



INSTALLATION AND MAINTENANCE INSTRUCTIONS

MARCH 2014

ASME – SAFETY AND RELIEF VALVES

IMPORTANT: This safety relief valve product is factory pre-set to a specified pressure, tamper proof sealed and code stamped per ASME code Section VIII. All readjusting of set pressure or blow-down is recommended to be performed by either the manufacturer or an accredited “VR” company.

Installation

Safety valves should always be installed on a tank or piping run in a vertical position with the outlet pointed horizontally. When screwing the valve into the inlet piping always use a wrench on the inlet side of the hex, never on the valve body.

Be certain not to allow piping tape or compound to reach inside of the valve body. This will cause leaking or poor performance. Recommended to clean all piping and tank systems prior to the installation.

Relief valves mounted to a tank should be connected with the minimum amount of piping between the tank and the valve. All piping must be equal to (or larger than) the piping size of the valve. Any smaller sized piping will restrict the flow characteristics and could cause serious catastrophic damage.

Caution is required in the outlet piping if installed outdoors, for either liquid or steam applications (due to freezing and limiting the function of the valve). Discharge lines, piping, valves, must be weather capped and drained to prevent any liquid collection.

Please see the following UG-135 ASME installation information:

UG-135 Installation

- (a) Safety, safety relief and pilot operated pressure relief valves, and non-reclosing pressure relief devices shall be connected to the vapor space above any contained liquid or to piping connected to the vapor space in the vessel which is to be protected.
- (b) The opening through all pipe and fittings between a pressure vessel and its pressure relieving device shall have at least the areas of the pressure relieving device inlet, and the flow characteristics of this upstream system shall be such the pressure drop will not reduce the relieving capacity below that required or adversely affect the proper operation of the pressure-relieving device. The opening in the vessel wall shall be designed to provide direct and unobstructed flow between the vessel and its pressure-relieving device.
- (c) When two or more required pressure-relieving devices are placed on one connection, the inlet internal cross-sectional area of this connection shall be at least equal to the combined inlet areas of the safety devices connected to it, the flow characteristics of the upstream system shall satisfy the requirements of (b).
- (d) Liquid relief valves shall be connected below the normal liquid level.
- (e) There shall be no intervening stop valves between the vessel and its protective device or devices, or between the protective device or devices and the point of discharge, except:
 - (1) when these stop valves are so constructed or positively controlled that the closing of the maximum number of block valves possible at one time will not reduce the pressure relieving capacity provided by the unaffected relieving devices below the required capacity, or
 - (2) under conditions set forth in Appendix M

- (f) The safety devices on all vessels shall be so installed that their proper functioning will not be hindered by the nature of the vessel's content.
- (g) Discharge lines from pressure relieving safety shall be designed to facilitate drainage or shall be fitted with drains to prevent liquid from lodging in the discharge side of the safety device, and such lines shall lead to a safe place of discharge. The size of the discharge lines shall be such that any pressure that may exist or develop will not reduce the relieving capacity of the relieving devices below that required to properly protect the vessel. (See UG-136 (a) (8) and Appendix M.)

Maintenance

ASME coded safety relief valves are factory set with precise pressure gauges and tanks to plus or minus 2 psi up to and including 70 psi and plus or minus 3% for pressures above 70 psi of the stamped set pressure. The setting is wired closed and lead sealed. **To Maintain ASME code status, adjustments must be performed by the manufacturer or an ASME authorized VR facility, only.**

Testing or cleaning of valve

For valve models with lifting devices (handles), they are designed to be lifted only when reaching a level of 80% set pressure. Keep the valve seat open long enough to allow cleansing of the seating / disk area.

Contact Aquatrol sales/service if there are any further questions. 800-323-0688 or 630-365-5400

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