KITO Armaturen GmbH

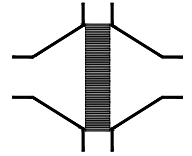**Type sheet**
Bi-directional in-line detonation flame arrester, short-time burning proof
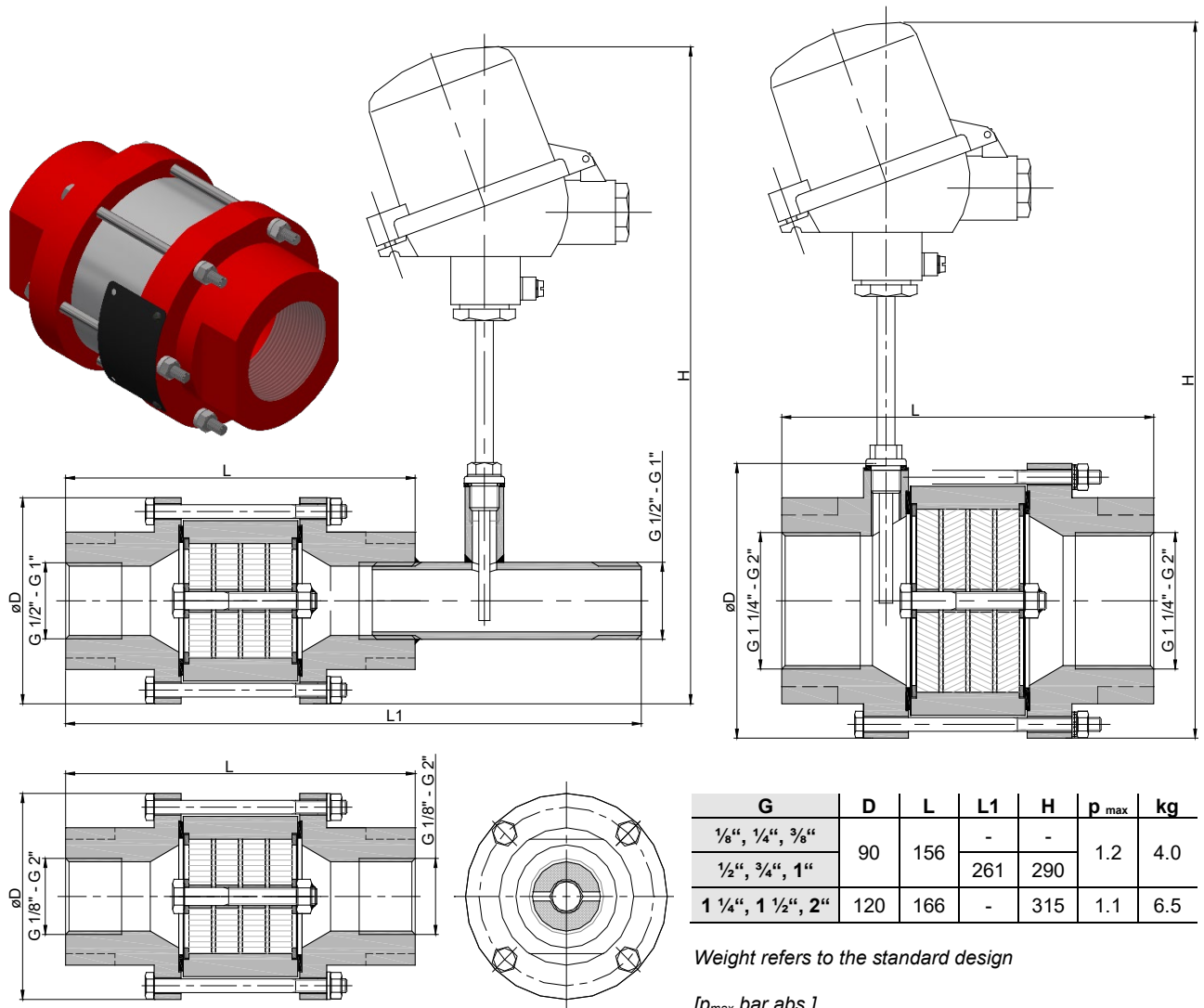**KITO® RG-Det4-IIC-…**
KITO® RG-Det4-IIC-…-T (-TT)

Application

For installation into pipes to the protection of vessels and components against **stable** detonation of flammable liquids and gases. Tested and approved as detonation flame arrester **type 4.** Approved for all substances of explosion groups IIA1 to IIC with a maximum experimental safe gap (MESG) < 0.5 mm. Bi-directionally working in pipes, whereby an operating pressure of 1.2 or 1.1 bar abs. and an operating temperature of 60 °C must not be exceeded. All sizes are tested against "stabilized burning" and withstand this up to a max. burn time BT ≤ 1.0 min. To detect a "stabilized burning" a temperature sensor must be installed at each endangered side. Mounting is acceptable in any position, in horizontal as well as in vertical pipes.

Dimension (mm)

G	D	L	L1	H	p_{max}	kg
⅛", ¼", ⅜"	90	156	-	-	1.2	4.0
½", ¾", 1"			261	290		
1 ¼", 1 ½", 2"	120	166	-	315	1.1	6.5

Weight refers to the standard design

[p_{max} bar abs.]

Example for order

KITO® RG-Det4-IIC-1 ¼"-1.2-T
(design with threaded connection G 1 ¼" and a temperature sensor)

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

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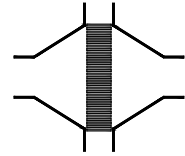
Design

	standard	optionally
housing	steel	stainless steel mat. no. 1.4571
gasket	HD 3822	PTFE
KITO®-flame arrester element	completely interchangeable	
KITO®-casing / KITO®-grid	stainless steel mat. no. 1.4301 / 1.4310	stainless steel mat. no. 1.4571 / 1.4571
bolts / nuts	A2	A4
temperature sensor *-not for connection G ⅛"- ⅜"-*		PT 100, connection ¼", 1.4571
connection	thread connection	

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

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

Performance curve: gas flow V [Nm³/min] vs pressure drop Δp [mbar]
- 2"; 1 1/2"; 1 1/4"
- 1"; 3/4"; 1/2"; 3/8"; 1/4"; 1/8"