

## TIP 5 — Large Hold-Down Clamp/Alex Green

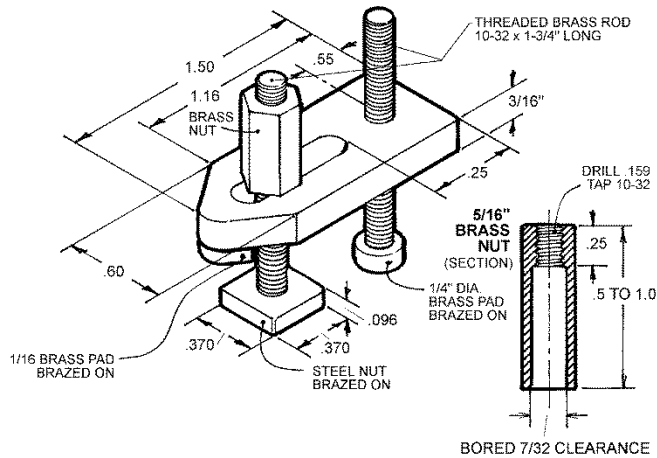


Figure 1—This steel clamp plate with brass nuts will hold a variety of size and shape parts without having to change screw lengths.

Alex Green of Victoria, British Columbia wanted to be able to clamp odd-shaped parts to his mill table but didn't like having to search for the proper length 10-32 bolts when changing thickness. His solution was to design a clamp that uses a deep brass nut that threads onto a threaded brass shaft. Only the top 1/4" of the nut is threaded so it quickly fits down over thinner pieces. For thicker parts, the nut can be threaded on from the other direction. His original nut was 1/2" long, but he said if he made it again, he would make it 1 inch long instead. A brass pad is brazed to the tip of the clamp to keep it from marring the surface of the part being held. A brass pad is also brazed to the bottom of the adjustable threaded standoff bolt to keep from scratching the mill table's surface.

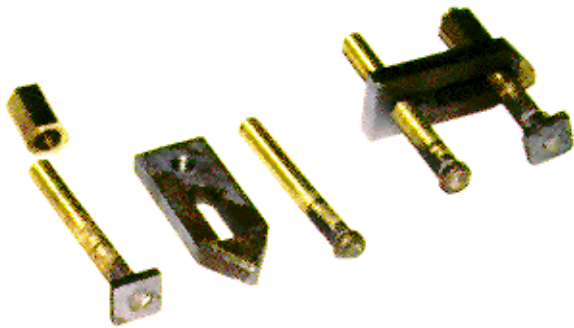


Figure 2—Here are the finished components of Alex Green's clamp system.

### Another way to make your own long studs

Steve Smith (see Tip 4) has a simple way of making his own 10-32 studs of various lengths quickly. Here's what he says:

“In on one case I used a 10-32 x 1-1/2" cap head screw and screwed a (Sherline) T-nut with the bottom first until it was jammed against the unthreaded shank. I then cut off the head and ground it flush with the bottom of the T-nut. This gave me a 1-1/4" stud that, when used with a washer and nut with the hold-down, would work with up to 1/2" stock.

In another case I used a 2" flat head screw and again jammed the T-nut against the tapered back of the head and ground off the head flush with the bottom of the T-nut. This gave me a 1-7/8" stud. The flat head screws are not as strong as cap head screws because they are not tempered, but they should work fine for lighter work. Longer flat head screws can also be used for longer studs.”

**NOTE:** A set of 10 Sherline T-nuts is [P/N 3056](#)