

# PLUNGE-



These saws are the best for breaking down sheet goods, if that's one of your shop chores. But you'll need to dig into the features to make your purchase decision.

# CUT SAWS

BY GLEN D. HUEY

Since DeWalt and Makita entered the United States plunge-cut saw market with Festool, the three have received immense interest and discussion. How are the saws different? Are the results of a crosscut or rip cut any cleaner than those made at a table saw? What features are common or unique on plunge-cut saws? I scrutinized a DeWalt DWS520, a Festool TS55 and a Makita SP6000 to see which, if any, of the saws stand out.

If you're looking for vast differences in the cuts produced by the various plunge-cut saws, I'm afraid you're going to be disappointed. I used each saw to cut plywood and hardwood, both with and across the grain, and for slicing samples of melamine. There is a small amount of tear-out (mostly across the grain as you might expect), but nothing significant. In fact, I compared those cuts with cuts made in the same materials at a table saw and again, the differences are minimal.

## A Smooth Ride

A quick look at the guide rail or track designs is of interest. The Festool and Makita guide rails look very similar in profile—so much so, that they fasten together and align. The DeWalt track has a different profile. DeWalt's track is symmetrical and center-justified, which means you can operate the saw in both directions. With the others, you have to flip the rails to cut in a second direction. That could be an issue depending on the task.

**Right on track.** The commonality of these saws is a guide rail or track on which each slides—as well as the clean, straight cuts produced. Where differences show is in the unique features found when given a closer look.

But here's what is attention grabbing: All three plunge-cut saws ride and operate on a Festool guide rail. However, Festool's saw rides on a Makita track, but not on a DeWalt track. And a DeWalt saw doesn't work with a Makita track just as a Makita saw is not functional on a DeWalt track. Need a scorecard?

## How Plunge-cut Saws Work

The Festool and Makita saws' plunge operation is like moving your wrist in a hammering motion. The DeWalt saw moves a bit differently. It rocks forward to make a plunge cut with an action similar to moving something from one spot to another—lift, move, then set back down. Switching between the two different motions causes one to think, but individually, their use is intuitive.

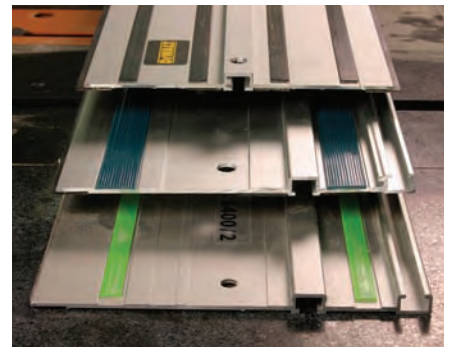
What makes these saws operate as they do is the blade set with a "toe-in" design. This allows the saw to cut at the front of the blade with the back of the blade held away from the freshly cut edge. Minimal burn and little tear-out on the money side of the cut is the result. This is also the major difference between the finished cuts from these saws and those of a circular saw when used in combination with a straightedge guide.

There are other features common to these saws, such as track adjusters to dial in the exact fit for a smooth slide, a lockable arbor for quick blade changes as well as blade depth-of-cut adjustments. And each saw is set up for dust extraction via an external vacuum. (See page 53 for more comparisons.)

A significant feature found on the DeWalt and Festool saws, but not on Makita's saw, is a riving knife. At first, you may question a riving knife's importance because the blade retracts into the saw if the tool is lifted from the track. But even with that action, there is still an opportunity for kickback and a riving knife defends against that action.



