Jigsaws Revisited

Less vibration and easier blade changing distinguish the current tools from those of only five years ago

BY MICHAEL STANDISH

Manufacturers call them professional or contractor grade, but I think of them as grown-up tools, the big boys designed to be used all day and every day. My own introduction to grown-up jigsaws came in the early 1980s with the Bosch 1581. The 1581 remains the standard against which I (and many others) measure jigsaws. It had a horse of a motor and three orbital settings; the base tilted for beveled cuts; it even had a blower to keep sawdust off my layout lines. It ripped and crosscut plywood and framing lumber with surprising speed; with care, it could make crisp, clean curved cuts. It was a dream for notched cuts that were neither undercut nor overcut. Still, almost everything that jigsaw did could have been better done with another tool. But often as not, the better tool was back at the shop, on another job or in a tool catalog.

Today, you can choose from about two dozen grown-up jigsaws. These tools are

Taking the saws for a test drive

I devised a number of field trials to see what these saws could do. Initially, I used them on job sites for a few days, familiarizing myself with the individual saws and forming first impressions. Then I took the saws into the shop to compare them more formally. I used Lennox bimetal blades, 18 teeth per in. (tpi) for finer work and 6 tpi for coarse.

To see which saws chipped less, I made cuts in ¾-in. melamine-faced particleboard (photo bottom left). This test yielded surprising results; the saws that bucked and kicked the most—the Craftsman and the Freud—chipped the least. I ripped a pile of 2x6 Douglas fir into kindling, making three 10-second timed rips with each of the saws (photo bottom right). I averaged the length of the rips as a measure of the saw's power.

Bosch 1584 and 1587

(877) 267-2499

Street price: $139
Weight: 5.8 lb. (1584), 6.2 lb. (1587)
Speed: 500-3100 spm*
Noise: 97 db.
Blades accepted: T-shank
Chip blower: Yes
Vacuum attachment: Optional
Blade change: Toolless
2x6 ripped in 10 seconds: 7⅞ in. (1584)
8⅛ in. (1587)

The 1584 is a barrel-grip version of the 1587. They are essentially the same; differences are noted above. The improved counterbalancing (relative to their predecessor, the 1581) makes these saws notably powerful and smooth in operation. These fine saws share a toolless blade-changing system, basically a lift-up knob that's turned several times to tighten or loosen the blade. This is convenient, but compared with the 1589, the blade-changing has an indefinite action and isn't much faster than changing blades with a separate tool. At $139, these saws are bargains.

Bosch 1589

(877) 267-2499

Street price: $199
Weight: 5.5 lb.
Speed: 300-3000 spm
Noise: 99 db.
Blades accepted: T-shank
Chip blower: Yes
Vacuum attachment: Optional
Blade change: Toolless
2x6 ripped in 10 seconds: 11⅜ in.

Available in January 2000, this saw is compact, fairly light, smooth and powerful. It has the best blade-changing mechanism of the lot, a spring-loaded lever that locks and unlocks the blade. More elegantly engineered than similar mechanisms, the 1589 ejects the blade rather than merely releasing it. This ejection can be a boon to the user's fingers because whatever dulls or breaks a blade usually makes it pretty toasty.

I plunge-cut ¾-in. CDX plywood to see if any saws had a propensity to break blades (photo bottom left). With one exception, the differences seemed to have little to do with saws but much to do with blade style. Universal blades broke regularly—particularly in the Porter-Cable 7549. T-shank blades were more robust.

Finally, I scroll-cut corbels from 2x6 Douglas fir to see which saws cut most square to the surface in tight-radius cutting (photo bottom right). All did reasonably well, and the Hitachi barrel grip showed almost no blade deflection. Not surprisingly, none cut as well as a bandsaw would.

Decibel levels were measured with a meter held an arm's length from the saws while ripping 2x6s.

Except as noted above, the main differences between the saws mostly had to do with power and with blade changing, as reported with the individual saw reviews.

—M. S.

Sidebar photos: Andy Engel.
*Strokes per minute

Craftsman 27251

(800) 948-8800

Street price: $138
Weight: 6.2 lb.
Speed: 0-3100 spm
Noise: 101 db.
Blades accepted: Universal
Chip blower: No
Vacuum attachment: No
Blade change: Hex wrench
2x6 ripped in 10 seconds: 3⅜ in.

