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Contents

Tool Test, 16

Installer's Toolkit, 28

5 Tools Up Close

DeWalt laser level; Milwaukee Inkzall; Warn PullzAll

16 TOOL TEST: 18-Volt Cordless Angle Grinders

| By Michael Springer

The latest cordless models offer better motors and batteries. Look for a tool with good handling that's strong enough for real grinding and cut-off tasks.

24 Editors' Choice

| By Scott Gibson

Our top picks for innovative new tools.

28 Installer's Toolkit for Low-Voltage Wiring

| By Brian Way

Keep everything you need in one large bag, and everything will be close at hand.

33 Product Watch

Compact framing saw; flip-joint wire cutters; cordless knockout system; cyclonic vacuum; work cart; area light; inspection scope; pneumatic stapler

39 Ad Index

40 Tool Hounds

Handmade hammers

On the cover: Greg Jones cuts rebar at a house in the Pacific Northwest.

Photo by Tim Uhler.



Editors' Choice, 24



Product Watch, 33

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Tools Up Close

BY TIM UHLER



DeWalt DW0822 Layout Laser

Our crew frequently frames tall walls and vaulted ceilings, and a laser is an indispensable tool. Sure, you can plumb walls and transfer layout lines with a spirit level or plumb bob, but using an electronic laser is faster and more accurate. We've been using one for the last 10 years.

We had a Stabila LAX300 laser that died last summer after five years of use. We replaced it with an inexpensive two-point laser we bought on the quick at Lowe's. It was OK while it lasted, but it died after just one job. It was around that time that DeWalt brought out its DW0822 laser.

The DW0822 is a combination laser, meaning that it functions as both a line laser and a dot laser. It shoots a vertical line, a horizontal line, and dots (or points) that go up and down like a plumb bob.

We use this tool in place of a plumb bob, so the dots are the number one feature for us. Most of the time we set the laser on the ground over a layout line and then carry it up to the ceiling or the underside of a rafter. Other times we might set the laser on top of a beam, then transfer the layout to the floor.

The laser also generates a horizontal and a vertical line with a beam spread of nearly 180 degrees. We rarely use the vertical line, but very often we shoot a horizontal line while setting windows and establishing grades for stair platforms and porches. The lines are pulsed, so if you have a detector, you will be able to see the lines when they're too faint to be visible in bright sunlight up to a distance of 165 feet (according to the manufacturer).

An integrated swiveling base raises the tool up; if you turn it sideways, there will be enough distance between



DW0822 Layout Laser

Country of origin: China

Web price: \$240

DeWalt

800.433.9258

dewalt.com

the tool and the floor for you to see the down dot without having to get on your hands and knees. The base also has an offset so you can set it next to a bottom plate and plumb up to the top plate above.

The base also has two very strong magnets that allow you to stick the tool to ferrous metal, such as steel studs. We've found that two 16d sinkers in a wood-framed wall provide just enough metal to hang the laser. What the magnets mean for us as framers is that we don't need a tripod to set windows; we can put a piece of metal on a wall at about the height we want and then move the laser up and down.

Another thing we like about this laser is the pendulum lock that protects the internal mechanism from damage when you're not using the

tool or transporting it. Our previous cheap laser didn't have a lock, and I think that caused its early demise. We've dropped the DeWalt laser hard with the pendulum locked, and except for some scratches, the tool wasn't damaged. It has a rubberized, shock-resistant housing and comes in a compact (easily stored) plastic case.

The required three AA batteries are included, and the tool comes with an impressive warranty: 90-day money back, one-year full service, three-year limited.

The DW0822 would be a worthwhile tool for any framer, finish carpenter, or siding contractor. It's accurate, easy to use, and has well thought-out features.

It's not the least-expensive model around, but its \$225 online price is about \$100 less than our last



Stabila laser. If you intend to use the laser outside, you'll need to buy a detector—which will add to the price. We didn't buy one for our DW0822 because we already have one for our rotary laser.

Tim Uhler is a lead carpenter for Pioneer Builders, in Port Orchard, Wash.



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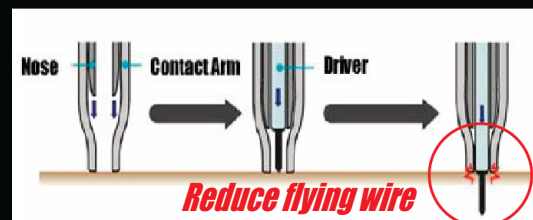
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Warn Cordless PullzAll

BY MICHAEL SPRINGER

I usually work alone, so I rely on certain devices to make it easier to move heavy objects. One of my favorite heavy-duty helpers is the cordless Warn PullzAll winch. It has a 1,000-pound pulling capacity and a useful range of 14 feet. And with its dynamic brake that holds in position under load even when powered down, it can be used both as a pulling winch and as a hoist for lifting and holding.

There's a corded electric version of the tool with the same load and duty ratings, but since I always use the PullzAll outdoors, I prefer the go-anywhere capabilities of the cordless model. I use it for strenuous odd jobs such as lifting heavy timbers, ripping out small stumps, and dragging massive loads into my truck, all without the need for a human helper or an electrical cord.

Other good uses include lifting beams, standing long walls, tensioning fencing, pulling cable through conduit, and loading trailers. Any job that requires a come-along, cable grip puller, or chain or lever hoist may be

easier to do with the push-button convenience of a PullzAll.

Operating the unit is easy. Insert the battery, toggle on the power button, slide the forward/reverse switch to the desired direction, and pull the trigger. Because of its brake, the PullzAll has to be run in reverse to let cable out, and as with all winches, make sure you keep the cable taut when spooling or unspooling to keep it from tangling inside.

I clocked the no-load speed of the winch at about 8 feet per minute, but it moves more slowly when working hard. For precise positioning, the variable-speed trigger lets you move items at a snail's pace, but don't overdo it—prolonged low rpm use under load can damage the motor.

When winching or hoisting, you'll get the maximum power of 1,000 pounds of pull when the cable is all the way out and only 750 pounds when 5 feet of cable remains. The available power decreases because as more cable is wrapped around the drum, its



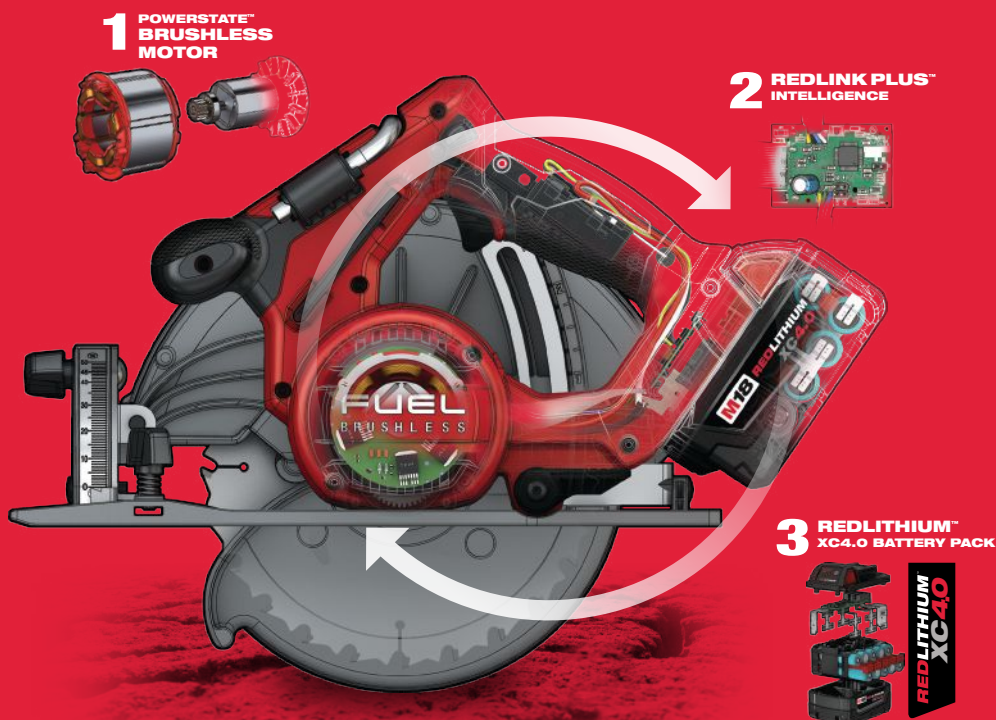
PullzAll

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Web price: \$270 for cordless PullzAll with one battery
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diameter increases, which effectively raises the gear ratio of the system.

