

## Safety device with multiple function: TT

### Type TT for in-hose installation

The safety device TT according to DIN EN ISO 5175-1:

- avoids dangerous gas mixtures by a gas non-return valve (NV)
- stops flashback through flame arrestor (FA)
- a dust filter protects the gas non-return valve against contamination
- every safety device is 100% tested
- all metal components in brass 2.0401 / spring 1.4310

### Safety elements of the IBEDA Safety Device TT:

- NV Gas non-return valve
- FA Flame arrestor

### Additional features:

- DF Dust filter



### Maintenance:

The safety devices are to be tested by a qualified and authorised person at regular intervals according to country specific regulations. The safety device is to be tested for gas tightness, gas flow and gas return at least once a year.

We would be pleased to offer you the flashback arrestor testing unit model PVGD.

It is not allowed to open the safety devices.

Technical Data:					
<b>Gas types:</b>	Acetylene (A)	Hydrogen (H) Industrial gas (C)	Natural Gas (Methane) (M) Propane (P)	Oxygen (O)	Compressed Air (D)
<b>Working pressure:</b>	0,15 MPa 1,5 bar	0,40 MPa 4,0 bar	0,40 MPa 4,0 bar	2,0 MPa 20,0 bar	2,0 MPa 20,0 bar
<b>Cracking pressure:</b>	50 to 70 mbar position-independent				
<b>Gas temperature:</b>	-20°C up to +70°C ( Oxygen -20°C up to +60°C)				
<b>Ambient temperature:</b>	-20°C up to +70°C				
<b>Connection-hose pin:</b>	4,0 mm; 5,0 mm; 6,3 mm; 8,0 mm; 9,0 mm				
<b>Measure and weight:</b>	diameter:		length:		weight:
	19,5 mm		82,0 mm		66,0 g
Applications:					
<b>Process:</b>	welding		cutting		heating
	up to 30 mm		up to 200 mm		up to 30 mm

Other materials, surface finishing, gas types and additional connections available on request.  
The flashback arrestor meets the test criteria of the Australian standard AS4603:1999

## Type: TT

### Flow rates [air]:

pv = Primary pressure

ph = Secondary pressure

$\Delta p$  = Primary pressure minus Secondary pressure

### Conversion Factors:

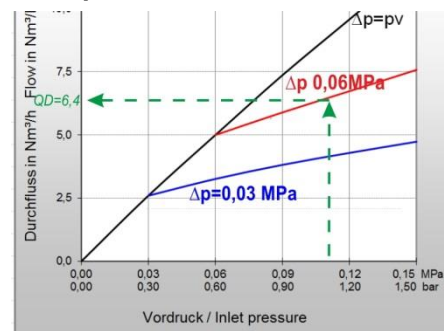
0,1 MPa = 1 bar = 100 kpa = 14,504 psi

1 m<sup>3</sup>/h = 35,31 cu ft/h

	A	H	P	M	M	O	E	L
QG ▶	C <sub>2</sub> H <sub>2</sub>	H <sub>2</sub>	C <sub>3</sub> H <sub>8</sub>	CH <sub>4</sub> +C	CH <sub>4</sub>	O <sub>2</sub>	C <sub>2</sub> H <sub>4</sub>	C <sub>3</sub> H <sub>6</sub>
F	1,2	3,8*	0,90	1,25	1,4	0,95	1,02	0,92

\* Conversion factor 2.5 for devices comprising a flame arrester  
The conversion factor for free flow is 3.8.  
(Reference: BAM report 220, D. Lietze)

### Example:



$$QG = QD \times F$$

$$QG \blacktriangleright A = 6,4 \times 1,2 = 7,68 \text{ m}^3/\text{h C}_2\text{H}_2$$

QG = flow / gas type

F = conversion factor

QD = flow / air

### Certification / Technical Standards / Rules

BAM Federal Institute for Materials Research and Testing, UL Underwriters Laboratories Inc., DGUV employer's liability insurance association rules and regulations, DVS German Association for Welding, Cutting and Allied Processes, TRBS German Technical rules for operation safety.

### Standards/ Approvals

Company certified according to ISO 9001:2015 and ISO 14001:2015, CE-marking according to: Pressure Equipment Directive 2014/68/EU

(Subject to change without notice)

