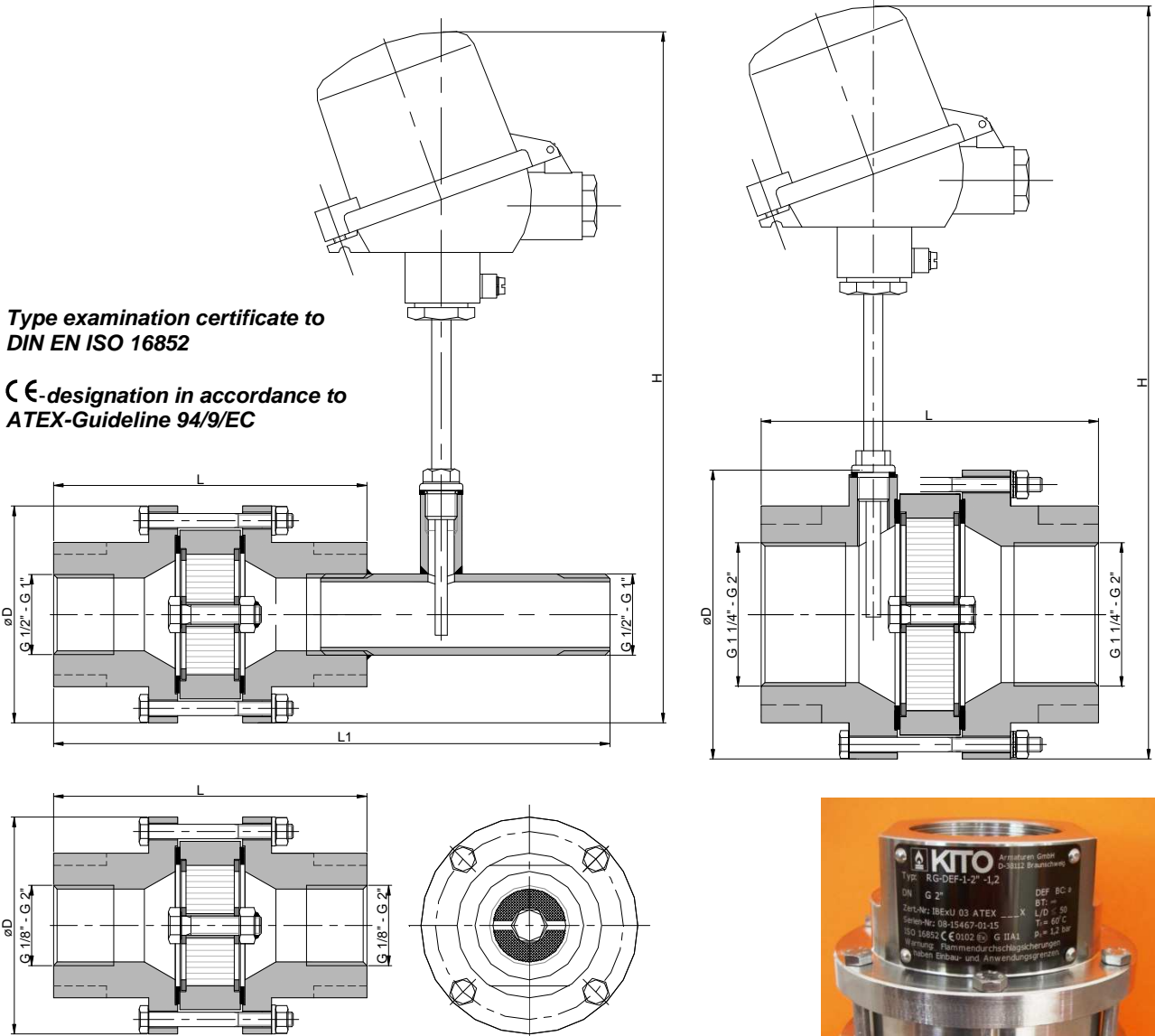
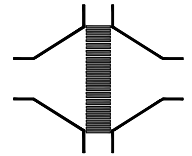


# Bi-directional in-line deflagration flame arrester

KITO® RG-Def-I-...-1.3

KITO® RG-Def-I-...-1.3-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	130	-	-	3,0
1/2", 3/4", 1"			235	290	
1 1/4", 1 1/2", 2"	120	140	-	315	4,8

Dimensions in mm / weight without thermocouple



performance curves: H 0.40.1 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-Def-I-1 1/4"-1.3-T**  
(design with thermo couple element)

### Application

For installation into pipes to the protection of vessels and components against deflagration of flammable liquids and gases.