As the winch hits 90% of its strength limit, a small LED warning light on the body of the unit glows red. When it hits 100%, the motor shuts down, and the light flashes. After a few seconds the overload relay clicks

off and you can pull the trigger again. Since it's more important to watch the load than to watch the warning light, the overload shutoff is a useful feature for protecting the tool.

Whenever I have loads that the PullzAll can barely move or can't move at all, I use a cable pulley called a

snatch block. With the pulley attached to the load and the cable end anchored back by the winch, the power is doubled up to 1 ton (2,000 pounds) while the speed is halved. The pulley can also be used to change the direction of the pull, including attaching it to a top anchor point to perform lifts while keeping your feet on the ground.

The PullzAll has a conservative duty cycle that states the tool should be rested for 30 minutes after being run at full capacity for 1 minute or at half-capacity for 2 minutes. This seems very limiting. Because there is no easy way to judge the exact load on the winch in use and because the original version of the winch I used for years didn't have a duty-cycle label, I have never observed this regimen. So far, my winches have survived without deliberate rest periods, but the warning is posted nonetheless.

The only real limitation I have found is that the battery pack can't be replaced while the unit is under load because the rear anchor hook is in the way. This means that a suspended load has to be set back down or secured by chains bypassing the winch cable (if possible) while enough slack is given to allow the battery to be accessed. When pulling loads, there's usually no problem, but when the battery runs out during a lift, this short-sighted design flaw creates a hassle.

The tool is available in a variety of configurations, including versions printed in a camouflage pattern.

Prices from Amazon:

- 885030 Cordless PullzAll with one battery \$270
- 885005 Cordless PullzAll with two batteries \$327
- 885000 Corded Electric PullzAll \$172
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Michael Springer is the former executive editor of TOOLS OF THE TRADE.

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Milwaukee Inkzall Jobsite Marker

BY TIM UHLER

For years, I've kept a marker in my tool bag for laying out plates and marking lumber. Recently I've been using a jobsite marker from Milwaukee called the Inkzall. It's sold in three configurations: as a two-pack medium-point marker, a four-pack fine-point marker, and a single fine-point marker with a stylus that can be used on tablets. The markers are black and can be clipped onto hard hats so they won't get lost.

According to Milwaukee, Inkzall markers will write on dusty, wet, oily, and rough surfaces like OSB, concrete, or cinder block. And if you forget to put the cap on, they won't dry out right away.



I've been using Milwaukee's medium marker for about three months, and for the most part, I like it. The medium point is great for laying out wall plates; the line is not much thicker than a pencil line

Inkzall

Country of origin: China

Web price: \$7 for a four-pack of fine-point or two-pack of medium-point

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but is dark and can be seen from a distance. When siding a house, I'll write dimensions for pieces on the house wrap or sheathing (if we're using Huber Engineered Woods' Zip System). A pencil will put marks on these materials, but they'll be too faint to be seen from a distance. The Inkzall is a better choice because the numbers will be legible to the cut man from his cut station.

There are two things I don't like about the Inkzall. First, the tips are not all that tough. For writing on OSB, I've gone back to using an inexpensive Sharpie Magnum. I've had the same one for a year and it hasn't worn out.

Second, I don't like that the Inkzall doesn't write on wet wood. I use a crayon in a keel holder for wet wood because no one has been able to invent anything that works as well.

For framing, I recommend carrying an Inkzall medium-tip for laying out plates, a Sharpie Magnum for drawing on rough surfaces, and a crayon for wet lumber.

The fine-point (four per pack) and medium-point (two per pack) can be found on the Web for about \$7 per pack. The model with the stylus is sold individually and can be found online for \$10.

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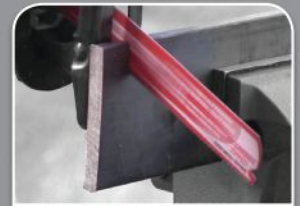
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The Thingamejig is a precision scribing tool invented by an Australian cabinetmaker who installs millwork and cabinetry. Unlike a compass or other scribing tools that mark with a pencil, the Thingamejig scores the material to be scribed with sharp carbide blades.

The tool's triangular head has a replaceable carbide cutter screwed onto each point. A threaded shaft runs through the center, allowing the head to be raised and lowered in relation to the circular foot, which bears against the surface being scribed. Once the setting is dialed in, you secure the shaft with a lock nut.

The scriber has an ergonomic three-finger grip, making it comfortable to hold and allowing the operator to apply pressure where and when needed. In use, the blades score easily, breaking through the finish, so there's no need to worry about chipping. The tool works well on cross-grain veneer, nearly eliminating the fear of tearing out grain while making the cut. I can usually get a successful scribe in one or two strokes. Laminate sometimes takes an extra stroke.

The three triangular blades can be rotated to provide three fresh edges, giving you a total of nine cutting edges. I have been using the Thingamejig for about a year, and the blades are ready to be replaced.

This is not a tool to be tossed around and should not be carried in your tool pouch. The Thingamejig comes in a snap-top plastic bin, which is a good place to store it.

The scriber includes a non-marring plastic cover that fits over the shoe and prevents it from damaging finish surfaces. I use it nearly all of the time and recommend keeping some

extras around because they, too, are easily damaged. If you use the scale, remember to deduct $\frac{1}{32}$ inch for the thickness of the cover.

There are pros and cons to scribing with blades instead of pencils. Blades work best on painted and prefinished material, where the finely scribed line is easy to see. By breaking through the finished surface, the blades make it possible to cut to the line with a jigsaw without having to worry that the finish will flake off.

However, the Thingamejig is not the best choice for scribing unfinished wood because the finely scribed line is hard to see. It also can't be used around moldings and rough surfaces such as stone. I use this tool when scribing to straight, smooth, and flowing surfaces—as when fitting countertops, cabinet fillers, and moldings to ceilings, walls, and floors.

You can order the tool from the website for \$74.95. A set of replacement cutters costs \$14.95.

Brian Way owns B.P. Way Millwork Installations, in Northford, Conn.



Thingamejig

Country of origin: China

Web price: \$69.97

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18-Volt Cordless Angle Grinders

Look for a tool with good handling that's strong enough for real grinding and cut-off tasks

BY MICHAEL SPRINGER

An angle grinder probably isn't the first cordless tool you'll buy, but one of the current models can make a useful addition to a tradesman's off-the-grid arsenal. Like 18-volt recip saws and rotary hammers, these grinders won't come close to replacing a corded version for all-day use, but most of them proved capable enough to have around for average jobs or for whenever the ease and convenience of cordless grinding and cutting is preferred.

As a way to lower users' expectations of how much work

they could get out of these typically underpowered tools, some manufacturers used to refer to their cordless tools as cut-off tools, instead of grinders. But better motors and batteries have made the latest models good enough to be called grinders by every brand. A few are still best suited for light-duty work, but to my surprise, most of these tools are real go-getters, capable of making the sparks fly during rigorous grinding work ... for a short while at least.

I chose the kit form of the grinders (with batteries,

charger, and case) where I had the option. All are available a la carte as add-on tools, but some are sold only that way.

