# PFA Plug Valves

## 43 Series

### Features

- Quarter-turn operation and full flow design.
- Light in weight.
- High-purity PFA material with low extractables for chemical resistance.
- 1/4 in. Swagelok® PFA tube fitting end connections for consistent performance.

### Technical Data

<table>
<thead>
<tr>
<th>Ordering Number</th>
<th>Orifice in. (mm)</th>
<th>$C_v$</th>
<th>Pressure Rating at 70°F (20°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFA-43S4</td>
<td>0.156 (4.0)</td>
<td>1.8</td>
<td>60 psig (4.1 bar)</td>
</tr>
</tbody>
</table>

### Pressure-Temperature Ratings

<table>
<thead>
<tr>
<th>Temperature °F (°C)</th>
<th>Liquid Service Working Pressure, psig (bar)</th>
<th>Gas Service Working Pressure, psig (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (-17) to 50 (10)</td>
<td>60 (4.1)</td>
<td>60 (4.1)</td>
</tr>
<tr>
<td>50 (10) to 70 (20)</td>
<td>60 (4.1)</td>
<td>60 (4.1)</td>
</tr>
<tr>
<td>100 (37)</td>
<td>50 (3.4)</td>
<td>50 (3.4)</td>
</tr>
<tr>
<td>150 (65)</td>
<td>30 (2.0)</td>
<td>30 (2.0)</td>
</tr>
<tr>
<td>200 (93)</td>
<td>10 (0.68)</td>
<td>—</td>
</tr>
</tbody>
</table>

Operation in a stable temperature environment will maximize valve life and performance.

### Flow Data at 70°F (20°C)

<table>
<thead>
<tr>
<th>Pressure Drop to Atmosphere (stp) psi (bar)</th>
<th>Air Flow std ft$^3$/min (std L/min)</th>
<th>Water Flow U.S. gal/min (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 (0.68)</td>
<td>20 (566)</td>
<td>5.7 (21.5)</td>
</tr>
<tr>
<td>30 (2.0)</td>
<td>37 (1047)</td>
<td>9.9 (37.4)</td>
</tr>
<tr>
<td>60 (4.1)</td>
<td>62 (1755)</td>
<td>14.0 (52.9)</td>
</tr>
</tbody>
</table>

### Materials of Construction

<table>
<thead>
<tr>
<th>Component</th>
<th>Material Grade/ASTM Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Handle insert</td>
<td>PFA 440-HP</td>
</tr>
<tr>
<td>2 Screw</td>
<td>Virgin PFA 440-HP/D3307</td>
</tr>
<tr>
<td>3 Handle</td>
<td>PFA 440-HP</td>
</tr>
<tr>
<td>4 Body, ferrules</td>
<td>PFA 440-HP</td>
</tr>
<tr>
<td>5 Nut</td>
<td>Virgin PTFE/D1710</td>
</tr>
<tr>
<td>6 Stem</td>
<td>PTFE-based</td>
</tr>
</tbody>
</table>

Wetted components listed in *italics*.

1 Blue dyed.

### Testing

Every 43 series PFA plug valve is factory tested with nitrogen at two times the rated pressure for leakage at the seat to a maximum allowable leak rate of 0.1 std cm$^3$/min. Body seals are tested with helium at two times the rated pressure to a maximum allowable leak rate of $1 \times 10^{-3}$ std cm$^3$/s.

### Cleaning and Packaging

Every 43 series PFA plug valve is cleaned and packaged in accordance with Swagelok Standard Cleaning and Packaging (SC-10). [MS-06-62](https://www.swagelok.com).
Safe Product Selection
When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

WARNING
Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.

Dimensions
Dimensions, in inches (millimeters), are for reference only and are subject to change.

**Ordering Number:** PFA-43S4  
**Weight:** 0.13 lb (0.06 kg)

![Dimensions diagram]

Dimensions shown with Swagelok nuts positioned prior to swaging.

Other Swagelok PFA Products
For more information about Swagelok PFA tubing and tools, see the Swagelok Hose and Flexible Tubing catalog, **MS-01-180**.

For more information about Swagelok PFA tube fittings, see the Swagelok PFA Tube Fittings catalog, **MS-01-05**.

For more information about Swagelok PFA needle valves, see the Swagelok PFA Needle Valves catalog, **MS-01-69**.

Installation Instructions

⚠️ **PFA tubing MUST be grooved for use with PFA tube fittings. Use the Swagelok groove cutter tool.**

1. Insert grooved PFA tubing into the Swagelok PFA tube fitting until a clicking sound is heard.
2. While holding fitting body steady, tighten the blue nut until there is no gap between the nut and body hexes.
3. Continue tightening until the nut and body hexes are aligned.

Accessories

**Panel Mount Bracket**
316 stainless steel bracket enables back or front mounting.

To order a Swagelok PFA plug valve with back mount assembly, add **-PM** to the ordering number.

Example: PFA-43S4-PM

To order a field assembly kit with mounting bracket and instructions, use ordering number SS-MB-P43.

**Panel Hole Drill Dimensions**

Panel Hole Drill Dimensions

Not required for back mount assembly

**Front Mount Assembly**
Combined panel thickness and screw head height above panel must not exceed 1/4 in. (6.4 mm).

**Back Mount Assembly**

**PFA Tubing**  
**PFA Tube Fittings**  
**PFA Needle Valve**

Warranty Information
Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.