

LOW PRESSURE VALVES, FITTINGS AND TUBING

BuTech Low Pressure Valves are designed for liquid and gas flow control in petroleum, chemical, power generating and general industrial applications.

Available in a variety of body styles, the valves are designed for operation at temperatures ranging from -100° to +600°F (-73° to +315°C). Optional packings and/or extended stuffing boxes increase the range to -423° to +1200°F (-253° to +648°C).

Their rugged construction provides assurance of fail-safe operation at pressures ranging to 15,000 PSI (1030 bar).

Note: BuTech Pressure Systems does not recommend compression sleeve connections below 0°F (-18°C) or above 650°F (343°C).

Needle Valve Features:

- Non-rotating stem prevents galling and scoring
- Five stem styles:
 - Vee
 - Metering
 - Regulating
 - Micro-Metering
 - Soft Tip
- 17-4PH Stem for longer service life. 316 wetted parts are also available by specifying option **-316WP** (see page LP-3)
- Glass-filled PTFE packing for temperatures up to 600°F (315°C)
- Integral through holes for bracket mounting, a panel-mounting option is also available (see page LP-3)
- Wide range of options allow customizing of valve
- Positive gland locking device

Materials of Construction

Standard materials of construction include 316 cold-worked stainless steel, 17-4PH, Ampco 45, and glass-filled PTFE. All BuTech equipment may also be produced in any machinable metal. Some of the more common exotic materials used are:

Hastelloy™
Inconel™
Titanium
Monel 400™

Tube Sizes: 1/16" through 1/2"
Pressures to 15,000 PSI (1030 bar)
Type: L/P Single Ferrule Compression

| Tube O.D. | Connection | Orifice | Cv* | MAWP+ |
|-----------|------------|--------------------|------|------------------------|
| 1/16" | 1/16" L/P | 0.042" (1.1 mm) | 0.06 | 15,000 PSI 1030 bar |
| 1/8" | 1/8" L/P | 0.094" (2.4 mm) | 0.12 | 15,000 PSI 1030 bar |
| 1/4" | 1/4" SL/P | 0.125" (3.2 mm) | 0.20 | 11,500 PSI 790 bar |
| 3/8" | 3/8" SL/P | 0.125" (3.2 mm) | 0.20 | 7,500 PSI 520 bar |
| 1/2" | 1/2" L/P | 0.375" (9.5 mm) | 1.90 | 5,500 PSI 380 bar |

*Cv values listed are for 2-way straight pattern valves excluding metering valves.

For 2-way angle pattern valves, increase Cv value by 50%.

For Metering Valves: Cv=.004, Port size=0.062" (1.57 mm)

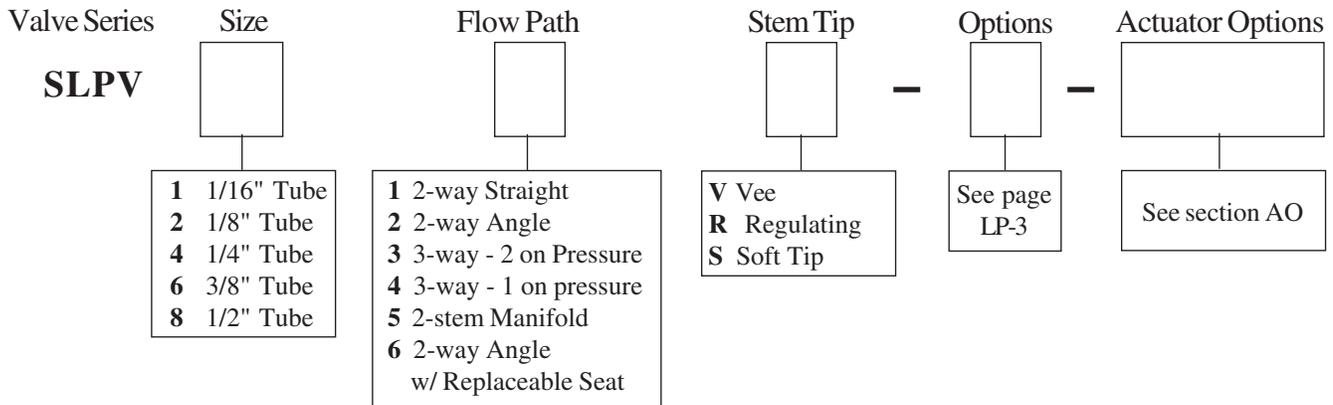
+Maximum allowable working pressure at 72° F (22° C)

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Ferrules and Glands included with all valves and fittings

All dimensions are for reference only and are subject to change.
Dimensions in parentheses are millimeters (mm)

ORDERING INFORMATION & REPLACEMENT PARTS



Examples:

SLPV42V specifies a 2-way angle valve for 1/4" tube with a Vee stem

SLPV81R-PM specifies a 2-way straight valve for 1/2" tube with regulating stem and panel-mount packing gland option

Replacement Parts

BuTech offers replacement parts in a variety of packages so you can purchase just the parts you need.

Replacement Stem Kit contains just the stem

Replacement Packing Kit contains all soft packing rings

Repair Kits contain stem, stem sleeve, stem nuts and washers, packings and packing washers (replacement seat where applicable)

| Valve Series | Repair Kits | | Replacement Stem | Replacement Packings | Replacement Valve Body |
|--------------|-------------|------------------|------------------|----------------------|------------------------|
| | All others | Replaceable Seat | | | |
| SLPV1 | RK-SLPV1* | RK-SLPV16* | LPS1* | LPPK1 | SLPV1+ |
| SLPV2 | RK-SLPV2* | RK-SLPV26* | LPS2* | LPPK2 | SLPV2+ |
| SLPV4 | RK-SLPV4* | RK-SLPV46* | LPS4* | LPPK4 | SLPV4+ |
| SLPV6 | RK-SLPV6* | RK-SLPV66* | LPS6* | LPPK6 | SLPV6+ |
| SLPV8 | RK-SLPV8* | RK-SLPV86* | LPS8* | LPPK8 | SLPV8+ |

*Complete catalog number by adding the following:

V, R or **S** for stem type

Suffix for special packing materials (see page LP-3)
(ex. **-GR** for Grafoil packings)

Suffix for special materials
(ex. **-HC** for Hastelloy)

-LT or **-HT** for cryogenic or high-temperature service

-WAO for a valve fitted with an actuator

+Complete catalog number by adding the flow path designator:

- 1 2-way straight
- 2 2-way angle
- 3 3-way, 2 connections on pressure
- 4 3-way, 1 connection on pressure
- 5 2-stem manifold
- 6 2-way angle with replaceable seat