**MODEL CHART**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Connection Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>V4-2-U</td>
<td>Brass body, universal vane</td>
<td>NPT</td>
</tr>
<tr>
<td>V4-2-U-NH**</td>
<td>Brass body, universal vane, no housing</td>
<td>NPT</td>
</tr>
<tr>
<td>V4-SS</td>
<td>Brass body, custom vane</td>
<td>NPT</td>
</tr>
<tr>
<td>V4-SS-NH*</td>
<td>Brass body, custom vane, no housing</td>
<td>NPT</td>
</tr>
<tr>
<td>V4-SS-2-U-BSP</td>
<td>Brass body, universal vane, no housing</td>
<td>BSPT</td>
</tr>
<tr>
<td>V4-2-U-BSP</td>
<td>Brass body, universal vane</td>
<td>BSPT</td>
</tr>
<tr>
<td>V4-SS-BSP</td>
<td>Brass body, custom vane</td>
<td>BSPT</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- Protects pumps, motors and other equipment against low or no flow
- Controls sequential operation of pumps
- Automatically starts auxiliary pumps and engines
- Stops liquid cooled engines, machines and processing when coolant flow is interrupted
- Shuts down burner when air flow through heating coil fails
- Controls dampers according to flow

**FEATURES/BENEFITS**

- Unique magnetically actuated switching design gives superior performance
- Features a free-swinging vane which attracts a magnet within the solid metal switch body, actuating a snap switch by means of a simple lever arm with no bellows, springs, or seals to fail
- Leak proof body machined from bar stock
- Internal design prevents internal pressure from building up due to body, actuating a snap switch by means of a simple lever arm with no bellows, springs, or seals to fail
- High pressure rating of 1000 psi (69 bar) with the brass body and 2000 psi (138 bar) with the 316 SS body
- Choice of custom vane calibrated for your application, Model V4, or field adjustable multilayer vane, Model V4-2-U (see set point chart)

**FEATURES/BENEFITS**

- The SERIES V4 Flow Switches is rugged and reliable, ideal for automatically protecting equipment and pipeline systems against damage from reduction or loss of flow. Time tested in thousands of pipeline installations and processing plants around the world this SERIES is Weatherproof, designed to meet NEMA 4 and Explosion-proof (listing included in specifications). This series can be used in pipes 1-1/2˝ (38.10 mm) and up.

**SPECIFICATIONS**

**Service:** Gases or liquids compatible with wetted materials.

**Wetted Materials:** Vane: 316 SS; Body: Brass or 316 SS standard; Magnet: 316 SS optional; Options: Other materials also available, consult factory (e.g., PVC, Hastelloy, Nickel, Monel, Titanium).

**Temperature Limit:** -4 to 275°F (-20 to 135°C) standard, MT high temperature option -4 to 163°F (-20 to 73°C); Process temperature -4 to 163°F (-20 to 73°C).

**Pressure Limit:** Brass body 1000 psi (69 bar), 316 SS body 2000 psi (138 bar), optional 5000 psi (345 bar) available with 316 SS body and SPDT switch only.

**Enclosure Rating:** Weatherproof and Explosion-proof, *listed with UL and CSA for Class I, Groups C and D; Class II, Groups E, F, and G.

**Process Connection:** 1-1/2˝ male NPT or BSPT or 38.10 mm.

**Mounting Orientation:** Within 5° of vertical for proper operation. Units for horizontal installation (vertical pipe with up flow) available.

**Set Point Adjustment:** For universal vane: five vane combinations. Weight: 4 lb 8 oz (1.9 kg).

**Agency Approvals:** ATEX, CE, CSA, FM, IECEx, UL**.

**OPTIONS**

**OPTIONS**

**To order add suffix:**

- **-D:** DPDT contacts
- **-MV:** Gold plated contacts, options for dry circuits
- **-MT:** High temperature, option rated 400°F (204°C)
- **-TRI:** Increasing flow time delay relay option with 2 SPDT contacts, adjustable from 0-1 to 0-31 minutes
- **-TRD:** Decreasing flow time delay relay option with 2 SPDT contacts, adjustable from 0-1 to 0-31 minutes
- **-316:** 316 SS magnet keeper, option to replace standard 430 SS
- **-AT:** Vertical up flow, option for upward flow in vertical pipe
- **-IEC:** IECEx compliant construction
- **-IEC:** IECEx certified construction
- **-BSPT:** Female BSPT process connection and M25 conduit connection

**OPTIONS**

*No housing option (-NH) has no approvals

---

For custom vane models, please supply factory with following information: pipe size, flow direction (horizontal, up), mounting, pressure, temperature, specific gravity, flow rates (maximum normal, actuation/deactuation†), etc.

