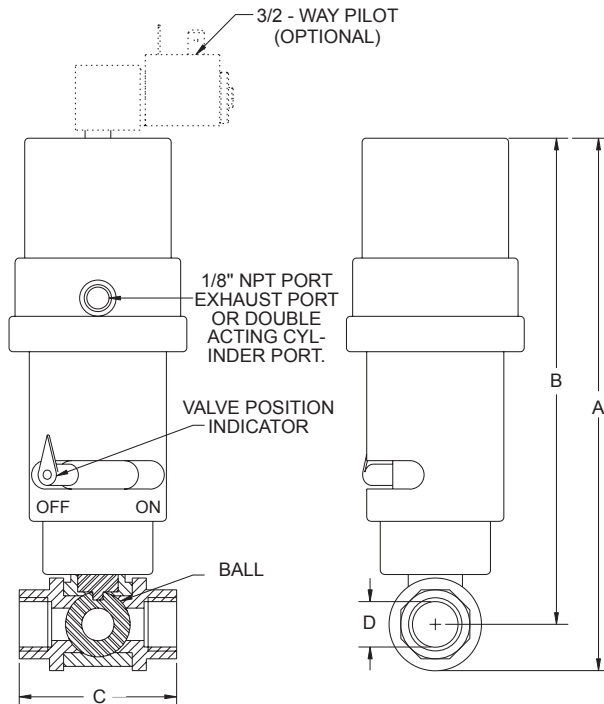




The Spartan Scientific Series APV-30 is a rugged full featured, pneumatically piloted ball valve. The unit is available in normally open, normally closed or double acting versions. With sizes from 1/2" to 2" NPT or BSP, the APV-30 will flow up to 85 gpm. The unit is compact as compared to competitive rack and pinion or motorized ball valves and comes standard with an ON-OFF indicator. The APV-30 features PTFE ball valve sealing using Chrome plated Brass or 316 Stainless balls. The valve body materials are Nickel plated Brass and 316 Stainless. Also available is a three way solenoid pilot valve, (Spartan Series 3823) which may be added to operate the APV-30.

Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



DIMENSIONAL TABLE				
Port Size (D) NPT	A	B	C	Weight (lbs)
1/2"	8.30"	7.64"	2.70"	2.50
3/4"	9.50"	8.70"	3.00"	2.50
1.0"	9.85"	9.25"	3.50"	3.50
1.25"	11.00"	9.52"	4.00"	5.30
1.5"	11.60"	10.40"	4.50"	7.70
2.0"	12.50"	10.80"	5.25"	11.50

DIFFERENTIAL PRESSURE CHART			
Port Size (D) NPT	Max. Pressure (psi) @ Temp. Range 0 to +25°C	Cv / GPM @ Δ P = 10 psi	Pilot Pressure (psi) Max.
1/2"	750	23.3 / 74.8	70 - 120
3/4"	750	56.4 / 180.5	70 - 120
1.0"	750	93.7 / 300	70 - 120
1.25"	600	165 / 528	70 - 120
1.5"	600	272.5 / 872	70 - 120
2.0"	480	400 / 1277	70 - 120

Technical Data

Function: 2/2-way, normally closed, normally open, remote air pilot, double acting

Port Size: 1/2", 3/4", 1.0", 1.25", 1.5", 2.0" NPT or BSP

Orifice Size: 15 - 50mm

Pressure: 0 - 750 psi (Depending on orifice size)
Pilot pressure: 70 - 120 psi (Depending on orifice size)

Flow Range: 23.3 - 400 Cv

Temp. Range: -20° to +150°C

Media: All fluids and gases compatible with wetted materials.
Steam to +180°C

Mounting: On pipe

Coil Data: Glass filled nylon encapsulation (Class F, continuous duty)
Voltage: 6, 12, 24 VDC
24, 120, 220, 240 VAC 50/60 Hz
(3/2 - way pilot optional)
Voltage tolerance: +/- 10%

Materials:
Actuator: Cylinder: Anodized Aluminum
Spring: Music wire
Rod: Stainless Steel
Seals: Viton
Valve body/ball: E-nickel plated Brass/ heavy duty
Chromium plated; 316 Stainless Steel/
316 Stainless Steel

SPARTAN SCIENTIFIC

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Series APV-30

Pneumatic Actuated
2-Way Solenoid Ball Valves

Principles of Operation

Normally Closed Version:

Closed (normal) position - Pilot inlet is connected to port #1 and blocked. Media inlet passage port #3 to port #4 is blocked as ball passage is rotated closed, interrupting media flow.

