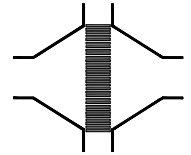


# Bi-directional in-line detonation flame arrester

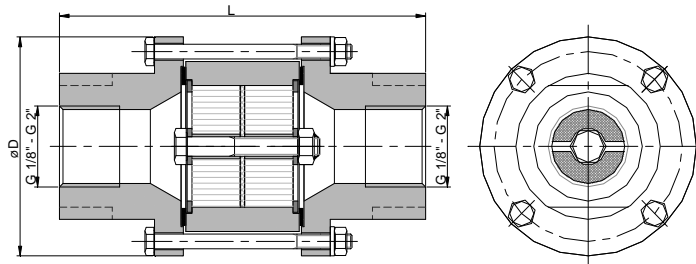
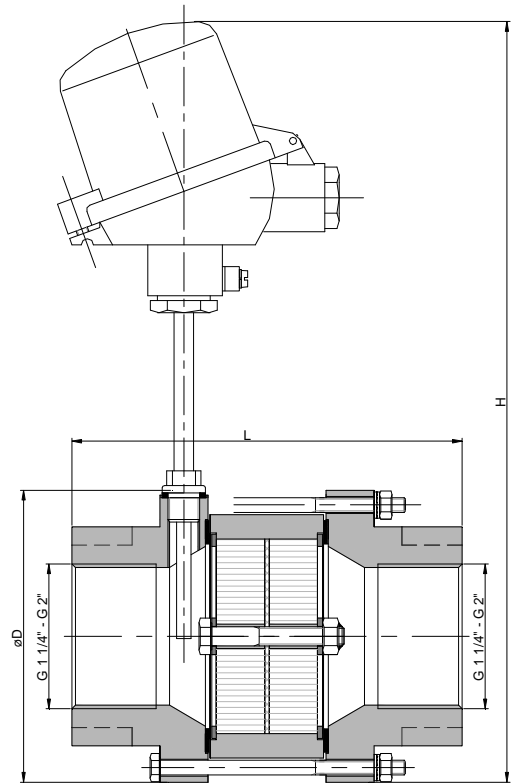
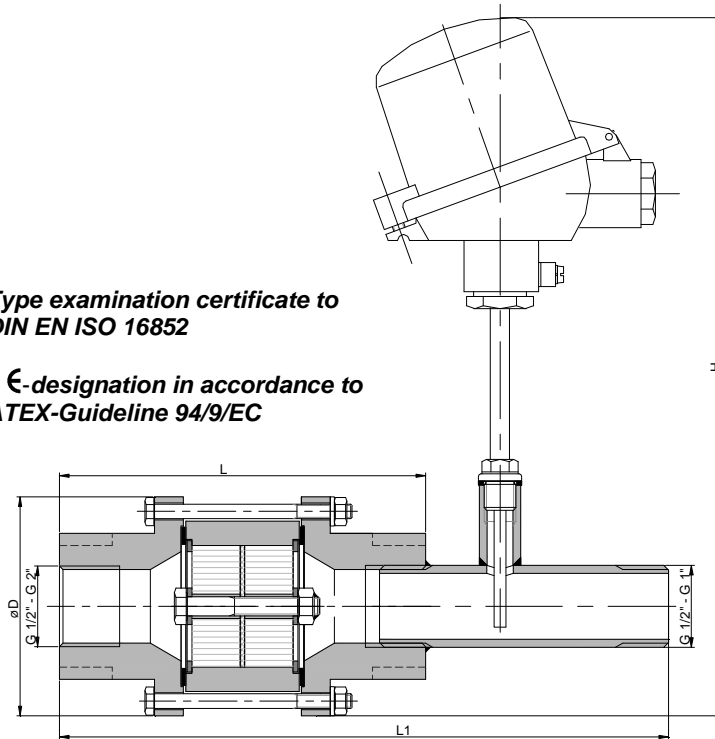
KITO® RG-Det4-IIA-...-1.2

KITO® RG-Det4-IIA-...-1.2-T (-TT)



Type examination certificate to  
DIN EN ISO 16852

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



G	D	L	L1	~ H	kg
1/8", 1/4", 3/8"	90	152	-	-	4,0
1/2", 3/4", 1"			257	290	
1 1/4", 1 1/2", 2"	120	166	-	315	6,5

