

Handsaw Revival

Today's handsaws cut all kinds of material with renewed comfort, control, and durability

BY BRIAN PONTOLILO

If you're trimming an entire house and you don't have a power miter saw, you're crazy. But if you think handsaws are old-fashioned, you're wrong, although you're probably not alone. Even in an age of laser-guided power tools, saw manufacturers continue to improve and reinvent the handsaw.

Purists might argue that their 100-year-old Disston handsaw will outperform any new saw. They'll laugh at the quality of modern saws and complain that new saws are throw-away tools because many of them can't be resharpened. In many ways, they're right. A well-maintained Disston crosscut saw makes easy work of cutting through most wood. And when the blade dulls, it can be filed and set to cut as if it were new. Of course, you have to know how to file and set the teeth, and if you're cutting particleboard or other man-made products, the glue may dull the blade faster than you can sharpen it.

Modern handsaw design is a response to the evolution of home building. Handsaws are used less, and sharpening is a lost art. Today's handsaws are designed to cut modern materials easily and without dulling.

Beyond basic crosscut saws and ripsaws


Once there were two standard saws used by carpenters, one for crosscutting and one for ripping. Because most ripping now is done with a circular saw or on a tablesaw, ripsaws

are a dying breed. Many new handsaws are capable of both crosscutting and ripping. Marketed as general-purpose saws, they are designed to cut solid lumber, engineered wood, and other man-made materials. There are also some innovative handsaws designed to cut specific materials such as drywall, composite decking, and synthetic trim (see p. 66).

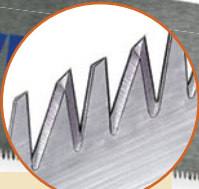
Traditional Japanese handsaws also have influenced the evolution of modern handsaws. The most notable difference between a Western-style saw and a Japanese handsaw is that the Western saw cuts on the push stroke and the Japanese saw cuts on the pull stroke. Japanese saws have inspired manufacturers to rethink both the blade and handle design of their saws.

Different strokes for different folks

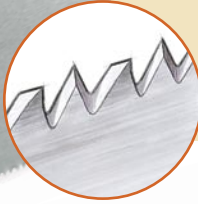
Traditional Western crosscut saws cut on the push stroke. The tips of the teeth score the wood, and the edges of the teeth sever the wood fibers. Western-ripsaw teeth also cut on the push stroke, but the teeth work more like a series of chisels. The teeth on both types of saw are set alternately so that the kerf—the groove created by the saw—is wider than the blade,



Japanese ripsaw teeth also cut with chiseling action. The teeth are small at the heel of the blade where you start the cut and larger toward the toe. This makes it easy to begin a stroke (\$38; www.japanwoodworker.com).



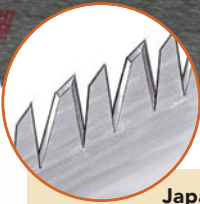
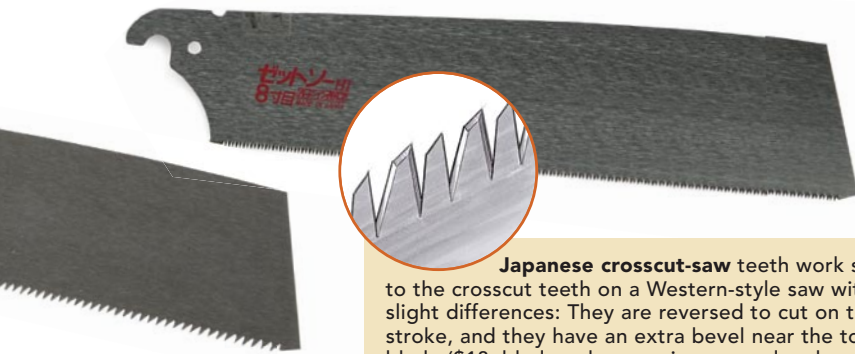
Hardened pull-saw teeth use traditional Japanese sawtooth design on induction-hardened steel to cut easily through wood as well as modern materials like plywood and particleboard. These larger teeth don't cut as fine as some traditional Japanese saws, but they cut faster (\$15; www.amazon.com).



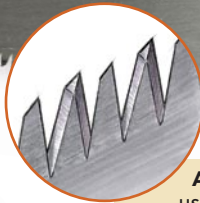
Western-style crosscut-saw teeth have sharp points that score the wood; filed edges then sever the fibers. The alternating set creates a kerf just wider than the blade to reduce friction (\$69; www.leevalley.com).



