

Instruction Manual Applying To Excess Flow Valves for NH₃ or LP-Gas Service

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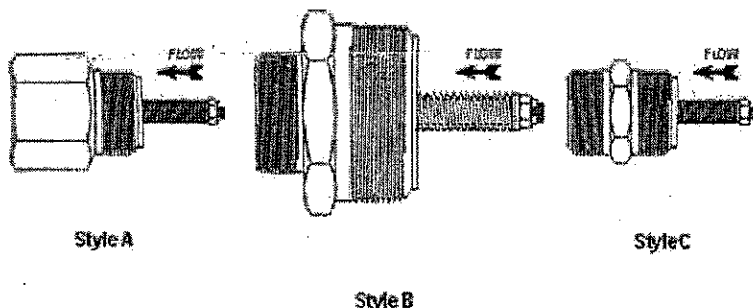
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KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.

WARNING

Before installation or removal of any valve, the system must be purged completely of all product. Use proper safety equipment at all times. For the use of ANHYDROUS AMMONIA an abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First aid treatment for exposure to ammonia. Installation of valves for LP-GAS in most states must comply with NFPA 58 standards. Therefore, only trained personnel should install and service this equipment. **Once per year the excess flow valve should be tested as described below at normal and minimum operating temperatures.**

CAUTION: Contact with or inhalation of Liquid Anhydrous Ammonia or L-P Gas or their vapors can cause serious injury or death. Dispersment must be in accordance with local regulations. For the proper handling and storage of Anhydrous Ammonia refer to ANSI Standard K61.1. For the proper handling and storage of Liquefied Petroleum Gas refer to NFPA Pamphlet 58.



1. The excess flow valve's closing flow rating must be less than the capacity of the NH₃ system in which the valve is being used. Allowance must be made for valves, fittings, hose, etc., in determining the capacity of the system. If branches or restrictions with a smaller capacity than the total system are incorporated, additional excess flow valves must be installed at these points.
2. Manually operate the excess flow valve's poppet before installation to assure parts were not damaged in shipment or blocked with dirt or foreign debris.
3. Use pipe dope on the male threads of the valve or the pipeline. Make sure flow is in the direction of the arrow stamped on the body, see illustration. Large size valves may require an extra length of pipe on the wrench handle to provide increased installation torque.
4. The excess flow valve should be checked periodically for corrosion and free operation of the excess flow mechanism. This must be done by physically inspecting the valve. Make sure system is empty of product before removing. Once per year the excess flow valve should be tested as described below at normal and minimum operating temperatures.
5. After an excess flow valve closes, leakage through the equalizing hole will continue to allow a small discharge of liquid product. The appearance that the valve may not have closed properly is due to the fact that NH₃ liquid expands approximately 800 times, and propane liquid expands approximately 300 times as it flashes to a vapor in the atmosphere. A cloud of vapor will be seen even though the valve has closed properly. For this reason the operator must be familiar with the location of all shutoff valves in the system. An Excess Flow Valve is not intended to shut off bubble tight when closed, but only to reduce the flow of vapor to a manageable amount until the appropriate shutoff valve can be safely closed.

A Restriction Upstream or Downstream Of An Excess Flow Valve That Does Not Allow A Flow Equal To The Valve Flow Rating Will Not Allow The Valve To Actuate Regardless Of A Break Downstream Of The Valve.

TESTING THE EXCESS FLOW VALVE

1. Install a ball valve and vent line at each logical piping or hose failure point and do the following at each point. **NOTE:** The valve line & vent line must be larger than the upstream piping so as to not cause a restriction and the vent line must be secured and positioned for safety of the test. **NOTE:** The test MUST be conducted at the lowest system pressure. Remember that temperature greatly affects system pressure.
2. Open all upstream valves first and then quickly fully open the test ball valve.
3. The excess flow valve should shut immediately.
4. **If it does not close, a smaller excess flow rated device must be installed.**