

Some Tips on Using the Kelton Hollowers

by Lyn J. Mangiameli

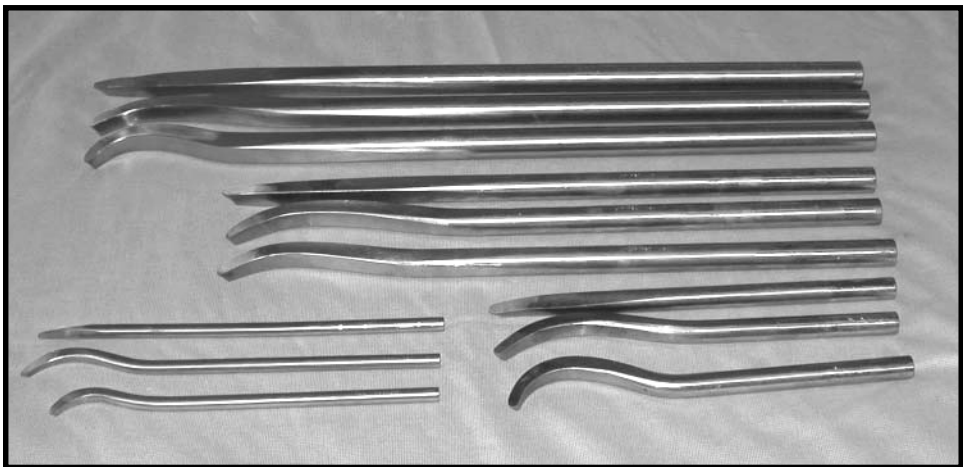
The Kelton Hollowers are some of my favorite and most used hollowing tools. The shapes are sized just about perfectly to go from opening up the form to final cutting under a rim. While fairly fast and efficient at wood removal, they also can leave a very good surface, often times saving one from having to make a final smoothing pass with a tear-drop style shear scraper. They are not, for some, intuitively easy to use, nor are the Kelton website instructions on their use. What follows are some brief comments on how I have had success using mine.

Like with most hollowing tools, it is best to begin by drilling a hole to near the intended internal depth of your final turning. Just how large that hole should be is dependent on the size of the Hollower used, but you can get by with it being only slightly larger than the diameter of the shaft. Then use the straightest tool to enlarge that shaft, working from top down in stages. After the central body is opened up, you can then switch to the more curved shafts. Your choice of the curved shafts will depend on the shape of your hollow form and where you are within it. Using these tools, begin at the mouth and move outwards to final wall thickness. As with any hollowing, you want to work deeper in concentric steps, allowing the thicker more distal walls to support the area where you are thinning out to final thickness.



(drawing from the Kelton website: <http://www.kelton.co.nz./holuse.html>)

The shape of the tips allows for several different cuts to be made off different portions of the tip (see drawing above). The tips are capable of taking a rather large bite when used horizontally as a traditional scraping tool because of the relatively large contact surface they offer, thus I most often use them at least slightly angled with the tip dipped counter-clockwise in more of a shear scraping position. This places the leading edge lower than the trailing portion of the tip. The horizontal position can be effective for aggressively removing a large amount of wood when initially clearing the form, but I think those who have had difficulty with the Keltons have failed to roll the tool over progressively more to the shearing position as the wall is thinned. Generally, like with most scraping tools, you want to use these at a 9 o'clock or slightly higher level within the form, though this is less critical as the tool is rolled over for shear scraping.



This photo shows the family of Kelton Hollowers: (top) 3/4 by 20; (next down) 5/8 by 15; (bottom right) 1/2 by 9; and the (bottom left) 5/16 by 8 inches long mini hollowers.

Keep in mind that you often can deal with the bottom center “cone” that usually forms by using the “back” of the tool tip (#3 in the drawing) moved to the right. This is usually safer than trying to approach the “cone” with the usual (#1 or #2) cutting side of the tip. Again, I’d keep the tool slightly angled (clockwise in this instance) with the leading edge rotated down, though a shearing cut is not as critical here (the shaft is angled clockwise, because this time you are using the “back” side of the blade and moving the tool to the right).

