

CARTRIDGE VALVE

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

Air Pilot Port, 1/8 NPT

O-Ring Piston Seal

Wear Ring, UHMW

Knob Illustrated

Rod Wiper

Seal

Lubrication Pocket

Pilot Piston

Ø1-1/2"

1" Hex for wrench

3/4-16 UNF-2A

.45
11.43

.85
21.59

1.10
27.94

INCH
METRIC

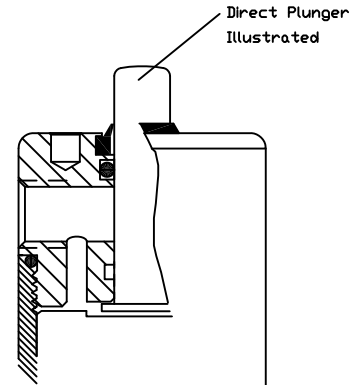
Port 2

4

Port 1

Ø.499
12.68

Valve fits a short 8-2 Cavity.
Please verify dimension compatibility.
For assistance, please contact
Doering Co. engineering department.



Direct Plunger
Illustrated

SPECIFICATIONS:

Pilot Operated poppet valve with Manual Override.
Two way, normally closed, actuate to open.
Maximum pressure 5,000 PSI, Ports 1 and 2.

See 'SHIFT FORCE NOTES' regarding operating force
required to open valve.
Full Flow is achieved at .08" Stroke.
Full Travel is at Prox. .16" Stroke.
Do not travel to or past full stroke with positive
force.

Use 1" wrench to install valve.

Torque to 20 to 30 foot pounds.

Use lubricant on external oil seals and mounting
threads.

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

STANDARD OPTIONS

T Option 10-32 vent ports at Key 7 (2 Places)

Seat (Key 4) is heat treated Stainless Steel.

Seal Materials used are Buna-N and Teflon.

Optional seal and construction materials available.

SHIFT FORCE NOTES:

10 to 15 Pounds of Force is
required to shift the valve
poppet with zero pressure on
ports 1 and 2.

Any pressure on port 1 will
increase Force requirement
by .030 X PSI at No. 1 Port.

Any pressure on port 2 will
increase Force requirement
by .003 X PSI at No. 2 Port.

For total force requirement,
add all 3 results.

Using port 2 as pressure
inlet may reduce the force
requirement to shift valve.

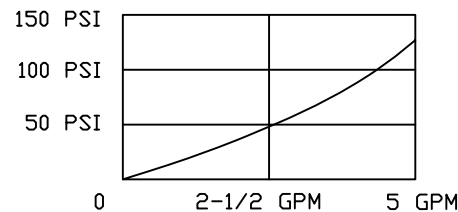
Valve
Number: 82D#227040M0#1

D = Direct Plunger
K = Aluminum Knob
R = Red Anodized Knob
S = Stainless Knob

Key No. 4
Blank = Hard Seat
K = Soft Seat

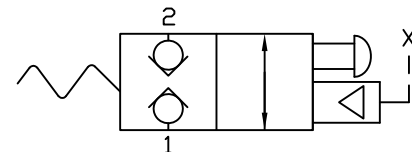
PRESSURE DROP CHART $C_v = 0.4$

VALVE ORIFICE DIAMETER = .160"



2PB SERIES

Functional Symbol



2PB N/C

2 Way Poppet Valve, Pilot / Manual