



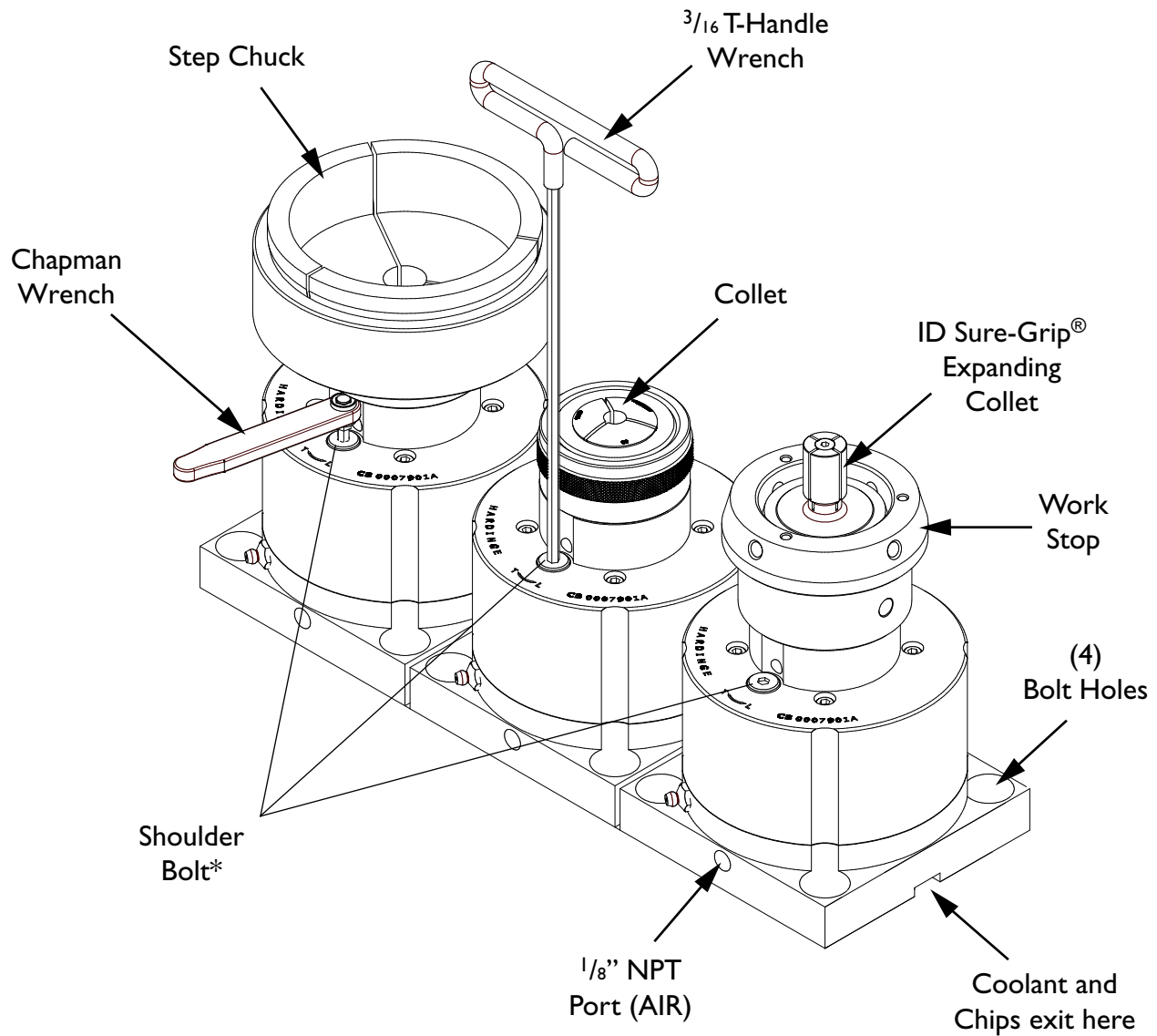
Hardinge 5C Pneumatic Collet Block

Installation

Operating Instructions

Maintenance

5C Pneumatic Collet Block Instructions B-124



Introduction:

The Hardinge 5C Collet Block is a fail-safe workholding solution. Air is applied to release the workpiece and when inserting and removing 5C workholding tooling such as the step chuck, collet or expanding collet shown above. When the workpiece is in place, the air is removed and a system of springs clamp the part. This enables utility-free machining of parts. If loss of air should occur, collet concentricity will be maintained, parts will not have to be scrapped and there will be no danger of parts flying off. An open base design allows coolant and chips to be blown out, eliminating the need to tear down and clean out the unit. Units can be mounted individually or grouped on a machine table, mounted on a sub plate or mounted vertically on tombstones. Wrenches and workholding units shown above can be ordered online at hardingetooling.com or by calling 800-843-8801.

