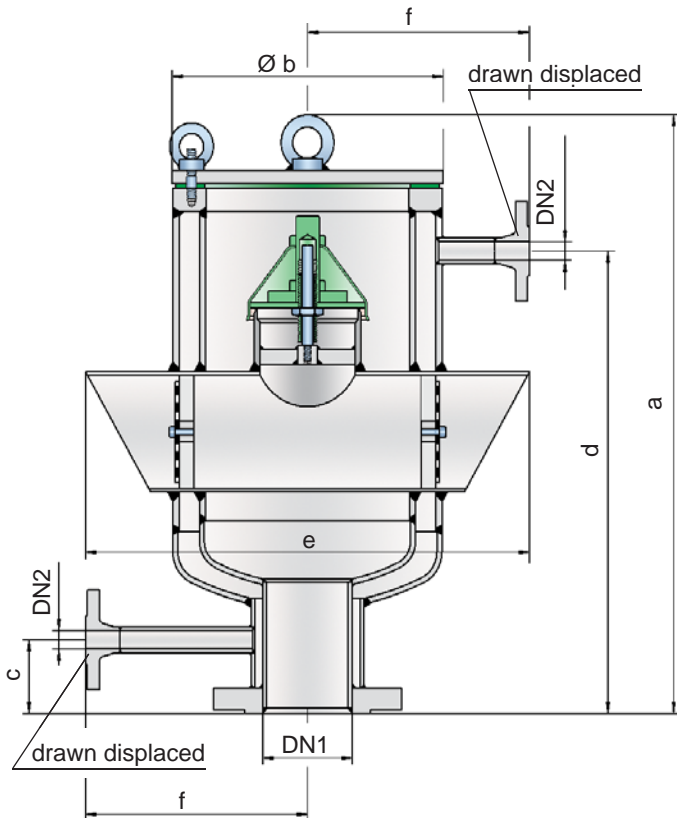


## Vacuum Relief Valve in a special heat jacketed design

**PROTEGO® SV/T-0-H**



### Vacuum settings:

-7 mbar up to -50 mbar  
-2.8 inch W.C. up to -20 inch W.C.  
Higher and lower vacuum settings upon request.

### Function and Description

The SV/T-0-H type PROTEGO® valve is a highly developed vacuum relief valve with a valve housing that comes with a heating jacket down to the flange. It is primarily used as a safety device for inbreathing to tanks, containers, and process engineering equipment under difficult operating conditions. This includes extreme weather conditions or products that tend to form polymers at certain temperatures, adhere, or form deposits that negatively influence function (such as bitumen, tar, dust). The valve offers reliable protection against vacuum and prevents the intake of air close to the set vacuum.

When the set vacuum is reached, the valve starts to open and reaches full lift within a 40% 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.

### Special Features and Advantages

- excellent tightness and hence least possible product losses and reduced environmental pollution
- high flow capacity
- the valve pallet is guided within the housing to protect against harsh weather conditions
- can be used in areas subject to an explosion hazard
- complete heat jacketed design down to the flange to avoid cold bridges
- maximum permissible heating medium temperature of 320°C / 608°F (at 6 bar / 87 psi)
- a special design that preheats incoming air is also available
- a special design with a heatable valve cover is also available
- the valve pallet cover prevents the set pressure from being distorted by dust or condensate
- reinforced housing design
- a special design with a mechanical vent pallet lift device is available

### Design Types and Specifications

The valve pallet is weight-loaded.

Vacuum valve in basic design with heating jacket

**SV/T - 0 - H**

Additional special devices available upon request.

**Table 1: Dimensions**

Dimensions in mm / inches

To select the nominal size (DN) use the capacity chart on the following page

DN1	80 / 3" *	100 / 4"	150 / 6"	200 / 8"	250 / 10"
DN2	15 / ½"	15 / ½"	15 / ½"	15 / ½"	15 / ½"
a	570 / 22.44	570 / 22.44	720 / 28.35	920 / 36.22	1050 / 41.34
b	275 / 10.83	275 / 10.83	355 / 13.98	405 / 15.94	508 / 20.00
c	70 / 2.76	70 / 2.76	60 / 2.36	70 / 2.76	70 / 2.76
d	440 / 17.32	440 / 17.32	590 / 23.23	790 / 31.10	920 / 36.22
e	450 / 17.72	450 / 17.72	650 / 25.59	750 / 29.53	950 / 37.40
f	225 / 8.86	225 / 8.86	260 / 10.24	300 / 11.91	350 / 13.78

\* also available with special flange DN 50 / 2"