To determine each tool's mettle on metal, I made countless cuts and ground away lots of steel. I chose grade 40, #4 rebar for the competitive trials. Besides being a familiar material to builders and remodelers, rebar is made very uniformly to government specs. Its carbon steel is tougher than mild steels used in general fabrication work.

To keep things even, I used identical 4 ½-inch cut-off and grinding wheels from Norton in all of the grinders, even though some of the tools will fit 5-inch wheels.

The tools also spent time in a professional welding and fabrication shop in the skilled hands of grinding maestros; craftsmen who wield an angle grinder with the ease and grace of a conductor's baton. These guys gave me great feedback regarding the finesse and ergonomics of these grinders. When fabricators need to remove a lot of metal in the shop, they typically grab a larger grinder, but smaller models like the ones in the test spend much of the day in their hands, blending and finishing surfaces before and after each weld they make.

GRINDER USES

The average building contractor may not spend the day with an angle grinder in hand, but for many uses, they are arguably the best tool for the job. Besides the obvious metal cutting and grinding uses, there are other tasks for which a grinder could be your go-to tool.

Any time you have to cut or smooth metal against concrete or masonry, a disposable abrasive wheel has a real edge over toothed cutting blades that can easily be dulled or damaged. Cutting off misplaced rebar or anchor bolts flush to a foundation wall or grinding the stubs of concrete-form ties are good jobs for small grinders on site. For masonry itself, smoothing ridges left on concrete walls from form seams, demoing tile walls—backerboard and all—or slicing through plaster or stucco without ripping out the expanded metal lath are all great uses. In addition, during remodeling jobs, a grinder fitted with a thin cut-off wheel may be the smoothest way to cut neatly through mudded-in corner bead without tearing it from the drywall.

FEATURES

At minimum, each grinder comes with a side handle, adjustable guard, and wheel attachment wrench, but some of the tools include a few extra accessories. Every brand has a switch circuit that protects the user against accidental startup. If you put the battery in with the switch turned on, the tool won't run until the switch is turned off first, then turned back on.

Despite the relative simplicity of angle grinders, there are beneficial features that stood out during the testing:

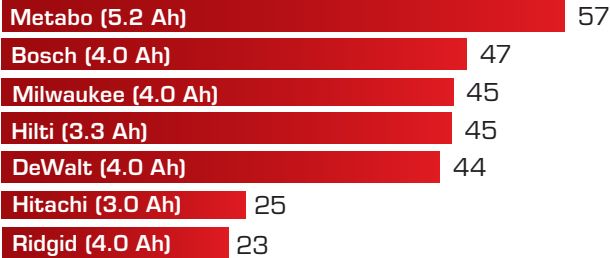
- Grinder guards that do not require tools to attach or

TEST RESULTS

During testing, materials to be cut and ground were secured in a vise and supported along their length to minimize vibration. Identical new 4 ½ inch cutting or grinding wheels were installed on each tool prior to each test.

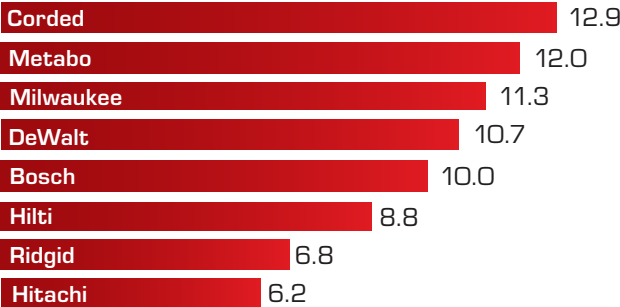
RUNTIME

Number of cuts through ½-inch rebar on a fully charged battery. Tested with Norton RightCut Type 1 cut-off wheels, .040-inch thick.



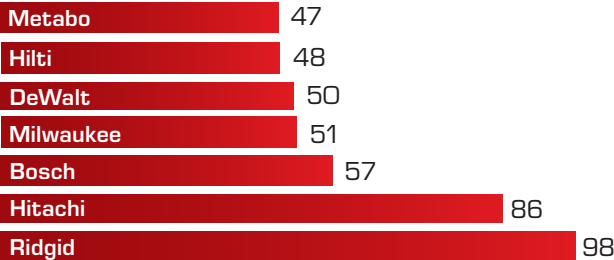
GRINDING SPEED

Grams of steel removed per minute during two, 2-minute trials of heavy grinding on a fully charged battery. Tested on rebar with Norton Gemini Type 27 grinding wheels. A corded model was included as a point of reference.



CUTTING SPEED

Time in seconds to make 10 cuts non-stop through ½-inch rebar on a fully charged battery. Tested with Norton RightCut Type 1 cut-off wheels, .040-inch thick.



18-VOLT CORDLESS GRINDERS

reposition are the key to efficient guard-adjusting.

- Each tool comes with an open-bottom (Type 27) grinder guard, but models that also include an enclosed-bottom (Type 1) cut-off-wheel guard add to their utility and safety while cutting.
- All of the tools have spindle lock buttons that let you tighten wheels with just one wrench, and a few of the tools have tool-free options for removing and even attaching wheels.
- Grinders with lock-on switches allow more freedom of movement and create less fatigue than those with a paddle switch or trigger that must be held on.
- The grinders that fit 5-inch wheels allow you to use longer-lasting cut-off wheels, however, the extra torque required for grinding with a larger wheel may sap the tool's strength.
- Grinders with motor brakes increase productivity because you can set the tool down immediately after use, instead of waiting for the wheel to stop.
- While it was hard to detect the exact benefit in use, two of the top models feature high-tech brushless motors with electronic instead of brushed commutation designed for high-efficiency operation.

THE BOTTOM LINE

Once the flying sparks had bounced their last, the grinding swarf had all settled, and the hot steel had cooled, I had to admit that I was quite impressed by the performance of these 18-volt cordless angle grinders. Of course, like many cordless tools, the minutes of actual runtime under a decent load can be counted on one hand, but when you consider that equals about 45 cuts through #4 rebar, it's a respectable amount of work. All of the tools could do the light grinding of finishing work such as smoothing welds and putting a radius on sharp corners, but when pushed harder, the more powerful tools proved their worth for serious grinding and cutting.

The Metabo takes the top spot, as it won every single power, speed, and runtime test. It also has advanced features. In the No. 2 spot is the Milwaukee, with a great combination of power when it counts the most and many advanced features. Great performances by Bosch and Hilti have them sharing third, and the powerful yet clumsy DeWalt follows. The light-duty Hitachi was a comfort standout, especially for finish work, but is really not in the same class as the more powerful tools above. The Ridgid trailed behind all with its timid output, doomed by a load limiter set too far below the level of work a cordless grinder needs to do.

Thanks to Norton Abrasives for the grinding and cut-off wheels used for the test and to the guys at Longmont Welding, in Longmont, Colo., for their contributions.



Bosch CAG180-01

Battery: 18 volts, 4.0 Ah

Battery gauge: 3 bars, on battery

Weight: 5.1 pounds

RPM: 10,000

Switch type: lock-on slider switch

Guard: 4 ½-inch grinder guard, 4 ½-inch cut-off wheel guard

Guard adjustment: requires hex wrench (stored onboard tool)

Web price: kit \$399; bare tool \$125

Includes: tool, 2 batteries, charger, cut-off guard, wheel wrench, fabric duffel bag

Country of origin: tool: Germany; battery: Malaysia

Comments: Solid third-place tool with great runtime and a light, agile form, but it slows under load more than the top two.

Pros: Separate grinder and cut-off guards; small switch positioned to the side keeps it well out of the way; slender body easy to grip.

Cons: A hex wrench is required to adjust the guard, which slows down the process.



