

Safety Valve Installation and Operating Instructions

The following information is of a general cautionary nature only. For specific information consult the appropriate design data and local industry codes. The F. C. Kingston Co. assumes no responsibility beyond its stated warranties. End use of "Kingston" products is the sole responsibility of the user.

Pre-Installation Handling

Pressure relief valves are designed to protect equipment from overpressure. The valve should be handled with care, not subject to heavy shock loads, and protected to prevent dirt from getting inside. It should be installed correctly. Failure to do so could result in property damage or serious injury to personnel.

Prior to installation of the valve, clean the piping of all foreign matter.

Installation

Mount the valve in a vertical position.

WARNING!

The installation design shall not allow accumulation of rainwater, snow, ice, or debris in the discharge system and shall be so installed that the proper functioning of the stem will not be hindered and excessive loading will not be applied. For the valve to function properly the stem must be allowed to move upwards freely and cannot be blocked from doing this in any manner (see below picture of the stem). The discharge ports shall not be blocked in any way and must allow free flow of the gas.

The installation design shall also be such as to not allow neighboring equipment to cause excessive heat loading on the valve that could distort the valve components or damage elastomeric components. The allowable temperature range is -20°F to 400°F (-29°C to 204°C).

The valve should be installed in a location that will not direct the discharge at personnel traffic areas.

Mount the valve in a location that will subject it to the least vibration possible. Severe vibration can affect the valve sealing and possibly damage the valve. Valves subject to vibration should be set at as high a pressure over the system operating pressure as is practical to avoid premature opening, this is particularly important when the valve is to be used with engine driven systems.

Make sure to mount the valve such that there is negligible external loading.

For threaded valves, apply a small amount of pipe thread sealing compound to external threads only. Do not put any sealing compound on the first thread or any internal threads. To do so may cause the sealing compound to enter the valve and cause seat leakage.

Care should be taken not to damage or distort the valve during installation. Use only the wrench flats closest to the bottom of the valve during installation and use the proper size wrench to avoid damage to the surface of the valve and to prevent distortion which can interfere with the valve operation or may alter the set pressure.

Operation

Maintain a system operating pressure at least 5 PSIG (0.35 bar) or 10% below the set pressure of the valve, whichever is greater. Operating too close to the valve set pressure will cause seat leakage. This includes avoiding system transient surges close to the set pressure.

Do not use the safety valve as a control valve to regulate system operating pressure. Excessive operation will cause the seat to leak and will require more frequent valve maintenance.

ASME Section VIII & XIII valves equipped with a lifting mechanism are designed to be operated only when the system pressure is 75% of the set pressure or greater. When hand operating the valve, hold it open long enough to purge any foreign matter from the seat area. If a cable or wire is attached to the lift lever for remote actuation, make sure the direction of pull is the same as it would be if the lever were pulled directly by hand.

Maintenance

Safety relief valves must be inspected and tested for operation periodically. It is the user's responsibility to determine the frequency of inspection as he is the only party familiar with the operating conditions and the relative hazards of an inoperative valve. It is recommended that at the very least each valve should be inspected semi-annually. Local ordinances may require more frequent inspection. Testing should be done by operating the valve either using the operating device on the valve or if it doesn't have an operating device, it should be connected to a source of pressure that will cause it to operate.

Valves that are capacity certified by the ASME are factory sealed. Tampering, altering, or adjustment of these valves voids any warranty and liability of the manufacturer. Repairs or resetting will be made only by the factory. Please contact the factory prior to returning any valve for service and securely package valves for shipping. Visual examination of the valve seating area can be accomplished by looking into the vent holes. Do not physically probe into the vent holes!

WARNING!

STEM MUST BE ALLOWED TO MOVE UPWARDS FREELY – DO NOT BLOCK THE STEM!

