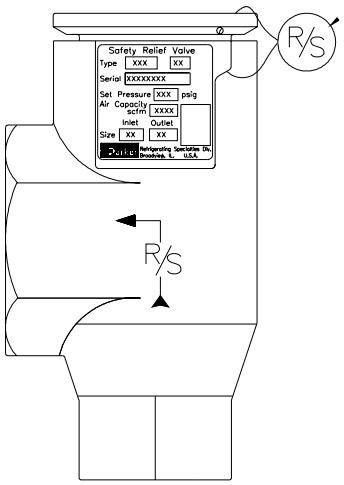
# SAFETY RELIEF VALVE

## Type SRH1, SRH2 & SRH3

**Size 13mm & 20mm (1/2” & 3/4”)**

**FOR R22, R134A, R404A, R717 AND OTHER COMMON REFRIGERANTS**

**BULLETIN 72-00**
**TYPE SRH**




**January 2002**
**Installation and Service Information**

### FEATURES

ANSI/ASHRAE 15 compliant

Excellent repeatability

All Stainless Steel Internal Parts

Unaffected by vibration

PTFE Seat

Pressure settings 150 to 400 psi

**Description**

The Type SRH High Capacity Safety Relief Valves are designed and constructed to meet the requirements of Section VIII ASME Boiler and Pressure Vessel Code and ANSI/ASHRAE 15 Code requirements and bear the ASME Code Symbol (UV). Employing proven principles of design, these Safety Relief Valves are highly reliable and dependable. Precision machined moving parts of stainless steel, and a PTFE disc prevent sticking due to corrosion or cold welding and assure valve opening at the set pressure long after installation. They are not suitable for corrosive ambient atmospheres such as chlorine, etc. Connection sizes are 1/2” FPT inlet with 3/4” or 1” FPT outlet. A 3/4” inlet with 1-1/4” or 1-1/2” FPT outlet is also available.

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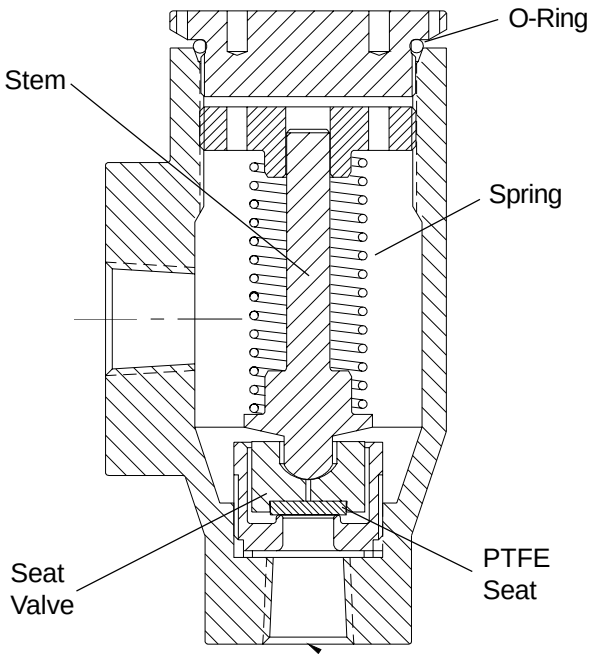



**Fig. 1**

**Purpose**

Safety Relief Valves should be used to protect each refrigeration system pressure vessel that can be isolated by valves. In many localities state or municipal codes govern selection and installation of Relief Valves. Many are patterned after the ASME Boiler and Pressure Vessel Code and the ANSI/ASHRAE 15 Safety Code for Mechanical Refrigeration. Where no compulsory code exists, installation of Relief Valves according to this ANSI/ASHRAE Code is highly recommended.

**Application**

The Type SRH1 thru SRH3 valves are for use with Ammonia and Halocarbon refrigerants in non-corrosive environments. Pressure settings and capacities apply only when the valve is discharging to atmospheric pressure.

**Pressure Settings**

Codes require valve settings equal to or less than design working pressure of the vessel protected. The Type SRH Safety Relief Valves are available in six standard settings, from 150 psig to 400 psig in 50 lb. increments. Special settings between 150 psig to 400 psig in 25 lb. increments are also available. To retain the validity of the code symbols, pressure settings and capacity, these valves must be set and sealed at the factory. When required, valves can be returned to the factory for verification of setting, or readjustment to the original setting. No major repairs or reconditioning will be done. Contact factory for details.

| Capacities | | | | | |
|---|---|---|---|---|---|
| Valve Type | Relief Valve Inlet | Relief Valve Outlet | Pressure Setting psig | Lbs. Per.Min Air | SCFM Air |
| | | | 150 | 35 | 463 |
| | | | 200 | 46 | 605 |
| **SRH1** | 1/2" | 3/4" | 250 | 57 | 747 |
| | FPT | FPT | 300 | 68 | 889 |
| | | | 350 | 79 | 1031 |
| | | | 400 | 89 | 1173 |
| | | | 150 | 35 | 463 |
| | | | 200 | 46 | 605 |
| **SRH2** | 1/2" | 1" | 250 | 57 | 747 |
| | FPT | FPT | 300 | 68 | 889 |
| | | | 350 | 79 | 1031 |
| | | | 400 | 89 | 1173 |
| | | | 150 | 35 | 463 |
| | | | 200 | 46 | 605 |
| **SRH3** | 3/4" | 1" | 250 | 57 | 747 |
| | FPT | FPT | 300 | 68 | 889 |
| | | | 350 | 79 | 1031 |
| | | | 400 | 89 | 1173 |

## Selection Data

The Type SRH Safety Relief Valve is intended to prevent the pressure of the vessel from rising more than 10% above the Design Working Pressure (DWP) of the vessel or the pressure setting of the relief device, whichever is the lower pressure.