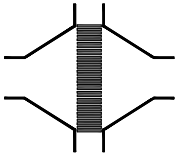
Approved for all substances of explosion group IIA1 ( old : I) with a maximum experimental safe gap (MESG) ≥ 1.14 mm.

Bi-directionally working in pipes, whereby an operating pressure of 1.3 bar abs. and an operating temperature of 60°C must not be exceeded. The distance between a potential ignition source and the flame arrester must not exceed 50 times the inner pipe diameter.

All sizes are tested against "stabilized burning" and withstand this for indefinite time (endurance burn).

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 deflagration flame arrester

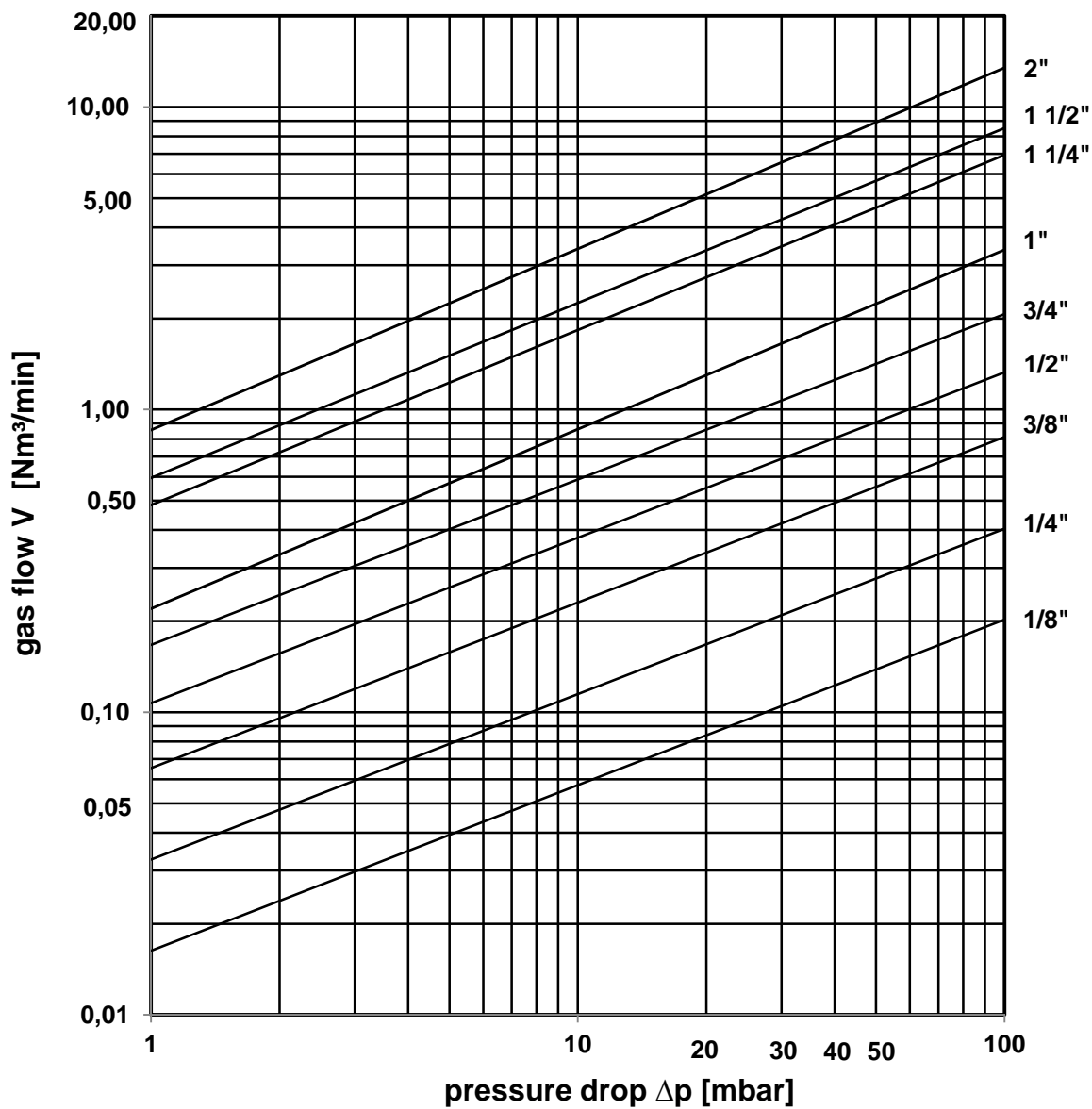
KITO® RG-Def-I-...-1.3

KITO® RG-Def-I-...-1.3-T (-TT)

