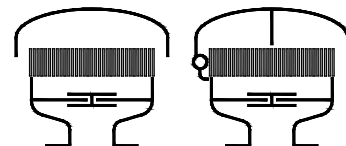# Combined Pressure / Vacuum Relief Valve
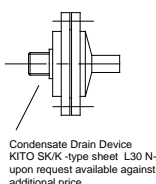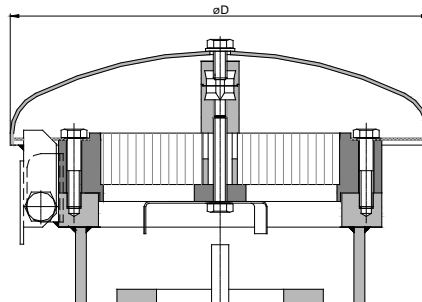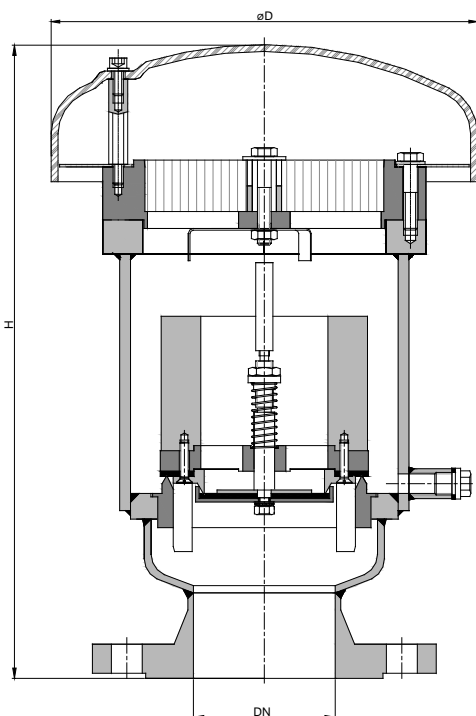## KITO® VD/KS-IIA-…-A
KITO® VD/KS-IIA-…-K

KITO VD/KS-IIA-...-A

KITO VD/KS-IIA-...-K

øD

H

DN

Condensate Drain Device
KITO SK/K -type sheet L30 N-
upon request available against
additional price

Example to order :

KITO® VD/KS-IIA-50-A
(design with weather hood from PMMA and flange connection DN 50 PN 16)

For larger sizes, we recommend :

DN 80-200→ KITO® VD/MC-IIA-…-K o. –A type sheet E 16.9 N
DN 150-400→ KITO® VD/MD-IIA-…-K o. –A type sheet E 16.20 N

Type examination certificate to DIN EN ISO 16852

$C\epsilon$ -*designation in accordance to ATEX-Guideline 94/9/EC*

DN		D	H		kg*	setting (mbar)			
						vacuum		pressure	
DIN	ANSI		DIN	ANSI		min.	max.	min.	max.**
50 PN 16	2"	220	315	335	13.5		100		50
80 PN 16	3"	245	370	395	20.5	3	50	10	60
100 PN 16	4"				22				66

Dimensions in mm

* 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.

standard valve setting 10-30 mbar (pressure) -different settings (< 200 mbar) against additional price-
(** higher settings require higher housings)

settings ≥ 200 mbar (pressure) see KITO® VD/KS-1-IIA-…-A or - K (type sheet E 13.1 N)

Design subject to change   performance curves: E 0.13 N

Standard design

|	
housing	: steel, stainless steel mat. no. 1.4571
valve parts / spindle	: stainless steel mat. no. 1.4571
gasket	: NBR, Viton, PTFE
valve pallet (vacuum)	: spring loaded
valve pallet (pressure)	: weight loaded
KITO® flame arrester element	: completely interchangeable
KITO® casing / grid	: stainless steel mat. no. 1.4308 / 1.4310, 1.4408 / 1.4571
weather hood	:
KITO® VD/KS-IIA-…-K	: stainless steel mat. no. 1.4571, hood can fold automatically as a result of folding mechanism and fusing element
KITO® VD/KS-IIA-…-A	: PMMA
protective screen	: PA6
flange connection	: DIN EN 1092-1 form B1, ANSI 150 lbs. RF

