# HAM-LET PLUG VALVES

## PLV SERIES

- Plug valve with working pressures up to 3000 psig (206 bar)
- One-piece body design and variety of O-rings for chemical compatibility
- Replaceable plug assembly

## PLV FEATURES

- Tight shut-off with throttling capability
- One piece body design
- Replaceable plug assembly
- Stainless steel and brass construction
- MAWP 3000 psi (206 bar)
- MAWT 400ºF (204ºC)
- Variable end connection types & sizes from 1/8" to 1/2" (6mm to 12mm)
- Colored nylon handles
- Low-operating torque
- Easy to maintain & clean
- Choice of o-rings for chemical compatibility
- Passivated body

## GENERAL

The PLV series offers a manually operated plug valve that features tight shut-off with high-pressure throttling capability, long life cycle service and low-operating torque.

The plug valve is rated to 3000 psig making it an optimal choice for a variety of instrumentation systems such as sampling, analytical purging and cleaning applications.

## MATERIALS OF CONSTRUCTION

| No. | Part | Qty | Material | |
| --- | --- | --- | --- | --- |
| | | | SST | Brass |
| 1 | Handle | 1 | Polythermide | |
| 2 | Pin | 1 | SST 316 | |
| 3 | Plug[1] | 1 | PTFE coated SST 316 A479 | PTFE coated brass ASTM B-16 |
| 4 | O-rings[1] | 2 | PTFE coated fluorocarbon FKM | |
| 5 | O-ring[1] | 1 | PTFE coated fluorocarbon FKM | |
| 6 | Pin | 1 | St.St.316 | |
| 7 | Body[1] | 1 | SST 316 A479 | Brass ASTM B-16 |
| 8 | Retaining ring | 1 | PH 15-7 Mo SST | |
| | Lubricant | | Silicone based | |

[1]Wetted Parts



## PRESSURE TEMPERATURE RATING

Based on PTFE Coated Fluorocarbon FKM O-rings.
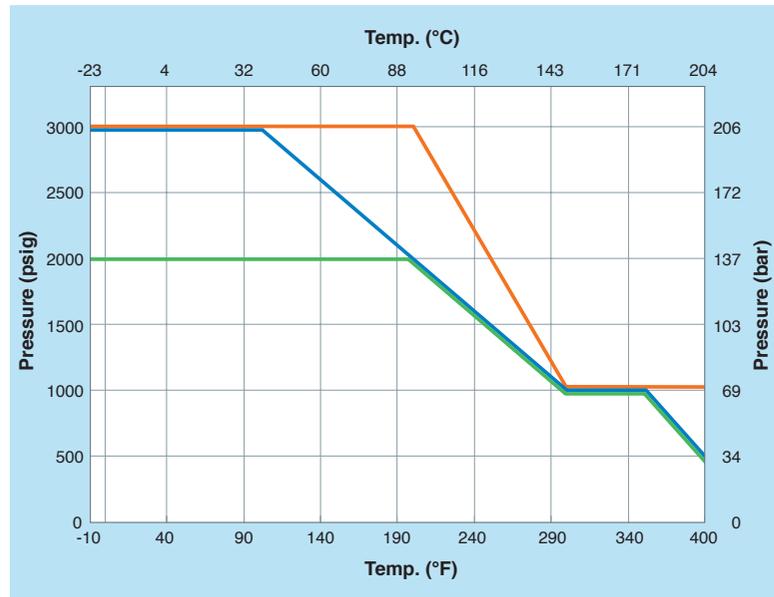


