

Hybrid Tablesaws

Do serious woodworking without springing for a cabinet saw

BY TOM BEGNAL



Until relatively recently, a home woodworker looking to buy a floor-standing tablesaw had just two choices—a contractor's saw or a cabinet saw. Now there's a third choice, commonly called a hybrid saw, that fits between the two in price and performance.

When it comes to power, hybrids generally have between 1¾ hp and 2 hp. Cabinet saws begin at 3 hp. But if you work with very thick stock only occasionally, a 3-hp motor isn't a must. A 1¾-hp to 2-hp

motor will cut just fine through the thickest hard maple—you just have to cut a bit slower. Also, hybrid saws, like contractor's saws, have 110v motors. That means there is no need for special wiring; you can plug them into any household grounded outlet. On the other hand, cabinet saws run on 220v.

Choosing a favorite

All these saws cut ¾-in.-thick stock without strain. And, with the exception of the

Hitachi, all could cut 2¾-in.-thick maple simply by slowing the feed rate. Also, all had good rip fences, a very important component in a tablesaw.

That said, the Woodtek had the most power, the widest rip capacity, a roll-around stand (that worked wonderfully), and a low price. I felt it was the best overall saw in the bunch. And, because it comes at a low price, it's the best value, too.

Tom Begnal is an associate editor.

What's the difference?

In terms of overall features, hybrids generally fall between contractor's saws and cabinet saws. But on the important points—smoothness of cut, dust collection, rip fence—hybrids have more in common with the big guys.

Contractor's saws

- Price range: \$550 to \$900
- 1½ hp, 110v
- Motor outside of cabinet
- Trunnion assembly mounted to underside of table
- Generally have stamped-steel wings (cast-iron wings optional)



Hybrid saws

- Price range: \$700 to \$1,100
- 1¾ hp to 2 hp, 110v
- Motor inside cabinet
- Trunnion assembly mounted to underside of table or cabinet
- Beefier trunnions than on contractor's saws
- Good-quality rip fence
- Cast-iron wings (optional on the DeWalt)



Cabinet saws

- Price range: \$975 to \$2,100
- 3 hp to 5 hp, 220v
- Motor inside cabinet
- Trunnion assembly mounted to cabinet, making for easier adjustment
- Beefiest trunnions
- Cast-iron wings



15-point inspection

What makes a good tablesaw? When evaluating the overall quality of a tablesaw, I take into consideration a number of categories—15, to be exact. A saw that does well in all 15 areas is an excellent tool.



1 Miter slots

For smooth, safe cuts, the tablesaw blade must be parallel to the miter slots at any blade angle. I measured blade/miter-slot parallelism with a 10-in.-dia. testing plate at 0° and then took a reading to see how different the alignment was with the plate at 45° (see chart, pp. 64-65). A difference of more than 0.007 or 0.008 means you'll have to shim the trunnions, a tedious process of trial and error on most saws. Anything less can be solved with a side-to-side shift, which is easier. It's important to check your saw when it arrives. Any of them can be bumped out of whack during shipping.



3 Flat table

A tabletop with one or more severe dips or crowns, depending on their location, could affect whether the blade makes a square cut. Using a test-quality straightedge and feeler gauges, I made 12 measurements on each top, then averaged them. All the tops were satisfactorily flat, with the average deviations ranging from under 0.001 in. to 0.002 in.