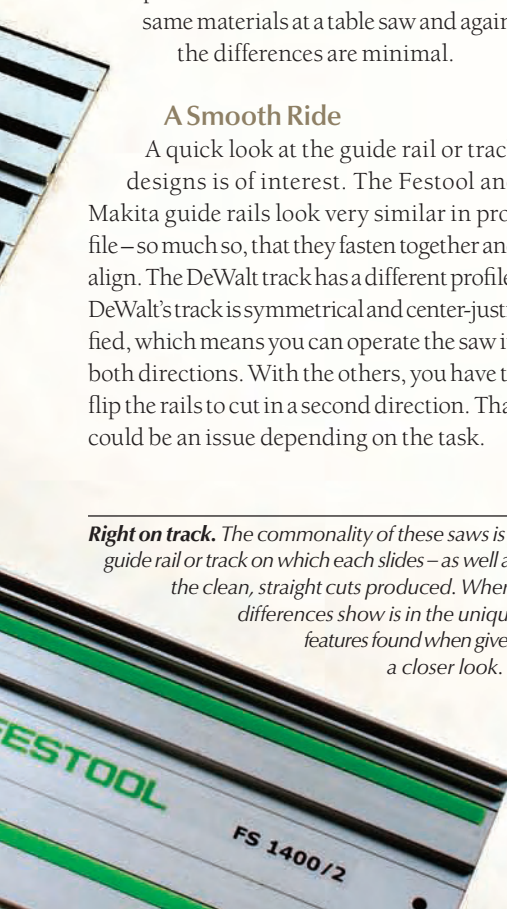
**Not glue ready.** The edges produced with plunge-cut saws are clean, but in the rake of the light, small saw marks can be seen.

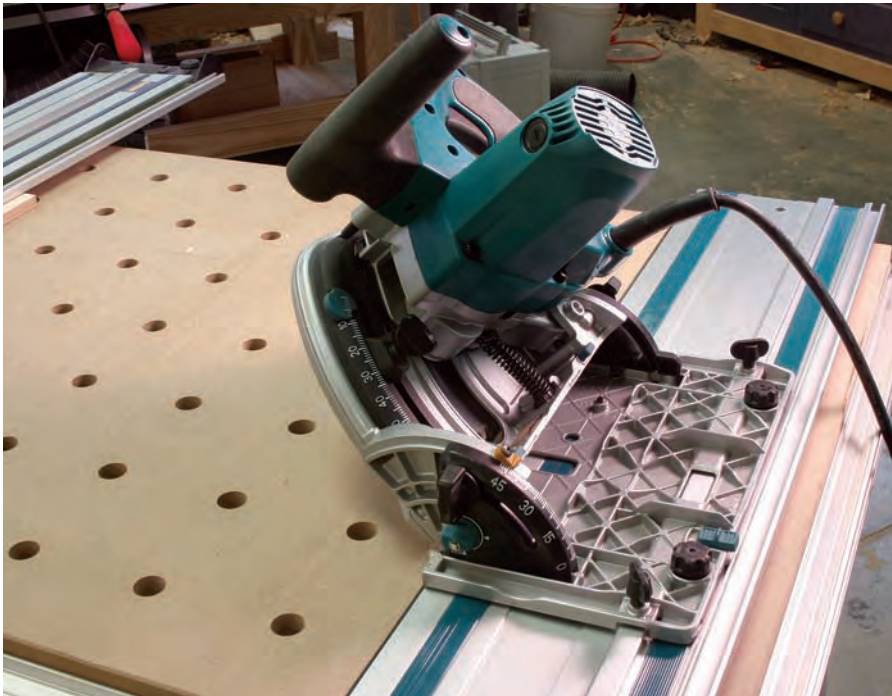


**All aboard.** Plunge-cut saws work best when slid along a guide rail or track. What saw works with which track is interesting.



**Properly set.** A plunge-cut saw is set up with the blade slightly canted at the front. Here you can see the paper-thin gap needed to make a saw work its best.





**Stays on track.** On the Makita, a small lever slides a catch into an undercut groove and does something that no other track saw can do – stay hooked to the track when all the weight is tilted.

### Features – Makita SP6000

Makita's plunge-cut saw rivals DeWalt when talking power. At 9.1 pounds, the SP6000 is the lightest of the three saws. Its maximum depth of cut is  $2\frac{3}{16}$ " when set at 90° and  $1\frac{9}{16}$ " at 45°. This saw is the only tool that has positive stops at both 22½° and at 45°. The maximum angle setting (48°) is the highest of all three saws. The SP6000 is also the only saw that allows a -1° cut.

Another unique feature of the SP6000 is a slide lever that, when engaged, hooks into an undercut groove in a Makita guide rail to keep the saw from tumbling off the rail when set to cut an angle, but only on the Makita track.

### Features – DeWalt DWS520

DeWalt's plunge-cut saw has maximum depth-of-cut potentials of  $2\frac{1}{8}$ " at 90° and  $1\frac{1}{2}$ " at 45° while on a track, and is the heaviest of the three plunge-cuts saws at 11.2 pounds. This saw's imperial markings for depth and angle adjustment are easy to read and account for the thickness of the track.

