

How To Build a Press Vise

- Article by Jason Springfield
- Front Range Woodturners
- February 18, 2008

If you decide to make segmented bowls or vessels, a press vise is an invaluable tool. Rick Fleming made mine, and during the process I took a few pictures of his handy work. It is my intention to give you a cursory understanding of the process involved with building a press vise. However, there are any number of methods and materials used to make a press vise. Tools, equipment, and material available will dictate how yours is built. Lucky for me, Rick has a full metal shop and built a heavy duty version for me.

We started with two pieces of 3/4" plywood cut to 18"X19". The two pieces were glued together and since I didn't have a vise long enough to reach the middle. I drilled four slightly oversized holes in one board then during the clamp up I screwed through the holes and into the second board squeezing them together. Once finished I had a base 1 1/2" thick. It is important that the base is very strong.

After some calculation we decided the inside dimensions of the vise should be 15"X15".



We used 2"x2" square stock. It is strong enough for our intended purpose. Rick cut each piece to our designed dimensions. The two sides are 15" high and the top piece is 19".

Rick cut the ends of the top piece at 45 degree angles. You will see later that it really makes a nice design.



The three pieces are welded together.

Two holes are drilled through the center of the top piece. The first hole, on the bottom, is drilled to the exact size of the vise nut. While the second hole, drilled on

the top, is slightly larger than the vise screw.



This picture better illustrates the two sizes to be drilled. Notches were ground into each side of the large hole using a dremel tool. This step was necessary because our vise nut was not exactly round. The one I purchased was a 9" screw vise from Rockler.

We attached the screw nut by drilling self-tapping screws into the slots of the nut.



It is important that the vise is welded square.

Tape was used to ensure molten metal didn't fly into the nut and ruin our vise.

In addition four pieces of 3/4" angle iron were cut to 2". A hole was drilled on one side of the angle iron for the bolt. Do this before the piece is welded to the bottom of sides. (It's kind of hard to get this thing into a drill press later on.) This is how the support structure is attached to the base. We didn't get a picture because we were having too much fun welding and drinking ice tea.



I should point out that Rick's welds were so fine that grinding was not necessary. I wish I could weld like that. In this photo you can see how the angle iron is welded to the bottom of the sides, then bolted to the base.

Finally, the support structure was bolted to the base and the vise screw was attached. The only thing left was to paint the metal and laminate the base.

The finished product!