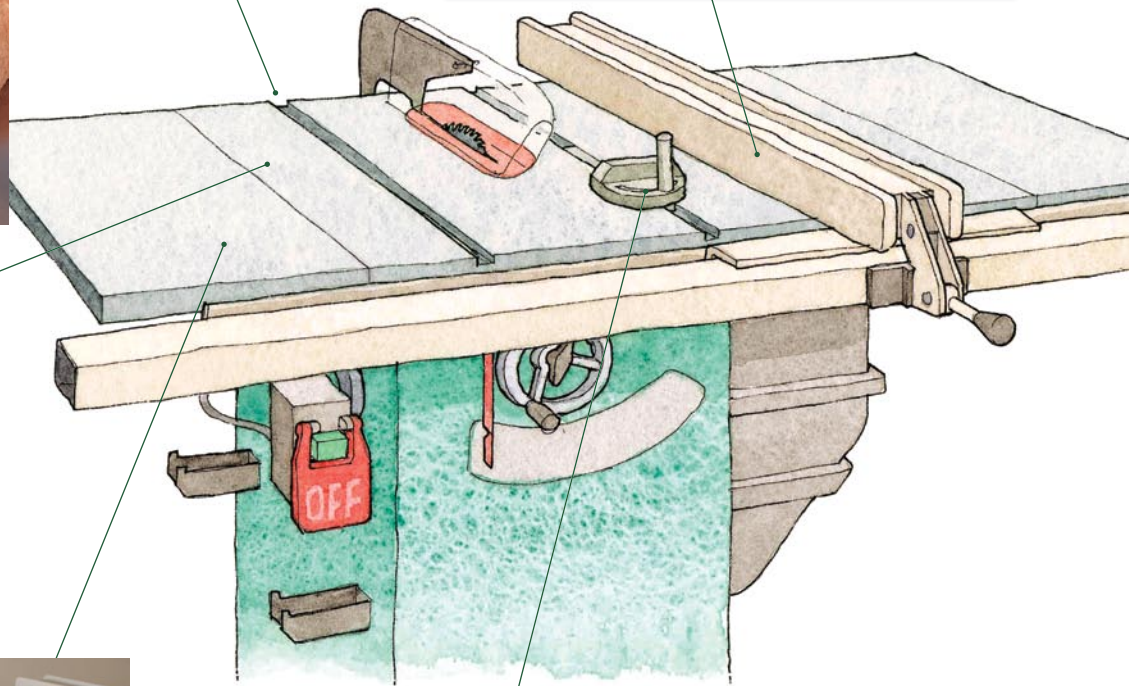
4 Wings

Like the table, the wings should be flat and installed flush to the table; if not, your boards might not be square to the blade. All the wings were flat enough.



2 Rip fence

The importance of a good rip fence is hard to overstate. A good one is sturdy, straight, square to the table, and parallel to the sawblade. If not parallel or square, the fence should be easy to adjust so. It should slide smoothly and lock securely with little effort. When side pressure is applied, fence deflection at the back of the saw should be minimal. All these hybrids had good rip fences. Some needed tweaking to get them parallel or square, but that took only a minute or two. To get a sense of how much each fence might deflect, I used a push-pull gauge to apply 6 lb. of force to the back end. None deflected more than 0.006 in., an acceptable number.



5 Miter gauge

A miter gauge should slide smoothly in its slots with no noticeable wobble in the bar, and it should allow you to set accurate stops at 0° (90°) and 45°. I also like a comfortable handle. All the miter gauges in this group were adequate, but those of the Grizzly, Shop Fox, and Delta stood out as especially sturdy and comfortable.

15-point inspection (continued)

INSIDE THE CABINET

A look under the hood can tell you a lot about how a tablesaw will perform when the blade meets the wood.

6 Vibration and cut quality

A saw that vibrates a lot is more likely to produce rough cuts. Plus, it will be noisy and generally annoying to use. I didn't test for vibration, as all the saws ran smoothly after adjusting for misalignment.

7 Trunnion

The trunnion houses the arbor, the spinning horizontal rod to which the blade is attached. It allows the blade to rise up and down and to tilt from 0° to 45°. The Craftsman and Steel City saws have cabinet-mounted trunnions, which means the table can be easily and independently adjusted if it isn't parallel to

the blade either at 0° or 45°. If the trunnions must be shimmed, they can be accessed easily by removing the saw table. On the other eight hybrids, the trunnions are attached to the underside of the table, where they are much harder to access. The good news is that any adjustment should be a once-in-a-lifetime event.