A design with remarkable similarities to the old DeWalt 318. It's a bit of a heavyweight, not necessarily a bad thing, but you'd expect a heavier saw to track a little better and have less blade clatter. It ate blades but produced unexpectedly smooth cuts in melamine. Two different hex wrenches are required for changing the blade and the baseplate angle.

DeWalt 321

(800) 433-9258

Street price: $164
Weight: 6.4 lb.
Speed: 500-3100 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: No
Blade change: Toolless
2x6 ripped in 10 seconds: 9 1/16 in.

This saw is a bruiser, big and heavy. It's also strong, precise and smooth, a nice saw. The toolless baseplate adjustment uses a cam-action lever that needed minor tuning to lock out of the way, after which it was precise, positive and fast.

DeWalt 323

Street price: $164
Weight: 6.3 lb.
Speed: 500-3100 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: No
Blade change: Toolless
2x6 ripped in 10 seconds: 7 3/8 in.

This barrel-grip model shared all the choice features of the 321 as well as the disappointing toolless blade change. Lifting and turning a knob atop the saw opens and closes the chuck's jaws, but the action is less definite than I'd like. While the blades appeared to be precariously gripped by the chuck, both DeWalt saws performed powerfully in the cutting tests without breaking any blades.

Fein Aste 638

(800) 441-9878

Street price: $500
Weight: 5.8 lb.
Speed: 1050-2600 spm
Noise: 96 db.
Blades accepted: Universal
Chip blower: No
Vacuum attachment: Integral
Blade change: Hex wrench
2x6 ripped in 10 seconds: 6 1/16 in.

Even the rheumatoid will love using this almost vibrationless saw. Unfortunately, its lack of orbital cutting action made it a comparatively weak performer in the rip tests. Of all the barrel grips, this saw is held most like a top handle; you can get right up near the cutting head and exert considerable downward pressure. Its blade change, a cap screw whose hex key is built into the top knob, is not flashy, but it's surer, easier and faster than all but the new Bosch and the Milwaukee. The Fein is finished more like jewelry than like a tool, which may explain its astronomical price.

Festo PS2E
(888) 337-8600

Street price: $285
Weight: 5.9 lb.
Speed: 1200-3100 spm
Noise: 99 db.
Blades accepted: T-shank
Chip blower: Yes
Vacuum attachment: Integral
Blade change: Hex wrench
2x6 ripped in 10 seconds: 7⅞ in.

This beautifully made saw is part of an astutely conceived accessory system that includes excellent cutting guides, dust control and a case that affixes to other Festo cases to ease transport. It gets tremendous mileage out of its rated amperage draw. The zero-clearance antisplintering insert and blade support are top drawer. Oddly, its left-side switch works best in left-handed operation; in right-handed use, I found it easy to shut off accidentally. It's also odd that this refined tool uses such a pedestrian blade-changing system as its cap screw and hex wrench.

Freud FJ85
(800) 472-7307

Street price: $100
Weight: 5.6 lb.
Speed: 500-3000 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: No
Vacuum attachment: Integral
Blade change: Screwdriver
2x6 ripped in 10 seconds: 7⅞ in.

This saw is inexpensive and looks it; the stampings and plastic moldings are of indifferent quality. It was a bit of a thrasher and not remarkably powerful, but made surprisingly smooth cuts in melamine. It offers an awful lot of bang for the buck, if little finesse.

more powerful and more convenient than the breakthrough models of the 1980s (or of even five years ago, for that matter). The current generation of jigsaws still won't cut as quickly as a circular saw or get as square to the face as a bandsaw. But the jigsaws are getting there, and their versatility is really hard to beat.

The choice of top handle or barrel grip remains subjective

To say that each jigsaw configuration—top handle or barrel grip—has its proponents is wild understatement. Broach the topic at any job-site coffee break, and you'll find that each school adamantly insists upon the greater comfort, control and precision afforded by their preferred style.

I prefer top handles. I like my hand to be directly over the cutting head for control, especially in one-handed use at the sportier orbit settings.

