

# Winners and the Winners are...



The products on these pages are the winners of Woodshop News' first Readers' Choice Awards. They were selected by the readers of Woodshop News, who were asked to nominate a favorite new tool, machine or accessory – bought within the last two or three years – that has significantly increased their productivity or quality of work.

## SawStop 10" cabinet saw

By B.H. Davis

I first learned of the SawStop table saw safety braking system when it was introduced at IWF 2000, where it received immediate acclaim. As a means of instantaneously stopping a rotating saw blade when contacting an operator's skin, it could help prevent thousands of hand injuries. However, reluctance on the part of major saw manufacturers to incorporate this new technology into their designs slowed its availability to those purchasing new table saws. This subsequently led to the development of the SawStop line of table saws as introduced at IWF 2004.

I became an instant fan of this new technology and signed on to purchase a saw at IWF 2002. I anticipated it would be a quality tool with the added benefit of the blade braking mechanism. What I have received with the new 10" cabinet saw is a machine that is as well designed and constructed as any equivalent machine on the market.

The braking system works by applying a minimal voltage (too low to feel) to the arbor and blade, which are isolated from the rest of the

saw by a high-impact nonmetallic arbor coating. If you touch the blade, your body draws off some current, thus lowering the voltage. The saw's electronics sense the change in voltage and trigger the brake. The torque created by the rapidly stopping blade subsequently causes it to drop below the table surface. All of this takes place in the time it takes three to four blade teeth to rotate through the contact point.

### Impressive owner's manual

I received a "temporary" owner's manual a few days before the saw arrived. The permanent manuals were yet to be printed but I found this provisional version to be the best machine document I have seen. There are nearly 100 pages of detailed descriptions, clear explanations and color photos of the saw from every imaginable angle.

Most notable is the section on Making Adjustments, where about 20 pages explain the numerous available adjustments. One in particular is the explanation on how blade/miter slot parallelism is accomplished. This is done with four adjustment points exposed on the

*continued on Page 30*



# Legacy ornamental milling machine

Legacy Woodworking Machinery's ornamental milling machines allow the user to turn without a lathe. A machine that holds and uses a router as the shaping tool, each Legacy machine can be used to turn pieces, add joinery and create decorative patterns. They are designed to make flutes, tapers, spirals, turned beads and coves, mortises, rosettes and many types of profiles, according to the company.

"This machine has opened up a new world," said reader Bob James.

There are six Legacy machines, ranging in price from \$359 for the model 200 — which can turn salt and pepper mills or small vases — to \$9,300 for the Legacy 2000, which can turn stock up to 13" in diameter and 126" long.

Contact: Legacy Woodworking Machinery, 1122 S. 900 E., Provo, UT 84606. Tel: 800-279-4570. [www.legacywoodworking.com](http://www.legacywoodworking.com)

*"This machine has opened up a new world."*

— Bob James,  
Woodshop News reader



## SAWSTOP from Page 27

outside of the cabinet rather than the more typical oversized table/trunnion mounting holes.

The basic assembly of this left-tilt saw was straight forward. We had to mount the left-hand cast iron extension table, the splitter/guard unit, the zero clearance table insert and the brake cartridge. All went on easily and accurately. We also installed the good-quality 60-tooth carbide blade that was included with the package.

The brake cartridge has to be set about 1/16" to 1/8" from the blade teeth, but no adjustment was necessary. If I had needed to alter this spacing an adjustment bolt is readily accessible just below the table insert. The brake cartridge itself slips on easily when accessed through the hinged cabinet side motor cover.

In addition to the existence of a brake cartridge, an item worth mentioning is the well-thought-out blade guard/anti-kickback pawl assembly. The guard is quite narrow so the fence can come in for cuts of less than 3/4" wide without its removal. Being so thin it is also close coupled to the blade, making for efficient air flow for dust collection — although an occasional inside air hose cleaning is needed to keep it clean. For dado cuts it is easily removed with a lock lever located just below the table insert. Opening a swinging door to the side of the blade gives a bit more room for your hand, but you need to remember to close it or you'll lose dust collector suction around the blade. This is a quality blade guard system that increases the chance users will want to leave it in place.

