Plug Valves

FloLok®

PV Series

- Working Pressure: Up to 3,000 psig (200 bar)
- End Connections: 1/8 to 1/2 in. (6 to 12mm)
- Temperature Range: -10 to 400°F (-23 to 204°C)
- Wide variety of end connection types and sizes
- Flow Coefficient: Up to 6.4

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At SSP, we are proud to be an American manufacturing success story.

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PV Series Plug Valves

PV Series quarter-turn plug valves are used for isolation and flow control in a wide range of applications including: gas supply manifolds, air systems, lube system controls, laboratories, instrument gas systems.

Design

1. **1/4-TURN ACTUATION**
   - 1/4-turn, low-torque actuation
   - Directional handle indicates the direction of the flow

2. **PTFE-COATED PLUG**
   - Reduces potential for galling
   - Low maintenance

3. **PTFE-COATED O-RING SEAL TO ATMOSPHERE**
   - Choice of O-ring materials
   - Easy maintenance

4. **ONE-PIECE BODY**
   - Compact size for tight spaces and close mounting
   - Lightweight
   - Fewer leak points

**STRAIGHT FLOW PATH**
- Forward-flow throttling
- High flow

**VARIETY OF END CONNECTIONS**
- Fractional Duolok®, Unilok® and Griplok® tube ends
- Metric Duolok® tube ends
- TruFit® NPT and ISO/BSPT pipe ends

**100% FACTORY TESTED**
Ordering Information

1. Select the basic ordering number from the Part Numbers and Dimensions table based on the end connections and orifice size for the valve. Example: **PV4-4PM-D4**
   - Basic part numbers for valves with tube fitting end connections specify the Duolok two-ferrule design.
   - To order Unilok single ferrule tube ends change the D to a U. Example: **PV4-4PM-U4**
   - To order Griplok dual-ferrule tube ends change the D to a G. Example: **PV4-4PM-G4**

2. If the valve requires downstream venting to atmosphere, add a V to the base part number. Example: **PV4V-4PM-D4**

3. Select the body material, then add it to the base part number. Example: **PV4-4PM-D4-316**

4. Add Options and Accessories to the end of the part number in alphabetical order. See the Options and Accessories section for more information. Example: **PV4-4PM-D4-316-LD**
### Part Numbers and Dimensions

<table>
<thead>
<tr>
<th>End Connection</th>
<th>Basic Part Number</th>
<th>CV</th>
<th>Dimensions in (mm)(^{3,4})</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1/8 in. PV4-D2</strong></td>
<td></td>
<td>0.10</td>
<td><strong>Orifice</strong> A</td>
</tr>
<tr>
<td><strong>1/4 in. PV4-D4</strong></td>
<td></td>
<td>1.6</td>
<td>0.093 (2.3)</td>
</tr>
<tr>
<td><strong>3/8 in. PV4-D6</strong></td>
<td></td>
<td>1.1</td>
<td>0.172 (4.4)</td>
</tr>
<tr>
<td><strong>3/8 in. PV6-D6</strong></td>
<td></td>
<td>6.4</td>
<td>0.283 (7.2)</td>
</tr>
<tr>
<td><strong>1/2 in. PV6-D8</strong></td>
<td></td>
<td>4.4</td>
<td>0.283 (7.2)</td>
</tr>
<tr>
<td><strong>6 mm PV4-DM6</strong></td>
<td></td>
<td>1.6</td>
<td>0.172 (4.4)</td>
</tr>
<tr>
<td><strong>8 mm PV6-DM8</strong></td>
<td></td>
<td>6.4</td>
<td>0.283 (7.2)</td>
</tr>
<tr>
<td><strong>10 mm PV6-DM8</strong></td>
<td></td>
<td>6.4</td>
<td>0.283 (7.2)</td>
</tr>
<tr>
<td><strong>12 mm PV6-DM12</strong></td>
<td></td>
<td>4.8</td>
<td>0.283 (7.2)</td>
</tr>
</tbody>
</table>

| **Female NPT**                  |                   |     | **Connection** | **A** | **B** | **C** | **D** | **E** | **F** | **G** |
| **1/8 in. PV4-2PF**             |                   | 1.2  | 0.172 (4.4) | 1.78 (45.2) | 0.89 (22.6) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |
| **1/4 in. PV4-4PF**             |                   | 0.9  | 0.172 (4.4) | 2.09 (53.1) | 1.05 (26.7) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |
| **1/4 in. PV4-6PF**             |                   | 4.3  | 0.283 (7.2) | 2.38 (60.5) | 1.19 (30.2) | 0.67 (17.0) | 0.56 (14.2) | 2.20 (55.9) | 2.63 (66.8) | 1.12 (28.4) |
| **1/2 in. PV6-8PF**             |                   | 2.7  | 0.283 (7.2) | 2.88 (73.2) | 2.88 (73.2) | 1.44 (36.6) | 0.67 (17.0) | 0.56 (14.2) | 2.20 (55.9) | 2.63 (66.8) | 1.12 (28.4) |

