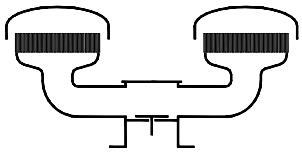
KITO Armaturen GmbH

Type sheet

Deflagration and endurance burning proof pressure relief valve

KITO® DS/M-IIB1-…

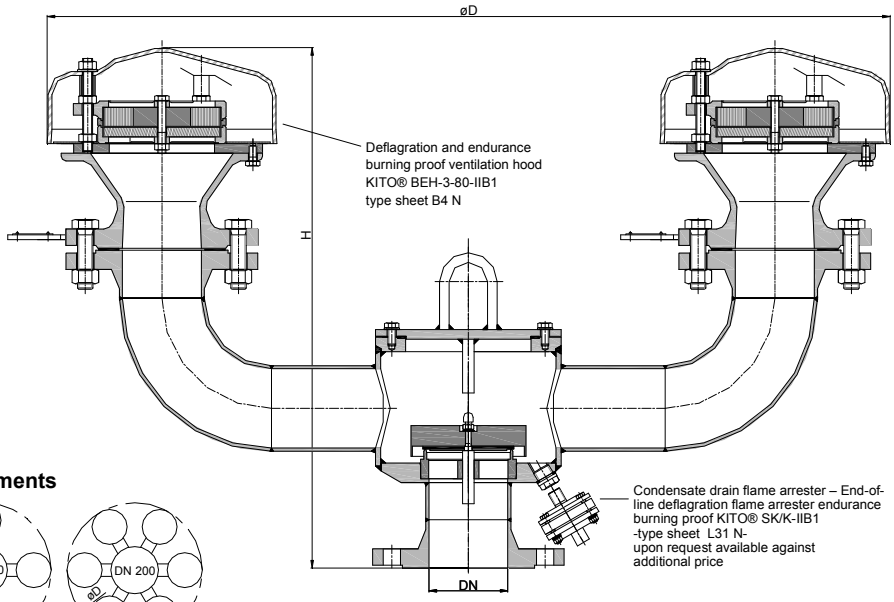


Application

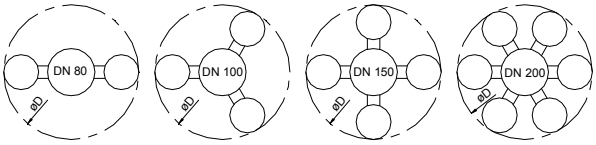
As an end-of-line flame arrester element to protect vent openings of storage tanks. Explosion and endurance burning proof for all inflammable liquids and vapors of explosion group IIB1 and also for alcohols with a maximum experimental safe gap (MESG) ≥ 0.85 mm and an maximum operating temperature of 60 °C. This device is not permitted to be installed in enclosed areas. Installation on top of storage tanks, tank access covers or breather pipes. The PRV allows the passage of hazardous excess pressure but will minimize the loss of gas/vapours depending on valve adjustment. Usually mounted on the top of the tank in conjunction with a vacuum relief valve. An explosion proof condensate drain is also available for this model at extra cost.

KITO® BEH-3-80-IIB1 with additional examination and approval, applicable also for alcohols (ethanol, methanol...)

Dimensions (mm) and settings (mbar)



Arrangement of the flame arrester elements



DN		D	H		number of KITO® BEH-3-80-IIB1	kg	setting		
DIN	ASME		DIN	ASME			min. - max. *(load weight from PE)*	min. - max.	min. - max. *(with housing extension)*
80 PN 16	**3“**	855	545	565	2		2 – 9.9	10 - 115	> 115 - 200
100 PN 16	**4“**	950	570	594	3		2 – 9.9	10 – 125	> 125 - 200
150 PN 16	**6“**	1110	605	639	4		2 – 9.9	10 – 90	> 90 - 150
200 PN 10	**8“**	1470	630	669	6		2.8 – 13.4	13.5 - 100	-

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

Higher settings on request !

Example for order

KITO® DS/M-IIB1-80
(design with flange connection DN 80 PN 16)

Type examination certificate to EN ISO 16852 and CE-marking in accordance to ATEX-Directive 2014/34/EU for KITO® BEH-3-80-IIB1 and KITO® SK/K-IIB1

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Date: 08-2018
Created: Abt. Doku KITO
Design subject to change

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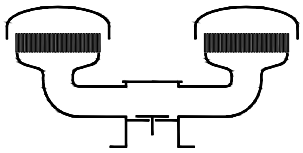


Design

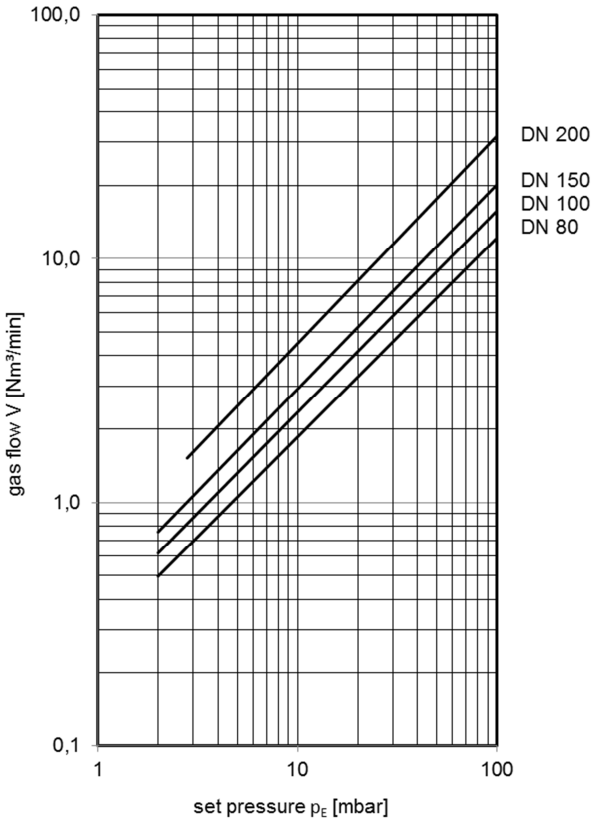
	standard	optionally
housing / cover	steel	stainless steel mat. no. 1.4571
housing KITO® BEH-3-80-IIB1	cast steel 1.0619	stainless cast steel 1.4408
gasket	HD 3822	PTFE
design valve pallet	orifice plate	
valve seat, valve spindle	stainless steel mat. no. 1.4571	
load weight	stainless steel mat. no. 1.4571	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. 1.4408 / 1.4310	stainless steel mat. no. 1.4408 / 1.4571
weather hood	PMMA	
protective screen	PA6	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

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

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

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.



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