Choosing and Using Japanese Chisels

What you need to know about these superior tools

BY JOHN REED FOX

The machine area of my shop is stocked with Western woodworking machines. But over at my workbench, all the hand tools are Japanese. Just as it's hard to beat hefty Western machines, I think Japanese hand tools clearly outperform their Western counterparts. When it comes to chisels, the Japanese variety takes a sharper, more durable edge than Western chisels; these tools simply work better and for a longer period of time.

What makes them so good?

Japanese chisels, like other Japanese edge tools, are laminated, and this is the key. A thin layer of very hard and finely tuned high-carbon steel—the cutting edge—is forge-welded to a thicker piece of iron or low-carbon steel that forms the body of the blade. The thick layer of softer metal provides mass and shock dampening and prevents the hard, brittle steel from fracturing.

When you buy a new Japanese chisel, there's some setup to do before you can put it to work—flattening the back, creating the cutting bevel, and setting the hoop (for an explanation of that process, see p. 24). Here I'll explain the anatomy of Japanese bench chisels, walk you through the various types, and give you guidelines and specific suggestions for which chisels to buy. Good-quality Japanese chisels are still made one at a time by individual blacksmiths in small shops, and I like the idea that while buying the best tool I can find I'm also helping keep an age-old craft alive.

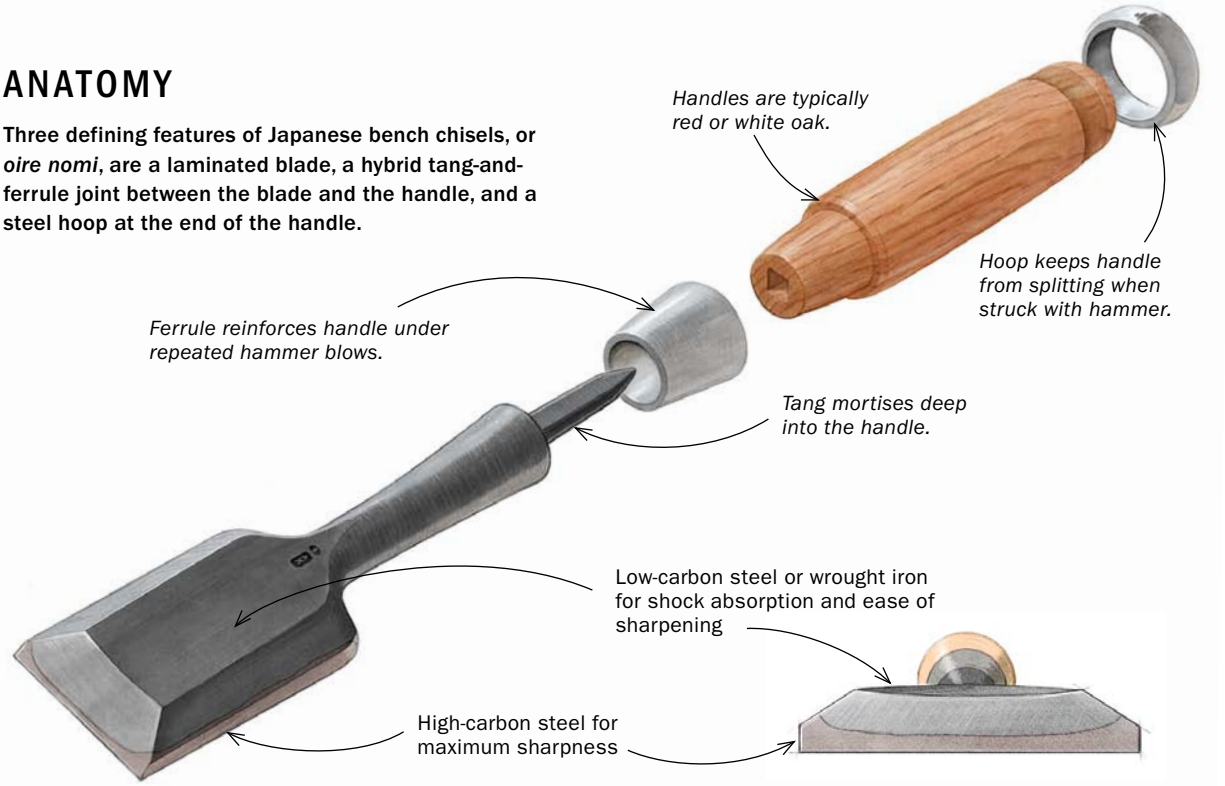
Photos: Michael Pekovich

Basic features

Nearly all Japanese-style chisels share a common anatomy, give or take the hoop, which is not found on dedicated paring chisels. But there are interesting variations in the blades, some significant and some not.

