



Pulley Ratio: 2:1
Optional: 3:1

NOTE: Headstock and stepper motor shown here are not included with this kit.

SHERLINE PRODUCTS
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Ordering a lathe or mill without a DC motor

If you wish to order a Sherline lathe or mill that will be driven by this stepper motor kit rather than the standard DC motor, you can request that we delete the DC motor and speed control. The delete credit is currently -\$141.75 off the list price of the lathe or mill.

Headstock Stepper Motor Mounting Kit

P/N 6500

About the Sherline Stepper Motor Mounting Kit

Certain jobs require the headstock to be rotated at a fixed and accurately controlled slow speed. Driving the spindle with a computer-controlled stepper motor is an excellent way to accomplish this. This setup replaces the standard Sherline 90 VDC motor and electronic speed control with a NEMA 23 stepper motor with toothed timing belt drive.

The stepper motor mounting kit includes the items you need to mount a stepper motor to drive any Sherline standard or industrial headstock spindle that accepts a motor mounting bracket. See page 2 for a list of compatible headstocks.

Included in the Kit

- Motor Bracket
- DC Motor Stand Off Assembly
- Timing belt
- 15-tooth motor pulley
- Industrial 30-tooth spindle cog pulley
- Stepper spindle motor mount
- Mounting hardware
- A **10-tooth drive pulley** is also available for a slower 3:1 drive ratio instead of the standard 2:1 ratio.

Headstocks and stepper motors (P/N 67127) must be purchased separately.

Installing the Stepper Motor

The conventional installation is shown at the top of the page, and an alternate space-saving alternative is shown at the right. When using the alternative method the pulley is located near the outside end of the spindle shaft. Flats must be ground on the spindle shaft to accommodate the pulley set screws. If this is not done, galling of the spindle



Figure 1—Alternate stepper location. By mounting the motor bracket in the opposite direction on the headstock, the motor will turn the spindle in the same direction as the stepper motor is turning. It also saves a little space if that is a consideration in your particular application.

shaft by the set screw points can make the pulley difficult or impossible to remove from the shaft later on.

We also recommend that you consider providing some strain relief on the stepper motor cable. A good way to do that is to use only 3 of the 4 mounting bolts when attaching the stepper motor. Run a plastic tie-wrap through the 4th motor hole and secure the cable. This will keep any inadvertent pull on the motor cable from being transferred to the plug

where it enters the motor (Not shown).

The stepper motor can be driven with a computer using either a Sherline 8760 4-axis driver box or by a keypad controller from the Sherline 8700 CNC rotary indexer.

Thank you,
Sherline Products Inc.

List of Compatible Headstocks

PART NO.	DESCRIPTION
30100	Standard Headstock 3/4-16/#1 Morse Spindle
30110	9/16" Headstock
30113	3C Collet Headstock
30111	ER-16 Headstock

Industrial Headstocks

PART NO.	DESCRIPTION
6501, 6502	Flat Base 3/4-16/#1 Morse Spindle
6503, 6504	Flat Base ER-16 Headstock
6519, 6520	Dovetail Base 3/4-16/#1 Morse Spindle
6521, 6522	Dovetail Base ER-16 Headstock
6523	Flat Base 3/4-16/#1 Morse Spindle
6524	Flat Base ER-16 Headstock