



Versa Products Company, Inc.
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General Installation and Maintenance of Versa Valves

INS-GEN-1 (Rev-A)

Review all product specifications and illustrations prior to installation, maintenance, or operation.

Warranty

NOTE: To remain compliant with the Versa 10-year limited warranty, all products must be used within specified pressure, temperature, and operating voltage ranges per engineering specifications.

To request documents, call your local sales representatives, or visit our website at: www.versa-valves.com/resources/, or scan the QR code below.



Filtration

40 micron filtration is recommended.

Storage before Installation

- Indoor, dry, vented storage is recommended.
- The maximum storage temperature should not exceed 140°F/60°C.
- Do not expose products or rubber components to:
 - extreme temperature
 - extreme humidity (not more than 75% rh)
 - direct sunlight
 - ozone generating equipment
 - excessive vibration
- Plug all product ports to prevent contamination.
- If the product is stored in a temperature below the elastomer's minimum working temperature, raise the temperature to within rated conditions prior to valve operation.

Lubrication

A general purpose, non-detergent, ISO, ASTM viscosity grade 32 lubricating oil is recommended.

NOTE: To avoid damage to the seals, do not use synthetic detergents or oils with alcohol content.

Valve Specifications

- **Internally Piloted** valves require minimum pressure at *INLET* to operate and require back pressure for operation. Bench testing may require plugging the cylinder port or installation into the circuit.
- **Externally piloted** valves require minimum pressure at 1/8" Ex-Pilot Port to operate.
- Plumb all valves to the designated ports marked on the valve, as valves may not operate due to damaged seals if plumbed improperly.
- Minimum pressure for operation and flow diagrams for all valves are provided on the specification sheet.
- 3-way valves that are **Normally Closed**, have *inlet* blocked to the cylinder port when not energized.
- 3-way **Normally Open** valves have *inlet* open to the cylinder port when not energized.

Equipment Salvage

Observe Local, National and International refuse regulations.

Installation

Preparation

- Do not remove the valve from the bag prior to installation to protect against dirt and debris.
- If removed from the bag, check for dirt and debris, and clean as necessary.
- If the fittings are pre-installed, remove and return to the bag until valve installation.
- Blow out all air lines before installation.

Port Connection

- Use the port markings as a guide to connect the tube/pipe.
- Apply pipe compound to the male threads of the pipe or fitting, not to the valve threads. This will avoid getting the compound inside the valve.
- Do not allow sealant inside the port when installing piping or fittings.
- When applying seal tape, leave 1.5 to 2 threads exposed on the end of the pipe/fitting.
- If removing fittings for re-adjustment, remove all traces of sealant from threads prior to re-application to ensure no debris enters the valve.
- Do not use the solenoid or the valve for leverage when tightening.
- Overtightening may cause damage to the pipe or fitting.
- To further protect the valve internals, it is recommended to use dust/debris excluders available from Versa on any open exhaust ports.

Mounting

- Valves **should always** be mounted securely through mounting holes in the valve body.
- Mounting hole dimensions and locations are illustrated on the valve drawings.
- Consider the orientation of the vent holes on the valve actuators to avoid exposing the valve to the ingress of debris or water.
- For mounting the valve to a panel, use one or two panel nuts.

Electrical connection

Solenoid operated valves only

Note: The wiring MUST comply with Local and National codes.

- Solenoids with wire leads: Unless wires are labeled as POS or NEG, the solenoid is not polarity-sensitive. A ground wire must be connected to a proper earthground.
- Solenoid with standardized three-pin molded coils: Fit industry standard EN 175301-803 connectors.
- Solenoid with Integral Junction box: Connect the incoming supply cable to the terminal block.

Note: If you remove the mounting plate assembly for easy access to the terminal block be certain to re-assemble when connections are complete.

- Loosen the top solenoid nut to re-orient the solenoid conduit.
- If the top solenoid nut is secured with a set screw, unscrewed first before loosening the top nut.
- To avoid damaging the solenoid, use following torques: 55 in-lb (for nuts up to 1 1/2" diameter) and 75 in-lb (for 1 5/8" diameter nut).
- Torque specifications are on the valve drawings.

Conduit connection (where applicable)

- Ensure that the cable entry device is suitable for the conditions of use and correctly installed.
- For hazardous locations, enclosures should be certified for explosion protection in accordance with the regulations in the installation location.
- For ambient temperature up to 140°F/60°C, use cables and cable glands suitable for at least 185°F/85°C.
- For ambient temperature up to 190°F/90°C, use cables and cable glands suitable for at least 239°F/115°C.

Note: To seal the conduit entry, Versa recommends Never-Seez Marine Grade thread lubricant from Bostik Inc. or LUBG-6 from Killark.

During operation

- When energized for an extended time, solenoid coils may reach high temperatures (up to 140°F/60°C above ambient temperature). Make sure to adequately ventilate and shield from any external heat sources.
- To avoid damage, do not allow water to freeze in the valve or pipe work.
- If prolonged freezing conditions are expected, insulate all exposed pipes or drain the system.
- Use dust and moisture exclusion accessories.

Basic Troubleshooting

Problem	Cause	Solution
Solenoid valve does not shift when energized	Improper wire connection	Reconnect the wires and the connector assembly.
	Power voltage outside working range	Ensure voltage is set per specified rating
	The coil is short / open circuited.	Replace it.
	Pressure differential is outside working range	Adjust the pressure differential or replace the solenoid if necessary.
	Fluid temperature too high.	Replace with an appropriately rated solenoid valve
	Dirt/Debris in the valve	Clean out the valve and replace seals if damaged.
	Valve plumbed incorrectly	Check that the proper port connections are made
Solenoid valve does not return when de-energized	Damaged seals	Replace the seals.
	Fluid temperature is outside working range	Replace with an appropriately rated solenoid valve.
	Dirt/Debris in the valve	Clean out the valve and replace seals if damaged.
	Deformed spring	Replace it.
	Exhaust port is blocked.	Clean out the valve regularly.
There is internal leakage	Damaged seals/springs	Replace (repair kits available.)
There is external leakage	Loose connections (including fittings), damaged seals	Inspect fitting connections and correct as needed. Tighten screws and replace seals where necessary.
Noise upon activation	Loose solenoid nuts, electrical connections	Tighten it (see electrical connection.)
	Voltage fluctuation outside working range	Regulate the voltage properly.
	Dirt/Debris on solenoid plunger	Clean out or change it.

Periodic Preventative Maintenance

WARNING: POWER SUPPLY MUST BE CUT OFF AND MEDIA PRESSURE DISCHARGED PRIOR TO MAINTENANCE.

- Maintenance must be performed by a technician familiar with the product.
- Regular cycling, inspection, and maintenance promotes proper operation of Versa products.
- Required cycling and maintenance schedules vary depending on the environment, media, and frequency of use.
- Products which are under high stress (temperature, cycling or pressure), should be monitored more frequently.
- Maintenance should be performed on a regular basis, and consist of:
 - Disassembly and cleaning of internals
 - Replacement of all soft seals
 - Re-greasing
 - Spring replacement (for severe and high cycle applications)

Note: For additional information, contact customer service at 201-843-2400 ext-3, or email SALES@VERSA-VALVES.COM.