Dimensions in mm / weight without thermocouple

Design subject to change

### Standard design

- housing : steel, stainless steel mat. no. 1.4571
- gasket : HD 3822, PTFE
- KITO® flame arrester element : completely interchangeable
- KITO® casing / grid : stainless steel mat. no. 1.4308 / 1.4310, 1.4408 / 1.4571
- bolts/nuts : A2, A4
- temperature sensor : PT 100 (option); connection 1/4" - not in connection G 1/8" - 3/8"
- connection : thread connection

Example for orders :

**KITO® RG-Det4-IIA-1 1/4"-1.2-T**  
(design with thermo couple element)

### 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 IIA with a maximum experimental safe gap (MESG) > 0.9 mm.

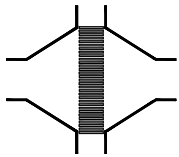
Bi-directionally working in pipes, whereby an operating pressure of 1.2 bar abs. and an operating temperature of 60°C must not be exceeded.

All sizes are tested against "stabilized burning" and withstand this up to a max. burn time BT = 30.0 min.

To detect a "stabilized burning" a thermocouple must be installed at each endangered side.

Mounting is acceptable in any position, in horizontal as well as in vertical pipes.

performance curves: G 0.26 N



## Bi-directional in-line detonation flame arrester

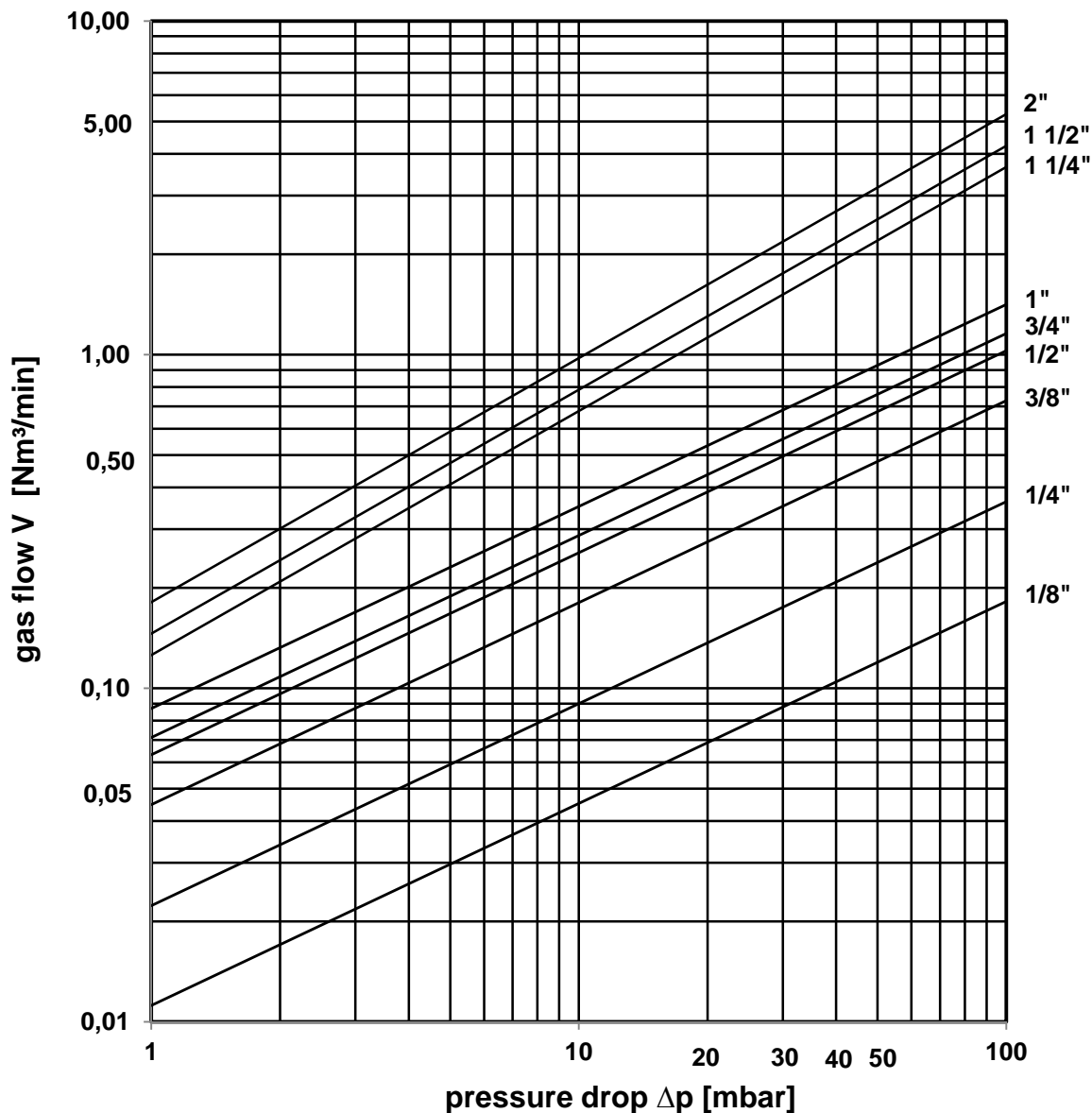
KITO® RG-Det4-IIA-...-1.2

KITO® RG-Det4-IIA-...-1.2-T (-TT)

G 26 N

The flow capacity  $V$  refers to a density of air with  $\rho = 1.29 \text{ kg/m}^3$  at  $T = 273 \text{ K}$  and a pressure of  $p = 1.013 \text{ mbar}$ . The flow capacity for gases with different densities can be calculated sufficiently accurate by the following approximation equation:

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

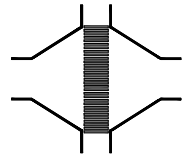


Design subject to change

# Bi-directional in-line detonation flame arrester

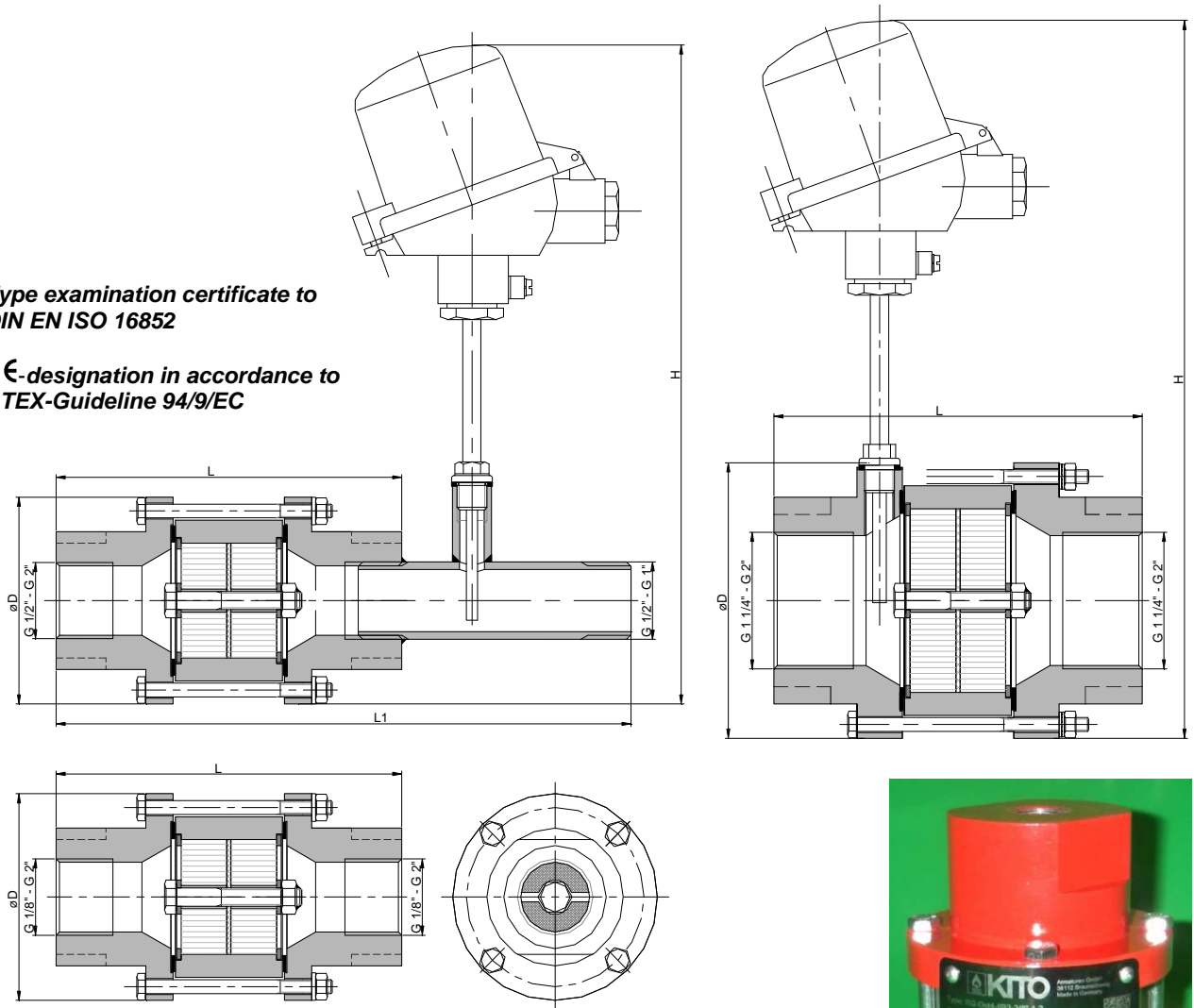
KITO® RG-Det4-IIB3-...-1.2

KITO® RG-Det4-IIB3-...-1.2-T (-TT)



Type examination certificate to  
DIN EN ISO 16852

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



G	D	L	L1	~ H	kg
1/8", 1/4", 3/8"	90	152	-	-	4,0
1/2", 3/4", 1"			257	290	
1 1/4", 1 1/2", 2"	120	162	-	315	6,5

Dimensions in mm / weight without thermocouple



performance curves: G 0.27 N

Design subject to change

## Standard design

housing	: steel, stainless steel mat. no. 1.4571
gasket	: HD 3822, PTFE
KITO® flame arrester element	: completely interchangeable
KITO® casing / grid	: stainless steel mat. no. 1.4308 / 1.4310, 1.4408 / 1.4571
bolts/nuts	: A2, A4
temperature sensor	: PT 100 (option); connection 1/4" - not in connection G 1/8" - 3/8"
connection	: thread connection

Example for orders:

**KITO® RG-Det4-IIB3-1 1/4"-1.2-T**  
(design with thermo couple element)

## 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**.

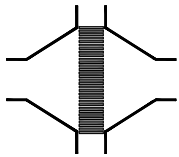
Approved for all substances of explosion groups IIA1 to IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm.

Bi-directionally working in pipes, whereby an operating pressure of 1.2 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 = 6.0 min.

To detect a "stabilized burning" a thermocouple must be installed at each endangered side.

