

# CARTRIDGE VALVE

## KEY EXPLANATION:

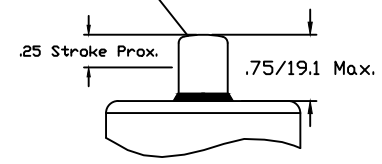
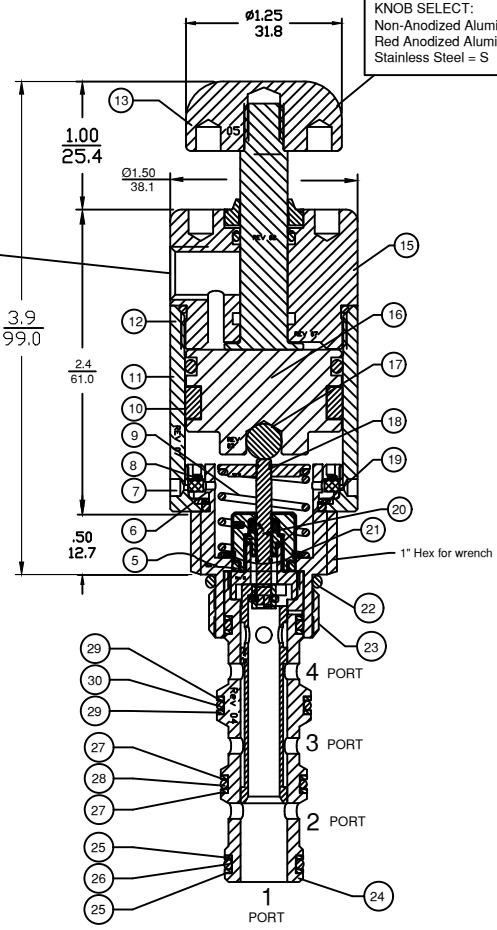
1. Bottom: System Port (1)
2. Second from bottom: System Port (2)
3. Third from bottom: System Port (3)
4. Fourth from bottom: System Port (4)
5. Cartridge Seat Seal (Teflon)
6. Filter, 10 Micron Sintered Bronze (optional SST.)
7. Vents to atmosphere (2 Places 180° apart)
8. Filter Retainer, Aluminum (optional SST.)
9. Spool return Spring, Stainless Steel.
10. Piston Wear Ring, UHMW (optional Teflon)
11. Actuator Guide Cylinder, Aluminum (optional SST.)
12. Bonnet O-Ring, Buna-N (also see options)
13. Operator Knob (See part No. designations)
15. Upper Actuator Bonnet, Aluminum (optional SST.)
16. Overtravel Protection Option (Prox. 1/8")
17. Operator Follower Assembly, Aluminum (Optional SST.)
18. Spring Retainer Assembly
19. O-Ring Seal, Teflon
20. Spool Connector Linkage (Stainless Steel)
21. Retaining Ring, Stainless Steel
22. O-Ring Seal, Buna-N (also see options)
23. Cartridge Mounting Threads (7/8-14)
24. Spool Cage (Heat Treated Stainless)
25. Back Up Rings, Teflon (two used)
26. O-Ring Seal, Buna-N (Also see Options)
27. Back Up Rings, Teflon (two used)
28. O-Ring Seal, Buna-N (Also see Options)
29. Back Up Rings, Teflon (two used)
30. O-Ring Seal, Buna-N (Also see Options)

Pilot Pressure 150 PSI Max.  
 Pilot medium Air or Nitrogen:  
 Pilot to # 1 Port  
 Pilot Ratio is 40:1  
 Pilot to # 2 Port  
 Pilot Ratio is 200:1

KNOB SELECT:  
 Non-Anodized Aluminum = K  
 Red Anodized Aluminum = R  
 Stainless Steel = S

DIRECT PLUNGER = D  
 Direct Plunger Operator  
 .75/19.1 Radiused End  
 Material 17-4 PH900, SST.

Air Pilot Port, 1/8 NPT



INCH  
 METRIC

## SHIFT FORCE NOTES:

10 to 15 Pounds of Force is required to shift the valve spool with zero pressure on port no. 1.

Any pressure on Port No. 1 will increase Force Requirement by .012 X Port No. 1 PSI.

## Cavity & Housing

Cavity C-8544 (10-4);  
 See Spec. Sheet 1200671

Line Mount Housings:  
 See Spec. Sheets  
 1200675 and 1202930

Panel Mount Housings:  
 See Spec. Sheets  
 1202984 and 1202990

## OPTIONS

Available with or without Overtravel Protection.  
 Optional seals include Viton, Teflon and others.

Key 7 vents to atmosphere (2 Places).  
 † Option provides 10-32 Threaded ports at these locations.

## OPERATION

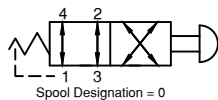
Pneumatic Pilot with Manual Override Hydraulic Spool Valve.  
 Two Position, Four Way, Directional Control or Selector Valve.  
 Maximum System Pressure: Ports 1, 2, 3 and 4,  
 3,000 PSIG. See "SHIFT FORCE NOTES"

Spool Stroke is 1/4".  
 Stroke and Over Travel dimensions are approximate.  
 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.

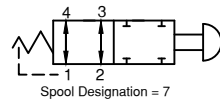
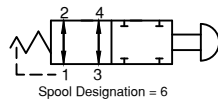
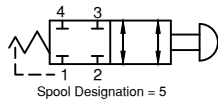
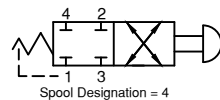
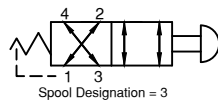
## CARTRIDGE VALVE ORDERING INFORMATION:

Order P/N 44H237108M###

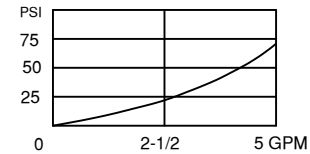
No Overtravel Protection = 0 } SPOOL DESIGNATION:  
 With Overtravel Protection = P } KNOB DESIGNATION:



SPOOL 3 HAS LOWER LEAK RATE THAN SPOOL 0



## PRESSURE DROP CHART



## 4PS SERIES

4 Way Spool Valve, Pneumatic Pilot / Manual Override.  
 Directional Control or Selector Valve.