The SV91 series is a 2-way, direct acting, floating seal design solenoid valve for control of cryogenic fluids down to -454°F. It is available in normally closed and normally open configurations. The direct acting design is less prone to hang-up during operation and the floating seal has self wiping action for tight shut-off. The SV91 series has all welded joints eliminating external leakage. Along with the standard construction, Valcor offers a high flow design and a design made specifically for LCO2. Consult a Valcor application engineer for help in specifying a valve.

**APPLICATION**

The SV91 series is a rugged construction suitable for a variety of cryogenic applications such as the following:
- Food processing/freezing
- Backup system for biologic freezers
- Environmental chambers
- Dewar transfer
- Gas chromatography
- Fogging machines
- Cryogenic surgery equipment

**FEATURES**

- Self wiping floating seal design for cryogenic fluids to -454°F
- Direct acting design with no minimum operating pressure
- All welded construction eliminates external leakage
- Special constructions for high flow and LCO2
- Pressure rating up to 1200 PSI
- Straight thru flow path yields high flow with less turbulence
- Mountable in any position
Valcor SV91 Specifications

### Construction

<table>
<thead>
<tr>
<th>Valve Parts in Contact With Fluid</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>SS</td>
<td></td>
</tr>
<tr>
<td>Seal Disc</td>
<td>Polymide</td>
<td></td>
</tr>
<tr>
<td>Plunger Tube</td>
<td>303 SS</td>
<td></td>
</tr>
<tr>
<td>Plunger</td>
<td>430F SS</td>
<td></td>
</tr>
<tr>
<td>Plunger Stop</td>
<td>430F SS</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>303 SS</td>
<td></td>
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<tr>
<td>Rider Rings</td>
<td>PTFE</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical

- **Standard Voltages**: 115/60 AC & 24 VDC. Consult factory for other voltages (available).
- **Standard Coil Housing**: Encapsulated with DIN terminals for 18 mm (43650A) connector.
  - General purpose with 1/2” NPT conduit, explosion proof, and grommeted pigtails are available. Consult factory.

### Specifications

<table>
<thead>
<tr>
<th>Port Size (NPT)</th>
<th>Orifice Size (in.)</th>
<th>Cv</th>
<th>Max. Pressure (PSI)</th>
<th>Model Number</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
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</tbody>
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#### 2-Way Normally Closed & Normally Open

- **3/8**: 0.20 1200 800 400 125 SV91D28C1C SV91D28C1C SV91D28O1C SV91D24O1C 14 21
- **3/8**: 0.46 650 300 125 100 SV91D28C3C SV91D28C3C SV91D28O3C SV91D24O3C 14 21
- **3/8**: 1.00 300 180 100 60 SV91D28C5C SV91D28C5C SV91D28O5C SV91D24O5C 14 21
- **3/8**: 1.85 150 75 65 25 SV91D28C6C SV91D28C6C SV91D28O6C SV91D24O6C 14 21
- **3/8**: 2.70 75 45 20 17 SV91D28C7C SV91D28C7C SV91D28O7C SV91D24O7C 14 21

#### 2-Way High Flow Construction

- **1/2**: 3.60 150 75 65 25 SV91D28C6VF SV91D28C6VF SV91D28O6VF SV91D24O6VF 14 21
- **3/4**: 4.90 75 45 20 17 SV91D28C7VG SV91D24C7VG SV91D28O7VG SV91D24O7VG 14 21

#### 2-Way Normally Closed - LCO2 Construction

- **3/8**: 0.46 1000 - - SV91C94HC3C-AE2 - - - - 32° -
- **3/8**: 1.00 350 - - SV91C94HC5C-AE3 - - - - 32° -

Bi-directional flow is available for some constructions. Contact factory for details.

Minimum pressure differential of 1 PSI in the direction of flow is required for bubble tight shut-off.

(*) This construction is intermittent duty with a maximum on time 20 mins with a 25% duty cycle. Consult factory for other duty cycle applications.

Liquid O₂ cleaning and testing is available. Consult factory.