



Photos: Mark Schofield

10-in. Sliding Compound Miter Saws

BY ANDY BEASLEY

They're versatile, accurate, and reasonably priced

If you're like me and didn't make a fortune by starting up a computer software company, you probably juggle cost and performance tradeoffs when making a purchase for the shop. A well-made tool that's capable of multiple tasks is always near the top of my shopping list. That's why I like the miter saw so much. But if you are shopping for a miter saw, the choices can be bewildering, with four major types available. There are fixed compound-miter saws (CMS) as well as sliding compound-miter saws (SCMS), and both come in 10-in. and 12-in. blade sizes.

To help select which type you need, consider two common scenarios: mitering tall moldings and cross-cutting wide stock. Compared to any SCMS, both the 10-in. and the 12-in. CMS can cut taller material standing vertically against the fence, but the 10-in. sliding saw beats both CMS sizes when you lay the molding flat on the table. Need to crosscut a 12-in. plank? Forget about a standard CMS; even the 12-in. version can crosscut only about 8 in. Finally, while a 12-in. sliding saw can crosscut wider stock than a 10-in. model, you'll pay about another hundred bucks for the measly half-inch of additional capacity.

The ability to miter, bevel, crosscut wide material, make compound cuts, and even plow dadoses, all at a reasonable price, makes the 10-in. slider a perfect fit for many shops. However, some saws achieve this compromise between cost and capability better than others.

A good saw is the sum of its parts

A sliding compound-miter saw must perform three basic operations: The head must pivot to create miter cuts; it must tilt to perform bevel cuts (the compound action makes use of both features); and the cutterhead must slide in and out on tubular steel guide rails to give the machine its impressive crosscut capability.

I tested the six 10-in. sliding compound-miter saws on the market. All offer similar cutting capacities, but two were available as left-hand, single-bevel models only. To cut a right-hand bevel you must swing the workpiece around, perhaps awkward in a cramped shop.

While the saws are similar in basic features and specifications, the details are what make the

Miter adjustments



Obscured miter scale. Although the scale is clearly printed on the Makita saw, the pointer's location on the side of the table makes it hard to read, especially when cutting a right-hand miter.



Detent override is useful. It can be difficult to set a miter angle fractionally different from one with a preset detent. The Milwaukee (shown here) and Bosch saws feature a detent-override lever that solves this problem.



Cast scales are hard to read. Saws with miter scales cast in the metal were harder to read than those with printed scales. Metabo's was a particular eye-strainer.

Angle adjustments



The bevel-angle setting is on the back of most of the saws. Milwaukee's top-mounted knob and dust-free scale were the best of the bunch.



Tune-ups maintain accuracy. Most of the saws will require minor tweaking to set and maintain accurate angles. In this regard, the Bosch saw was the most user-friendly.

Fences must adjust, too



Clever design. On the Milwaukee, the tall end of the left-hand fence is kept close to the blade for miter cuts. For bevel or compound cuts, the fence is unclamped and flipped so that the short end will not interfere with the blade.

Problem fence. When bevel-cutting on the Metabo, the rectangular auxiliary fences must be removed.



difference when it comes to achieving high-quality, repeatable results. Because these tools may cut miters one minute and bevels the next, all adjustment controls must be easy to access, operate, and lock. All angles—fence to table, fence to blade, and blade to table—must be right on target, and the saw's design should facilitate adjustments to maintain accuracy.

Selecting accurate miter angles should be easy—

The miter angle is the setting that is changed most often on these saws, so the scales must be readable and the angle setting precise. The most readable miter scales are those on the Chicago Electric, Hitachi, and Makita saws, while the blunt, raised castings of the other saws aren't as legible. However, because the Makita's scale rotates with the table, it can be awkward to get a straight view of the side-mounted angle pointer.

All the saws feature detents at the frequently used angles, but it can be difficult to lock in an angle just shy of these fixed detents. The Bosch and Milwaukee saws feature an override for precise angle selection.

Setting the bevel angle can be hit and miss—

Bevel controls typically get less frequent use, but on some of the saws the scales and controls almost appear to be an afterthought. The standout is Bosch's front-mounted lock; it makes even continual changes a breeze. The other five saws feature rear bevel locks. Milwaukee's is the easiest to use, and this saw also has the best bevel scale (it's large, easy to read, and attracts less dust than the scales on the other saws).