*** IMPORTANT:** You must have air applied to the collet block before adjusting the shoulder bolt. With air ON, the shoulder bolt will rotate freely - with air OFF, the shoulder bolt, if forced, could damage the unit.

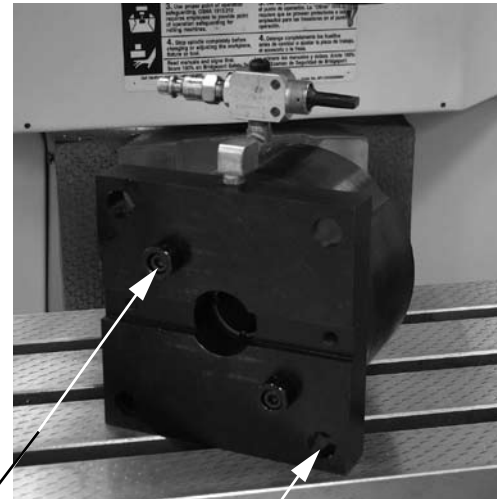
5C Pneumatic Collet Block Instructions B-124

Installation:

There are four mounting holes provided for 1/2" or 12mm screws. They can be mounted to a sub plate with a 4" center-to-center bolt hole pattern. For mounting the collet block to a mill table (as shown), there are two locating pin holes for locating in the table slot. 5/8" and 18mm pins are available for use in the collet block. When using these locating pins, the block will be rotated 45 degrees and only two mounting bolts will be required.

Optional 5/8" locating pins: Part number CI 000199011

Optional 18mm locating pins: Part number CI 000199018MM



Optional
5/8" or 18mm
Locating Pins

Holes for
1/2" or 12mm
Mounting Bolts



A 1/8" NPT port is located on the collet block for the air connection. Air valving and the air supply are supplied by the customer. A 75psi minimum air supply is required to operate the collet block. The air should be filtered and dry to insure proper functioning of the block and to prolong the life of the unit. For ease of use, a valve should be placed in the air supply so that opening and closing of the block can be done quickly. Valves can be ordered from Hardinge.

Operation:

Once the block is mounted and the air supply is in place, open the valve allowing air to enter the collet block, which will release the closing springs.

IMPORTANT: Air must be applied before installing and adjusting the collet or other workholding device.

Note: The Hardinge Collet Block is NOT intended for higher speed rotation as in the case of a lathe.



Operation (continued):

Align the keyway of the workholding to the key in the block.



Located on the collet block just above the air connection is a shoulder bolt which requires a $\frac{3}{16}$ wrench. For standard collets, a $\frac{3}{16}$ T-handle is recommended. For larger step chucks, a $\frac{3}{16}$ Chapman will work best.

With the collet block in the open position and air applied, this bolt will rotate freely. Turn the bolt clockwise to tighten the workholding and counterclockwise to loosen.

Insert a workpiece into the workholding and adjust workholding for proper clearance using the bolt. Actuate the valve several times to make sure that the block is opening and closing properly and proper gripping is being achieved. Tighter clearances between the workholding device and the workpiece will produce higher gripping forces. The clearance should be adjusted for the tightest clearance that will still allow the block to open and release the workpiece.

NOTE: DO NOT ATTEMPT TO ADJUST THE COLLET POSITION IN THE "AIR OFF" GRIPPED STATE. THE COLLET BLOCK IS DESIGNED TO BE LOCKED IN THIS POSITION AND DAMAGE TO THE UNIT WILL RESULT. Once the collet block has been adjusted, the air is removed and the workpiece will be clamped. Fail-safe machining can now occur. When the machining is done, apply air and remove the part.



5C Pneumatic Collet Block Instructions B-124



COLLET APPLICATION



STEP CHUCK APPLICATION



ID SURE-GRIP
EXPANDING COLLET APPLICATION

Operation (continued):

Note: The collet block cap can be removed to thread on a step chuck, expanding collet system, manual chuck or other 5C threaded workholding piece.

IMPORTANT: NEVER CLOSE THE WORKHOLDING TOOLING WITHOUT A WORKPIECE IN PLACE. THIS WILL CAUSE PREMATURE WEAR OR PERMANENT DESTRUCTION OF THE WORKHOLDING TOOLING.



REMEMBER THE COLLET BLOCK IS FAIL SAFE AND IF AIR IS REMOVED, THE WORKHOLDING WILL CLOSE. IF THE COLLET BLOCK IS TO BE STORED, IT IS SUGGESTED THAT THE WORKHOLDING BE REMOVED OR AT LEAST STORED WITH A WORKPIECE INSTALLED.

