WOODWORKERS GUILD OF AMERICA®

BUYING GUIDE

HOW TO BUY A TABLE SAW

A ROADMAP OF TODAY'S TABLE SAW MARKET

By: David Munkittrick
Photos By: Manufacturers

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Most woodworking shops, from modest garage shops to fully equipped pro shops, are built around the table saw. That's because we call on this machine to perform multiple tasks along the course of any project from the first rough cuts to precision joinery. The centrality of a table saw to most woodworking operations makes it a critical buying decision. You will be living with it a long time.

If you are looking to buy your first table saw or are in the market for an upgrade, there is good news: The quality and safety of table saws has greatly improved over the past decade. Here's some more good news: This article will provide you with a 30,000-foot view of the market and walk you through some key considerations all buyers face when shopping for a table saw. We start off with the obvious, "How big a saw should I get?" Then, we'll cover the essential safety and other "must have" features to look for. And finally, we'll highlight some "nice to have" features. This article will get you headed down the right path so let's get started.

There have been many exciting changes in table saws over the past few years. Beginning with Underwriter Laboratories' (UL) 2008 ruling that all saws must come with a real riving knife (see "Saw Safety", below) to manufacturer designs that have done away with wretchedly poor fences and underpowered motors to bring you good quality saws in any size.

SIZE, OR WHAT'S IN A NAME

When you are on the road to buy a new table saw, the first fork in the road is to decide on the size saw that best fits your needs and budget. Here's a look at the four major categories you'll find on the market today.

JOBSITE OR BENCHTOP SAW ($200 - $600)

These saws are not the benchtop saws of old which were little more than a circular saw turned upside down in a box. The fence systems now are much more sturdy and accurate and the motors, bearings and drive systems have been upgraded as well. For this article, I will define a jobsite or benchtop saw by these two common features: they all have universal motors and are light enough for one man to pick up and carry.

If mobility is a big factor in your table saw purchase, than a jobsite saw is hard to beat. Jobsite saws are designed to go where you go and are a favorite of carpenters. Their compact size makes them easy to stow away when not in use; a big plus for folks with limited shop space. Also, these saws run off of a standard household outlet, so no special wiring is needed.

The jobsite saw's small size is its strength but also its weakness. Their small table means a limited rip capacity. Some saws have pull out fence rails to allow for a 24-in rip. So, kitchen cabinets are theoretically a go. But, to balance a full sheet of plywood on these small tables requires a helper or some added support surfaces. I've seen clever arrangements where a benchtop saw is built into a bench for added stock support. When the saw is not in use, the blade is retracted and the fence stowed leaving the bench open for other work.

To keep the weight down, these saws all come with universal motors. A universal motor uses brushes and are the motors used in hand power tools like routers and circular saws. Beware of inflated horsepower claims. You have to be a little skeptical when a 75-lb. saw claims to have more horsepower than a typical full-sized cabinet saw. Expect these saws to lack the power you'll find in larger saws with induction motors. They may be capable of cutting 2-in. thick maple, but your feed rate will be greatly reduced.

Rip fences have come a long way on these saws as well. Most lock down front and back and eliminate the deflection that plagued older models. (For more on what to look for in a fence see "Fences", below).

Look for a jobsite/benchtop saw with a full 3/4" miter gauge slot. These saws often come with poor quality miter gauges. The full sized miter slots will allow you to upgrade to an after market gauge.

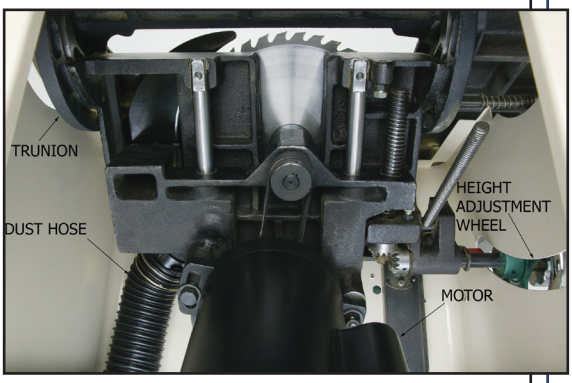
A jobsite saw can be just the ticket if your budget is as tight as your shop space. What these saws lack in size and power, they make up for in convenience and price.

