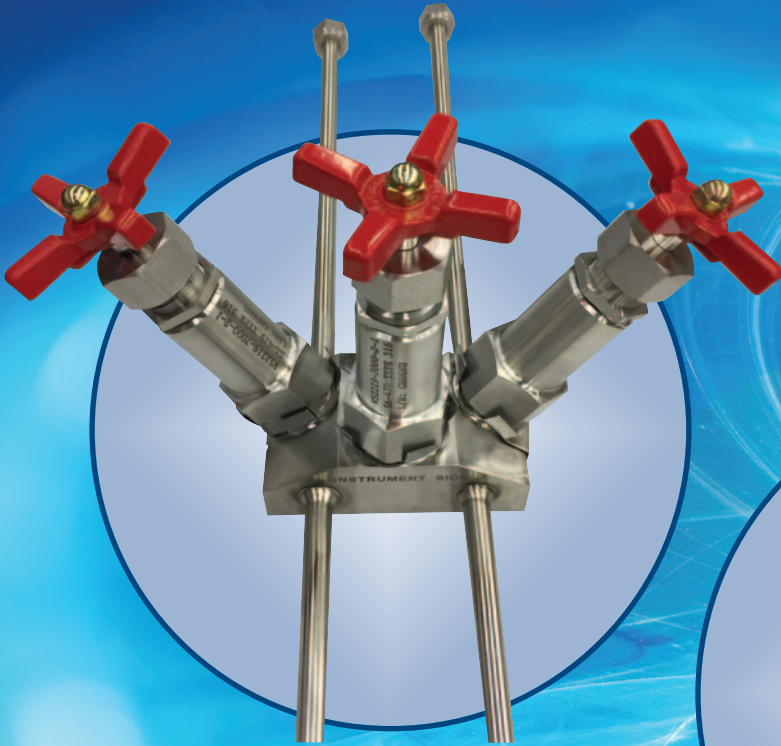




Valcor Engineering Corporation

# Instrument Isolation Valves



Valcor's instrument isolation valves are typically used in systems as shut-offs, vents, or isolation valves to other instruments in the system. They are also used for sampling, metering, analyzers, and handling of corrosive fluids.

Designed and manufactured according to customer specifications and following the guidelines of ASME B&V Codes, Valcor's instrument isolation valves are available with manual or pneumatic operators. These valves are single body or manifold bodies, with various types of end fittings, such as tube, welded, or compression fittings.

# Manually Operated Valves

## V522-7000 – Bellows Sealed

V522-7000 series bellows sealed plug valves have a wide operating fluid temperature range of  $-320^{\circ}$  to  $+1200^{\circ}\text{F}$  ( $-196^{\circ}$  to  $+649^{\circ}\text{C}$ ). This series meets the demands of many critical fluid control conditions. Operating pressure range is 0-2000 psig. The bellows sealed construction assures zero external leakage of process fluids. These valves are typically used in high temperature systems, critical gas analysis, corrosive fluids, and vacuum systems.

### Additional Features:

- Positive plug return on all valves prevents plug sticking in severe service
- No torque transmitted to bellows
- Secondary o-ring seal in upper bonnet prevents leakage if bellows is damaged
- Non-rising stem prevents falling or seizing of stem threads
- Heavy-duty welded bellows provide long cycle life and assures leak tight service
- Long size bellow ensures full lift and utilization of full orifice area
- Various end connection choices



## V522-7010 – Stem Packed

V522-7010 series needle valves are designed for the most severe service applications. They feature a stem backseat for safety, a long cycle life with high temperature capability to  $700^{\circ}\text{F}$  ( $370^{\circ}\text{C}$ ), and a union bonnet for safe, convenient maintenance. These valves are typically used in high temperature systems, corrosive fluids and hot condensates.

### Additional Features:

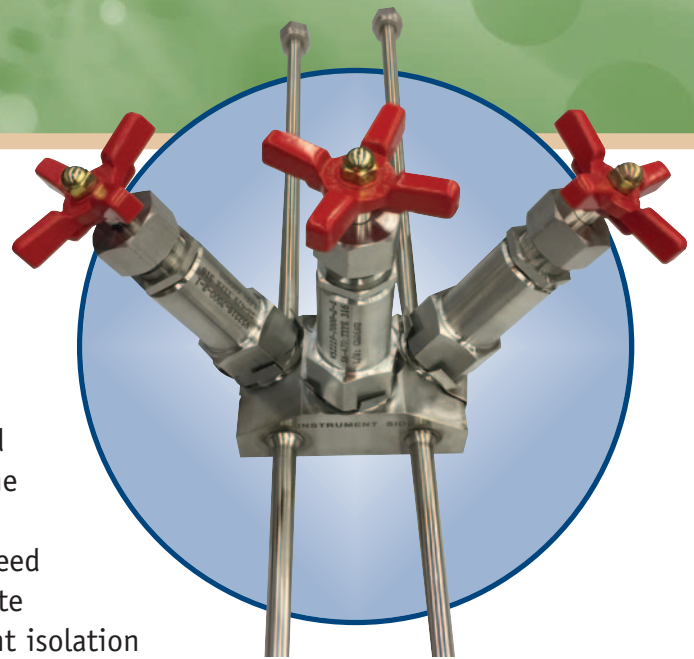
- Union bonnet design
- 17-4PH stainless steel hardened stem with dry film lubricant on threads and hardened thread gland for increased thread life
- Non-rotating hardened stem tip prevents galling
- All valves are tested for bubble-tight leakage at both seat and packing
- Various end connection choices, including tube fittings, female NPT, or tube socket weld connections



