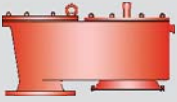
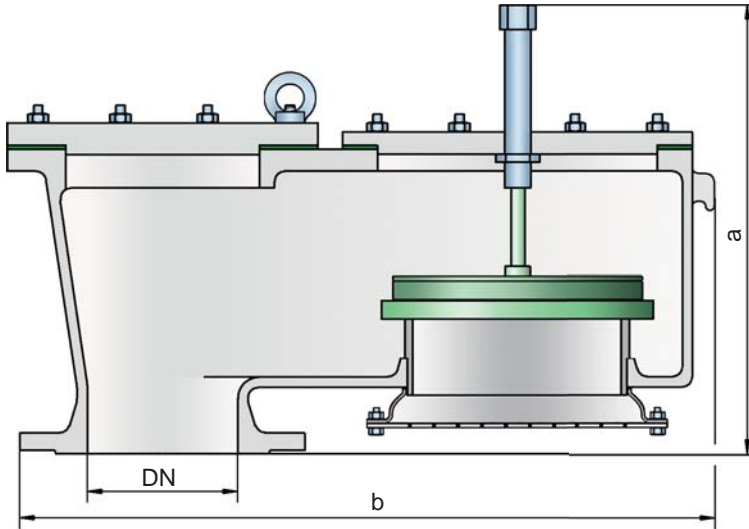


Vacuum Relief Valve



PROTEGO® V/SV-XXL



Settings:

Vacuum: -2.0 mbar up to -16 mbar
 -0.8 inch W.C. up to -6.4 inch W.C.

Higher vacuum settings upon request.

Function and Description

The V/SV-XXL type PROTEGO® valve is a highly developed optimized vacuum relief valve with excellent flow performance. It is primarily used as a safety device for relieving vacuum in tanks, containers and process engineering equipment.

When the set vacuum is reached, the valve starts to open and reaches full lift within a 100% vacuum increase. Up to the set vacuum, the tank vacuum is maintained with a seal that is far superior to the conventional standard due to the highly developed manufacturing technology. This feature is achieved by valve seats made of high quality stainless steel with precisely lapped valve pallets and a reinforced housing design. After the vacuum is relieved, the valve reseats and again provides a tight seal.

The optimized fluid dynamic design of the valve body and valve pallet is a result of intensive research and development activities, which allow a stable operation of the valve pallet and optimized performance resulting in reduction of product losses.

Special Features and Advantages

- excellent tightness and hence least possible product losses and reduced environmental pollution
- very high optimized flow capacity
- the valve pallet is guided within the housing to protect against harsh weather conditions
- can be used in areas subject to explosion hazards
- self draining
- maintenance friendly design
- best technology for API-tanks
- designed for use on cryogenic tanks

Design Types and Specifications

The valve pallets are weight-loaded. Higher vacuum can be achieved upon request with a special spring-loaded design.

There are two different designs:

Pressure/vacuum valve in basic design **V/SV-XXL - □**

Pressure/vacuum relief valve with heating jacket **V/SV-XXL - H**

Additional special devices available upon request.

Table 1: Dimensions

Dimensions in mm / inches

DN	300 / 12"
a	649 / 25.55
b	946 / 37.24

Dimensions of pressure and vacuum relief valves with heating jacket upon request

Table 2: Material selection for housing

Design	A	B	C
Housing	Aluminium	Steel	Stainless Steel
Heating jacket (V/SV-XXL-H-...)	–	Steel	Stainless Steel
Valve seat	Stainless Steel	Stainless Steel	Stainless Steel
Sealing	PTFE	PTFE	PTFE
Cover	Aluminium	Steel	Stainless Steel

Option: Housing ECTFE-coated

Special materials upon request

Table 3: Material selection for vacuum valve pallet

Design	A	B
Vacuum range (mbar) (inch W.C.)	-2.0 up to -9.0 -0.8 up to -3.6	<-9.0 up to -16 <-3.6 up to -6.4
Valve pallet	Aluminium	Stainless Steel
Sealing	Metal to Metal	Metal to Metal

