

# ***What Should You Expect from Your Safety Pressure Relief Valve?***

## **1. Safety Relief Valves Should Not Leak.**

Consider the present regulations impacting refrigeration, embracing OSHA and EPA process safety regulations, and the Greenhouse Gas curtailments now under discussion. It is obvious that the first expectation should be that the valve will not leak. In a recent comparison test, the Shank #900 valve mounted on the discharge line of a 250 hp R-22 screw compressor proved to have a tight seal, while another manufacturer's product leaked.

***Shank Relief Valves have multiple concentric seat rings, unique in the industry, which, when mated with Teflon seat rings, provide extra insurance against leakage.***

## **2. Safety Relief Valves Should Release at the Set Point.**

1. Exposure to atmospheric moisture and corrosive effects on the working parts are a severe test for Safety Relief Valves. Tests conducted in an independent Relief Valve assembler's shop, authorized by an insurance company, confirmed that after years of use Shank Relief Valves tested repeatedly within the original certified specification and reseated tightly.

***The springs in Shank Relief Valves are heat-treated stainless steel. The Shank long spring design assures better set point accuracy, performance, and durability over the competitors' products. This design reduces the stress on the spring.***

## **3. Safety Relief Valves Should Reset Tightly After Releasing.**

A widely held opinion is that Safety Relief Valves only need to operate once. That, after a release of one valve in a dual assembly, the valve can be easily replaced. Recent repeated tests to determine which makes of valves reseated tightly were performed by a refrigeration contractor. The Shank valves with 1/2", 3/4", and 1" inlets discharged within 3 psi of set point and reseated without leaking after 5 to 7 tests. All of the other makers tested lost 5 to 15 psi from the set point on the second test. The next best performing valve reseated only 3 to 4 times before leaking. All other makes leaked after the first test.

***The Shank Relief Valves involved in these tests have seat-guided valve pieces, unique in the industry, which provide for reliable reseating.***