Whenever conditions permit, it is advisable to have the relief valve pressure setting (which must not exceed the design working pressure of the vessel) at least 25% higher than the normal operating pressure for the refrigerant used.

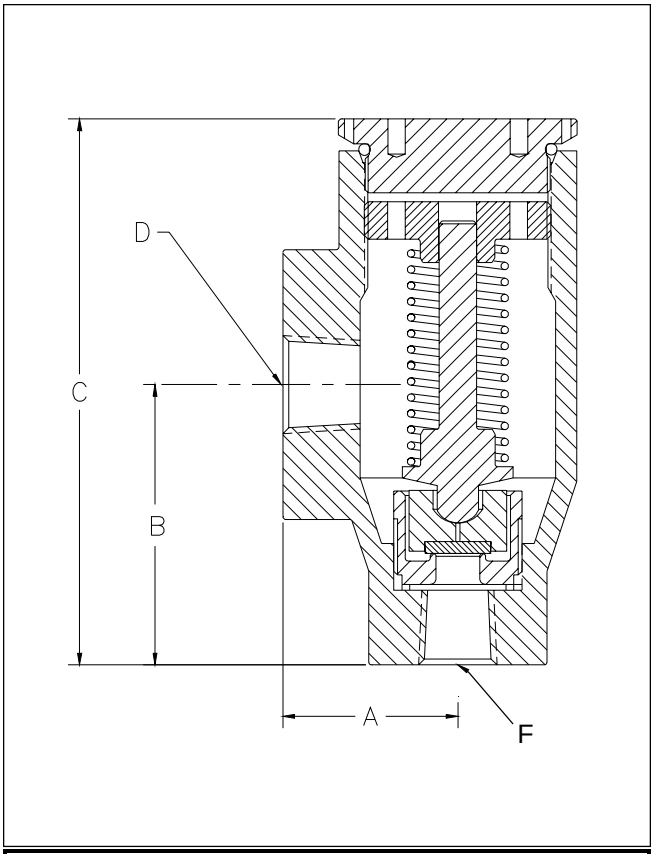
Pressure limiting devices, such as high pressure cutouts on positive displacement compressor systems, must stop the action of the pressure imposing element at no higher than 90% of the pressure setting for the pressure relief device.

For non-positive displacement compressors, the pressure limiting device, such as a high pressure cut-out, may be set at the DWP of the high side; providing, the low side is protected by a properly sized pressure relief device set to relieve pressure at low side DWP and there are no stop valves in the system that isolate the high side from the low side.

Discharge piping from relief devices must not exceed specified lengths indicated in ANSI/ASHRAE 15 with discharge to atmosphere.

Per ANSI/ASHRAE 15 the minimum required discharge capacity of a relief device for each pressure vessel where vessel is valved off from refrigerating systems is determined as follows: C = FDL. Where D = outside diameter of vessel, ft.; L = Length of vessel, ft.; C = Capacity, lb/min air and F = Factor determined as follows:

| Refrigerant | F |
|---|---|
| R-717 | 0.5 |
| R-22, -134a, -500 | 1.6 |
| R-13, -404A, -502, -507 | 2.5 |
| All others | 1.0 |




| DIMENSIONS IN INCHES | | | | | |
|---|---|---|---|---|---|
| VALVE | A | B | C | D | F |
| SRH1 | 1.562 | 2.75 | 5.05 | 3/4" NPT | 1/2" NPT |
| SRH2 | 1.562 | 2.75 | 5.05 | 1" NPT | 1/2" NPT |
| SRH3 | 1.562 | 2.75 | 5.92 | 1" NPT | 3/4" NPT |

## Warranty

All Refrigerating Specialties Products are warranted against defect in workmanship and materials for a period of one year from date of shipment from the factory, This warranty is in force only when products are properly installed, maintained and operated in use and service as specifically stated in Refrigerating Specialties Catalogs or Bulletins for normal refrigeration applications, unless otherwise approved in writing by Refrigerating Specialties Division. Defective products, or parts thereof returned to the factory with transportation charges prepaid and found to be defective by factory inspection will be replaced or repaired at Refrigerating Specialties' option, free of charge, F.O.B. factory. Warranty does not cover products which have been altered or repaired in the field; damaged in transit, or have suffered accidents, misuse, or abuse. Products disabled by dirt, or other foreign substances will not be considered defective.

THE EXPRESS WARRANTY SET FORTH ABOVE CONSTITUTES THE ONLY WARRANTY APPLICABLE TO REFRIGERATING SPECIALTIES PRODUCTS, AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. No employee, agent, dealer or other person is authorized to give any warranties on behalf of Refrigerating Specialties, nor to assume, for Refrigerating Specialties, any other liability in connection with any of its products.