

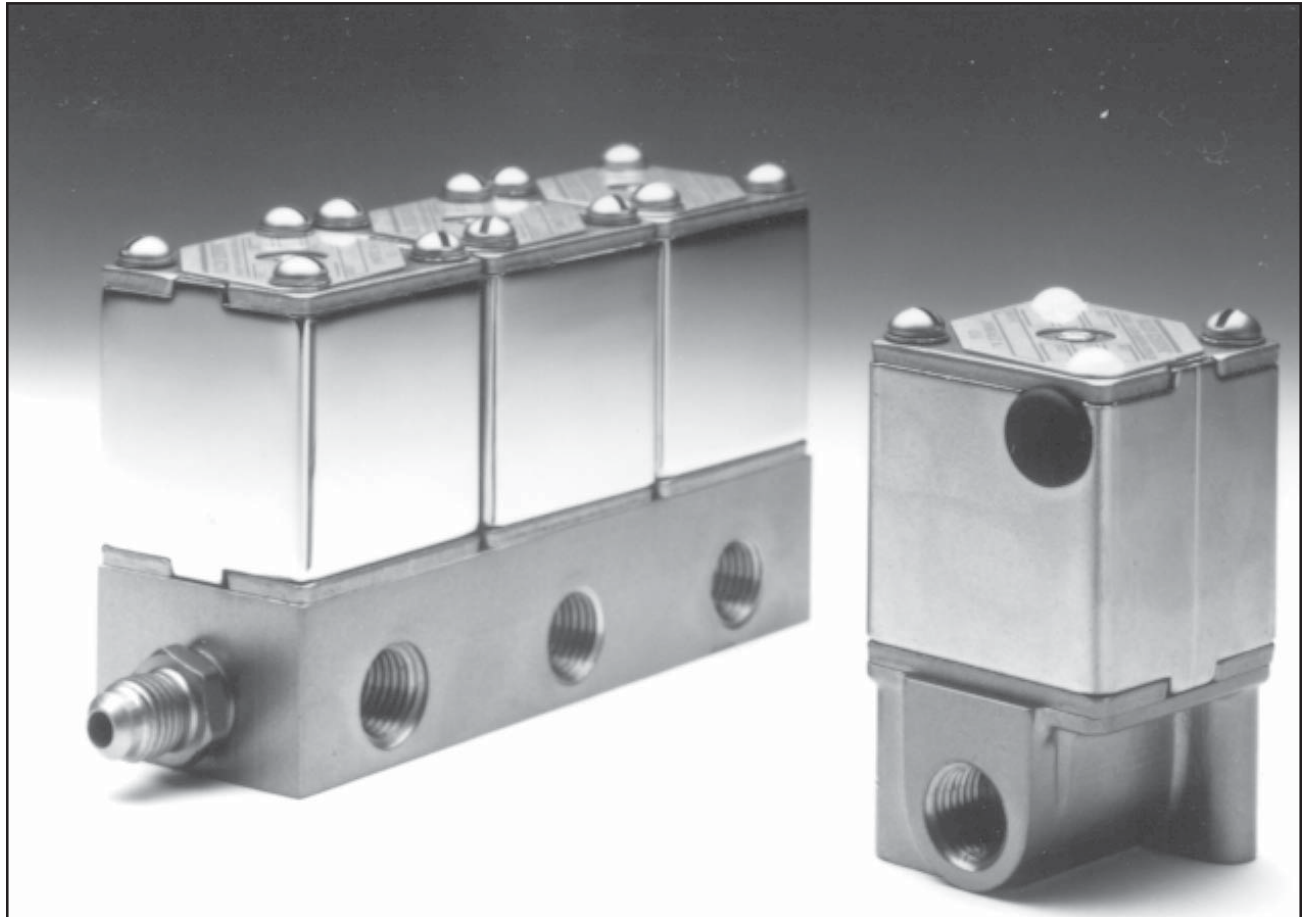
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Valcor Scientific

Cryogenic Valve

2-Way, Normally Closed Solenoid

Model: SV95/SV955



INTRODUCTION

With the SV95/955, Valcor Scientific, a division of Valcor Engineering Corporation, introduces its third generation line of cryogenic solenoid valves and accessories. The SV95/955 cryogenic valves accept the challenge of critical flow control needs for liquid nitrogen (LN_2) and liquid carbon dioxide (LCO_2) service. Applications cover a broad spectrum of industries including: analytic chemistry, food processing, biomedical, micro-electronic and metal treatment.

The SV95/955 Series offers distinct and unique advantages when used in harsh cryogenic fluid control applications. The Series has been designed to be quieter, last longer, and

to operate more reliably than conventional solenoid valves employed in cryogenic service.

