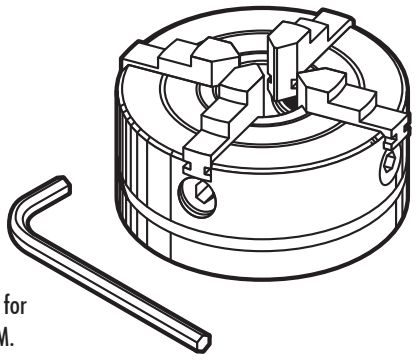

CAUTION
These chucks are not intended for use at speeds above 3000 RPM.

NOTE: P/N 1030, 1032 and 1044 chucks are independent jaw chucks. Each jaw is adjusted individually. 4-jaw self-centering chucks are available in both 2.5" and 3.1" sizes. See P/N 1075, 1076 and 1078.
P/Ns 1032 and 1078 chucks have a 22 x 1.5 mm thread for use on ER-16 collet spindles.

SHERLINE PRODUCTS
INCORPORATED 1974

4-Jaw Independent Chucks

P/N 1030, 1032 (3.125") and P/N 1044 (2.5")

Because of the varied uses of the 4-Jaw Chuck, it would be impossible to write a comprehensive set of safety rules to cover every specific use, other than simply suggesting the use of liberal amounts of "Common Sense." If you're not sure of your set-up, it probably isn't good enough. Get a machinist with more experience to advise on a safe setup. Be sure to remove the chuck key before turning on the spindle. Work Safely!

The screws that move the jaws are 20 threads per inch (T.P.I.). A complete revolution of a screw moves the jaw .050". If you keep this number in mind when indicating in a part, it can speed up the process. First, use the lines machined on the face of the chuck to roughly align the part concentric with the chuck. With a dial indicator, measure the run-out. Move the jaw closest to the high or low point 30% of the total indicator reading in the proper direction.

NOTE: We recommend the 30% figure because the high point of a part will very seldom line up with a jaw. Moving a jaw too much can cause "chasing your tail," or simply moving the high point around the chuck.

Example:

The indicator shows a .030" run-out. 30% of .030" is approximately .010". If one revolution of the jaw feed screw is .050", then a little less than a 1/4 turn will be .010". Back the jaw out this amount and tighten the opposite jaw. Do NOT tighten the jaws beyond "snug" until the part is running within .005" T.I.R. (Total Indicated Reading). Repeat this process until the part runs within your specifications. Once the part is running within .002" T.I.R. it can usually be "brought in" by a final tightening of the jaws. It should also be noted that the chuck jaws are ground with a slight angle to allow the jaws to apply equal pressure to the tip and base when properly tightened. This angle amounts to less than .001" on the jaw surface.

Do not force a jaw onto the guide rails with the screw when reversing jaws."Wiggle" the jaw as the screw is advanced until the jaw moves in unison with the screw without binding.

If an off-balance part has to be run, be sure to turn the motor on at a low RPM setting and bring the speed up slowly. Never go past the point that the machine starts to vibrate.

Jaw Opening Ranges

3.125" 4-Jaw Chucks (P/N 1030, 1032, and 1078)

Jaws in normal position: 3/32" (2mm) - 1-1/2" (38mm)
Jaws in reverse position: 5/16" (8mm) - 2-3/4" (70mm)

The 2.5" 4-Jaw Chuck (P/N 1044)

Jaws in normal position: 3/32" to 1-3/16" (30 mm)
Jaws in reverse position: 5/16" to 2-1/4" (56 mm)

Sherline chucks have a .687" (17 mm) through hole with a 3/4"-16 thread (P/Ns 1032 and 1078 have a 22 x 1.5 mm thread).

Removing a Chuck from the Spindle

The large size of the 4-jaw body makes it easier to grip than the thinner 3-jaw chuck. The chuck unscrews counter-clockwise. You should be able to unscrew it from the spindle by hand, but if the chuck becomes stuck on the spindle thread, there are two means of removal:

1. Unscrew two opposite jaws until they stick out about 1/4" past the chuck body. Give the jaws a sharp tap with a plastic mallet to loosen the thread. This should break the thread loose and the chuck can then be unscrewed by hand.
2. Insert the 5/32″ hex wrench into one of the chuck jaw screws. Then using a block of wood against the side of the wrench, tap the wood sharply with a mallet to break the chuck loose. This technique also works if you are holding a small part and do not want to lose your setup by backing off one or two jaws.

Replacing Worn or Damaged Jaws

Should the chuck jaws ever become worn or damaged, we recommend you return your chuck to the factory where we will replace the jaws and assure that the chuck is adjusted within tolerances. If the chuck body is damaged, replacement of the entire chuck is usually more economical than attempting to repair the body. If you wish to attempt the replacement of a jaw or jaws yourself, measure the width of the jaw you are replacing carefully with a micrometer (it is usually .3120–.3150"), and give us the dimension so we can provide a perfect replacement.

NOTE: Both P/N 1030 and P/N 1044 chucks use same size jaws and screw. Chuck jaws are a factory replacement item only.

Lubrication and Maintenance

Clean chips from the jaw slots with a brush and add lubrication to keep the jaws 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.