— St.St. PLV4 & PLV6    — Brass PLV4    — Brass PLV6

## O-RINGS

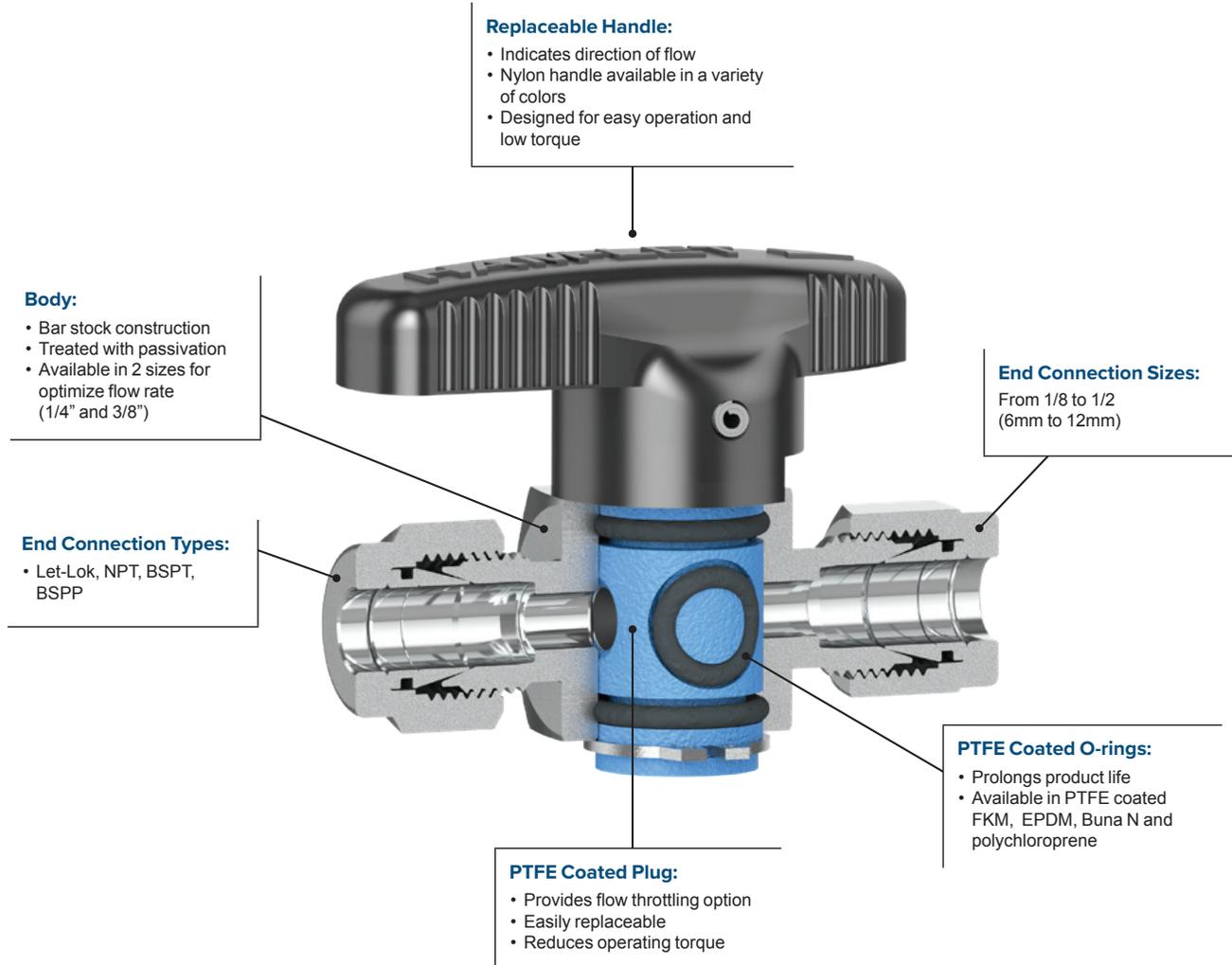Different materials available for special applications.