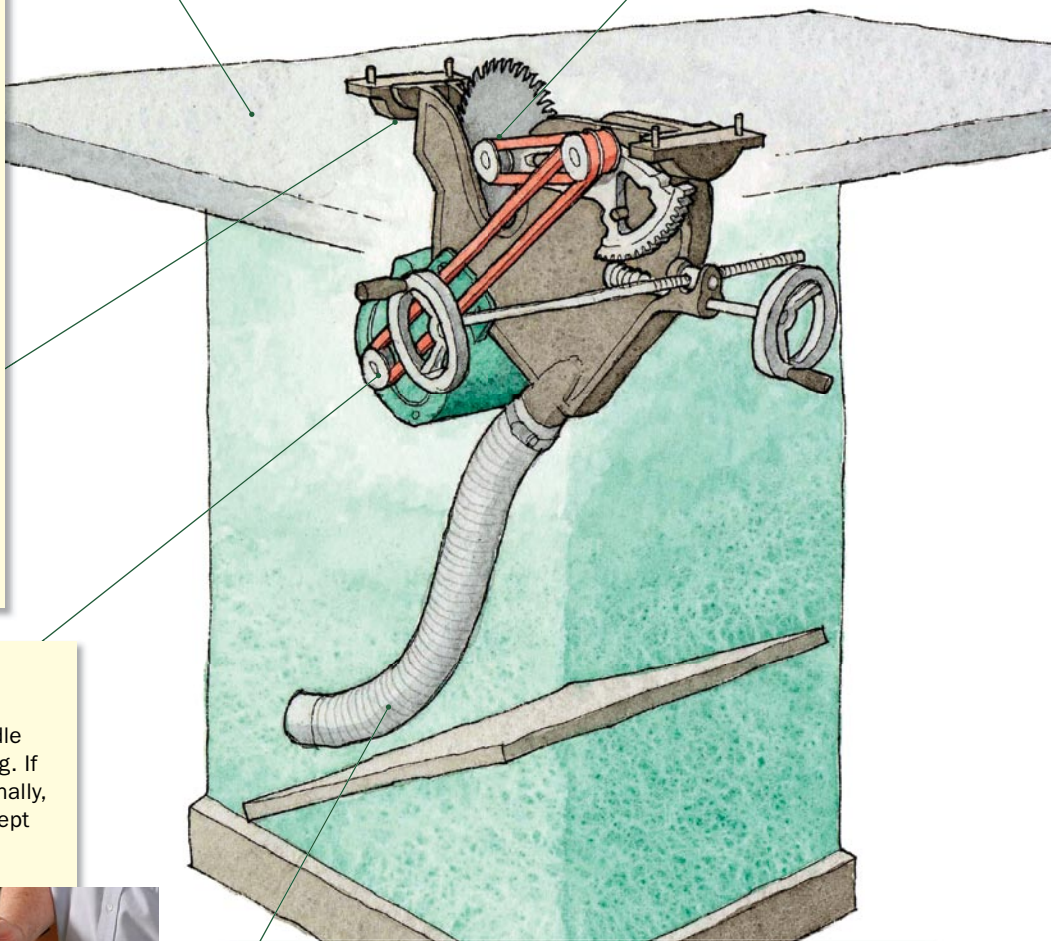
9 Motor

You want a motor that has the horsepower to handle your cutting needs without bogging down or stalling. If you rip thick stock (1½ in. to 2½ in.) only occasionally, horsepower is not a big issue; just cut slower. Except for the Hitachi, all the saws did fine when ripping 1⅞-in.-thick stock at a reasonable feed rate of about 5 ft. per minute (fpm). On the Hitachi, the thermal-overload breaker popped and shut off the saw a couple of times during each cut. When the saws were pushed to a fairly aggressive 7½ fpm, the Woodtek was the only one that didn't bog down.



8 Arbor-flange runout

The sawblade mounts directly to the arbor flange, so any runout on the flange is increased several times at the outside edge of the blade. Wobble creates a wider kerf and a rougher cut. Manufacturers try to keep this runout to a maximum of 0.001 in. Only the Craftsman, with a runout of 0.002 in., exceeded the limit, but it cut as smoothly as the others.



10 Dust collection

Wood dust is bad for your lungs. A saw that removes at least 90% of the dust it generates is about the best we can hope for, especially since some is certain to escape at the throat plate and will be thrown toward the operator by the spinning blade. All the hybrid saws did an adequate job collecting dust with a 2½-hp, 220v dust collector attached to the dust ports.

ON THE OUTSIDE

Several features on the outside of the cabinet affect safety and convenience; be sure to give them adequate consideration.



