In-line Deflagration Flame Arrester
KITO® RV/N-…/…-IIA

Supporting construction, connection for measuremt of differential pressure and cleaning lance on request

Thermo couple element

L1

waste gas treatment

waste gas

øD1

DN

DN

øD2

C2

L2

H1

C1

ø18

80

DN 25 (ANSI 1")
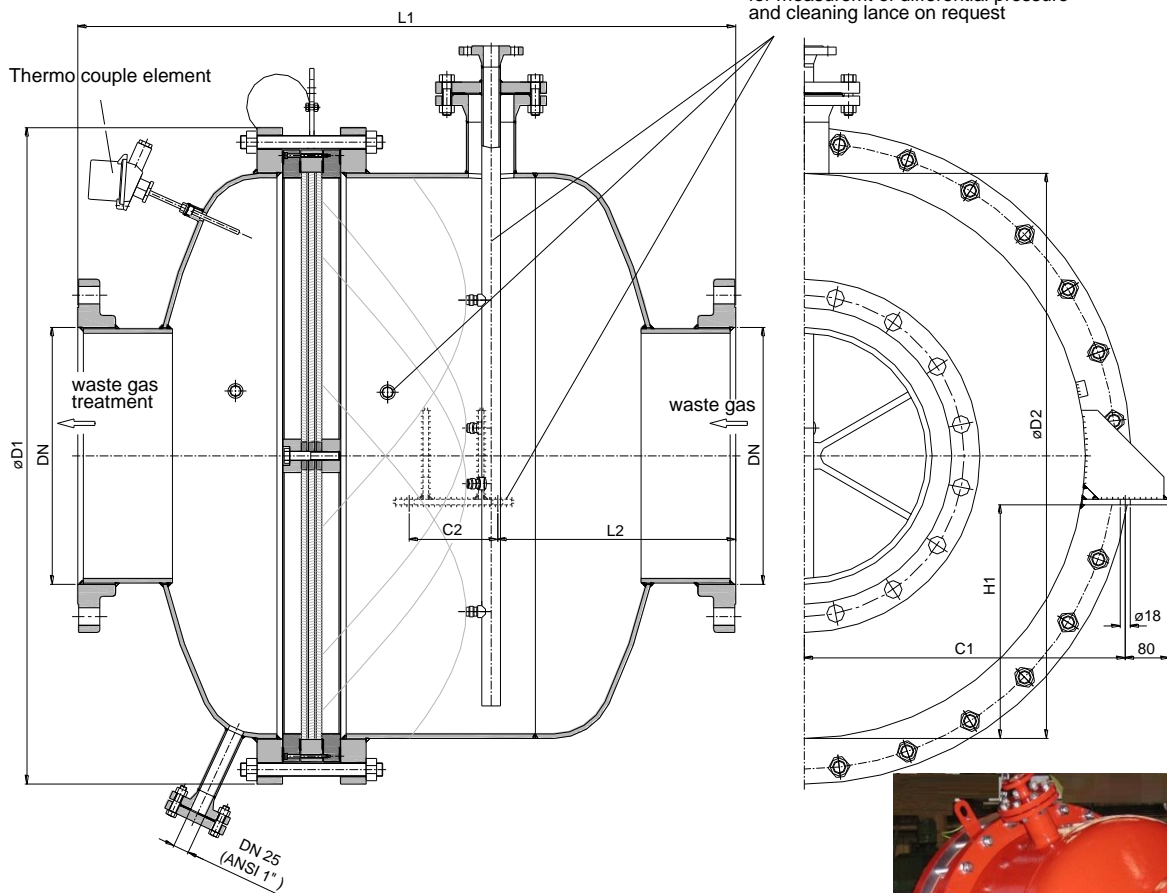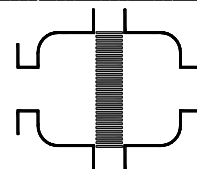
Type examination certificate to DIN EN ISO 16852

