

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 W/ 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 port 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
24. 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.

No. 1 port is the preferred pressure holding port.

Maximum pressure 5,000 PSI, Cavity C-8502
Cavity C-8542, 5,000 PSI Port 1, 3,000 PSI Port 2

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.

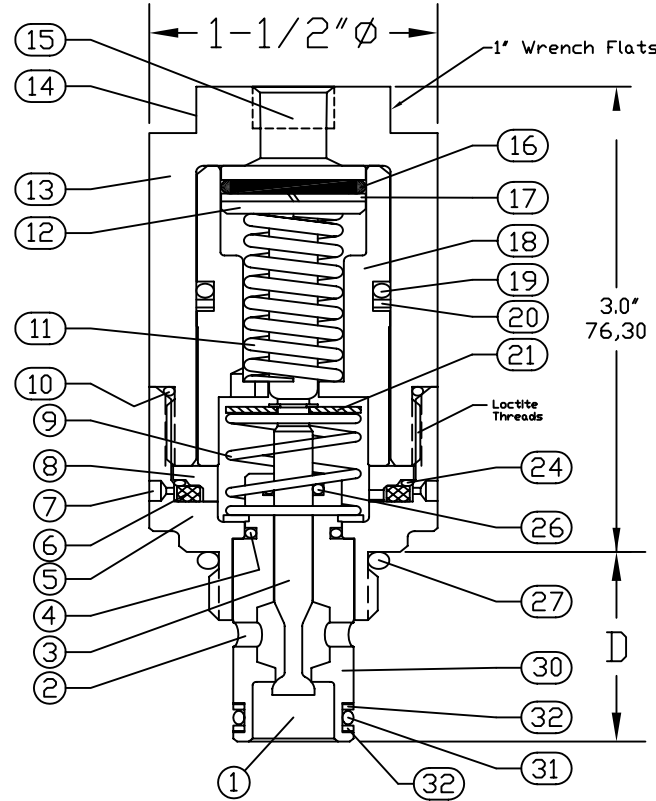
14:1 PILOT RATIO:

Area of pilot piston is 14 X larger than seat area.
To determine Minimum Pilot pressure required, follow these steps:

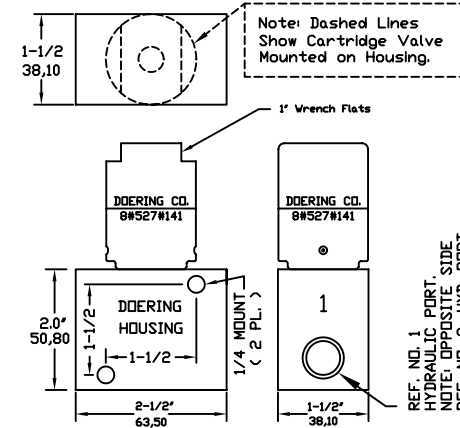
- (1) Multiply the maximum possible system pressure X 1.1 = SM (System Max.)
- (2) Divide SM by 14 and add 75 PSI = MP

Note: MP is minimum pilot pressure needed to open this normally closed valve.

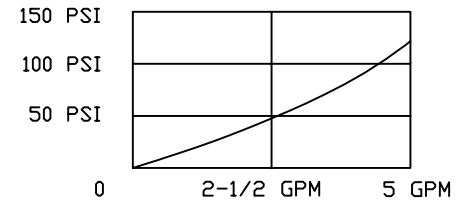
CARTRIDGE VALVE



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.



FLOW AND PRESSURE DROP CHART. 0.4 C_v

FLOW and PRESSURE DROP Chart indicates U.S. G.P.M. All flow performance data based on tests using fluid at a specific gravity of .85 and a viscosity of 150 S.U.S. at a temperature of 100°F.

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:

HOUSING NUMBER

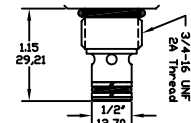
" D " SUB SURFACE DETAIL

82427#141

3/4-16 UNF Mounting threads

PILOT PORT OPTIONS	
1	= 1/8 NPT
2	= 1/4 NPT
4	= SAE4
6	= SAE6

S8502
- OR -
S8502-2
- OR -
S8502-6



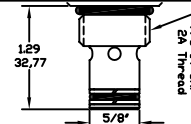
Use with Cavity C-8502.

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7/8-14 UNF Mounting Threads

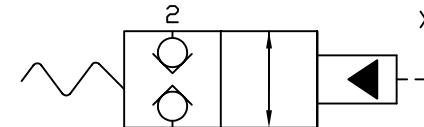
PILOT PORT OPTIONS	
1	= 1/8 NPT
2	= 1/4 NPT
4	= SAE4
6	= SAE6

S8542
- OR -
S8542-2
- OR -
S8542-6



Use with Cavity C-8542.

2PB SERIES



2PB N/C

HIGH PRESSURE PILOT RATING.

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