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DOERING

Cavity & Housing

For 82#####1 Valve:
 Cavity C-8502 (8-2):
 See Spec. Sheet 1200630

Line Mount Housings:
 See Spec. Sheets
 1200672 and 1203123

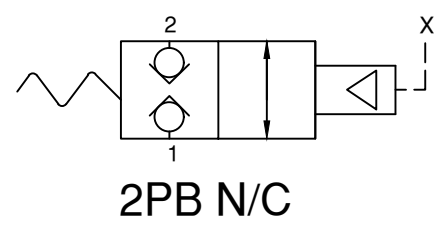
Panel Mount Housings:
 See Spec. Sheets
 1202981 and 1202990

For 84#####1 Valve:
 Cavity C-8542 (10-2):
 See Spec. Sheet 1200621

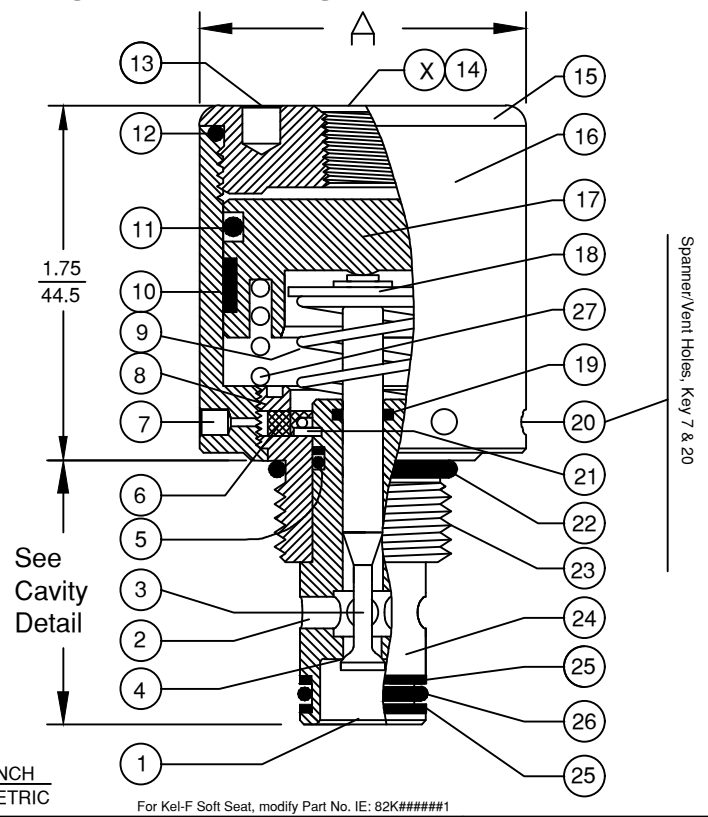
Line Mount Housings:
 See Spec. Sheets
 1200674 and 1201455

Panel Mount Housings:
 See Spec. Sheets
 1202982 and 1202990

2PB SERIES



CARTRIDGE VALVE



INCH
METRIC

For Kel-F Soft Seat, modify Part No. IE: 82K#####1

STANDARD OPTIONS

Pilot Port (Key X) 1/8 NPT. Optional SAE4 Available.
 Seals: Buna N, Viton or Teflon. Others please specify.
 T Option: 10-32 Ports at Key 7 & 20, Random 360° Pos.
 Seat (Key 4) Hard Stainless. For Kel-F Soft Seat,
 insert letter K after second digit of part number.

TOOLING

* 1/8 (3.175) Pin Spanner Tool
 Order No. 471, Ref. Key No. 20
 * 3/16 (4.763) Face Spanner Tool
 Order No. 482, Ref. Key No. 13

KEY EXPLANATION:

- Port No. 1, System
- Port No. 2, System
- Poppet, Hard Stainless Steel
- Seat passage sealing area.
- O-Ring Seal or O-Ring Seal with Back Up Ring
- Filter, 10 Micron, Sintered Bronze.
- Vent (2 Pl.) Optional T Port Locations
- Filter Retainer
- Poppet and Actuator Return Spring, Stainless
- Piston Guide Ring
- Piston O-Ring Seal, Buna N (Also See Options)
- Bonnet O-Ring Seal, Buna N (Also See Options)
- 3/16" (4.763) Spanner Holes (2 Pl.)
- 1/8 NPT Pilot Port X (Also See Options)
- Bonnet, Aluminum Material
- Actuator Body, Aluminum
- Actuator Piston, Aluminum
- Poppet Return Spring Retainer Assembly
- Poppet Seal, TFE
- 1/8" (3.175) Spanner Holes (4 or 6 Pl.)
- Cartridge Seat Retaining Ring
- Mount O-Ring Seal, Buna N (Also See Options)
- Cartridge Mounting Threads, Stainless Steel
- Cartridge Seat, Hard Stainless
- Back Up Rings, Buna N or Urethane (See Options)
- O-Ring Seal, Buna N (Also See Options)
- Spring (Used on valves with 2-1/4" "A" Diameter)

SPECIFICATIONS:

Pilot operated two way cartridge valve. Normally closed. Pilot to open passage between ports one and two.

No. 1 port is the preferred pressure holding port.

Maximum pressure 5,000 PSI, Cavity C-8502
 Cavity C-8542, 5,000 PSI Port 1, 3,000 PSI Port 2

Pilot Pressure Range, 50 PSI Min. to 150 PSI Max.
 Fluid temperature -45°F, (42.7°C) to 200°F, (93.3°C)

Install Cartridge Valve using No. 471 Spanner Tool.
 Valve should screw in freely to the Mount Seal.
 Final tightening to 15 foot pounds torque.
 Use lubricant on external oil seals and mounting threads.

PILOT RATIO NOTES:

- TO CALCULATE THE CORRECT PILOT RATIO VALVE TO ORDER FOLLOW THESE STEPS:
- Determine the MAXIMUM possible system pressure.
 Multiply X 1.1 = SYSTEM
 - Determine MINIMUM possible pilot pressure.
 Multiply X .9 = PILOT
 - Divide SYSTEM by PILOT = PILOT TO SYSTEM RATIO
 - Round up to standard available ratio.

PILOT TO SYSTEM RATIO	"A" Diameter		Order Valve No.	Fits Cavity:	PRESSURE DROP CHART Hard Seat Only.
	Inch	Metric			
40:1	1-1/2	38.10	822270401	C-8502 (8-2) 3/4-16 Thd.	VALVE ORIFICE DIAMETER = .180" Smaller Orifice with K Option Seat.
49:1	1-5/8	41.28	823270491		
69:1	1-7/8	47.63	826270691		
104:1	2-1/4	57.15	827271041		
40:1	1-1/2	38.10	842270401	C-8542 (10-2) 7/8-14 Thd.	
49:1	1-5/8	41.28	843270491		
69:1	1-7/8	47.63	846270691		
104:1	2-1/4	57.15	847271041		

SPEC. SHEET NO. 1200754 REV. 017