DeWalt DCG412M2

Battery: 18 volts, 4.0 Ah
Battery gauge: 3 bars, on battery
Weight: 6.3 pounds
RPM: 7,000
Switch type: trigger

Guard: 5-inch grinder guard, 5-inch cutoff wheel guard
Guard adjustment: tool free
Web price: kit \$299; bare tool \$119
Includes: tool, 2 batteries, charger, cut-off guard, wrench, fabric duffel bag
Country of origin: tool: Mexico; battery: Japan

Comments: A strong tool that gets extra torque from its slower motor, but its bulky rear handle with a trigger is not preferred over a standard grinder design.
Pros: Separate grinder and cut-off guards; 5-inch guards lets tool fit wider range of wheels.
Cons: Biggest and heaviest; bulky handle design; having to hold on to trigger adds fatigue and diminishes grip versatility; grip with handle way at the back makes it cumbersome, especially when following curves.



Hilti AG 500-A18

Battery: 21.6 volts, 3.3 Ah
Battery gauge: 4 bars, on battery
Weight: 6.1 pounds
RPM: 9,500
Switch type: paddle switch

Guard: 5-inch grinder guard, plastic cover for cut-off use
Guard adjustment: tool free
Other features: tool-free wheel nut; brushless motor, metric M14 shaft
Web price: kit \$559; bare tool \$329 (manufacturer's list price)
Includes: tool, 2 batteries, charger, cut-off guard cover, wrench, 25 cut-off wheels, fabric duffel bag
Country of origin: tool: China; battery: China

Comments: This fast cutter shares third place, but it's at its best when applied in short intervals; when pushed hard for very long its speed wavers under load.
Pros: Fast motor brake; cut-off guard cover plate snaps onto grinder guard without tools; 5-inch guard let tool fit wider range of wheels; nice wrench-free wheel nut can save time
Cons: Once motor speed dipped under load, it took a while with the pressure let up before the brushless motor found the top of its range again; this characteristic seemed to slow output more noticeably during longer periods of use; paddle switch only—would prefer a sliding switch.



Hitachi G18DSL P4

Battery: 18 volts, 3.0 Ah
Battery gauge: 2 bars, on tool
Weight: 5.0 pounds
RPM: 9,100
Switch type: lock-on slider switch

Guard: 4 1/2-inch grinder guard
Guard adjustment: requires screwdriver (not included)
Web price: bare tool \$90
Includes: tool, wrench
Country of origin: tool: China; battery: China

Comments: Light-duty tool with only modest power and runtime; outclassed by other tools in the test but its compact form was appreciated for lighter finishing work.
Pros: Light weight, good balance, and lots of rubber grip surfaces made this downsized tool a standout for one-handed finishing work.
Cons: Limited to light work; screwdriver is required to adjust the guard which slows down the process; unlike the others with multiple LEDs on the battery, has a more rudimentary fuel gauge with two LEDs on the tool itself; lacks cut-off guard.

18-VOLT CORDLESS GRINDERS



Metabo WP18LTX115

Battery: 18 volts, 5.2 Ah

Battery gauge: 4 bars, on battery

Weight: 5.5 pounds

RPM: 8,000

Switch type: paddle switch (lock-on slider switch model also available)

Guard: 4 1/2-inch grinder guard

Guard adjustment: tool free

Other features: rotating battery, removable filter screen, overload warning light

Web price: kit \$399; bare tool \$103.

Includes: tool, 2 batteries, charger, wrench, plastic case

Country of origin: tool: China; battery: Hungary

Comments: Firsts in every test really says it all; hands-down the best tool for serious cutting and grinding with powerful and predictable performance.

Pros: Unique rotating battery lets you optimize the tool's form and balance for different grinding and cutting positions; filter screen a nice extra for protecting the motor.

Cons: Would rather have the sliding-switch version (W18LTX115) rather than the paddle-switch version for ease of use; lacks cut-off guard.



Milwaukee Fuel M18 Brushless

Battery: 18 volts, 4.0 Ah

Battery gauge: 4 bars, on battery

Weight: 6.0 pounds

RPM: 8,500

Switch type: lock-on slider switch (paddle switch model also available)

Guard: 5-inch grinder guard, 5-inch cut-off wheel guard

Guard adjustment: tool free

Other features: rubber bushing in handle, removable filter screen, brushless motor

Web price: kit \$399; bare tool \$169.

Includes: tool, 2 batteries, charger, cutoff guard, wrench, spare filter, plastic case

Country of origin: tool: China; battery: Korea and China

Comments: Strong, smooth second-place tool. A real comfort standout. Comes with useful accessories and extras.

Pros: Fast motor brake; separate grinder and cut-off guards; 5-inch guards let tool fit wide range of wheels; rubber bushings on front handle and slender, rubber-covered rear handle provide a great feel in use; wheel nut can be removed without a wrench; filter screen protects motor.

Cons: Extra length can reduce maneuverability in some uses.



Ridgid R86040B

Battery: 18 volts, 4.0 Ah

Battery gauge: 4 bars, on battery

Weight: 5.5 pounds

RPM: 9,000

Switch type: lock-on slider switch

Guard: 4 1/2-inch grinder guard

Guard adjustment: tool free

Other features: overload warning light on tool, three-position handle

Web price: bare tool \$99

Includes: tool, wrench

Country of origin: tool: China; battery: China

Comments: Light-duty tool that stalls quickly and frequently under load due to its overprotective battery feedback circuit. This characteristic makes it frustrating to use and limits the tool to timid grinding and cutting uses only.

Pros: Balanced compact tool, but heavy.

Cons: Hair-trigger protective circuit shuts off tool before user feels or hears it slow; two distracting LEDs on tool caution the user to ease up, but they go on almost constantly; the limited amount of pressure you can apply to stay below the warning threshold is much less than with the other tools; lacks cut-off guard.



1 Size Wise. Sizes of the tools ranged from the 15 ½-inch-long DeWalt (on left) weighing 6.3 pounds to the 11 ⅝-inch-long, 5-pound Hitachi. A big part of the extra bulk of the DeWalt is the rear grip with its large D-shaped handle guard. Finish grinding—especially radius grinding on three-dimensional objects—is much easier with a small, maneuverable grinder such as the Hitachi or the Bosch or Ridgid. Such compact tools can even be used one-handed for light-duty grinding when your other hand is needed to steady the workpiece.

2 Tool-Free Guard. Ridgid's guard can be rotated to the desired position by simply using your thumb to push a spring-loaded lever that unlocks the guard. Tool-free guard adjustments also can be found on the DeWalt, Hilti, Metabo, and Milwaukee grinders.

3 Guard Adjustment Tools. The Hitachi (shown) and Bosch grinders both require the use of a tool to adjust their guards. The Hitachi needs a Phillips screwdriver, which is not included. The

Phillips-head machine screw is difficult to tighten solidly and in the rough environment at the front of an angle grinder, I think a slotted or hex head screw would be better for securing the guard. The Bosch uses a hex wrench, which stores in a rubber slot down by the battery, but leaving it there isn't recommended because it readily falls off. By having to stop and find a tool to adjust the guards, the extra hassle makes it less likely that a needed adjustment will be made.

4 Two Guard Types. The Bosch, DeWalt, and Milwaukee (shown) each come with two guards: a standard Type 27 grinder guard (on right in photo) and a more enclosed Type 1 cut-off wheel guard that provides greater personal protection in the event that a sharp cut-off wheel throws fragments into shrapnel at high speed. DeWalt, Hilti, and Milwaukee grinders all come with 5-inch guards, giving them the flexibility to be used with either 4 ½- or 5-inch accessories.

OTHER CHOICES

There are several other 18-volt cordless grinders that weren't included in the comparative test. Some were duplicates; Milwaukee has a paddle-switch version of its tool in the test, and Metabo has a lock-on switch version.

Notably absent, Makita is adding a new grinder to outperform its current light-duty offering, but a sample of its more powerful model wasn't yet available at the time of testing.