ANATOMY

Three defining features of Japanese bench chisels, or *oire nomi*, are a laminated blade, a hybrid tang-and-ferrule joint between the blade and the handle, and a steel hoop at the end of the handle.



PROFILES

The Japanese bench chisel comes in a variety of blade profiles. These are four of the most common and useful.

KAKU UCHI
An old style with only slightly raked sides, this profile delivers maximum power for chopping but is less versatile when paring.

MENTORI
The most common blade profile, it combines heft for chopping and striking with side bevels for paring access.

KINARI
With longer bevels than the *mentori*, this more delicate profile is excellent for paring dovetails but still retains enough mass for effective chopping.

SHINOGI
The low, wide-beveled blade profile affords excellent access when paring in tight spaces. It is used only on push chisels—unhooped chisels not meant for striking.

BACKS

You'll find one or more hollows on the back of a Japanese chisel. They make flattening and honing the hard, high-carbon steel back easier.

FINISHES

Depending on the maker, the body of a Japanese chisel may be finished in a variety of ways. The finishes are decorative and don't affect functionality. From left: polished, or file-finish; black; *mokume*, or wood-grained; and hammered.

Drawings: John Hartman

SPECIALTY CHISELS ABOUND

Japanese chisel-makers still produce a wide array of specialty chisels for Japanese craftsmen plying traditional trades. Here are a few that are useful on the Western workbench. From left: a long *shinogi* push chisel for paring; a *hiramachi* chisel for access to tight spaces; a crankneck chisel for cleaning the bottoms of dadoes and sliding dovetails; a heavy mortise chisel for chopping mortises; and a very wide chisel for paring or chopping.

Fishtail chisel is worth reeling in. *With its flared blade, the* bachi nomi *is superb for getting at otherwise inaccessible corners while paring.*

Using a Japanese chisel

Using Japanese chisels doesn't present anything like the radical shift users experience when going from Western to Japanese planes and saws. Japanese bench chisels are generally shorter than Western chisels and have a different feel and balance, but you'll work with them in the same ways.

One slight difference in use is due to the hollows on the back of the blade. When you are paring with a Japanese chisel and the back is registered against a flat surface, you have to adapt to the fact that you don't have the full width to ride on as you would with a Western chisel. Also note that Japanese chisels should never be used with a prying motion, as this action risks breaking the edge.

Sharpening the laminated blade may actually be easier than what you're used to. Because the thin steel cutting edge needs to be fully supported, the bevel of a Japanese chisel shouldn't be hollow-ground or given a microbevel—the whole bevel stays flat and the whole thing is honed at each sharpening. But since the backing iron is soft, sharpening the bevel on stones is quick. And dispensing with the grinder simplifies the sharpening process.