Tables and fences work together for stock support—The fence plays an important role in accuracy and safety; it should be 3 in. to 4 in. tall to support vertical workpieces on both sides of the blade, and the

Some handles are better than others



Custom-fit handle. The twin red safety buttons make the handle on the Bosch suitable for left- or right-handed users. In addition, the handle can be rotated to four positions based on personal comfort.



Right-handers only. The black trigger lock on the Hitachi is designed to be depressed by the thumb of the right hand. Lefties will find the operation awkward.



Hang on tight. Milwaukee's open handle, made from slippery plastic, makes it easy for your hand to slide away from the switch.

user should be able to move it quickly out of the way when the cutterhead is tilted for beveling. Because most of the saws pair a large, moveable left fence with a low, fixed right fence, the Bosch really stood out from the crowd: Both of its easily removable fences are 4 in. tall and offer great support close to the cut.

The tables on these saws are fairly compact. The exception is the Makita, which boasts a large, steady surface. However, all of these tools would benefit from shopmade extensions for supporting larger stock (see "Add wings to your saw," *FWW* #181, pp. 62-63).

Dust collection and lasers vary in usefulness

I tested each saw with its dust bag (except the Metabo, which doesn't have one) and then connected it to an excellent Fein vacuum. The first thing I learned was that dust collection was most effective when cutting solid wood at least 2 in. thick. In this situation, the sawteeth and the chips exit the wood close to the typical dust-pickup port. The chips from thinner stock and the dust from sheet goods often escaped entirely.

Bearing those limitations in mind, I found that the Hitachi worked well with just the dust bag attached, with the Makita a close second. On all the saws, collection improved significantly with the vacuum attached; the Hitachi, Makita, and Bosch saws being roughly equal. The exception was the Metabo, whose fixed, rear-mounted dust port was too far from the cutting action for the vacuum to be effective.

The laser cutting guides available on the Bosch, Hitachi, and Makita saws don't live up to their billing. None are sharp enough or display well enough to replace the more accurate method of aligning the blade

Setting up a new saw

It may sound crazy, but read the owner's manual first. Unpack the saw by grasping its base or carrying handle(s) and not the saw head, which can cause damage. Check the depth stop to ensure that the blade cannot hit the tool base when the saw head is fully lowered. If your saw has adjustable kerf inserts, leave them spaced wide open; you can move them closer to the blade later, after the blade angle is dialed in (the Milwaukee is the exception—its solid kerf plate must be cut by the user).

Because most saws will arrive out of alignment, expect to refer to the owner's manual for corrective action. Get the saw to the point where all of the detents for common angles yield perfect results.

Attach the machine to its permanent worktable with screws or bolts through the mounting holes in the base. These are large tools, so even with the miter-control knob and part of the turntable overhanging the front of the worktable, you'll still need about 30 in. of working depth.



Make a series of test cuts to check the tool for square. Use a wide strip of plywood to test miter accuracy, and a thick piece of wood to check the bevels (including the vertical setting).



BOSCH 4410L

The best saw in this survey has many features that make it exceptionally easy and enjoyable to use. The adjustable, four-position grip is ideal for either hand; up-front controls make this saw the most convenient for permanent mounting; and the large workpiece clamp operates like a bench holdfast and is the easiest to position. In addition to its miter-detent override, the saw features a microadjustment knob for fine-tuning a cut 2° on either side of a detent. That's good, because the miter scale and its chubby pointer aren't all that precise (though the detents are). The laser cutting guide aligns with only the left edge of the blade and is too blurry for accurate work.

with a pencil mark or using a stop. The only time I found a laser useful was while cutting molding at large bevel angles: The line helped me to visualize where the tilted blade would enter the profiled material.

Performance: I don't want much, just great results

My testing focused on saw performance in four areas: smoothness, accuracy, power, and ease of use. I evaluated smoothness of cut by crosscutting wide pieces of veneer plywood and 8/4 hard maple. This included a trimming cut near the end of the maple to see how much the blade tended to deflect when not supported equally on both sides of the cut. Because many users will replace the manufacturer's blade, I duplicated each test with a top-quality aftermarket blade, a new 80-tooth Forrest ChopMaster. I measured the tools' accuracy (once I'd set them up properly) by cutting material at selected miter and bevel settings, then checking the results with a Starrett square. The power test was a subjective evaluation of motor drag while crosscutting a wide hardwood plank. Finally, after cutting various materials in as many different settings as possible, I scored each saw on how easy it was to use.

