevel detents were not perfectly accurate, and the precarious placement of the battery pack in the charger does not seem up to the challenge of job-site use and abuse. A misplaced foot or a dropped 2x4 would probably do it in. The biggest complaint about this saw was its run time, but because it comes with two batteries and has enough run time to keep going until a new battery is ready, that isn't a major concern.

DeWalt DW007K

This 6 $\frac{1}{2}$ -inch, right-blade saw won the power and endurance tests hands down. It ships with two NiCad batteries, and DeWalt also offers a unique option: a DC-to-AC adapter (part no. DW0247, \$120) that lets you bypass the battery and feed power to the saw with a conventional extension cord. Though a bit heavy, it handles smoothly and comfortably, easily tackling



DeWalt's AC adapter turns its cordless saw into a handy panel saw and comes to the rescue when batteries are spent, but the adapter alone costs as much as some corded circular saws.

framing and finish projects. Plywood, framing lumber, MDF, and pressure-treated lumber proved little challenge to its power. Even with the 6 $\frac{1}{2}$ -inch blade, bevel cuts and 90-degree depth of cuts rival those of full-size 7 $\frac{1}{4}$ -inch blades. Visibility on this saw is good, although the black shoe, intended to minimize bothersome reflection, makes it difficult to read the bevel scale. DeWalt's new 24-volt system uses a small fan in the charger and internal vents to cool hot batteries — a nice feature, because heat prematurely kills battery packs, and chargers will slow to a trickle when asked to juice up a hot pack. This means not only faster charging but three times the number of charging cycles, according to the manufacturer, compared to the earlier 24-volt system that was not fan cooled.

Hitachi C7D

If any saw comes close to replacing a corded tool outright, it's Hitachi's 7¹/₄-inch, 24-volt right-blade cordless saw. While weighing in as the heaviest of the saws tested, it is well balanced and handles comfortably. In addition to its power, this saw's greatest asset is its excellent cut visibility on both 90-degree and bevel cuts. It's equipped with a lamp that I thought a bit gimmicky at first but quickly came to appreciate; it increases visibility in both low-light and normal lighting conditions. The saw's smooth performance in cutting bevels of up to 50 degrees and its ability to easily handle 8-foot rips of 2-by material put it on an equal footing with most corded sidewinders. Had it been shipped with two batteries, I doubt my corded saw would have left its case for the duration of the test.



The little headlight on Hitachi's C7D does a good job illuminating the cut line and proves valuable on poorly lit remodeling jobs.



Makita BSS730SHK

Clearly, a lot of time and a lot of thought were invested in the design of this 24-volt right-blade 7¹/₄-inch saw. Although ergonomics is subjective, our crew unanimously agreed that this saw was the most comfortable to use. The feel of the grip, the easy and effective safety, and even the battery-pack release are



well designed for safety and ease of use. This was the only saw tested that uses NiMH batteries rather than NiCads. Visibility on both 90-degree and bevel cuts was excellent, and the positive stop at a 45-degree bevel was a welcome feature. Makita has tackled the hot-battery problem with its own high-tech charger approach: A fan-cooled charger monitors individual cells in the pack and optimizes the charger to compensate for hot or weak cells. The charger even "remembers" charging patterns to help keep packs at maximum efficiency. Though the run time on this saw was shorter than that of some 24-volt saws, it has the power to compete. Because the Makita comes standard with only one battery, the biggest obstacle to owning this well-engineered and versatile tool might be the hefty cost of a second battery.

Milwaukee 6310-22

Although equipped with only an 18-volt battery, this left-blade 6¹/₂-inch saw held its own with the 24-volt saws tested. It has a comfortable grip, good balance, and a wide shoe that's excellent for repetitive cuts. Like the 24-volt saws, this saw handled sheet goods, framing lumber, and finish material alike without a problem.

Visibility on bevel cuts was a bit disappointing, however, and although it touts a 50-degree bevel capacity, the blade depth fell somewhat shy of handling 2-by material at that angle. The biggest drawback of the Milwaukee is the stiff release system on the battery pack: I had trouble squeezing both buttons and sliding the pack off at the same time. Although the two-button release loosened up over time, I still found it awkward to use. Overall though, this is a good saw — for the price, it stands out from the crowd.



Porter-Cable 9845

As a fan of Porter-Cable's 743K corded framing saw, I was disappointed by the ergonomics of this 19.2-volt, 6-inch, left-blade saw. Unable to reach the safety-release button with my thumb, I was forced to use the saw with only two fingers on the grip while I stretched my middle finger to reach the release. If the handle's diameter was a little smaller or the safety release was closer to the grip, the saw would be much easier to use. Those with larger hands may find this less of an issue, but most of my crew

found the saw uncomfortable. Needless to say, my unstable grip greatly hindered my ability to use this saw and assess it fairly. All I can say is that visibility was good on both straight and bevel cuts, and the depth and bevel adjustments were easy to use.



The grip and poorly placed safety on Porter-Cable's 9845 made it impossible for the author to hold the saw securely and reach the safety. Other testers could reach the safety, but they found the grip less comfortable than that of other saws tested.



Do They Make the Cut?

While they won't become the mainstay of a framing crew, the new generation of cordless saws, with their increased power and run time, deserve a place in the toolbox. They are indispensable for roof work or anywhere that AC power is at a premium. Their ability to handle framing material has improved — we regularly used the DeWalt, Makita, and Hitachi saws to rip full 8-foot 2x4s for furring and leveling floors.

Overall, these saws proved their merit on the construction site. Given their power and versatility, the DeWalt, the Hitachi, or the Makita would be an asset in new construction or remodeling. The far superior run time of the DeWalt DW007K and its optional DC-to-AC adapter make it well suited for the demands of heavy framing. Between the Makita and the Hitachi, I would choose the Hitachi C7D — primarily because of its excellent cut visibility. The headlamp is a cool feature in low light. The Bosch 1660K and the Milwaukee 6310-22 run close behind, with the Milwaukee beating the Bosch.

Price. By any standard these saws are expensive: You could buy two or three corded sidewinders for the price of one of these. Buying an additional battery pack (minimum \$75) sends the price even higher.

For the work that I do, I have concluded that the convenience of a cordless saw is worth the high price. As a remodeler, I'm rarely anchored to a cut station, cranking out mass amounts of framing. Just the time I save by not dragging a cord behind me or searching for a functioning outlet makes any of these saws worth the money. Anyone who does a lot of roofing would probably agree. The answer may be different for new-home builders who do more production cutting. Both types of home construction would benefit from the unsurpassed portability for doing punch lists or quick repairs. 

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Cordless Saw Manufacturers

Bosch Power Tools

Chicago, Ill.
877/267-2499
www.boschtools.com

Hitachi Power Tools

Norcross, Ga.
800/829-4752
www.hitachi.com/powertools

Milwaukee Electric Tool

Brookfield, Wisc.
800/729-3878
www.mil-electric-tool.com

DeWalt Industrial Tool Co.

Baltimore, Md.
800/433-9258
www.dewalt.com

Makita USA Corp.

La Mirada, Calif.
800/462-5482
www.makitatools.com

Porter-Cable Corp.

Jackson, Tenn.
800/487-8665
www.porter-cable.com