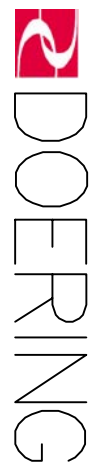


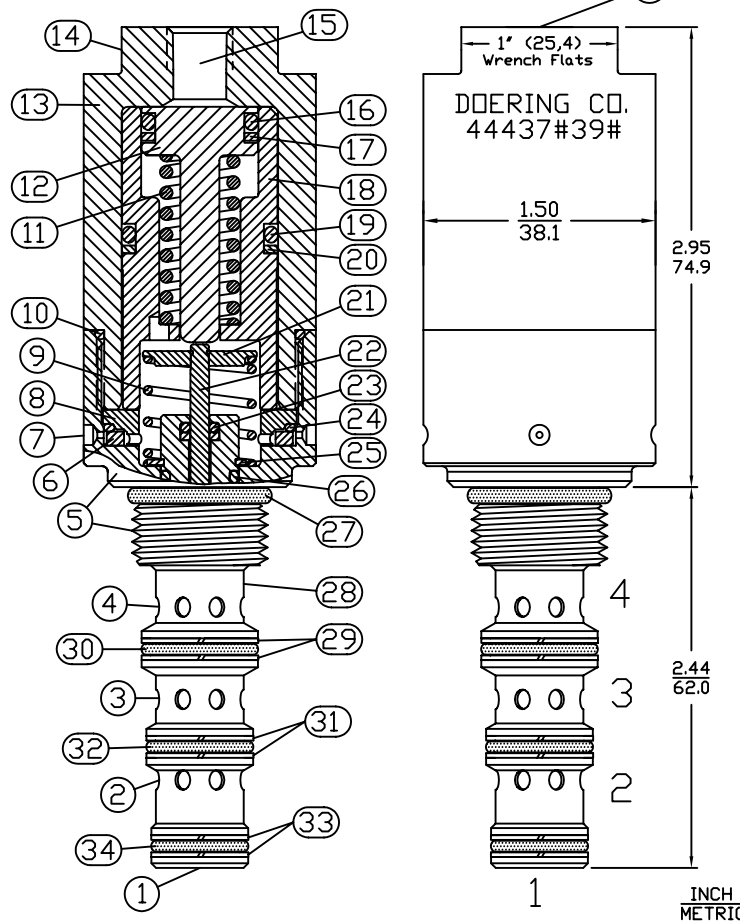
6343 RIVER ROAD SE ■ CLEAR LAKE, MN 55319 USA
 Telephone: 320-743-2276 ■ Fax: 320-743-3723
 mailbox@doering.com ■ www.doering.com



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.
10. O-Ring Seal, Buna N (Also see Options)
11. Coil Spring, Stainless Steel
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
18. Cylinder Sleeve
19. O-Ring Seal, Buna N (Also see Options)
20. 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)

CARTRIDGE VALVE (X)



Cavity & Housing

Cavity & Tooling C-8544 (10-4)
 See Spec. Sheet 1200671
 Line Mount Housings:
 See Spec. Sheet 1200675 & 1202930
 Panel Mount Housings & Spacers:
 See Spec. Sheets
 1202984 and 1202990
 Cavity & Housing information found at
 www.doering.com Products Housings
 Doering Co. also manufactures multi function
 and multi station housings and manifolds.

Specifications

Hydraulic or Gas Pilot Operated Spool Valve.
 Four Way, Directional Control or Selector Valve.
 Pilot (X) Hydraulic or Gas mediums.
 Pilot Pressure Range, 100 PSI Min. to 5000 PSI Max.
 See 39:1 Pilot Ratio notes for more information.
 System Ports (A, B, P, and T)
 require lubricated fluid. I.E. Standard Hydraulic Oil.
 Ports A, B, P, and T 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 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.

39:1 PILOT RATIO:

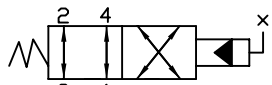
Pilot Ratio applies to the T Port only.
 The A, B, and P ports are balanced.
 To determine the pilot pressure required,
 divide the maximum pressure at the T Port by
 the ratio of 39 and add the spring PSI of 100.
 This represents the theoretical minimum
 pilot pressure in PSI required to shift the valve.
 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.

CARTRIDGE VALVE ORDERING INFORMATION:

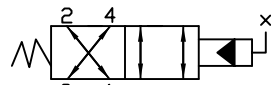
| PILOT PORT OPTIONS | |
|--------------------|-----------|
| 1 | = 1/8 NPT |
| 2 | = 1/4 NPT |
| 4 | = SAE4 |
| 6 | = SAE6 |

Order P/N 44437#39#

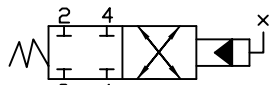
SPOOL DESIGNATIONS:
 SEE FUNCTIONAL SYMBOL KEY BELOW



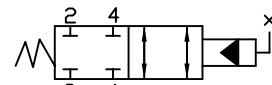
Spool Designation = 0
 SPOOL 3 HAS LOWER LEAK RATE THAN 0



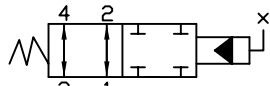
Spool Designation = 3



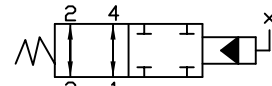
Spool Designation = 4



Spool Designation = 5

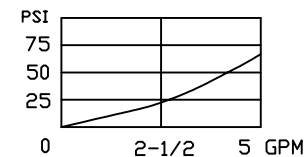


Spool Designation = 6



Spool Designation = 7

PRESSURE DROP / FLOW



4PS SERIES

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