A unique feature found on the DeWalt saw is an anti-kickback catch. Release a knob and a small spring-loaded wheel, located in the center groove of the saw's base, is thrust against the track preventing backward movement. But this feature only works on the DeWalt track. (On a Festool guide rail, the DeWalt saw's center groove is not utilized.)

### Features – Festool TS55

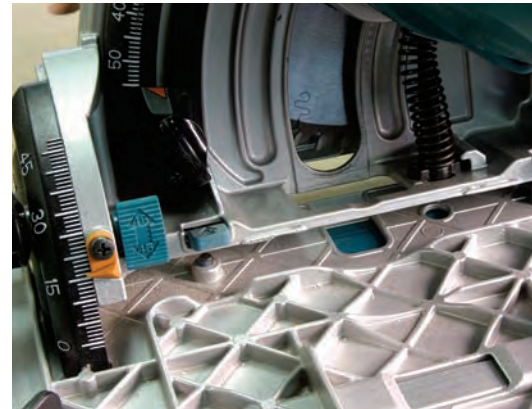
The TS55 has slightly less power than the other two saws and has maximum on-a-track cut of  $1\frac{15}{16}$ " at 90° and  $1\frac{7}{16}$ " at 45°. The Festool saw's depth-stop gauge is adjusted with a simple push, then move and release. However, the company continues to use metric measurements. The TS55 is the easiest of the saws for blade change – lift the FastFix lever (shown in the bottom right photo), plunge the saw until you here a click and you're set. The arbor locks as you turn the blade to loosen the hand to lock the shaft.

Also, the Festool saw is part of a woodworking system and there is an extensive number of accessories available for this tool.

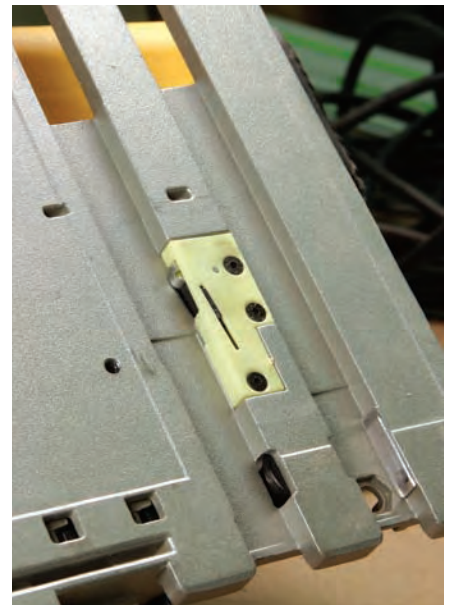
### A Total Toss-up

If breaking down sheet goods is a primary function in your shop, a setup with one of these saws is helpful. We found that all three tools made excellent cuts, their features were similar and the prices were in the same ballpark. We think a lot of purchasing decisions will be made based on brand loyalty (all three brands have intense loyalists). However, no matter which brand you choose, we don't think you'll be making a bad decision. **PW**

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**A tale of two levers.** Flip a lever to bypass the 45° stop and cut at the maximum-cut angle of 48° – or push in the twin tabs to drop the saw to cut at a negative angle. These are two features that are unique to Makita's saw.



**Spring to action.** A spring-loaded roller locks the DeWalt saw to a DeWalt track. This is a great feature if you're using this saw as a panel-cutting tool.



**Quick-change artist.** Festool's saw is by far the easiest on which to swap out blades. It's a one-handed operation.

# Plunge-cut Saws

## MAKITA #SP6000

The 12-amp motor on Makita's plunge-cut saw spins the 6½"-diameter (165mm) blade between 2,000 and 5,200 revolutions per minute (rpm). This saw has a number of features I find useful. Being able to cut to a maximum 48° with a flip of a lever is nice, but to quickly find and set angled cuts at 22½° and 45° with built-in positive stops is great – even if the 22½° and 48° settings are factory set and not adjustable.

Additionally, this is the only saw that allows a -1° cut option. To reach that angle, you need to push in two stops at the saw's base, then lower the body of the tool. Once you're finished, a simple lift of the saw above the 0° line resets those stops.