PROS

- **Lightweight** – easy for one man to carry
- **Compact** – small footprint allows for easy storage
- **Mobile** – many models are available with a roll around, fold up cart
- **Affordable** – $300 to $600 for a good quality saw (rolling stands extra)
- **Requires no special wiring** – standard 120-volt, 15 amp outlet

CONS

- **Less power** – universal motor can cut through anything but may require a very slow feed rate
- **Noisy universal motors** – hearing protection should be worn anyway
- **Small table** – hard to cut sheet stock or long boards
- **Limited rip capacity** (generally less than 25-in)
- **Small control wheels and knobs**
- **Limited dado capacity** on some saws (1/2-in or less, or can't take a dado at all)



CONTRACTOR SAWS
($700 - $900*)

The next size up the table saw food chain is the contractor's saw. Some manufacturers still use this label, some call it a "contractor style" saw and one calls theirs a "builder's saw". Again, great gains have been made in this category of table saw, although this seems to be a shrinking category. On the one end, the much more mobile jobsite saw has taken over the professional carpenter market. On the other end, the hybrid saw is designed to meet the needs of a shop-based saw. As a result, there is some blurring of the line that defines a contractor saw and a hybrid saw.

The biggest improvement in these new saws is that most, if not all, have done away with the old cantilevered motor mount where the motors hang out the back of the saw. This caused a problem when the blade was set for angled cuts as the motor's weight could cause the arbor to twist out of alignment with the fence, resulting in a severely burned cut. The new models have eliminated this problem by mounting the motor under the table and using a sturdier trunnion that won't go out of alignment.

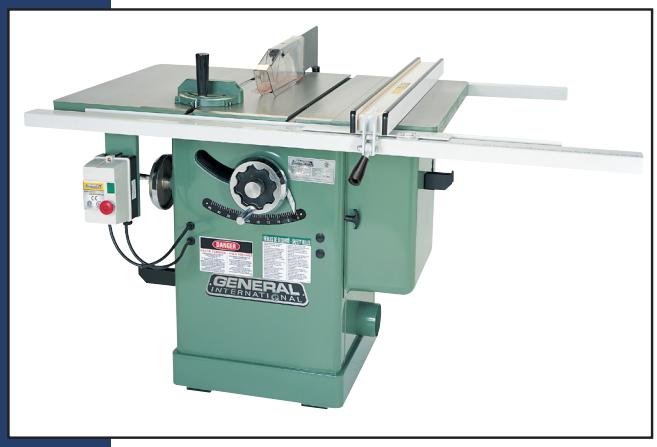
PROS

- Cast iron tops absorb vibration
- More powerful induction motors
- Solid, large capacity fence systems available
- Larger tables support large stock
- Only slightly more expensive than the top of the line jobsite saws
- Some models have a built-in mobile base
- Can run on a 120-volt, 15-amp circuit
- Will take a full size dado set
- Larger adjustment wheels than a jobsite saw

CONS

- Open stand can make dust collection difficult, look for models with shrouded blades
- 2hp models may require a dedicated 20-amp circuit for best performance
- Too heavy for one man to lift

*$1,800 for the SawStop Contractor's Saw, but this saw is in a category of its own with many unique features not found on typical contractor's saws, so it was not listed in the average price range.



HYBRID SAWS
($765 - $1000)

These saws are relatively new on the market. They are slightly larger and heavier than a typical contractor saw but smaller than a full sized cabinet saw. I hesitate to call them a compromise cabinet saw because they really deliver all the features a woodworker could want without the big price tag of a cabinet saw. In general, the features that distinguish them from a contractor saw are; they sport larger cast iron tops, have enclosed or mostly enclosed stands and feature 1-3/4-hp to 2-hp motors. These saws have the durability, power and accuracy to meet any woodworker's needs.

PROS

- Larger cast iron tops than typical contractors saw
- Powerful motors equal to or slightly larger than a typical contractor's saw
- Full dado capacity
- Some include built-in mobile bases
- Shrouded blades for better dust collection (look for 4-in. ports for optimal dust collection)

CONS

- May not hold up as well as a cabinet saw under continuous use
- 2 hp models may require a dedicated 20-amp circuit for 120-volt operation or a 220-volt circuit for maximum performance

CABINET SAW
($1,125 - $3,200)

If your wallet and shop space can support it, you can't go wrong with a full sized cabinet saw. There are no compromises to worry about. These machines feature plenty of power and vibration absorbing cast iron. I've been working my 3hp cabinet saw for over 30-years without a hitch.

All the great features you could want in a saw are available on these saws.

