CARTRIDGE VALVE

KEY EXPLANATION:

1. Bottom Port: System Inlet (Port 1)
2. Side Port: System Outlet (Port 2)
3. Cartridge Body, Lower Section, 7/8"-14 Thread
4. Retaining Ring
5. Poppet and Piston return Spring, Stainless Steel.
6. Filter, 10 Micron Sintered Bronze.
7. Vents to atmosphere (2 Places 180° apart)
8. Filter Retainer
9. Pilot Piston and Manual Operator Follower
10. Piston Guide Ring, UHMW
11. O-Ring Seal, Buna-N (Also see Options)
12. O-Ring Seal, Buna-N (Also see Options)
13. Pilot Port, 1/8" NPT (X)
14. Bonnet, Aluminum
15. Manual Operator Push Rod
16. Manual Operator Knob (See Order Information)
17. Wiper Ring, Urethane
18. O-Ring Seal, Teflon
19. Lubrication Groove
20. Cylinder, Aluminum
21. Spring Retainer Assembly
22. Retaining Ring
23. O-Ring Seal, Buna-N (Also see Options)
24. O-Ring Seal, Teflon
25. Seat Assembly Top Component, Stainless Steel.
26. O-Ring Seal, Teflon
27. O-Ring Seal, Buna-N (Also see Options)
28. Poppet (Heat Treated Stainless)
29. Poppet Seat (Heat Treated Stainless)
30. O-Ring Seal, Buna-N (Also see Options)
31. Orifice Option, Stainless (See Order Information).
32. Back Up Rings, Teflon (two used)

PILOT OPERATION

100:1 Pilot/System Ratio:
Maximum Pilot Pressure 150 PSI.
Recommended Pilot Medium: AIR

To determine the minimum theoretical pilot pressure (PSI) required to shift the valve: Divide the system inlet pressure by the pilot ratio of 100 and add the spring PSI of 6.

Example: 5000 (inlet pressure) divided by 100 (ratio) = 50 + 6 (Spring PSI) = 56 PSI Minimum Pilot.

This represents the theoretical minimum pilot pressure in PSI required to shift the valve. Considering variations in springs and hysteresis it is advisable to add at least 10 PSI to the calculated minimum theoretical pilot pressure to assure full valve function.

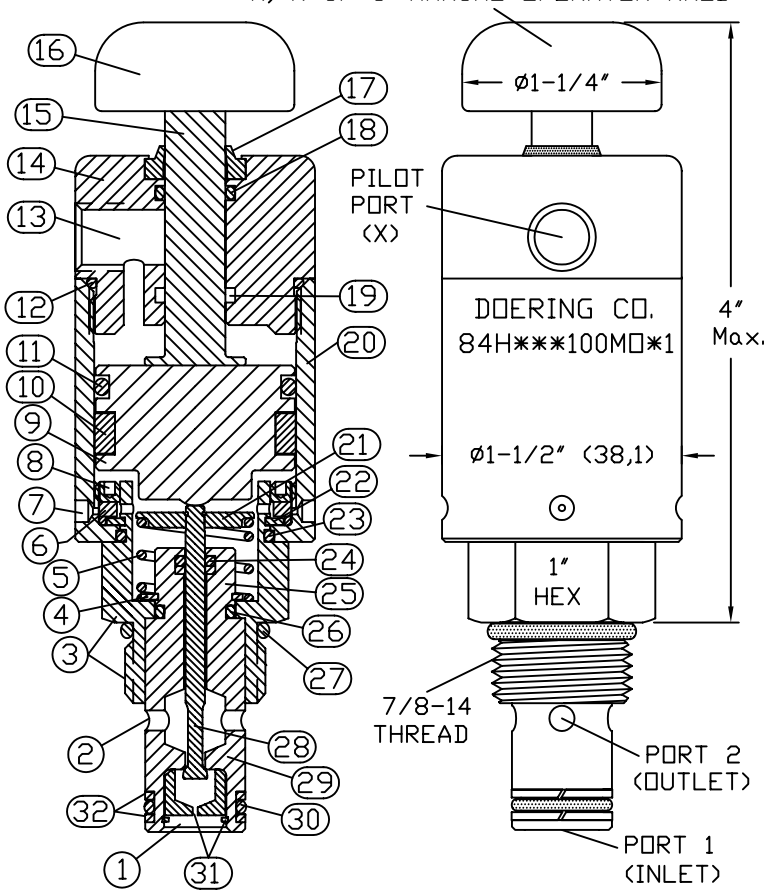
MANUAL OPERATION

To determine the minimum theoretical operating force (#) required to shift the valve manually, multiply the system inlet pressure by .012 and add the spring force of 7-1/2 pounds (#).