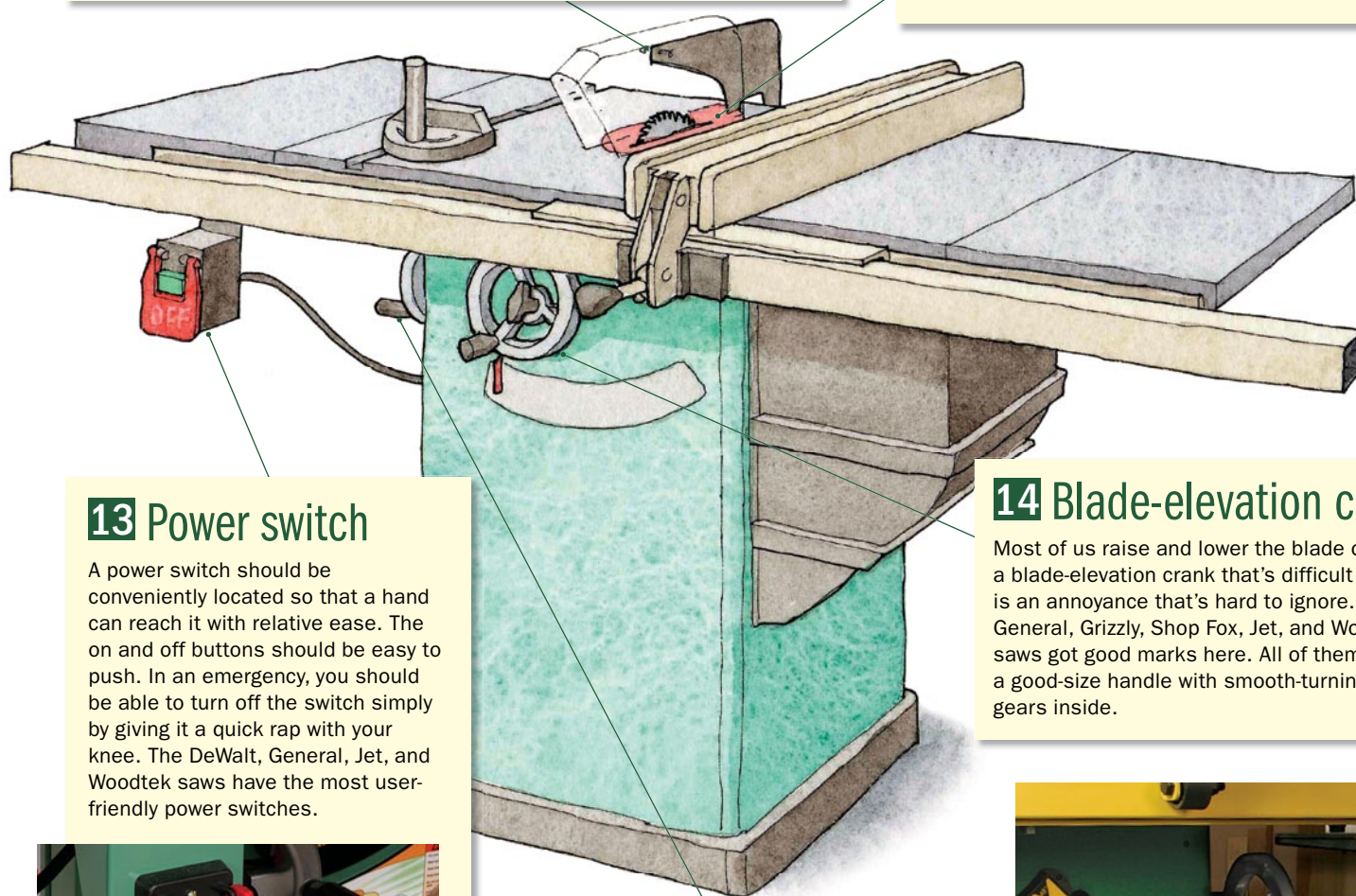
11 Blade cover and splitter

None of the saws have exceptional blade covers and splitters. Only the Craftsman and Steel City saws make them relatively easy to remove and replace—simply loosen a locking knob and slip the unit from a toolless locking bracket. All but the Delta and the Hitachi have covers that remain tilted up when placed in that position to align the blade with a mark on a workpiece, although the DeWalt requires a long reach to do so.