Open position - Pilot pressure is applied to the cylinder piston which causes the actuator to rotate, connecting the ball passage with ports #3 and #4. Media flows from port #3 to port #4.

Note: In the event that pilot pressure is interrupted, valve will switch to the closed position.

Normally Open Version:

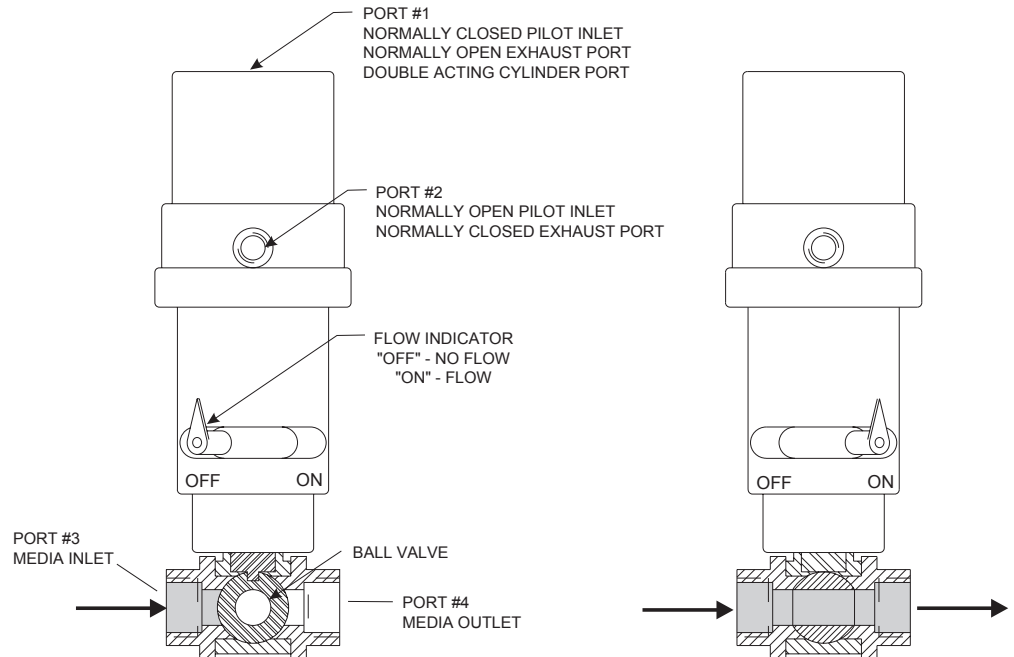
Open (normal) position - Pilot inlet is connected to port #2 and blocked. Media inlet passage port #3 is open to port #4 as ball passage is normally in-line with both ports. Media flows from port #3 to port #4.

Closed position - Pilot pressure is applied to the cylinder through port #2 causing actuator to rotate ball passage, interrupting flow and blocking port #4.

Note: In the event that pilot pressure is interrupted, valve will switch to the open position.

Double Acting Version:

The double acting version can be made normally open or normally closed depending on how the 4-way pilot is connected to ports #1 and #2.



How To Order

APV30 - 00 -

Body Material
4 - E-Nickel plated Brass
9 - 316 Stainless Steel

Function
1 - 2/2 NC
2 - 2/2 NO
3 - Double acting

***Port Size / Orifice / Cv**
1 - 1/2" NPT / 15mm / 23.3
2 - 3/4" NPT / 20mm / 56.4
3 - 1.0" NPT / 25mm / 93.7
4 - 1.25" NPT / 32mm / 165
5 - 1.5" NPT / 40mm / 272.5
6 - 2.0" NPT / 50mm / 400

Coil Options*
0 - No Pilot
1 - 6 VDC
2 - 12 VDC
3 - 24 VDC
6 - 24 VAC 50/60 Hz
7 - 120 VAC 50/60 Hz
8 - 220 VAC 50/60 Hz
9 - 240 VAC 50/60 Hz

Order Example: APV30-00-4127
Series APV30, E-Nickel plated brass,
2/2 normally closed, 3/4" NPT port size,
20mm orifice, 56.4 Cv, 120 VAC 50/60 Hz

Replacement Ball Valves

Description	Model Number
1/2" NPT	APV30-01-0001
3/4" NPT	APV30-01-0002
1.0" NPT	APV30-01-0003
1.25" NPT	APV30-01-0004
1.5" NPT	APV30-01-0005
2.0" NPT	APV30-01-0006

* All thread sizes available in BSP.
Contact factory for details.

*For more coil options see page 7.

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