

NOTE: The P/N 1042 chuck is threaded 22 x 1.5 mm for use on ER-16 collet spindles.

CAUTION
These chucks are not intended for use at speeds above 3000 RPM.

SHERLINE
PRODUCTS
INCORPORATED 1974

3-Jaw Chucks

P/N 1040, 1040C, 1042 (3.125") and P/N 1041 (2.5")

Three-jaw chucks are designed so that all three jaws move together and automatically center round or hexagonal parts or stock to within a few thousandths of an inch. These chucks provide the quickest and easiest way of holding work in the lathe. To open or close the chuck, turn the outer ring with one hand while holding the knurled inner ring in your other hand. Use the tommy bars in the holes provided in each ring to apply more leverage to tighten or loosen the chuck.

Jaw Opening Ranges

These chucks are designed so that the jaws can be removed and reversed to hold larger stock. They can also be used to clamp externally on bar stock or internally on tube stock.

The 2.5" 3-Jaw Chuck (P/N 1041)

Jaws in normal position: 3/32" (2mm) to 1-3/16" (30 mm)

Jaws in reverse position: 1/4" (6mm) to 2-1/4" (56 mm)

3.125" 3-Jaw Chucks (P/N 1040, 1040C, and 1042)

Jaws in normal position: 3/32" (2mm) - 1-1/2" (38mm)

Jaws in reverse position: 1/4" (6mm) - 2-3/4" (70mm)

Sherline chucks have a .687" (17 mm) through hole with a 3/4"-16 thread for use on standard Sherline headstock spindles. (P/N 1042 has a 22 x 1.5 mm thread for use on ER-16 collet spindles).

Due to the nature of the design of a 3-jaw chuck, it cannot be expected to run perfectly true. Even 3-jaw chucks costing five times more than the one made for this lathe will have a

0.002" to 0.003" runout. If perfect accuracy is desired in a particular operation, the use of a 4-jaw chuck or a collet is recommended. Both are available for your Sherline Lathe.

NOTE: DO NOT TURN THE LATHE SPINDLE ON UNTIL THE CHUCK IS TIGHTENED. The acceleration of the spindle can cause the scroll to open the chuck jaws if not tightened!

To prevent permanent damage, only finished, turned or drawn stock should be held with this chuck. For rough castings, etc., use the 4-jaw chuck.

DO NOT OVERTIGHTEN THE CHUCK. Use only moderate pressure with the supplied Tommy Bars.

Reversing the Jaws

Jaw Locations REVERSE POSITION

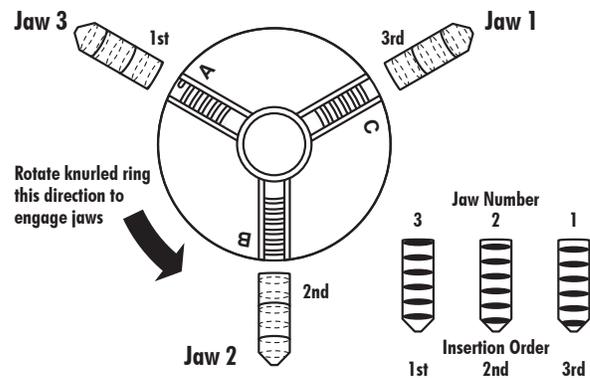


FIGURE 2—Reversing the Chuck Jaws. **NOTE: Always start with position "A."**

Jaw Locations NORMAL POSITION

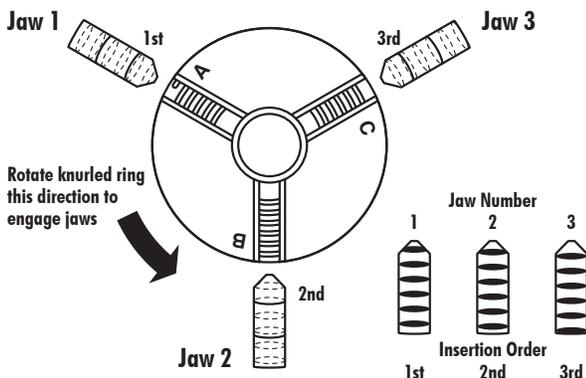


FIGURE 1—Three-Jaw Chuck, standard jaw locations.

To reverse the chuck jaws, rotate the knurled scroll until the jaws can be removed. They can be easily identified by the location of the teeth to the end of the jaw (See Figures 1 and 2). To maintain chuck accuracy, the second jaw must always be inserted in the same slot even when the jaws are reversed. This slot is identified by a punch mark or the letter "B" next to the slot. Always insert the jaws in the order and location shown on the drawings. Turn the scroll counter-clockwise when viewed from the face of the chuck until the outside start of the scroll thread is just ready to pass the slot for the first jaw. Slide the first jaw as far as possible into the slot. Turn the scroll until the first jaw is engaged.

Due to the close tolerances between the slot and jaw, the most difficult part of replacing the jaws is engaging the scroll

thread and first jaw tooth without binding. Therefore, never use force when replacing the jaws, and if binding occurs, back up the scroll slightly and wiggle the jaw until it is free to move in the slot. Advance the scroll and repeat for the second and third jaws. The scroll thread must engage the first tooth in the first, second and third jaws in order.

A set of replacement jaws is available as P/N 1141. Should it become necessary, please return your chuck to the factory so that we can replace the jaws and check the alignment before returning it to you. In the case of a damaged chuck body, replacement of the entire chuck is usually more economical than attempting repairs.

ER-16 Chucks

Introduced in early 2014, the P/N 1042 3.1" 3-jaw self-centering chuck is now offered with a 22 x 1.5 mm thread for use on the optional ER-16 spindle nose for the headstock. It is used in the same way as a standard chuck but now offers those who opt for the ER-16 collet option a way to use a Sherline chuck on their lathe.

Removing a Stuck Chuck from the Spindle

Use one tommy bar in the hole in the spindle and another tommy bar in a hole in the rear ring of the chuck body to achieve enough leverage to unscrew the chuck (counterclockwise) from the spindle thread. If the chuck becomes stuck on the spindle thread, put a tommy bar in the hole in the chuck body. Place a block of wood against the tommy bar where it enters the chuck. With a small mallet, give the block of wood a sharp tap, turning the chuck in a counter-clockwise direction. It should not be necessary to hold the spindle, as its inertia should be sufficient. (Don't hit the tommy bar anywhere other than right where it enters the chuck or you could bend it.) This small but sharp force at the outer edge of the chuck should break the thread loose and the chuck can then be unscrewed by hand or with the tommy bars.

Lubrication and Maintenance

Clean chips from the jaw slots with a brush and add lubrication to keep the chuck operating smoothly. To prevent rust, keep the surfaces of the chuck lightly oiled. If possible, store wrapped in the waxed paper it came in.

Thank you,
Sherline Products Inc.