

How to Buy a Tablesaw



Get one that's right for your shop and the way you work.

Tools Editor Bob Hunter tried out a number of tablesaws for this article, and turns that into buying advice for you.

Ask a hundred woodworkers which machine a beginner should buy first, and most will heartily recommend a tablesaw. And with good reason: It's ideal for sawing stock to size, getting it square, machining miters and bevels, and cutting nearly all types of joinery.

Whether you're buying a tablesaw for the first time or upgrading your old clunker, begin by narrowing your focus. First, you'll have to choose from the four types of tablesaws: benchtop/job-site,

contractor, hybrid, and cabinet. Any of these saws, when well-tuned, make accurate cuts, but step-up features increase a saw's usefulness, as well as its cost.

8 key factors to consider when buying a tablesaw

■ **Power.** If you regularly work with hardwoods more than $\frac{3}{4}$ " thick, get a saw with at least a $1\frac{1}{2}$ -hp motor. (It takes 3 hp to make heavy cuts with no bogging down.) Totally enclosed fan-cooled (TEFC) induction motors run cooler and

quieter than the universal motors typically found on benchtop/job-site saws.

■ **Electrical service.** Tablesaws with 2-hp or larger induction motors typically require 220-volt service. Know your shop's power capabilities before you buy, or be willing to add a 220 line. Also, consider what machines you'll operate at the same time, such as a dust collector, so you don't overload circuits.

■ **Price.** You can pay anywhere from \$150 for a benchtop saw to well over \$3,000 for a professional-level cabinet

RIVING KNIFE PREVENTS KICKBACK



A riving knife attaches behind the blade and moves up and down with it. This device holds the kerf open and prevents kickback.

saw. As the woodworkers' creed says, "Get all the tool you can afford."

■ **Capacity.** All tablesaws feature at least a 10"-diameter blade, but tabletop sizes vary greatly. And maximum rip capacity ranges from 1' to over 4', an important consideration if you work regularly with sheet goods.

■ **Safety.** Some saws include better safety guards and features (anti-kickback riving knives, blade-brake technology) than others, but often at a higher price tag. For example, a riving knife, shown *above*, keeps boards from pinching against the back edge of the blade, thus preventing kickback. A few saws have this feature now, and many more will in the next few years, as manufacturers comply with new safety regulations. Blade-brake technology, available exclusively on models from SawStop, almost instantly stops a spinning blade should a hand or finger come into contact. It could mean a small cut instead of an amputation.

■ **Space.** If you work in a small garage or basement, your shop might not accommodate a tablesaw with 7' fence rails. Instead, opt for a more compact machine with a rip capacity of 30" or less. In addition to the footprint of the machine, you'll need to leave infeed and outfeed space for ripping long workpieces, and side space for crosscutting long stock. Don't let a too-big tablesaw eat up the very space you need to work in.

■ **Dust control.** Cutting wood creates dust, but not all tablesaws can control it. Closed-base saws with dust ports prove most effective at channeling debris to a dust collector, while many open-base contractor and benchtop/job-site saws simply let the dust fly.

■ **Availability and service.** Online dealers can ship a tablesaw to your shop, but will they provide parts should it break down? You might prefer to buy from a local retailer if you're not confident in making your own repairs.



Cabinet saws deliver powerful performance

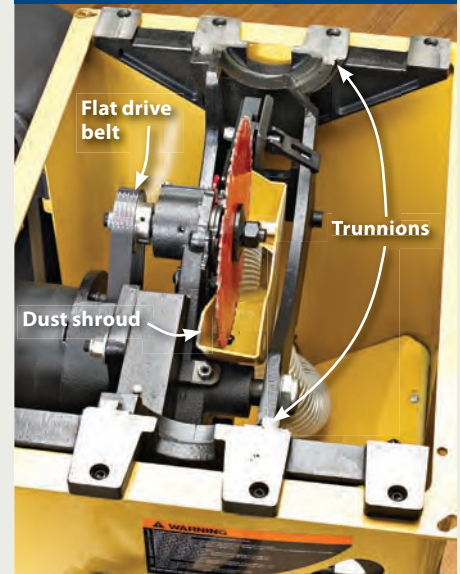
Just as automobile enthusiasts dream of luxury vehicles or speedy sports cars, woodworkers long for cabinet-style tablesaws. With heavy-duty components and 3-hp motors, these machines slice through wood like it's pudding, yet deliver and maintain pinpoint accuracy when set up correctly. The term "cabinet saw" comes from the enclosed steel base that enhances dust collection as well as reduces blade and motor noise, though not all tablesaws with cabinets belong in this group. The saw of choice for professional woodworking shops, this will cost you at least \$1,000 for a new machine.

