

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 psig
10. O-Ring Seal, Buna N (Also see Options)
11. Coil Spring, Stainless Steel, 80 psig
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

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:

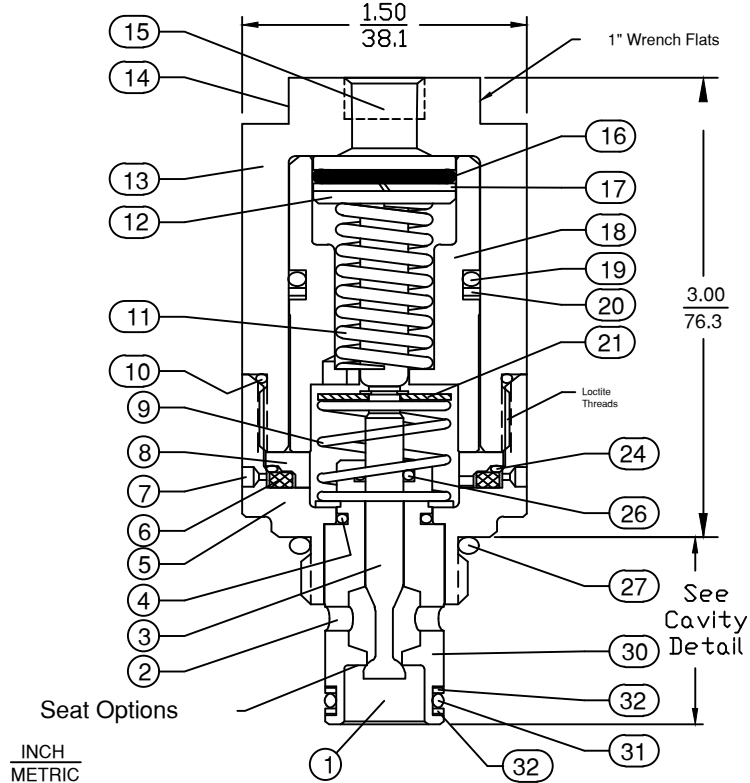
Pilot pressure Range 90 PSI Min. to 5000 PSI Max.
Add pilot pressure to offset working pressure.
Area of pilot piston is 14 X larger than seat area.

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 90 PSI = MP

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

CARTRIDGE VALVE



INCH
METRIC

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

Cavity & Housing

For 82#427#141 Valve:
Cavity C-8502 (8-2):
See Spec. Sheet 1200630

Line Mount Housings:
See Spec. Sheets
1200672 and 1203123

Panel Mount Housings:
See Spec. Sheets
1202981 and 1202990

For 84#427#141 Valve:
Cavity C-8542 (10-2):
See Spec. Sheet 1200621

Line Mount Housings:
See Spec. Sheets
1200674 and 1201455

Panel Mount Housings:
See Spec. Sheets
1202982 and 1202990

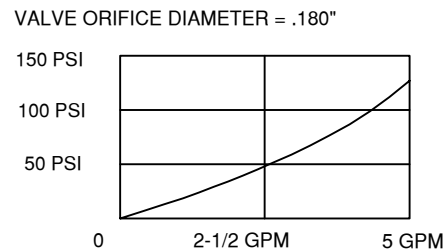
Valve Number: **8##427#141**

2 = 3/4-16 Thread
Cavity C-8502
(8-2)
4 = 7/8-14 Thread
Cavity C-8542
(10-2)

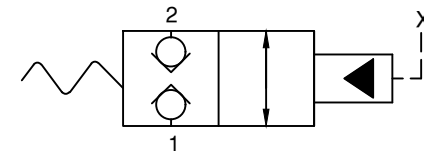
Pilot Porting, Key 15
1 = 1/8 NPT
2 = 1/4 NPT
4 = SAE4 (ORB)
6 = SAE6 (ORB)

Seat Options:
Blank = Hard Seat
K = Soft Seat (Kel-F with Metal Backup)
10% Flow Restriction with Soft Seat.

PRESSURE DROP CHART $C_V = 0.4$



2PB SERIES



2PB N/C

HIGH PRESSURE PILOT RATING.

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