And a few are specialty models; Metabo

leads the cordless angle grinder count with at least five. Besides the two 4 ½-inch models already accounted for, there are two similar models that take 6-inch wheels. I think its primary use would be for cut-off uses because with a circumference ⅓ larger than a 4 ½-inch wheel, a 6-inch grinding wheel would require a lot of torque. The newest—and coolest—specialty cordless grinder by Metabo is the WF18LTX125 flat head grinder (shown). This unique-looking tool's claim



to fame is its low-profile head configuration that can reach into an acute angle as tight as 43 degrees to grind inside tight corners.

18-VOLT CORDLESS GRINDERS



5 Side Handles. Side handles for the grinders can be threaded into the right or left side of the tool, and in the case of the Ridgid, also in a third position straight up above the head of the tool. Some handles are perpendicular, such as the Milwaukee (left) or are steeply angled like the Bosch (right). Angled handles provide a wider grip stance but can get in the way at the front of the tool. I didn't have a preference, and in fact, the experts at the fabrication shop usually use the tools without front handles so they can grip the tool closer to the front to improve handling. The rubber bushing in the Milwaukee's handle noticeably isolates vibration from your hand.

6 Plastic Cover Guard. Instead of a dedicated cut-off wheel guard, the Hilti has a plastic cover that snaps over its 5-inch grinder guard.

7 Rotating Battery. Metabo's battery can be rotated and clicked into four positions, keeping it out of your way. Pointing the toe end sideways (as shown) lets you get closer to a flat surface. Pointing the toe end down keeps it from bumping into your arm.

8 Filter Screens. Removable filter screens on the Metabo (shown) and the Milwaukee models keep abrasive particles from getting sucked into the motor windings. The screen can

be removed for maximum air flow or cleaning. The Milwaukee comes with a spare replacement screen.

9 Switch. There are three types of grinder switches. The trigger switch on the DeWalt (left) can be locked off but not locked on so it offers the least amount of grip flexibility. DeWalt's handle provides knuckle protection, but because you have to hold the trigger on, you can't move your rear hand to choke up for a different grip. Having your hand stuck at the back of the grinder (plus its extra length) costs the tool some maneuverability. Bosch, (center), Hitachi, Milwaukee, and Ridgid feature lock-on slider switches. These offer the best freedom of motion for both the tool and your hand position. But if the grinder were ever to get away from you while running, look out! The Metabo (right) and Hilti have paddle switches, also called a "dead man switch" because if you let go of the tool, it stops. There's a safety lever that must be pushed for the switch to work to prevent the tool from turning on if it's set down on its trigger. Once on, you can move your hand around somewhat as long as it's still holding down the switch, so it is possible to choke up on the tool to shift your grip forward.

Michael Springer is the former executive editor of TOOLS OF THE TRADE.



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Editors' Choice

Our top picks for innovative new tools

1 RYOBI P320 CORDLESS BRAD NAILER AND P360 NARROW-CROWN STAPLER

The attractively priced cordless brad nailer, part of Ryobi's One+ 18 Volt lineup, fires 18-gauge fasteners $\frac{5}{8}$ inch to 2 inches long. Including the battery, the tool weighs just 6 pounds. Among its features are a tool-free adjustment for depth of drive, a dry-fire lockout, an LED light to illuminate the work area, and a toggle switch for shifting between single-shot and bump-fire operation. The narrow crown stapler, which fires $\frac{3}{8}$ -inch to $1\frac{1}{2}$ -inch narrow-crown staples, has many of the same features as the brad nailer. Sold without batteries, the stapler costs \$139 and the brad nailer is \$129. Ryobi tools are sold only at The Home Depot.

Ryobi Power Tools, 800.525.2579, ryobitools.com

2 MILWAUKEE CORDLESS RECIP SAW

Five years ago, reciprocating saws powered by lithium-ion batteries were only marginally prepared for the real-world rigors of a jobsite. That's no longer the case. Milwaukee's 2720 18-volt Fuel cordless reciprocating saw was the overall winner of our recent test. It was able to take as much pressure as the operator could dish out without bogging down, and showed only medium vibration. Its rounded-over profile is hand-friendly and easy to grip. The Quik-Lok clamp makes blade changes a snap, and the saw is equipped with an LED lamp.

The saw is guaranteed for five years; the batteries for three. The online price for the saw in a one-battery kit is about \$300; purchased bare it's about \$200. Milwaukee, 800.729.3878, milwaukeeetool.com

3 HANDIBOT PORTABLE CNC MACHINE

CNC machines are fixtures in many machine and mill shops but Handibot is the first one designed to be taken into the field. The 40-pound tool cuts or carves in a field 6 inches by 8 inches by $3\frac{1}{4}$ inches deep, but with an accessory track, the Handibot also can be used to cut stair stringers or complicated rafter tails. You'll need your own PC or tablet running Windows, but the company promises



that the software is easy to use. The tool comes with a DeWalt variable-speed router and several bits and costs \$2,795. ShopBot Tools, 888.680.4466, handibot.com

4 BOSCH CORDLESS IMPACT DRIVER/WRENCH

This 18-volt cordless impact driver accepts both ½-inch sockets and ¼-inch hex-drive bits so you can leave your socket adapter at home. The impact driver/wrench uses brushless motor technology and has three speed/torque settings. Bosch says that the tool delivers up to 1,650 inch-pounds of torque; when used as an impact wrench, it has enough oomph to sink a ¾-inch-by-6-inch lag in hardwood. Three LED lights illuminate the work area. Kits come in two versions: model IDH182-01L with two 4-amp-hour batteries, a charger, and case for \$330; or the IDH182-02L that comes with two 2-amp-hour batteries, charger, and case for \$280. You can also buy the bare tool and case, model IDH182BL, for \$200. Bosch, 877.267.2499, boschtools.com

5 DEWALT JOBSITE TABLE SAW

DeWalt's model DWE7491RS is the largest of three table saws introduced in 2013, and it comes with a number of improvements over earlier models. Chief among them is a wheeled stand that is hard to tip over, yet folds up easily. The saw has a 32 ½-inch rip capacity, and its 15-amp motor handles a 10-inch blade or a stack dado up to 1 3/16 inch wide. An upgraded model, DWE7499GD, is nearly identical but comes with what DeWalt calls a "guard detect" system, making the saw a little harder to use without the guard in place. If you want this safety feature, expect to pay about \$750; the saw without it costs \$600. DeWalt, 800.433.9258, dewalt.com

6 FEIN ASCM 18-VOLT DRILL DRIVER

The ASCM 18QX is part of a new series of cordless tools from Fein that also includes a hammer drill/driver, an impact driver, and an impact wrench. This drill/driver has four geared speeds and can spin at speeds up to 3,850 rpm—nearly twice as

fast as most cordless drills—with a maximum torque of 796 inch-pounds. Like Metabo and Festool, the ASCM 18QX has a removable chuck and bit holder, although the company doesn't currently offer a right-angle chuck. Torque settings are electronic, and Fein says that the motor and electronics are completely dust-proof. Lithium-ion batteries are available in 2-amp-hour and 4-amp-hour versions. A kit with two 4-amp-hour batteries, charger, side handle, and case lists for \$538. Fein Power Tools, 800.441.9878, fein.us.com

7 KNAACK JOBSITE CHEST WITH JUNK TRUNK

Chuck everything into a single-compartment job box and your small or delicate tools may be gone for good. Knaack's answer to this all-too-common problem is a shallow drawer at the bottom of the case in its 4830-D Jobsite Chest. The drawer not only lets you keep small items out of the main storage compartment, but it also raises the floor of the main box so you don't have to bend as low



to reach to the bottom. The lid for the top of the box and the drawer can be locked (and keyed) separately, making it possible to control access to different types of tools. The box measures 48 inches high by 30 inches wide by 35 inches long and has a capacity of 17 cubic feet. The drawer is 5 inches tall. The chest lists for \$798. Knaack, 800.456.7865, knaack.com

