

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 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")

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 Pilot Pressure Range, 50 PSI Min. to 150 PSI Max. Fluid temperature -45°F, (42.7°C) to 200°F, (93.3°C)

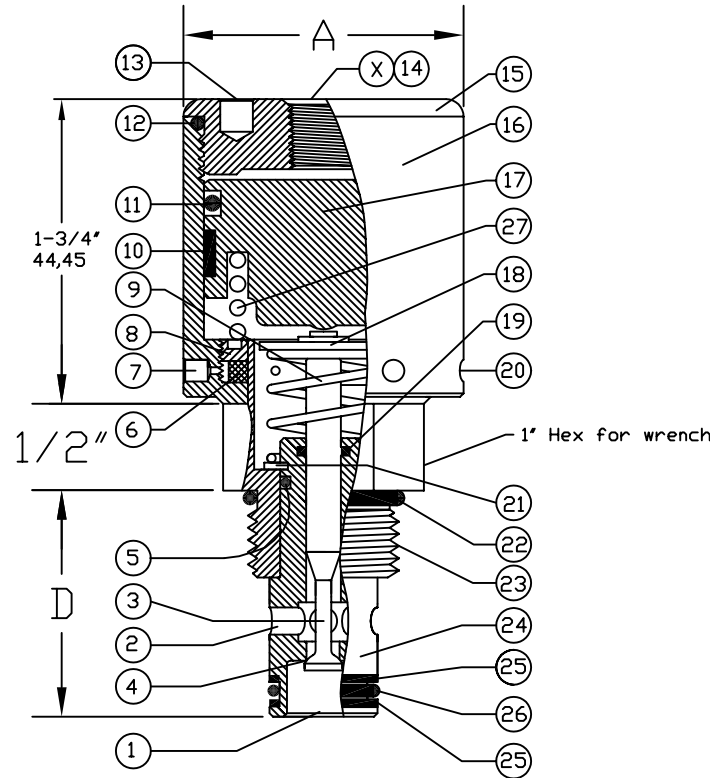
Install Cartridge Valve using 1" wrench. Valve should screw in freely to the Mount Seal. Torque to 20 foot pounds. Use lubricant on external oil seals and mounting threads.

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.

CARTRIDGE VALVE



STANDARD OPTIONS

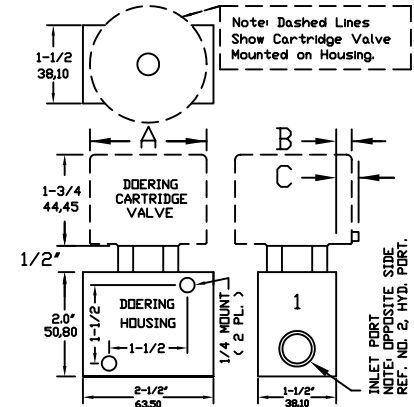
Pilot Part (Key X) 1/8 NPT. Optional SAE4 Available. Seals: Buna N, Viton or Teflon. Others please specify. T Option: 10-32 Ports at Key 7 & 20, Random 360° Pos. Seat (Key 4) Hard Stainless. Optional Soft Available. Add letter K after H to order Kel-F B1 soft seat.

TOOLING

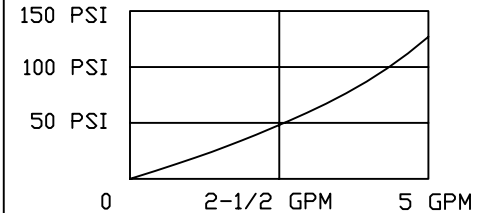
* Cavity Form Tools: FT+ cavity#
 * 1/8 (3.175) Pin Spanner Tool
 Order No. 471, Ref. Key No. 20
 * 3/16 (4.763) Face Spanner Tool
 Order No. 482, Ref. Key No. 13

PILOT TO SYSTEM RATIO	" A " DIAMETER	" B " MAXIMUM	" C " MAXIMUM APPLICABLE TO T OPTION ONLY	CARTRIDGE VALVE NO.	HOUSING BODY NO.	" D " SUB SURFACE DETAIL
40:1	1-1/2 38,10	NOT APPLICABLE	.15 3,81	82H2270401	S8502	
49:1	1-5/8 41,28	.06 1,53	.21 5,34	82H3270491	- OR -	
69:1	1-7/8 47,63	.19 4,83	.34 8,64	82H6270691	S8502-2	
104:1	2-1/4 57,15	.38 9,65	.53 13,46	82H7271041	- OR -	
40:1	1-1/2 38,10	NOT APPLICABLE	.15 3,81	84H2270401	S8542	
49:1	1-5/8 41,28	.06 1,53	.21 5,34	84H3270491	- OR -	
69:1	1-7/8 47,63	.19 4,83	.34 8,64	84H6270691	S8542-2	
104:1	2-1/4 57,15	.38 9,65	.53 13,46	84H7271041	- OR -	

HOUSING



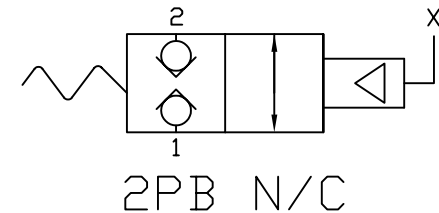
Standard Housing is 3/8 NPT, -2 is 1/4 NPT, -6 is SAE6. Standard Housing Material is Aluminum. For Stainless add -S or -2S or -6S to Housing No.



FLOW AND PRESSURE DROP CHART, $C_v = 0.4$

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



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