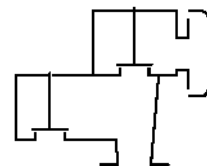


Type sheet

Pressure and vacuum relief valve

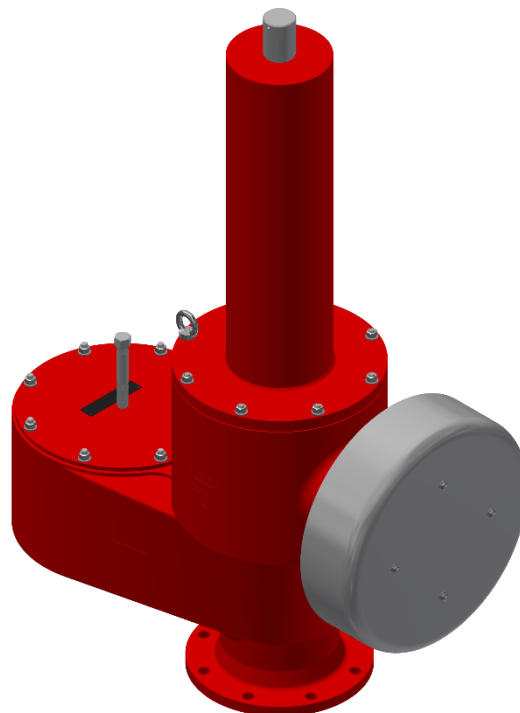
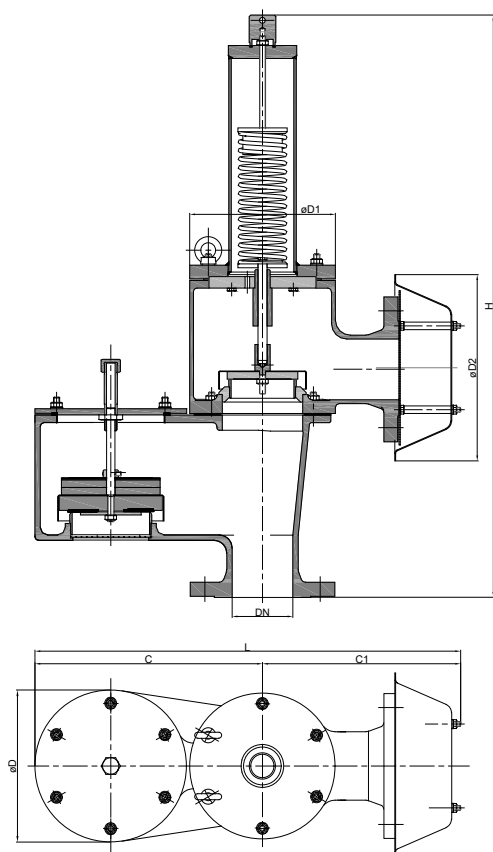
KITO® VD/oG-PA-... DE



Application

As end-of-line armature, for venting apertures on tank installations. Used mainly as venting and breather device for fixed roof tanks. Used to prevent inadmissible pressure and vacuum and to minimize unwelcome gas losses or inadmissible emissions respectively. The housing is mounted perpendicularly on a tank roof.

Dimensions (mm) and settings (mbar)



DN	ASME	C	C1	D	D1	D2	H	L	kg	setting	
DIN										vacuum	pressure
50 PN 16	2"	255	230	165	165	245	604	485	30	2-60	>60-415
80 PN 16	3"	300	320	200	192	286	766	620			
100 PN 16	4"	400	340	250	240	331	911	740	66		
150 PN 16	6"	555	405	350	350	405	1173	960	142		
200 PN 10	8"	625	455	400	390	465	1526	1080	211		
250 PN 10	10"	705	460	460	460	550	1630	1165			
300 PN 10	12"	705	460	460	460	600	1630	1165			

Indicated weights are understood without weight load and refer to the standard design

Example for order

KITO® VD/oG-PA-50 DE

(design DN 50 with flange connection DN 50 PN 16)

