



Hardinge 5C Tri-Grip Collet Block

Part No. 7799-00-00-000088

Installation, operation and maintenance instructions

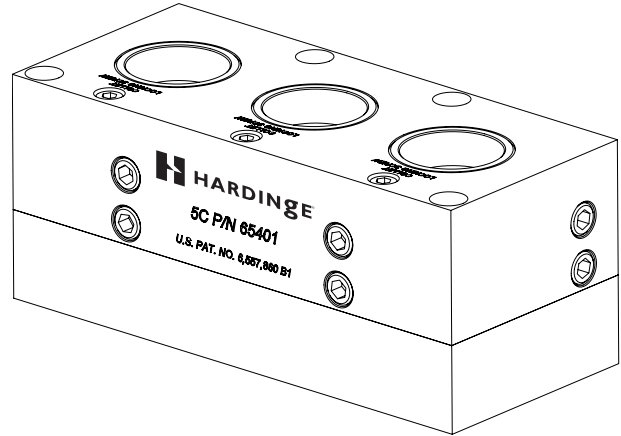
5C Tri-Grip Collet Block

Dead-Length, High-Pressure, Hydraulic Actuated, Double Acting

Part No. 7799-00-00-000088

Specifications

- Maximum operating pressure – 5000 psi (344 bar)
- Draw tube force – 1.1 x line pressure
- Collet capacity – 5C
{ $1/64$ " to $1 1/16$ " (.39 to 26.98mm) round}
- Thru-hole in base
- Four thru-holes for mounting with $5/16$ " screws
(mounting to a rigid flat surface is required)
- Two $3/8$ " (9.52mm) dowel holes in bottom of base
- Two SAE-4 ports for hydraulic supply
- Twelve pressure ports for connecting multiple Tri-Grip Collet Blocks
using connector bushings sold separately (part no. 7799-00-00-000078).
- 2-position, 4-way hydraulic valve recommended (not included)



Safety

- Do not over tighten the mounting hardware or the plumbing fittings.
- When installing a collet in the closer, do not over tighten the collet locking screw.
- Do not exceed the recommended maximum pressure of 2727psi (187 bar).
- Make sure that the collet retains your material when the closer is closed.

Application

This 5C collet block is a stationary unit with three double-acting cylinders. It is effective on machine and assembly operations that require reliable clamping and unclamping. Use the collet block as a single unit or mount multiple collet blocks on rotary tables, fixtures, pallets, or tombstones for increased productivity.

Installation

1. Mount the collet block to a rigid flat surface.
2. Plumb your first supply line using 5000 psi (344 bar) rated $3/8$ " OD steel tubing to the CLAMP SAE-4 port of the collet block and the normally OPEN $1/4$ NPTF port of your hydraulic control valve.
3. Plumb your second supply line using 5000 psi (344 bar) rated $3/8$ " OD steel tubing to the UNCLAMP SAE-4 port of the collet block and the normally CLOSED $1/4$ NPTF port of your hydraulic control valve.
4. Plumb your hydraulic supply to the $1/4$ NPTF pressure port of the control valve.
5. This configuration maintains a closed collet until the valve is actuated.

