TIP 48 — A Mill Z-Axis Indicator Holder/Steven Lang

First version is made from an existing part

GM employee and long time Sherline user Steven Lang sent us an example of this useful indicator holder he had made from a P/N 1290 Steady Rest Riser Block. By machining down the thickness and drilling an additional hole to mount the indicator, he was able to turn it in to a Z-axis holder for an inexpensive dial indicator. The extrusions of the 1290 come 1.2" thick, but Steven machined his down to a thickness of 0.50" to take up less vertical space. The 10-32 hole to mount the indicator is based on the location of the flange on this particular indicator. Check the one you are using and modify the hole location if needed. Although you could use a standard 10-32 socket head cap screw to secure the holder to the column dovetail, Steven has also turned a nice looking knurled knob and pressed it onto the head of 10-32 screw to eliminate the need for a hex key when moving the holder to a different position.

Photos 1, 2, 3 and 4 show the indicator bolted directly to the holder with the indicator needle touching the top of the headstock case.

Photo 1

Photo 2

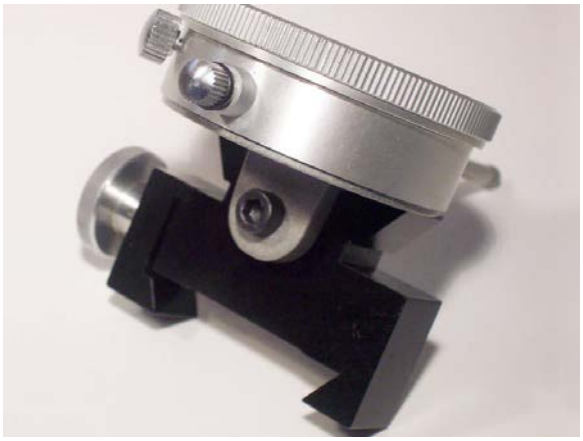

Photo 3

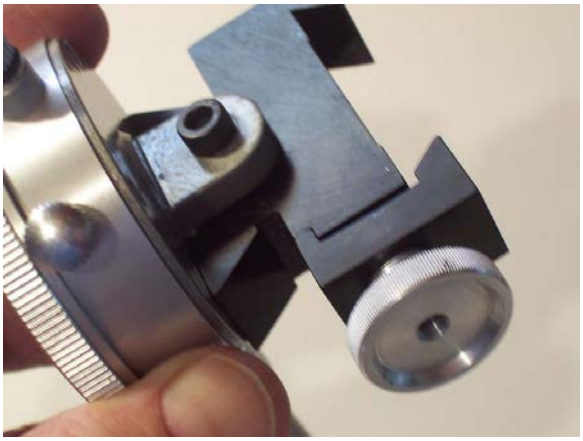

Photo 4

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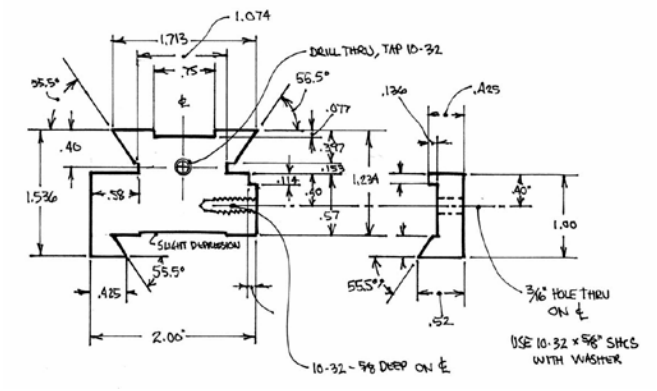

Thickness: 0.50"

Figure 1—In case you don't want to machine down a $50.00 part, here are the dimensions to make the holder from scratch. Click on the drawing above to view a larger and easier to read image. We regret the 55.5° angles, but that is the way the original design was laid out in the 1970's in Australia, and we have had to stick with it to keep all the accessories compatible with the machines then already on the market. A 60° angle would have made things much easier for you and for Sherline.

Version 2—Another piece allows more vertical travel

When we first received Steven's original prototype, Joe Martin commented that the design took up too much vertical space because of the way the indicator was mounted. Steven had been using it in setups where that vertical space was not a problem, but he took the advice to heart and came up with an additional piece that bolts to the first holder that allows the indicator to be held by its shank so it sits above the holder. This cuts the lost vertical space down to about the thickness of the holder. No plans for this additional part were sent, but by looking at the photo and coming up with a few dimensions of your own, we are sure you can make one that will work for your indicator now that you see how it's done.

Submitted by Steven Lang, Columbus, MI

Photos 5, 6, 7, 8 and 9 show an additional part mounted to the cut-down holder so that the indicator can be mounted above the holder by its shank, allowing the headstock to be brought up higher. With this modification, less than 1" of vertical travel is lost to the holder.