On the downside, Makita chose not to include a riving knife on its plunge-cut saw, and the power cord is short – at 8' this cord doesn't cover the standard length of sheet goods.

An SP6000 will set you back around \$384, and don't forget to pick up a guide rail. Two guide rails are available: 54" (\$80) and 117" (\$200). The cost of a replacement blade is \$45.



### MAKITA

Model #SP6000

[makita.com](http://makita.com)

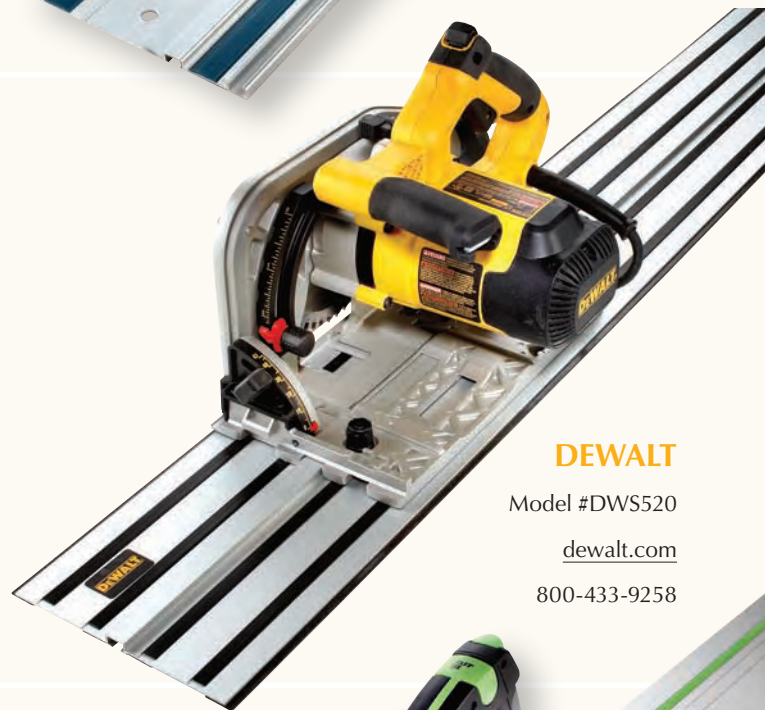
800-462-5482

## DEWALT #DWS520

Spinning a 6½", 48-tooth blade to a variable speed between 1,750 rpm and 4,000 rpm is no problem for the 12-amp motor. In fact, there's plenty of power to make the maximum cuts of 2⅛" at 90° and 1½" at 45° while on a track. The saw can reach up to a 47° bevel cut and weighs in at 11.2 pounds, easily the heaviest of the three saws.

The DeWalt saw's built-in kickback catch is a unique feature, but there are two issues to consider. First, the feature is only usable when working on DeWalt's track. And second, while this catch works to thwart backward movement, it does nothing to keep the saw on the track. And once the saw is lifted from the track, the catch action is eliminated. But if you're looking to use this setup as a panel saw, the kickback catch is top shelf.

DeWalt's saw is priced at \$499 including a 59" track. Three track lengths are available: 46" (\$80), 59" (\$100) and 102" (\$230). Replacement blades are available at \$60.



### DEWALT

Model #DWS520

[dewalt.com](http://dewalt.com)

800-433-9258

## FESTOOL #TS55

Festool has had its plunge-cut saw available in the States longer than either of the other saws. The TS55 saw has a 10-amp motor that produces sufficient power for variable blade speeds between 2,000 and 5,200 rpm. The saw includes a 48-tooth, carbide-tipped blade with an alternate-top-bevel (ATB) design that is 6¼" in diameter or 160mm. This blade (as on the other saws) has a 20mm arbor hole. Street price for replacement blades is \$58.

At a weight of 9.92 pounds, I found this saw easy to maneuver along the guide rail and no trouble with day-long use.

The Festool cord is 13' in length, which makes it easy to stretch along the length of most sheet goods. And because this cord detaches at the tool, you'll be sure the power is off when making adjustments.

After a recent price increase, a TS55 is priced at \$500 including a 55" guide rail. Other Festool rails are available in eight different lengths, from 32" (\$63) to 197" (\$474).



### FESTOOL

Model #TS55

[festoolusa.com](http://festoolusa.com)

888-337-8600