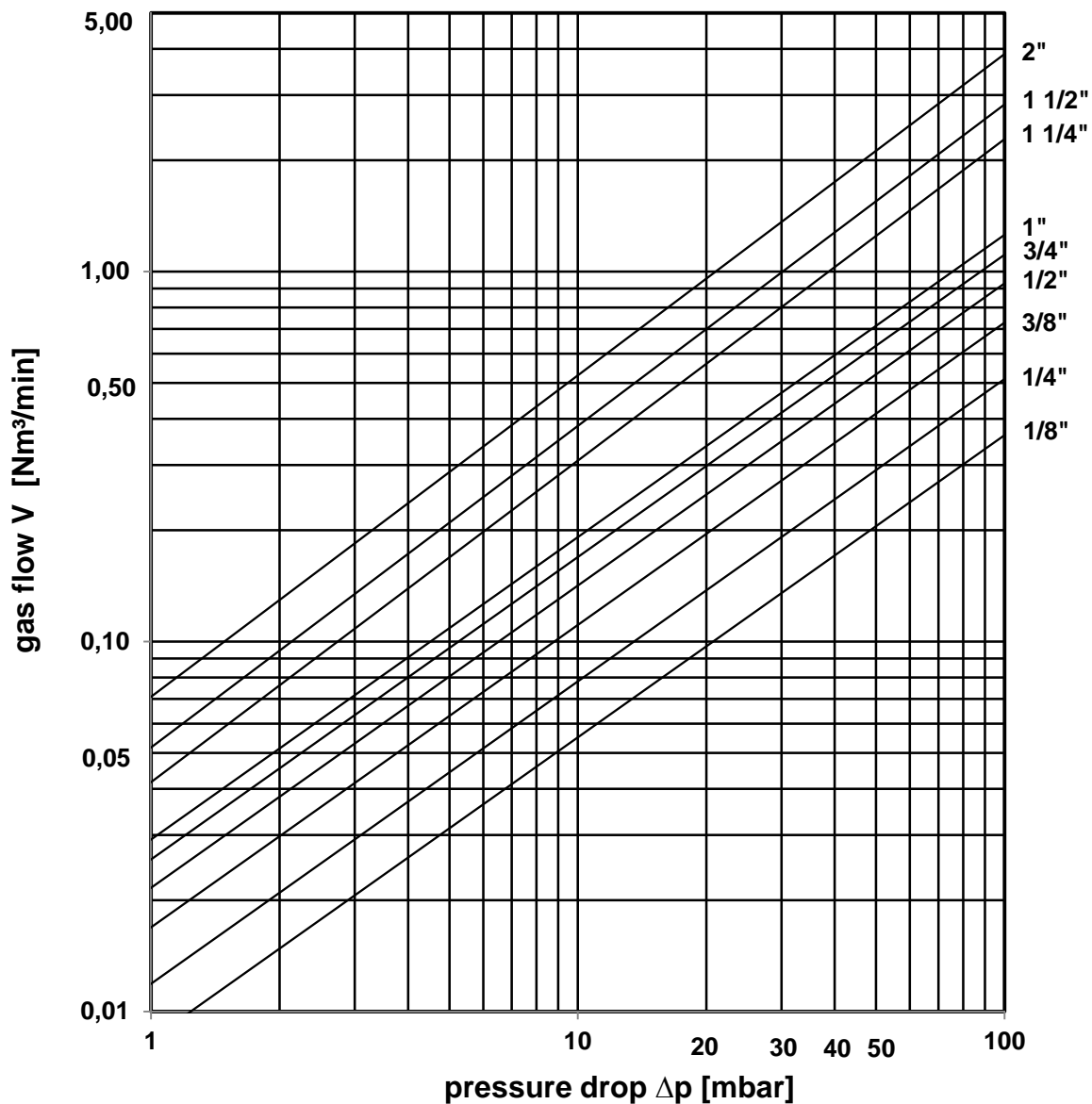
Mounting is acceptable in any position, in horizontal as well as in vertical pipes.



**Bi-directional in-line detonation flame arrester**  
**KITO® RG-Det4-IIB3-...-1.2**  
**KITO® RG-Det4-IIB3-...-1.2-T (-TT)**  
**G 27 N**

The flow capacity  $V$  refers to a density of air with  $\rho = 1.29 \text{ kg/m}^3$  at  $T = 273 \text{ K}$  and a pressure of  $p = 1.013 \text{ mbar}$ .  
 The flow capacity for gases with different densities can be calculated sufficiently accurate by the following approximation equation:

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



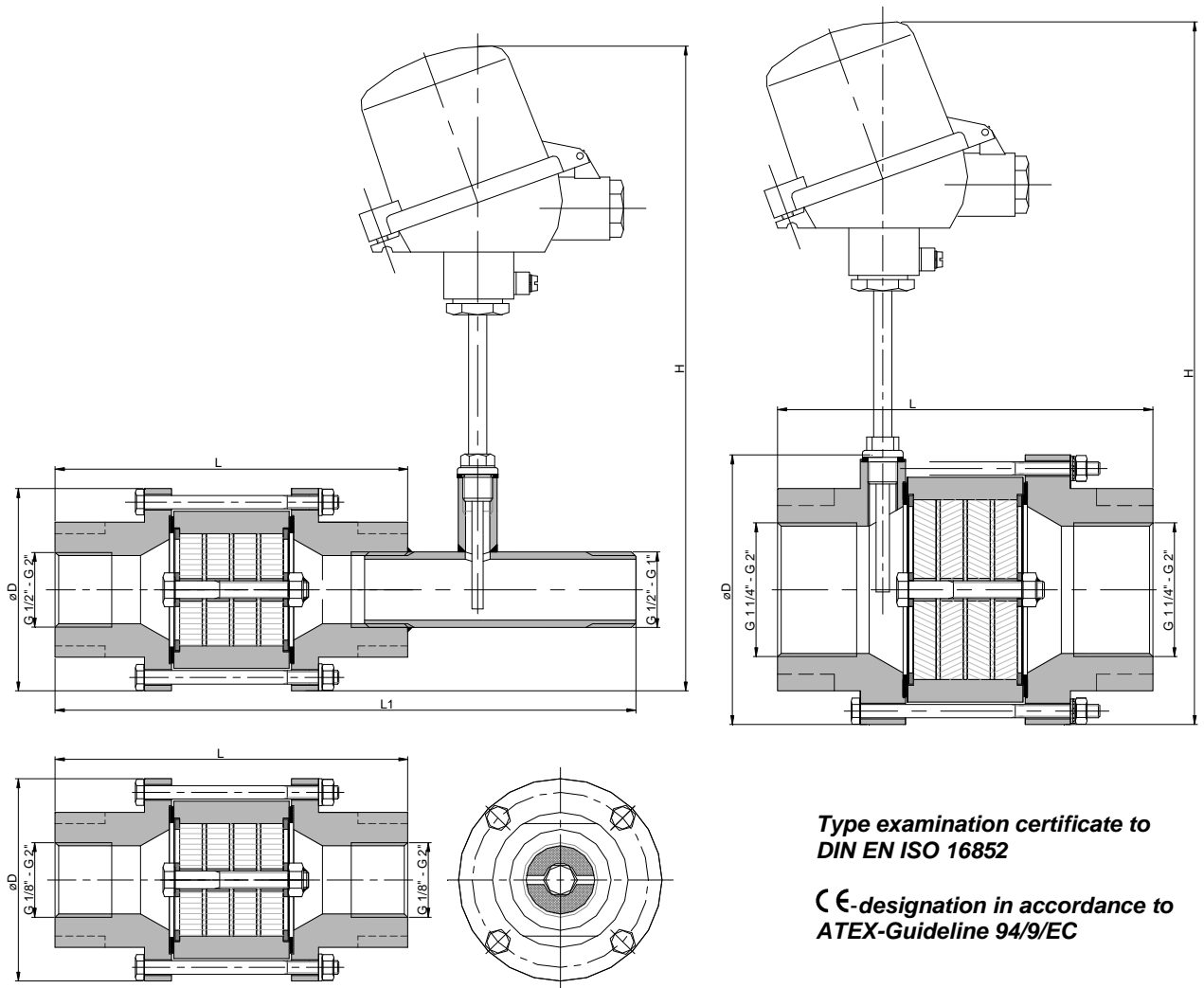
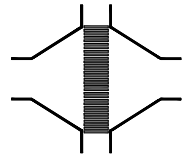
Design subject to change

## Bi-directional in-line detonation flame arrester

KITO® RG-Det4-IIC-...-1.2

KITO® RG-Det4-IIC-...

KITO® RG-Det4-IIC-...-T (-TT)



Type examination certificate to  
DIN EN ISO 16852

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

G	D	L	L1	~ H	p <sub>max</sub> bar abs.	kg
1/8", 1/4", 3/8"	90	156	-	-	1.2	4.0
1/2", 3/4", 1"			261	290		
1 1/4", 1 1/2", 2"	120	166	-	315	1.1	6.5

Dimensions in mm / weight without thermocouple

Design subject to change

performance curves: G 0.28 N

### Standard design

housing	: steel, stainless steel mat. no. 1.4571
gasket	: HD 3822, PTFE
KITO® flame arrester element	: completely interchangeable
KITO® casing / grid	: stainless steel mat. no. 1.4308 / 1.4310, 1.4408 / 1.4571
bolts/nuts	: A2, A4
temperature sensor	: PT 100 (option); connection 1/4" - not in connection G 1/8" - 3/8"
connection	: thread connection

### 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.

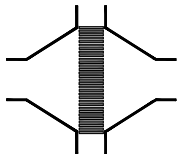
All sizes are tested against "stabilized burning" and withstand this up to a max. burn time BT = 1.0 min.

To detect a "stabilized burning" a thermocouple must be installed at each endangered side.

Mounting is acceptable in any position, in horizontal as well as in vertical pipes.