8 MAKITA DUAL-BATTERY CIRCULAR SAW

The XSH01 is the first cordless tool to be designed from the start to run on a pair of 18-volt batteries, so the adapter that was required on the earlier X2 line isn't needed. Makita says that the 36-volt saw has enough power to allow carpenters to go completely cordless. It will make 205 cuts through 2-inch by 11 3/4-inch melapi (a type of soft luan lumber) on a single charge, Makita says. It also takes a 7 1/4-inch blade, a step up from the 6 1/2-inch blades typical on cordless circular saws, and it bevels



up to 50 degrees. The saw is sold bare and costs \$229. Makita, 800.462.5482, makitatools.com

9 Senco 21-GAUGE PIN NAILER

Carpenters are getting onboard with this intermediate-size pin: It grabs much better than 23-gauge fasteners and it leaves a smaller, less obvious entry divot than an 18-gauge brad does. Senco's FinishPro 21LXP shoots 21-gauge headless and slight-head pins in lengths from 5/8 inch to 2 inches. The magazine automatically adjusts for fasteners of different lengths. Other features include a last-nail lockout that prevents dry-firing, a reversible belt hook, and a narrow nose for getting into tight spots. The 2.7-pound tool also has both a wrench to clear nail jams and an extra nose pad stored onboard. Introduced this spring, the Senco sells for \$250. A case is included. Senco, 800.543.4596, senco.com.



10 BATTERY-HEATED JACKETS

Until this winning idea was pioneered by Milwaukee, working outside in cold weather meant a choice between bundling up in thick layers that could make it difficult to move around or just being miserable. Now you plug a cordless tool battery into one of these specialized jackets and go about your business in comfort, if not in style. jackets are now offered by a number of additional major tool brands, including Bosch, DeWalt, Ridgid, and Makita. Some of them can be powered by more than one size of battery. DeWalt's version, for example, can run on either its 12-volt or a 20-volt Max battery and is available in four styles. Makita's jackets are matched to specific battery sizes, 12 volts or 14.4/18 volts; versions from other manufacturers may run on 12-volt batteries only. Milwaukee offers fleece-lined side pockets and also has a hoodie. Runtimes on low seem to average about 5 or 6 hours, and prices range from about \$130 to \$230, depending on the manufacturer.

Bernard Jester, Assoc. AIA
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Installer's Toolkit for Low-Voltage Wiring

Keep all the tools you'll need in one large bag, and everything will be close at hand

BY VICTOR RASILLA

When I first started running residential construction jobs, the electricians I dealt with didn't do low-voltage wiring, so I would find myself scrambling to line up a phone-installation guy before I could close in the walls. I researched the low-voltage items that normally go into our projects (telephones, doorbells, intercoms, speakers, and basic home networking) and found that the necessary tools and skills were easily acquired. Many of the tools I use are specialty items that are relatively pricey—around \$800 for everything listed here—but they pay for themselves after a few jobs.

While you can find many of the tools at a big-box store or your local electrical supply house, if you don't need them immediately, shopping online may be less expensive, especially if you combine shipping from a single source.



1 EVERYTHING YOU NEED IN A SINGLE BAG

Low-voltage wiring requires a specific set of tools, and I keep them all in a single bag. That way, when I get to the job, everything I need is in one easily accessible kit. I've set up similar bags for other specialized tasks. Sure, there are some duplicate tools in the different bags, but that's better than having to run out in the middle of a job to buy a tool I forgot to bring.

2 IDEAL DATA T CUTTER

I use this cable cutter specifically for cutting coaxial cable. Its rounded jaw helps leave the cut end of the cable in better shape for an accurate strip with the coaxial strippers.idealindustries.com, 800.435.0705, average online price: \$17

3 KLEIN TOOLS 11057 WIRE STRIPPERS

These strippers are just like any other strippers you might carry, except they strip the smaller-gauge wires normally associated with datacom work. They work with 22-32 AWG Stranded and 20-30 AWG Solid (cat5e wire is 24ga solid). kleintools.com, 800.553.4876, average online price: \$16

4 FLUKE NETWORKS PRO3000 PROBE AND TONE GENERATOR KIT

This is my favorite tool in the kit. I can connect the tone generator to the end of a wire (with alligator clips or by plugging it into a RJ45 jack) and use the probe (the pen-like device) to get a rough idea of where the wire runs inside the wall. The probe will emit a tone when it gets close the wire's location. Hearing a tone is handy if the drywallers have covered up

some electrical boxes by accident. You can identify a wire in a remote location by connecting the tone generator to one end of the cable and then passing the probe over the other end. The probe will emit a distinct tone when its tip is at the correct wire. flukenetworks.com, 800.283.5853, average online price: \$65

5 FLUKE NETWORKS D914S PUNCH-DOWN TOOL

When you connect wires to jacks or terminal blocks you punch them down between a pair of bars that slice through the sheathing and make electrical contact. If you buy a blister pack of data-jack ends at a big-box store, the package will include a little plastic punch-down tool. That free tool is nothing like this one. Sometimes I really need to give it some pressure, and the larger handle is more manageable. The business end that you see in the

LOW-VOLTAGE-WIRING TOOLKIT



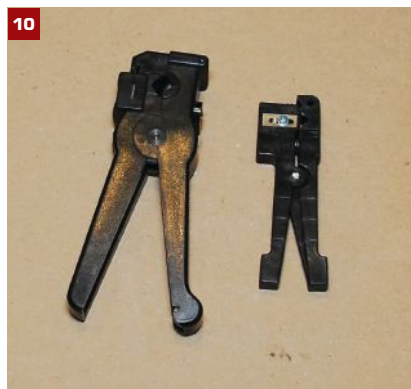
photo stores in the butt of the handle to keep it protected when stowed in your bag. I like that the tool is spring-loaded and automatically trims the wire (to length) when you punch it down. flukenetworks.com, 800.283.5853, average online price: \$77

6 IDEAL OMNISEAL COMPRESSION TOOL

I use this compression tool for installing F style connectors to the ends of coaxial cable (such as for cable TV). I never use the twist or crimp style ends, as they can interfere with the cable's shield at the cut end and cause slight noise and signal leaking, plus it's easy for them to pull off the end of the cable. idealindustries.com, 800.435.0705, average online price: \$65

7 IDEAL F STYLE COAXIAL DRIVER TOOL

The butt end of this driver is used for pushing on the compression



style F connectors, and then after they are compressed, the front nut driver can tighten the connector after it's been threaded on to the post you're attaching it to. It will accommodate BNC and TNC connectors. idealindustries.com, 800.435.0705, average online price: \$23

8 DYMO RHINOPRO 5200 LABELER

Nothing makes a job look more professional than a neatly labeled panel or wires. I did quite a bit of research before deciding on a Rhino PRO 5000 labeler, a midrange model with functions and symbols specific to datacom and electrical applications.

This particular model has been discontinued and replaced by the similar Rhino Industrial 5200. The label is printed vertically in succession, so it can be read from any side, then you wrap it around the wire. When I remove the temporary masking tape labels we use



from each jack location, I put on the wire wrap labels in the network panel. I also label the regular circuit breaker panel with it if the stickers that came with the panel got lost (as they often do) before the end of the job. It can be problematic to find the labeler's ink cartridges in stores, so I buy them online and make a point to keep a good assortment of them on hand. dymo.com/en-US, 877.289.3966, average online price: \$125

9 IDEAL RATCHET TELEMMASTER

After removing the jacket from data wire and sorting the wire pairs, I use this tool to trim the wires to length and crimp RJ45 or RJ11 terminations onto them. It's a matter of poking the wire into the back of the jack (the termination) and using the ratcheting action of the handles to crimp it on. When you squeeze the handles, pins in the Telemaster drive the knife bars in the termination into the wires so electrical connections are made.