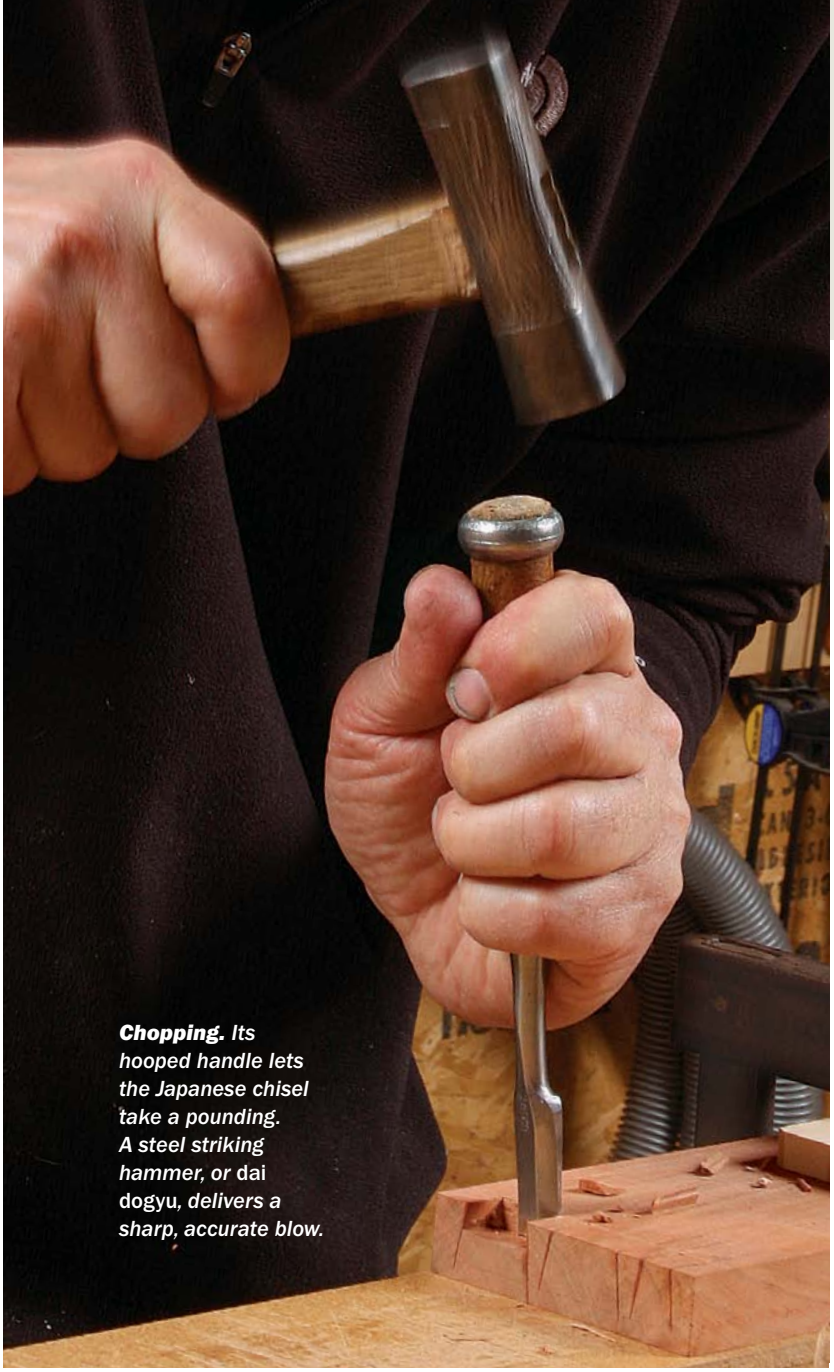
If you use a mallet with your chisels, you might consider getting a Japanese hammer to use with these chisels. The hoop at the end of a Japanese bench chisel keeps the wood from splitting when it's struck with a metal chisel hammer. These hammers are lighter, smaller, and easier to control than large wooden mallets, and deliver a more accurate blow.

Choosing a chisel

Although there's no real learning curve in using a Japanese chisel, it will have a subtly different heft and feel in use than a Western

Using Japanese chisels

With their super-sharp blades and hooped handles, Japanese chisels perform both chopping and paring tasks with ease and accuracy.



Chopping. *Its hooped handle lets the Japanese chisel take a pounding. A steel striking hammer, or* dai dogyu, *delivers a sharp, accurate blow.*

Precision paring. *Japanese bench chisels are superb for paring, but shouldn't be used with a prying action, which could chip the very hard cutting edge.*

Specialty tools in action. *The* shinogi *push chisel (above) excels at paring wide recesses like hinge mortises; the ultra heavy duty* tataki *(right) excels at hand-chopping large mortises.*

one. If you are new to these chisels, consider buying one in a size that you use often and working with it for a while to see how you like it. If you prefer it, I still wouldn't advise buying a full set unless cost is no object. You get almost no discount for buying a set of 10 and you pay a hefty premium for the larger sizes. Instead, I'd buy five or so in the sizes you use most. For me, that would be: 3mm (⅛ in.), 6mm (¼ in.), 9mm (⅜ in.), 12mm (½ in.), and something wide like 24mm (1 in.) or 36mm (1½ in.). Japanese chisels are usually sized metrically, and are slightly narrower than their imperial equivalents. The smaller widths—⅛ in. to ½ in.—are good for the relatively small dovetails I use on drawers. The ¼-in. and ½-in. chisels are also good for squaring mortises cut by machine. And having one or two wider chisels is nice for larger dovetails and larger mortises. All these chisels would work well for the various paring tasks that come up while making furniture.

Depending on need, you could fill out the set over time. Or use the money not spent on a complete set of bench chisels to buy some specialty chisels. Because hand-tool use is still a living part of the woodworking culture in Japan and because much of the woodworking there is highly specialized, there is a wide variety of chisel types.

You could get a wide *shinogi*-style push chisel, which is great for general-purpose paring (and not meant to be struck); a crank-neck chisel with a short foot for cleaning the bottoms of dadoes; a heavy mortising chisel for hand-chopping large mortises; or a fishtail-shaped chisel, or *bachi nomi*, for working in tight spaces like the hard-to-clean rear corners of half-blind dovetails.