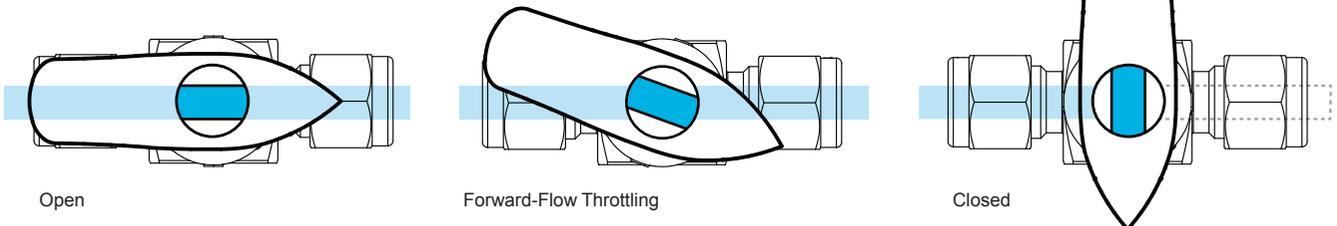| O-ring Material | Temperature Rating °F (°C) |
| --- | --- |
| PTFE coated buna N | -10 to 250 (-23 to 121) |
| PTFE coated EPDM | -50 to 300 (-45 to 148) |
| PTFE coated fluorocarbon FKM | -10 to 400 (-23 to 204) |
| PTFE coated polychloroprene (CR) | -40 to 250 (-40 to 121) |

## TESTING

The plug valve design is burst and proof tested. Standard testing for each plug valve includes testing with nitrogen at 80 & 1000 psig. Each valve is tested for leakage through the shell and plug O-Rings. The maximum allowable leakage across the ball seats is 0.1 std cc/min.

## CLEANING & PACKAGING

Every Plug valve is cleaned in accordance with standard cleaning and packaging (procedure 8184). Oxygen Clean & Lubricant-Free cleaning and packaging, in accordance with special cleaning and packaging (procedure 8185), is an option.

Lubricant-free cleaned valves have significantly higher actuation torque.

**Replaceable Handle:**
- Indicates direction of flow
- Nylon handle available in a variety of colors
- Designed for easy operation and low torque

**Body:**
- Bar stock construction
- Treated with passivation
- Available in 2 sizes for optimize flow rate (1/4" and 3/8")

**End Connection Sizes:**
From 1/8 to 1/2 (6mm to 12mm)

**End Connection Types:**
- Let-Lok, NPT, BSPT, BSPP

**PTFE Coated O-rings:**
- Prolongs product life
- Available in PTFE coated FKM, EPDM, Buna N and polychloroprene

**PTFE Coated Plug:**
- Provides flow throttling option
- Easily replaceable
- Reduces operating torque

## OPERATION

Open

Forward-Flow Throttling

Closed

- Valve is capable of bi-directional flow (please note maximum differential pressure is limited to 150 psig when flow is reversed).
- Reverse-flow throttling may damage O-ring.
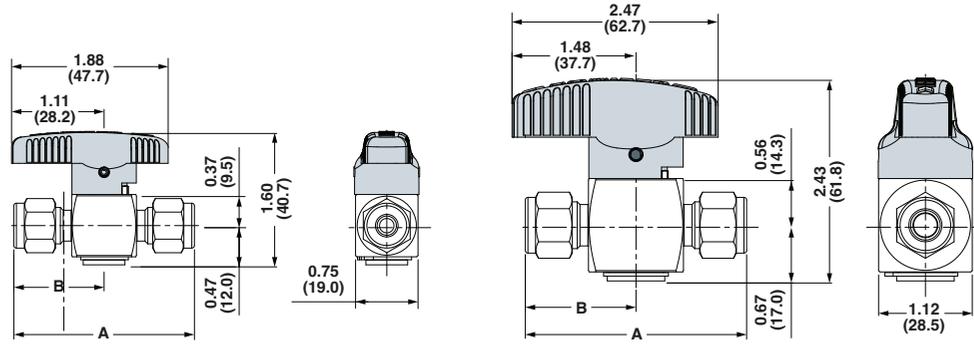
## PLV STANDARD CONFIGURATION DIMENSIONS

