Brushless 18-Volt Angle Grinder

BY PAUL JOHNSON

A couple of years ago, I bought a Makita 18-volt model XAG01 4 ½-inch angle grinder as a bare tool to add to my Makita 18V LXT cordless platform. The tool has been on the market since 2006, and I thought it might be an ideal companion to my corded model, which is a Metabo W8-115.

Given its limited power and runtime, I've used the cordless tool mainly for cutting metal closet rod, the occasional rebar, and the like, reserving more demanding jobs for the Metabo.

When *JLC* asked if I would like to try Makita's new brushless 18-volt, 4 ½-inch model XAG03, I was eager to see if it could truly replace corded grinders on the jobsite, as Makita claims. Makita sent me the bare tool (XAG03Z) along with two of its new 4-amp-hour batteries and a charger, but a full kit (XAG03M) with a plastic case is also available.

FEATURES AND PERFORMANCE

The new model is almost 2 inches longer than its predecessor, but has a narrower body that I found to be more comfortable to hold for long periods of time. Given the old model's shorter length, however, it does fit into tighter spaces and feels a little better balanced, at least in my hands.

Internally, the new grinder really shines. In addition to an efficient brushless motor that improves battery runtime, the soft-start tool uses Makita's "Automatic Speed Change" technology. This adjusts the speed and torque on the fly for optimal performance. Also, Makita's "Star Protection Computer Controls" monitor the tool and the batteries help prevent overloading, overdischarging, and overheating.

To compare the cordless angle grinders side by side, I tested their runtime and speed under constant heavy load by making multiple crosscuts through scraps of ⅜-inch by 1-inch flat-stock steel. Powered by the 3-amp-hour batteries that I normally use, the older model averaged eight cuts in roughly six minutes of continuous cutting before the battery drained. Using the same batteries, the new model made the same number of cuts in only three minutes and averaged a total of 16 cuts in six minutes of continuous cutting per charge, delivering steady, constant power no matter how hard I pushed it.

When I switched to the new 4-amp-hour batteries, the new grinder averaged 22 cuts in almost 7½ minutes of continuous cutting per charge. As a point of reference, I averaged the exact same number of cuts per minute with my corded grinder.

On the jobsite, I've used the new grinder with the 4-amp-hour batteries to cut plenty of rebar, smooth irregularities on sheet steel, ground down some humps in a concrete floor, and cut a few dozen ½-inch-thick porcelain tiles. I've only drained one or two batteries per month, so the runtime is certainly adequate for these routine intermittent tasks.

I do have a couple of gripes about the tool. I usually need to shift my grip or use both hands to lock on the slide switch for continuous operation, which is a hassle. And although I'm glad that the "Computer Controls" help prevent damage to the tool and the batteries, they can repeatedly shut down the tool when I push it really hard, which nullifies some of the convenience of going cordless.

As for power, this angle grinder is a brute. For those using a grinder for long periods at a time under serious load, though, it still won't replace a corded model. But for remodeling contractors like me, it's a dream come true. A paddle-switch version will soon be available.

XAG03 Specs

Weight with grinding wheel and battery: 5.5 pounds
RPM: 8,500
Price: $160 for XAG03Z bare tool, $390 for XAG03M kit
Warranty: 3 years tool, 1 year battery

Paul Johnson is a remodeling contractor in Portland, Ore.

Senco 21-Gauge Pinner

BY GARY STRIEGLER

When we started using 23-gauge pinners about 15 years ago, they replaced our 18-gauge brad nailers for many delicate wood-to-wood applications, such as attaching trim inside face frames, installing base shoe, and tacking small, freshly glued miters. The headless pins almost never split even the smallest pieces, and my painters love them because the tiny entry holes are easy to fill. We still use brad nailers and 15-gauge finish nailers, however, for securing baseboard, crown, and casings because the fasteners have significantly more holding power.

JLC asked if I'd like to try the new Senco FinishPro 21LXP 21-gauge pinner. It fires slight-head pins from ⅝ inch to 2 inches long and has several deluxe features, including a lock-out mechanism to prevent dry-firing and a reversible belt hook. I had never used a 21-gauge pinner, and wanted to see if it would be a step up from our other pinners and nailers for some applications.

PERFORMANCE

I first used the tool on a trim job for fastening small returns, pinning outside corners, and shooting through splices. After that, I used it to fasten moldings to the frames and panels of a mantel. The pinner worked great for these jobs, but didn't offer any advantages over my 23-gauge pinners, and it left slightly larger holes to deal with.

Next, I used the tool to case some doors with finger-jointed pine trim and an arched jamb with MDF trim. Normally I would use 18-gauge brads to fasten these casings to the jambs. The pins worked fine and left smaller holes to fill, but I had to use more fasteners to pull the casings tight against the jambs.

