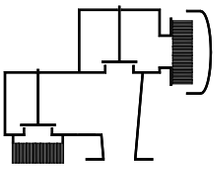
KITO Armaturen GmbH

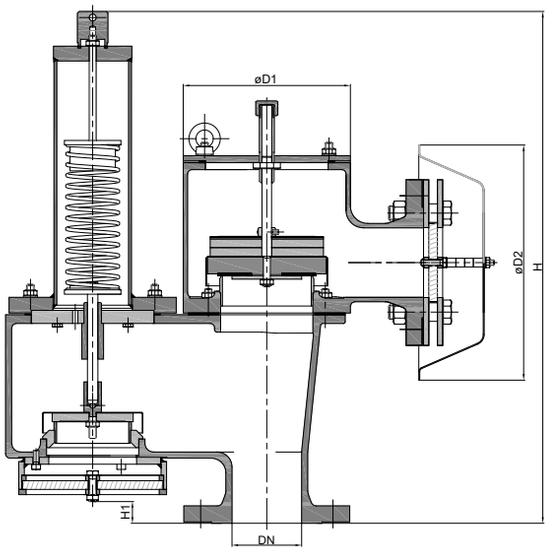
Type sheet
Deflagration proof pressure and vacuum relief valve
KITO® VD/KG-PA-IIB3-… VE

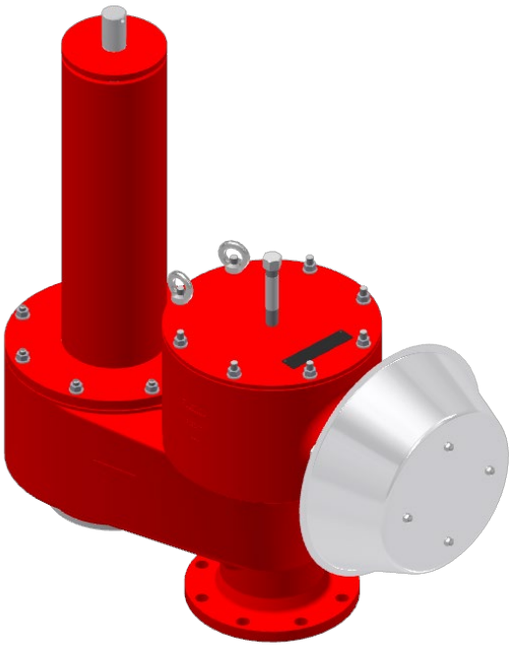


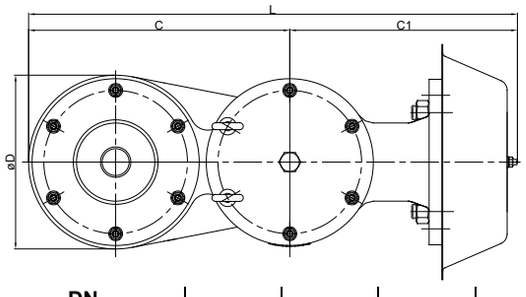
Application

As end-of-line armature, for venting apertures on tank installations. Tested and approved against atmospheric deflagrations for all materials of the explosion group IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm and an maximum operating temperature of 60 °C. 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 DIN	DN ASME	C	C1	D	D1	D2	H	H1	L	kg	setting vacuum	setting pressure
50 PN 16	2“	255	230	165	165	245	462	3	485		>60-415	2-60
80 PN 16	3“	300	320	200	192	286	589		620			
100 PN 16	4“	400	340	250	240	331	719		740			
150 PN 16	6“	555	405	350	350	405	956		960			
200 PN 10	8“	625	455	400	390	465	1140	12	1080			
250 PN 10	10“	705	460	460	460	550	1190		1165			
300 PN 10	12“	705	460	460	460	600	1190		1165			

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

Example for order

KITO® VD/KG-PA-IIB3-50 VE
(design DN 50 with flange connection DN 50 PN 16)

Type examination certificate to EN ISO 16852 and CE-marking in accordance to ATEX-Directive 2014/34/EU

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Date: 06-2023
Created: Abt. Doku KITO
Design subject to change

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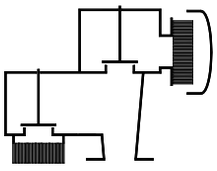


Design

	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 / steel	stainless cast steel mat. no. 1.4408 / 1.4571
cover	steel	stainless steel mat. no. 1.4301/1.4571
gasket	PTFE	
design valve pallet	weight loaded *-pressure-* spring loaded *-vacuum-*	
valve seat	stainless steel mat. no. 1.4571	
valve pallet / valve spindle *-vacuum-*	stainless steel mat. no. 1.4571	
valve sealing *-vacuum-*	metal sealing	
spring loaded parts *-vacuum-*	stainless steel mat. no. 1.4571	
compression spring *-vacuum-*	stainless steel	
KITO®-flame arrester element	interchangeable	
KITO®-casing / KITO®-grid	stainless steel mat. no. 1.4571 / 1.4310	stainless steel mat. no. 1.4571 / 1.4571
weather hood	stainless steel	
protective screen	stainless steel mat. no. 1.4301 (DN 200-300)	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

Design valve pallet *-pressure-*

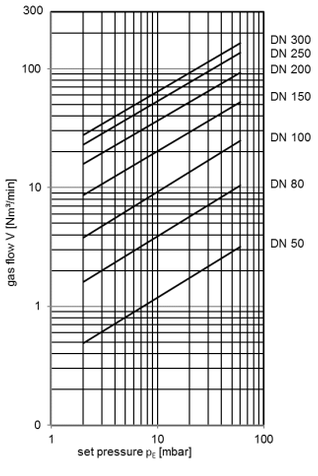
design	pressure range I 2 - < 3.5 mbar	pressure range II ≥ 3.5 - 14 mbar	pressure range III > 14 - 35 mbar	pressure range IV > 35 - 60 mbar
pallet	aluminum	stainless steel mat. no. 1.4571	stainless steel mat. no. 1.4571	stainless steel mat. no. 1.4571
valve spindle	aluminum / stainless steel mat. no. 1.4571	stainless steel mat. no. 1.4571	stainless steel mat. no. 1.4571	stainless steel mat. no. 1.4571
valve sealing	FEP & HD3822	FEP & HD3822	PTFE	PTFE

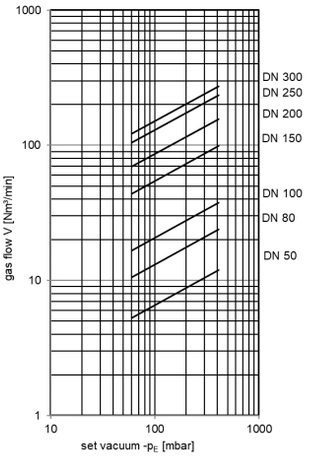
Performance curves

Flow capacity V based on air of a density ρ = 1.29 kg/m³ at T = 273 K and atmospheric pressure p = 1.013 mbar. For other gases the flow can be approximately calculated by

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

The indicated flow rates will be reached by an accumulation of 20 % above valve's setting. If the allowable overpressure is less than 20%, please consult the factory for the corrected volume flow.





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