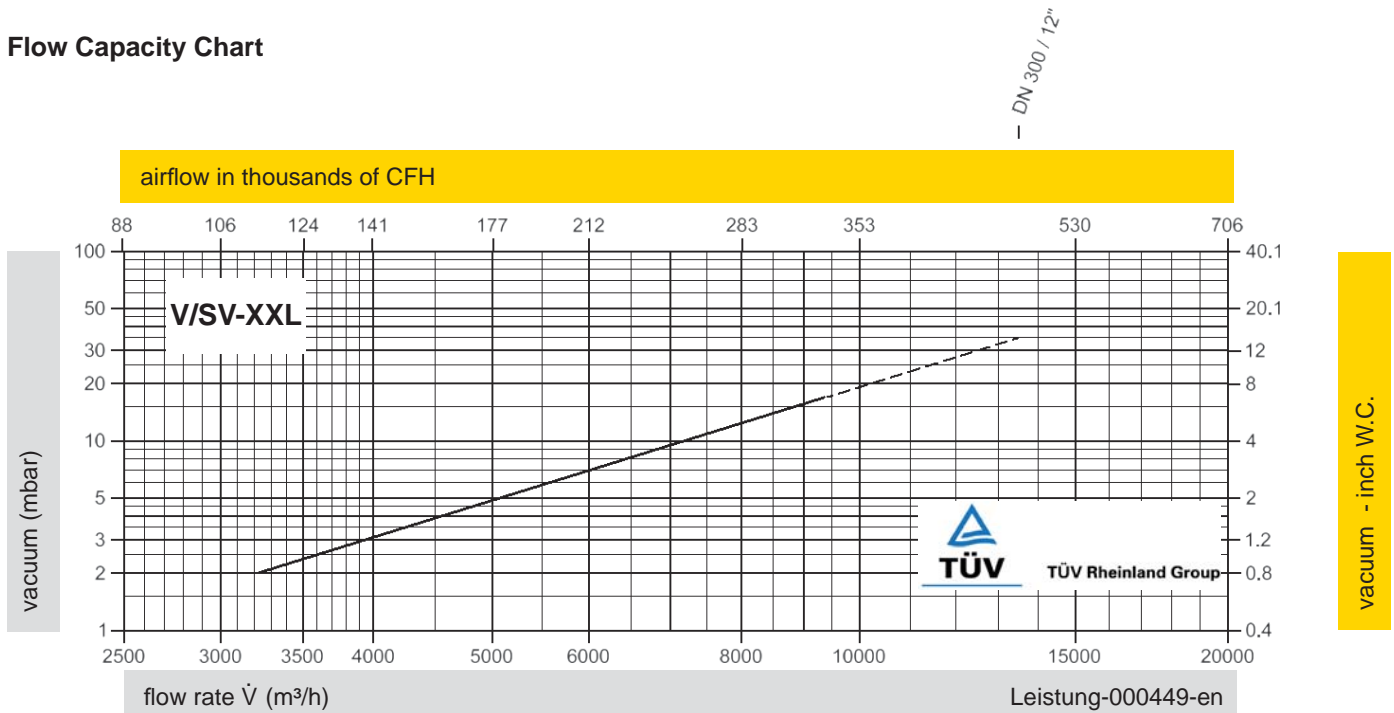
Special material as well as higher vacuum upon request

Table 4 Flange connection type

EN 1092-1; Form B1
ASME B16.5; 150 lbs RFSF

other types upon request

Flow Capacity Chart



Remark

$$\text{set pressure} = \frac{\text{opening pressure resp. tank design pressure}}{2}$$

Set pressure = the valve starts to open

Opening pressure = set pressure plus overpressure

Overpressure = pressure increase over the set pressure

The flow capacity chart has been determined with a calibrated and TÜV certified flow capacity test rig.

Volume flow \dot{V} in (m³/h) and CFH refer to the standard reference conditions of air ISO 6358 (20°C, 1bar).

Conversion to other densities and temperatures refer to Vol. 1: "Technical Fundamentals".



for safety and environment