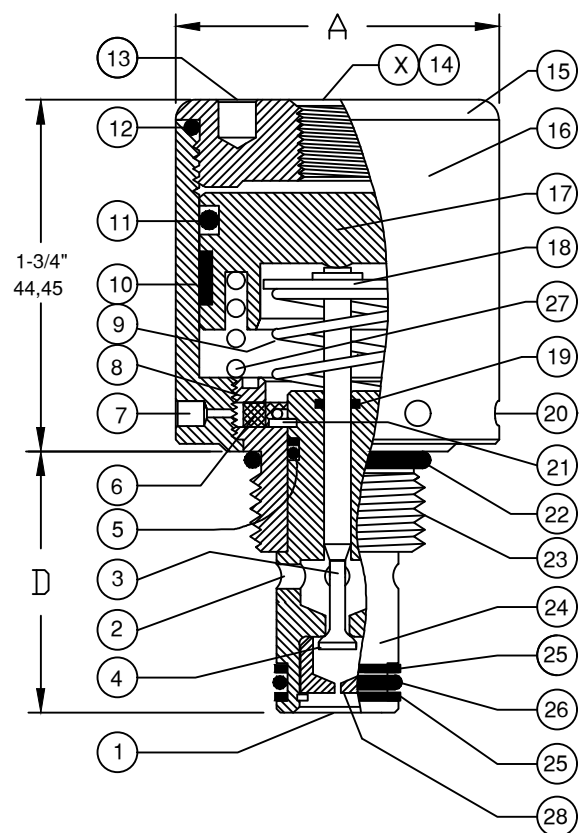


6343 RIVER ROAD SE CLEAR LAKE, MN 55319 USA
 Telephone: 320-743-2276 Fax: 320-743-3723
 mailbox@doering.com www.doering.com



DOERING

CARTRIDGE VALVE



Cavity & Housing

For 82#####1 Valve:
 Cavity C-8502 (8-2):
 See Spec. Sheet 1200630

Line Mount Housings:
 See Spec. Sheets
 1200672 and 1203123

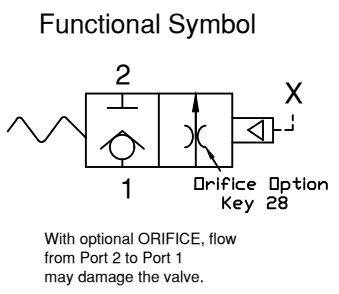
Panel Mount Housings:
 See Spec. Sheets
 1202981 and 1202990

For 84#####1 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



KEY EXPLANATION:

1. Port No. 1, System Inlet
 2. Port No. 2, System Outlet
 3. Poppet, Hard Stainless Steel
 4. Seat passage sealing area. Hard Stainless Steel.
 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 UHMW material
 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, Teflon
 26. O-Ring Seal, Buna N (Also See Options)
 27. Spring (Used on valves = "A" Dia. 1-7/8 & 2-1/4")
 28. Orifice Options, Ø.015 or Ø.031.
- Call for information and restrictions.

SPECIFICATIONS:

Pilot operated two way cartridge valve. Normally closed. Pilot to open passage between ports one and two.

Use No. 1 port as pressure inlet port.

Port No. 1 pressure rating (8502 Cavity) 7,500 PSIG
 Port No. 1 pressure rating (8542 Cavity) 5,000 PSIG
 Port 2, Cavity C-8502, Maximum PSI 5,000
 Port 2, Cavity C-8542, Maximum PSI 3,000
 Pilot Pressure Range, 50 PSI Min. to 150 PSI Max.
 Fluid temperature -40°F, (-40°C) to 200°F, (93.3°C)

Install Cartridge Valve using 1" wrench.
 Valve should screw in freely to the Mount Seal.
 Torque to 15 foot pounds.
 Use lubricant on external oil seals and mounting threads.

PILOT RATIO NOTES:

- TO CALCULATE THE CORRECT PILOT RATIO VALVE, 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.

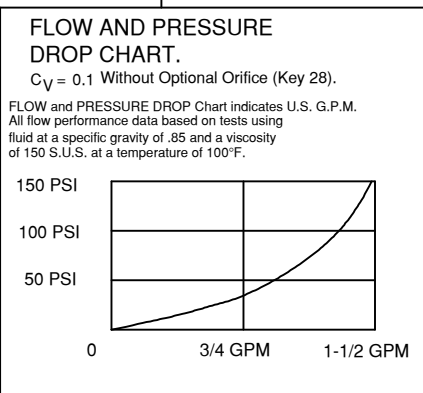
STANDARD OPTIONS

Pilot Port (Key X) 1/8 NPT. Optional SAE4 Available.
 Seals: Buna N, Viton or Teflon. Others please specify.
 T Option: 10-32 Ports at Key 7 & 20, Random 360° Pos.

TOOLING

- * Cavity Form Tools: FT+ cavity#
- * 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

PILOT TO SYSTEM RATIO	" A " DIAMETER	" B " MAXIMUM	" C " MAXIMUM APPLICABLE TO T OPTION ONLY	CARTRIDGE VALVE NO.
100:1	1-1/2 38,10	NOT APPLICABLE	.15 3,81	822041001
120:1	1-5/8 41,28	.06 1,53	.21 5,34	823041201
168:1	1-7/8 47,63	.19 4,83	.34 8,64	826041681
255:1	2-1/4 57,15	.38 9,65	.53 13,46	827042551
100:1	1-1/2 38,10	NOT APPLICABLE	.15 3,81	842041001
120:1	1-5/8 41,28	.06 1,53	.21 5,34	843041201
168:1	1-7/8 47,63	.19 4,83	.34 8,64	846041681
255:1	2-1/4 57,15	.38 9,65	.53 13,46	847042551



SPEC. SHEET NO. 1201457 REV. 006