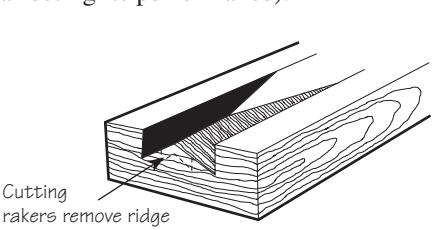
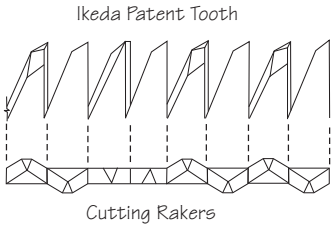
The Care and Use of Japanese Saws

Japanese saws have become increasingly popular among Western craftsmen in recent years. Having evolved independently and quite differently from European woodworking tools, they require somewhat different techniques in their use and sharpening.

Traditional Japanese saws are designed to cut only on the pull stroke. This affects the structure and behavior of the saw in a number of ways. First, there is no tendency for the blade to bend as it is pulled through the wood, unlike Western saws which are pushed through the wood on the cutting or power stroke. Japanese saws can, therefore, be made of thinner, harder steel than their Western counterparts (which must be thick enough to stay straight under pressure and soft enough not to snap as they bend). Second, because the blade on a Japanese saw can be thinner, it leaves a narrower kerf. The minimal set of the teeth in Japanese saws, compared to Western ones, also produces a finer kerf; consequently, the saw cuts faster and with less effort. Third, because the steel used for pulling through wood can be harder than that required in Western saws, it is also more brittle. A tooth can occasionally break off a Japanese saw (without, however, noticeably affecting its performance).





The tooth pattern in Japanese saws also tends to be more specialized than that in Western ones. Traditionally, there are different patterns for different functions and even for hardwood vs. softwood applications. Many of the Japanese saws we carry have the "Ikeda patent tooth", a more recent innovation. The patent is a set of cutting rakers (as opposed to chipping rakers) at regular intervals along the blade. The cutting rakers have little or no set, depending on the saw. Normally, the regular teeth leave a pointed ridge of wood in the center of the cut. The cutting rakers remove this ridge, thereby reducing friction as well as the amount of work to be done by the regular teeth, allowing each of them to cut deeper.

Types of Saws

Dozuki

"Dozuki" is the Japanese word for the shoulder of a tenon. These saws are particularly suited to any fine work, including dovetails and tenons where accuracy and a smooth cut are so important.

Ryoba

This is the most commonly used saw in traditional Japanese woodworking (although among our customers, the most popular Japanese saw is the dozuki). The ryoba has one rip and one crosscut edge, with the blade thickness and size of tooth varying according to the length of the blade.

Azebiki

This is a small ryoba-type saw with a short blade and curved edges to allow you to start a cut in the center of a panel. It is particularly appreciated by boat builders because of its ability to make flush cuts in awkward places.

There are a number of other specialty saws made in Japan, including compass and keyhole saws, kataba (half a ryoba), hosobiki (the closest Japanese saw to our dovetail), shitaji (for slotting), anahiki (log saw), and kugihiki (flush-cut saw).

Sharpening Japanese Saws

Since they are so hard, Japanese saws rarely need to be sharpened. In Japan, the finest saws were traditionally returned to their maker for sharpening. It remains economically sound to replace a Japanese blade rather than trying to hone it yourself – especially if you are a beginner.

For sharpening enthusiasts, however, it is possible to tackle a Japanese saw, provided you use a feather-edge file to accommodate its fine, long teeth. For ryoba, azebiki, anahiki and pruning saws, a 100mm (4″) feather-edge file is required. For the regular dozuki and the ultra-fine teeth in the professional dozuki, a 75mm (3″) feather-edge is best. Until you are accustomed to sharpening Japanese saws, we recommend that you use a file with one safe side for filing secondary bevels and that you stone the edge of the file so that an inadvertent nick is not put in an adjacent tooth. Ordinary Western saw-sets are not suitable for sharpening Japanese saws since they do not accommodate their unique tooth patterns.

Working with Japanese Saws

The traditional stance for maximum control when using a Japanese saw is to hold the workpiece with one foot, and bend over while holding the saw with both hands widely spaced on the handle. Westerners who are not sufficiently limber for this method find that holding the saw with one hand also works well.

Lee Valley TOOLS LTD.
www.leevalley.com
1090 Morrison Drive
Ottawa ON K2H 1C2
Canada
1-800-267-8761
814 Proctor Avenue
Ogdensburg NY 13669-2205
United States
1-800-267-8735
customerservice@leevalley.com
© Lee Valley Tools Ltd. 2013