

Toolbox

Is That a V28 Under the Hood?

by David Haines

As a remodeler, I love cordless tools. Not only do they save me set-up time, but I don't have to drag dusty extension cords through somebody's clean house. Plus, the cordless kits allow me to carry three or four tools in a single case.

For those reasons and more, I adopted DeWalt's 18-volt platform a few years back. At the time, DeWalt offered the greatest variety of 18-volt tools, and sticking with one platform meant I could share batteries and chargers. Generally, I've been quite happy with the reliability and performance of my DeWalts. Nevertheless, when Milwaukee came out with its V28 tools last year — promising enough runtime to last all day — I couldn't wait to try them out.

What's Different?

The big innovation with V28 tools is that they use rechargeable lithium-ion cells. Lithium-ion battery chemistry is common with electronic devices like digital cameras and cellular phones, but only recently have toolmakers figured out how to adapt this technology to

the high-drain electric motors in cordless tools.

According to Milwaukee, the V28 tools offer the performance of corded tools along with double the runtime of 18-volt nicad-powered tools. Another advantage is weight: Whereas conventional cordless-tool battery packs get heavier with increases in voltage, the four-cell V28 packs weigh about the same as conventional 18-volt nicad or NiMH battery packs. Conveniently enough, Milwaukee includes a "fuel gauge" on the pack to let you know the battery's status before you go into a crawlspace or up on the roof (see photo, below).

Since I'm not one to take tool manufacturers at their word, I did a number of quantitative runtime and performance tests to check the veracity of Milwaukee's claims. To ensure a level playing field, I used brand-new DeWalt batteries for all of the testing, as well as brand-new blades and bits.

In addition, I used the V28 tools on the job every day for about six months, which gave me a good sense of their real-world performance and durability.

Here's what I learned.

Milwaukee Electric Tool Corp.

800/729-3878

www.milwaukeetool.com

Roughly the same size and weight as an 18-volt nicad pack, Milwaukee's V28 lithium-ion battery pack uses four 7-volt cells and includes an LED fuel gauge that shows the pack's remaining life when a small button is pressed.



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0730-22 Circular Saw

Blade diameter:	6 1/2 inches
Depth of cut at 90 degrees:	2 1/8 inches
Depth of cut at 45 degrees:	1 5/8 inches
Bevel capacity:	50 degrees
Weight:	9.4 pounds



The V28 circular saw performs very well. I found I could use it the same way I'd use a corded saw. Compound cuts aren't a problem, and the saw spins at 4,300 rpm — double the speed of most cordless circular saws. It has a comfortable handle and feels sturdier than any other cordless saw I've used.

To test runtime, I matched it against my 18-volt DeWalt to see how many 2x4s I could crosscut on a single charge. I was able to make 268 cuts with the V28 vs. 122 with the DeWalt. I stopped cutting when I noticed a decrease in performance.

0724-24 Cordless Drill

Maximum torque:	600 inch-pounds
Chuck type:	metal keyless
Clutch settings:	20
Capacity in steel:	1/2 inch
Capacity in wood:	2 9/16 inches
Weight:	6.7 pounds



A good test of any cordless drill's stamina is drilling with a hole saw, so I drilled holes through a 2x4 with a 2 1/8-inch hole saw — the same size used for cylindrical locksets. I drilled 13 holes with the Milwaukee and four holes with my DeWalt. I also tried a 1-inch spade bit to simulate roughing in pipe or wire. The Milwaukee managed 141 holes, the DeWalt 47. Both drills had hammer-drill settings, so I tested drilling in concrete, too. With the V28, I drilled 65 5/8-inch holes through a solid 4-inch concrete block; with the DeWalt, 23.

The V28 cordless drill boasts Milwaukee's innovative "Clip Lok" holster, which allows you to hang the tool on your tool belt; the thumb-actuated release is made for both right- and left-handed users. The drill has a two-speed gearbox and rubber inserts on the handle.

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8719-22 Reciprocating Saw

Strokes per minute:	0-2,000/0-3,000
Stroke length:	1 ¹ / ₈ inches
Length:	16 inches
Weight:	9 ¹ / ₂ pounds

I tested the V28 recip saw by cutting a 2x4 into slivers. I was able to make 89 cuts with the Milwaukee vs. 39 with the DeWalt. The V28 saw has a good feel and balance and operates very smoothly. It has a keyless blade clamp, an adjustable shoe, and two speeds; it doesn't have orbital cutting action.



0799-22 Cordless Impact Wrench

Maximum torque:	3,900 inch-pounds/325 foot-pounds
Rpm:	0-1,450
Weight:	9 pounds

Milwaukee's V28 1/2-inch impact driver is not one of the compact drivers used for running deck and drywall screws, but a heavy-duty version similar to the air-powered tools used by auto technicians. I use my DeWalt impact wrench to drive lag bolts for structural connections like ledgers. The DeWalt and the Milwaukee, I found, are pretty evenly matched in terms of maximum torque — the DeWalt puts out 300 foot-pounds and the Milwaukee 325 — but the DeWalt is the smaller of the two tools, which could be an advantage in some circumstances.

I thought a good test would be driving 1/2-inch-by-4-inch lags into a well-seasoned piece of pressure-treated 4x6. Because I didn't predrill, and because the wood was quite dry, it was a tough run. Still, I was able to sink 24 lags with the Milwaukee and 12 with the DeWalt.