A typical 3-hp cabinet tablesaw weighs 500 lbs or more because of its big motor and cast-iron components. (Pro models feature 5-, 7½-, or 10-hp motors and also can have 12" or 14" blades.) The motor, mounted below the blade inside the cabinet, drives the blade with either two or three V-belts or one wide, ribbed flat belt.

To harness this kind of power, cabinet saws feature an all-cast-iron inner structure (yoke, trunnions, gears). The large trunnions mount to the cabinet, shown *above right*, rather than to the cast-iron top, as with other tablesaw styles. This is an advantage because adjusting the top parallel to the blade—necessary for accurate cuts—requires loosening only three of the four bolts that connect it to the cabinet and pivoting the top.

Cabinet-style saws typically come with fence rails that provide 50–54" of rip capacity—mighty handy for working with 4×8' sheet goods. Don't need that much? You can get one instead with 30"-capacity rails, an attractive option for small shops. Most cabinet saws feature T-square-style fences with heavy-duty rails.

THIS SAW'S BUILT FOR TOUGH USE



Heavy-duty trunnions provide durability and accuracy, and also dampen vibration.

Pros:

- Powerful motor for bog-free cuts
- Trunnions mount to cabinet for easy, long-lasting table adjustments
- Heavy-duty fence and rails
- Large rip capacity
- Enclosed base improves dust collection
- Large, comfortable handwheels
- Low blade and motor noise levels
- Typically, a large power switch in an easy-to-reach location
- A few models have built-in or included mobile bases

Cons:

- Prices start at around \$1,000
- Requires 220-volt electrical service
- Heavy, so mobility is limited
- Large footprint on saws with long fence rails



These tablesaws aren't just for contractors

The contractor-style table saw gets its name from decades back, when home builders used them on location. Today, you'll seldom see one on a job site, thanks to the evolution of the lighter-weight benchtop/job-site saw.

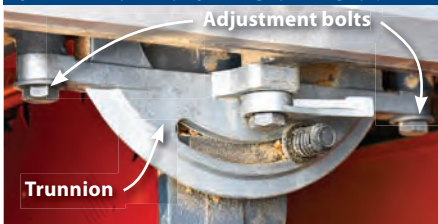
Contractor-style saws feature cast-iron tops, and most now include cast wings. This added vibration-dampening weight helps hold an accurate setup longer than a saw with stamped-steel wings. However, the trunnions, much smaller than those on a cabinet saw, mount to the tabletop from below, as shown *above right*. This makes alignment more difficult because you must reach inside the saw to loosen and move the arbor assembly rather than the top.

Power ratings on these saws range from 1½ to 2 hp with 110-volt motors, which extend out the back of the saw (as shown *above*) and drive the blade with one belt. Because the hanging motor adds 15–20" of depth to the saw, it limits the use of outfeed stands or tables and prevents you from stowing the saw flat against a wall.

With a contractor saw, you get 30" to 36" of rip capacity standard (with 50"-capacity rails optional on some models), smaller handwheels, and much lighter weight (200–350 lbs). These saws tend to vibrate more than cabinet-style saws, suffer greater likelihood of drive-belt slips (because only the weight of the motor provides tension), and generate higher noise levels. Many models include dust hoods for connection to a dust collector, and some even include a plastic shroud around the blade to channel dust.

Although its components are lighter-duty than those of cabinet saws, you still can set up a contractor-style saw for pinpoint precision. However, you might have to compensate for the reduced

SMALLER PARTS=MORE WORK



The small forged-steel trunnions on this saw secure to the top rather than the base, making top-to-blade alignments trickier.

power with slower feed rates and thinner blades. Cuts in thick, hard stock may prove difficult or impossible.

A bare-bones contractor saw costs about \$400, or as much as \$800 with added features. Deluxe models overlap the price range of hybrid tablesaws—and even approach some low-cost cabinet saws—so compare before buying.

