Valcor Scientific

Cryogenic Valve

2-Way, Normally Closed, Floating Seal Design

Model: SV91



INTRODUCTION

Valcor Scientific, a Division of Valcor Engineering, has provided cryogenic solenoid valves for more than forty years. The SV91 is a large orifice, gate valve designed for the stringent requirements of hi-flow liquid nitrogen (LN₂) applications.

DESCRIPTION

The SV91 is designed as a two-way, normally closed, solenoid operated valve with a low mass stainless steel

body, heli-arc welded construction to provide a hermetic external seal and structural soundness. No elastomers are used.

As little as 1 psi differential pressure is all that is required to effectively seal the polyimide disc on the seat.

Standard SV91 series valves are uni-directional flow. Bi-directional and normally open designs are available in the SV91 series. We encourage you to consult with the application

engineers at Valcor Scientific on your specific needs.

APPLICATIONS

Cryogenic valves typically deliver liquid cryogens from a dewar to a closed chamber. Often, large orifice valves are used to transfer replenishment volumes of LN₂ from larger to smaller vessels.

Typical LN₂ applications for the SV91 are:

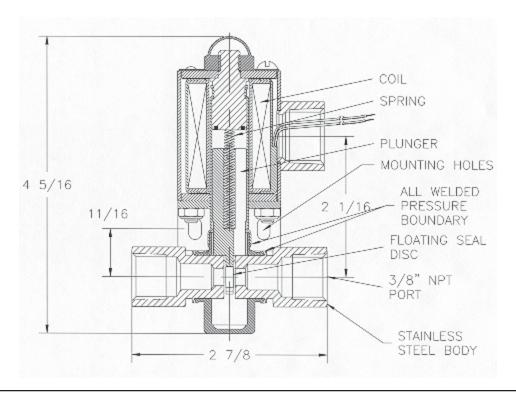
- · Inlet valve to cold chambers
- Shut-offvalvesforLN₂dewars
- Hi-volume LN₂ transfer
- LN₂ dewarbleed off valve

Due to the design features of the SV91, non-cryogenic applications involving straight-through flow such as a light gate for lasers or other photo-electric light devices are appropriate.

FEATURES

- Straight through line of sight flow provides for minimum pressure loss, minimum turbulence and maximum flow.
- Floating seal gate design provides self-wiping action across the optically flat seal area.
- Robust construction featuring all welded stainless steel pressure boundary accommodating high pressure.
- Direct acting plunger design.
- · No elastomeric seals.
- · Mountable in any position.
- Low mass body provides for minimum heat transfer.

MODEL SV91



MECHANICAL SPECIFICATIONS

Model Number	Orifice Size	C _v	PS Gas	IG Liquid	Coil	Wattage
91C88HC6C	5/16"	1.85	100	35	115V/60HZ	21
91C84HC6C	5/16"	1.85	65	25	24VDC	9
91C88HC7C	3/8"	2.7	65	15	115V/60HZ	21
91C84HC7C	3/8"	2.7	15	NR	24VDC	19

Other port and orifice configurations are available

NR = Not recomended

SPECIFICATIONS

 Size:
 4 1/4" x 2 13/16" x 11/2"

 Weight:
 190z

 Port Connection:
 3/8" NPT - Female

 Material in Contact with Fluid:
 04 and 430F Stainless Steel & Polymide

 Coil Construction:
 UL Class H, with 10" leads, 18AWG

 Power:
 19 watts (24 VDC)

 21 watts (115 VAC)

 Operating Pressure:
 to 100 psi

 Fluid Temperature:
 -452° F to +140° F

 Mounting Bracket:
 On 1" Slotted Centers

Valcor Scientific

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