Without EC certificate and CE-marking

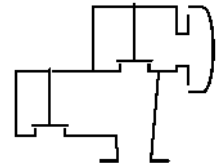
page 1 of 3



Type sheet

Pressure and vacuum relief valve

KITO® VD/oG-PA-... DE



Design

	standard	optionally
housing upper part (PN 1)	cast steel mat. no. 1.0619	stainless cast steel mat. no. 1.4408
housing lower part	cast steel mat. no. 1.0619	stainless cast steel mat. no. 1.4408
cover	steel	stainless steel mat. no. 1.4301/1.4571
gasket	PTFE	
weather hood	stainless steel	
protective screen	stainless steel mat. no. 1.4301 (DN 200-300)	
design valve pallet	weight loaded -vacuum- spring loaded -pressure-	
valve seat	stainless steel mat. no. 1.4571	
valve pallet / valve spindle -pressure-	stainless steel mat. no. 1.4571	
valve sealing -pressure-	metal sealing	
spring loaded parts -pressure-	stainless steel mat. no. 1.4571	
compression spring -pressure-	stainless steel	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

Design valve pallet -vacuum-

design	pressure range I 2 - < 3.5 mbar	pressure range II ≥ 3.5 - 14 mbar	pressure range III > 14 - 35 mbar	pressure range IV > 35 - 60 mbar	pressure range M-I ≥ 3.5 - < 10 mbar*	pressure range M-II ≥ 10 - 60 mbar
pallet	aluminum	stainless steel	stainless steel	stainless steel	aluminum*	stainless steel
valve spindle	aluminum / stainless steel	stainless steel	stainless steel	stainless steel	aluminum	stainless steel
valve sealing	FEP & HD3822	FEP & HD3822	PTFE	PTFE	metallic	metallic

* DN 50 ≥ 4.4 - pallet DN 50 aluminum / stainless steel

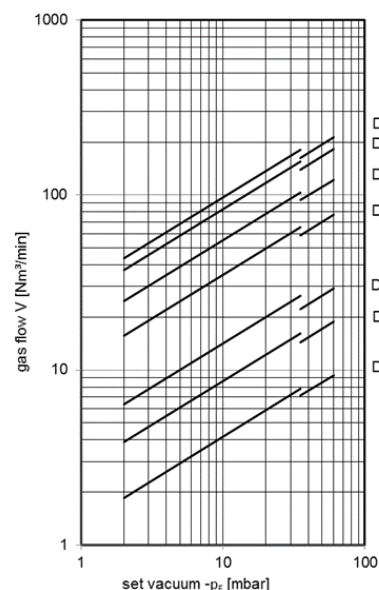
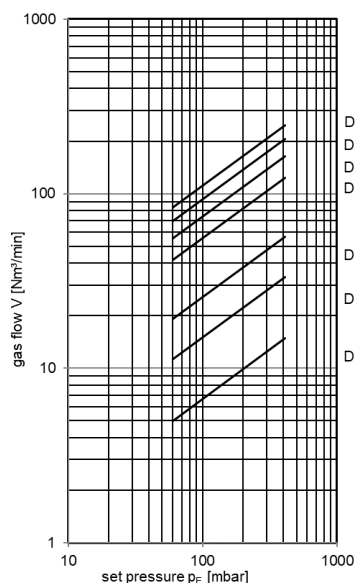
stainless steel = 1.4571

Performance curves

Flow capacity V based on air of a density $\rho = 1.29 \text{ kg/m}^3$ at $T = 273 \text{ K}$ and atmospheric pressure $p = 1.013 \text{ mbar}$. For other gases the flow can be approximately calculated by

$$\dot{V}_{20\%} = \dot{V}_b \cdot \sqrt{\frac{\rho_b}{1.29}} \quad \text{or} \quad \dot{V}_b = \dot{V}_{20\%} \cdot \sqrt{\frac{1.29}{\rho_b}}$$

The indicated flow rates will be reached by an accumulation of 20 % above valve's setting (see DIN 4119).

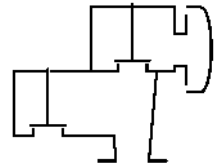




Type sheet

Pressure and vacuum relief valve

KITO® VD/oG-PA-... DE



$$\dot{V}_{10\%} = \dot{V}_b \cdot \sqrt{\frac{\rho_b}{1.29}} \quad \text{or} \quad \dot{V}_b = \dot{V}_{10\%} \cdot \sqrt{\frac{1.29}{\rho_b}}$$

The volume flow at reduced lift will be reached by an accumulation of 10 % above valve's setting (see DIN 4119).

