

## KEY EXPLANATION:

1. Port No. 1, System
2. Port No. 2, System
3. Poppet, Hard Stainless Steel
4. Filter, 10 Micron Sintered Bronze, Drilled V/ T option.
5. Poppet and Piston return spring, Stainless
6. Seat Saver Spring Group, Stainless Steel.
7. Piston, Seat Saver style.
8. Bonnet, Stainless Steel.
9. 1" Wrench Flats.
10. Pilot Port. See Pilot port options / ordering info.
11. O-Ring Seal, Filter Retainer ( Buna-N )
12. Cartridge Seat, Hard Stainless Steel.

## SPECIFICATIONS:

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

Valve will also function as a Pilot Operated Relief Valve. See notes regarding pilot pressure.

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 5000 PSI Max.

Pilot minimum may be lower if valve is used as a pilot operated relief valve.

Fluid temperature -45°F, (-42.7°C) to 200°F, (93.3°C)

Install Cartridge valve using 1" wrench  
Valve should screw in freely to the Mount Seal.  
Final tightening to 20 Foot pounds torque.  
Use lubricant on external oil seals and mounting threads.

## 26:1 PILOT RATIO:

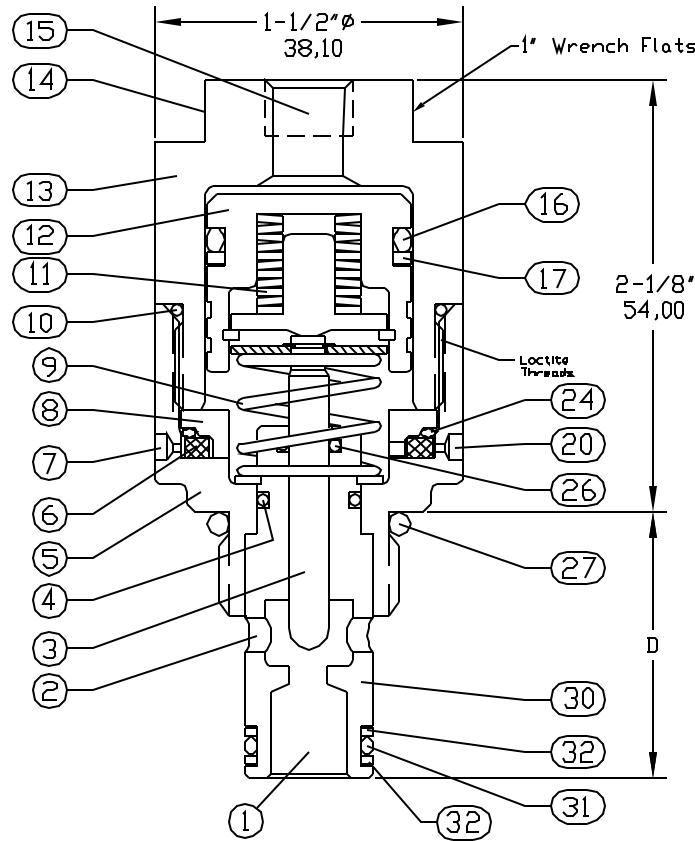
Area of pilot piston is 26 x larger than seat area.

To determine Minimum Pilot pressure required, follow these steps:

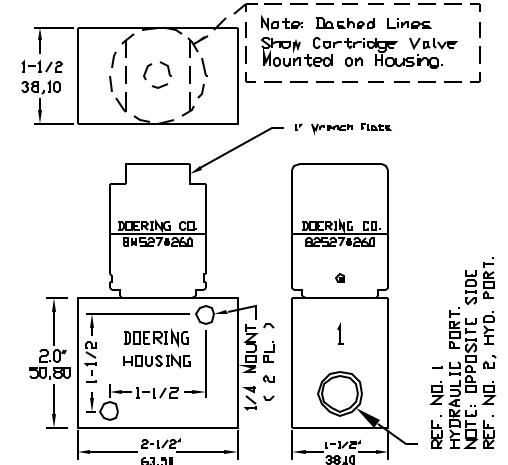
- (1) Multiply the maximum possible system pressure X 1.1 = SM ( System Max. )
- (2) Divide SM by 26 = MP ( Min. Pilot )

Note: MP is minimum pilot pressure needed for normally open / pilot to close valve function. If pilot pressure falls below MP, the valve will function as a pilot operated relief valve.

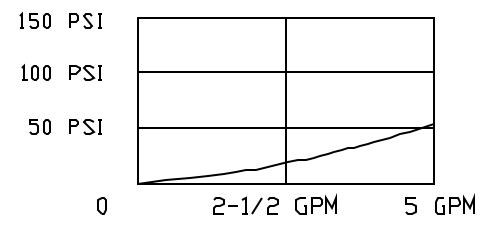
## CARTRIDGE VALVE



## HOUSING



Standard Housing is 3/8 NPT. -2 is 1/4 NPT. -6 is SAE6  
Standard Housing Material is Aluminum.  
For Stainless add -S or -2S or -6S to Housing No.



## FLOW AND PRESSURE DROP CHART. 0.4 Cv

FLOW and PRESSURE DROP Chart indicates U.S. G.P.M.  
All flow performance data based on tests using fluid at a specific gravity of .85 and a viscosity of 150 S.U.S. at a temperature of 100°F.

## STANDARD OPTIONS

Seals: Buna N, Viton or Teflon Others please specify.  
T Option: 10-32 Ports at Key 7 & 20, Random 360° Pos.  
If T option is used, allow for fitting clearance.

## TOOLING

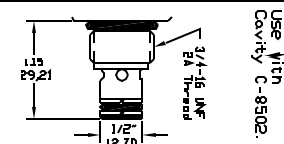
- \* Cavity Form Tools: FT+ cavity#
- \* 1" Open End Wrench No. 720
- \* 1/8 ( 3.175 ) Pin Spanner Tool  
Order No. 471, Ref. Key No. 20

## CARTRIDGE VALVE ORDERING INFORMATION:

### HOUSING NUMBER

S8502  
- OR -  
S8502-2  
- OR -  
S8502-6

### " D " SUB SURFACE DETAIL



82527#260

3/4-16 UNF Mounting threads

#### PILOT PORT OPTIONS

- 1 = 1/8 NPT
- 2 = 1/4 NPT
- 4 = SAE4
- 6 = SAE6

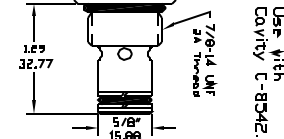
84527#260

7/8-14 UNF Mounting Threads

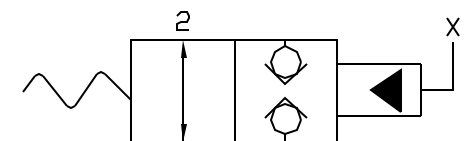
#### PILOT PORT OPTIONS

- 1 = 1/8 NPT
- 2 = 1/4 NPT
- 4 = SAE4
- 6 = SAE6

S8542  
- OR -  
S8542-2  
- OR -  
S8542-6

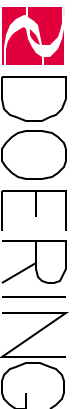


## 2PB SERIES



2PB N/O

HIGH PRESSURE PILOT RATING.



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