| **Male NPT**                    |                   |     | **Connection** | **A** | **B** | **C** | **D** | **E** | **F** | **G** |
| **1/8 in. PV4-2PM**             |                   | 1.0  | 0.172 (4.4) | 1.53 (38.9) | 0.76 (19.3) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |
| **1/4 in. PV4-4PM**             |                   | 1.0  | 0.172 (4.4) | 1.90 (48.3) | 0.95 (24.1) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |
| **1/2 in. PV6-8PM**             |                   | 2.4  | 0.283 (7.2) | 2.64 (67.1) | 1.32 (33.5) | 0.67 (17.0) | 0.56 (14.2) | 2.20 (55.9) | 2.63 (66.8) | 1.12 (28.4) |

| **Male NPT to Fractional Tube Fitting** | **PV4-4PM-D4** | 0.9  | 0.172 (4.4) | 2.03 (51.2) | 0.95 (24.1) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |

| **Male to Female NPT**          | **PV4-4PM-4PF** | 1.0  | 0.172 (4.4) | 2.00 (50.8) | 0.95 (24.1) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |

| **Female ISO Tapered**          | **PV4-8FRT**    | 0.9  | 0.172 (4.4) | 2.21 (56.1) | 1.11 (28.2) | 0.47 (11.9) | 0.38 (9.7) | 1.68 (42.7) | 2.00 (50.8) | 0.75 (19.1) |
| **1/2 in. PV6-8FRT**            |                   | 2.7  | 0.283 (7.2) | 3.14 (79.8) | 1.57 (39.9) | 0.67 (17.0) | 0.56 (14.2) | 2.20 (55.9) | 2.63 (66.8) | 1.12 (28.4) |

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1. The Basic Ordering Numbers for tube fitting end connections specify Duolok end connections. For Unilok and Griplok end connections, see the Tube Fitting End Connection options on page 6.
2. Only Duolok tube ends are available in metric sizes.
3. Dimensions are subject to change.
4. Dimensions shown with tube fitting nuts finger-tight.
Options & Accessories

Tube Fitting End Connections
SSP provides three tube fitting designs for all PV Series valves. Use the designators below to indicate the required design. For more information about SSP tube fitting end connections see our tube fitting catalogs.
Example: PV4-U4-316 for Unilok tube end connections.

<table>
<thead>
<tr>
<th>Design</th>
<th>Description</th>
<th>Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duolok</td>
<td>2-Ferrule</td>
<td>D</td>
</tr>
<tr>
<td>Unilok</td>
<td>1-Ferrule</td>
<td>U</td>
</tr>
<tr>
<td>Griplok</td>
<td>2-Ferrule</td>
<td>G</td>
</tr>
</tbody>
</table>

Body Material
Select the valve body material required and add the designator to the valve basic part number.
Example: PV4-D4-B

<table>
<thead>
<tr>
<th>Material</th>
<th>Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>316 Stainless Steel</td>
<td>-316</td>
</tr>
<tr>
<td>Brass</td>
<td>-B</td>
</tr>
</tbody>
</table>

O-Ring Material
FKM is the standard O-ring material for all PV Series valves. To specify other O-ring materials add the material designator from the table below to the basic part number.
Example: PV4-D4-316-BN

<table>
<thead>
<tr>
<th>Material</th>
<th>Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile</td>
<td>-BN</td>
</tr>
<tr>
<td>Ethylene Propylene</td>
<td>-EP</td>
</tr>
<tr>
<td>Perfluoroelastomer</td>
<td>-KZ</td>
</tr>
<tr>
<td>Neoprene</td>
<td>-NE</td>
</tr>
</tbody>
</table>

Handle Colors
Green nylon handles are standard on non-vented valves. Red handles are standard on vented valves. For standard colored handles do not use a color designator. To select a different color handle, add the designator from the table below.
Example: PV4-D4-316-RD

<table>
<thead>
<tr>
<th>Handle color</th>
<th>Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>-BK</td>
</tr>
<tr>
<td>Blue</td>
<td>-BL</td>
</tr>
<tr>
<td>Green</td>
<td>-GR</td>
</tr>
<tr>
<td>Red</td>
<td>-RD</td>
</tr>
</tbody>
</table>

Locking Hardware
SSP offers aluminum locking devices all PV Series valves and 316 stainless steel locking devices for PV4 valves only.
PV Series locking devices:
- Use padlock with shackle diameters from 1/4 to 5/16 in. (6.4 to 8mm)
- Available factory installed or for field installation

Factory installed locking hardware can be added to any size valve by adding -LD for aluminum and -LDSS stainless steel devices to the part number.
Example: PV6-8PF-316-LD

To order locking hardware kits for field installation, select the part number from the table below. Kits include the locking plate installation instructions and all necessary hardware.