PROS

- All the power you could want
- Lasts a lifetime

CONS

- Cost
- Mobile bases available, but these saws are more comfortable as a permanent shop fixture

SAW SAFETY

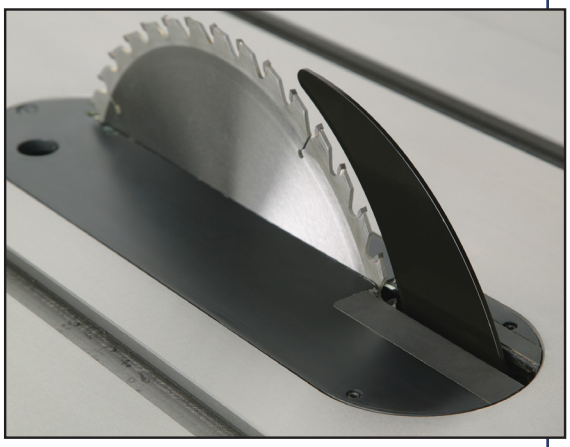
Every year, close to 40,000 emergency room visits are attributable to table saw accidents. Many of these accidents are life changing. Safety must be a top consideration in any saw you buy.

SAWSTOP

Since we're on the topic of safety, there's no way can get away without mentioning the SawStop and its now famous flesh sensing/ blade braking technology that actually stops and removes the blade before serious injury can occur. It's often the difference between a nicked finger and a trip to the emergency room. A SawStop saw may cost a bit more, but how much are your fingers worth? In addition to their ground breaking flesh sensing technology, SawStop saws came with riving knives and other safety features long before any other manufacturers.

Last year a jury awarded $1.5 million in a case involving a benchtop table saw injury, claiming that the saw should have had flesh-sensing, blade-braking technology. Are there more safety changes on the way? We'll see.

Important Update: A recent USA Today article reports that the federal Consumer Protection Agency is investigating whether to require the flesh sensing technology found in SawStop products on all table saws sold in America.



RIVING KNIVES TO THE RESCUE

Most table saw manufacturers have made great strides in saw safety. One conspicuous change is the arrival of the riving knife to America. This is largely due to a 2008 UL ruling that required riving knives on all new table saw models regardless of size. Older models that pre-date this ruling are grandfathered in until 2014, so you may still find a table saw out there without a riving knife. If you do, it'll likely be at a good price. Walk away. Don't even think of it.

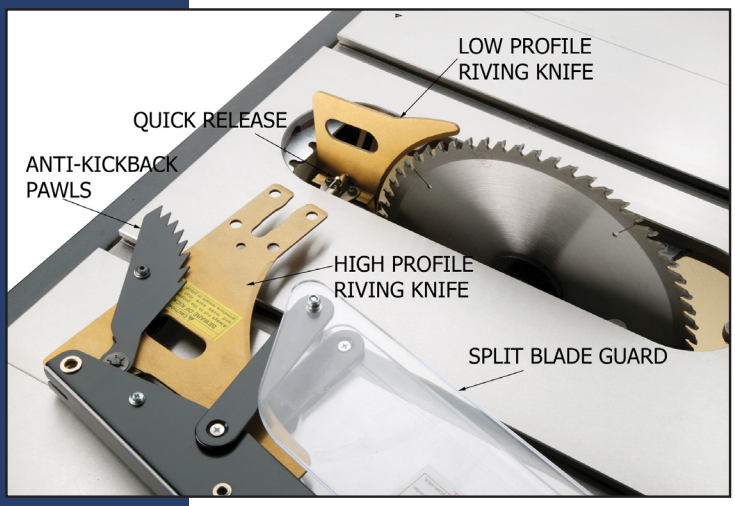
Like its predecessor, the splitter, a riving knife prevents two of the most common causes of kickback:

1. When the stresses in the wood cause the kerf to pinch shut on the spinning blade
2. When the board wanders a bit from the fence and climbs up the back of the spinning blade.

Many riving knives come with a simple snap in feature. Avoid saws that require you to use a separate wrench. Anything that discourages the use of riving knife should be avoided.

BLADE GUARDS

The blade guard has been around for a while. It covers the blade and protects the user's fingers from accidental contact with the blade. Old blade guards had splitters instead of a riving knife. They were cumbersome and hard to remove and were often set aside never to be used, which greatly reduces their effectiveness. Again, great strides have been made in the convenience of



this important safety feature. Look for a guard with the same tool free advantage as the riving knives. Choose a model with split, clear plastic guards. The see through plastic makes it easy to align cuts to a mark on a board. The split guard has two sides that move independently. This is an advantage on angled cuts or when the board is too narrow to support the whole guard.

EMERGENCY SHUT-OFF

Look for a saw with a large paddle switch placed within easy reach for an emergency shut-off.