Steels and handles

The cutting edge of Japanese chisels is usually made from either "white steel," which is a very pure high-carbon steel, or "blue steel," which is white steel to which tungsten and chromium have been added to make the steel tougher. The names white and blue steel have nothing to do with the color of the metals—they refer to

Buying guide

Japanese chisels fall into three general categories according to cost.

LOW END ($20–$40)
In this range, the maker's name will not be known—possibly because the tools are mass-produced. The handle may be dyed to mask inferior wood, and poorly fitted to the ferrule. Blades may be stamped from sheet material and painted. Cutting steel may be soft and abrade away quickly. Hollows may be ill-formed. Blades won't get as sharp as better brands and will lose their edge more quickly.

MID RANGE ($60–$300)
Although made one at a time in small shops and typically attributed to a particular blacksmith, these chisels offer the best value to furniture makers. Made with high-quality white or blue steel tempered to Rockwell c65 or higher, they should take a razor-sharp edge and hold it. Care in the making will be evident in the even shape of the hollow, a clean lamination line, a graceful transition from the neck to the body, and the fit of the handle to the ferrule.

HIGH END ($500 AND UP)
Some Japanese tools are treated as art, and with collectors in the picture, prices can get stratospheric. The provenance of a chisel—whether the blacksmith is a national figure—and features like folded-steel blades, exotic handles, and rustic, hammered surface treatments can increase the value of a chisel, but they don't improve its performance.

A few great models to start with

For workmanlike chisels of excellent quality, I suggest the Fujihiro brand (far left in photo), made by Chutaro Imai. "Workmanlike" is a compliment; these chisels are similar in quality to the ones I've been using for over 30 years. Made with white steel, they sharpen easily to a very durable edge. Well-crafted and finished, they come in the *mentori* profile and have red-oak handles and nice hoops. They are available with single or multiple hollows. A ½-in. (12mm) chisel is $71 from Hida Tool (hidatool.com) in Berkeley, Calif.

The next level of chisel, in my experience, takes an even sharper edge and holds it longer. An example is the Sekiryu brand (a 36mm Sekiryu is at center in the photo). These chisels are branded for Hiraide Tools (a large Japanese distributor), so the blacksmith's name is unknown. They are nicely made with an exceptionally clean back face, white-oak handles, and black finished metal with a *kinari*-style profile. They have wide side bevels for good access to tight spaces but are still robust enough for striking hard. Easily honed to a sharp and durable edge, a ½-in. (12mm) Sekiryu is $92 from Harrelson Stanley at japanesetools.com (or call 877–692–3624).

If price was no object, I'd buy all my chisels from father-and-son blacksmiths Akoi and Michio Tasai. At the very top of their craft, they make chisels in an array of finishes and styles (their *shinogi* paring chisel is at right in the photo). The standard Michio Tasai cabinetmaker's chisel, or *oire nomi*, with a *mentori* profile is beautifully made from yasuki, a type of blue steel, and has a black finish and red-oak handles. It will take an incredibly durable edge. This is about the highest level of chisel that I would actually use. A ½-in. (12mm) Tasai costs $162 at Tomohito Iida (japantool-iida.com), a wonderful Osaka dealer that carries many other fine tools.

the paper that the steel comes wrapped in from the mill. There are different grades of both white and blue steel. White is said to take a sharper edge, blue to hold it longer in use. In my experience, either kind can make an outstanding chisel. One of my favorite chisels is made with #1 white steel. It's easy to sharpen, holds a great edge, and is fairly durable. But I also have chisels made with blue steel that perform similarly. To me, the skill of the blacksmith is more important than the choice of steel.

Japanese chisel handles are often made from red or white oak, but boxwood, gumi, ebony, and rosewood handles are also fairly common. All except the ebony and rosewood are strong, tough, and resilient enough to make excellent handles. I find rosewood and ebony too brittle for chisels that will receive hammer blows, but they are fine for push chisels, which are meant only for paring.

A word about prices

Good Japanese chisels are not cheap. They start at about $70 apiece. But these tools are hand-forged by blacksmiths drawing on years and usually generations of experience who are at the top of their craft. They are using materials that are difficult to work and expensive. And they are creating arguably the finest tools of their kind. I'm constantly surprised that they don't cost more.

That said, in Japan there is definitely a level of "tools as art," and there are collectors around the world who buy them. It is not necessary—and it may be counterproductive—to go to that level to find a wonderful tool. For me, the most beautiful tools are those that perform their jobs the best. □

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