PRESSURE RELIEF APPLICATION PROFILE

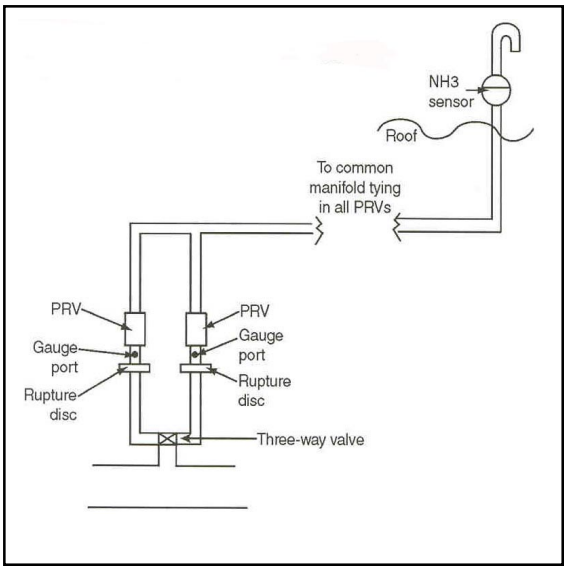
REFRIGERATION RUPTURE DISC

Typical Industries Served	**Food** **Pharmaceutical**

INTRODUCTION

Pressure relief valves are located on industrial refrigeration equipment such as chillers, oil pots or other equipment containing a refrigerant such as Ammonia. A rupture disc may be used to prevent the valve from leaking the regrigerant or provide a means of notificaiton of release of the valve.

Fike's Refrigeration Rupture Disc Assembly has been specially designed for use in such applications.



FEATURES

- NPT inlet and outlet for ease of installation
- Silver or Nickel disc materials, subject to burst pressure
- Non-fragmenting rupture discs
- Full vacuum rated
- Leak tight to $1x10^{-6}$ ATM CC/S
- Standard burst pressures
- (2) 1/8" NPT ports between disc and valve
- Inlet / outlet sizes 1/2", 3/4", 1" and 1 1/4"
- ASME certifications supplied with assembly

The rupture discs come in Silver or Nickel materials. The discs are non-fragmenting, forward acting and scored for precision accuracy.

FUNCTIONS

Standard burst pressures range from 150 psig to 450 psig at 72° F, in 50 psig increments. The discs are provided with a Zero Manufacturing Range. All burst pressures feature full-vacuum capability.

In addition to the NPT inlet and outlet, the assembly features (2) 1/8" NPT ports above the rupture disc as required by the ASME code for rupture discs in combination with relief valves. Once the disc is installed, the entire assembly is leak tested to $1x10^{-6}$ ATM CC/S. The body of the assembly is made from ASME approved Stainless Steel material.

BENEFITS

ASHRAE clarifies its recommendations for relief-valve applications in the 1996 edition of Guideline 3. For example, Section 4.1.6.2 now specifically cautions designers that *"the rupture disc should be a nonshattering type"* when it is installed in series with a relief valve. Designers typically specify metallic, nonfragmenting rupture discs to comply with this section. Using the Refrigeration Rupture Disc in combination with a relief valve offers two benefits: 1) Eliminates refrigerant loss due to poor valve sealing. 2) ASME code UG-127 states that "the space between a rupture disk device and a pressure relief valve shall be provided with a pressure gauge, a try cock, free vent or suitable telltale indicator. This arrangement permits detection of disk rupture or leakage." The (2) 1/8" NPT ports provide for compliance with this portion of the ASME code.

Fike Corporation

Fike Corporation has an extensive product offering for facility and process protection for commercial and industrial applications.

Rupture Disc – A pressure relief device, typically applied to a closed chemical process, will open at a predetermined pressure and temperature to prevent the bursting or explosion of the process.

Explosion Venting/Isolation/Suppression - Total Concept Explosion Protection, including explosion testing, explosion venting, explosion isolation, and explosion suppression systems to mitigate the effects of industrial explosions.

Fire Detection Systems – Fike offers a full line of detection products from single hazard to multi zone analog addressable systems. These controls are suited for fire alarm, agent suppression systems, or sprinkler/pre-action fire detection and control systems. The Cheetah analog addressable control panel can be configured to communicate directly with one or more VESDA® LaserPLUS detectors via a High Level Interface (HLI).

Fire Suppression Systems – Fike offers a full range of suppression systems to protect your equipment and/or process. Because Fike offers more than one choice of extinguishing agents you are certain to get the right agent for your hazard. Fike systems incorporate the following agents:

- HFC-227ea
- Carbon Dioxide
- Water Mist

704 South 10th Street • Blue Springs, Missouri 64015-4263 U.S.A.
Phone (816) 229-3405 • Fax (816) 229-4615 • e-mail fmpsales@fike.com • www.fike.com

FORM No. PR001 702

PRINTED IN U.S.A.