CARTRIDGE VALVE

KEY EXPLANATION:

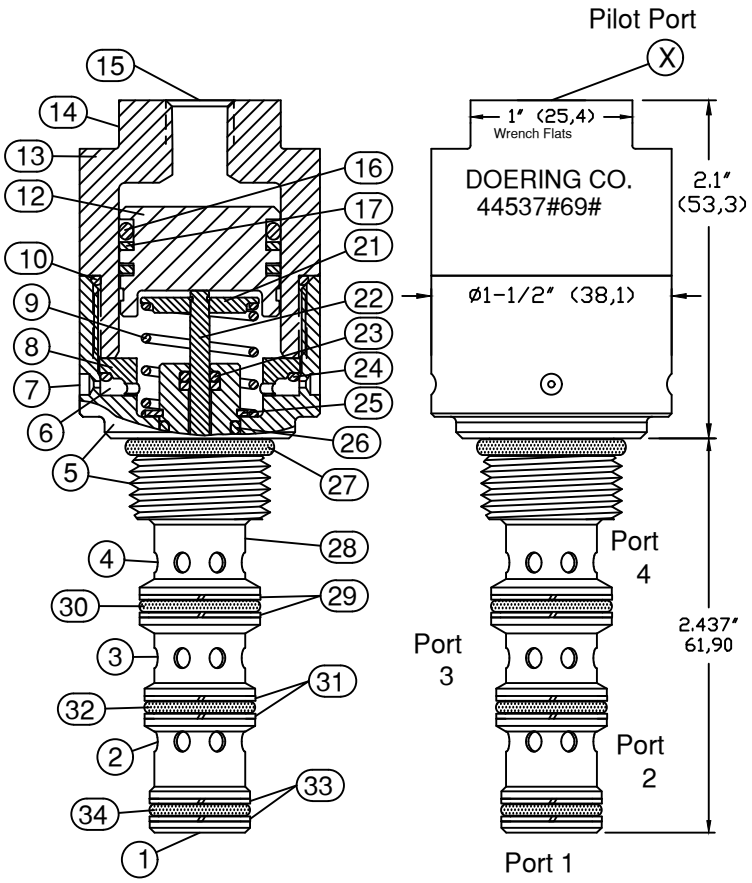
1. Bottom: System Port (T)
2. Second from bottom: System Port (A)
3. Third from bottom: System Port (P)
4. Fourth from bottom: System Port (B)
5. Cartridge Body, Lower Section, 7/8"-14 Thread
6. Filter, 10 Micron Sintered Bronze.
7. Vents to atmosphere (2 Places 180° apart)
8. Filter Retainer
9. Spool return Spring, Stainless Steel, 13 PSI.
10. O-Ring Seal, Buna N (Also see Options)
12. Piston
13. Cartridge Body, Upper Section
14. 1" Wrench Flats
15. Pilot Port. See Ordering Information for choices.
16. O-Ring Seal, Buna N (Also see Options)
17. Back Up Ring, Teflon
21. Spring Retainer Assembly
22. Spool Connector Linkage (Stainless Steel)
23. O-Ring Seal, Teflon
24. O-Ring Seal, (Buna-N)
25. Retaining Ring
26. O-Ring Seal, Teflon
27. O-Ring Seal, Buna-N (Also see Options)
28. Spool Cage (Heat Treated Stainless)
29. Back Up Rings, Teflon (two used)
30. O-Ring Seal, Buna-N (Also see Options)
31. Back Up Rings, Teflon (two used)
32. O-Ring Seal, Buna-N (Also see Options)
33. Back Up Rings, Teflon (two used)
34. O-Ring Seal, Buna-N (Also see Options)

69:1 PILOT RATIO:

Pilot Ratio applies to the No. 1 Port only.
Ports 2, 3, & 4 are balanced.
To determine the pilot pressure required, divide the maximum pressure at No. 1 Port by the ratio of 69 and add the spring PSI of 13. 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 50 PSI to the calculated minimum theoretical pilot pressure to assure full valve shift.

CAUTION:

This valve has a light (13 PSI) piston return spring and is not recommended for applications where Pilot Return pressure or viscosity may impair piston travel.



HOUSING & MANIFOLD INFO.

Single Station Housings (Sub-Plates) illustrated on Spec. Sheet No. 1200706, S8544-** Group.
Also see Web Sheet S8544 at www.doering.com.
Choose from Aluminum or Stainless materials.
Multi Station and Custom Housings or Manifolds also available.

CAVITY INFO.

Cavity C-8544 (Industry 10-4)
Form Tool: FT-8544 Call for source information.
Reference Cavity Spec. Sheet No. 1200023 or
Web Sheet C-8544 at www.doering.com

SPECIFICATIONS

Hydraulic or Gas Pilot Operated Spool Valve.
Four Way, Directional Control or Selector Valve.
Pilot (X) Hydraulic or Gas mediums.
Pilot Pressure Range, 50 PSI Min. to 5000 PSI Max.
See 71:1 Pilot Ratio: notes for more information.
System Ports (A, B, P, and T)
require lubricated fluid. I.E.: Standard Hydraulic Oil.
Ports 1, 2, 3, and 4 rated to 3,000 PSI.
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

Pilot area (X) is isolated from system ports (A, B, P, and T) by vent to atmosphere (Key 7).
All ports may be pressurized allowing use as directional control or selector valve.

OPTIONS

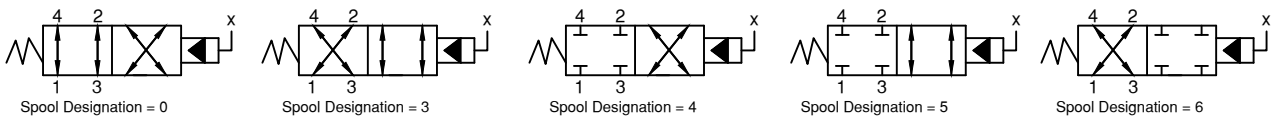
All Stainless Steel option, add -SS to Part Number.
Standard seals ore Buna-N with Teflon back up rings.
Optional seals include EP, Viton, Teflon and others.
Key 7, Vents to atmosphere (2 Places 180° apart).
T Option provides 10-32 Threaded ports at these locations. With T option, Key 6. Sintered Bronze filter, is omitted from the assembly.

CARTRIDGE VALVE ORDERING INFORMATION:

PILOT PORT OPTIONS
1 = 1/8 NPT
2 = 1/4 NPT
4 = SAE4
6 = SAE6

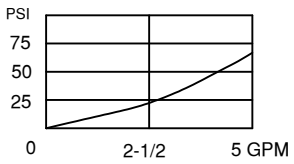
Order P/N 44537#69#

SPOOL DESIGNATIONS:
SEE FUNCTIONAL SYMBOL KEY BELOW



Spool Designation = 0 | Spool Designation = 3 | Spool Designation = 4 | Spool Designation = 5 | Spool Designation = 6

PRESSURE DROP / FLOW



4PS SERIES

4 Way Spool Valve, Pilot Operated.
Directional Control or Selector Valve.

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

DOERING