CE *-designation in accordance to ATEX-Guideline 94/9/EC*

Example to order :

KITO® RV/N-800/400-IIA

size	DN	ANSI	D1	D2	L1	L2	C1	C2	H1	max. L/D**	kg* (DN)	kg* (ANSI)
800	400	16"	1015	813	900	295	487	130	316	10	540	
	500	20"									560	
1000	400	16"	1180	1016	1190	405	580	210	420	50		
	450	18"									824	862
	500	20"									821	879
	600	24"									839	939

Dimensions in mm

* weight refers to the standard design
** ratio of pipe length to nominal pipe diameter

Design subject to change

performance curves: H 0.26 N

Standard design

housing	: <u>steel</u>, stainless steel mat. no. 1.4571 or 1.4301
gasket	: <u>HD3822</u>, PTFE
KITO® flame arrester element	: completely interchangeable
KITO® casing	: <u>steel</u>, stainless steel mat. no. 1.4571 or 1.4301
KITO® grid	: stainless steel mat. no. <u>1.4310</u> or 1.4571
temperature sensor	: 2x PT100 (option)
condensate drain connecting piece	: blank flanged
flange connection	: <u>DIN EN 1092-1 PN 10 form A</u>, ANSI 150 lbs. RF

Application

Intermediate armature, mainly installed as in-line deflagration flame arrester in pipes to thermal incineration plants for vapor/air and air/gas mixtures. Unilaterally working in pipes, whereby an operating pressure of 