

Morse #1 Taper Tailstock

P/N 4112A/4112M, P/N 4412A/4412M

About the Morse #1 Taper Tailstock for Pen Makers

We designed our Morse #1 tailstock to support our pen maker customers who use our lathes. The pen mandrels and the mandrel saver live centers come with either Morse #2 or #1 tapers on them. This tailstock will allow our customers to use the Morse #1 taper pen making accessories.

The Morse #1 Taper Tailstocks are available with standard handwheels or zero adjustable handwheels, in both inch and metric graduations.

Standard Handwheels

- P/N 4112A (inch)
- P/N 4112M (metric)

Zero Adjustable Handwheels

- P/N 4412A (inch)
- P/N 4412M (metric)

Notes about the Morse #1 Taper Tailstock

1. We did not make this MT#1 taper for larger size tailstock chucks. Tailstock chucks that come with an MT#1 taper are capable of holding larger size drills and other cutters. Our machine is not designed for these larger tools and the forces that they exert on the working parts of our machine. If you buy one of these tailstocks to hold a larger drill chuck, the largest diameter tool should still not exceed .375" (9.5mm).
2. The way our tailstock is designed, we use the tailstock feed screw to remove accessories from the spindle. This is done by turning the tailstock handwheel and retracting the spindle back into the tailstock body. When the tailstock spindle is almost all the way into the body, the end of the tailstock screw will push against the end of the accessory. This will break the contact fit between the two tapers and release the accessory.

A. Because we don't make any of the pen making accessories, we don't have control over the dimensions or tolerances of these part. Therefore, we cannot design an end plug that will work with all possible mandrel saver live tailstock bodies.

B. The MT#1 mandrel saver live tailstock center that we purchased has a .280" through-hole and an OD of .375" at the end of the taper.

C. In order to be able to remove this accessory from the tailstock spindle, we need to put a hard plug in the end of the taper for the tailstock slide screw to push against. Otherwise the slide screw will just go inside of the .280" through-hole and you will not be able to remove the mandrel saver.

D. For a mandrel saver with these dimensions, a solid plug made of steel with the dimensions shown in Figure 2 will work. A cheaper and easier plug could be made by cutting off the head of a "16D Common Nail" leaving 3/8" of the nail below the head (see Figure 3). Push the nail into the through-hole until the nail head rests against the back of the Morse taper.

NOTE: Make sure the diameter of the 16D nail is not larger than the end diameter of your taper (shown below as 0.375).

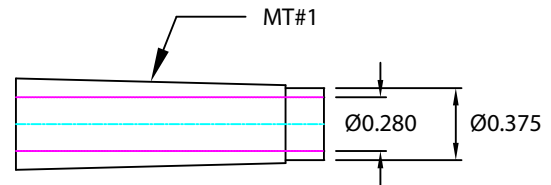


FIGURE 1—Morse #1 Taper dimensions

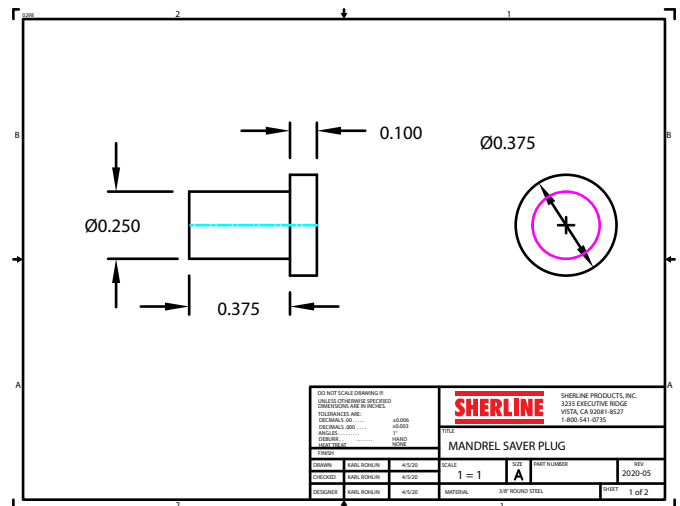


FIGURE 2—Mandrel Saver Plug dimensions

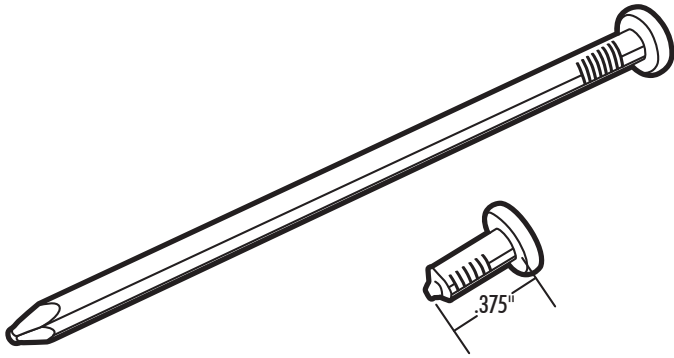


FIGURE 3—Shows a 16D Common nail and how it can be cut down for use as a mandrel plug.

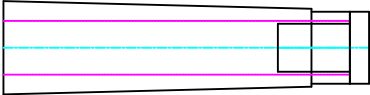


FIGURE 4—Shows the plug in the spindle.

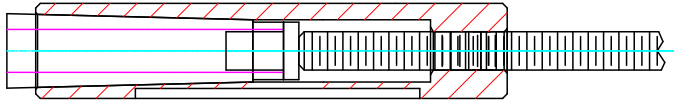


FIGURE 5—The mandrel, plug, spindle, and screw assembly.

Thank you,
Sherline Products Inc.