I recommend and usually prefer a round handle, as I am regularly rotating the Kelton Hollowers into just the right shearing action, and like the ability to control how much of the shaft is exposed out from the handle. This is not to say that the Hollowers can’t be used with an

armbrace or torsionally restrained system (and indeed they are intended to be the primary hollowing shafts for the Kelton version of such rigs), but I would emphasize that you will have more control over shearing angles when the tools are used freehand with a round handle.

Kelton provides a special 12 inch long, 1 inch diameter handle for their smallest 5/16 inch diameter set of Hollowers. This round steel handle is specifically sized with a 5/16 inch bore in one end and a 3/8 inch bore in the other. I find it to be an excellent match for the smallest Kelton Hollowers, and an outstanding handle for most miniature tools (a 1/4 inch shaft will work in it too). The larger Hollowers can be fitted with several choices of steel Kelton handles, or one of several steel handles offered by other manufacturers such as Hamlet, Oneway, etc. The exception is the short Woodcut Proforme steel handle’s bore is slightly undersized for the 5/8 inch Kelton Hollowers (though the 1/2 inch Woodcut handle that

comes with their Bowl Saver works fine for the 1/2 inch Kelton set).

You can use the Kelton hollowers with an armbrace, though all but the largest size of Hollowers will require a sleeve adapter, such as those offered by Don Pencil. I often use an armbrace, particularly when hanging near all of a Hollower’s shaft over the tool rest. However, while an armbrace obviously allows a lot more freedom of movement than the torsionally restrained rigs (Jamieson, Kelton’s own, etc), it is not as easy to rotate tools with an armbrace as it is with a traditional handle. The other drawback to all the armbraces, regardless of manufacturer, is that they have only a short socket to accept the tool shaft, which does not allow one to vary the length of tool shaft that extends out from the handle.

In addition to rotating to a shearing angle, you can also control the aggressiveness of cut by how great a burr you put on the tool. Generally I find only a slight burr is the most desirable. I find a burr most easily obtained on these tools by using a slipstone held vertically and stroked upward when the tool is held horizontally. There is a slight bevel on these tools, so just align the slipstone to contact both high points of the bevel as you stroke. If you can feel the edge being raised with your fingernail, this is enough. I will occasionally smooth off the top of the tool so that a fresh burr will be formed, but do this cau-

tiously so that you are mostly removing only the raised surfaces of the burr. The top of the Kelton Hollowers has a specially hardened layer, so you don’t want to eventually remove that (I don’t believe I ever have, and I’ve used these tools a lot and for a long time). I have never taken these tools to a grinder, and do all my edge/burr maintenance by hand. I prefer the Henry Taylor two slipstone set that is available from Craft Supplies (the large is great for use on the Keltons and general flute maintenance, the small works perfectly for Glaser bowl gouge flutes) over diamond or waterstone slipstones, though all will work. I generally use a fine diamond credit card to smooth the tops. Note the area labeled as rounded over in the Kelton drawing above. This is done to limit the amount of scraping surface that can contact the wood. It is wise to maintain this rounded off area to prevent the tool tip from achieving too great a bite, with the possibility of a major catch.

These tools are relatively tolerant with respect to lathe speed. Kelton generally recommends something in the 800-1100 range, though I often use even lower speeds as is my usual preference with all hollowing tools. Higher speeds will work for smaller work, but are more likely to induce vibration.

Like with all hollowing tools, it is important to clear the chips/shavings often to prevent them from building up and interfering with tip contact with the wood. Again, a shear scraping cut is less sensitive to chip build up than when the tip is used perpendicular to the wood surface. With the lathe turned by hand or powered down to nearly zero rpm, the tools can actually be helpful in guiding the shavings out of the form.

There is likely more to be said, but these are some of the issues that have developed for me in my use of these excellent tools. I’ll try to revise and expand this with input from other Kelton Hollower users.

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