Automated Ball Valve - Three-Way Plastic

**W. Anderson**

The Series 3PBV is ideal for mixing or diverting services in industrial, chemical, turf and irrigation, and pool and spa applications, as well as for use with potable water. The valve features a sleek design for efficient automation, reinforced TFE seats and EPDM seals for longer life, and an all PVC construction for heavyweight durability at a lightweight cost. Valves also come standard with field selectable NPT or socket process connections.

The 3PBV is an economical automated valve package with either an electric or pneumatic actuator. Electrically actuated models are weatherproof, NEMA 4 (IP56), powered by standard 115 VAC supply, and are available in either two-position or proportional control. Actuators are constructed of anodized aluminum and are epoxy coated for years of corrosion resistance. Actuators are equipped with a 3- to 32-volt DC solenoid for an electric actuator and a SV3 solenoid valve to electrically switch the supply pressure between the air supply ports.

The 3PBV features a 3-seat design for efficient automation, reinforced TFE seats and EPDM seals for reliable valve performance. Wetted materials include aluminum and TFE, with all PVC construction for heavy-duty durability at a lightweight cost.

### Specification

- **Service**: Compatible liquids or gases.
- **Body**: 3-way.
- **Line Size**: 1/2” to 2”.
- **End Connections**: Female NPT or socket (field-selectable).
- **Pressure Limit**: 1/2” to 1-1/2”: 232 psi (16.0 bar) @ 73°F (23°C); 1-1/4” to 2”: 150 psi (10.3 bar) @ 73°F (23°C) WOG; Vacuum: 29” Hg. See chart for curve.
- **Wetted Materials**: Body, and connectors; PVC; Ball, stem: PVC; Seat: TFE; Stem seal: EPDM.
- **Temperature Limit**: 32°F to 140°F (0 to 60°C).

### Electric Actuator

- **Power Requirements**: 120 VAC, 50/60 Hz, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.
- **Power Consumption (Locked Rotor)**: DA series: 0.33 A, 2”: 0.75 A; Modulating: 0.75 A. SR series: 0.33 A, 2”: 0.75 A; Modulating: 0.75 A.
- **Cycle Time (per 90°)**: DA1: 0.02 s; DA2: 0.22 s; DA3: 0.33 s; SR1: 0.22 s; SR2: 0.25 s; SR3: 0.5 s; Modulating: 5 s.
- **Duty Cycle**: DA series: 2”-4” 2.5 s; SR series: 2”-4” 2.5 s; Modulating: 75%.
- **Enclosure Rating**: NEMA 4. Optional NEMA 7 (Class 1, Div. II groups A, B, C, D).
- **Housing Material**: Aluminum with thermal bonding polyester powder finish.
- ** Temperature Limit**: 0 to 150°F (-18 to 65°C).
- **Conduit Connection**: 1/2” female NPT.
- **Modulating Input**: 4 to 20 mA.
- **Standard Features**: Manual override and visual position indicator except modulating units.
- **Pneumatic “DA” and “SR” Series**
  - **Type**: DA series is double acting and SR series is spring return (rack and pinion).
  - **Normal Supply Pressure**: 80 psi (5.5 bar).
  - **Maximum Supply Pressure**: 120 psig (8 bar).
- **Air Connections**: DA/SR1 to 5: 1/8” female NPT, all other sizes: 1/4” female NPT.
- **Air Consumption (per stroke)**: DA1: 2.32 in³; DA2: 9.34 in³; SR3: 17.21 in³.
- **Cycle Time (per 90°)**: DA1: 0.03 s; DA2: 0.04 s; SR2: 0.09 s; SR3: 0.14 s.
- **Housing Material**: Anodized aluminum body and epoxy coated aluminum end caps.
- **Temperature Limit**: -4 to 180°F (-20 to 82°C).
- **Accessory Mounting**: NAMUR standard.
- **Standard Features**: Visual position indicator.

### Options

- **Explosion Proof Electric Actuators**: Add “EX” to model number.
- **Actuator Size**: + $236.00
- **Solenoid Valve**: See Model SV3.

### Product Information

<table>
<thead>
<tr>
<th>Size</th>
<th>CV</th>
<th>Double Acting Pneumatic</th>
<th>Spring Return Pneumatic</th>
<th>Two Position Electric</th>
<th>Modulating Electric</th>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>3PBVPDA102</td>
<td>$350.00</td>
<td>$415.00</td>
<td>$3BPBVP1102</td>
<td>$2060.00</td>
<td></td>
</tr>
<tr>
<td>3/4”</td>
<td>3PBVPDA103</td>
<td>374.00</td>
<td>448.00</td>
<td>3BPBVP1103</td>
<td>2026.00</td>
<td></td>
</tr>
<tr>
<td>1”</td>
<td>3PBVPDA104</td>
<td>410.00</td>
<td>477.00</td>
<td>3BPBVP1104</td>
<td>2061.00</td>
<td></td>
</tr>
<tr>
<td>1-1/4”</td>
<td>3PBVPDA105</td>
<td>623.00</td>
<td>700.00</td>
<td>3BPBVPV1202</td>
<td>2222.00</td>
<td></td>
</tr>
<tr>
<td>1-1/2”</td>
<td>3PBVPDA206</td>
<td>690.00</td>
<td>728.00</td>
<td>3BPBVPV1206</td>
<td>2274.00</td>
<td></td>
</tr>
<tr>
<td>2”</td>
<td>3PBVPDA207</td>
<td>849.00</td>
<td>877.00</td>
<td>3BPBVPV1207</td>
<td>2351.00</td>
<td></td>
</tr>
</tbody>
</table>

* Complete models include Port Configuration - see "How to Order" above.
  ① Items are subject to Schedule B discounts.

For filters or regulators see pages 562 through 566.