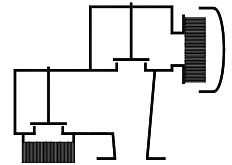


## Type sheet

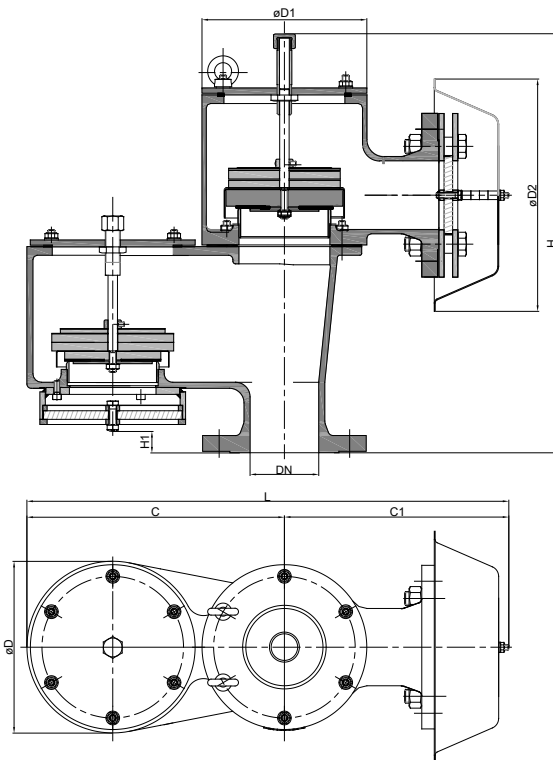
Deflagration proof pressure and vacuum relief valve  
**KITO® VD/KG-PA-IIB3-...**



### 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)  $\geq 0.65$  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		C	C1	D	D1	D2	H	H1	L	kg	setting	
DIN	ASME										vacuum	pressure
50 PN 16	2"	255	230	165	165	245	389	3	485	32	2-60	2-60
80 PN 16	3"	300	320	200	192	286	488		620	46		
100 PN 16	4"	400	340	250	240	331	548		740	70		
150 PN 16	6"	555	405	350	350	405	656		960	143		
200 PN 10	8"	625	455	400	390	465	776	12	1080	202		
250 PN 10	10"	705	460	460	460	550	876		1165	270		
300 PN 10	12"	705	460	460	460	600	882		1165	296		

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

### Example for order

**KITO® VD/KG-PA-IIB3-50**

(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**

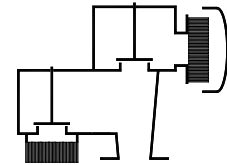
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**KITO**

Armaturen GmbH

**Type sheet**

Deflagration proof pressure and vacuum relief valve

**KITO® VD/KG-PA-IIB3-...****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
gasket	PTFE	
valve seat	stainless steel mat. no. 1.4571	
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**

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  $\rho = 1.29 \text{ kg/m}^3$  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. If the allowable overpressure is less than 20%, please consult the factory for the corrected volume flow.

