



Series FNV, Forged Needle Valve User Instructions

Scope:

These user instructions are applicable for Generant Series FNV, Forged Needle Valves sizes 1/8", 1/4", and 3/8" (Connection Types NPT, SAE, BSPT and Bi-Lok Tube)

Intended Use:

The intended use of these valves is to meter the flow in a given system. These products can be used with the following media; Inert gases, Oxygen and potential oxidizer gases > 21% and Hydrogen. When intended use is for Oxygen and oxidizer gases >21%, valves must be specified to be "Cleaned for Oxygen service" and will be supplied heat-sealed in poly bags. Proper seal material selection is important to ensure compatibility with intended media.

Technical Data:

FNV Series Needle Valves are 100% factory tested for leakage. Series FNV Needle Valves are marked with Manufacturer, Part Number and Direction of Flow. Operating parameters are listed below:

Maximum Operating Pressure: Brass Valves 3000 Psi (207 Bar) @ 100°F*
Stainless Valves 5000 Psi (345 Bar) @ 100°F*

Temperature Range:

Metal to Metal Stem: -320° to 450° F (-195° to 232° C)

PCTFE Soft Stem Tip: -65° to 200°F (-54° to 93° C)

*for Pressure Ratings at temperatures above 100°F, see Table in Product Literature.

⚠ WARNING Generant Series FNV Needle Valves are supplied assembled and 100% Factory tested for leakage. Valves that are supplied "Cleaned for Oxygen Service" from the factory are supplied heat sealed in poly bags. Once removed from the bag, integrity of this cleaning has been compromised. Proper handling should be used to ensure the integrity and cleanliness of the system.

Installation:

1. Install Needle Valve with Arrow facing in the direction of Controlled Flow.
2. When installing valves with Male NPT or BSPT threads, Teflon tape should be used to seal the connection between the relief valve and the piping system.
3. Beginning with the first thread, wrap tape in the direction of the male tapered thread spiral, and join with a slight overlap.
4. Make sure tape does not overhang the first thread, as the tape could shred and get into the system.
5. Cut off excess tape. Draw the free end of the tape around the thread tautly so that it conforms to the threads. Press in firmly at the overlap point. The connection is now ready for makeup. (If any additional pipe sealant is being used (i.e.: pipe dope or Swak), **Do not** apply it to the first thread of the valve)
6. Thread the valve into the connection port hand tight. Using an open-end wrench, tighten the valve an additional ¾ to 1 full turn.
7. When ordered with Bi-Lok connections, follow installation instructions for Dual Ferrule Tube Fittings, per Generant Series "D" Catalog.
8. Stem Packing is adjustable. If Leakage is observed around the stem, tighten Packing Nut until Leakage stops.

Safe Component Selection

When selecting a component, the total system design must be considered to ensure safe, trouble free performance. Component function, materials compatibility, adequate ratings, proper installation, operation, cleanliness and maintenance are the responsibility of the system designer and user.

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