**DESCRIPTION**

A solenoid-operated, two-way, pilot-operated, poppet-type, normally open, screw-in hydraulic cartridge valve with outlet flow check, designed for low leakage in load holding applications.

**OPERATION**

When energized, the SVCV08-21 blocks flow from 2 to 1 and from 1 to 2.

When de-energized, the cartridge’s poppet lifts to open the 2 to 1 flow path, while continuing to block flow from 1 to 2.

The SVCV08-21 is designed to fit into the VC08-3 cavity with the normal inlet at cavity port 3 (valve port 2), the outlet at cavity port 1 (valve port 1), and with cavity port 2 blocked.

**Operation of Manual Override Option:** To override, push and hold override button.

**FEATURES**

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

**RATINGS**

- **Operating Pressure:** 207 bar (3000 psi)
- **Rated Flow:** 22.7 lpm (6 gpm)
- **Reverse Flow Check Valve Spring:** 0.69 bar (10 psi)
- **Maximum Internal Leakage:** 2 to 1: 5 drops/minute at 207 bar (3000 psi); 1 to 2: 10 drops/minute at 207 bar (3000 psi)
- **Temperature:** -40 to 120 °C with standard Buna seals
- **Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage
- **Response Time:** First indication of change of state with 100% voltage supplied at 80% of nominal flow rating:
  - Energized: 40 ms; De-energized: 46 ms
- **Initial Coil Current Draw at 20 °C:** Standard Coil: 1.2 amps at 12 Vdc; 0.13 amps at 115 Vac (full wave rectified); E-Coil: 1.4 amps at 12 Vdc; 0.7 amps at 24 Vdc
- **Minimum Pull-in Voltage:** 85% of nominal at 207 bar (3000 psi)
- **Filtration:** See page 9.010.1
- **Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1
- **Installation:** No restrictions; See page 9.020.1
- **Cavity:** VC08-3; See page 9.108.1
- **Cavity Tool:** CT08-3XX; See page 8.600.1
- **Seal Kit:** SK08-3X-M; See page 8.650.1
- **Coil Nut:** Part No. 7004400
**DIMENSIONS**

- **Manual Override Option 'K'**
  - DIA. 1.41
  - 35.8
  - 1.40
  - 35.6
- **Manual Override Option 'P'**
  - DIA. 1.13
  - 28.7
- **Torque**
  - 4–5 ft-lb (5.4–6.8 Nm)
  - 19–21 ft-lb (25.8–28.5 Nm)

**COIL MUST BE INSTALLED WITH LETTERING UP**

**E-Coil**

**Standard Coil View**

- **Manual Override Option 'K'**
  - DIA. 1.41
  - 35.8
  - 1.40
  - 35.6

**TO ORDER**

**SVCV08-21**

**Voltage**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Std. Coil</th>
<th>Termination (Vdc)</th>
<th>Std. Coil</th>
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<tbody>
<tr>
<td>0</td>
<td>Less Coil**</td>
<td>DS Dual Spades</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10 Vdc†</td>
<td>DG DIN 43650</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12 Vdc</td>
<td>DL Leadwires (2)</td>
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<tr>
<td>24</td>
<td>24 Vdc</td>
<td>DL/W Leads w/Weatherpak Connectors</td>
<td></td>
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<tr>
<td>36</td>
<td>36 Vdc</td>
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<tr>
<td>48</td>
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<tr>
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<tr>
<td>230</td>
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**Porting**

<table>
<thead>
<tr>
<th>Porting</th>
<th>Cartridge Only</th>
<th>SAE 6</th>
<th>3/8 in. BSP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>6T</td>
<td>3B</td>
</tr>
</tbody>
</table>

**Seals**

- Buna N (Std.) N
- Fluorocarbon V

**MATERIALS**

**Cartridge**

- Weight: 0.11 kg (0.25 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

**Standard Ported Body**

- Weight: 0.27 kg (0.60 lb); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ. See page 8.008.1

**Standard Coil**

- Weight: 0.11 kg (0.25 lb); Unitized thermoplastic encapsulated, Class H high temperature magnet wire. See page 3.200.1

**E-Coil**

- Weight: 0.14 kg (0.3 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors. See page 3.400.1

**Termination (Vac)**

<table>
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<tr>
<th>Porting</th>
<th>Cartridge Only</th>
<th>SAE 6</th>
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<td>3B</td>
</tr>
</tbody>
</table>

**Seals**

- Buna N (Std.) N
- Fluorocarbon V

**Options**

- None (Blank)
- Manual Override without Knob P
- Manual Override with Knob K

**Termination (Vdc)**

- DS Dual Spades
- DG DIN 43650
- DL Leadwires (2)
- DL/W Leads w/Weatherpak Connectors
- DR Deutsch DT04-2P

**Termination (Vdc)**

- E-Coil
- ER Deutsch DT04-2P (IP69K Rated)
- EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.