

## SAFETY VALVE INSTALLATION NOTES

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 it's stated warranties.

It is essential to the proper operation of safety valves that cleanliness be observed in storage, handling, and installation. Each valve should be stored under cover so that foreign matter will not enter the valve or lodge in the inlet or outlet ports. Inspect each valve before installation and make sure that it is clean. Foreign matter can be carried into or through the valve during operation, which may damage the seat, resulting in leakage. Prior to installation of the valve, clean the piping of all foreign matter.

Valves should be mounted vertically. Horizontal mounting could affect the alignment of the moving parts and affect the operation of the valve. If vertical mounting is not possible please consult the factory. 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.

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.

Normal installations require that valves be set a minimum of 5 PSI or 10%, whichever is higher, over the operating pressure of the system. When checking the pressure setting of a valve use a test gauge of known accuracy. The first "pop" of a valve can vary considerably from the set pressure. The valve should be operated several times prior to taking a pressure reading. The set pressure can deviate from the marked pressure by plus or minus 2 PSI at settings below 70 PSI and plus or minus 3% at settings of 70 PSI and above.

If a valve is discovered to be leaking it can be cleared by manually operating the valve to a pressure (that will cause it to operate). Please note that valves with metal-to-metal seats are not absolutely "bubble tight" and they will allow a pressure loss over a period of time. If a valve has a leak it should be replaced, as leaks are self-propagating.

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 through the use of 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.

The capacity of a valve should be selected to be over the maximum capacity of the combined sources of air supply, it should also be noted that the capacity should not be over 150% of the supply as the valve may "chatter" when it discharges. Each installation must be properly engineered and flow piping should be sized with reference to established criteria such as the pressure piping code and ASME Pressure Vessel design data or any applicable design criteria for specific usage. When designing system protection for extreme high or low temperatures or use with gasses other than air, consult the factory.

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.

We hope that the foregoing information is useful to our customers and if there are any questions about valve usage or installation please contact us and we will be pleased to provide any assistance that we can.

### Application:

The end use of any Kingston product is the sole responsibility of the user. The design of air, fluid or other systems is a complex discipline and has potential safety hazards that must be properly assessed and engineered. Each system is unique and must be individually investigated by the user for adherence to published design criteria, including, but not limited to, the ASME boiler and Pressure Vessel code; individual State, County and Municipal safety codes; as well as Federal and Industry codes and specifications for particular application.