H 40.1 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:

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

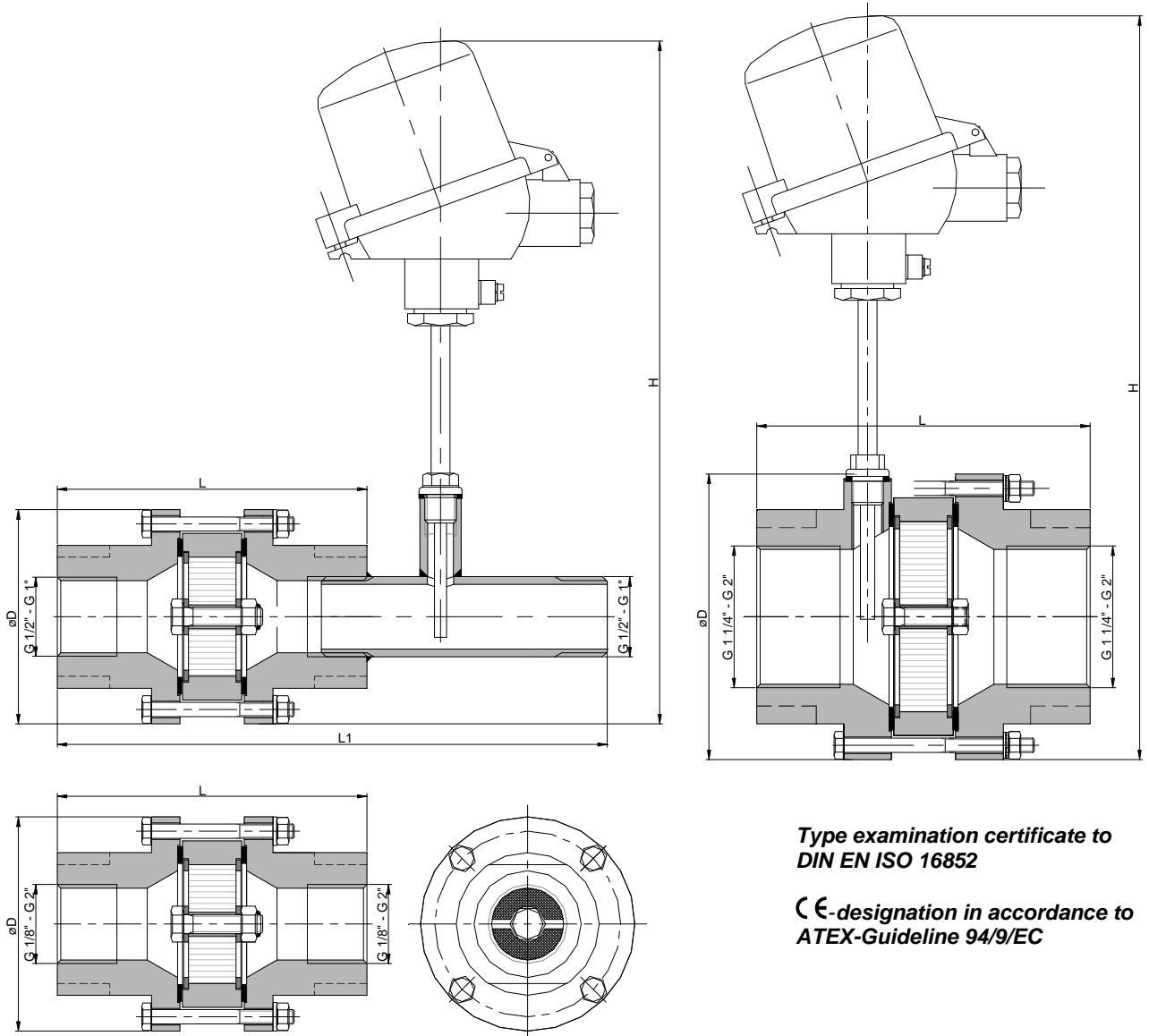
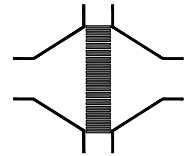


Design subject to change

# Bi-directional in-line deflagration flame arrester

KITO® RG-Def-IIA-...-1.2

KITO® RG-Def-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	130	-	-	3,0
1/2", 3/4", 1"			235	290	
1 1/4", 1 1/2", 2"	120	140	-	315	4,8

Dimensions in mm / weight without thermocouple

Design subject to change

performance curves: H 0.41 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

Example for orders:

**KITO® RG-Def-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 deflagration of flammable liquids and gases.

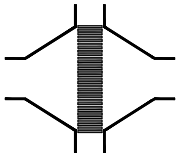
Approved for all substances of explosion groups IIA1 to IIA with a maximum experimental safe gap (MESG) > 0.9 mm.