Still, two of the best woodworkers I know argue that cutting precise scrolls and other curves is far easier with a barrel grip where the saw is pushed forward rather than down. After three straight days of cutting with both types, I began to see their point.

Saw configuration also determines the switch type and location. Most barrel-grip saws have slide-type locking switches that are inconveniently placed (especially for left-

BLADE CHANGES HAVE GOTTEN EASIER

Although a few manufacturers cling to the old standard of an easily lost hex-wrench and cap-screw blade lock, many saws have improved with the addition of tool-free blade changing.

Squeezing together two spring-loaded levers releases the Porter-Cable 9543's blade. The wire finger guard, however, interferes considerably with blade changes.

Pulling the plunger-mounted lever on the Metabo STEP700 frees the blade. This is one of the easiest blade changes to do. Blades insert easily and lock positively.

Milwaukee 6266-6 and 6276-6 and the Bosch 1589 feature a front-release mechanism. The Bosch ejects the blade, saving fingers from handling friction-heated blades.

Lifting and turning the top knob of DeWalt's 321 opens the jaws of the blade holder. DeWalt's 323, Bosch's 1584 and 1587, and Makita's 4304T and 4305T use similar systems.

A hex wrench integral to the Fein's knob is convenient and hard to lose. Although not tool-free, this system is about as fast in use as the top-knob controlled blade chucks.

Sidebar photos this page: Sloan T. Howard

Hitachi CJ65V2

(800) 706-7337

Street price: $160
Weight: 5.9 lb.
Speed: 700-3200 spm
Noise: 98 db.
Blades accepted: T-shank
Chip blower: No
Vacuum attachment: No
Blade change: Hex wrench
2x6 ripped in 10 seconds: 7 11/16 in.

This saw may be toward the middle of the pack, but it's running with some mighty big dogs. This is a well-made and competent saw, smooth, reasonably powerful and exceptionally compact. The provision for blade storage in the baseplate is a nice touch; there is also a small compartment that holds the blade lock's hex wrench.

Hitachi CJ65VA2

Street price: $160
Weight: 5.9 lb.
Speed: 700-3200 spm
Noise: 97 db.
Blades accepted: T-shank
Chip blower: No
Vacuum attachment: No
Blade change: Hex wrench
2x6 ripped in 10 seconds: 7 7/8 in.

While barrel grips are typically longer than top-handle versions to accommodate speed controls and such at the back of the saw body, this saw was disproportionately so. It offers excellent performance in a slightly bulky package. This and its top-handle cousin displayed less blade wandering while scroll-cutting than most other saws surveyed.

Makita 4304T

(800) 462-5482

Street price: $160
Weight: 5.9 lb.
Speed: 500-3000 spm
Noise: 97 db.
Blades accepted: T-shank and universal
Chip blower: No
Vacuum attachment: Optional
Blade change: Toolless
2x6 ripped in 10 seconds: 8 3/8 in.

Makita has stepped things up considerably in the five years since I last used one of their jigsaws. This tool is another of the admirable new breed of jigsaw, tools that provide unruffled delivery of ample power. Adjusting the baseplate for beveled cuts, using a mechanism similar to the DeWalt's, is neat and fleet; a pleasure.

handers), requiring considerable fumbling to shut off the saw. The trigger of a top-handle saw allows you to shut off the power immediately without groping for a switch. As if to compensate perversely, some top-handle saws locate their switch-locking button where it's easy to trip accidentally (again, especially in left-handed operation). The potential danger is obvious.

Handle style also influences the placement of the speed regulator. Barrel-grip models locate this dial toward the rear of the barrel, and accommodating the electronics means a longer saw body, which can get in the way when cutting in close quarters. On top-handle versions, the dial is generally near (or even part of) the trigger, making for a more compact saw and facilitating midcut speed changes. The operating speed of some top-handle models can also be modulated by trigger pressure, producing the ultimate in instant speed adjustments.

Last, there is a speed control that is independent of saw configuration: Many jigsaws feature electronic-feedback circuitry meant to maintain constant operating speed regardless of load. Although hyped in advertising, no saw's electronic feedback made a noticeable difference ripping 2x6 lumber (sidebar pp. 84-85).

