



**SHERLINE
PRODUCTS**
INCORPORATED 1974

“Sherline Lathe Basics—Setup and Use of the Sherline Lathe”

Video by Mike Rehmus, P/N 5335

Purpose of this instructional video

Whether you are a first-time lathe user or even an experienced machinist who has been out of the shop for a while, this video will set you on the right path to making good parts on a small precision lathe. The various chapters can be watched in any order, but we recommend you watch the shorter segments on mounting the machine to a board, backlash, setting tool height, handwheel dial control and work holding before going on to the main operations of turning a test bar, facing and boring. Grinding your own tool bits is also an important part of learning to use a lathe. Sherline offers written instructions for that process at www.sherline.com/grinding.pdf if you want another take and some illustrations on the process.

Machine and accessories used in the video

The author uses a Sherline Model 4500 lathe in the examples. This lathe includes handwheels that can be reset to a zero reading at any time. These are not included on the basic Model 4000 lathe, but are included on the longer 4400 models. Also shown are some accessories that are not included with the basic lathe, such as the live center. Included with each lathe, however, are dead centers, and the live center, steady rest, center drills and other accessories are included with optional “B” or “C” packages available when purchasing a Sherline lathe.

Inch vs. Metric

The examples are given in inches, but all Sherline tools are also available with handwheels and leadscrews calibrated in metric increments. The inch handwheels have a 20 TPI pitch, meaning each revolution of the handwheel advances the slide 0.050" (1/20"). There are 50 marks, each one representing 0.001" (1/1000"). Metric handwheels have a 1 mm pitch, meaning each revolution of the handwheel advances the slide 1 mm. There are 100 marks, each one representing .01 mm (1/100 mm).

Safety Precautions

Read the “Safety Rules for Power Tools” section on page 3 in the Sherline Assembly and Instruction Guide that came with your machine before attempting to operate it. Remember especially to always wear proper safety glasses or eye protection when operating a power tool.

Remember; “Foresight is better than no sight.” Do not wear gloves, ties or loose, baggy clothing that could get caught in the spinning chuck or part. Wear protective headgear to keep long hair out of the way.

Table of Contents

Introduction: (Plays automatically the first time you insert DVD in player, then main menu comes up. If you wish to skip the introduction in subsequent plays, select the [menu] button on your DVD player interface and then select the “title menu” option. The first screen to appear is actually only half of the menu. Select “Main Menu” at the bottom right corner of the screen to see your other choices. You can toggle back to the first menu by checking the “Next Menu” box at the bottom of the screen. (The interface of your particular DVD player may be slightly different.)

Items in the Menu Screens

Main Menu:

- Turning (detailed)—55 min.
- Turning, facing and boring—18 min.
- Work holding—35 min.
- Eccentrics and tapers—33 min.
- Threading—20 min.
- Toolbit grinding—15 min.

Menu 2:

- Backlash—7 min.
- Setting tool height—8 min.
- Cleaning a chuck—4 min.
- Handwheel dial adjustment and control—2 min.
- Follower rest—3 min.
- Mounting the lathe—2 min.
- Aligning the headstock—8 min.
- Milling—3 min.

Other videos available from Sherline

- *Shop Secrets—Measuring Tools* by Mike Rehmus (VHS, 2 Hr., P/N 5329, available soon on DVD)
- *Steam Engine Video* by Rudy Kouhopt (DVD, 3.5 hr., P/N 5328-DVD, also still available on VHS tape as P/N 5328-VHS until supply runs out.) Includes material list and plans to build a small horizontal stationary steam engine.