V² Valve

Value squared switching solenoid valve

FEATURES

- **2-way or 3-way, 2 position valve (NO, NC & Distributor)**
- **Meets performance characteristics for a minimum of 25 million cycles**
- **Cost-effective, unique PBT body**
- **Manifold mount design or molded barbed fittings to fit a range of needs**



MEDIA COMPATIBILITY

Non-corrosive gases

WETTED MATERIALS

Body:
PBT (Polybutylene Terephthalate)

Stem base:
360 HO2 brass

All others:
FKM; 430 FR series stainless steel (passivated); 302 series stainless steel; Loctite® 290

ELECTRICAL

Power	0.5, 1.0 or 2.0 W
Voltage	5, 12, 24 V_{DC} ± 10%

PHYSICAL PROPERTIES

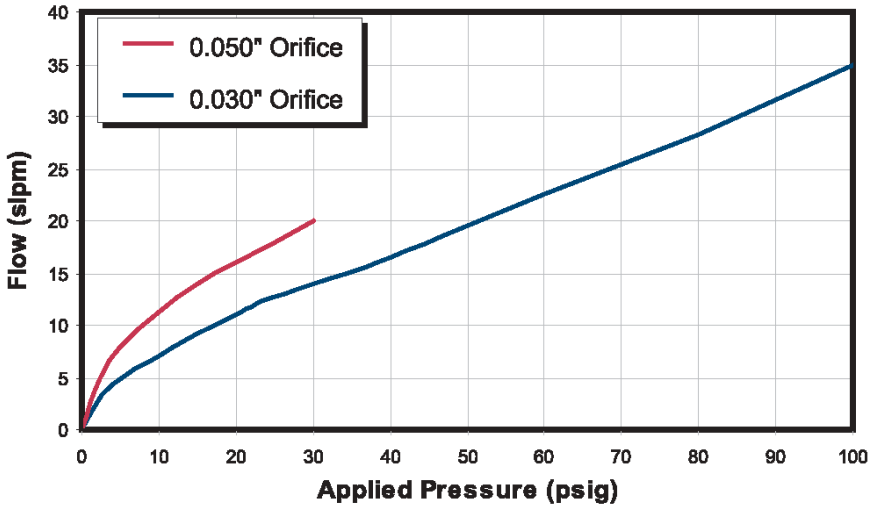
Operating environment	0 to 70 °C
Storage temperature	-40 to 70 °C
Length	43.9 mm (1.73 in)
Width	15.9 mm (0.625 in)
Height	17 mm (0.67 in)
Porting	Barb fittings for 1/8 in I.D. tubing or manifold mount
Weight	34 g (1.2 oz)
Internal volume	0.016 cm^3 (nominal)
Filtration (recommended)	40 µm
Lubrication	None required

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PERFORMANCE CHARACTERISTICS

Part no.	Pressure	Vacuum	Orifice sizes/ Equivalent C_V [1]	Leak rate[2]	Response
V210...	0...100 psig	0...27 "Hg (0...13 psi)	0.030" (0.762 mm)/ 0.017 C_V	≤0.2 sccm	<30 msec cycling (2 Watt)
V213...	0...50 psig				
V214...	0...30 psig		0.050" (1.270 mm)/ 0.035 C_V		<30 msec cycling (2 Watt)
V217...	0...15 psig				
V220...	0...6 psig				

FLOW CURVES (typical air flow)[3]



Notes:

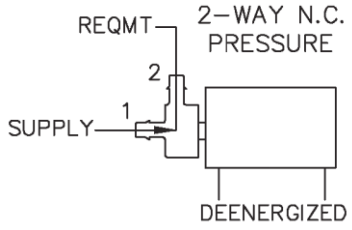
[1] The C_V value is the volume flow in US gallons/min under specific flow conditions and describes the relative flow capacity of a valve. If several valves with the same nominal diameter are compared, the valve with the highest C_V value has the best flow dynamics design. The equivalent european measure is the k_V value expressed in m^3/h (k_V = 0.86 C_V).

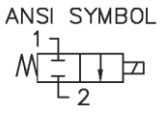
[2] sccm denotes Standard Cubic Centimeters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1000 sccm = 1 slpm.

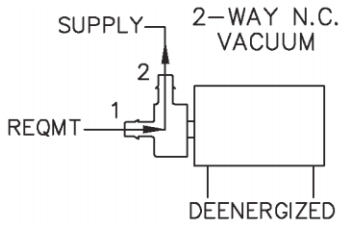
[3] slpm denotes Standard Liters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1 slpm = 1000 sccm.