# Manifolds

## V522-7025

V522-7025 series is a 2-way bellows sealed plug valve manifold. It incorporates the design concepts of the single valve (series V522-7000) into a multi-valve manifold body construction. This series is typically used with differential pressure and multivariable transmitters. In a 3-valve manifold design, two block valves provide instrument isolation, and one equalizer valve is positioned between the high and low transmitter process connections. Additionally, a Block and Bleed 2-valve manifold design is used with inline gauge and absolute pressure transmitters. A single block valve provides instrument isolation and a plug valve provides drain/vent capabilities.



### Additional Features:

- Positive plug return on all valves prevents plug sticking in severe service
- No torque transmitted to bellows
- Secondary o-ring seal in upper bonnet prevents leakage if bellows is damaged
- Non-rising stem prevents falling or seizing of stem threads
- Heavy-duty welded bellows provide long cycle life and assures leak tight service
- All-welded design for high-temperature and high-pressure service
- Plugs and bellows are replaceable

## V522-7021

V522-7021 series is a 2-way packed stem needle valve manifold. It incorporates the design concepts of the single valve (series V522-7010) into a multi-valve manifold body construction. This series is typically used with differential pressure and multivariable transmitters. In a 3-valve manifold design, two block valves provide instrument isolation, and one equalizer valve is positioned between the high and low transmitter process connections. Additionally, a Block and Bleed 2-valve manifold design is used with inline gauge and absolute pressure transmitters. A single block valve provides instrument isolation and a plug valve provides drain/vent capabilities.

### Additional Features:

- Integral stem backseat
- Union bonnet design
- Grafoil packing ring located below stem threads extends service to 700°F (370°C)
- Non-rotating hardened stem tip prevents failing
- 17-4PH stainless steel hardened stem with dry film lubricant on threads and hardened thread gland for increased thread life

# Pneumatically Operated Valves

## V522-7050

V522-7050 series of pneumatically operated bellows sealed plug valves have a wide operating fluid temperature range of -320° to 1200°F (-196° to +649°C). This series offers fail safe operation for either normally open or normally closed position in automated instrument and process systems. Operating pressure range is 0-2000 psig. The bellows sealed construction assures zero external leakage of process fluids. Typical applications of these valves include high temperature systems, critical gas analysis, corrosive fluids and vacuum systems. These valves are used in areas that are not accessible and manual operation is not possible, as well as in hazardous fluid handling where remote control is mandatory.



### Additional Features:

- Positive plug return on all valves prevents plug sticking in severe service
- No torque transmitted to bellows
- Secondary o-ring seal in upper bonnet prevents leakage if bellows is damaged
- Non-rising stem prevents falling or seizing of stem threads
- Heavy-duty welded bellows provide long cycle life and assures leak tight service
- All-welded design for high-temperature and high-pressure service
- Plugs and bellows are replaceable

## About Us

Valcor's Nuclear Group provides high quality flow control devices to the nuclear power industry, including nuclear power plants, laboratories, and waste treatment facilities. For decades, Valcor has earned a reputation of dependability with an expansive installed base of valves and related components in both the U.S. and the international nuclear market.

Valcor's family of nuclear flow control components include an extensive line of solenoid operated valves, flow and pressure regulators, check valves, excess flow check valves, cavitating venturis and plug resistant orifices. Additionally, Valcor has teamed with Hoke, Circle Seal, CU Services and Fox Valve to provide "N" stamped and safety related versions of products formerly supplied to the nuclear market by these companies.

### Nuclear Standards & Certifications

- |                    |                      |                 |                    |
|--------------------|----------------------|-----------------|--------------------|
| • ASME NQA-1       | • ANSI N45.2         | • MIL-STD-767   | • ASME B & PV Code |
| • IEEE 323/344/382 | • 10CFR50 Appendix B | • MIL-STD-45662 | Section III        |
| • ASME QME-1       | • MIL-Q-9858         | • HAF 604       | • N Stamp          |
| • ISO-9001         | • MIL-I-45208        | • CSA N285      | • NPT Stamp        |