Blades catch up to powerful saws

The aggressive cutting action and stronger motors of the early powerhouse jigsaws had a dark side: They could be blade eaters. The then-prevalent universal (straight-shanked) blades fit most saws, but not always for long. Manufacturers developed beefier shanks to address this problem, but they and the means of holding the blade in the saw exemplified what today's computer lingo calls "immature technology." Some required spe-

Makita 4305T

Street price: $160
Weight: 5.7 lb.
Speed: 500-3000 spm
Noise: 97 db.
Blades accepted: T-shank and universal
Chip blower: No
Vacuum attachment: Optional
Blade change: Toolless
2x6 ripped in 10 seconds: 7⅞ in.

The barrel-grip version shares all the commendable features of the 4304T as well as its uninspired blade-changing action. The latter is a pull-and-turn knob similar to the DeWalt and the older Bosch saws. Although an improvement over systems requiring separate tools, it is a bit vague in operation, leaving the user unsure if the blade is well seated.

Metabo EP565

(800) 638-2264

Street price: $250
Weight: 6.4 lb.
Speed: 500-3000 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: No
Blade change: Hex wrench
2x6 ripped in 10 seconds: 10⅝ in.

This saw is very well made; things fit and work well. Like the Festo, it performed better than its amperage rating would suggest. This is a strong and comfortable saw, a pro. In this context, the old-style hex wrench and cap-screw blade changing is a letdown.

Metabo STEP700

Street price: $219
Weight: 6.4 lb.
Speed: 1000-3000 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: Integral
Blade change: Toolless
2x6 ripped in 10 seconds: 9³⁄₁₆ in.

If anything, this big barrel grip has an even higher level of finish than the top handle, with especially crisp yet smooth switch detents. Its blade-change system, a lever attached to the plunger, is easy, quick and sure; definitely in the top tier.

cial tools that were easy to lose, like Bosch's custom screwdriver. Others used special blades that could be quite hard to find, such as Porter-Cable's otherwise excellent hook-shank blades.

Today, manufacturers have cleaned up this act. All the saws surveyed (except the Porter-Cable 548) accept either universal or the T-shank type popularized by Bosch.

As for blade changing, many makers abandoned the tried, true, readily available hex wrench, instead developing tool-free blade-changing systems (sidebar p. 87). Even the

least tractable of these systems eliminates worries about misplacing a crucial tool.

Orbital action speeds cuts at the expense of smoothness

Seen from the side, orbital cutting is pretty much what its name implies. The blade descends straight down, then moves forward and up for the cutting portion of the stroke. Near the apex, the blade moves backward, forming a roughly circular path. This means that a blade that cuts on the upward stroke (as most do) plunges through a precut kerf, reducing friction and increasing blade cooling. Typically, four blade paths can be selected. The widest arc produces the fastest but roughest and choppiest cutting action. The slowest but most splinter-free and manageable setting, vertical motion only, is preferable for fine work.

All the saws surveyed except the Fein and the Porter-Cable 548 offer orbital action.

DeWalt, Makita and Porter-Cable have gone a step farther and introduced bases whose bevel adjustment requires no tool.

Orbital cutting produces a staggering improvement in cutting speed. However, early orbital-action saws bucked and thrashed.

