Horizontal Bandsaw Quick Clamp, Version 1.1

By R. G. Sparber

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I use one of these Harbor Freight table clamps[2] on my drill press and, after modification, it works great. At a recent Valley Metal Club[3] meeting, a friend of mine mentioned that he uses one of these clamps on their horizontal/vertical bandsaws. Well, of course, I had to try this idea out.

Here you see the clamp modified with a hockey puck on the adjustment screw. Not as obvious is the modification

to the hold-down stud or that the adjustment screw has been recut to be an SAE thread.

The stud's nut has been replaced with a block. I drop the block down into the table's curved slot and rotate the clamp a few degrees to lock it in place. Easy install and easy removal.

The jury is still out on this tool. I need experience to see how well the clamping action works.

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[2] https://rick.sparber.org/ModifiedDrillPressClamp.pdf

[3] Based in the Phoenix metro area.

Fabrication

I don't have a set of metric taps and dies (yet…) but that did not stop me. A ½-13 die can be run over this metric thread and the result is usable[4]. Not pretty mind you, just usable. Past experience has shown me that it is strong enough for this application.

I first fabricated the stud block. My junk drawer yielded a 1-inch cube of CRS. I drilled and tapped ½ - 13 to a depth of about ½ inch. First used a tapered tap and then a plug tap.
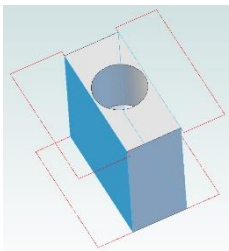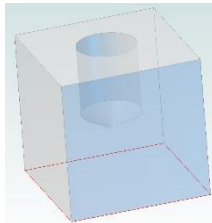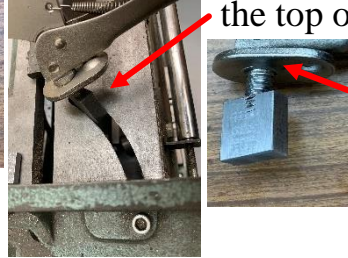

Next, I sawed the cube to the needed thickness. Since the hole was drilled and tapped first, it was easy to center it by eye between saw cuts.

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[4] ½-13 when translated to soft metric would be 12.7 mm and 0.512 threads per mm. The nearest metric thread is 13 mm and 0.5 threads per mm.

After cleaning out the threads and bottom of the hole, I screwed the stud in. The tool was dropped into the slot and lifted up. I then measured the distance between the top of the table and the bottom of the clamp. This told me how much stud to saw off. I removed burrs but did not put a taper on the end of the threads. Not enough room in the blind hole to do that.

I placed a bit of rubber in the bottom of the hole and screwed the block into the stud. This was enough friction to secure the block. Initially, I tried Loctite Red but the thread fit was too sloppy for it to set up even after waiting 24 hours. I hesitate to use epoxy since adjustments may be needed in the future.

Next, I removed the metric adjustment screw from the end of the clamp and ran a 5/16-18 tap[5]. This permitted me to use a length of threaded rod I had in my junk drawer.

Just to try something different, I put a scrap hockey puck in my lathe and drilled an "F" hole. The puck drilled rather easily but the hole closed up a little when the drill was extracted. I then ran my 5/16-18 tap but I don't think it cut much rubber. And finally, I screwed the threaded rod into the hole and it held tightly.

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[5] 5/16-18 translated to soft metric is 7.94 mm and 0.709 threads per mm. The nearest metric is 8 mm and 0.5 threads per mm.

Test Run

This clamp really shines when an irregular part must be cut.

Using the tool is a breeze. With the clamp's finger down, I spun the puck until the foot contacts the stock. Then I lifted up the clamp's finger, turn the puck clockwise half a turn, and clamped down.

Acknowledgments

Thanks to Corey Renner of the Valley Metal Club for suggesting this clamp and explaining how it is best used.

I welcome your comments and questions.

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