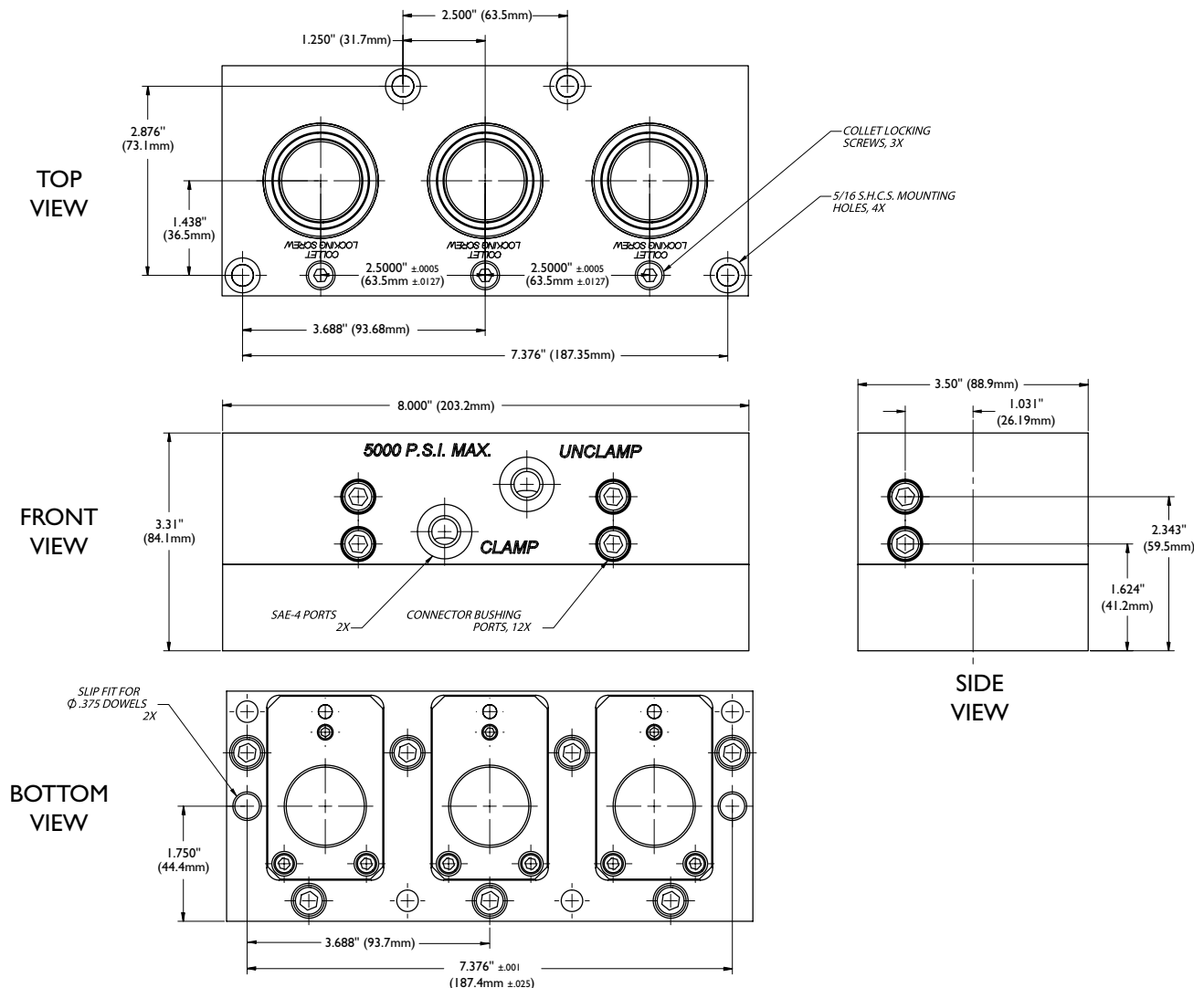
Operation

1. Make sure the collet closer is in the open position (piston retracted).
2. Remove the hydraulic supply from the valve.
3. Loosen the collet locking screws.
4. Insert the desired collet in the top of the collet block.
5. Using the supplied collet wrench, turn the collet clockwise until it contacts the piston taper. Continue to turn the collet clockwise until the desired workpiece clearance is achieved.
6. Tighten the collet locking screws. Do not overtighten.
7. Insert the workpiece in the collet, and connect the hydraulic supply to the valve.

WARNING: Do not close the closer without the workpiece in the collet.

8. Actuate the valve to close the collet.
9. Adjust your supply pressure to a level that assures effective workholding only. Continuously operating the closer at maximum pressure will decrease the service life of the seals and collet.

WARNING: Pressure to this closer above 2727 psi (187 bar) may overstress the 5C collet.



Maintenance

Periodically remove the collet from the closer. Clean the collet, piston thru-hole, and collet nut. Then grease the collet taper and bearing surface.

