

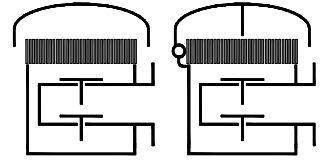


## Type sheet

Deflagration and endurance burning proof pressure and vacuum relief valve

**KITO® VD/KL-IIA-.../...-A**

**KITO® VD/KL-IIA-.../...-K**



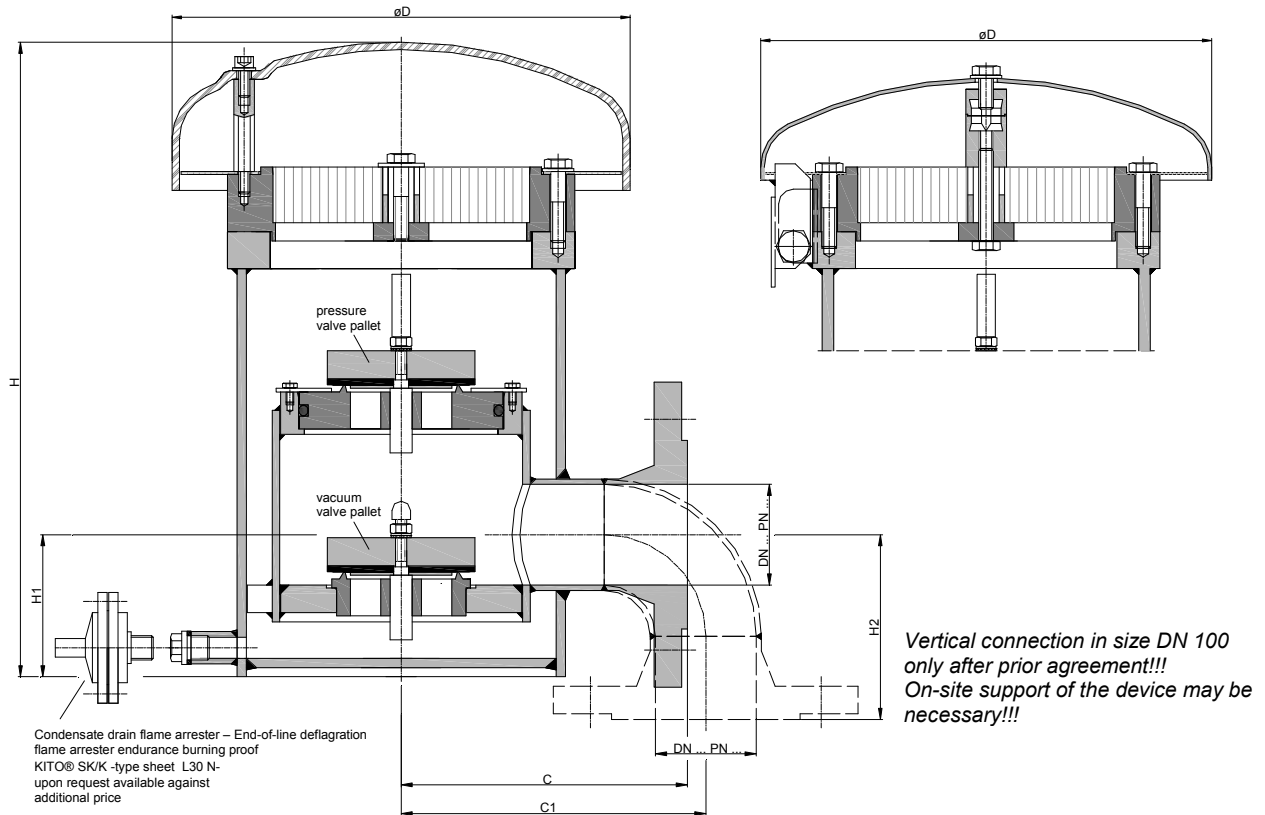
### Application

As end-of-line armature, for venting apertures on tank installations, valve is explosion-proof and endurance-burning proof for certain inflammable liquids. Used mainly as venting and breather device for fixed roof tanks to prevent inadmissible pressure and vacuum and to minimize unwelcome gas losses and inadmissible emissions. Approved for all materials of the explosion group IIA with a maximum experimental safe gap (MESG) > 0.9 and an maximum operating temperature of 60 °C. The housing is mounted perpendicularly on a tank roof. If required by the customer, the valve is equipped with an explosion-proof condensate drain device.

### Dimensions (mm)

KITO® VD/KL-IIA-...-A

KITO® VD/KL-IIA-...-K



DN		D	H	H1	H2		C		C1	kg
DIN	ASME				DIN	ASME	DIN	ASME		
50	PN 16 2"	248	345	77	121	140	155	174	186	22
80	PN 16 3"	248	400	105	165	184	180	200	247	30
100	PN 16 4"	248	478	124	204	228	190	190	310	47

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

Attention !!! Dimension H for design with a weather hood from stainless steel 1.4571 ca. 10-15 mm lower

### Example for order

**KITO® VD/KL-IIA-80/50-A (lateral)**

(design with lateral flange connection DN 80 PN 16, weather hood from PMMA, vacuum valve pallet DN 80 and pressure valve pallet DN 50)

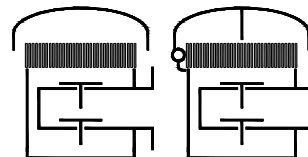
**Type examination certificate to EN ISO 16852 and (€-marking in accordance to ATEX-Directive 2014/34/EU**

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### Design

	standard	optionally
housing	steel	stainless steel mat. no. 1.4571
valve seat, valve spindle	stainless steel mat. no. 1.4571	
valve seat seal (o-ring)	VMQ-FEP	Viton, NBR, VMQ-PFA
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. 1.4308 / 1.4310	stainless steel mat. no. 1.4408 / 1.4571
weather hood KITO® VD/KL-IIA-...-A	PMMA	
weather hood KITO® VD/KL-IIA-...-K	stainless steel mat. no. 1.4571, hood can fold automatically as a result of folding mechanism and fusing element	
protective screen	PA6	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF
connection	lateral	vertical

### Settings (mbar)

DN	size	vacuum valve pallet		pressure valve pallet			min. - max. (with housing extension)
		min. - max. (load weight from PE)	min. - max.	size	min. - max. (load weight from PE)	min. - max.	
50 PN 16	50/...	1.9 - 10.4	10.5 - 65	50/25	3.1 - 10.8	10.9 - 200	-
				50/50	1.9 - 10.4	10.5 - 145	> 145 - 200
80 PN 16	80/...	1.9 - 7.8	7.9 - 63	80/50	1.9 - 10.5	10.6 - 200	-
				80/80	1.9 - 7.8	7.9 - 73	> 73 - 200
100 PN 16	100/...	1.8 - 7.6	7.7 - 90	100/50	2.7 - 11.3	11.4 - 200	-
				100/80	1.9 - 8.0	8.1 - 90	> 90 - 200
				100/100	1.9 - 7.7	7.8 - 67	> 67 - 200

The size of the vacuum valve pallet is always identical to the size of the flange connection.

The size of pressure valve pallet can be selected in accordance with required capacity!

Higher settings see KITO® VD/KL-1-IIA-...-... (type sheet E 14.1 N).



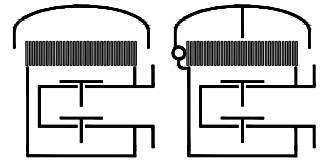


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### Performance curves

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.

