CARTRIDGE VALVE

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.

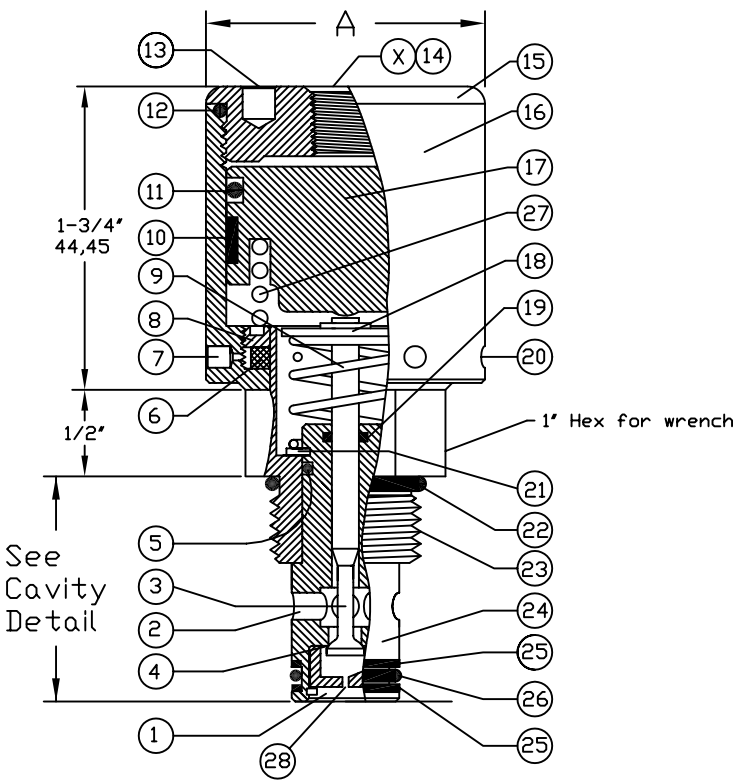
SPECIFICATIONS:

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 20 to 30 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

Cavity & Housing

For 82H######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 84H######1 Valve:
Cavity C-8542 (10-2):
See Spec. Sheet 1200621

Line Mount Housings:
See Spec. Sheets
1200674 and 1201455

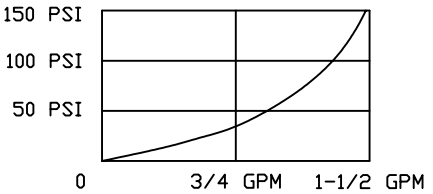
Panel Mount Housings:
See Spec. Sheets
1202982 and 1202990

PILOT TO SYSTEM RATIO	" A " DIAMETER		Order Valve No.	Fits Cavity:
100:1	1-1/2	38,10	82H2041001	C-8502 (8-2)
120:1	1-5/8	41,28	82H3041201	
168:1	1-7/8	47,63	82H6041681	
255:1	2-1/4	57,15	82H7042551	
100:1	1-1/2	38,10	84H2041001	C-8542 (10-2)
120:1	1-5/8	41,28	84H3041201	
168:1	1-7/8	47,63	84H6041681	
255:1	2-1/4	57,15	84H7042551	

FLOW AND PRESSURE DROP CHART.

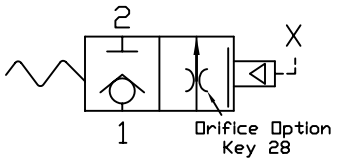
C_V= 0.1 Without Optional Orifice (Key 28).

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.



2PB SERIES

Functional Symbol



With optional ORIFICE, flow from Port 2 to Port 1 may damage the valve.

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