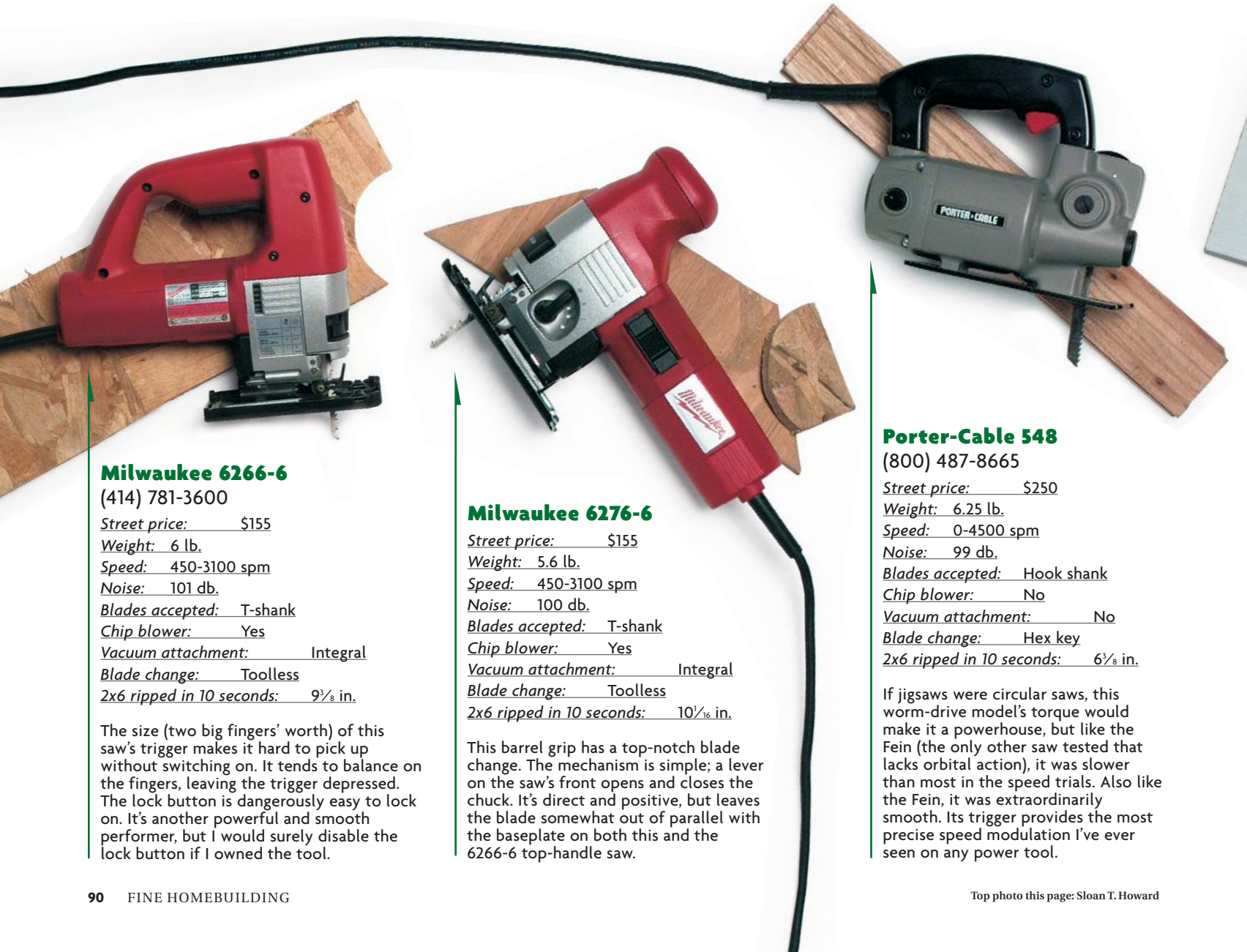
Recently, manufacturers have applied themselves to this problem, and their efforts at counterbalancing have paid off. The resulting vibration reduction means that more power is applied where it's wanted: to cutting wood rather than to beating up the user's elbow and wrist.

Keeping cuts splinter-free

To enable smooth cuts in materials where a surface chip spells disaster—sink cutouts in laminate counters, for example—blades that cut on the downstroke are available. If your toolbox lacks such a blade on countertop-installation day, antisplintering baseplate inserts can help, but not much.

Most manufacturers offer these inserts, but only Festo's made a significant difference. Installing Festo's insert, however, was a bit unnerving. It has to be pushed into place while the saw is running.

Most saws have chip blowers that channel air from the motor's cooling fan to the vicinity of the blade. These blowers are a serviceable means of keeping cutlines visible. A shop-vac or other dust collector hooked to



Milwaukee 6266-6

(414) 781-3600

Street price: $155
Weight: 6 lb.
Speed: 450-3100 spm
Noise: 101 db.
Blades accepted: T-shank
Chip blower: Yes
Vacuum attachment: Integral
Blade change: Toolless
2x6 ripped in 10 seconds: 9⅜ in.

