

# 12-in. Compound-

In a field of powerful and accurate tools, **three saws stand out** with useful features and large cutting capacities

BY RICK ARNOLD AND MIKE GUERTIN

**O**ur first power miter saw was a 10-in. Makita. It was one of the first decent saws on the market. The saw was expensive, it weighed a ton, it had a short stationary fence, and it didn't make compound cuts. At the time, it was state of the art, and it was revolutionary for trim carpentry.

For more than 20 years now, saw manufacturers have been hard at work refining and introducing new miter saws. With new saws come new features. Some features, like the ability to cut bevels, prove handy and quickly become standard on all saws. Others prove impractical and never catch on. We recently sorted through eleven 12-in. compound-miter saws to determine which features are helpful, which are frivolous, and which saws rise to the top.

## Is a 12-in. compound-miter saw the right tool for you?

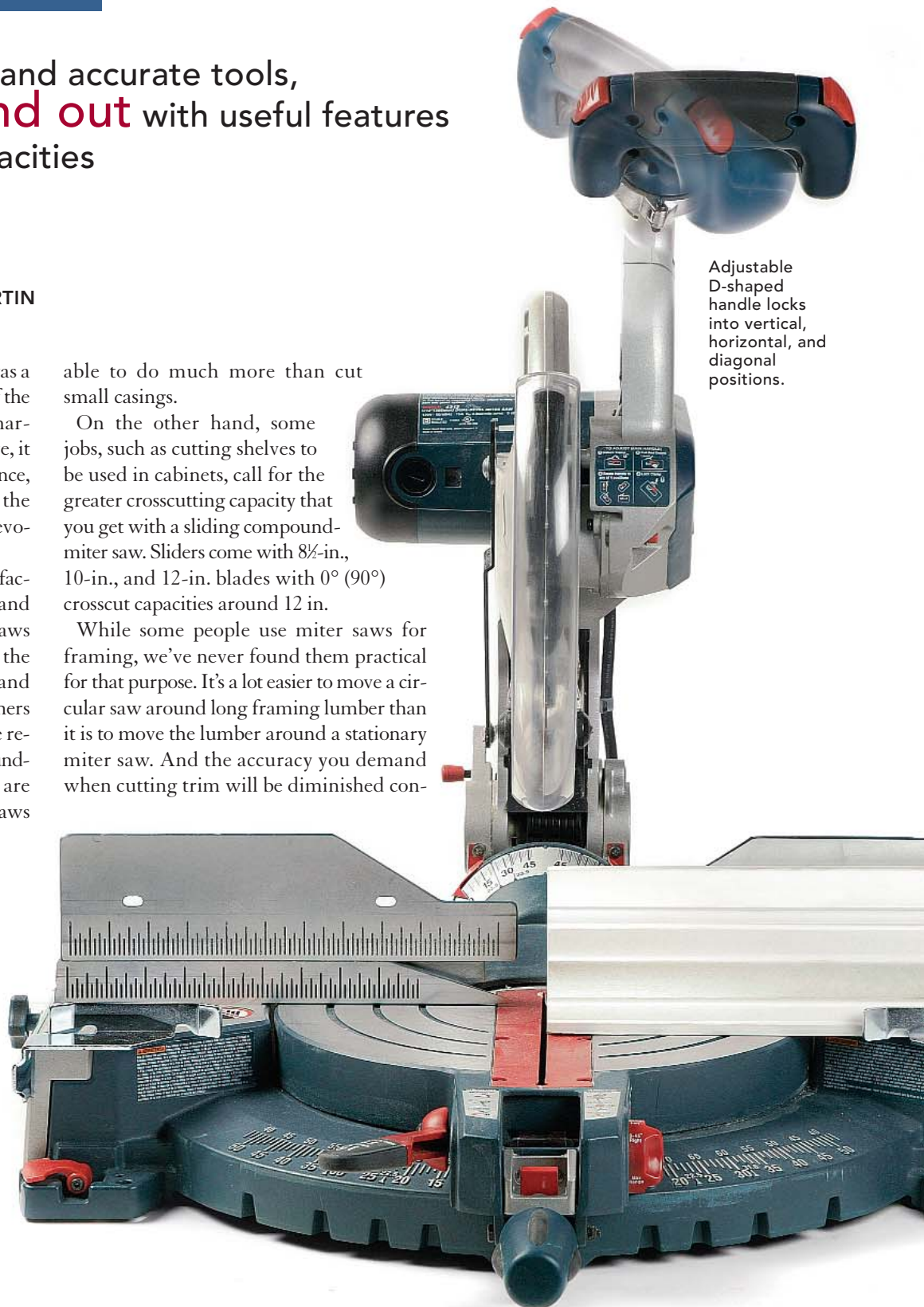
Compound-miter saws make fast, accurate work of cutting miters and bevels. Because there is more than one type of miter saw, you first have to decide if a 12-in., fixed-head compound-miter saw will meet your needs. In general, 12-in. saws have a crosscut capacity around 8 in. and a depth-cut capacity of 4½ in. Those capacities are adequate for most interior and exterior trim work.