DESCRIPTION

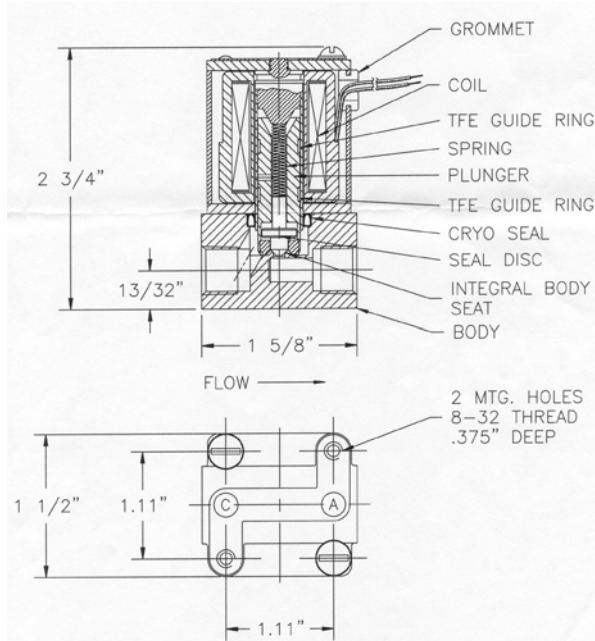
The SV95/955 is designed as a two-way, normally closed, solenoid operated valve with low mass forged brass bodies, self-energized Teflon® external body seals and stainless steel trim. Especially noteworthy in this design is Valcor's proprietary constant load Teflon® or PFA seal disc that insures bubble tight shutoff. Designed for fluid temperature down to $-345^\circ F$, the SV95/955 series is suitable for a wide range of low temperature liquids and can also be adapted for your gas control needs.

Because cryogenic applications are

both demanding and unforgiving, the SV95/955 series was designed to tolerate the non-lubricating aspects of LN_2 and LCO_2 , yet survive repeated, severe on-off cycling demands.

The Valcor Scientific guided plunger design not only enhances quiet operation and longer life, but also overall valve cycling response for crisp, repeatable temperature setpoints. Because valve characteristics are affected by application conditions including, fluid and environmental temperatures, inlet and outlet pressures, and electrical considerations, we encourage you to consult with the application engineers at Valcor Scientific on your specific needs.

MODEL SV95/955



- Test chambers for micro-electronics fabrication
- Back-up systems for biologic freezers
- Environmental chambers
- Gas chromatography ovens
- Freezing human tissue for preservation
- Metal treatment

The SV95/955 incorporates these outstanding features:

- Proprietary seat/seal design for cryogenic fluids down to -345°F and operating pressure to 1000 psig
- Direct acting seal - no minimum operating pressure
- Noticeably quieter than other cryogenic valves
- Bubble tight shutoff
- Robust construction, with a small footprint
- Compact low mass design
- Wide selection of port configurations, orifice sizes and electrical options

APPLICATIONS

Cryogenic valves are most often employed to deliver liquid coolant directly into a closed chamber. Chamber sizes can vary from small, 10cc quartz vessels for cryo-focusing in gas chromatography, to large cargo trailers employed in food transportation. The SV95/955 is well suited to the critical control needs for LN₂ and LCO₂ service in the analytic chemistry, food processing, and bio-medical industries.

Other common uses for the SV95/955 to deliver LN₂ or LCO₂ coolant include:

PHYSICAL SPECIFICATIONS

Size: 3" x 5/8" x 1 1/2" (AC)
 2 3/4" x 1 5/8" x 1 1/2" (DC)

Weight: 14.8 oz

Port Connection: 1/8" or 1/4" NPT

Metal in Contact

With Fluid: 304 and 430F Stainless Steel, Brass Teflon®, and/or PFA

Coil Construction: UL Class B or H molded

Power: 8.5, 10 or 15 watts

Operating Pressure: Up to 1000 PSIG

Fluid Temperature: -345°F to +165°F

MECHANICAL SPECIFICATIONS

Part Number	Port Size NPT	Orifice Size	C _v	Pressure (PSIG) Liquid	Coil	Wattage	Recommended Nozzle Orifice Diameter
SV955G56C0	1/4"	3/64"	.06	1000	24VDC	10	0.014"
SV95G60C0	1/4"	3/64"	.06	1000	115vAC	8.5	0.014"
SV955G56HC3	1/4"	1/8"	.35	150	24VDC	15	0.110"
SV955G32HC3	1/4"	1/8"	.35	150	115vAC	15	0.110"
SV955G56HC23	1/8"	1/8"	.35	150	24VDC	15	0.110"
SV95G32HC23	1/8"	1/8"	.35	150	115vAC	15	0.110"
SV955G56HC6	1/4"	1/4"	.71	35	24VDC	15	0.220"
SV95G32HC6	1/4"	1/4"	.71	35	115vAC	15	0.220"

N/A = Not Applicable
 *Other configurations available

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