

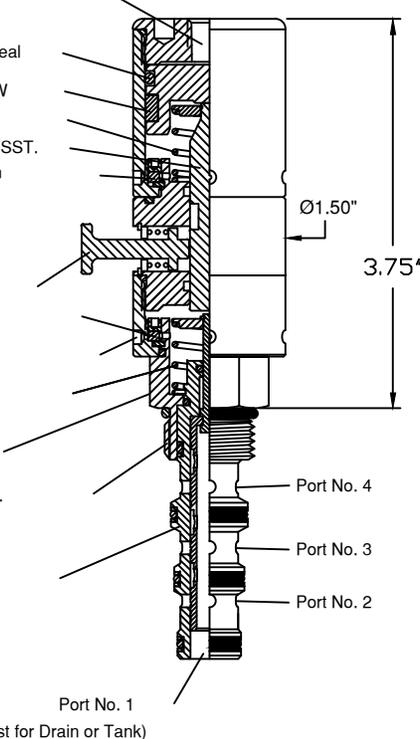
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## DOERING CARTRIDGE VALVE

Air Pilot Port, 1/8 NPT

- Piston Seal
- Piston Guide Ring, UHMW
- Spool return Spring, SST
- Linkage, SST.
- Atmosphere Filter, 10 Micron
- Latch Pin, SST.
- Atmosphere Filter, 10 Micron
- Vent to Atmosphere (2 Places)
- Spool return Spring, SST
- 1" Wrench Hex, SST.
- 7/8-14 Mounting Thread, SST.
- See 'Cavity Info.'
- Cage & Spool, 17-4 SST.
- Heat Treated & Lap Fit



### DESCRIPTION

A Four Way Air Pilot Operated to shift, latching in the shifted position, spring-return, screw-in, directional hydraulic cartridge valve, spool design.

### FEATURES

Actuator mechanism may be rotated 360° for ease of access to Latch Release Pin. Ability to rotate is for access only. Valve does NOT latch by rotating!  
 Actuator area is isolated from system ports through a 10 Micron sintered filter.

### OPERATION

Once the valve is fully actuated, it is held in the actuated position until released by pulling the Latch Release Pin. Upon pulling the latch release pin, the valve spring returns the spool to the normal position as illustrated by the corresponding functional symbol selected. It is ideal to connect the No. 1 Port of the valve to the lowest pressure port, typically the Tank port. Any pressure on No. 1 Port will act upon the spool linkage and is additive to the spring force and effects the shift force required. See "SHIFT FORCE NOTES".

### PILOT PRESSURE and SHIFT FORCE NOTES:

Spring forces around 20 PSI.  
 Recommended air pilot pressure 50-100 PSI.  
 Maximum air pilot pressure 150 PSI.

### 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](http://www.doering.com) Cavities, Housing & Manifolds.

Doering Co. also manufactures multi function and multi station housings and manifolds.

Please call for assistance.

### RATINGS

- Pressures to 3,000 PSIG, Ports 2, 3 & 4 Only
- Pressure to 150 PSIG, Port No. 1  
 Use No. 1 Port for Drain or Tank.
- Caution, Port 1 Pressure effects Shift Force.  
 See "SHIFT FORCE NOTES" for more detail.  
 Temperature: -40° to 120°C

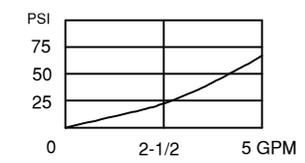
### INSTALLATION

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.

### OPTIONS

Call for assistance on options ordering.  
 All Stainless Steel option, add -SS to Part Number.  
 Stainless Steel Wetted Area Only, add -S to Part Number.  
 Stainless Steel Actuator Area Only, add -PS to Part Number.  
 Standard seals are Buna-N with Teflon back up rings.  
 Optional seals include EP, Viton, Teflon and others.  
 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.

### PRESSURE DROP / FLOW



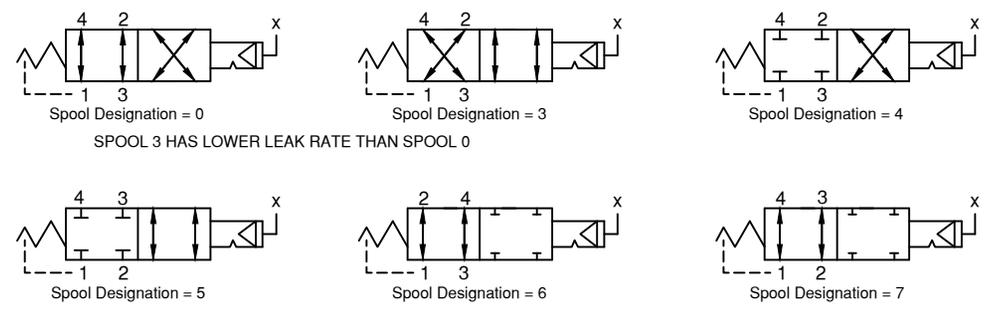
### 4PS SERIES

4 Way Spool, Directional Control,  
 Pilot Operated, Latching Valves

### CARTRIDGE VALVE ORDERING INFORMATION:

Order P/N 44LH237108# ##### ###  
Call for assistance on options ordering.

SPOOL DESIGNATION: [ ] SEAL OPTIONS: [ ]  
 MATERIAL OPTIONS: [ ]



SPEC. SHEET NO. 1203158 REV. 01