

A Safer Tablesaw Finally Arrives

But will blade-stopping technology revolutionize the woodworking-tool industry?

BY KELLY MEHLER

SAWSTOP CABINET SAW

Motor	3 hp or 5 hp, single or three phase
Blade size	10 in.
Blade tilt	Left
Rip capacity	36 in. or 52 in.
Dust collection	Blade shroud
Price	\$2,499 plus fence
Contact	503-638-6201 www.sawstop.com

For years I've advocated improvements in the safety design of tablesaws sold in the United States. After testing one of the first SawStop machines shipped from the Geetech factory in Taiwan, I'm happy to report that with this saw, the industry has made a major leap forward. (For a description of the features on this saw, see *FWW* #171, p. 34.)

This machine offers three valuable safety features: a brake that stops the blade instantly when it comes in contact with the operator; a riving knife that prevents kickback; and a user-friendly blade cover. The blade brake is activated by an electronic sensor in a replaceable cartridge. When it senses contact with human flesh, the cartridge fires into the blade as it drops down below the level of the tabletop. The blade is ruined in the process, and the cartridge will need to be replaced. A cartridge for a

A blade guard that works. This blade guard, which is thinner than most, lifts easily out of the way. It's mounted on an integral riving knife fitted with antikickback pawls.

10-in. blade is \$59, and one for 8-in. dado sets is \$69. I tested this saw twice with hot dogs, once with a chicken leg, and once with sopping-wet pressure-treated lumber. (If there's any chance that you might activate the brake by mistake, as when cutting pressure-treated lumber, you can override the sensor with a keyed lock.) Each time I tested the device, it worked.

The first test was in front of one of my classes. I stuck a hot dog on the end of a stick and swung it into the moving blade as fast as I could. The result was a 1/6-in.-deep

by 1/8-in.-wide by 3/16-in.-long cut. One of the students, a medical doctor, said such a wound would require two or three stitches at most. When I tested the device using a chicken leg pushed into the blade at normal speed, the cut was almost imperceptible.

I'm really pleased to see a riving knife on this saw. Unlike a splitter that stays in one position, a riving knife travels with the blade for height and angle adjustments, and it can be set to within 1/8 in. of the back of the blade. It not only prevents kickback but also keeps hands away from the back of

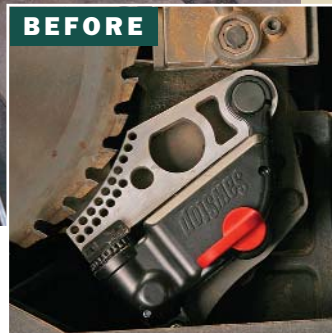


FASTER THAN THE EYE CAN SEE

When Mehler moved the chicken leg into the path of the blade, the SawStop brake worked flawlessly, leaving no discernible damage on the piece of chicken. The braking mechanism springs an aluminum cartridge into the path of the blade as the whole blade assembly drops below the surface of the tabletop, out of harm's way.



Now you see it. The replaceable cartridge on the bottom right of this photo (inset) is the device that fires into the blade to stop it instantly.



Now you don't. Heat from the force of the impact welds the blade to the aluminum cartridge, which means you'll have to replace both.



the blade. This saw comes with a choice of two riving knives—one single-piece unit and one with antikickback pawls that is part of the blade-cover assembly, which is the best of any other designs that I've seen.

I did run into an electrical problem with the test machine: Twice it turned off inadvertently, without my having hit the switch. The quality-control staff at SawStop will have to solve this problem. □

Kelly Mehler recently opened a woodworking school in Berea, Ky. (www.kellymehler.com).



Riving knife eliminates kickback. This technology, common on European saws, does not exist on any other 10-in. cabinet saw sold in the United States.

Will SawStop be standard on all saws?

When Stephen Gass first invented a device to detect contact between an operator and a moving sawblade and then stop that blade instantly (meaning within five-thousandths of a second), he figured that all he had to do was offer it to saw manufacturers, and they'd be tripping over each other to buy it. It didn't work out that way. After the SawStop technology won the prestigious Challenger's Award at the IWF show in Atlanta in 2000, progress seemed to grind to a halt. Why?

The answer to that question, like most stories, depends on whom you ask. I spent more than an hour on the phone with Gass, and he gave me a truncated version of the events from his perspective. Gass and his partners showed prototypes of the device to more than a dozen tablesaw manufacturers and got as far as a signed license agreement with one of them before the deal fell apart. In April 2003 they (along with several hundred signatures in agreement) petitioned the U.S. Consumer Product Safety Commission (CPSC) to initiate a ruling that would declare the technology a performance standard, the net effect of which would require manufacturers to put it on their saws. The CPSC has yet to make a formal ruling on that petition.

None of the manufacturer representatives that I contacted would agree to let me use their names or go on the record with a response. But one of them told me the reluctance to adopt the technology is twofold: They don't believe the mechanism has been tested thoroughly enough, and the retooling costs would be enormous because they can't retrofit it to existing saws. He added that they also don't believe tablesaws are inherently unsafe, as long as consumers utilize the guards and splitters that come with the machines.

According to statistics put out by the CPSC, there were 33,114 injuries on tablesaws in the United States in 2002. Of those, 3,503 were amputations and 22,105 were lacerations, and none of them were fatal. (The chart I saw didn't explain the missing 7,506 injuries, but presumably, that would represent blunt traumas from kickbacks.) The owners of SawStop believe their product will reduce those figures.

—William Duckworth, associate editor