If, over a period of time, you experience a decrease in clamping force even though hydraulic pressure remains unchanged, remove the collet block from service, disassemble, clean, and replace any damaged or worn o-rings.

Warranty

The products furnished hereunder are guaranteed by Hardinge Inc. against any defect in material or workmanship for a period of one (1) year from date of shipment when owned by original buyer or first user, and maintained and operated under normal conditions. Any products hereunder not manufactured by Hardinge Inc. are warranted only to the extent of the original manufacturer's warranty. Parts found to be defective in material or workmanship under this guaranty shall be repaired or replaced without charge, F.O.B., original point of shipment provided prompt notice of the defect is given and compliance with the terms of this guaranty are established. HARDINGE INC. SHALL BE LIMITED STRICTLY AND WHOLLY TO THE FOREGOING.

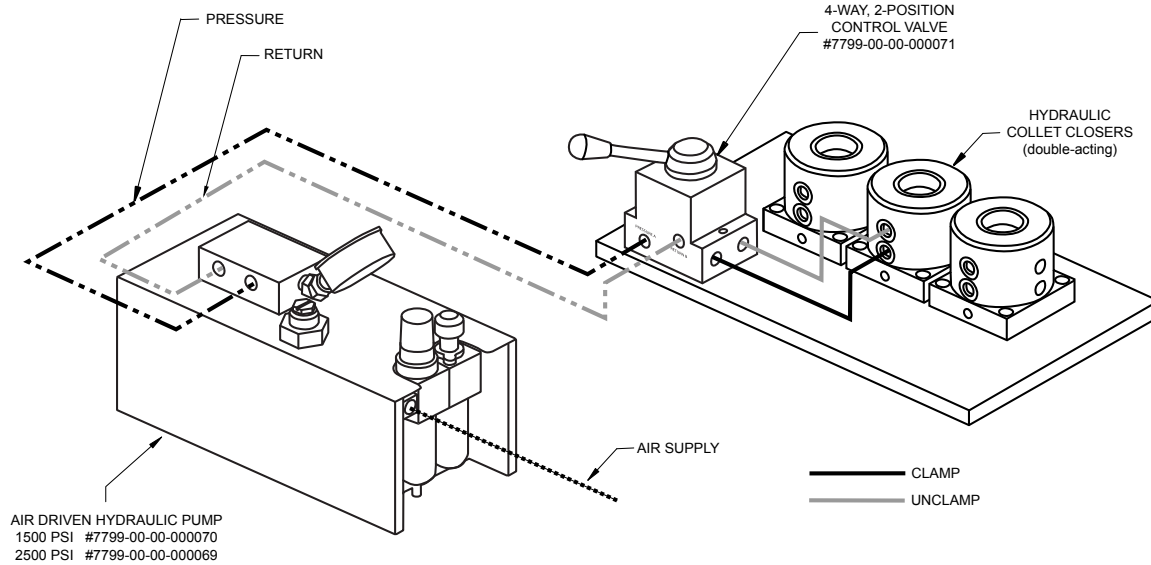
In no event shall Hardinge Inc. be liable for consequential or incidental damages or for other costs, expenses, or damages incurred by you attributed to any item sold hereunder.

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Example of a typical hydraulic configuration

Components include a pump, control valve and three hydraulic collet blocks supplied by Hardinge mounted on a customer machined fixture plate. (schematic shown in clamp position) 5000 psi (344 bar) rated hose/tubing is recommended.

Dimensions for mounting holes are available on the installation instructions online at www.hardingetooling.com



Example of a quick disconnect hydraulic configuration

Components include a pump, control valve, accumulator, quick disconnect handle, manifold with check valve and three hydraulic collet blocks supplied by Hardinge on a customer machined fixture plate. The control valve should mount outside of the machine with the pump or on the outside wall of the machine. The quick disconnect with check valve allows you to remove the hydraulics while in the clamp mode – ideal for preloading pallets. An accumulator is required when using the quick disconnect product. (Schematic shown in the clamp position) 5000 psi (344 bar) rated hose/tubing is recommended.

Dimensions for mounting holes are available on the installation instructions online at www.hardingetooling.com