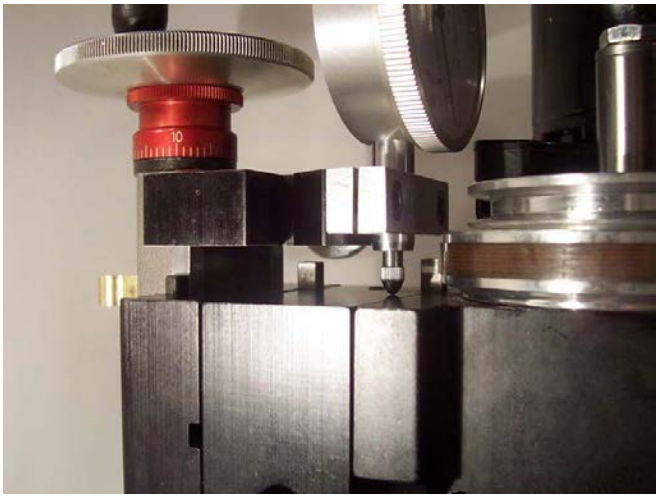

Photo 5

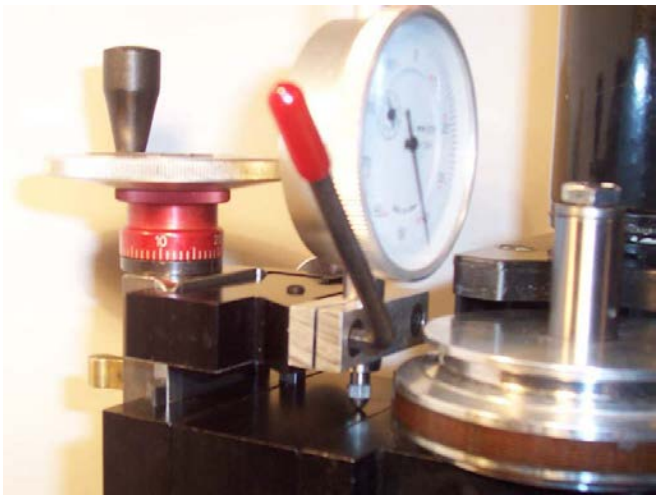

Photo 6

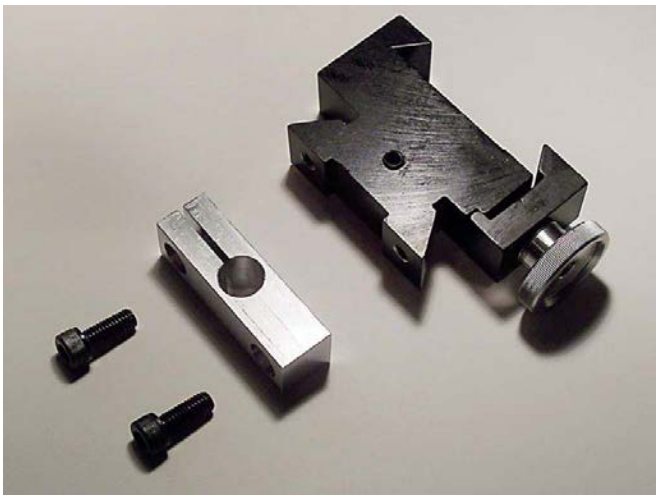

Photo 7

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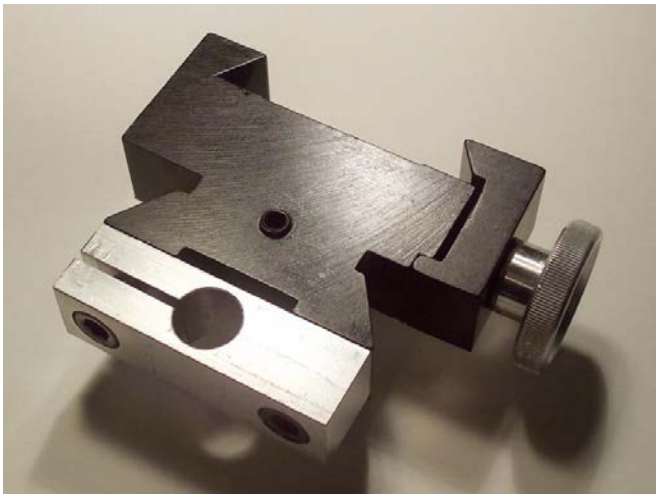

Photo 8

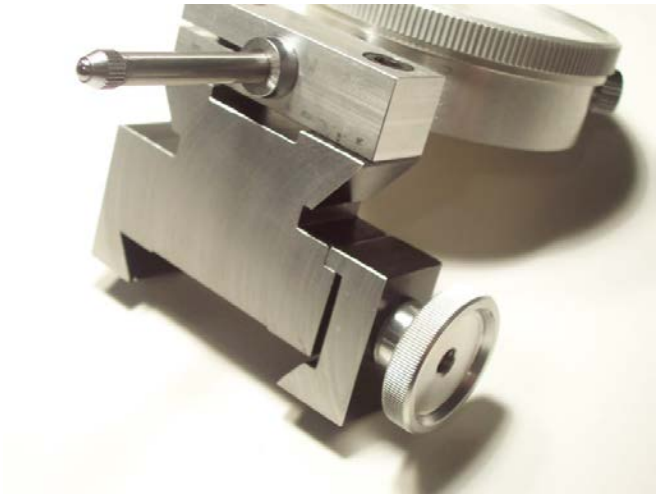

Photo 9

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