Western-style rip saw teeth are larger and usually have fewer points per inch than crosscut saws. Rip saw teeth also are set alternately, but instead of cutting with the tips and the edges, the front of the teeth cut like a series of chisels (\$69; www.leevalley.com).



Japanese crosscut-saw teeth work similarly to the crosscut teeth on a Western-style saw with two slight differences: They are reversed to cut on the pull stroke, and they have an extra bevel near the top of the blade (\$18, blade only; www.japanwoodworker.com).



Aggressive-cutting handsaw teeth use a design similar to Japanese saws, but each tooth is sharpened on both sides to cut on push and pull strokes. With only 8 ppi, this 15-in. blade is designed to cut faster than most traditional saws (\$20; www.amazon.com).



THE ORIGINAL CORDLESS SAW

From a quick cut through a single piece of framing lumber to a precise cut to remove a piece of rotting trim, handsaws often get the job done more quickly, more safely, and more accurately than their powered counterparts. Before you buy a handsaw, it is a good idea to understand how different saws work, and why some cost \$20 and others cost \$100.

Western-style carpenter's saws

Traditional Western-style saws cut on the push stroke with teeth that are hand-filed and set by the manufacturer. The saws can be filed and set when the blade dulls or the set is thrown off. Crosscut-saw and rip saw blades differ in tooth design and the number of points per inch (ppi) or teeth per inch (tpi). The blades on traditional Western saws range from 20 in. to 26 in. long, and the handles are wooden and bolted to the blades.

Japanese pull saws

Traditional Japanese pull saws cut on the pull stroke, allowing for thinner, finer-cutting blades. Due to the complexity of the tooth design and their inexpensive nature, blades usually are replaced instead of resharpened. The blade can be removed easily from the handle, and one handle often can be used for more than one type of blade. The straight bamboo handle makes it easy to control the saw and line up a cut, and it can be used with two hands.

Modern hybrids

Many modern handsaws are designed with new users and new uses in mind. Because handsaws are used less often, especially for ripping, many new saws are not designated for crosscutting or ripping but for general use. The average blades are shorter, and the teeth cannot be filed because they are hardened to stay sharp even when cutting man-made building materials. Some saws are made for specific materials (see pp. 66-67). The plastic handles are designed for ergonomic comfort and control.

HOW MANY HANDSAWS DO YOU NEED?

The truth is that you can cut PVC with a string, and if you have a general-carpentry saw, you can handle most occasional jobs. But if you cut a lot of one type of material, or if you just like tools, there are a bunch of useful saws you should know about.



High-tension hacksaw

This tool is often the remedy for a stripped screw or a rusty bolt. And if you don't own pipe cutters, a hacksaw makes easy work of cutting copper pipe. This high-tension frame offers three blade positions for regular cuts, flush cuts, and cutting in tight spaces (\$26; www.lenoxsaw.com).



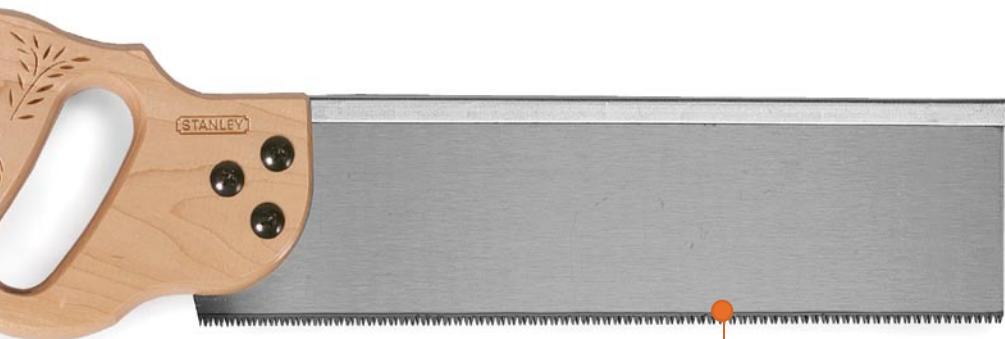
Recip-saw blade handles

You can't carry a reciprocating saw in your tool belt, but you can carry the most important part. These two handles from Milwaukee (\$20; www.milwaukeetools.com) and Lenox (\$18; www.lenoxsaw.com) allow you to hand-saw with any recip-saw blade.



Crosscut or general-purpose carpentry saw

This is the saw you reach for to finish the cuts for a stair stringer or a roof rafter, or for other general uses. You can choose a Western-style saw (\$20; www.leevalley.com) or a pull saw (\$25; www.leevalley.com), depending on how you are most comfortable cutting.