The size (two big fingers' worth) of this saw's trigger makes it hard to pick up without switching on. It tends to balance on the fingers, leaving the trigger depressed. The lock button is dangerously easy to lock on. It's another powerful and smooth performer, but I would surely disable the lock button if I owned the tool.

Milwaukee 6276-6

Street price: $155
Weight: 5.6 lb.
Speed: 450-3100 spm
Noise: 100 db.
Blades accepted: T-shank
Chip blower: Yes
Vacuum attachment: Integral
Blade change: Toolless
2x6 ripped in 10 seconds: 10 1/16 in.

This barrel grip has a top-notch blade change. The mechanism is simple; a lever on the saw's front opens and closes the chuck. It's direct and positive, but leaves the blade somewhat out of parallel with the baseplate on both this and the 6266-6 top-handle saw.

Porter-Cable 548

(800) 487-8665

Street price: $250
Weight: 6.25 lb.
Speed: 0-4500 spm
Noise: 99 db.
Blades accepted: Hook shank
Chip blower: No
Vacuum attachment: No
Blade change: Hex key
2x6 ripped in 10 seconds: 6⅜ in.

If jigsaws were circular saws, this worm-drive model's torque would make it a powerhouse, but like the Fein (the only other saw tested that lacks orbital action), it was slower than most in the speed trials. Also like the Fein, it was extraordinarily smooth. Its trigger provides the most precise speed modulation I've ever seen on any power tool.

Top photo this page: Sloan T. Howard

the saw (many manufacturers offer adapters) is superior and reduces airborne dust.

Which one would I choose?

If you skipped to this section, you should know that in the afterlife, you will be forced to use a jigsaw that combines the worst features of the saws reviewed here. But whether you've read the article or not, my first choice is the new Bosch. It's powerful and compact. However, if you can't wait until the first of the year (when Bosch expects to make them available), here's my suggestion. Set aside the Fein and the Porter-Cable 548 as lovable eccentrics and eliminate the Craftsman, Freud and Ryobi as being outdistanced by others. As for the rest, throw their names into a hat and pick one. They're all pretty good. □

Michael Standish is a woodworker and author from West Roxbury, Massachusetts. Photos by Judi Rutz, except where noted.

Porter-Cable 7549

Street price: $140
Weight: 6.4 lb.
Speed: 500-3200 spm
Noise: 102 db.
Blades accepted: Hook shank and universal
Chip blower: Yes
Vacuum attachment: Hex wrench
Blade change: Toolless
2x6 ripped in 10 seconds: 6⅝ in.

Like Bosch's 1587, this saw is an update of a 15-year-old pioneer. Its blade-support system is an improvement over the previous bandsaw-style roller bearings, and the current version now accepts universal pattern blades as well as Porter-Cable's own hook-shank blades. This is a convenience, but the factory quite rightly cautions against using the highest orbit setting with universal blades. This saw has more than enough power to chew up universal-style blades, even those of the highest quality.

Porter-Cable 9543

Street price: $160
Weight: 6.4 lb.
Speed: 500-3100 spm
Noise: 97 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: No
Blade change: Toolless
2x6 ripped in 10 seconds: 9⅛ in.

Porter-Cable's latest is at the top of the class for smooth delivery of lots of power. Its toolless baseplate bevel adjustment is just fine, but the toolless blade-change mechanism wants some remedial work. The wire finger guard at the nose of the saw impedes access to the blade-releasing lever, making blade changes a torment.

Ryobi JS048

(800) 525-2579

Street price: $79
Weight: 5 lb.
Speed: 0-3000 spm
Noise: 98 db.
Blades accepted: T-shank and universal
Chip blower: Yes
Vacuum attachment: No
Blade change: Hex wrench
2x6 ripped in 10 seconds: 7⁹⁄₁₆ in.

Along with the Craftsman, Freud and, to a lesser extent, the Porter-Cable 7549, this saw vibrated excessively. Surprisingly, it also produced some of the smoothest cuts in melamine. One would expect a thrashing saw to be associated with gross chip-out when cutting such notoriously brittle material. The Ryobi's speed-modulating dial is a model of inaccessibility.