And the award goes to...

I'm often asked if I get to keep the tools I review. Unfortunately, the answer is an emphatic no. But if the rules change, the saw I'd keep is the Bosch, my choice for best overall. Cutting performance was superb and the saw's many smart features made it a pleasure to use. The Makita was a close second—it cut marginally better than the Bosch but didn't handle as well.

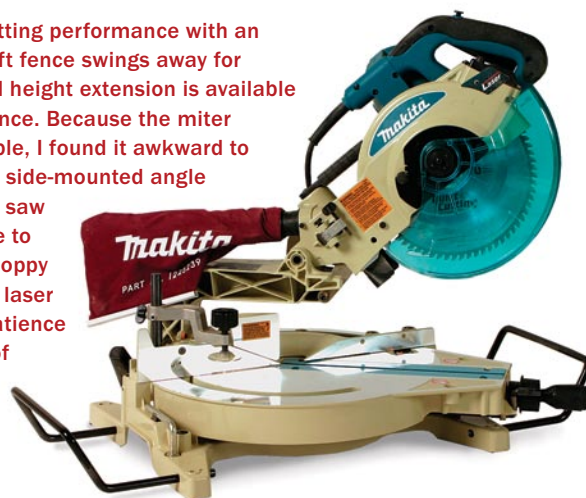
If you're looking for a solid, dependable saw at a fair price, the best value of this group is the Milwaukee. It's only a single-bevel tool, but the lower price is worth the slight inconvenience. □

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MODEL AND SOURCE	STREET PRICE	AMPS	MAX. CUTTING DEPTH IN.	MAX. CUTTING WIDTH IN.
Bosch 4410L boschtools.com 877-267-2499	\$510	15	0° bevel, 3 ⁷ / ₈ ; 45° bevel, left 2 ³ / ₈ , right 1 ¹ / ₂	0° miter, 12 ¹ / ₈ 45° miter, 8 ³ / ₄
Chicago Electric 90891 harborfreight.com 800-444-3353	\$100	5.1	0° bevel, 3 ¹ / ₂ ; 45° bevel, left 1 ³ / ₄	0° miter, 12 45° miter, 8 ¹ / ₈
Hitachi C10FSH hitachipowertools.com 800-706-7337	\$500	12	0° bevel, 3 ¹¹ / ₃₂ ; 45° bevel, left 2 ³ / ₁₆ , right 1 ³ / ₁₆	0° miter, 12 ⁹ / ₃₂ 45° miter, 8 ¹⁹ / ₃₂
Makita LS1013L makita.com 800-462-5482	\$500	15	0° bevel, 3 ³ / ₈ ; 45° bevel, left 2, right 1 ¹ / ₄	0° miter, 12 45° miter, 8 ¹ / ₂
Metabo KGS 303 metabousa.com 800-638-2264	\$570	15	0° bevel, 3 ³ / ₁₆ ; 45° bevel, left 2 ¹ / ₈ , right 1	0° miter, 11 ⁷ / ₃₂ 45° miter, 7 ⁷ / ₈
Milwaukee 6497-6 milwaukeeetool.com 800-729-3878	\$430	15	0° bevel, 3 ⁷ / ₁₆ ; 45° bevel, left 2 ¹ / ₈	0° miter, 12 ³ / ₈ 45° miter, 8 ³ / ₄

MAKITA LS1013L

This saw pairs superb cutting performance with an innovative design. The left fence swings away for beveling, and an optional height extension is available for the undersize right fence. Because the miter scale rotates with the table, I found it awkward to get a straight view of the side-mounted angle pointer. Additionally, this saw was the most susceptible to angle errors caused by sloppy miter detents. The blurry laser guide required a lot of patience to adjust from one side of the blade to the other.