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. The distance between a potential ignition source and the flame arrester must not exceed 50 times the inner pipe diameter.

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.



## Bi-directional in-line deflagration flame arrester

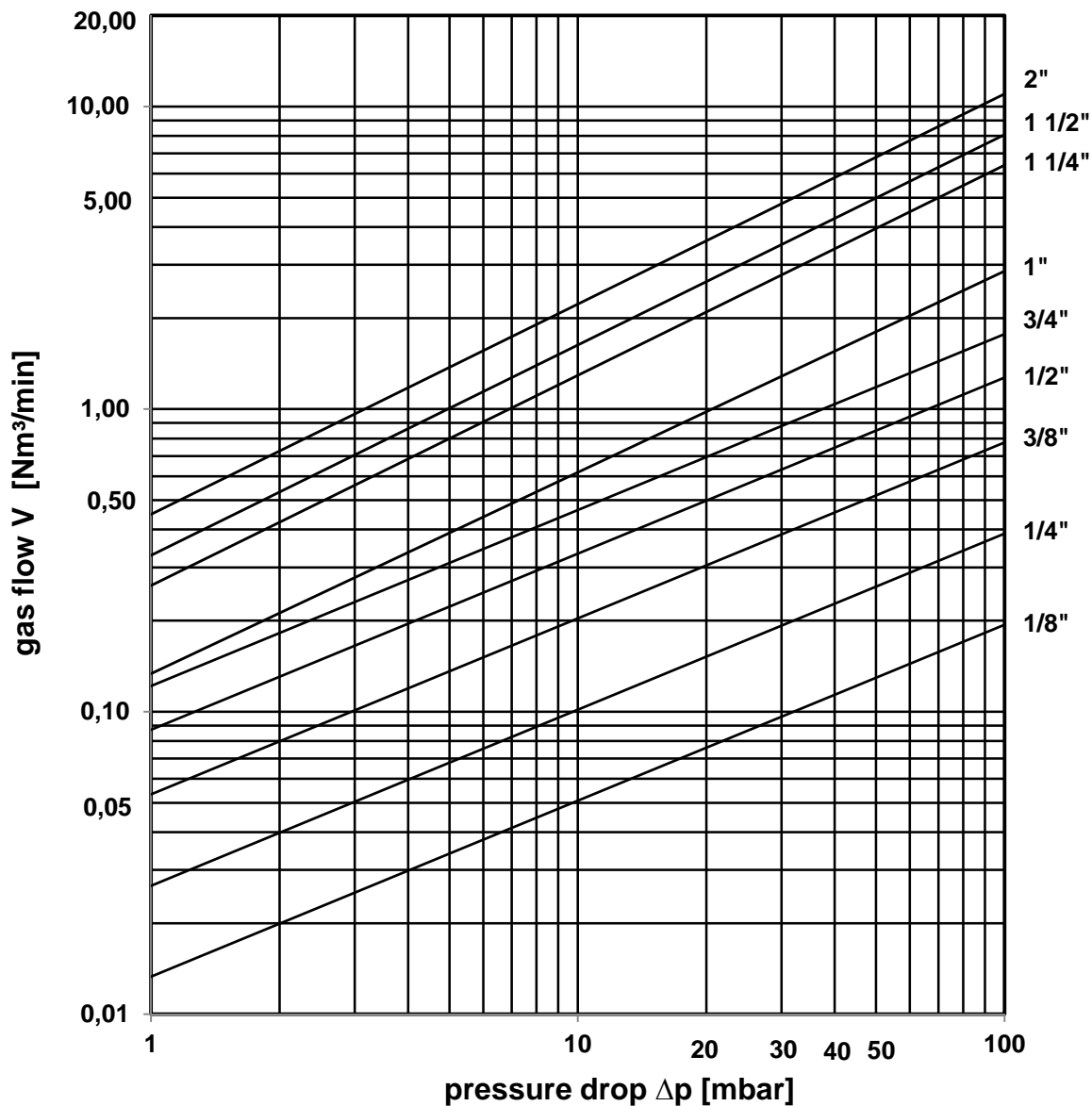
KITO® RG-Def-IIA-...-1.2

KITO® RG-Def-IIA-...-1.2-T (-TT)