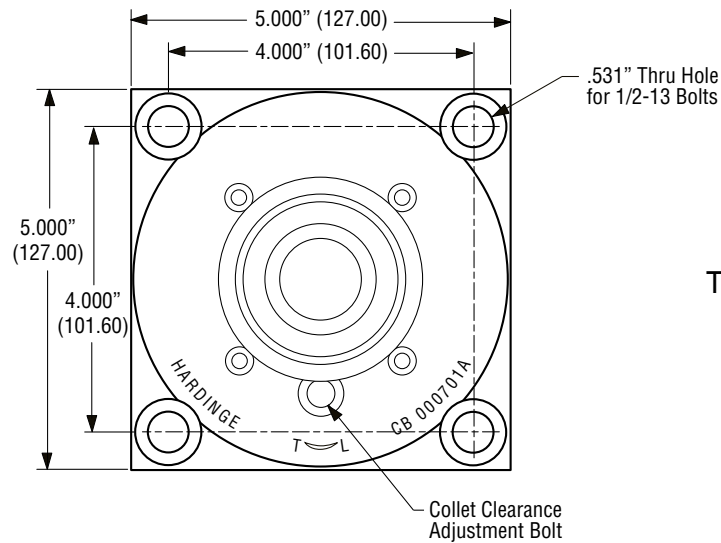
Maintenance:

In the event of dry machining, periodically grease the head angle on the spindle of the collet block with anti-seize to prevent collet sticking. This is the only maintenance required.

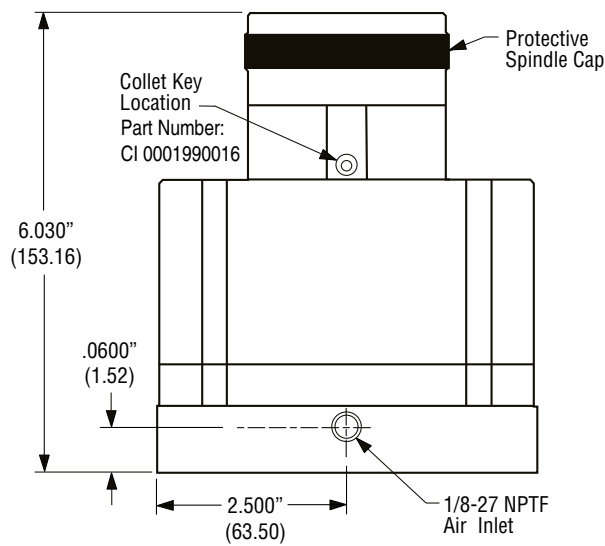
NOTE: DO NOT ATTEMPT TO DISASSEMBLE THE COLLET BLOCK. SPRINGS ARE PRE-LOADED AND COULD REPRESENT A HAZARD WHEN BEING DISASSEMBLED. RETURN TO AN AUTHORIZED HARDINGE REPAIR CENTER IF DISASSEMBLY IS REQUIRED.

5C Pneumatic Collet Block Instructions B-124

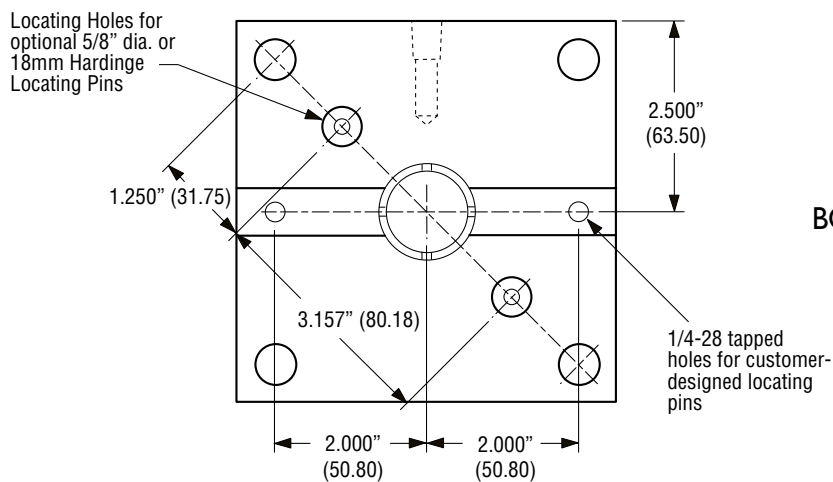
Dimensions:



TOP VIEW



FRONT VIEW



BOTTOM VIEW