If slots need to be cut with a 10" blade, you can remove the blade guard/anti-kickback pawl unit and slip on the included riving knife. This is a narrow steel splitter that sits directly behind the blade. Its curved edge stops just below the top of the blade, giving out feed pinch protection. It is a nice accessory that we use quite often.

Another feature we like is the large saw table, which is about 6" deeper than on my old saw. It allows the miter gauge to pass the center of the blade without the lead end of the guide rail sliding past the outfeed edge of the table. This means that no routed slots are required in a user-supplied outfeed table.

I purchased the accompanying 52" fence system and found quality details here as well. It is designed for use on either the right or left side of the blade, with the typical 52" to the right and a surprising 12" to the left. There is an alignment cross hair sight for each side, and a much-welcomed 12" scale for left-side settings.

The fence incorporates a commonly used front and rear rail system. However, the rear rail was not drilled and countersunk as needed for my typically mounted outfeed table, which I mentioned to the folks at SawStop. To their credit they made a corresponding change in their next production

run. They were also receptive to my concern that the gloss black side extension table was a potential hazard. I felt that items inadvertently set down here could be overlooked and accidentally pushed into the blade. I re-laminated mine in white.

## Design and construction

We've had the SawStop 10" cabinet saw in the shop several months now and have come to like many of its features. Some of the more noteworthy of these are: large all-steel hand wheels, oversized vinyl sleeved blade wrenches; bottom relief on the table insert giving blade clearance for bevel cuts; a double offset flat belt drive system that isolates motor vibration and dual vertical trunnion slide shafts for raising and lowering the blade. Additionally, machining, assembly and adjustment at the factory have all led to a noticeably high level of fit and finish.

All this being said there are still some things that are unique to the use of this saw, and some minor changes in habit are required to run it properly. In addition to brake cartridge positioning as mentioned above, a different cartridge is required when an 8"

dado set is used. Also, blade changes should include a hand spin to make sure all teeth clear the brake plate.

To use the saw the main power switch must be turned on to activate the electronics before a paddle switch can start the motor, and if you have turned off the saw you have to wait for the blade to come to a complete stop before restarting. Turning on the main power switch activates a power on self-test which takes three to four seconds. You can either turn this switch on and off each time the saw is used, or turn it on in the morning and off at the end of the day. In our shop turning off the lights automatically cuts power to all machinery, so we can leave the switch in the on position unless we are making a blade change or removing the blade guard assembly.

For cutting nonferrous metals there is a by-pass key included that allows you to turn off the safety brake system. You can also use this by-pass mode to cut woods with excessively high moisture content, which might shut off the saw but would not trigger the blade brake, according to the manufacturer.

With regard to dust collection, you must use it. The trunnion blade housing ports directly into a 4" dust line that exits out the back of the saw. If a dust collection system is not connected, this line will clog and cause sawdust to build up around the blade. We added a shop-built electronic dust gate that opens and automatically starts our sawdust blower when the saw is turned on.

Lastly, there are red and green indicator lights having various meanings depending upon their on/off blinking condition. These give you information on the status of the electronic sensing system, and are fully detailed in the manual.

## Final impressions

As you can tell, my impressions of the SawStop 10" cabinet saw thus far are quite positive. The company staff has been readily available to answer my questions as well as being interested in my feedback. There are some changes in habit required in using the saw but they are minor inconveniences in comparison to the overall increase in safety.

Bottom line is that this is a well-built table saw with or without the SawStop braking system. Whether or not the brake works properly if needed five to 10 years down the road remains to be seen. Just the possibility of avoiding serious injury by way of the braking system, though, is enough to convince me the saw is a worthwhile investment. The additional fact that it is a precision piece of equipment makes it an excellent addition to our shop. ■

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[www.curvedmoldings.com](http://www.curvedmoldings.com)



There is an alignment cross-hair sight for each side, and a much-welcomed 12" scale for left-side settings (top); The brake cartridge (at right) slips on easily when accessed through the hinged cabinet side motor.