

KEY EXPLANATION:

1. Port No. 1, System
2. Port No. 2, System
3. Poppet, Hard Stainless Steel
4. O-Ring Seal, Buna N (Also see Options)
5. Cartridge Body, Lower Section
6. Filter, 10 Micron Sintered Bronze, Omitted Ψ / T option.
7. Vent (2 Pl.) Optional T Port Locations
8. Filter Retainer
9. Poppet return Spring, Stainless Steel.
10. O-Ring Seal, Buna N (Also see Options)
11. Coil Spring, Stainless Steel
12. Piston
13. Cartridge Body, Upper Section
14. 1" Wrench Flats
15. Pilot Port. See Pilot part options / ordering info.
- 16 & 19. O-Ring Seals, Buna N (Also see Options)
- 17 & 20. Back Up Rings, Teflon
18. Cylinder Sleeve
21. Spring Retainer Assembly
22. O-Ring Seal, Filter Retainer (Buna-N)
- 26, 27, & 31. O-Ring Seals, Buna N (Also see Options)
30. Cartridge Seat, Hard Stainless Steel.
32. Back Up Rings, Teflon

SPECIFICATIONS:

Pilot operated two way cartridge valve. Normally closed. Pilot to open passage between ports one and two. Valve will not hold pressure from 2 to 1. Use No. 1 port as pressure inlet port.

Maximum recommended system pressure (ports one and two) 5,000 PSI.

Pilot pressure Range 75 PSI Min. to 5000 PSI Max.

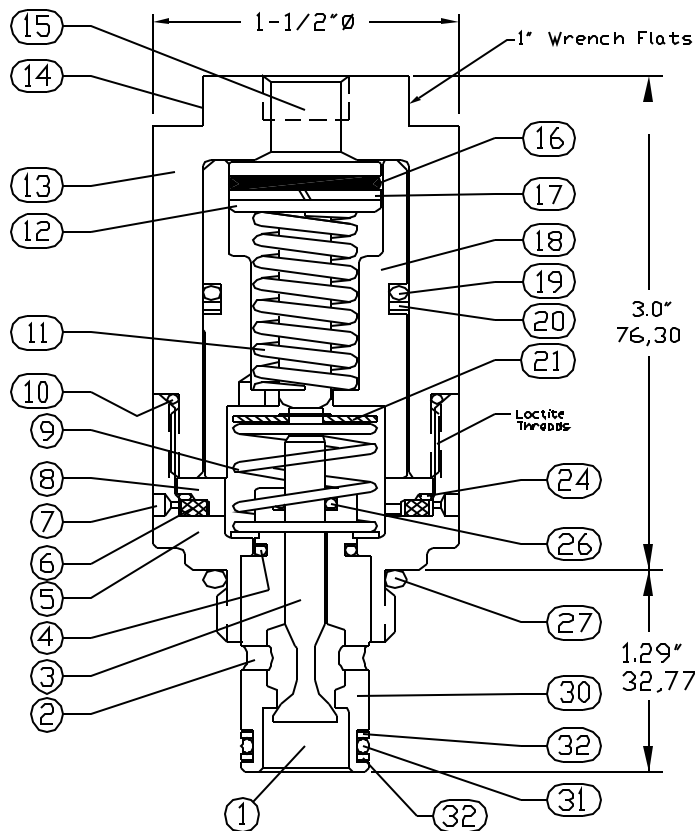
Note: Pilot pressure maximum designed at 4 to 1 safety factor when provided with 1/8 NPT port. Fluid temperature -45°F. (42.7°C) to 200°F. (93.3°C) Install Cartridge valve using 1" wrench Valve should screw in freely to the Mount Seal. Final tightening to 20 foot pounds torque. Use lubricant on external oil seals and mounting threads.

7:1 PILOT RATIO

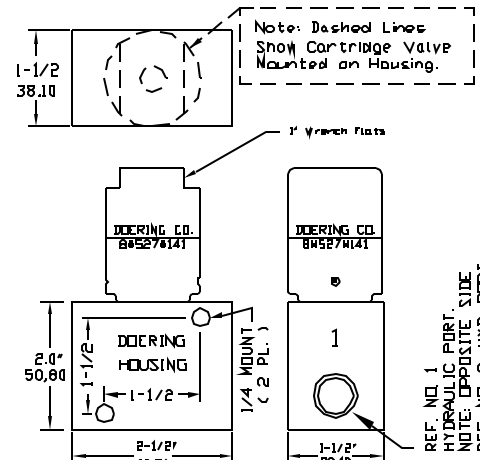
Area of pilot piston is 7 X longer than seat area. To determine Minimum Pilot pressure required, follow these steps:

- (1) Multiply the maximum possible system pressure X 1.1 = SM (System Max.)
- (2) Divide SM by 7 and add 75 PSI = MP
 Note: MP is minimum pilot pressure needed to open this normally closed valve.

CARTRIDGE VALVE

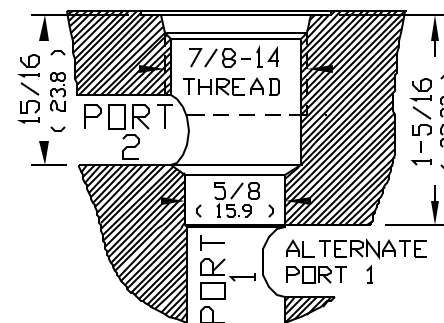


HOUSING



Standard Housing is 3/8 NPT, -2 is 1/4 NPT, -6 is SAE6. Standard Housing Material is Aluminum. For Stainless add -S or -2S or -6S to Housing No.

CAVITY



REQUEST CAVITY DRAWING: C-8542
 REFERENCE FORM TOOL: FT-8542

STANDARD OPTIONS

Seals: Buna N, Viton or Teflon. Others please specify.
 T Option: 10-32 Ports at Key 7 (Located 2 places)
 If T option is used, allow for fitting clearance.

TOOLING

- * Cavity Form Tools: FT+ cavity#
- * 1" Open End Wrench No. 720
- * 1/8 (3.175) Pin Spanner Tool
 Order No. 471, Ref. Key No. 20

CARTRIDGE VALVE ORDERING INFORMATION:

84409#071

PILOT PORT OPTIONS

- 1 = 1/8 NPT
- 2 = 1/4 NPT
- 4 = SAE4
- 6 = SAE6

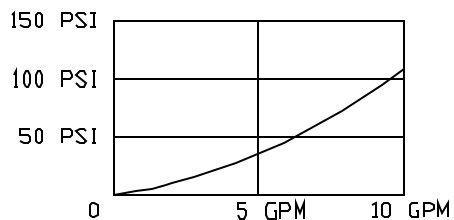
HOUSING BODY NO.

- S8542
- S8542-2
- S8542-5
- S8542-6
- S8542-8

For Stainless Steel add Letter S to end of part number.

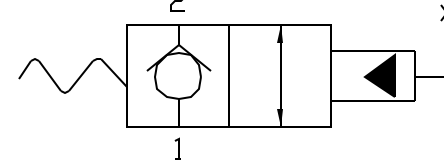
FLOW AND PRESSURE DROP CHART, $C_v = 1.0$

VALVE ORIFICE DIAMETER = .280"



2PB SERIES

IN CLOSED POSITION, VALVE DOES NOT FREE FLOW FROM 2 TO 1.



2PB N/C

HIGH PRESSURE PILOT RATING.