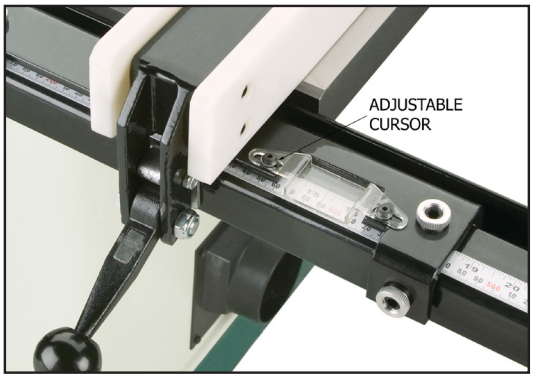
DUST COLLECTION

You may never lose a finger because of dust, but the woodworking world now recognizes the hazard wood dust presents. Dust is bad for the air passages in our bodies and can be a real fire hazard in our shops. Gone are the days when knee-deep sawdust was a sign of a productive shop. Look for a saw with a shrouded blade and ready to go ports for dust collection. The best dust collection on a table saw is a split system where dust is collected below the table by a shroud around the blade and also from above through the blade guard.

RIGHT OR LEFT TILT

Most saws come with left tilt these days. There is a safety benefit to a left tilt when you are using the fence to rip a bevel because the blade tips away from the fence instead of toward the fence. However, most fence systems now allow you to set the fence a limited distance on the left side of the blade allowing for safe bevel rips with a right tilt saw. I am not aware of any real advantage to a right tilt saw, which is probably why most manufacturers are now making their saws left tilt.

OTHER IMPORTANT FEATURES



FENCE

There's nothing worse than a poorly designed fence. Fortunately, most of today's saws come with a good fence. Look for one that glides easily and locks securely. There should be no deflection on the fence when pressure is applied to the face. Look for an easy to read cursor that can be adjusted for the slight variations inherent in blade thickness. If you want to rip a board to 3-3/32", you should be able to set the fence on the mark and make the cut without hit and miss test cuts to get the setting right.

Larger saws give you a choice between a 30" fence and a 52" fence. If you've got the room, go with the 52" fence.

MITER GAUGE

A good miter gauge will have an adjustable bar to eliminate slop in the miter slot and yield accurate crosscuts. Positive stops, ease of adjustment and no plastic parts are other features to look for in a miter gauge. Some saws come with very basic miter gauges. This isn't a deal breaker. If you find the perfect saw but find the miter gauge to be below par, there is a wide array of excellent after market gauges you can buy.

GRANITE TOPS

Some saws offer granite tops as an option. Granite tops have some advantages over cast iron: they won't rust and they stay flat. On the downside, granite can get chipped and devices that depend on magnets, like feather boards and other jigs, won't stick to a granite top.

ONBOARD STORAGE

Finding a place for arbor wrenches, miter gauges, push sticks and extra blades is a must. It's great when a saw has built-in storage.

ACCESSORIES

Most manufacturers offer an array of excellent accessories including; extension tables, sliding tables, built-in router lifts and even mobile bases. Accessories made by the manufacturer have the advantage of being designed specifically for their saw so installation and operation are more likely to go smoothly.

A WORD ABOUT BLADES

The blade is where the rubber meets the road so to speak. Buy a high quality multi-purpose blade. Some saws come with excellent blades. If not, expect to pay around $50 for a new one. It may seem crazy to spend a $50 on a blade for a $400 saw, but you simply can't beat the performance you will get out of a high quality blade. A good blade on a poor saw will make better, cleaner cuts than a cheap blade on the most expensive saw. A good blade will likely last you a lifetime and will work just as well on an upgrade saw if there's one in your future.

For jobsite saws, a thin kerf blade is a must because it cuts less wood and thus requires less power from the saw.

CONCLUSION

Buying the right table saw to take center stage in your shop is a task that should not be taken lightly. Hopefully this article will help you narrow your focus. Paper and internet research is important, but I always tell people to go the extra mile and do some field work. Nothing beats a hands-on comparison. Get to a woodworking show if possible or visit some dealers. Talk with reps and try out the control wheels and fence before you buy. Some decisions are very personal and you may find one manufacturer has a control wheel that fits your hand perfectly while another feels awkward. Check out the accessories and blades that come with the saw. There's added value in good accessories and blades. Remember a good table saw will last you a lifetime. Don't get saddled with annoying little quirks that you'll regret every time you use your saw.

Happy table saw hunting, and safe woodworking!

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