



SHERLINE
PRODUCTS
INCORPORATED 1974

VERTICAL MILLING TABLE

P/N 1185 (Inch)
P/N 1184 (Metric)

About the vertical milling table

The vertical milling table can be used to do small milling jobs on the lathe by moving the part up and down in front of a cutter in the headstock. This was a technique often shown in older machining manuals. It can also be a handy fixture on a milling machine table for certain setups.

In its original Sherline version, the table was the same as the original brass lathe crossslide table, which was 4" long. When Sherline changed to a 6" table on the lathe crossslide the same 6" table was used on the vertical milling table. In 2004, the vertical mill table was upgraded to our 8" industrial slide table, which is also an additional 1/4" thicker than the old 4" or 6" tables to offer additional rigidity for milling. The table is also predrilled to accept a stepper motor mount, making it easier to convert to computer control should you wish to do so in the future.

Some basic rules for milling

Whether you're milling with the vertical milling column or the vertical milling table, some of the same basic rules apply. Here is a brief summary of those rules:

1. This is a small, light duty machine and shouldn't be used to remove vast amounts of unnecessary stock that could be easily removed with a hacksaw. Get stock as close to size as possible before starting.
2. Loads involved for milling are a lot higher than lathe turning. The vibration level is also a lot higher; therefore, more attention must be paid to gib adjustments. They should be kept snug, but not overtightened.
3. End mills must run true and must be sharp. Holding end mills in a drill chuck is a poor method. Milling collets should be used for this purpose. When cutting aluminum, run the motor at top speed and take light cuts.

4. Fly cutting is an excellent way of cutting stock from flat surfaces.

5. Learn to use a dial indicator.

6. Shims may be required to properly align the machine. Normally, standard machine alignment will be good enough for most work unless it is exceptionally large or has to be extremely accurate.

7. A good milling vise is a must. In most cases, simple drill press vises are not accurately machined and are difficult to align. They are also designed to take only the straight down loads of drilling, not the lifting and side forces of milling.

8. Often more time will be spent making fixtures to hold work than doing the actual work. There aren't any short cuts in this type of work. If your part comes loose while it is being machined and is destroyed, more time is lost than that saved in a quick setup.

9. Always try to have one point to measure from. Don't machine this point off half way through the job and leave yourself with no way of measuring the next operation. **PLAN AHEAD!**

10. A good rule for machining operations is, "If the tool chatters, reduce speed and increase feed."

It takes a long time to accumulate the knowledge, tools and fixtures to do the numerous different types of operations involved in milling. Don't get discouraged by starting a job that is too complex.

Joe Martin, President and Owner
Sherline Products Inc.

Refer to the *SHERLINE ASSEMBLY AND INSTRUCTION GUIDE* (P/N 5326) for more details on milling setup and operations.

VERTICAL MILLING TABLE PARTS LIST

| NO. REQ. | PART NO. | DESCRIPTION |
|-------------|-------------|--|
| 1 | 11831 | Milling table base |
| 1 | 40080 | Handwheel, Inch (41040, Metric) |
| 2 | 40250 | Extended T-nut |
| 1 | 40280 | Handwheel Thrust |
| 3 | 40520 | 10-32 x 3/16" Cone Point Set Screw |
| 1 | 40530 | 5-40 x 3/8" Socket Head Cap Screw |
| 2 | 40730 | 10-32 x 2" Socket Head Cap Screw |
| 1 | 40820 | GibLock |
| 1 | 40890 | Slide Screw Insert, In. (41890, Metric) |
| 1 | 40980 | Crossslide Gib |
| 1 | 50130 | Anti-backlash lock, Inch (51140, Metric) |
| 1 | 50150 | Star gear backlash lock |
| 1 | 50210 | 8-32 x 1/4" pan head socket screw |
| 1 | 65210 | Slide Screw, Inch (65220, Metric) |
| 1 | 67036 | 8" Crossslide table |

