Japanese Finish Saws

by Clayton DeKorne

A decade ago, bringing out a Japanese handsaw on site always drew looks from other subs and crew members. But nowadays these tools are a bit more common. A number of importers are distributing Japanese handsaws through local tool stores and homecenters, so you don't have to buy them exclusively from high-end woodworking supply catalogs. And a few of these saws, such as those sold by RMI Designs and Takagi Tools, have plastic "pistol" grips or folding handles in place of the traditional wooden "sword" handles, so at least you won't have to suffer the Ninja jokes any longer. But the saw blades are essentially the same as those that have been made for Japanese carpenters for centuries.

For those who haven't used one of these saws, this article will serve as a quick introduction to the styles and use of these fast-cutting, thin-kerf cutters.

Pull Stroke

Unlike traditional Western handsaws, all Japanese saws cut on the pull stroke. Some aficionados claim that because pulling is a more precise movement than pushing, these saws are more accurate. This may be true, but I think any craftsman can learn to push or pull with equal precision. It's more likely that the design of a pull saw, rather than the pull action, makes the Japanese saw a precision tool.

Because the blade is always in tension as it is drawn through the cut, it's easier to keep the blade straight. The blades are also made of a much thinner steel, since the blade doesn't need to be thick to resist bending. Japanese saw blades are made of a much harder, more brittle steel, so the teeth can hold a steep bevel that cuts cleanly and won't dull quickly. And the teeth have little set, or none at all, so the kerf is very narrow and there is much less drag on the blade.

By contrast, the blade on a Western handsaw is both thicker to resist bending when it's pushed through the cut, and made of a softer steel, so the blade won't kink if it binds on the push stroke.

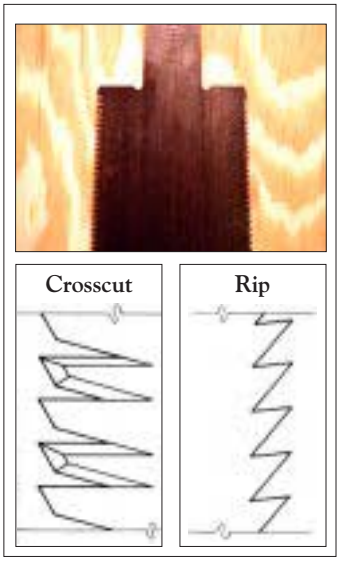

Figure 1. *The two-sided ryoba has a crosscut blade (left) and a rip blade (right). The crosscutting teeth have sharply ground alternating bevels and a steep rake angle, so they sever the wood fibers, rather than tearing a narrow trough as a Western backsaw does.*

Crosscut vs. Rip

The tooth pattern of a Japanese crosscut blade differs markedly from that of the traditional Western handsaw (Figure 1). Typically, Japanese crosscut blades have about 13 to 17 teeth per inch. These teeth have sharply ground alternating bevels and a steep rake angle, so they sever the wood fibers, rather than tearing a narrow trough as a Western backsaw does. And the teeth are long, so sawdust is cleared quickly from the kerf. These finish saws cut with equal precision, but noticeably faster, than most Western backsaws.

A rip blade differs little from a Western rip saw, except that the tooth pattern is reversed so it cuts on the pull. Most rip blades are listed at 5 to 6 teeth per inch. However, the number of teeth varies along the length. Near the handle, the teeth are spaced closer together (about 9 teeth per inch) to make it easier to start the cut.

With both the crosscut and rip blades, you want to start the cut at a low angle, otherwise the teeth tend to snag on the board's edge. Once the cut is started, I have always found it easier to rip with the saw held straight up and down (perpendicular to the board), rather than at an angle. For crosscutting, any angle seems to work well.

Types of Saws

When selecting a Japanese saw it's helpful to know the Japanese name, since this is what you'll often find on the label.

Ryoba. A ryoba is a two-sided saw. It has a crosscut blade along one edge and a rip blade along the other. The kerf of both blades is the same, so the teeth of the unused blade won't catch on the backside of a cut.

Kataba. A kataba is a one-sided version of either a rip or crosscut saw. There are many folding versions available. Be careful when choosing one of these, however. Many folding saws of this type are actually made for pruning, not cutting dry wood, so you won't get a clean finish cut.

Dozuki. A dozuki is a backsaw, and is available with either a full or partial *back* — the steel reinforcing band along the back edge. There are several folding backsaws, as well.

Anahiki. This is a long, stiff single-blade saw with coarse teeth (7 to 13 per inch) for framing. The blade works well for both crosscutting and ripping.

Azibiki. The Azibiki is a flooring saw. It has a short, rounded blade made for plunge-cutting into the middle of a panel, similar to a Western veneer saw.

Kugihiki. This is a very flexible, one-sided blade made specifically for flush-cutting, as the teeth have no set. While this is a great saw for cutting off dowels, I find it unnecessary. I have a ryoba, which is more versatile, and the crosscutting edge has such a fine set that I can cut flush without marring the face of a board.

Uses On Site

Since most of my work these days is in small, older houses or in my cramped shop, I often use a Japanese handsaw instead of the chopsaw. In fact, I have often found it easier and faster to walk to each end of a board to make a cut than to try to flip a 12- or 14-footer end for end. To aid my cuts, I use a jig made from lauan plywood that resembles a Speed Square. This has an extended fence that serves as a guide to keep my saw blade perpendicular to the board's surface (Figure 2).

Because the ryoba is good for flush-cutting, it is also an excellent tool for cutting the bottoms of door jambs and casing to slide finish flooring underneath. For this, I usually run a scrap of hardwood flooring through the planer, and then with the saw flat on this I cut the door trim near the floor. A 1/16-inch planer pass is enough to compensate for the thickness of the sawblade.

I also carry a folding backsaw from RMI design. This saw has 17 teeth per inch. The teeth are hardened, showing visibly blackened tips, so they cut equally well in plywood, hardwood, and softwood. I often keep this in my belt, or close at hand. It is the best tool I know for cutting off shims at door and window jambs. It is much faster than a knife where several shims are built up.

Figure 2. *This simple jig works well to guide a Japanese handsaw when cutting a miter. The raised fence keeps the saw blade perpendicular to the face of the board, so the cut doesn't wander off at a slight bevel.*

I also have a one-sided folding saw — the Sawara from RMI Design — that has teeth extending all the way to the tip. (The teeth on most Japanese saws stop about 3/8 inch from the end). This saw is useful for getting into tight corners.

Maintenance

Few sharpeners are set up to grind the fine, narrow teeth if the blade should get dull. "Feather" files that fit between the teeth are available to sharpen these saws but fortunately I have never had to use one — a testimony to how long these saws hold an edge. I used one Ryoba on site continuously for four years before I noticed it wasn't as sharp as the day I got it. I am careful to avoid cutting drywall or hitting nails, but that doesn't mean I treat it like a relic. It is, after all, a tool that gets hard use and it shows for the wear. Because the steel is brittle, the teeth break easily. My crosscut Ryoba is missing three teeth, but this doesn't seem to affect its performance at all.

Many of the newer saws have replaceable blades, which run between $5 and $25. Considering you can get several years from a single blade, replacing a blade is a reasonable alternative to sharpening. ■

Sources of Supply

Highland Hardware
1045 N. Highland Ave., NE
Atlanta, GA 30306
404/872-4466
800/241-6748

The Japan Woodworker
1731 Clement Ave.
Alamedan, CA 94501
800/537-7820

RMI Design
411 AABC
Aspen, CO 81611
303/920-9615

Takagi Tools
P.O. Box 14355
Torence, CA 90503
800/777-5538