

6343 RIVER ROAD SE ■ CLEAR LAKE, MN 55319 USA
 Telephone: 320-743-2276 ■ Fax: 320-743-3723
 mailbox@doering.com ■ www.doering.com



DOERING

Cavity & Housing

For 82#####0 Valve:
 Cavity C-8502 (8-2):
 See Spec. Sheet 1200630

Line Mount Housings:
 See Spec. Sheets
 1200672 and 1203123

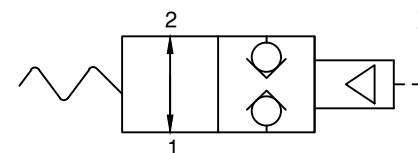
Panel Mount Housings:
 See Spec. Sheets
 1202981 and 1202990

For 84#####0 Valve:
 Cavity C-8542 (10-2):
 See Spec. Sheet 1200621

Line Mount Housings:
 See Spec. Sheets
 1200674 and 1201455

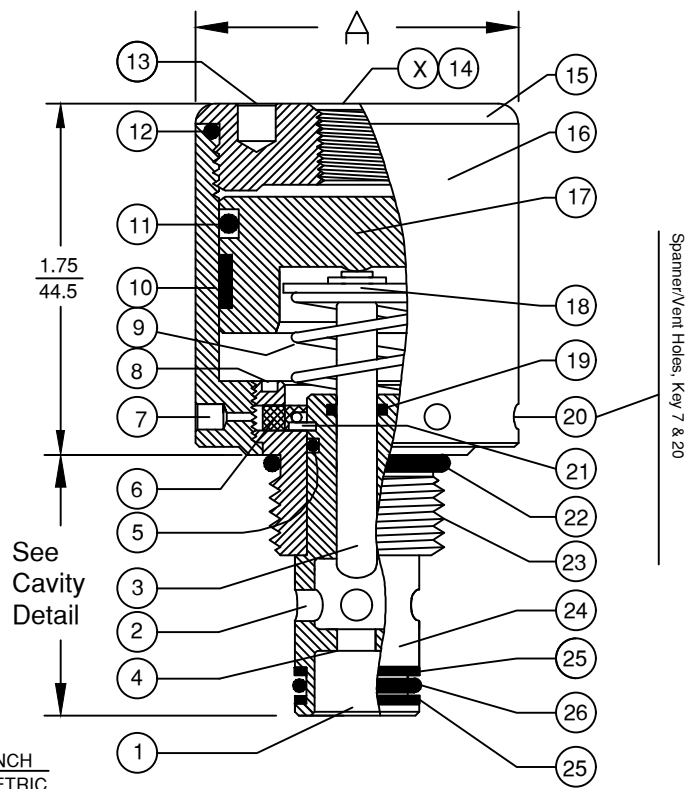
Panel Mount Housings:
 See Spec. Sheets
 1202982 and 1202990

2PB SERIES



2PB N/O

CARTRIDGE VALVE



Spanner/Vent Holes, Key 7 & 20

See
Cavity
Detail

INCH
METRIC

STANDARD OPTIONS

Pilot Port: (Key X) 1/8 NPT or -4 SAE. Specify.
 Seals: Buna N, Viton or Teflon. Others please specify.
 T Option: 10-32 Ports at Key 7 & 20, Random 360° Pos.

TOOLING

* 1/8 (3.175) Pin Spanner Tool
 Order No. 471, Ref. Key No. 20
 * 3/16 (4.763) Face Spanner Tool
 Order No. 482, Ref. Key No. 13

KEY EXPLANATION:

1. Port No. 1, System
2. Port No. 2, System
3. Poppet, Hard Stainless Steel
4. Seat passage sealing area.
5. O-Ring Seal, Buna N (Also See Options)
6. Filter, 10 Micron Sintered Bronze.
7. Vent (2 Pl.) Optional T Port Locations
8. Filter Retainer
9. Poppet and Actuator Return Spring, Stainless
10. Piston Guide Ring
11. Piston O-Ring Seal, Buna N (Also See Options)
12. Bonnet O-Ring Seal, Buna N (Also See Options)
13. 3/16" (4.763) Spanner Holes (2 Pl.)
14. 1/8 NPT Pilot Port X (Also See Options)
15. Bonnet, Aluminum Material
16. Actuator Body, Aluminum
17. Actuator Piston, Aluminum
18. Poppet Return Spring Retainer Assembly
19. Poppet Seal, TFE
20. 1/8" (3.175) Spanner Holes (4 or 6 Pl.)
21. Cartridge Seat Retaining Ring
22. Mount O-Ring Seal, Buna N (Also See Options)
23. Cartridge Mounting Threads, Stainless Steel
24. Cartridge Seat, Hard Stainless
25. Back Up Rings, Buna N or Urethane (See Options)
26. O-Ring Seal, Buna N (Also See Options)

SPECIFICATIONS:

Pilot operated two way cartridge valve. Normally open. Pilot to close passage between ports one and two.
 Maximum pressure 5,000 PSI, Cavity C-8502
 Cavity C-8542, 5,000 PSI Port 1, 3,000 PSI Port 2
 Pilot Pressure Range, 50 PSI Min. to 150 PSI Max.
 Fluid temperature -45°F, (42.7°C) to 200°F, (93.3°C)
 Install Cartridge Valve using No. 471 Spanner Tool.
 Valve should screw in freely to the Mount Seal.
 Final tightening to 15 foot pounds torque.
 Use lubricant on external oil seals and mounting threads.

PILOT RATIO NOTES:

TO CALCULATE THE CORRECT PILOT RATIO VALVE TO ORDER FOLLOW THESE STEPS:

1. Determine the MAXIMUM possible system pressure.
 Multiply X 1.1 = SYSTEM
2. Determine MINIMUM possible pilot pressure.
 Multiply X .9 = PILOT
3. Divide SYSTEM by PILOT = PILOT TO SYSTEM RATIO
4. Round up to standard available ratio.

Order Valve No.	System Ratio:	" A " Diameter	Fits Cavity:	Pressure Drop Chart
822270400	40:1	1.50 38.1	C-8502 (8-2) 3/4-16 Thd.	$C_V = 0.5$
823270490	49:1	1.62 41.2		
826270690	69:1	1.87 47.5		
827271040	104:1	2.25 57.2	C-8542 (10-2) 7/8-14 Thd.	
842270400	40:1	1.50 38.1		
843270490	49:1	1.62 41.2		
846270690	69:1	1.87 47.5		
847271040	104:1	2.25 57.2		