Pros:

- Prices range from \$400 to \$800
- Rip capacity equals cabinet-style saws on some models
- Dust hoods or shrouds on some models
- Lighter weight than cabinet saws
- Accurate when set up correctly
- A few models have built-in mobile bases

Cons:

- Limited power means struggles in thick, hard materials
- Trunnions mount to top rather than base, making adjustments difficult and shorter-lasting
- Lighter-duty components allow more vibration
- Open design reduces dust-collection efficiency and increases noise
- Motor hangs out the back of the stand, adding to footprint



Hybrids blend big-saw features at 110 volts

A hybrid table saw marries the small-shop needs of a contractor-style saw (110-volt electricity, light weight) with some of a cabinet saw's benefits (cast-iron guts, enclosed base for good dust collection and noise reduction) in a modest price range. The features vary from one saw to another. For example, some models have forged-steel trunnions as on a contractor saw, and others

CAST TRUNNIONS ARE RARE



The trunnions on this Steel City saw, as well as on Craftsman's hybrid, mount to the cabinet rather than the top.



Benchtop saws: Good options for small shops

You don't have to be a contractor or trim carpenter to appreciate these portable tablesaws. In spite of their small stature and light weight, you can cut hardwoods if you slow your feed rate and use a thin-kerf blade, but some struggle in 2"-thick hardwoods.

Benchtop/job-site saws feature 110-volt universal motors that provide respectable power but are loud and prone to vibration, thanks in part to direct- or gear-drive power trains. Models with closed bases feature good dust collection, but the smaller ports are sized for shop vacuums. Many benchtop saws have shallow miter slots that accept only light-duty miter gauges. They also can be unsafe when cutting large workpieces by yourself because of the narrow footprint and small tabletop. Rip capac-

ity tops out at 25" on the better saws in this class, with some as little as 12". Because of the small tops, you'll need infeed and outfeed support for boards more than 4' long, as well as support for crosscutting stock of that length. The better-equipped benchtop/job-site saws carry price tags that rival those of middle-of-the-pack contractor saws. 🌲

Written by **Bob Hunter**

Pros:

- Prices range from \$150 to \$700
- Lightweight and easily portable, especially with collapsible, wheeled stands
- Motors run on 110-volt electricity
- Up to 25" rip capacity on some models
- Decent dust collection on closed-base models
- Small footprint

Cons:

- Noisy universal motors tend to lack the power of full-size tablesaws
- Increased vibration leads to less-than-furniture-quality cuts.
- Aluminum or molded plastic tabletops lack the durability and vibration dampening of cast iron
- Some models cannot accept a full 3/4" stacked dado set on their arbors
- Blade-height adjustments typically made with a single, small, uncomfortable handwheel
- Most models don't have geared-bevel adjustments and must be done manually, making them tougher to set accurately
- Higher-priced saws overlap mid-priced contractor-style saws
- Light-duty fences
- Thin throat insert plates make it difficult or impossible to make your own zero-clearance inserts

have cast-iron trunnions, though they're smaller than those on a cabinet saw.

To enclose the cabinet, manufacturers mount the motors below the arbor assembly, as with cabinet saws, but these 1½- to 2-hp motors won't have the muscle of a cabinet-style saw. Like a contractor-style saw, most have trunnions that mount to the top rather than the cabinet, making top-to-blade adjustments even more difficult (thanks to the enclosed base) and increasing vibration slightly. See the photo *opposite* for a welcome exception to this style.

Hybrids come standard with 30"-rip capacity fence rails, but you can upgrade to longer rails for up to 54" capacity. The fences typically are the same heavy-duty models sold with cabinet saws.

Pros:

- Prices range from \$700 to \$1,100
- Up to 54" rip capacity on some models (with optional fence rails)
- Enclosed cabinet aids dust control and reduces noise
- Heavier weight than contractor saws
- Motors run on 110-volt electricity
- Some models have cabinet-mounted trunnions

Cons:

- Most models have top-mounted trunnions, making blade/table alignment more difficult
- Power (1½ to 2 hp) similar to contractor-style saws

BIG PUNCH IN A SMALL PACKAGE



Ryobi's job-site saw features a sliding crosscut table that locks into place when you want to make a rip cut or for storage.