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idealindustries.com, 800.435.0705,
average online price \$45

10 IDEAL COAX & TWISTED-PAIR DATA WIRE STRIPPERS

These Ideal brand coaxial-cable and twisted-pair data cable wire strippers allow me to install terminations quickly and efficiently at cable/data panels or at jack locations. Twisted-pair data cable is typically category 5e or 6. The data cable stripper works to strip the outer sheathing off the cable, so you can untwist and work with the individual wire for punch-down jacks or line up your wires to insert into an RJ45 (ethernet) or RJ11 (phone) jack before crimping it on with another tool. The coaxial strippers have multiple sets of blades at different depths to strip both the inner and outer shields simultaneously. These handy little strippers can be found at most major building and hardware supply stores.

idealindustries.com, 800.435.0705;
online prices vary from \$35 to \$50,
depending on model

11 IDEAL VDV MULTIMEDIA TESTER

VDV stands for voice, data, video. This is a great little tester for toning out (sending a tone down a cable so you can locate or identify it) coaxial and data cables. Unlike the probe tool, this tester connects to the terminations (RJ11 or RJ45) and gives you a read on whether you got the connections right when you installed the jacks. Basically, it tells you if any of the connections are open (bad) or if you reversed a pair of wires when you made the connection. idealindustries.com, 800.435.0705, online average price: \$75

12 LEFTOVER SCREWS & PATCH CABLES

If I have leftover screws from a job and I need to replenish my kit, I'll

throw them in a little zipper pouch. Inevitably, a panel will have a missing screw, or I'll drop one and it bounces into outer (or inner) space and I can't ever find it. I use the short patch-panel cables when I'm testing connections.

13 & 14 LOW-VOLTAGE INSTALLATION BAG

I recently switched bags and moved my low-voltage tools to a Veto Pro Pak bag, model LC. It has a five-year warranty, 57 pockets and compartments, is reasonably protective, and is sized to hold what I need. The dimensions are 19 inches by 13.5 inches by 9.5 inches (HxLxW—13 inches high with the handle folded down). vetopropac.com, 877.847.1443, retail price: \$160

Victor Rasilla is a general contractor in the San Francisco Bay Area and the owner of VRGC.

A photograph of a middle-aged couple smiling and embracing. The woman is in the foreground, leaning over the man's shoulder. They are both smiling warmly at the camera. The background is a soft, out-of-focus indoor setting.

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Product Watch

BY DOUG MAHONEY

ARROW PT50

Arrow's first pneumatic stapler, the PT50, is a nice alternative to a hammer tacker or staple gun. The small tool, about the size of a pinner, has a rubber grip, an adjustable exhaust, and a probe tip to prevent accidental firing. For fast operation, the stapler has bump fire capability. It can handle all sizes of heavy-duty T-50 Arrow staples and comes with a case. Price: \$50 / COO: China / arrowfastener.com



GERBER ARTIFACT

For something so small, the Gerber Artifact has quite a few uses. The tiny pocket tool (1 ½ ounces) contains a replaceable razor blade, a mini pry bar, and a bottle opener. There is also a Phillips screwdriver and two sizes of slot-head drivers. The tool has a lanyard for attaching to a keychain. It might not be a primary tool, but it could certainly help out in a crawl space. Price: \$12 / COO: China / gerbergear.com



RIDGID COMPACT FRAMING SAW

Ridgid's updated R3204 6 ½-inch compact framing saw offers power and capabilities a framer needs, minus some of the weight and size. Even with the smaller blade, the 8-pound saw can make a 45-degree cut through 2-by stock. Kerf marks at the front and back of the magnesium footplate help with accuracy, and the blower keeps the cutline clear of sawdust. The 12-amp motor spins the blade at 6,100 rpm. The redesigned handle cuts back on "wrist arch," according to the manufacturer. The handle is positioned as far down the back as possible, much like on a worm-drive saw. This design permits more of a pushing-through-the-stock motion versus pulling. Price: \$100 / COO: China / ridgid.com



WERNER PODIUM LADDER

The Werner Podium Ladder looks a lot like a traditional stepladder, but the top step is a 16-inch-by-20-inch standing platform, complete with a partial wrap-around guardrail and toe guard. The platform lets you safely work facing any direction, and the front of the guardrail has a tray, two magnetic spots for storing gear, and a place to put a drill and a couple of screwdrivers. The fiberglass ladder has a 1A rating with a 300-pound-load limit. For added stability, the ladder has oversized footpads. It's available in five sizes, ranging from 5 feet to 12 feet. Price: \$120 to \$300, depending on size / COO: Mexico / us.wernerco.com



GENERAL TOOL PALMSCOPE

The General Tool Palmscope inspection scope measures 5 ½ inches by 3 inches. Its 2-foot probe wand has four LEDs at the end to light up any nook or cranny. The simple interface lets you control the brightness of the LEDs, flip the image 180 degrees, and zoom up to 4x. A rubber housing protects the tool from drops of almost 3 feet, 6 inches, according to the manufacturer. The unit comes with a nylon pouch and four accessories for the probe tip (pickup hook, magnetic pickup, 90-degree mirror, and thread protector). **Price: \$150 / COO: China / generaltools.com**



LEICA DISTO E7100i

The Leica Disto E7100i is a small distance-measuring laser capable of recording distances of up to 200 feet (in feet, meters, or inches) and calculating area. The unit can then send dimensions to your cell phone or tablet via a Bluetooth connection so you can create a floor plan or sketch with a free Leica app. The compact tool weighs just over 3 ounces and measures less than 5 inches by 2 inches. It comes with a removable pocket clip for easy storage and is splash- and dust-proof, according to the manufacturer. **Price: \$150 / COO: Hungary / disto.leica-geosystems.us**



KLEIN VELCRO TOP LEATHER BOTTOM BUCKET

It's tough to overestimate the usefulness of a good, solid canvas bag. Even though Klein's 5014VT Velcro Top Leather Bottom Bucket is designed with the professional lineman in mind, it can be useful for any trade. The bag, made out of thick canvas, has a leather-reinforced bottom and a high-density polyethylene rim for rigidity. The top attaches with Velcro and has attachment loops for more gear. The bag is rated for 100 pounds. **Price: \$90 / COO: U.S. / kleintools.com**



HILTI PR 2-HS ROTATING LASER

Hilti's new PR 2-HS is a multipurpose rotating laser designed to withstand the brutal conditions of exterior use. Due to a shock-absorbing casing, the laser can handle drops from standard tripod height. It is also dust-tight and water-resistant. In bright light, a separate sensor can pick up the laser's beam 1,000 feet away from the base unit. The rechargeable lithium-ion battery powers the laser for up to 30 hours per charge, according to the manufacturer. Hilti offers two free calibrations during the first two years of ownership. **Price: \$1,450 / COO: Germany / us.hilti.com**





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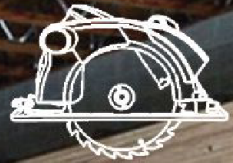
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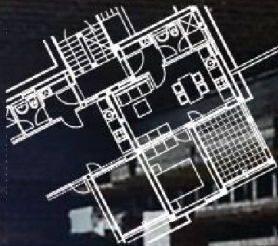
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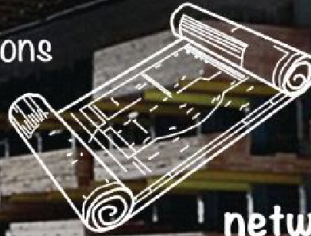


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DIABLO PERGO BLADE

Because of the abrasive nature of its upper layer, laminate flooring is tough on saw blades. Diablo's new thin-kerf Pergo Blade is the first saw blade specifically made for Pergo and other laminate flooring. Approved by the Pergo brand, the blade has polycrystalline diamond teeth that offer 75 times the cutting performance when used with a chop saw, compared with a carbide-tipped saw blade, according to the manufacturer. A nonstick coating works against gumming and heat build-up, and the blade design has both anti-kickback and anti-vibration features for increased cutting precision. **Price: \$165 (10-inch), \$200 (12-inch) / COO: Italy / diablotools.com**

BOSCH SEALANT KNIFE

Bosch's Sealant Knife accessory is designed to be used with an oscillating tool to cut through thick beads of silicone and urethane sealant. The 3-inch blade cuts along an edge or makes a plunge cut. Because of the versatility of the oscillating tool interface, the blade can be positioned at any angle, making it appropriate for corners and other tight spots. The thickness of the blade keeps it rigid during cuts, and it can be sharpened. It is compatible with the Bosch OIS interface system, and the maker says it works with most other oscillating tools.