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Flashlights

As a final test, I turned on the V28 and DeWalt flashlights and let them burn until the batteries were spent. The Milwaukee lasted five hours and 18 minutes, and the DeWalt four hours — a noticeable difference, but not the 100 percent increase found with the high-drain tools.

The Upshot

In general, my runtime tests exceeded the claims made by Milwaukee's advertising. Still, I wanted to get other points of view, so I asked several guys to try the V28s on the job. They all quickly fell in love. They were surprised the tools had enough power to do the tasks usually reserved for corded versions, and were astonished at their runtimes.

One problem we did notice with the lithium-ion batteries is that they give little warning when they are about to go dead. They don't bog down; they just stop. This might explain why Milwaukee added the LED fuel gauge — which is a great idea anyway. I can't believe it took a manufacturer so long to think of this perk.

But probably the biggest shortcoming with V28 technology is the price. Milwaukee says the new tools cost about 40 percent more than the company's 18-volt nicad tools. Online at Toolbarn.com, I found Milwaukee's four-tool combo kit (recip saw, circular saw, drill, and flashlight with two batteries) for \$729, plus \$3 shipping; the 18-volt DeWalt kit with the same tools cost \$400.

For the \$730 I would pay for the Milwaukee kit, I could buy DeWalt's kit and still have enough money left over to buy three or four extra batteries (between \$70 and \$80 each) and an additional charger (about \$50). This could easily offset Milwaukee's runtime advantage.

Just the same, I really like the new tools, and I'd consider the additional money well-spent. Besides their great performance, these tools feel solid and well-made. I'd like to see a jigsaw added to the lineup — and while they're at it, maybe a cordless planer and a cordless miter saw.

David Haines is a remodeler in Doylestown, Pa.

Toolbox | Stepladders & Accessories | by Patrick McCombe

Top Shelf. For those times when there's just not enough room on top of a stepladder, a *Flip Tray* can double the available real estate. Its maker says this folding tool tray holds up to 40 pounds of tools and supplies, and mounts easily on most ladders. Square notches on the front manage electrical cords; rounded ones on the side harbor fluorescent bulbs and other round objects. The tray packs a lifetime warranty and sells for about \$25.

Kintz Mercantile Products, 800/909-4453, www.fliptray.com. **Circle #16**



Horse of a Different Color. When I'm cutting in a top coat at the ceiling, sometimes it seems like I spend more time moving the ladder than painting. This little scaffold-stepladder hybrid could be just what I need. With its 12-inch-by-38-inch walk surface and integral tool tray, the 20-inch-high *Work Horse Scaffold Platform* minimizes the up-and-downs of painting and drywall finishing. The rig folds for storage and transport and sells for about \$50.

Cosco, 888/818-5110, www.coscoproducts.com. **Circle #17**



Three-Legged Stepladder. Many serious fall-related injuries involve heights most carpenters wouldn't consider dangerous. Some result from

setting up stepladders on uneven surfaces, others from excessive reaching. Both types of accidents could be prevented with a *Fiberglass Tripod Stepladder*. According to the maker, the three-legged design is more stable on uneven surfaces and allows users to get closer to the work for less reaching. The ladder has a 300-pound capacity, built-in paint-can and drill holders, and deeply textured treads. A 6-foot version sells for about \$150.

Werner, 888/523-3370, www.wernerladder.com. **Circle #18**

Toolbox | Hammers

Light Headed. When I first heard about titanium hammers, I couldn't imagine that such a lightweight material could really pound nails effectively. However, after talking to carpenters who use them, I've changed my mind. At about half the weight of their conventional framing counterparts, Stiletto Titanium hammers significantly decrease user susceptibility to carpal-tunnel syndrome and other repetitive-motion, stress-related injuries, says the maker. They come in trim and framing styles with curved and straight handles. Prices start at about \$100 for the 14-ounce wood-handled *Titan* and peak at about \$190 for the 14-ounce titanium-handled *TiBone*.

Stiletto Tools, 800/987-1849, www.stilettotools.com. **Circle #19**



Slide Hammer. With Norwolf's *Glide Hammer*, you can make swinging a sledge easier on your body. Designed with a unique sliding grip that eliminates the need to change hand position midswing, the aluminum-handled hammer is virtually indestructible, says the manufacturer. It costs \$166. Norwolf makes some other cool tools for carpenters, too, including the *A-Hammer* (\$44), an aluminum-handled rip hammer; the *Unibar* (starting at \$99; not shown), a high-tech pry bar with an adjustable head; and the *Pro Nailer* (\$33; not shown), a nail set for framing nails. All look sturdy enough to become family heirlooms.

Norwolf, 888/667-9653, www.norwolf.com. **Circle #20**



Shock Absorber. It's no secret that pounding nails day after day can take a toll on your wrist, elbow, and shoulder. Fuller's new *Wavex Hammers* promise to minimize the shock waves that go through your arm every time you strike a nail. According to the company, the hammers use an impact-reducing technology first developed for tennis rackets. They come in 16- and 20-ounce claw, 20-ounce rip, and 22- and 28-ounce framing styles; prices range from about \$13 to about \$20.

Fuller Tool, 262/242-1161, www.fullertool.com. **Circle #21**