Pushing the tool to the limit, I drove 2-inch-long pins with it to assemble a built-up pine door casing. About 25% of the pins curled out of the wood. Curious, I used my 23-gauge pinner to shoot a bunch of 2-inch pins as close as possible to the 21-gauge Senco pins to see if they did the same thing. Surprisingly, none of the 23-gauge pins curled out. When I used the long 21-gauge pins to fasten thick casings to a door jamb, though, they worked perfectly.

A lot of our jobs have an exceptionally high level of finish, and filling the fastener holes is a critical step. To see if the slightly larger entry holes left by the 21-gauge pins would be harder to fill than 23-gauge holes, I shot several 21- and 23-gauge pins into a piece of trim and had our painter fill the holes and paint the trim. When he was done, I had to look really hard to spot any of the pin holes of either size. On stain-grade work, though, I would probably see the difference. Sometimes we don't fill 23-gauge holes in stained base shoe, but I couldn't do that with the slight-head 21-gauge pins. Some contractors never fill 23-gauge holes. I'm guessing that you couldn't get away with that when using these 21-gauge pins.

THE BOTTOM LINE

Overall, I think the Senco FinishPro 21LXP is a high-quality tool. I didn't have a single jam during my field tests, and the two-trigger safety worked flawlessly. I do wonder why Senco's 2-inch-long pins curled out of the woodwork during one field test while my smaller-diameter 2-inch, 23-gauge pins didn't, but that was the only time I encountered that problem. This tool is a useful addition to the ones we already use, but will not become my number one option.

FinishPro 21LXP Specs

Weight: 2.7 pounds
Pin length: 5/8 inch to 2 inches
Pin capacity: 200
Price: $250
Warranty: 5 years

Gary Striegler is a trim carpenter in Fayetteville, Ark.

Photo, top right: Charlie Carte

Versatile Inline Demo Hammer

BY JOSH DUNLAP

We've been great fans of inline electric demolition hammers in the 25-pound weight class since we bought two model D25900K DeWalts in 2003. The well-balanced tools are tall enough to use upright, yet light enough to hold diagonally for floor scraping or horizontally for vertical surface work. Skip forward to 2014, though, and we couldn't buy replacement parts to keep our DeWalts alive. After researching the field, we decided to replace them with Bosch's SDS-Max model DH1020VC, which hit the market in 2013. After using it for almost nine months, we have no regrets.

QUICK TOUR

The Bosch DH1020VC delivers soft starts and a constant speed under varying loads, has a variable-speed dial to adjust the speed and impact force for maximum control, and has a "Service Minder" light indicating that the carbon brushes must be replaced within eight hours or the tool will automatically shut down. Bits can rotate and lock into 12 different positions, and the side handle adjusts for an optimal grip.

Similar to other demo hammers, this one uses a piston to launch a free-floating striker through a hammer tube, which in turn whacks an impact bolt against the bit. An air space between the piston and the striker compresses and drives the striker forward as the piston advances, then sucks it back as the piston withdraws. The air space also acts as a shock absorber. According to Bosch, however, the DH1020VC has a longer hammer tube, air space, and impact bolt than its predecessor to deliver more power to the bit while more effectively dampening vibration. A decoupled rear handle further reduces vibration.

ON THE JOB

When we first unboxed the Bosch, we saw that the case is smaller than our DeWalt ones, with less room for accessories. That's a good thing, because we were no longer tempted to lug around an extra 20 pounds of steel along with the tool.

The first time we used the Bosch, it demolished all of our doubts about buying it. It broke up exposed-aggregate concrete with a high quartz content as if it were asphalt. We often install new columns in existing basements, and we've been using the Bosch to break up patches of the old concrete slabs and to excavate underneath to accommodate new footings. The tool has excelled at both tasks.

In fact, we often use a demo hammer equipped with a clay spade to break up compacted clay-laden soil for foundation pads and the like. Our old DeWalts could handle this job, but the Bosch cuts through the hard ground like a hot knife through butter. Granted, the Bosch is at least one generation above our DeWalts, but the difference between the tools is astonishing. We also used the Bosch horizontally for deconstructing a CMU wall and for opening up an old stone foundation. Superb.

As for vibration control, our hands typically begin to ache after using the Bosch continuously for about an hour. With our old DeWalts, that took only about 10 minutes.

THE BOTTOM LINE

If we had to demolish a whole basement slab, we would rent a heavyweight breaker like the electric 63-pound Bosch Brute or a 90-pound pneumatic. But the muscular 25-pound Bosch DH1020VC can handle most of our demolition tasks, and it's light enough to use for horizontal or vertical work. As for comfort and power, it's light-years ahead of our 12-year-old, 22-pound DeWalt models that it has replaced.

DH1020VC Specs

Weight: 25.4 pounds
Length: 27.5 inches
Impact energy: 17 foot-pounds
Blows per minute: 900 to 1,700
Price: $900
Included with tool: tube of grease, side handle, plastic case

Josh Dunlap is a production manager of Aleto Construction Group, a residential design/build remodeling contractor in St. Louis.

The tool's inline design and 25-pound weight are ideal for a variety of vertical and horizontal applications.

Photo, bottom right: Josh Dunlap