1.2 bar abs. and an operating temperature of 60°C must not be exceeded. Approved for all substances of the explosion group IIA with a MESG > 0.9 mm. The maximum length of the pipe from the KITO® flame arrester to the ignition source is limited (L/D tube length/tube diameter). It is only allowed to install the device in pipes with nominal widths ≤ than the nominal width of the armature (DN). The thermal sensor serves to trigger an emergency function, e.g. shutting off or inerting the gas flow if a stabilized burning occurs at the KITO® flame arrester.
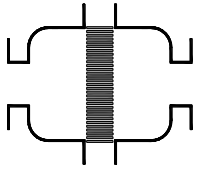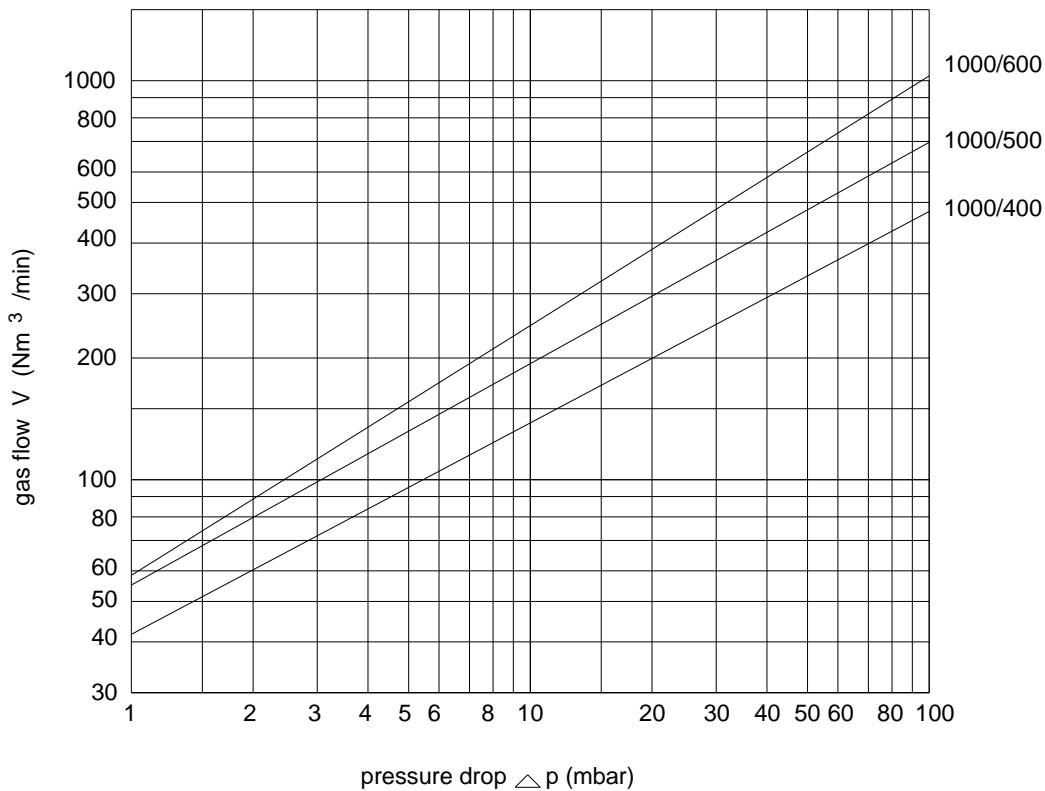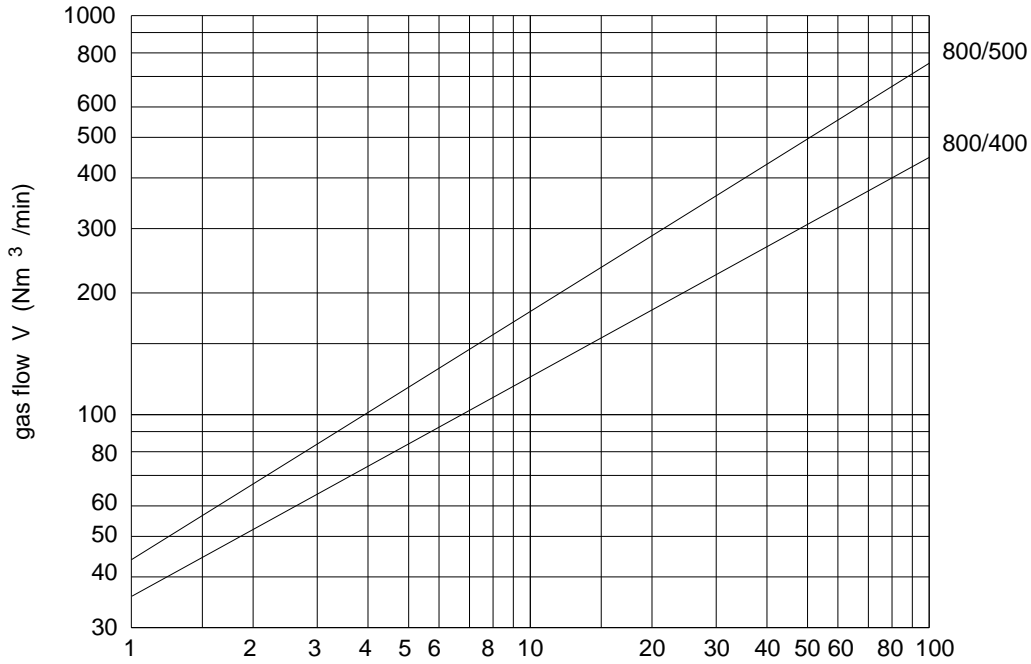
Flow capacity V based on air of a density ρ = 1.29 kg/m³ at T = 273 K and atmospheric pressure p = 1.013 mbar.

For other gases the flow can be approximately calculated by $\dot{V} = \dot{V}_b \cdot \sqrt{\frac{\rho_b}{1.29}}$ or $\dot{V}_b = \dot{V} \cdot \sqrt{\frac{1.29}{\rho_b}}$

Upper chart — gas flow V (Nm³/min) vs pressure drop △p (mbar); curves labeled 800/500 and 800/400.

Lower chart — gas flow V (Nm³/min) vs pressure drop △p (mbar); curves labeled 1000/600, 1000/500, and 1000/400.

pressure drop △p (mbar)

Design subject to change