<table>
<thead>
<tr>
<th>Series</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV4</td>
<td>PV4-LDK</td>
</tr>
<tr>
<td>PV6</td>
<td>PV6-LDK</td>
</tr>
<tr>
<td>316 SS</td>
<td>PV4-LDSSK</td>
</tr>
</tbody>
</table>

Stainless Steel Handles
PV Series valves are available with a stainless steel handle and plug for valves with both brass and stainless steel valve bodies.
To order PV Series Plug Valves with stainless steel handles, add -BH1 to the part number. Example: PV4-D6-316-BH1

Special Cleaning
ASTM G93, Level C and CGA G-4.1 compliant cleaning is available for valves with oxygen compatible lubricant. To specify special cleaning, add -XP98 to the basic ordering number. Example: PV4-D4-316-XP98
Vented Valves

PV Series plug valves are available with a vented stem and ported body to allow downstream pressure to vent to the atmosphere when the valve is in the closed position.

- Vented PV Series valves come standard with a red handle. See the Handle Colors section on page 6 for other colors
- Note: The pressure rating for vented plug valves is 150 psig (10.3 bar).

To order PV Series vented plug valves, add a V to the valve size designator in the basic part number.

Examples: PV4V-D4-316

Note: Red handles are standard on vented valves. When specifying vented valves no handle designator is required.

Special Orders

The Part Numbers and Dimensions table (page 5) contains only the most popular valve configurations; many more are available. If the required valve configuration is not in the Part Numbers and Dimensions tables, use the chart below to build part numbers for quotation purposes.

```
A  B   C D   E    F
PV4   V -4PM -D4 -316 -GR- LD
```

```
A Orifice/Valve Size
PV4  PV6

B Vented Valves
  No Vent -Blank
  Downstream Vent -V

C Inlet
  Types
  Duolok Tube Fitting -D
  Unilok Tube Fitting -U
  Griplok Tube Fitting -G
  Duolok Metric -DM
  Female NPT -PF
  Male NPT -PM
  Male ISO Tapered -MRT
  Female ISO Tapered -FRT

D Outlet
  Fractional Sizes
  1  1/16 in
  2  1/8 in
  4  1/4 in
  6  3/8 in
  8  1/2 in

  Metric Sizes
  6  6 mm
  8  8 mm
  10 10 mm
  12 12 mm

E Body Material
  316 SS -316
  Brass -B

F Options
  O-rings
  -Blank
  Flourocarbon FKM (Standard)
  Nitrile Rubber -BN
  Ethylene Propylene -EP
  Perfluoroelastomer -KZ
  Neorene -NE

  Other Options
  Locking Device Aluminum -LD
  Locking Device Stainless Steel -LDSS
  Clean per ASTM G93 Level C XP98 and CGA G-4.1

  Handles
  Green Nylon -Blank
  Black Nylon -BK
  Blue Nylon -BL
  Red Nylon -RD
  SS plug with T-bar handle -BH1
```

1 Tube fitting end connection part numbers are formatted Type followed by Size. Example: D6
2 Pipe ends are formatted Size followed by Type. Example: 6PF. If the inlet and outlet are the same use only one designator
3 Options are added to the end of the part number in alphabetical order. Example: PV6-D4-316-BL-EP
4 Green handles are standard on all non-vented valves. Red handles are standard on vented valves. When specifying vented valves no handle designator is required.

Important Information

IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE PERSONAL INJURY AND PROPERTY DAMAGE. It is the sole responsibility of the system designers and users to properly select and use products for their specific applications. This document has been provided to users with technical expertise as a reference for further investigation to determine specific product needs relative to their design requirements.

Testing

All PV Series valves are factory tested with Nitrogen to 1000 psig (69 bar) at 70°F (20°C).

Warranty

FloLok valves are backed by the SSP Limited Life Time Warranty. This warranty is available from your local distributor or at www.mySSPusa.com.
Founded 1926
Privately owned, third generation business
Modern single-site vertically integrated manufacturing facility
DFARS-compliant raw material
ISO 9001 quality management system
Lifetime Limited Warranty