Application

proof for products of explosion group IIA with a maximum experimental safe gap (MESG) > 0.9 mm.
Mainly used as equipment of fixed roof tanks for venting and inbreathing to prevent undue pressure resp. vacuum and undesired losses of vaporization, respectively undue emissions.
Installation on top of storage vessels.
Available with an explosion and endurance burning proofed condensate drain device.
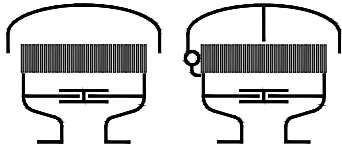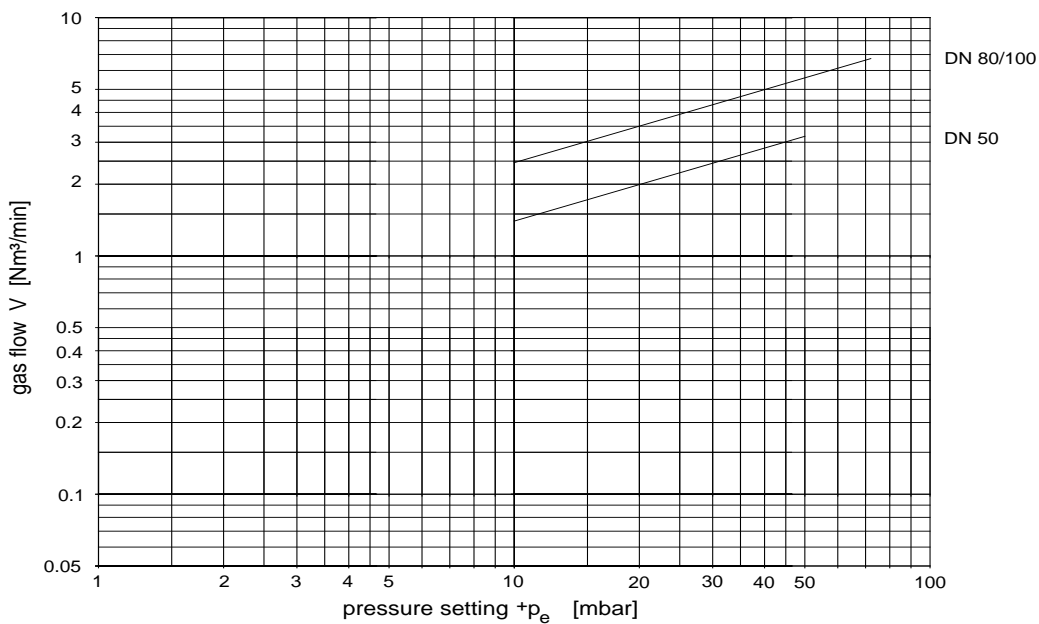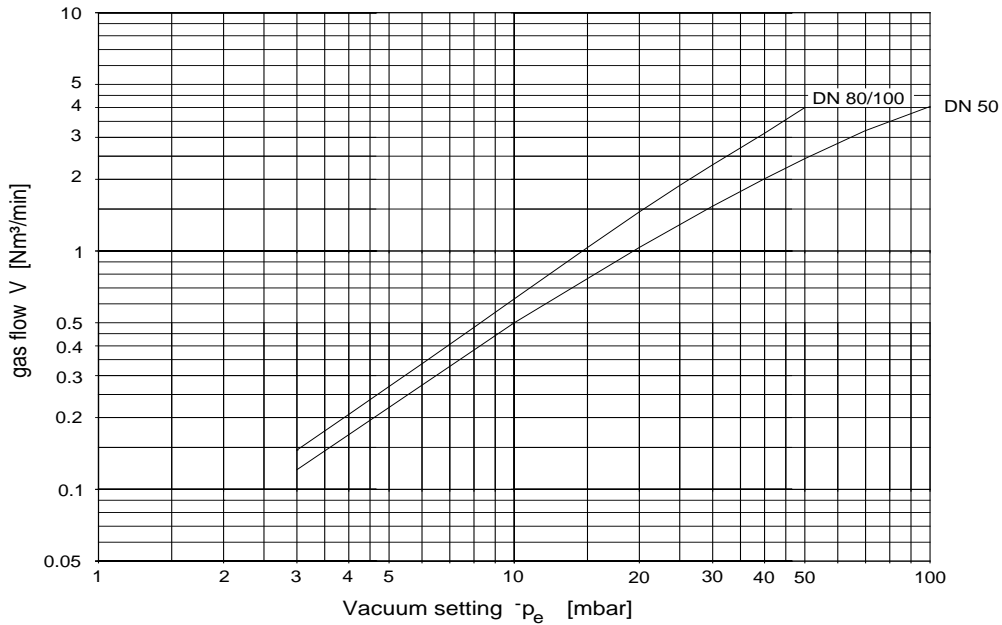
The flow capacity V refers to a density of air with ρ = 1.29 kg/m³ at a temperature of 273 K and a pressure of 1.013 mbar.
The indicated flow rates will be reached by an accumulation of 40% above valve's setting.

The flow capacity for gases with different densities can be calculated sufficiently accurate by the following approximation equation:

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

Indicated flow rates will be reached by an accumulation of 40% above valve's setting.

Design subject to change