Ten-inch compound-miter saws operate the same way and offer similar features to the 12-in. models, but they don't have enough cutting capacity to be

able to do much more than cut small casings.

On the other hand, some jobs, such as cutting shelves to be used in cabinets, call for the greater crosscutting capacity that you get with a sliding compound-miter saw. Sliders come with 8½-in., 10-in., and 12-in. blades with 0° (90°) crosscut capacities around 12 in.

While some people use miter saws for framing, we've never found them practical for that purpose. It's a lot easier to move a circular saw around long framing lumber than it is to move the lumber around a stationary miter saw. And the accuracy you demand when cutting trim will be diminished con-



Adjustable D-shaped handle locks into vertical, horizontal, and diagonal positions.

# Miter Saws

## Bosch 4212



Double-bevel saws simplify working with long boards by allowing you to flip-flop the bevel on the saw rather than turning the board end for end.

**WITH UP-FRONT CONTROLS, THERE'S NO REASON EVER TO REACH AROUND TO THE BACK OF OUR FAVORITE SAW**

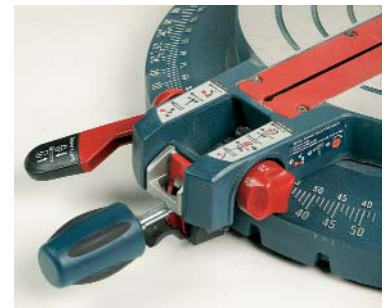
Until now, some of the most frequently used controls on compound-miter saws have been awkward because they were on the back of the saw. On this new saw from Bosch, all the controls are on the front of the saw. The bevel lock, the double-bevel release knob, a switch for bevels beyond 45°, and a bevel-stop override are on the miter-table handle, leaving users with little reason to reach around to the back of the saw. In keeping with the idea of up-front controls, Bosch also positioned a 33.9° bevel-stop pin just beneath the bevel scale.

While most of the saws have a detent override for the miter scale, this saw goes one step farther with a detent-override lock. The simple thumb-operated lever is great for one-handed operation and for preventing settings that are close to the detents from slipping into the detent position.

The D-shaped handle has a unique repositioning capability. It can be set horizontally, diagonally, or vertically, and there are conveniently located switches for both left- and right-handed operation. Most of the other saws cater only to right-handed operation. And all the operation knobs, buttons, and switches are spotted easily by their red color.

It is aggravating to have to bend down repeatedly to read a bevel scale from a particular angle. This saw's bevel scale is angled upward toward the user's line of vision, making it easier to read.

This saw was precise out of the box, and only the crown stops (for holding crown molding tight against the fence when cutting it in position) needed to be inserted before going to work. The saw has only average cutting capacities, but a superior miter-angle capability at 52° left and right.







**Revolutionary controls.** Bosch moved the bevel lock, right-bevel release, and maximum-bevel release, typically found on the back of the saw, to the miter handle.



**Retractable features are there when you need them.** Swing-away crown-molding stops and retractable extension wings come in handy for certain tasks, but don't get in the way when they're not needed.