Example: 5000 (inlet pressure) multiply by .012 = 60 + 7-1/2 pounds spring force = 67-1/2#.

This represents the theoretical minimum manual operating force required to shift the valve. Considering variations in springs and hysteresis it is advisable to add at least 10# to the calculated minimum theoretical operating force to assure full valve function.

K, R or S: MANUAL OPERATOR KNOB



C-8502 Cavity & Housing

For 82H***100M*1 Valve
Cavity C-8502 (8-2), Spec. Sheet 1200630
Line Mount Housings, Spec. Sheets 1200672 & 1203123
Panel Mount Housings, Spec. Sheet 1202981 & 1202990

C-8542 Cavity & Housing

For 84H***100M*1 Valve
Cavity C-8542 (10-2), Spec. Sheet 1200621
Line Mount Housings, Spec. Sheets 1200674 & 1201455
Panel Mount Housings, Spec. Sheet 1202982 & 1202990

SPECIFICATIONS:

Air Pilot operated valve with Manually Override
Two way, normally closed, Air Pilot or push Manual Operator to open.

See PILOT and MANUAL OPERATION notes for more information on pilot PSI or Force required.

Operator Stroke is 1/4" with 3/16" Free Travel.
Stroke and Free Travel dimensions are approximate.

Maximum Operating Pressure Ratings:
5,000 PSI for Ports 1 & 2 on 82H***M*1 Valve.
5,000 PSI for Port 1 on 84H***100M*1 Valve.
3,000 PSI for Port 2 on 84H***100M*1 Valve.

Fluid temperatures -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. Final tightening 20 to 30 foot pounds torque. Use lubricant on external oil seals and mounting threads.

FEATURES

Small poppet design yields low shift forces and low flow. Ideal for manual operation and decompression. Can be combined with larger flow valve for two stage decompression.
Pilot area (X) is isolated from system ports 1 and 2 by vent to atmosphere (Key 7).
Pilot Bonnet/Cylinder assembly may be rotated 360° for positioning of the pilot line port (Key 13).

OPTIONS

All Stainless Steel option, add -SS to Part Number.
"B" Bubble Tested Hard Seat. Call for price and P/N.
Standard seals are Buna-N with Teflon back up rings.
Optional seals include EP, Viton, Teflon and others.
Key 7, Vents to atmosphere (2 Places 180° apart).
T Option provides 10-32 Threaded ports at these locations. With T option, Key 6. Sintered Bronze filter, is omitted from the assembly.
Flow Restriction Orifice. See Order Information.

CARTRIDGE VALVE PART NO. ORDERING INFORMATION:

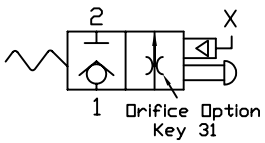
8*H***100M*1

2 = Fits C-8502
4 = Fits C-8542

K = Aluminum Knob
R = Red Anodized Knob
S = Stainless Knob

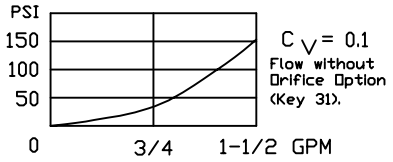
204 = Ø.085" Without Optional Orifice
015 = Ø.015" Removable Orifice, Key 31
031 = Ø.031" Removable Orifice, Key 31

Functional Symbol:



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

PRESSURE DROP / FLOW



2PB N/C SERIES

2 Way Normally Closed Poppet Valve
Pilot Operated with Manual Override.

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