

**SHERLINE  
PRODUCTS**  
INCORPORATED 1974

## MILL HOLD-DOWN SET P/N 3012

Holding parts firmly in place for milling is one of the most important challenges faced by machinists. A mill vise can hold flat or round parts, but rough or odd shaped parts like castings need to be clamped to the table. We now offer a set of step block hold-downs (P/N 3013) that are small versions of the type of hold-down clamp most often used in machine shops. The 3012 set described here is an earlier version that was developed to provide a simple and inexpensive way to adjust for height using a carriage bolt as an adjustable spacer. Should you need additional clamps, we highly recommend you add the 3013 step block set to your shop as your next purchase.

Not much is required in the way of instructions in order to use these clamps. The biggest problem you can create for yourself is overtightening the nut and damaging the T-slots on your mill table. You have to realize that you are stronger than your machine when you have both the lever (wrench) and the screw working to your advantage (or disadvantage).

Use the eight 3/16" I.D. washers to adjust the height of the clamping screw head. Use the two 1/4" I.D. washers to keep the head of the carriage bolt from marring the table surface.

When properly adjusted for height, the clamp should be parallel to the table or, if anything, the tip can be slightly low. If the tip is higher than the back, the clamp is only gripping at the very edge of the part, which is not desirable. See Figure 1 below.

Joe Martin, President and Owner  
Sherline Products Inc.

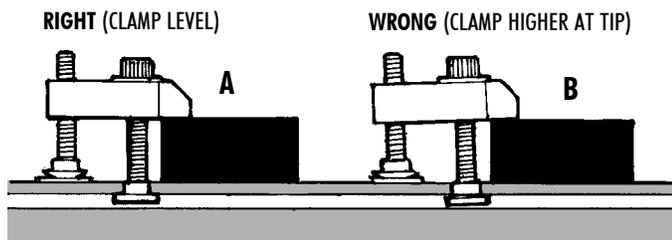


FIGURE 1—(A) Shows the clamp properly positioned in a level or slightly tip-down position. (B) Shows a block improperly clamped with the tip high.

### EXPLODED VIEW AND PART NUMBER LISTING

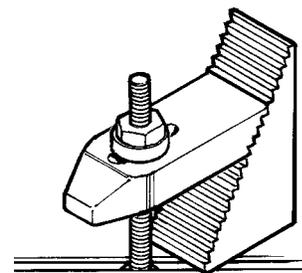
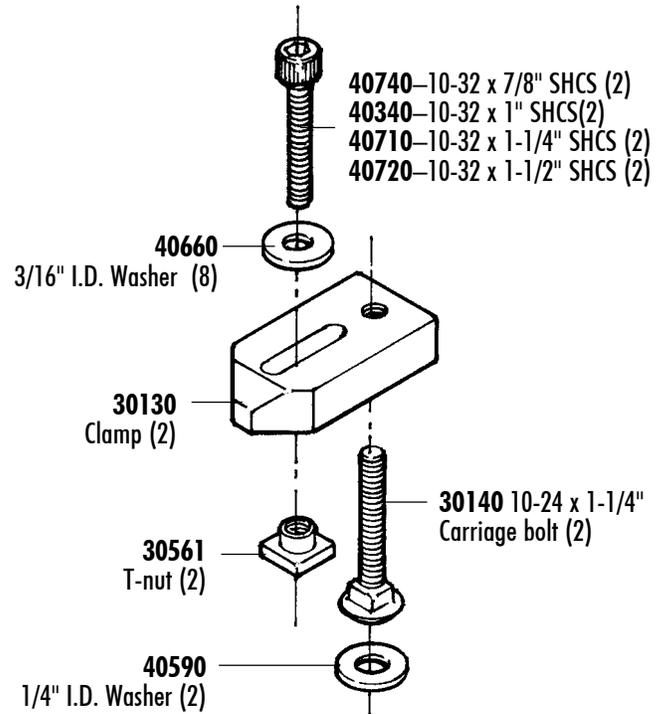


FIGURE 2—The newer P/N 3013 step block hold-down set uses a similar clamp, but the back end has a series of steps. A stepped block allows quick height adjustment. Threaded rods in six lengths up to 3.5" long are provided for a wide clamping range. This is a small version of the type of clamp most often used on full-size machine tools.