# A quick comparison of the 12-in. compound-miter saws we tested

	Blade	Weight	Warranty	Motor amps/rpm	Crosscut capacity at 0° (90°)	Upright cutting capacity	45° by 45° cut capacity	Maximum miter/bevel	Comments	
<b>LISTED BY PRICE</b>										
	Ryobi TS1551DXL with laser <b>\$230</b>	28-tooth carbide	42.5 lb.	2 years	15/3600	7¼ in.	4¾ in.	5½ in.	47° left and right/45° left	The least-expensive saw in the group, but it needs a better blade for cutting trim.
	Craftsman 351.212240 with laser <b>\$270</b>	40- and 60-tooth carbide	51.5 lb.	1 year	15/4000	7¾ in.	5 in.	5½ in.	48° left and right/45° left	With two trim blades included in the price, this saw is a top value.
	Bosch 3912 <b>\$270</b>	40-tooth carbide	43.5 lb.	1 year (30 days cash back)	15/4300	7¾ in.	5 in.	5½ in.	52° left and right/45° left	Good value. Miter-detent override is simple and useful, but the bevel scale is a bit hard to read.
	Makita LS 1221 <b>\$300</b>	32-tooth carbide	39.5 lb.	1 year	15/4000	8 in.	4¾ in.	5½ in.	48° left and right/45° left	Sawdust collection and the blade-guard retracting arm are the best of the bunch.
	Ridgid MS1250LZ with laser <b>\$300</b>	40-tooth carbide	49 lb.	3 years (90 days cash back)	15/4000	7¾ in.	4½ in.	5½ in.	47° left and right/45° left	Has erasable marking pad on the fence for repeating cuts. The 45° bevel stop is difficult to adjust.
	DeWalt 705 <b>\$300</b>	60-tooth carbide	40 lb.	1 year	15/4000	8 in.	4¾ in.	5½ in.	48° left and right/45° left	Well-made saw, with decent cutting capacities at a fair price.
	Delta 36-255L Porter-Cable 3802L with laser <b>\$350</b>	40-tooth carbide	54 lb.	2 years	15/3500	8 in.	4½ in.	5½ in.	47° left and right/45° left	Dual adjustable lasers mounted on blade housing mark both sides of the kerf.
<b>OUR THREE FAVORITES ARE THE MOST EXPENSIVE AND ARE ALSO THE THREE DOUBLE-BEVEL SAWS</b>										
	DeWalt 706 <b>\$350</b>	60-tooth carbide	42.5 lb.	1 year	15/4000	8 in.	6¾ in.	5½ in.	50° left and right/48° left and right	Refining the miter adjustment is easy: Move the scale plate rather than adjust the fence.
	Bosch 4212 <b>\$350</b>	40-tooth carbide	57 lb.	1 year (30 days cash back)	15/3800	8¾ in.	4½ in.	5½ in.	52° left and right/47° left and right	The best of the bunch, with all front-mounted controls.
	Delta 36-412 <b>\$400</b>	60-tooth carbide	50 lb.	2 years	15/3500	9¼ in.	6¾ in.	6½ in.	48° left and right/48° left and right	Top-of-the-line saw with the largest cutting capacities.

## Delta 36-412

**THIS SAW MAY BE THE RUNNER-UP, BUT IT WILL CUT WIDER BOARDS THAN ANY OTHER SAW WE TESTED**



If you're looking for a double-bevel saw to cut wide stock, this tool is for you. At 9½ in., this saw has the largest 0° (90°) cutting capacity of all the saws we tested. And with the secondary retracting-blade housing (photo below), the saw can cut 6¾-in.-wide 1x boards standing up against the fence.



The front-mounted bevel lock and cam-style sliding fence locks are quick and easy to use. This saw has a sliding bevel-stop plate for 33.9° and 45° bevels, and release pins behind the pivot head allow the saw to reach 48° bevel angles. The release pins reset when the saw is brought back past the 45° mark. The only flaw is the 0° bevel stop. It is imprecise and requires the user to double-check the setting.

The bevel scale is accurate and easy to read. The indicator has a diamond-shaped viewing area that reads single degrees on the inside of the diamond and 5° increments on the outside pointer. And because the indicator is close to the scale's surface, the view angle doesn't affect the reading as much as it

does on some of the saws.

One of the best features on this saw is the flip-up stops that hold crown molding in position against the fence. They can be adjusted for different-size crown molding, and they make holding pieces tight against the fence a breeze when cutting crown in position. The handle on this saw was the most comfortable of all the saws, and its miter-lock system requires only a quarter-turn to lock or disengage. The Delta 36-312 is a single-bevel version of this saw.



**A better system for sliding fences.** Delta made positioning the fence easier by replacing the screw-in locks with a spring-loaded lever.



**The bevel scale and stop plate are easy to read.** The bevel indicator on this saw marks 1° and 5° increments. A sliding plate allows you to toggle between 45° and 33.9° bevel stops.

siderably after your saw does a stint on a framing project.

