

VSO[®] Miniature Proportional Valve

Thermally Compensated Proportional Valve



The VSO[®], Voltage Sensitive Orifice, is a miniature solenoid valve that controls the flow of gas in proportion to input current. You can drive the valve with either DC current or pulse width modulation and use closed loop feedback to deliver optimal system performance. Medical and analytical OEMs worldwide choose VSO as their preferred miniature proportional valve.

Features

- Offers operating pressure up to 150 psig and a range of orifice sizes.
- Satisfies a 0.2 sccm leakage specification of He for 100 million life cycles and offers high repeatability.
- Provides computer-automated calibrations and full calibration traceability.
- Uses either DC current or pulse width modulation with closed loop feedback to deliver optimal system performance.
- Maintains ideal flow through thermal compensation.
- ROHS compliant

Physical Properties

Valve Type:	2-Way Normally Closed
Media:	Air, argon, helium, hydrogen, methane, nitrogen, oxygen, & others
Operating Environment:	32 to 131°F (0 to 55°C)
Storage Temperature:	-40 to 158°F (-40 to 70°C)
Length:	1.785 in (45.34 mm)
Width:	0.625 in (16.51 mm)
Height:	0.67 in (17.02 mm)
Porting:	Barbs or 10-32 female; manifold mount with screens
Weight:	2.2 oz (62.86 grams)
Internal Volume:	0.031 in ³ (.508 cm ³)
Filtration: (Suggested and Available)	Models 1 & 2: 17 micron Models 3, 4, 5, & 6: 40 micron
Oxygen and Analytically Clean:	Standard

Electrical

Power:	2.0 Watts maximum
Voltage:	See <i>Ordering Information</i>
Electrical Termination:	18" Wire Leads PC Mount, Spade Lugs

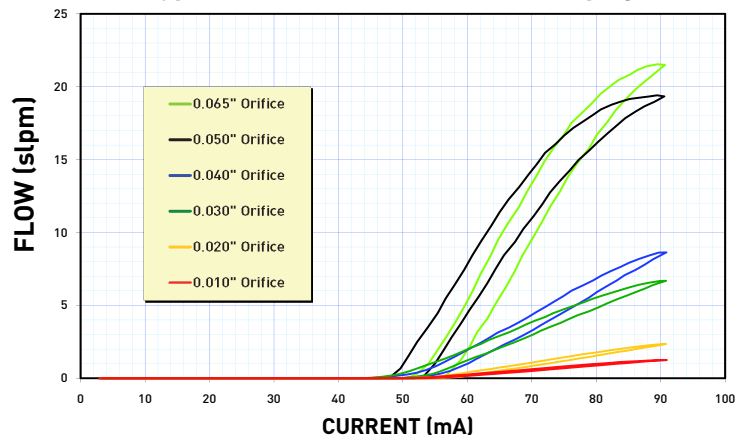
Wetted Materials

Body:	360 HO2 Brass
Stem Base:	430 FR Stainless Steel and Brass 360 HT
All Others:	FKM; FFKM; 430 FR Stainless Steel; 300 Series Stainless Steel

Performance Characteristics

Leak Rate:	<0.2 sccm of helium (bubble tight)
Pressure:	0 to 50 psi (0.34 MPa) 0 to 75 psi (0.52 MPa) 0 to 100 psi (0.69 MPa) 0 to 150 psi (1.03 MPa)
Vacuum:	0-27 in Hg (0.09 MPa)
Orifice Sizes:	0.010" (0.245 mm) 0.020" (0.510 mm) 0.030" (0.762 mm) 0.040" (1.016 mm) 0.050" (1.270 mm) 0.065" (1.651 mm)

Typical Air Flow with 20VDC coil (25 psig)

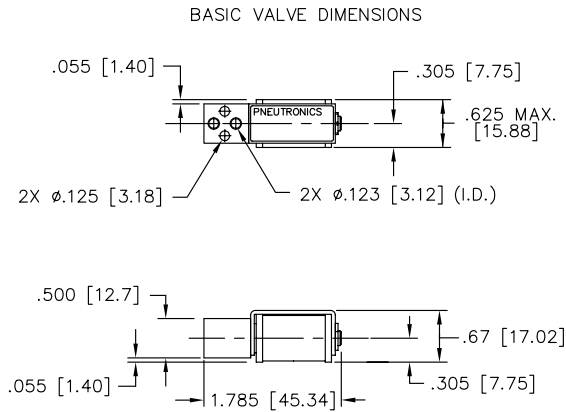


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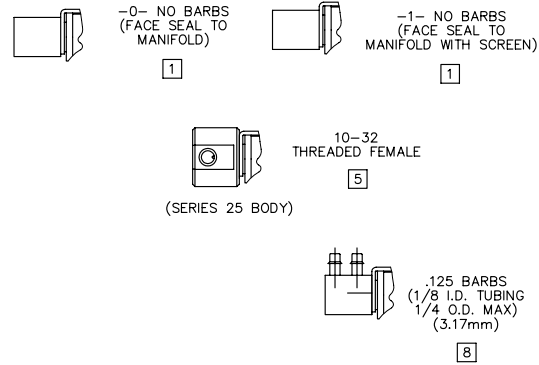


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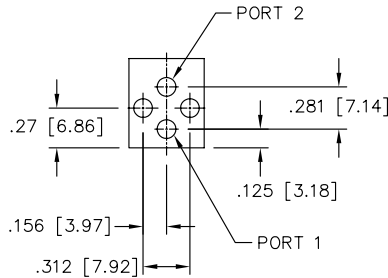
Dimensions



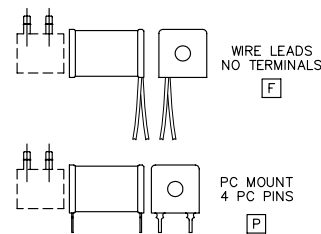
PNEUMATIC INTERFACE OPTIONS



PORT AND MOUNTING HOLE DIAGRAMS



ELECTRICAL INTERFACE OPTIONS



NOTES:
1. DIMENSIONS IN [] ARE IN MM.

Ordering Information

Sample Part ID	VSONC	1	S	11	V	A	F	8
Description	Standard	Model Number	Series	Body Series	Elastomer	Coil Selection	Electrical Interface	Pneumatic Interface (Series 11 only except with Option 5)
Options		#: Max. Operating Pressure/Orifice Size 1: 150 psid/0.010" 2: 150 psid/0.020" 3: 150 psid/0.030" 4: 75 psid/0.040" 5: 100 psid/0.050" 6: 50 psid/0.065"		11: Series 11 25: Series 25 (available in nickel-plated brass only)	V: FKM/Brass C: FFKM/Brass I: FKM/Stainless Steel H: FKM*/Stainless Steel	X: Max Voltage* A 5.5 VDC B 8 VDC C 11.5 VDC D 13.5 VDC E 20 VDC F 29 VDC * Max Voltage for continuous full flow, ambient temperature 55°C	F: Wire Leads, 18" P: PC Board Mount, 4 PC Pins Q: Quick Connect Spade	0: Manifold Mount 1: Manifold Mount with Screens 5: 10-32 Threaded Female (Series 25) 8: 1/8" Barbs



NOTE: Please consult Parker Precision Fluidics for other considerations. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002115-001 and Drawing #890-003022-001.

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For more information call 1.800.525.2857 or email ppfinfo@parker.com
Visit www.parker.com/precisionfluidics