| Series | End Connection | Size | CV | Orifice | | Dimensions | | | |
| --- | --- | --- | --- | --- | --- | A | | B | |
| | Type | inch | | mm | inch | mm | inch | mm | inch |
| PLV4 | Let-Lok® imperial | 1/8 | 0.1 | 2.3 | 0.093 | 50.5 | 1.99 | 25.3 | 0.99 |
| PLV4 | | 1/4 | 1.6 | 4.4 | 0.172 | 55.1 | 2.17 | 27.6 | 1.08 |
| PLV4 | | 3/8 | 1.1 | 4.4 | 0.172 | 58.2 | 2.29 | 29.1 | 1.14 |
| PLV6 | | | 6.4 | 7.2 | 0.283 | 67.6 | 2.66 | 33.8 | 1.33 |
| PLV6 | | 1/2 | 4.4 | 7.2 | 0.283 | 73.2 | 2.88 | 36.6 | 1.44 |
| PLV4 | Let-Lok metric | 6 mm | 1.6 | 4.4 | 0.172 | 55.1 | 2.17 | 27.6 | 1.08 |
| PLV6 | | 8 mm | 6.4 | 7.2 | 0.283 | 67.6 | 2.66 | 33.8 | 1.33 |
| PLV6 | | 10 mm | 6.4 | 7.2 | 0.283 | 68.1 | 2.68 | 34 | 1.34 |
| PLV6 | | 12 mm | 4.8 | 7.2 | 0.283 | 75.2 | 2.96 | 37.6 | 1.48 |
| PLV4 | Female NPT/BSPT | 1/8 | 1.2 | 4.4 | 0.172 | 45.2 | 1.78 | 22.6 | 0.89 |
| PLV4 | | 1/4 | 0.9 | 4.4 | 0.172 | 53.1 | 2.09 | 26.6 | 1.05 |
| PLV6 | | | 4.3 | 7.2 | 0.283 | 60.5 | 2.38 | 30.3 | 1.19 |
| PLV6 | | 1/2 | 2.7 | 7.2 | 0.283 | 73.2 | 2.88 | 36.6 | 1.44 |
| PLV4 | Male NPT/BSPT | 1/8 | 1 | 4.4 | 0.172 | 38.9 | 1.53 | 19.5 | 0.76 |
| PLV4 | | 1/4 | 1 | 4.4 | 0.172 | 48.3 | 1.9 | 24.2 | 0.95 |
| PLV6 | | 1/2 | 2.4 | 7.2 | 0.283 | 67.1 | 2.64 | 33.5 | 1.32 |
| PLV4 | Male NPT to Let-Lok | 1/4 | 0.9 | 4.4 | 0.172 | 51.2 | 2.03 | 25.6 | 1.01 |
| PLV4 | Male to female NPT | 1/4 | 1 | 4.4 | 0.172 | 50.8 | 2 | 25.4 | 1.00 |

Dimensions are for reference only and subject to change.

## DOWNSTREAM VENT

Open

Plug vent

Body vent

Closed
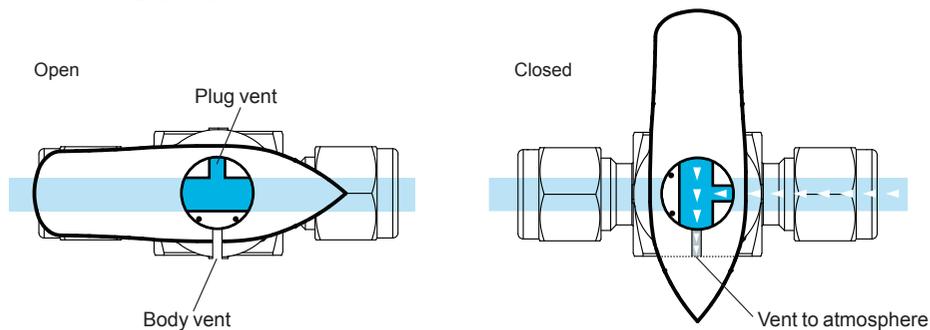
Vent to atmosphere

- In the closed position the plug valve allows the release of pressure to the atmosphere.
- The maximum working pressure for downstream vents is 150 psig.