### **Some features we've come to expect; others, we can live without**

All the saws we looked at are pretty good tools with plenty of cutting capacity and power. The saws we tested can make 0° (90°) cuts through boards around 8 in. wide and 45° miters through boards around 5½ in. wide. Two saws can even cut ¾-in. (or 1x) boards

more than 6 in. wide standing up against the fence. With 15-amp motors that run between 3500 rpm and 4300 rpm, all the saws have plenty of power for cutting trim. Still, there is a fine line between must-have features and other features that are OK, but aren't going to make or break the sale.

The features we expect from a compound-miter saw include tall sliding fences on the active bevel side of the saw for supporting stock close to the blade; miter and bevel capacities

beyond 45° for remodeling situations where out-of-square walls come with the territory; miter detents at 31.6° and bevel-scale marks at 33.9° for cutting crown molding lying flat. Easy-to-read bevel scales, easily adjusted settings for miter and bevel stops, smooth-swinging tables, and onboard tools for blade changes and saw adjustments also are important features.

Some of the saws we looked at offer other features that we found convenient but un-

## Two lasers are better than one



Reviewers aren't supposed to have biases. But we did. We had a bias against lasers. We assumed they were just a flashy feature of no real value to a carpenter. And for the most part, our testing confirmed our bias.

Ryobi, Ridgid, and Craftsman have arbor-mounted laser disks that replace the blade washer. As soon as the blade starts spinning, a single laser line appears on the stock. The laser is helpful for getting stock close to position, but it is not accurate enough to eliminate lining up the kerf with your mark. And these lasers are not adjustable.

But working with the dual laser on the Delta 36-255L and the Porter-Cable 3802L humbled our stodgy prejudice. The dual lasers on these saws are mounted on the blade housing and mark both sides of the kerf; they are adjustable for accuracy and for different blades. Because the laser is activated with a switch, you can use it without the blade spinning. When we were done testing the saws, a dual-laser model was one of the saws we continued to use on our current project. So if you must have a laser, this one is worth the extra \$50. You can expect to see this feature on other Delta and Porter-Cable saws in the future.

necessary, including extension wings for supporting longer stock. While they can be handy, in most cases you'll still need an aftermarket stand or homemade rig to work successfully with long pieces of baseboard or crown molding. Although clamps and vises allow you to keep your hands away from the blade when working with smaller pieces of stock, they are clumsy to use and can interfere when you are cutting bevels and miters. Ridgid's compound-miter saw has an erasable marking strip along the fence. It's a great idea, but not enough to make us choose the Ridgid over another saw.

### Setting up the saws takes time

The saws arrived over a couple of weeks. If we had known how much time setup would take, we would have opened the boxes as soon as they were delivered. When the day came to start the review, all we wanted to do was play with the saws. The first thing we learned, though, was that most of the saws require around 30 minutes of setup time, including assembly and adjustment.

Installing the blade and dust bag was quick and easy to figure out, but nearly every saw needed the miter and bevel settings adjusted. And it can be like a treasure hunt looking for things like bevel stops and release knobs. The owner's manuals weren't as bad as we expected at describing these adjustments and offered handy tips on using the tools.

### Blade guards are for safety

The primary safety feature on older saws, a retracting blade guard, was annoying and sometimes dangerous. But the saws we tested all have smooth, self-retracting guards. Although the retracting arm and the guard still can hang up if the fence isn't set back far enough, that is not a safety issue. However, such a problem might limit the cutting depth and even mess up a cut by deflecting the pivot arm. Makita's saw has the best blade-guard design with a housed actuation arm that prevents blade retraction from interfering with the saw's operation. On some saws, the blade guard limits the height capacity of stock set against the



Ridgid's saw comes with an erasable marking strip along the fence.

fence. On the DeWalt 705, for instance, the blade housing permits an upright cut of 5¼ in., but the guard allows only 4½ in. of clearance near the fence.

### A good fence is easy to position

The fence is the most basic feature of the saw, yet still one of the most important. It is also something you can test easily in the store. The fence should be

as tall as the upright cutting capacity of the saw. To keep the fence from getting in the way when cutting bevels, most of the saws have tapered sliding fences on the bevel side of the blade. The quality of the sliding surfaces and the locking devices varies. Some saws have smooth surfaces that allow the fence to slide easily in and out, while others have surfaces that are a little rough and sloppy. The locks are either twist bolts or cam-style. Although the bolts do the trick, the cam locks are much faster and easier to use.