Example for orders:

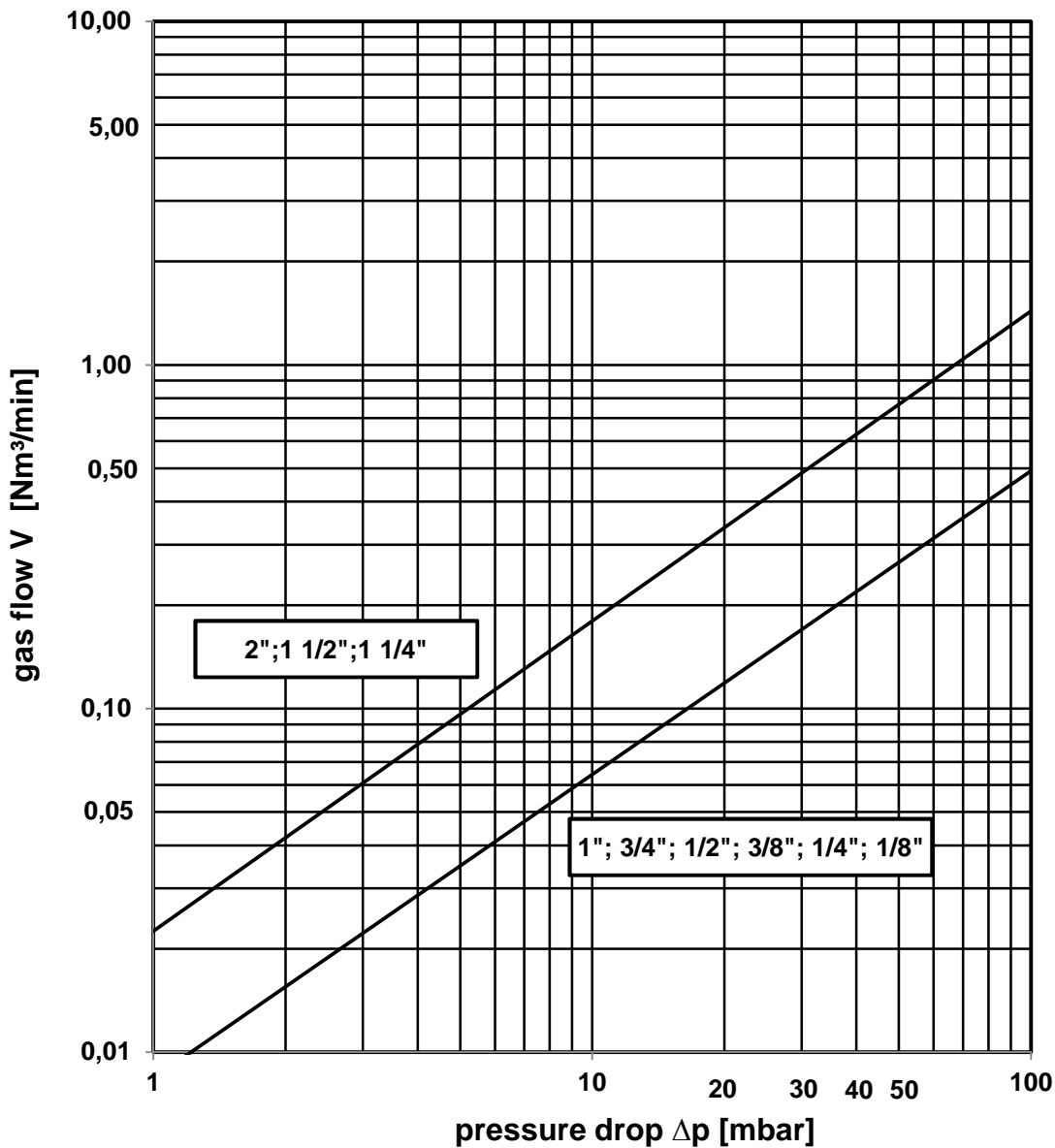
**KITO® RG-Det4-IIC-1 1/4"-1.2-T**  
(design with thermo couple element)



**Bi-directional in-line detonation flame arrester**  
**KITO® RG-Det4-IIC-...-1.2**  
**KITO® RG-Det4-IIC-...**  
**KITO® RG-Det4-IIC-...-T (-TT)**  
**G 28 N**

The flow capacity  $V$  refers to a density of air with  $\rho = 1.29 \text{ kg/m}^3$  at  $T = 273 \text{ K}$  and a pressure of  $p = 1.013 \text{ mbar}$ . The flow capacity for gases with different densities can be calculated sufficiently accurate by the following approximation equation:

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



Design subject to change