12 Table insert

Most of the inserts were less than flat, making it about impossible to get them level with the table. And because they are relatively thin, all tended to deflect under moderate downward pressure. Craftsman, Delta, DeWalt, Jet, and Steel City made an effort to add stiffness by including ribs on the underside of the inserts. They helped, but not enough to eliminate the problem. You're better off making your own zero-clearance insert (see FWW #169, p. 51).



13 Power switch

A power switch should be conveniently located so that a hand can reach it with relative ease. The on and off buttons should be easy to push. In an emergency, you should be able to turn off the switch simply by giving it a quick rap with your knee. The DeWalt, General, Jet, and Woodtek saws have the most user-friendly power switches.



14 Blade-elevation crank

Most of us raise and lower the blade often, so a blade-elevation crank that's difficult to turn is an annoyance that's hard to ignore. The General, Grizzly, Shop Fox, Jet, and Woodtek saws got good marks here. All of them had a good-size handle with smooth-turning gears inside.

15 Blade-tilt crank

Like the blade-elevation crank, the blade-tilt crank should be easy to turn. The blade should move smoothly as it pivots, with accurate stops at 0° (90°) and 45°. All the cranks worked acceptably well.



Head to head

Consider all factors, from price to power to setup, when choosing a saw.



CRAFTSMAN 22124

Includes outfeed table and 12-in.-wide side table; blade guard and splitter easy to remove and replace; poor parallelism but adjustment isn't difficult on this saw.



DELTA 36-717

Includes 14-in.-wide side table with support legs; fair parallelism (needed simple trunnion adjustment, covered in manual).



DEWALT DW746X

Stamped steel wings; sliding table available as option; fair parallelism (needed simple trunnion adjustment).



Woodtek 148-271

www.woodworker.com

\$760

2 hp/18 amps

27 in. by 44 in.

1 3/4 hp/15 amps

27 in. by 40 3/4 in.

27 in. by 39 3/4 in.

27 in. by 41 1/4 in.

1 1/2 hp/15 amps

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RIP CAPACITY	ARBOR-FLANGE RUNOUT	BLADE-TO-SLOT PARALLELISM		RIP-FENCE DEFLECTION	CUTTING POWER
		@ 0°	Difference @ 45°		
30 in.	0.002 in.	0.001 in.	0.010 in.	0.001 in.	Good
30 in.	0.001 in.	0.008 in.	0.008 in.	0.001 in.	Good
28 in.	0.000 in.	0.001 in.	0.006 in.	0.003 in.	Good
30 in.	0.001 in.	0.002 in.	0.014 in.	0.003 in.	Good
27½ in.	0.000 in.	0.005 in.	0.002 in.	0.003 in.	Good
25½ in.	0.000 in.	0.007 in.	0.022 in.	0.001 in.	Fair
32 in.	0.000 in.	0.003 in.	0.008 in.	0.005 in.	Good
27½ in.	0.000 in.	0.008 in.	0.022 in.	0.003 in.	Good
31 in.	0.001 in.	0.011 in.	0.002 in.	0.006 in.	Good
36 in.	0.000 in.	0.002 in.	0.008 in.	0.003 in.	Very good



HITACHI C10LA

Includes small outfeed table; blade-angle scale is in tabletop; poor parallelism (required difficult adjustment).



JET JPS-10TS

Includes blade lock for one-wrench blade changing; blade-elevation crank among easiest to turn; fair parallelism (needed simple trunnion adjustment, covered in manual).

Online Extra

The DeWalt hybrid offers an optional sliding crosscut table. For a video, go to FineWoodworking.com/extras.



WOODTEK 148-271

Digital angle readout; built-in rolling stand; widest rip capacity; most cutting power; blade-elevation crank among easiest to turn; fair parallelism (needed simple trunnion adjustment).



STEEL CITY 35601

Includes 10-in.-wide side table; blade guard and splitter are easy to remove and replace. Good overall parallelism (easy adjustment needed, covered in manual).



SHOP FOX W1748

Blade and power-cord plug not included; blade-elevation crank easy to turn; poor parallelism (required difficult adjustment, but manual covers it).