### Scales should be easy to read

For the most part, the miter scales on all these saws are easy to read and adjust. The scales have detents at 0°, 15°, 22.5°, 30°, 31.6° (for cutting crown flat on the miter table), and 45°. On all the saws, the miter handles twist to lock the miter table in position, and each saw has an override system that allows you to swing the miter table around without stopping at each detent. Locking positions close to a stop still requires a steady hand as the spring tries to slip into the detent. Holding the override and twisting down the miter lock sometimes is a two-hand process.

The bevel scales, on the other hand, can be frustrating. Most of them are accurate, but only if you are looking at them from the right direction. Depending on where you stand, you get different readings. Overall, the closer the indicator was to the scale, the easier it was to

line up bevel angles. Most saws bevel beyond 45° if you adjust the stop, but only our three favorite saws have a positive bevel stop at 45° and a quick-release feature to bevel beyond 45°. To complement the 31.6° miter-scale detent for cutting crown molding lying flat, bevel scales are marked at 33.9°. And some saws offer retractable



Makita's blade guard is designed not to get caught up on the fence.



## DeWalt 706

**A WORKHORSE, THIS SAW IS ACCURATE, SIMPLE TO ADJUST, AND STILL ONE OF THE BEST ON THE MARKET**

Although it doesn't have the standout features of the newer Bosch 4212 or Delta 36-412, the DeWalt, which has been on the market for a few years, has proved its worth.

We didn't expect any of the saws to be accurate right out of the box. And while this tool was no exception, it was the easiest to get up and running because the adjustment process was so simple: Instead of adjusting the fence, you adjust the miter scale by loosening a few screws in the metal detent plate. Another benefit of DeWalt's miter-plate system is that the detents don't snap down as hard as on some other saws, so they are easy to shift out of position and to lock into angles close to the detent.

The saw has an average crosscut capacity at 0° (90°), but the upright cutting capacity is greater than most saws, at 6½ in. The upright cutting capacity let us do more work with the miter table before having to resort to flat bevel cuts.

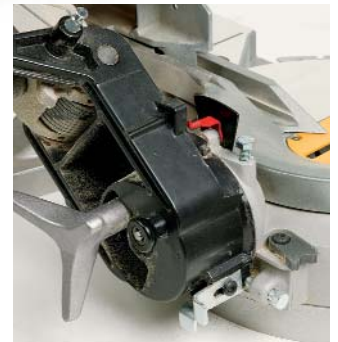
The saw bevels in both directions with a decent bevel scale. But unlike on the Bosch and Delta, we had to reach around to the rear of the DeWalt to operate the bevel lock and to release the pin that allows the bevel to be swung to the right. When the saw is returned to 90°, however, it automatically resets with a positive stop. The swing-out stops for 33.9° bevels and the slide-out stops for bevels greater than 45° are on the money and easy to operate. And at the end of the day, we appreciated that the saw was not as heavy as the Bosch or the Delta.



**Designed for wide boards.** The blade housing on this saw allows 6½-in. boards to be cut standing up against the fence.



**Miter adjustments made easy.** Adjusting the miter scale requires loosening only a few screws and sliding the scale/detent plate to the right or left.



**Bevel stops are on the money.** On the back of the saw, the swinging stops for 45° and 33.9° bevels are accurate cut after cut.

stops at this mark. If you cut a lot of crown molding, you will appreciate this feature.

### Consider the blade

A good 12-in. sawblade can cost more than \$50, so be sure to evaluate the blade that comes with any saw you are thinking about buying. If you're going to use the saw only for cutting framing lumber, then you'd be satisfied with a 28- or 32-tooth blade. For some simple trim work, you can get away with a

40-tooth blade. But for finish carpentry, you should use a 60-tooth blade.

### The dust bags are good, but not good enough

All the saws have bags to collect sawdust. Of course, how much dust gets into the bag is what counts. We used a simple test to see how well the dust collection worked. On a clean bench with a backstop, we made several cuts through a 2x6 with each saw. We swept up

after each trial and measured the amount of dust collected by the bag and the amount in the dustpan. Most saws caught 60% to 70%. But sawdust is a known carcinogen, so only 100% really would be good enough. □

*Fine Homebuilding* contributing editors Rick Arnold and Mike Guertin are builders in North Kingstown and East Greenwich, R.I. Photos by Scott Phillips, except where noted.