



A Cut Above

Using the Knew Concepts Stainless Bench Pin

V1.02



The Knew Concepts Bench Pin has been designed from the ground up for piercing and bench work. It is machined from a solid 3/16" slab of stainless steel. First, so that it is stiff and rigid enough to support your work without bouncing as you cut, yet remain thin enough not to interfere with your full stroke. This thinness is helpful when doing delicate piercing. Second, it is stainless steel so that even when you do cut it, it doesn't contaminate your sweeps.

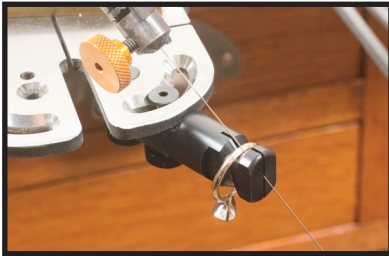
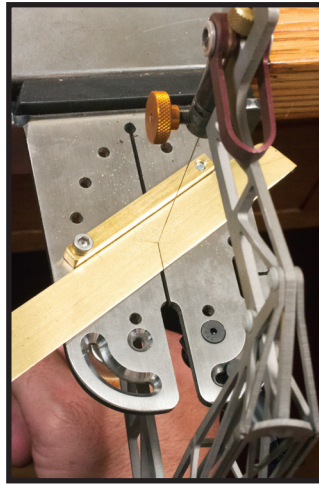
The Knew Concepts Bench Pin has several other features built in.

- It is designed to fit onto a standard jeweler's dovetail plate, the same as your other bench accessories.
- It comes with an adjustable ring hook, designed to make cutting rings for sizing a breeze.
- It also has an adjustable brass guide fence that can guide your cuts at right angles, or any angle up to 60 degrees, in 15 degree increments.
- It comes with a pair of posts that can be attached to the pin to guide a #30 flex-shaft handpiece straight up-and-down, for quick drilling, or any other activity where having the flex-shaft at right angles to the face of the bench pin would be helpful, like cutting ring seats in waxes, or wax milling. The limits are entirely those of your imagination. We'll just keep things square.

The basics of cutting with a bench pin designed specifically for piercing are simple: it all comes down to support. The ultimate goal is to support the material you're cutting, as close as possible to where the cutting is taking place. That's why there is no wide "V" on this pin, but rather a series of small openings. Always use the smallest opening you can, and always be as close to one of the side walls as you can. That way the material will receive the most support from the pin, and be least likely to bend and break your blade. It really is that simple.

The Brass Angle Fence is adjustable in 15 degree increments, starting at 90 (or 0), to 60 degrees. To adjust, simply remove the knob from the underside of the pin, leave the fixed end in one of the two forward most holes, move the free end to one of the other holes, and retighten the knob. To cut with the guide, cut down the central slot. It's best not to hit the walls at all, but it is sometimes helpful to slide along one wall or the other as a guide.

To file an angle over the edge of the pin, it works best to file down, so that the pin supports the material you're filing. This may feel or look strange, but If you try to file up, the metal has no support, and will vibrate badly.



The Delrin Ring Hook is designed to adjust to any angle you find convenient, to make cutting rings for sizing a breeze.

Just loosen the two knobs under the hook slightly, adjust as needed, and retighten. To switch to left handed use, just remove the screws, reinsert everything on the other side, and adjust.

As it wears, it can be flipped over, and easily replaced.

The Flex Shaft Guide Posts were originally designed to fit into the two holes just behind the countersunk holes that anchor the ring hook. In that position, the flex shaft will drill through the wide open space in the front of the pin, giving lots of clearance for large bits .

After testing, we discovered that some jobs need more support. With that in mind, the second-to-rear-most set of holes for the angle fence will also serve to anchor the guideposts. If you put the handpiece behind the guideposts, the drill will bullseye the rearmost hole for tighter clearance. If you put the handpiece in front of the guideposts, you have no clearance at all, but that position is most useful for wax milling and other cutting tasks. It is also easier to leave the posts permanently attached if they're toward the rear, rather than the original front position. The choice is yours.



If scratching from the stainless plate is a concern, our testers have recommended attaching a small piece of thin (1/16") self adhesive foam, available from crafts stores. (It's usually in with the children's craft supplies.)

Trace the outline of the pin on the back of the sheet, cut, and adhere. Trim with an X-Acto knife or similar. The fine interior cuts are best done with a jeweler's saw blade. It just takes a few seconds to slide along the sides of the pin as a guide.