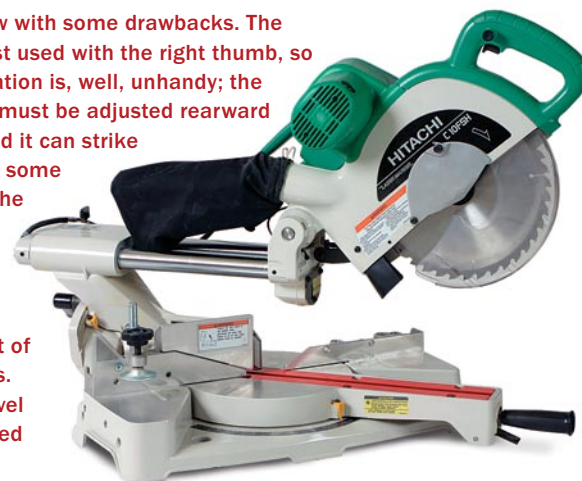
CHICAGO ELECTRIC 90891

This tool's many flaws led to extremely poor cutting results. Although performance improved dramatically with the Forrest blade, it still wasn't good enough to justify buying a blade that costs more than the saw itself. The saw-head spring is too strong; struggling against its resistance made all operations jerky and imprecise. With left-handed use, the retracting blade guard struck the fingers.



HITACHI C10FSH

This is a good saw with some drawbacks. The trigger lock is best used with the right thumb, so left-handed operation is, well, unhandy; the rear blade guard must be adjusted rearward when mitering and it can strike the fences during some compound cuts; the tiny right fence isn't too helpful, but the excellent left-side fence smoothly flips out of the way for bevels. The miter and bevel scales are cluttered but very precise.

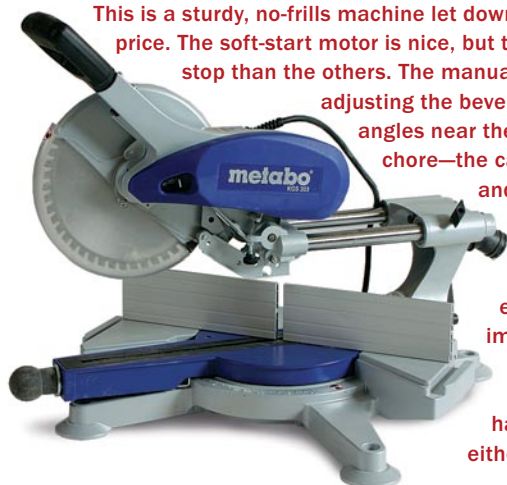


TESTING RESULTS

BEVEL RANGE	MITER RANGE	FACTORY BLADE	LASER BLADE	WARRANTY	SMOOTHNESS factory blade	SMOOTHNESS Forrest blade	POWER	ACCURACY after setup	EASE OF USE
Left 47° Right 46°	Left 52° Right 60°	60-tooth carbide	Yes, fixed	1 year	Excellent	Excellent	Excellent	Excellent	Excellent
Left 45°	Left 45° Right 45°	60-tooth carbide	No	90 days	Poor	Fair	Fair	Good	Fair
Left 45° Right 45°	Left 45° Right 57°	40-tooth carbide	Yes, adjustable	5 years	Fair	Good	Excellent	Excellent	Good
Left 45° Right 45°	Left 47° Right 52°	70-tooth carbide	Yes, adjustable	1 year	Excellent	Excellent	Excellent	Good	Good
Left 48° Right 48°	Left 50° Right 60°	48-tooth carbide	No	1 year	Good	Excellent	Fair	Excellent	Good
Left 48° Right 3°	Left 51° Right 59°	80-tooth carbide	No	5 years	Good	Good	Good	Excellent	Good

METABO KGS 303

This is a sturdy, no-frills machine let down by its relatively high price. The soft-start motor is nice, but the blade takes longer to stop than the others. The manual gives no guidance for adjusting the bevel stops, and selecting angles near the miter detents was a chore—the cast scale is imprecise, and there's no override to overcome the tension of the detents. The auxiliary fences are excellent and a huge improvement over the small ones fixed to the saw. The horizontal handle is perfect for either hand.



MILWAUKEE 6497-6

A lot of features make this saw the best value: the top-mounted bevel lock; the large flip fence on the left side; a great arbor lock for quick blade changes; and a detent-over-ride lever for angles near the detents. The workpiece clamp is good, but its short reach keeps it far from the blade. The fence height is adequate; the left side can be quickly unclamped and flipped for bevel cuts.