**Table 2: Material selection for housing**

Design	A	B	
Housing	Steel	Stainless Steel	Special materials upon request
Heating jacket	Steel	Stainless Steel	
Valve seat	Stainless Steel	Stainless Steel	
Sealing	PTFE	PTFE	

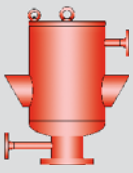
**Table 3: Material selection for vacuum valve pallet**

Design	A	B	C	
Vacuum range (mbar) (inch W.C.)	-7.0 up to -25 -2.8 up to -10	-10 up to -30 -4.0 up to -12	-30 up to -50 -12 up to -20	Special materials and other vacuum settings are available upon request
Valve pallet	Aluminium	Stainless Steel	Stainless Steel	
Valve pallet hood	Stainless Steel	Stainless Steel	Stainless Steel	
Sealing	Metal to Metal	Metal to Metal	Metal to Metal	

**Table 4: Flange connection type**

EN 1092-1; Form B1	other types upon request
ASME B16.5; 150 lbs RF5F	

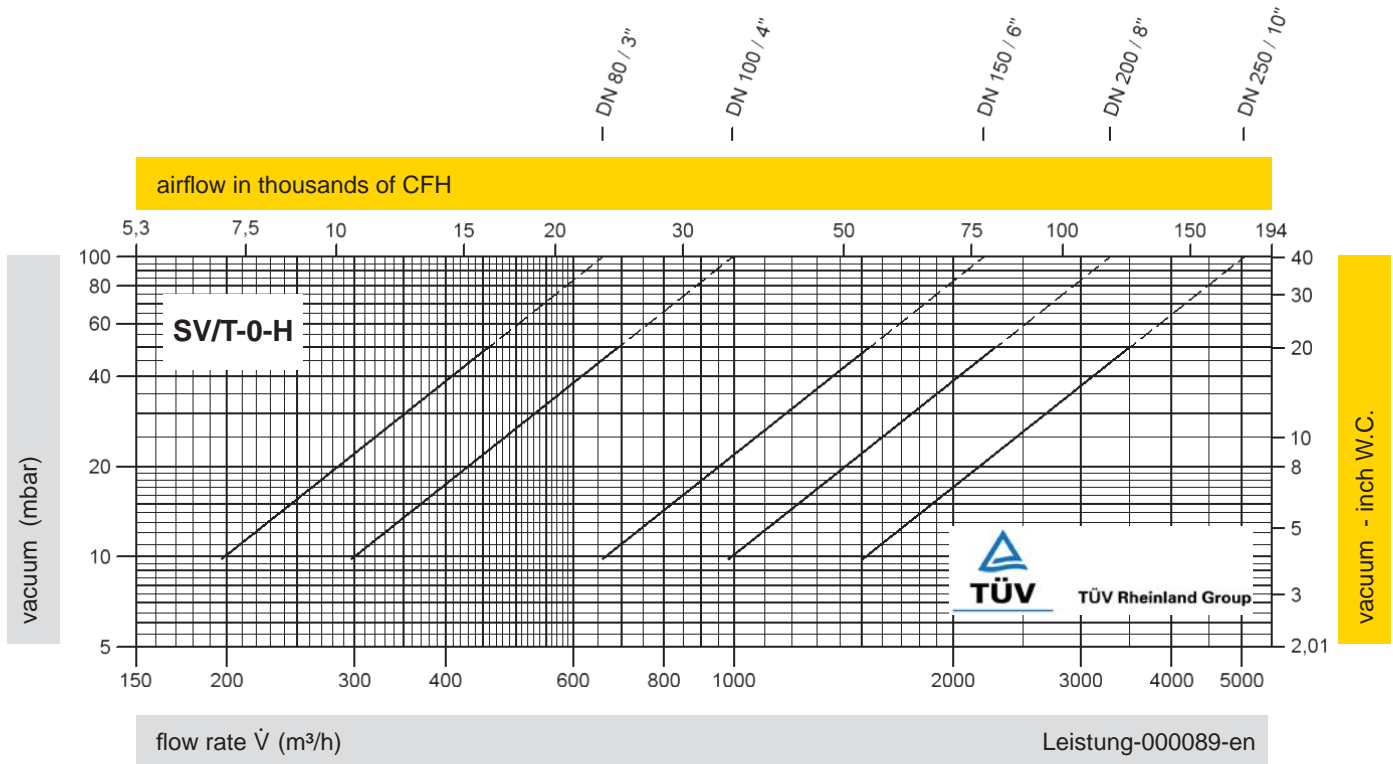




# Vacuum Relief Valve

## Flow Capacity Chart

### PROTEGO® SV/T-0-H



#### Remark

$$\text{set pressure} = \frac{\text{opening pressure resp. tank design pressure}}{1.4}$$

**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".