



NOTE: Not designed for use on Sherline lathes.

**SHERLINE
PRODUCTS**
INCORPORATED 1974

3.1" 5C Quick-Change 4-Jaw Chuck

P/N 1045

Introduction

This is a light duty chuck and has not been designed to take the load normally associated with 4-jaw chucks. It has been designed to allow the user a method of getting small diameter parts running perfectly true using standard collet holding devices.

The 5C is a larger collet size that is used on full size machines. This chuck was designed to work on full size machines like we have in our shop. It was not designed to work with our Sherline lathes.

NOTE: The chuck adapter is not hardened; therefore, caution should be used to ensure your setup is clean and free from chips.

Safety Tips

Because of the varied uses these tools have, it would be impossible to write a set of safety rules to cover specific uses other than saying use a liberal amount of common sense.

If you are not sure of your setup, it probably isn't any good. Get a toolmaker with more experience to advise on a safe setup. Be sure to remove the chuck key before turning the spindle on. Work safely, wearing eye protection at all times and no gloves, ties, loose clothing or long hair that could become entangled in a spinning chuck.

Instructions for use

The screws that move the jaws are 20 TPI. One complete revolution of the hex key wrench equals .050" of jaw travel. If you keep this number in mind when indicating a part in, 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 an indicator, read the runout. Move the jaw closest to the high or low point 30% of the total indicator reading in the proper direction. We recommend 30% because the high point will very seldom line up with a jaw. Moving a jaw too much can cause "chasing your tail."

Example:

The indicator shows a .030" runout. 30% is approximately .010". If one revolution of the jaw feed screw is .050", then a little less than 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. Repeat this process until the part runs within your specifications. This may require the use of a 1/10,000" indicator for the final check. Once the part is running within .001" T.I.R. it can usually be "brought in" by 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. Overtightening could damage the alignment.

Another use for this chuck that isn't too obvious is holding it in a 3-jaw when tolerances don't allow the runout found on most 3-jaws. Remember, the chuck body is not hardened, so care should be taken not to "ding" it up when using it in this manner.

Lubrication

Regular cleaning and lubrication of the chucks is recommended and should be part of periodic machine maintenance. These are the things you can do to insure accuracy and long life in your chuck.

Accessories

Soft Jaws—For custom setups, soft jaws are available for the 3" 4-jaw chucks. These unhardened 12L14 steel jaws can be turned to fit your part holding needs. They require a set of bottom jaws (carriers).

P/N 11430 (Factory installation required unless ordered with new chuck)

Stop Adapter—These chucks have an internal thread to accept a stop adapter at the rear of the collet. This adapter was designed to use 1/2-13 threaded rod for a stop, which is a common size for mill hold-down clamping bolts.

P/N 1172 (Hard stop)