CARTRIDGE VALVE

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, 20psig
10. O-Ring Seal, Buna N (Also see Options)
11. Coil Spring, Stainless Steel, 100psig
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. Valve will not hold pressure from 2 to 1. Use No. 1 port as pressure inlet port.

Valve is pressure rated to 5,000 PSI working and 7,500 PSI Proof Pressure.

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.

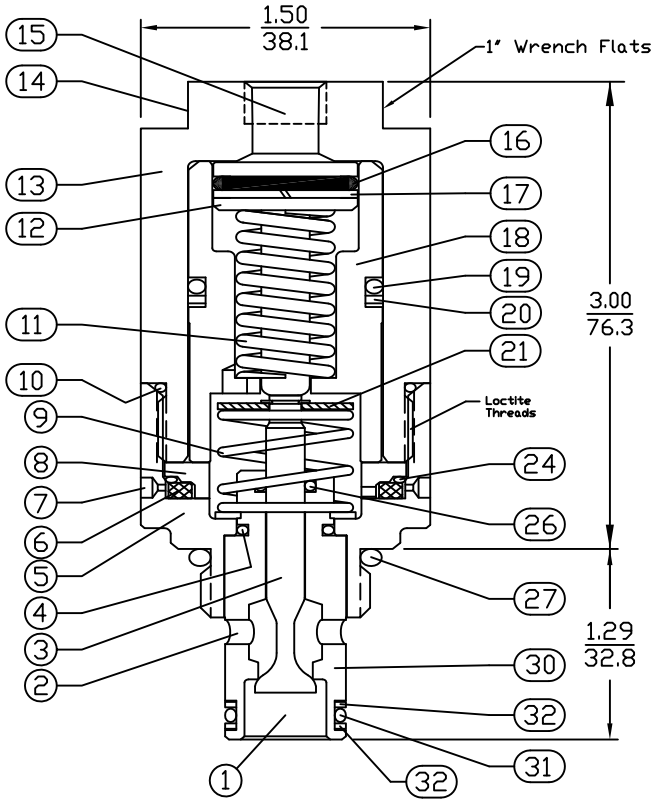
7:1 PILOT RATIO NOTES

Pilot pressure Range 120 PSI Min. to 5000 PSI Max.
Add pilot pressure to offset working pressure.
Area of pilot piston is 7 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 7 and add 120 PSI = MP

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



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

Cavity & Housing

Please see Spec. Sheets at www.doering.com

Cavity C-8542 (10-2):
See Spec. Sheet 1200621
Includes Cavity and Cavity Tooling Info.

Line Mount Housings:
See Spec. Sheets
1200674 and 1201455

Panel Mount Housings:
See Spec. Sheets
1202982 and 1202990

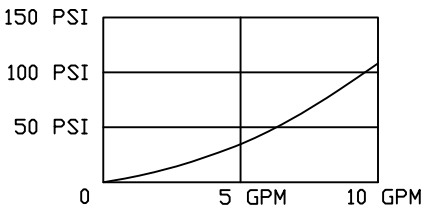
Two Stage Decompression Housings:
See Spec. Sheets
1201268 and 1203114

Valve Number: 84409#071

Pilot Porting, Key 15
1 = 1/8 NPT
2 = 1/4 NPT
4 = SAE4 (ORB)
6 = SAE6 (ORB)

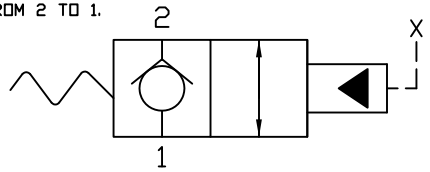
FLOW AND PRESSURE DROP CHART. $C_V = 1.0$

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.

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