H 41 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:

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

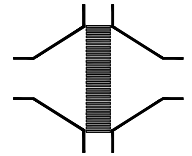


Design subject to change

# Bi-directional in-line deflagration flame arrester

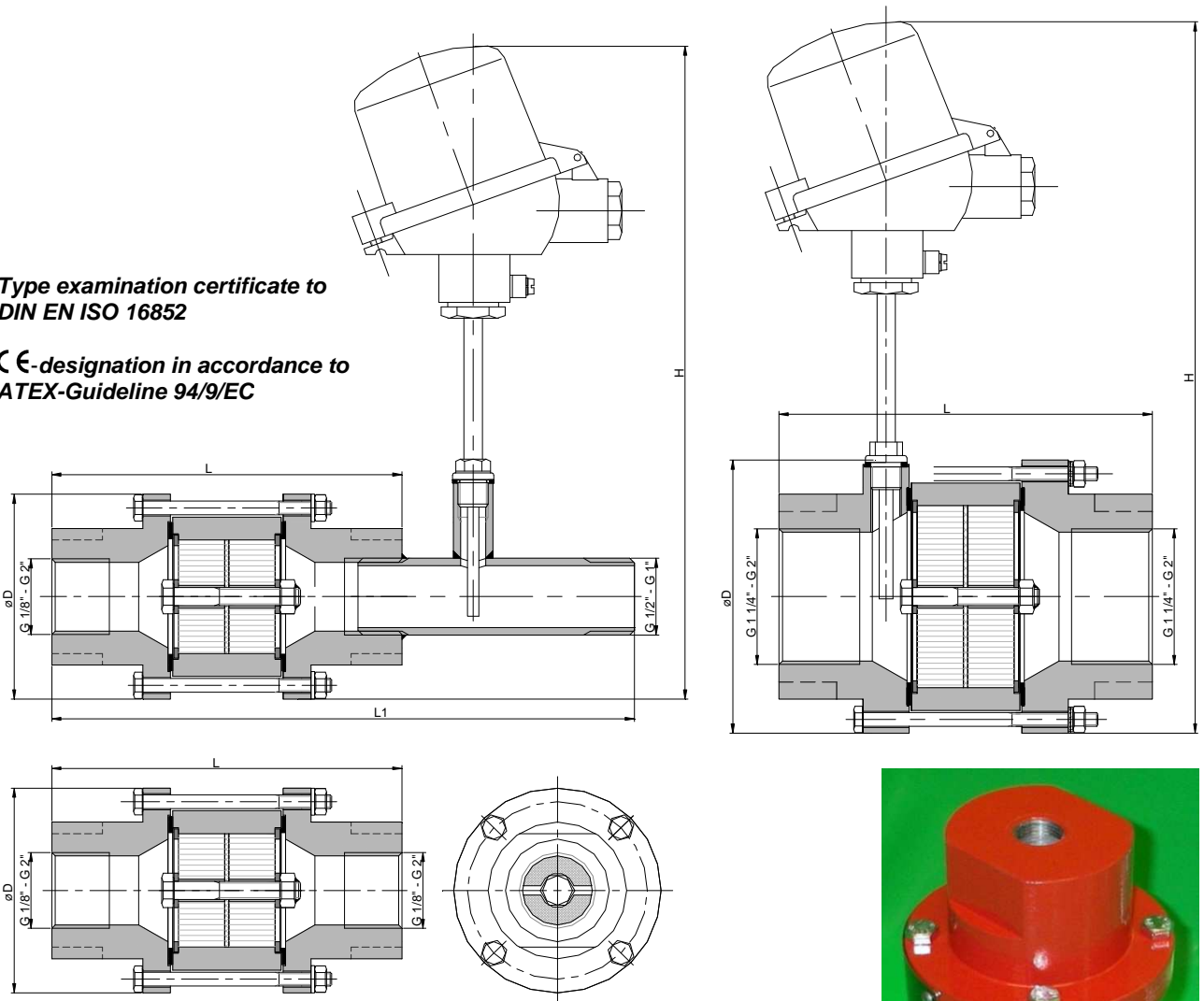
KITO® RG-Def-IIB3-...-1.2

KITO® RG-Def-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: H 0.42 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-Def-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 deflagration of flammable liquids and gases.

