V44700 - Cryogenic

2-Way Normally Open or Normally Closed
Shut-Off Solenoid Valve

Valcor Aerospace - Cryogenic Fuel Cell Management

DESCRIPTION

Valcor offers a subset of their V44700 Series for cryogenic fuel cell management. These valves are directing acting, solenoid shut-off valves with an all welded body construction. They come in normally open or normally closed configurations. Their simple construction of three moving parts provides high reliability. The valve seal is a carbon disc that utilizes Valcor's "Floating Seal" principle. The seal is an optically flat disc that offers high contamination resistance due to the self-cleaning action between the seal and seat. The necked configuration provides excellent isolation of the solenoid and the main body. The seat and seal configuration utilizes a Venturi flow path to minimize pressure drop across the valve.

APPLICATION

This subset of the V44700 valves is ideal for cryogenic fuel cell management. They can handle gaseous and liquid hydrogen and oxygen.

FEATURES

- 2-Way Normally Closed or Normally Open
- Simple Floating Seal Design
- 1/4", 3/8", or 1/2" OD Line
- Ambient Temperature Range: -65°F to +165°F
- Fluid Temperature Range: -425°F to +165°F
- Pressure Range: 0-1000 PSIG, depending on flow requirements
- Weight Range: 1.5 lbm to 3 lbm, depending on pressure and flow rate
- Position Indication Options Available
- Connector orientation can be co-axial or perpendicular to solenoid

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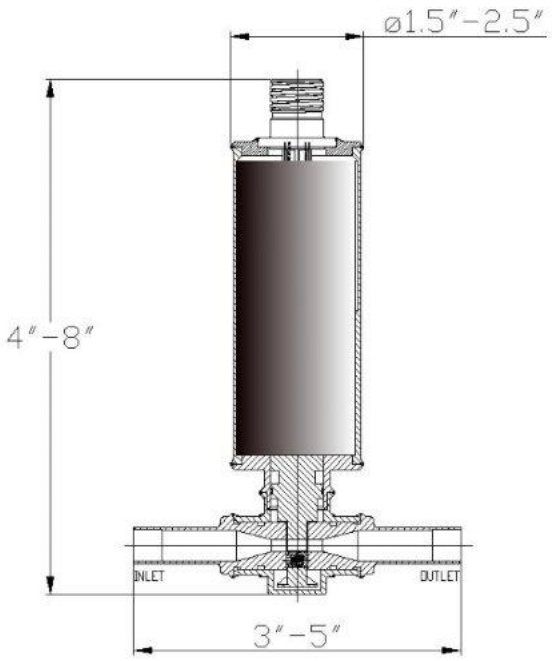
SOLENOID VALVE SERIES 44700 - CRYOGENIC FUEL CELL MANAGEMENT



Tabulation

Port Size	Orifice	Cv
-4	.100	.20
-6	.235	1.00
-8	.310	1.85

Specifications

Operating Pressure and Flow Ratings

Equiv. Sharp Edged Orifice CD = .65	Operating Pressure (PSIG)	Ambient Temp.	Min. Volts DC	Cv
.100	1-1000	165°F	18	.19
.235	1-150	165°F	18	1.50
.310	1-60	165°F	18	1.85

Electrical Data

Voltage	18 to 30 VDC
Duty	Continuous
Current	1.5 amps at 28 VDC and at 70°F
Electrical Connector	To suit customer requirements

Leakage

External	Zero over range of 0 to 1000 PSIG
Internal	Liquid Service, 0.5 cc/hr max. Gas Service, 20 scc/min. typical