Price: \$30 / COO: Switzerland / boschtools.com



DEWALT 20-VOLT AREA LIGHT

DeWalt's new DCL050 20-volt cordless area light can be placed on a flat surface or gripped by the molded handle. Also, an included hook allows the light to be hung from 2-by stock. To provide a full range of lighting, the upper lamp section can pivot 140 degrees up or down. The three-LED light has two brightness settings (250 and 500 lumens), and a fully charged battery powers the tool for up to 17 hours, according to the manufacturer. Battery and charger not included. **Price: \$70 (tool only) / COO: China / dewalt.com**

WORX AEROCART

The Worx Aerocart may look like just a 3-cubic-foot-capacity wheelbarrow, but it has hidden capabilities. A metal plate folds down to transform it into a handcart. Accessories increase its utility: A cylinder holder assists with carrying water bottles and propane tanks; a strap secures objects to the cart; and extension arms (similar to forklift tines) extend the footprint of the dolly, making it easy to move appliances or heavy bagged goods. The Worx is rated for a 300-pound load, and its two-wheel design adds stability, particularly when it's used as a wheelbarrow. At 22 inches wide, it can fit through almost any door. The powder-coated frame won't rust, according to the manufacturer. **Price: \$160 / COO: China / worx.com**



MAKITA CYCLONIC CANISTER VACUUM

Makita's new DCL500Z Cyclonic Canister Vacuum is a compact clean-up tool powered by the company's 18-volt battery. Weighing less than 10 pounds, the two-speed vac has an LED that indicates a low battery or a clogged filter, and the telescoping wand is capable of a 40-inch reach. The Makita can be moved around on its wheels or carried with a shoulder strap. A single charge gives the tool up to 30 minutes of continuous run time, according to the manufacturer. Included are a floor nozzle, a crevice tool, and a cleaning brush. Battery and charger not included. Price: \$300 (tool only) / COO: China / makitatools.com



SPECTRA PRECISION LT56 THREE-LINE LASER

Trimble's new Spectra Precision LT56 three-line laser (one horizontal, two vertical) offers durability and ease of use. Designed with a rubber overmold, the LT56 can withstand a 3-foot drop, according to the manufacturer. The included universal mount has vertical and horizontal adjustments for fine-tuning, and the laser can be coupled with the Spectra HR220 receiver (not included) for outdoor operation. The unit is powered by a rechargeable lithium-ion battery that gives the tool anywhere from 25 to 50 hours on a charge, depending on how many beams are used. Price: \$500 / COO: China / spectralasers.com



STONEBREAKER JOURNEYMAN GLOVES

Made of synthetics and leather, StoneBreaker's Journeyman gloves are both durable and comfortable. The shell consists of 22 separate pieces so the leather conforms to the hand and won't bunch up at the palm. A synthetic back gives a snug fit and breathability. Several high-use areas are reinforced with leather patches. Price: \$32 / COO: China / stone-breaker.com



WISS FLIP JOINT

The unusual Wiss Flip Joint combines implements for three standard electrical tasks in a single tool: cutting plastic insulated wire, slicing the sheath, and stripping the wires. First, the induction-hardened cutting jaws can handle vinyl-coated cable up to 10/3. Then, once the cable is cut, flip the handles all the way around to expose a cutting edge that slices the sheath. Lastly, flip the handles back and use the wire strippers to complete the process. The 8-inch tool comes with nonslip plastic-dipped handles. Price: \$22 / COO: Taiwan / wisstool.com





MILWAUKEE CORDLESS KNOCKOUT SYSTEM

Milwaukee's new cordless M18 10-ton knockout kit uses hydraulics to punch ½-inch to 4-inch holes in up to 12-gauge stainless steel. Because the punch and die (complete with laser-engraved crosshairs) can be aligned without the tool attached, set-up is easy. The tool then uses a quick-connect system to grab on and punch the hole. The Milwaukee punches and dies are compatible with both mild and stainless steel. The tool is available in a basic set (no punches and dies) or in sets with the accessories. A full selection of punches and dies is available separately. Price: \$1,300 to \$2,000, depending on kit / COO: China / milwaukeetool.com



HYDE 17-IN-1 PAINTER'S MULTI TOOL

Hyde's new 17-in-1 Painter's Multi Tool can be used to scrape paint, pull nails, apply putty, open cans and bottles, clean large and small rollers, and gouge out a crack in wood or a wall. Along the edges are two wrenches in sizes (¾ and 1 1/16) common to spray hose connections; four screwdriver bits and a nail set are hidden in the handle. The metal cap at the base of the handle acts as a hammer. The stainless blade won't rust, and the tool is guaranteed forever, the manufacturer says. Price: \$12 / COO: China / hydetools.com



SPYDER SKELETON JIGSAW BLADES

The cut-out sections along the length of Spyder's Skeleton jigsaw blade disperse heat, keeping the blade cooler during cuts. The distinctive tooth design cuts on both the up and down stroke. This makes for faster work and, because the blade is always in contact with the wood, straighter cuts. Available in both 10 and 12 TPI (teeth per inch) in U-shank and T-shank designs. Price: \$6 (two-pack) / COO: Germany / spyderproducts.com

MAG RING

The Mag Ring, made by Jack Rabbit Tool Co., can magnetize any ¼-inch driver bit, nut driver, hex wrench, or screwdriver. Three neodymium magnets arranged in a ring of brass hold the item in place and transfer the magnets' force to the bit. According to the manufacturer, the holding power is three times stronger than that of other similar devices. Price: \$10 / COO: Taiwan / jackrabbittool.com



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Tool Hounds

BY JEFFERSON KOLLE



Handmade Hammers

Brent Bailey figures he has made more than 16,800 hammers at his forge in Orland, Calif., along with lots of other woodworking and blacksmithing tools. When he was in his 30s, he asked one of the hands at his father's ranch to show him how to use an old Lincoln welder and a torch in one of the outbuildings. After a half-hour lesson, Bailey, now 44 years old, was on his way to a new career.

His claw hammers are tools of beauty and utility. Many customers, he says, focus on the beauty and never use them for their intended tasks. When he has asked customers for feedback, "lots of guys have told me that they've never even hammered the first nail," he says. "They get them and put them on the mantle as a display piece."

It takes Bailey about 2½ hours to make a claw hammer, and that includes the time to shape the hickory handle. After heating an ingot of steel in a coal-fired forge, he punches out the handle's eye, then forms the head with a plain or checkered face. The claws, straight or curved, are formed with a chisel. Heat treating comes next. The process

involves heating the steel until it turns a bright orange, then dousing it in water or oil. Finally, the hammer head is dressed and polished.

Bailey can make a hammer head in any weight up to 2½ pounds. His hammers come with a lifetime warranty, excluding the handle. He also makes wood chisels and drifts, and he welcomes custom orders.

A Brent Bailey hammer costs \$135, and his lead time is about three weeks from the time an order is placed. With every hammer ordered, he includes an American-flag key fob complete with all 50 stars, formed using a special punch. He also sends along a hand-forged bottle opener. So even if you decide just to display your new hammer on your mantle, you'll probably figure out a good use for the bottle opener after work.

brentbaileyforge.com, 530.865.4176

Jefferson Kolle is a writer and editor in Bethel, Conn.

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