†When both values are supplied, note which is critical

**NOTE:** For custom vane models, please supply factory with following information: pipe size, flow direction (horizontal, up), mounting, pressure, temperature, specific gravity, flow rates (maximum normal, actuation/deactuation†), etc.

**WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

USA: California Proposition 65
**FLOTECT® VANE OPERATED FLOW SWITCH**

Field Adjustable — Dependable Protection Against Flow Variation or Stopping in Pipelines for Fluids, Gases and Flowing Solids

**V4 UNIVERSAL VANE FLOW CHARTS**

Values shown in both charts are nominal. If normal flows exceed actuation rates by less than 10%, custom vanes are recommended. Figures are based on standard vertical installation in a 1-1/2” threaded branch connection in a horizontal run of pipe.

### APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR COLD WATER; GPM (LPM)

<table>
<thead>
<tr>
<th>Vane Layers</th>
<th>1.5” Pipe</th>
<th>2” Pipe</th>
<th>3” Pipe</th>
<th>4” Pipe</th>
<th>6” Pipe</th>
<th>8” Pipe</th>
<th>10” Pipe</th>
<th>12” Pipe</th>
<th>14” Pipe</th>
<th>16” Pipe</th>
<th>18” Pipe</th>
<th>20” Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7-3</td>
<td>15-8</td>
<td>45-22</td>
<td>95-40</td>
<td>210-120</td>
<td>375-175</td>
<td>600-300</td>
<td>900-450</td>
<td>1200-600</td>
<td>1400-800</td>
<td>2000-1000</td>
<td>2400-1200</td>
</tr>
<tr>
<td>1 &amp; 2</td>
<td>7-4</td>
<td>23-14</td>
<td>50-35</td>
<td>130-90</td>
<td>230-150</td>
<td>450-250</td>
<td>750-450</td>
<td>1050-750</td>
<td>1250-950</td>
<td>1550-1150</td>
<td>2500-1400</td>
<td>3000-1800</td>
</tr>
<tr>
<td>1, 2, 3 &amp; 4</td>
<td>11-7</td>
<td>27-19</td>
<td>80-60</td>
<td>200-90</td>
<td>310-200</td>
<td>550-300</td>
<td>850-600</td>
<td>1150-850</td>
<td>1350-1050</td>
<td>1750-1350</td>
<td>2500-2000</td>
<td>3000-2500</td>
</tr>
<tr>
<td>1, 2, 3, 4 &amp; 5</td>
<td>17-12</td>
<td>60-45</td>
<td>120-90</td>
<td>230-150</td>
<td>310-200</td>
<td>480-300</td>
<td>680-500</td>
<td>900-700</td>
<td>1050-900</td>
<td>1450-1100</td>
<td>2100-1700</td>
<td>2500-2200</td>
</tr>
</tbody>
</table>

Actuation rates are based on cold water at a specific gravity of 1.0.

For fluids of different specific gravity, actuation rates may be approximated by dividing the rate shown by the square root of the specific gravity.

### APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR COLD AIR; SCFM (LPS)

<table>
<thead>
<tr>
<th>Vane Layers</th>
<th>1, 2, 3, 4 &amp; 5</th>
<th>60-45</th>
<th>310-200</th>
<th>480-300</th>
<th>680-500</th>
<th>900-700</th>
<th>1050-900</th>
<th>1450-1100</th>
<th>2100-1700</th>
<th>2500-2200</th>
<th>3000-2500</th>
<th>3500-3000</th>
<th>4000-3500</th>
<th>4500-4000</th>
<th>5000-4500</th>
<th>5500-5000</th>
<th>6000-5500</th>
<th>6500-6000</th>
<th>7000-6500</th>
<th>7500-7000</th>
<th>8000-7500</th>
<th>8500-8000</th>
<th>9000-8500</th>
<th>9500-9000</th>
<th>10000-9500</th>
</tr>
</thead>
</table>

Actuation rates are based on air at standard conditions.

For gases at other pressures, temperatures, or specific gravities, consult factory for equivalent flow approximations.

---

**APPLICATION DRAWINGS**

**FOR FLOTECT® AUTOMATIC FLOW SWITCHES**

- **Threaded Branch Connection Installation.** May also be installed using tee, flange or coupling.

---

**USA: California Proposition 65**

⚠️ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov