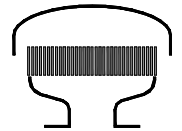


Type sheet

Deflagration proof ventilation hood

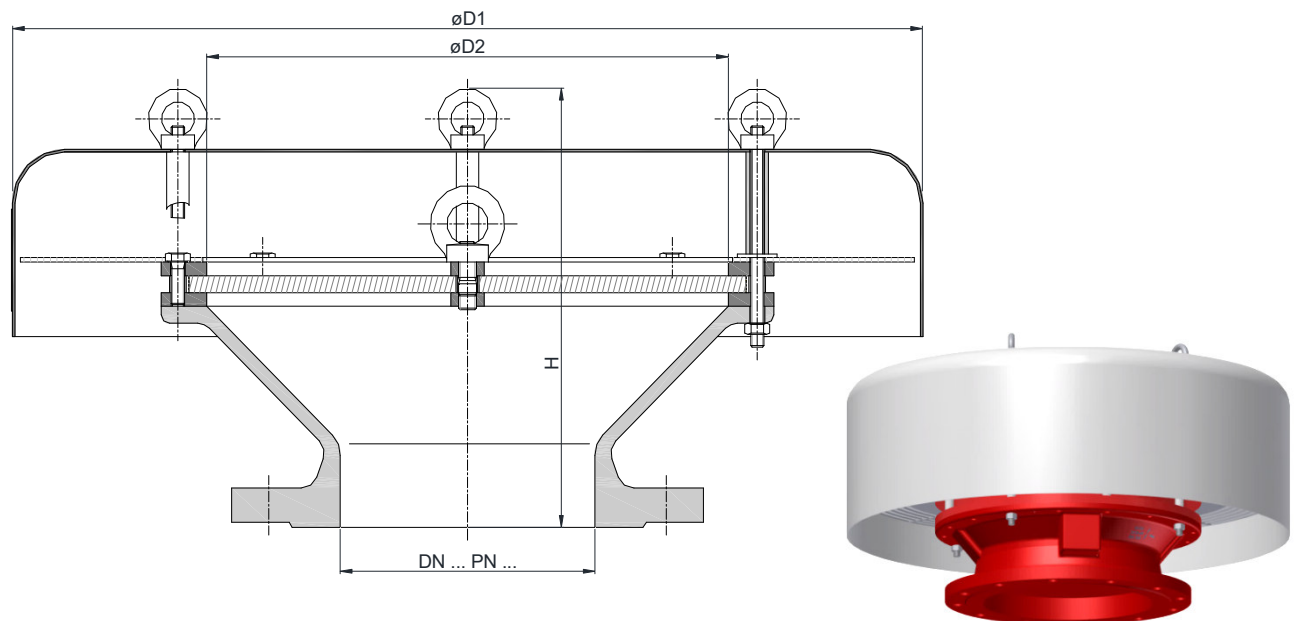
KITO® VH-...-IIB3



Application

As breather/venting safety device incorporating an explosion proof flame arrester element for installation on top of storage tanks, tank access covers or breather pipes. The breather allows the unimpeded flow of gases out to atmosphere and air into the tank/pipe thereby preventing vacuum locks whilst ensuring provision of a permanent and reliable protection against any flashback into the tank/pipe. This device is not permitted to be installed in enclosed areas. Approved for all materials of the explosion group IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm and an maximum operating temperature of 60 °C .

Dimensions (mm)



DIN	DN	ASME	D1	D2	H		kg
50 PN 16		2"	285	110	170		7.3
80 PN 16		3"	330	150	180		11
100 PN 16		4"	405	185	220		15
150 PN 16		6"	550	315	260		29.9
200 PN 10		8"			315		31.5
250 PN 10		10"	600	395	355		62.5
300 PN 10		12"			350	396	62
350 PN 10		14"	800	595	405	464	88
400 PN 10		16"			400	455	103
450 PN 10		18"	1000	700	-	489	130
500 PN 10		20"			415	485	
600 PN 10		24"	1200	800	485	558	192
700 PN 10		-	1400	1000	520	-	265
800 PN 10		-	1600	1210	560	-	345

Weight refers to the standard design

Example for order

KITO® VH-300-IIB3

(design with flange connection DN 300 PN 10)

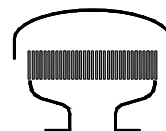
Type examination certificate to EN ISO 16852 and CE-marking in accordance to ATEX-Directive 2014/34/EU



Type sheet

Deflagration proof ventilation hood

KITO® VH-...-IIB3



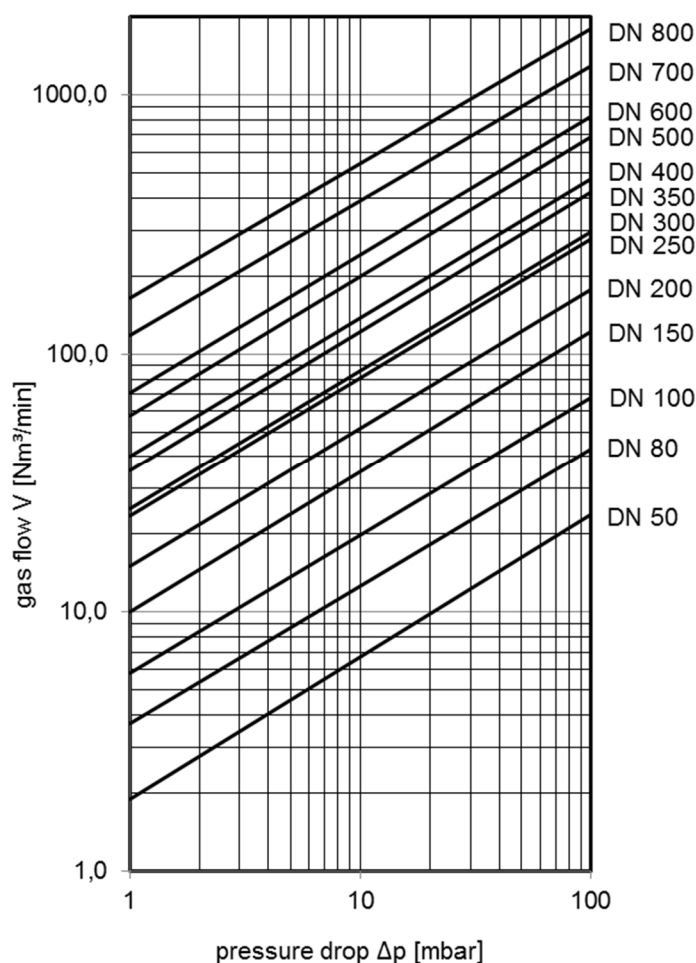
Design

	standard	optionally
housing	cast steel 1.0619 (≥ DN 350 steel)	stainless cast steel 1.4408 (≥ DN 350 stainless steel mat. no. 1.4571)
KITO®-flame arrester element	completely interchangeable	
KITO®-casing	steel	stainless steel mat. no. 1.4571
KITO®-grid	stainless steel mat. no. 1.4310	stainless steel mat. no. 1.4571
weather hood	stainless steel	
protective screen (not for DN 50-100)	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

Performance curves

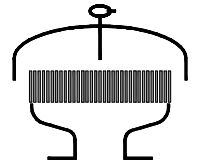
Flow capacity V based on air of a density $\rho = 1.29 \text{ kg/m}^3$ at $T = 273 \text{ K}$ and atmospheric pressure $p = 1.013 \text{ mbar}$. For other gases the flow can be approximately calculated by

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



Type sheet

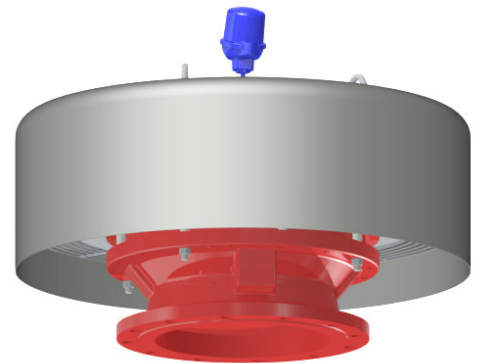
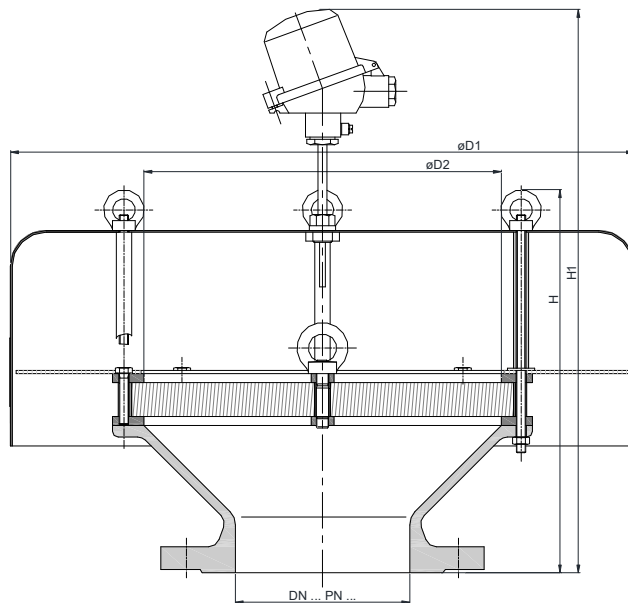
Deflagration and short-time burning proof ventilation hood KITO® VH-...-IIB3-T



Application

As breather/venting safety device incorporating an explosion and short-time burn proof flame arrester element for installation on top of storage tanks, tank access covers or breather pipes. The breather allows the unimpeded flow of gases out to atmosphere and air into the tank/pipe thereby preventing vacuum locks whilst ensuring provision of a permanent and reliable protection against any flashback into the tank/pipe. This device is not permitted to be installed in enclosed areas. Approved for all materials of the explosion group IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm and an maximum operating temperature of 60 °C. Design with temperature sensor, to detect a "stabilized burning" (burn time 1 minute).

Dimensions (mm)



DN		D1	D2	H	H1	kg
DIN	ASME					
50 PN 16	2"	285	110	214	390	8.5
80 PN 16	3"	295	150	242	430	14.5
100 PN 16	4"	350	185	297	454	20
150 PN 16	6"	600	315	342	500	41
200 PN 10	8"					45
250 PN 10	10"	800	395	474	614	84
300 PN 10	12"			462	509	81
350 PN 10	14"			507	567	136
400 PN 10	16"	1000	595	502	558	152
450 PN 10	18"			-	611	-
500 PN 10	20"			537	607	188
600 PN 10	24"	1200	800	660	734	253
700 PN 10	-			691	-	376
800 PN 10	-	1500	1000	734	-	495

Weight refers to the standard design

Example for order

KITO® VH-300-IIB3-T

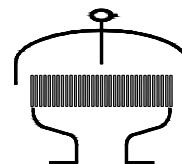
(design with flange connection DN 300 PN 10 and a temperature sensor)

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

page 1 of 2

**Type sheet**

Deflagration and short-time burning proof ventilation hood

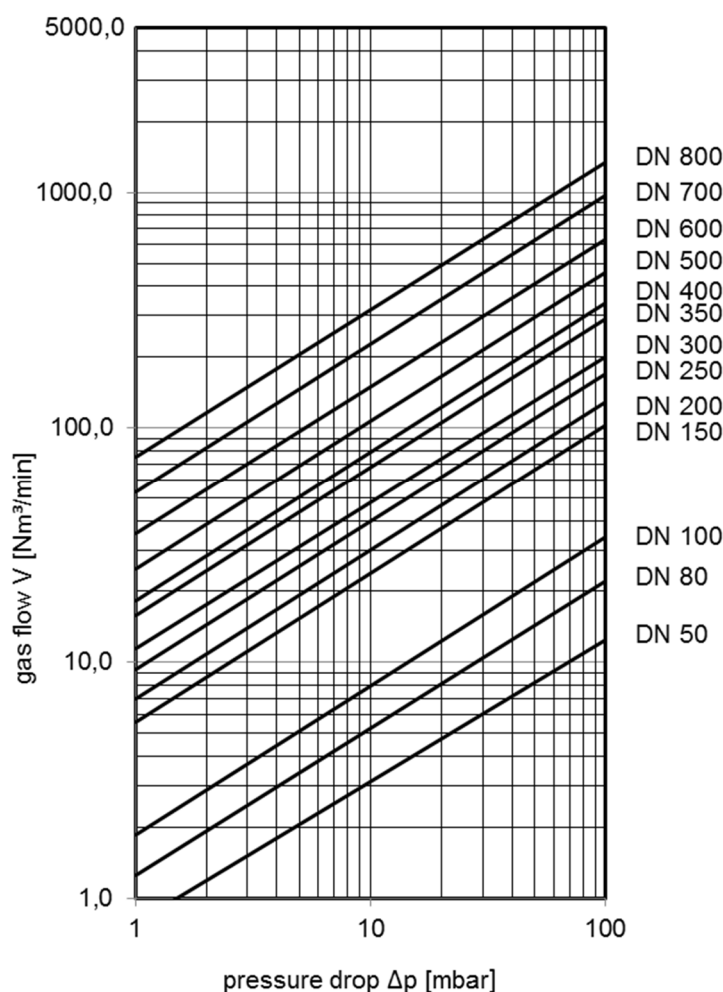
KITO® VH-...-IIB3-T**Design**

	standard	optionally
housing	cast steel 1.0619 (≥ DN 350 steel)	stainless cast steel 1.4408 (≥ DN 350 stainless steel mat. no. 1.4571)
KITO®-flame arrester element	completely interchangeable	
KITO®-casing	steel	stainless steel mat. no. 1.4571
KITO®-grid	stainless steel mat. no. 1.4310	stainless steel mat. no. 1.4571
weather hood	stainless steel	
protective screen	stainless steel mat. no. 1.4301	stainless steel mat. no. 1.4571
temperature sensor	PT 100, connection 3/8", 1.4571	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

Performance curves

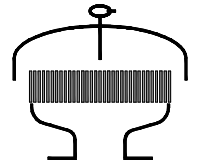
Flow capacity V based on air of a density $\rho = 1.29 \text{ kg/m}^3$ at $T = 273 \text{ K}$ and atmospheric pressure $p = 1.013 \text{ mbar}$. For other gases the flow can be approximately calculated by

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



Type sheet

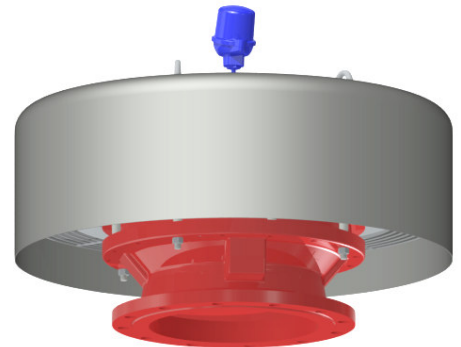
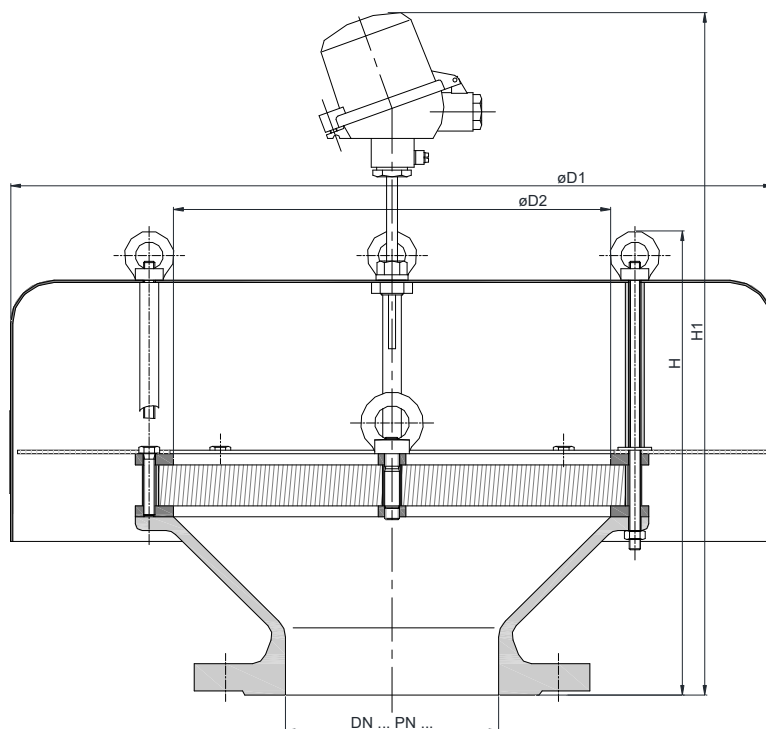
Deflagration and short-time burning proof ventilation hood KITO® VH-...-IIB3-XT



Application

End-of-line venting device incorporating an explosion and short-time burn proof flame arrester element for installation on storage tanks. Suitable to protect flammable products of explosion group IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm up to a maximum operating temperature of 180 °C. This device is not permitted to be installed in enclosed areas. Installation on top of storage tanks, tank access covers or at the end of breather pipes. It prevent a flashback into the tank and allows the inbreathing and out breathing of the tank. Design with temperature sensor, to detect a "stabilized burning" (burn time 1 minute).

Dimensions (mm)



DN								
DIN	ASME	D1	D2	H		H1		kg
50 PN 16	2"	285	110	214		390		8.5
80 PN 16	3"	295	150	242		430		14.5
100 PN 16	4"	350	185	297		454		20
150 PN 16	6"	600	315	342		500		41
200 PN 10	8"							45
250 PN 10	10"	800	395	474		614		84
300 PN 10	12"			462	509	604	651	81
350 PN 10	14"	1000	595	507	567	649	709	136
400 PN 10	16"							

Weight refers to the standard design

Example for order

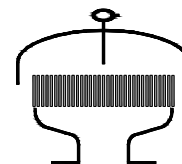
KITO® VH-300-IIB3-XT

(design with flange connection DN 300 PN 10 and a temperature sensor)

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

**Type sheet**

Deflagration and short-time burning proof ventilation hood

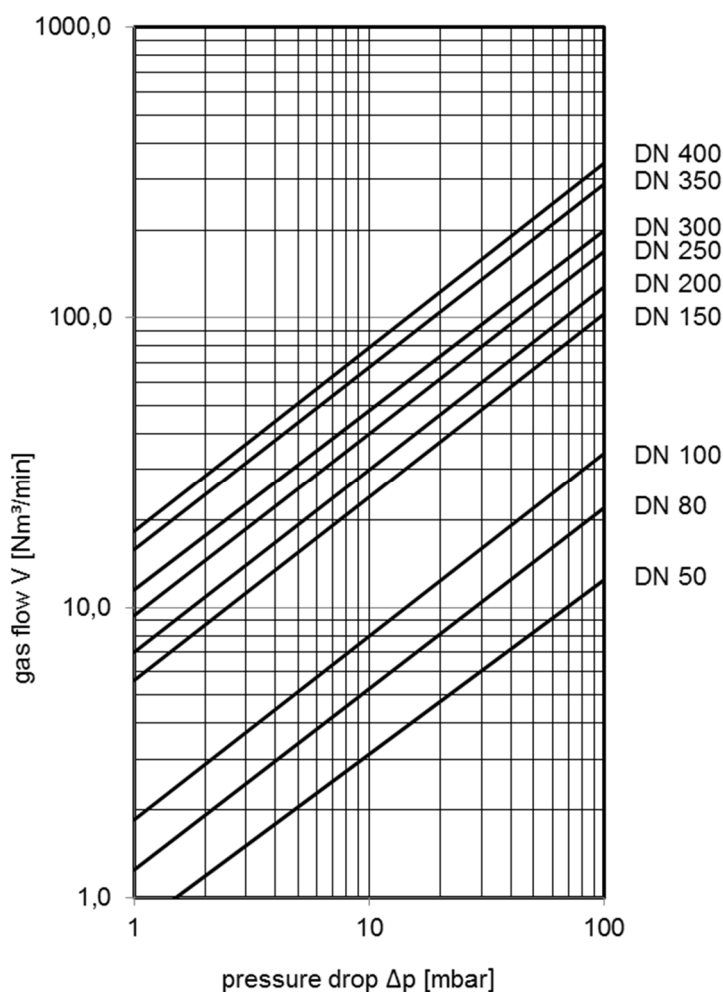
KITO® VH-...-IIB3-XT**Design**

	standard	optionally
housing	cast steel 1.0619 (≥ DN 350 steel)	stainless cast steel 1.4408 (≥ DN 350 stainless steel mat. no. 1.4571)
KITO®-flame arrester element	completely interchangeable	
KITO®-casing	steel	stainless steel mat. no. 1.4571
KITO®-grid	stainless steel mat. no. 1.4310	stainless steel mat. no. 1.4571
weather hood	stainless steel	
protective screen	stainless steel mat. no. 1.4301	stainless steel mat. no. 1.4571
temperature sensor	PT 100, connection 3/8", 1.4571	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

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

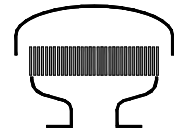
$$\dot{V} = \dot{V}_b \cdot \sqrt{\frac{\rho_b}{1.29}} \quad \text{or} \quad \dot{V}_b = \dot{V} \cdot \sqrt{\frac{1.29}{\rho_b}}$$



Type sheet

Deflagration proof ventilation hood

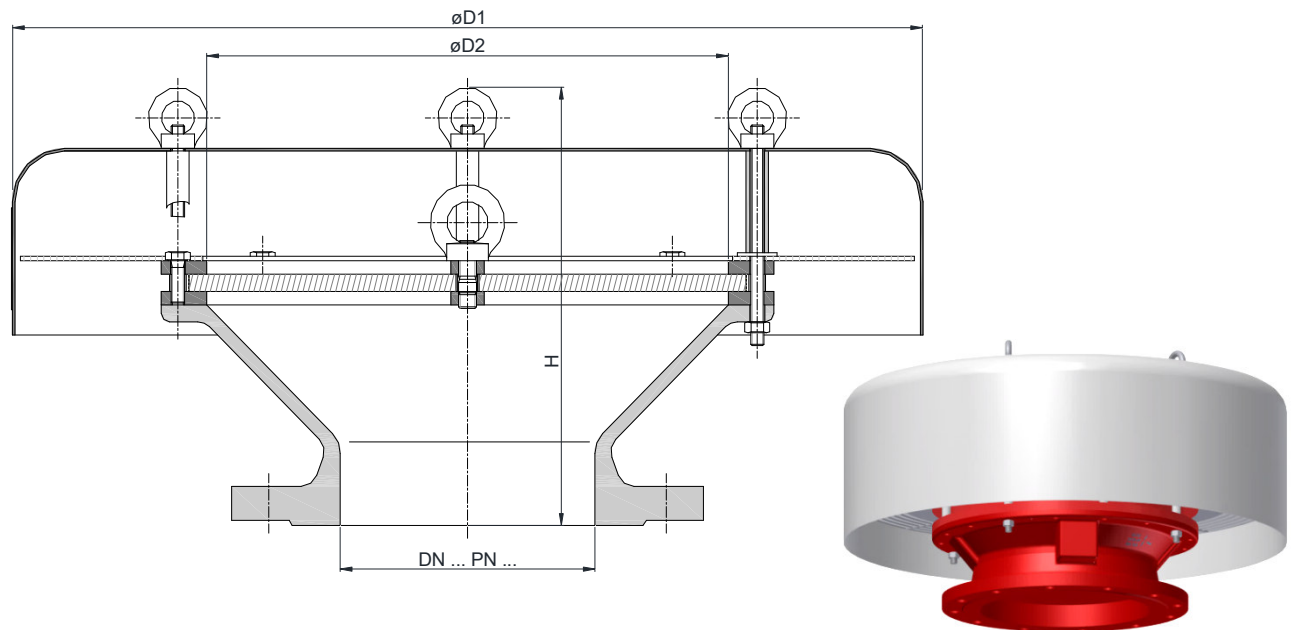
KITO® VH-...-IIC



Application

As breather/venting safety device incorporating an explosion proof flame arrester element for installation on top of storage tanks, tank access covers or breather pipes. The breather allows the unimpeded flow of gases out to atmosphere and air into the tank/pipe thereby preventing vacuum locks whilst ensuring provision of a permanent and reliable protection against any flashback into the tank/pipe. This device is not permitted to be installed in enclosed areas. Approved for all materials of the explosion group IIC with a maximum experimental safe gap (MESG) < 0.5 mm and an maximum operating temperature of 60 °C.

Dimensions (mm)



DIN	DN	ASME	D1	D2	H		kg
50 PN 16		2"	285	110	180		8
80 PN 16		3"	330	150	190		13
100 PN 16		4"	405	185	230		18
150 PN 16		6"	550	315	270		36
200 PN 10		8"					40
250 PN 10		10"	600	395	365		74
300 PN 10		12"				360	73
350 PN 10		14"	800	595	415	406	112
400 PN 10		16"			410	465	127
450 PN 10		18"	1000	700	-	499	
500 PN 10		20"			425	495	173
600 PN 10		24"	1200	800	495	568	250
700 PN 10		-	1400	1000	530	-	348
800 PN 10		-	1600	1210	570	-	457

Weight refers to the standard design

Example for order

KITO® VH-300-IIC

(design with flange connection DN 300 PN 10)

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

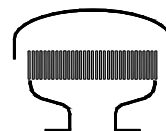
page 1 of 2



Type sheet

Deflagration proof ventilation hood

KITO® VH-...-IIC



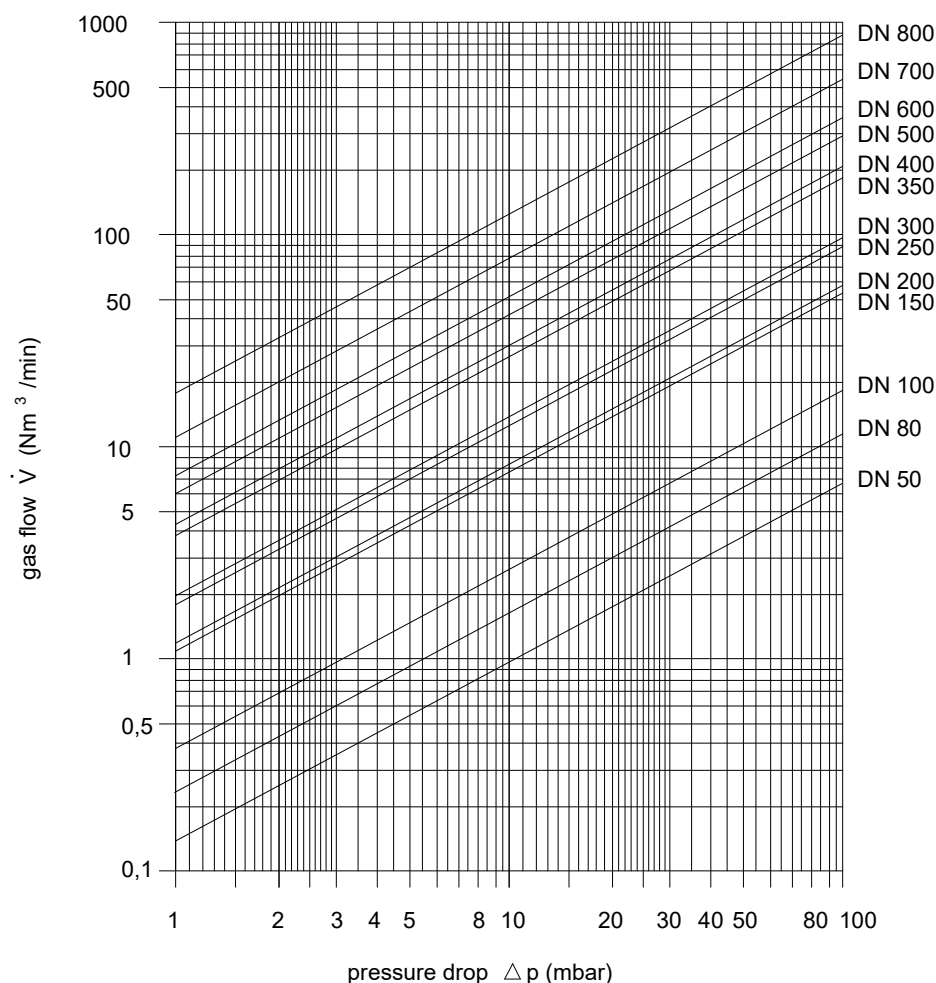
Design

	standard	optionally
housing	cast steel 1.0619 (≥ DN 350 steel)	stainless cast steel 1.4408 (≥ DN 350 stainless steel mat. no. 1.4571)
gasket	HD 3822	PTFE
KITO®-flame arrester element	completely interchangeable	
KITO®-casing	steel	stainless steel mat. no. 1.4571
KITO®-grid	stainless steel mat. no. 1.4310	stainless steel mat. no. 1.4571
weather hood	stainless steel	
protective screen (not for DN 50-100)	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

Performance curves

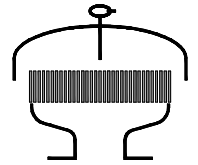
Flow capacity $\dot{V}$ based on air of a density $\rho = 1.29 \text{ kg/m}^3$ at $T = 273 \text{ K}$ and atmospheric pressure $p = 1.013 \text{ mbar}$. For other gases the flow can be approximately calculated by

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



Type sheet

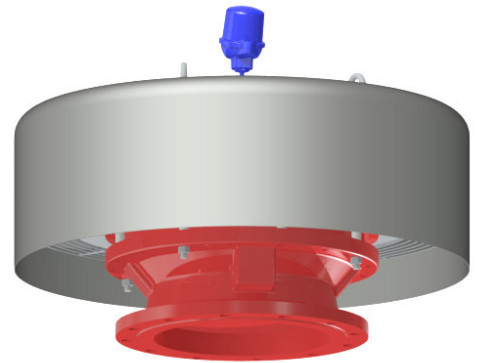
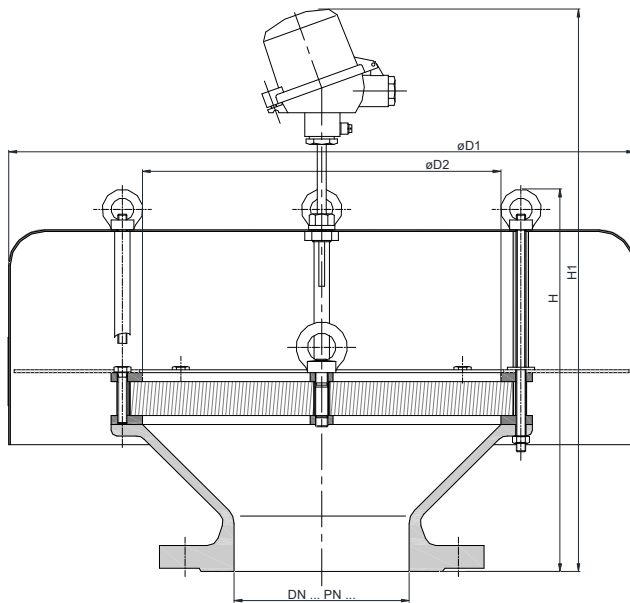
Deflagration and short-time burning proof ventilation hood KITO® VH-...-IIC-T



Application

As breather/venting safety device incorporating an explosion and short-time burn proof flame arrester element for installation on top of storage tanks, tank access covers or breather pipes. The breather allows the unimpeded flow of gases out to atmosphere and air into the tank/pipe thereby preventing vacuum locks whilst ensuring provision of a permanent and reliable protection against any flashback into the tank/pipe. This device is not permitted to be installed in enclosed areas. Approved for all materials of the explosion group IIC with a maximum experimental safe gap (MESG) < 0.5 mm and an maximum operating temperature of 60 °C. Design with temperature sensor, to detect a "stabilized burning" (burn time 1 minute).

Dimensions (mm)



DN								
DIN	ASME	D1	D2	H		H1		kg
50 PN 16	2"	285	110	225		410		10
80 PN 16	3"	295	150	254		438		18
100 PN 16	4"	350	185	316		474		25
150 PN 16	6"	600	315	366		524		54
200 PN 10	8"							57
250 PN 10	10"	800	395	487		629		105
300 PN 10	12"			482	529	624	671	105
350 PN 10	14"	1000	595	527	587	669	729	182
400 PN 10	16"			522	578	664	720	197
450 PN 10	18"	1200	700	-	631	-	773	-
500 PN 10	20"			557	627	699	769	259
600 PN 10	24"			680	754	823	896	346
700 PN 10	-			711	-	854	-	500
800 PN 10	-	1700	1210	754	-	896	-	668

Weight refers to the standard design

Example for order

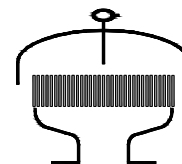
KITO® VH-300-IIC-T

(design with flange connection DN 300 PN 10 and a temperature sensor)

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

**Type sheet**

Deflagration and short-time burning proof ventilation hood

KITO® VH-...-IIC-T**Design**

	standard	optionally
housing	cast steel 1.0619 (≥ DN 350 steel)	stainless cast steel 1.4408 (≥ DN 350 stainless steel mat. no. 1.4571)
gasket	HD 3822	PTFE
KITO®-flame arrester element	completely interchangeable	
KITO®-casing	steel	stainless steel mat. no. 1.4571
KITO®-grid	stainless steel mat. no. 1.4310	stainless steel mat. no. 1.4571
weather hood	stainless steel	
protective screen	stainless steel mat. no. 1.4301	stainless steel mat. no. 1.4571
temperature sensor	PT 100, connection 3/8", 1.4571	
flange connection	EN 1092-1 type B1	ASME B16.5 Class 150 RF

Performance curves

Flow capacity $\dot{V}$ 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

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