# ORDERING INFORMATION PLV SERIES

**OPTIONAL**

PLV4 - 00 SS L 1/4 PF S - ☐ ☐ ☐

### Valves Series

| PLV4 | 1/4 Body |
|------|----------|
| PLV6 | 3/8 Body |

### Valve Type

| 00 | LET-LOK ends |
|----|--------------|
| 10 | Female ends |
| 80 | Male ends |
| 85 | Male to female ends |
| 95 | Male to LET-LOK ends |

### Body and Ends Material[2]

| SS | SST 316 |
|----|---------|
| B  | Brass |

### End Connection Type

| L | LET-LOK end |
|----|-------------|
| N | Threaded NPT |
| G | ISO parallel (BSPP) |
| R | ISO tapered (BSPT) |
| NL | NPT to LET-LOK |
| LN | LET-LOK to NPT |

Other end connections available upon request.

### End Connection Size

| 1/8" | 6 mm |
|------|------|
| 1/4" | 8 mm |
| 3/8" | 10 mm |
| 1/"2 | 12 mm |

### O-ring Material

| PF | PTFE Coated Fluorocarbon FKM Seals are standard |
|----|------|
| PB | PTFE Coated Buna N |
| PE | PTFE Coated EPDM |
| PN | PTFE Coated Polychloroprene (CR) |

### Handle

| S | Black nylon handle |
|---|--------------------|
| R | Red nylon handle |
| B | Blue nylon handle |
| G | Green nylon handle |
| Y | Yellow nylon handle |

### Approval

| DV[1] | Downstream Vent |
|-------|-----------------|

### Locking Device

| LD | Locking handle |
|----|----------------|

### Treatment

| BLANK | Standard cleaning & passivation |
|-------|------|
| OC | Oxygen clean |
| LF | Lubricant free |
| SF | Silicone free |

* For FDA option, please consult UCT

[1]MAWP 150 Psi
[2]For other materials, please consult UCT

## HANDLE KIT

Handle Kit includes handle and pin. To order a spare-parts kit, use the following format:

**Z** - **PLV4** - **HK** **S**

| Body Designator Pre-Series | |
|---|---|
| PLV4 | 1/4" body |
| PLV6 | 3/8" body |

| Kit Type | |
|---|---|
| HK | Handle kit |

| Handle | |
|---|---|
| S | Black nylon handle |
| R | Red nylon handle |
| B | Blue nylon handle |
| G | Green nylon handle |
| Y | Yellow nylon handle |

## SEAL KIT

Sale Kit includes 3 O-rings. To order a spare parts kit, use the following format:

**Z** - **PLV4** - **SK** **S**

| Body Designator Pre-Series | |
|---|---|
| PLV4 | 1/4 Body |
| PLV6 | 3/8 Body |

| Kit Type Series | |
|---|---|
| SK | Seal Kit |

| O-ring Material | |
|---|---|
| PF | PTFE coated fluorocarbon FKM |
| FB | PTFE coated buna N |
| PE | PTFE coated EPDM |
| PN | PTFE coated polychloroprene (CR) |

## PLUG KIT

Plug Kit includes handle, plug and 3 O-rings. To order a spare -parts kit, use the following format:

**Z** - **PLV4** - **SS** **PK** **PF** **S**

| Body Designator Pre-Series | |
|---|---|
| PLV4 | 1/4 Body |
| PLV6 | 3/8 Body |

| Body and Ends Material | |
|---|---|
| SS | SST 316 |
| B | Brass |

| Kit Type | |
|---|---|
| PK | Plug Kit |

| O-ring Material | |
|---|---|
| PF | PTFE coated fluorocarbon FKM |
| FB | PTFE coated buna N |
| PE | PTFE coated EPDM |
| PN | PTFE coated polychloroprene (CR) |

| Handle | |
|---|---|
| S | Black nylon handle |
| R | Red nylon handle |
| B | Blue nylon handle |
| G | Green nylon handle |
| Y | Yellow nylon handle |

**Warning!**

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.