

SHERLINE PRODUCTS

INCORPORATED 1974

End Mill Holders

P/N 3075, 3079, 6079, 6080, 6081, 6082, 6083, 6086 (inch)
3076, 3077, 3078 (metric)

End Mill Holders for the Sherline Mill

Most of the work accomplished on the Sherline milling machine can be accomplished with one of the miniature series cutters. These cutters have standard shank diameters of 3/16" (4.8 mm) or 1/4" (6.4 mm) and are normally held using Sherline's Milling Collets, P/N 3060. However, there may be times when you will want to use a standard end mill with a 3/8" (9.5 mm) diameter shank. These cutters are more readily available than the miniature series of cutters and are actually less expensive in many cases. Also, special purpose cutters such as those designed for cutting key slots, dovetails and corner radii usually have 3/8" diameter shanks. The Sherline 3/8" end mill holder will increase the versatility of your milling machine by enabling you to hold these popular cutters. (CAUTION! Always consider the power and size limitations of your equipment when using larger size cutters. You may want to reduce cutter speed.)

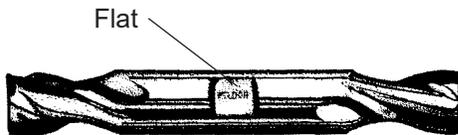


FIGURE 1—The flat area on a commercial double-ended end mill is for the set screw on the end mill holder to tighten against.

In addition to the 3/8" holder, this same type of end mill holder is now also available to hold 5/16" (P/N 3075), 1/4" (P/N 6079), 3/16" (P/N 6080), 1/8" (P/N 6081), 5/32" (P/N 6082), 1/2" x 1.2" (P/N 6083), and 1/2" x 2" (P/N 6086) end mills. The advantage of this type of holder is that it allows you to use smaller size double ended mills or tools with longer shanks which could not be held in a milling collet. An end mill holder is a better choice compared to a collet for holding end mills because:

1. An end mill can spin in a collet during heavy cuts while the set screw against a flat on the end mill prevents this with an end mill holder.
2. The end mill is supported over a longer distance in an end mill holder than in a collet. We actually decided to produce this type of holder in the smaller sizes after many requests from Sherline users who simply prefer its ease of use even when using regular miniature end mills.

The 6071 1/8" end mill holder uses two 4-40 set screws that take a 5/64" hex key (included). All the larger end mill holders take a single 10-32 set screw. It uses a 3/32" hex

key, which is not included but comes with each lathe and mill, as it is the same hex key used to tighten the handwheel set screws.

For those who use metric size cutting tools, the 10.0 mm (P/N 3078) is the most common size, but we also offer 6.0 mm (P/N 3076) and 8.0 mm (P/N 3077) sizes.

One of our Sherline machinists also pointed out that these holders make an excellent "quick-change" tool system for milling. Keep your favorite cutters chucked up in their own holders and simply swap holders to change tools. Since they just screw onto the spindle thread, changeover is a quick operation.

NOTE: The thread "pitch diameter" on both the end mill holder and the headstock spindle are held to a tolerance that is almost an interference fit. We do this to keep the runout as low as possible. Some of the end mill holders may fit tight when you first use them. We highly recommend that you wipe a drop of light oil onto the threads of the end mill holder before you thread them onto the spindle.

Maintenance

When the end mill holder is not in use, make sure it is treated with a light surface coat of oil to prevent rust. If the end mill holder does rust, it can be cleaned using a ScotchBrite® or similar abrasive pad. Store wrapped in the original waxed paper if possible.

Thank you,
Karl Rohlin, Vice President of Manufacturing
Sherline Products Inc.

End Mill Holders are available in the following sizes:

P/N 3075 5/16" End Mill Holder
P/N 3076 6.0 mm End Mill Holder
P/N 3077 8.0 mm End Mill Holder
P/N 3078 10.0 mm End Mill Holder
P/N 3079 3/8" End Mill Holder
P/N 6079 1/4" End Mill Holder
P/N 6080 3/16" End Mill Holder
P/N 6081 1/8" End Mill Holder
P/N 6082 5/32" End Mill Holder
P/N 6083 1/2" x 1.2" End Mill Holder*
P/N 6086 1/2" x 2" End Mill Holder*

*Please note that when using the 1/2" x 1.2" end mill holder (6083) or the 1/2" x 2" end mill holder (6086), be aware of the length of the shaft of your cutter. The hole through the spindle is .405" so a long end mill would not be able to go through the spindle.