Backsaw or detail saw

If you need to cut miters for casings or crown molding, or if you need to cut a piece of trim in place, this saw is your best bet for a precision cut. The ridge along the top of a backsaw stiffens the blade for straight, fine cutting (\$20; www.stanleytools.com).





PVC saw

With fine teeth and a wide blade, this type of saw is used to make smooth cuts through all sizes of PVC pipe, leaving a clean, ready-to-glue edge (\$20; www.lenoxsaw.com).



Just for drywall

Here are two saws that are handy to have when you're hanging drywall. For straight cuts, try Stanley's SharpTooth drywall saw (\$20; www.stanleytools.com). For curves and circles, try SharkSaw's Rockeater (\$13; www.takagitools.com).



A modern saw for modern material

It's hard to cut through synthetic materials without the sawblade bogging down in the kerf. The SharkSaw Composit Saw is designed to stay sharp when cutting man-made material, and the raker teeth clean out the kerf as you cut (\$25; www.takagitools.com).



reducing friction as the saw moves deeper into the cut. Cutting with a Western-style saw requires sharp, properly set teeth and good technique because the blade has a tendency to bend during cutting (see "Building Skills," p. 116).

Many carpenters have been won over by Japanese-style saws that cut on the pull stroke. The appeal of these saws is easy to understand. When you pull the saw across the material, tension keeps the blade straight, allowing pull saws to have thinner blades. A thinner blade requires less strength to move through the wood and produces a more refined cut. The blade design—with three cutting edges on the crosscut saws and two on the rip saws—cleans sawdust from the kerf as you cut. Unfortunately, sawdust tends to land on the stock and can make the cutline difficult to see.

Some new handsaws are designed to cut on both the push and the pull stroke. The tooth design is similar to a crosscutting pull saw, but the teeth are filed to cut in both directions. These aggressive saws are more difficult to use, but they cut faster (some manufacturers claim 50% faster) than saws that cut only on one stroke.

As tooth design evolves, saws can't be resharpened

Most Japanese pull-saw blades are too complex to be sharpened. Instead, the blades are designed to be removed from their handles and replaced. Removable blades can be an advantage. You can withdraw the blades from their handles to fit the saws into a toolbox, and you may need to buy only one handle for many different types of blade.

Likewise, many new Western-style saws cannot be resharpened. In an effort to make saws that can stand up to the glues and synthetics found in modern building materials, manufacturers have developed methods to harden the steel so that blades stay sharper longer. Electronically heat-tempered steel teeth, recognized by their blue and black color, are designed for performance and longevity, but they can't be filed.

Fortunately, most new handsaws are priced fairly. Machine-made general-use carpenter's saws cost around \$20. Replacement blades for pull saws often cost less than \$20. Sawblades that are not hardened and can be refilled and reset likely were hand-sharpened and set by the manufacturer. If you want to buy a saw

that can be resharpened, plan to spend more money and more time looking for a saw.

One rule applies to all saws

All sawblades have a number of points, or teeth per inch. Most manufacturers specify points per inch, or the number of cutting tips in 1 in. of blade. Coarse blades with fewer points per inch cut fast but leave a rough edge. Blades with more points per inch make smoother cuts, but cut more slowly.

This rule applies to all saws and is important to consider whether you're buying a Western-style saw or a Japanese pull saw. If you are going to cut only framing lumber, where smooth edges are unnecessary, a saw with 9 points per inch will do the job quickly and with little effort. If your task is to cut veneered plywood, a saw with 12 or more points per inch will avoid splintering the veneer and will leave a smooth edge. Although the saw will cut more slowly, the control is an advantage when you are trying to cut accurately.

Saw handles are designed for control and comfort

The D-shaped handles on Western-style saws offer the best grip for pushing a saw through a cut. The handles are usually wood, though some manufacturers have switched to lighter, more comfortable plastic handles. Most handles attach to the blade with bolts that can be loosened to adjust the handle's position or tightened if the handle works loose. Some handles are molded to the blade without bolts. These handles still can loosen from the blade but can't be tightened.

Traditional Japanese saws have straight, easy-to-pull handles that can be used with one or two hands. With a long handle that extends straight out from the blade, it is easy to cut a precise line across the stock.

Many of today's general-carpentry saws that cut on the pull stroke have pistol-grip handles. They don't offer the same amount of control as the straight handles on Japanese saws, but the pistol-grip handles are more comfortable for making quick cuts. Just as you should choose a blade based on the material you are cutting and the level of finish your work requires, you should choose a handle based on comfort and the amount of finesse you need to get the job done. □

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