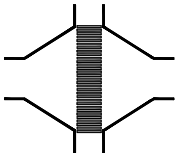
Approved for all substances of explosion groups IIA1 to IIB3 with a maximum experimental safe gap (MESG) ≥ 0.65 mm.

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. The distance between a potential ignition source and the flame arrester must not exceed 50 times the inner pipe diameter.

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 deflagration flame arrester

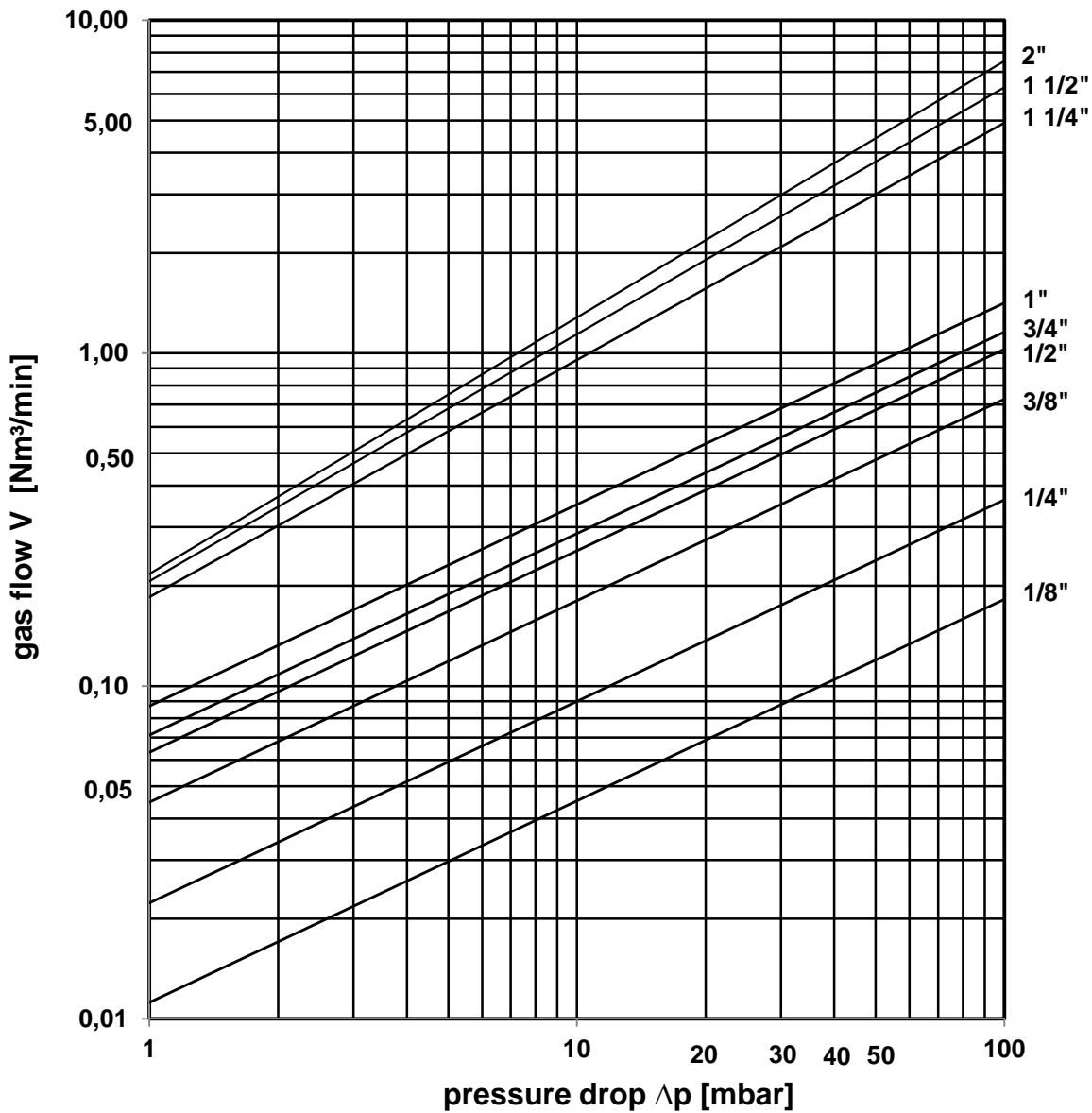
KITO RG-Def-IIB3-...-1.2

KITO RG-Def-IIB3-...-1.2-T (-TT)

H 42 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:

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



Design subject to change