VALVE TYPE

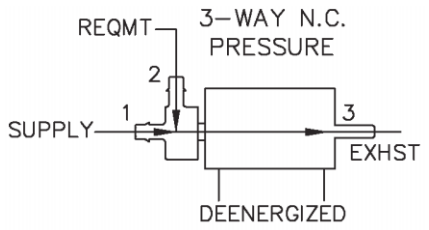
Type 1

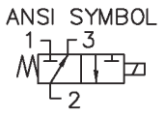


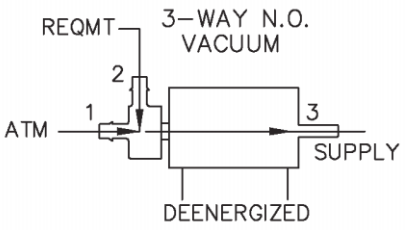


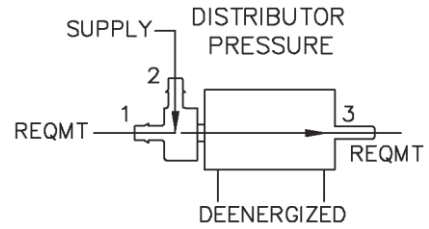


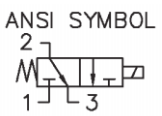
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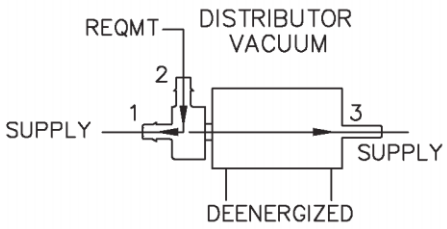




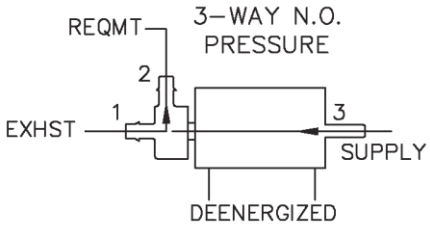


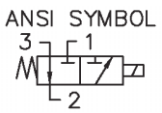


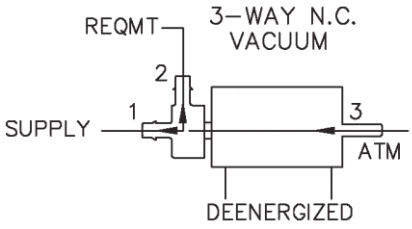




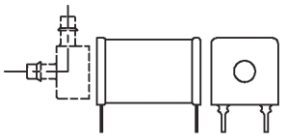
Type 4



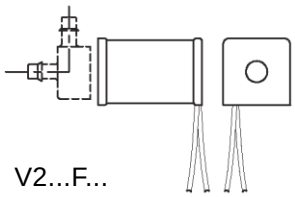




COIL STYLES

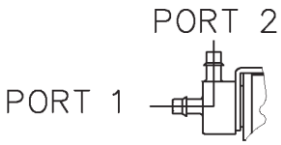


V2...P...
(PC mount, 4 PC pins)

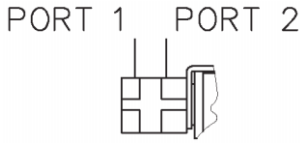


V2...F...
(Wire leads,
no terminals)

BODY STYLES

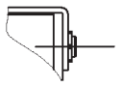


V2...8...
(1/8" I.D. tubing)

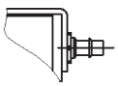


V2...0...
(Manifold mount)

STEM BARB STYLES



V2...0
(Type 1 top seat, plugged)



V2...8
(0.125" top seat, 1/8" I.D. tubing)

ORDERING INFORMATION

	Series	Model no.				Type		Material			Voltage		Coil type		Body styles		Topseat barbs	
			Max. pressure	Orifice size	Coil wattage				Body	Plunger & seal								
Options	**V2**	**10:**	0...100 psi	0.030" (0.762 mm)	2 W	**1:**	2-way NC	**PV:**	PBT	FKM	**5:**	5 V_{DC}	**P:**	PC mount, 4 PC pins	**0:**	mani-fold	**0:**	none (manifold mount)
		13:	0...50 psi	0.030" (0.762 mm)	1 W	**3:**	3-way NC or distributor				**12:**	12 V_{DC}						
		14:	0...30 psi	0.050" (1.270 mm)	2 W						**24:**	24 V_{DC}	**F:**	Wire leads, 18"	**8:**	1/8" barbs	**8:**	1/8" barbs
		17:	0...15 psi	0.050" (1.270 mm)	1 W	**4:**	3-way NO											
		20:	0...6 psi	0.050" (1.270 mm)	0.5 W													
Example:	**V2**	**14**				**3**		**PV**			**12**		**P**		**8**		**8**	

Note: Not all combinations might be available.
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