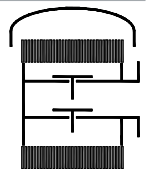


## Type sheet

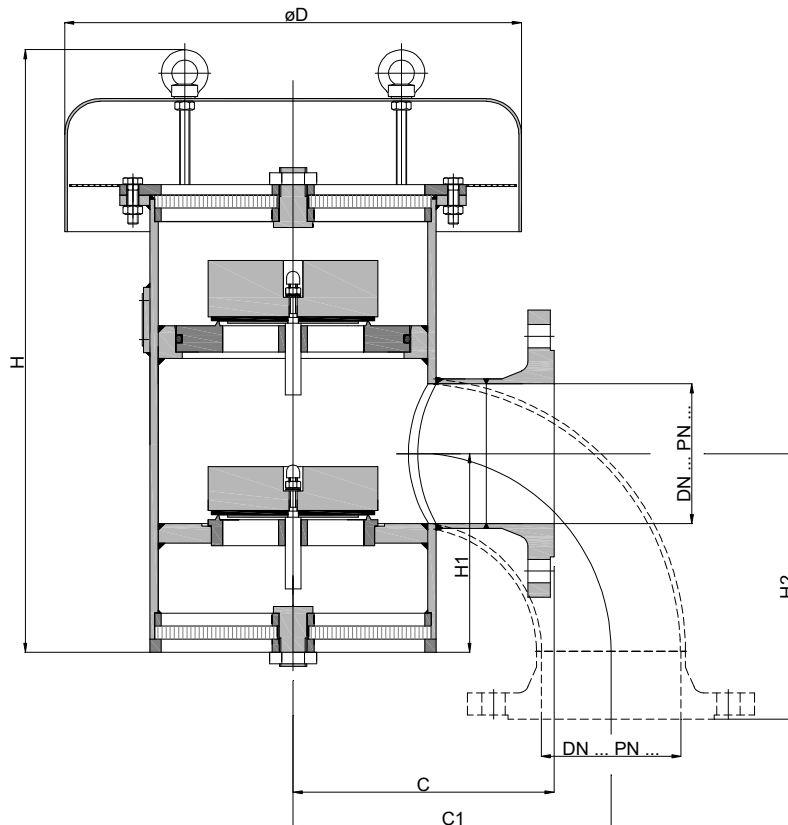
Deflagration proof pressure and vacuum relief valve  
**KITO® VD/AE-...-IIB3**



### Application

As end-of-line armature for venting and breathing of tanks. 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. Vertical mounting (for tank roofs) with an integrated elbow as an option.

### Dimensions (mm)



Vertical connection from size DN 100 only after prior agreement!!!  
 On-site support of the device may be necessary!!!

DN		D	H	H1	H2		DIN	C	C1	kg
DIN	ASME				DIN	ASME				
50	PN 16	240	350	108	121	140	150	169	180	17
80	PN 16	350	425	131	165	184	180	180	245	25
100	PN 16	372	500	156	204	228	200	224	245	26
150	PN 16	465	585	200	285	316	245	279	419	60
200	PN 10	550	725	262	367	407	275	315	518	100
250	PN 10	600	855	260	449	483	320	355	633	180

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

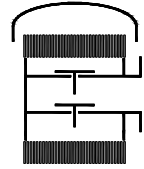
### Example for order

**KITO® VD/AE-50-IIB3 (lateral)**  
 (design DN 50 with lateral flange connection DN 50 PN 16)

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

## Type sheet

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



### Design

	standard	optionally
housing	steel	stainless steel mat. no. 1.4571
valve seat, valve spindle	stainless steel mat. no. 1.4571	
valve seat seal DN 50-200 (o-ring)	VMQ-FEP	Viton, NBR, VMQ-PFA
valve seat seal DN 250 (gasket)	HD 3822	PTFE
load weight	stainless steel mat. no. 1.4571	PE
valve sealing	NBR	Viton, PTFE, EPDM, metal sealing
	≥ 100 mbar only PTFE or metal sealing	
KITO®-flame arrester element	completely 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	stainless steel mat. no. 1.4571
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF
connection	lateral	vertical

### Settings (mbar)

DN		vacuum		setting	pressure	min. - max.
DIN	ASME	min. - max. (load weight from PE)	min. - max.	min. - max. (load weight from PE)	min. - max.	min. - max. (with housing extension)
50 PN 16	2"	2.7 - 10.7	10.8 - 35	2.5 - 10.7	10.8 - 65	> 65 - 200
80 PN 16	3"	1.9 - 7.9	8.0 - 35	2.4 - 8.0	8.0 - 52	> 52 - 200
100 PN 16	4"	1.9 - 7.9	8.0 - 35	1.9 - 7.9	8.0 - 57	> 57 - 200
150 PN 16	6"	2.0 - 11.9	12.0 - 35	2.0 - 11.9	12.0 - 50	> 50 - 150
200 PN 10	8"	2.1 - 11.9	12.0 - 35	2.2 - 11.9	12.0 - 50	> 50 - 100
250 PN 10	10"	2.3 - 11.9	12.0 - 35	2.3 - 11.9	12.0 - 50	> 50 - 100

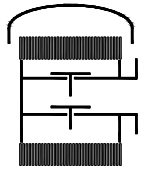
Higher settings see KITO® VD/AE-1-...-IIB3 (type sheet E 20.1 N)





## Type sheet

### Deflagration proof pressure and vacuum relief valve KITO® VD/AE-...-IIB3



#### 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

$$\dot{V}_{40\%} = \dot{V}_b \cdot \sqrt{\frac{\rho_b}{1.29}} \quad \text{or} \quad \dot{V}_b = \dot{V}_{40\%} \cdot \sqrt{\frac{1.29}{\rho_b}}$$

The indicated flow rates will be reached by an accumulation of 40% above valve's setting (see DIN 4119).  
If the allowable overpressure is less 40%, please consult der factory for the corrected volume flow.

