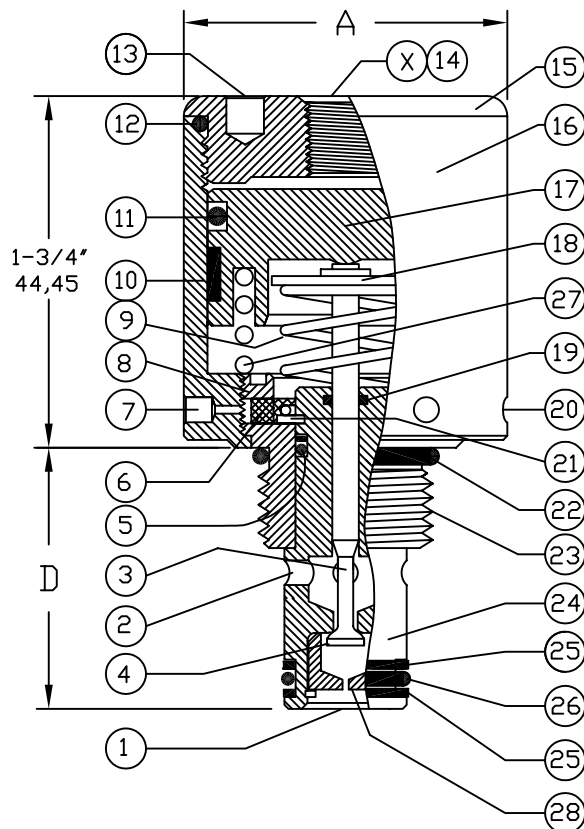


### KEY EXPLANATION:

1. Port No. 1, System Inlet
  2. Port No. 2, System Outlet
  3. Poppet, Hard Stainless Steel
  4. Seat passage sealing area, Hard Stainless Steel.
  5. O-Ring Seal, Buna N ( Also See Options )
  6. Filter, 10 Micron, Sintered Bronze.
  7. Vent ( 2 Pl. ) Optional T Port Locations
  8. Filter Retainer
  9. Poppet and Actuator Return Spring, Stainless
  10. Piston Guide Ring UHMW material
  11. Piston O-Ring Seal, Buna N ( Also See Options )
  12. Bonnet O-Ring Seal, Buna N ( Also See Options )
  13. 3/16" ( 4.763 ) Spanner Holes ( 2 Pl. )
  14. 1/8 NPT Pilot Port X ( Also See Options )
  15. Bonnet, Aluminum material
  16. Actuator Body, Aluminum
  17. Actuator Piston, Aluminum
  18. Poppet Return Spring Retainer Assembly
  19. Poppet Seal, TFE
  20. 1/8" ( 3.175 ) Spanner Holes ( 4 or 6 Pl. )
  21. Cartridge Seat Retaining Ring
  22. Mount O-Ring Seal, Buna N ( Also See Options )
  23. Cartridge Mounting Threads, Stainless Steel
  24. Cartridge Seat, Hard Stainless
  25. Back Up Rings, Teflon
  26. O-Ring Seal, Buna N ( Also See Options )
  27. Spring ( Used on valves = "A" Dia. 1-7/8 & 2-1/4" )
  28. Drifice Options, Ø.015 or Ø.031.
- Call for information and restrictions.

## CARTRIDGE VALVE



### 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

### SPECIFICATIONS:

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

Use No. 1 port as pressure inlet port.

Port No. 1 pressure rating ( 8502 Cavity ) 7,500 PSIG  
 Port No. 1 pressure rating ( 8542 Cavity ) 5,000 PSIG

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

Pilot Pressure Range, 50 PSI Min. to 150 PSI Max.  
 Fluid temperature -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.  
 Torque to 15 foot pounds.  
 Use lubricant on external oil seals and mounting threads.

### PILOT RATIO NOTES:

- TO CALCULATE THE CORRECT PILOT RATIO VALVE, FOLLOW THESE STEPS:
1. Determine the MAXIMUM possible system pressure.  
 Multiply X 11 = SYSTEM
  2. Determine MINIMUM possible pilot pressure.  
 Multiply X .9 = PILOT
  3. Divide SYSTEM by PILOT = PILOT TO SYSTEM RATIO
  4. Round up to standard available ratio.

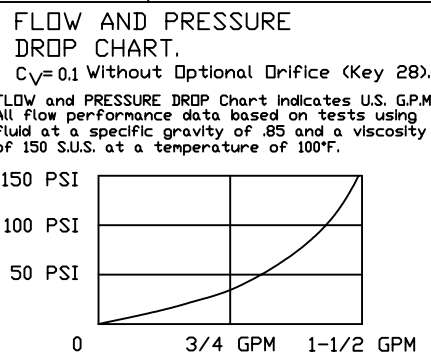
### STANDARD OPTIONS

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.

### TOOLING

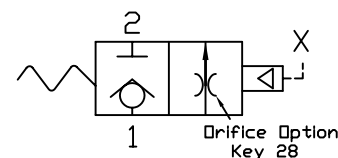
\*Cavity Form Tools: FT+ cavity#  
 \*1/8 ( 3.175 ) Pin Spanner Tool  
 Order No. 471, Ref. Key No. 20  
 \*3/16 ( 4.763 ) Face Spanner Tool  
 Order No. 482, Ref. Key No. 13

PILOT TO SYSTEM RATIO	" A " DIAMETER		" B " MAXIMUM	" C " MAXIMUM APPLICABLE TO T OPTION ONLY		CARTRIDGE VALVE NO.
100:1	1-1/2	38,10	NOT APPLICABLE	.15	3,81	822041001
120:1	1-5/8	41,28	.06 1,53	.21	5,34	823041201
168:1	1-7/8	47,63	.19 4,83	.34	8,64	826041681
255:1	2-1/4	57,15	.38 9,65	.53	13,46	827042551
100:1	1-1/2	38,10	NOT APPLICABLE	.15	3,81	842041001
120:1	1-5/8	41,28	.06 1,53	.21	5,34	843041201
168:1	1-7/8	47,63	.19 4,83	.34	8,64	846041681
255:1	2-1/4	57,15	.38 9,65	.53	13,46	847042551



## 2PB SERIES

### Functional Symbol



With optional DRIFICE, flow from Port 2 to Port 1 may damage the valve.