

## Safety device (with dust filter): **ESFN-20L**

### Type **ESFN-20L** for protection of Tapping Points and Distribution Lines

The safety device ESFN-20L 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 temperature-sensitive cut-off valve stops the gas flow when a predetermined temperature is exceeded (TV)
- 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 **ESFN-20L**:

- NV Gas non-return valve
- FA Flame arrestor
- TV Temperature-sensitive cut-off valve

### 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.

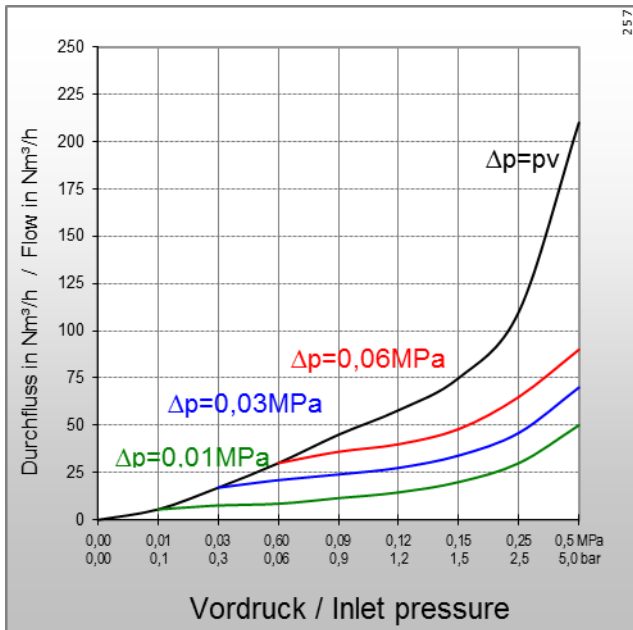
We would be pleased to offer you the flashback arrestor testing unit model PVGD.

It is not allowed to open the safety devices.

Technical Data:			
<b>Gas-Types:</b>	Hydrogen (H) Industrial Gas (C)	Natural Gas (Methane) (M) Propane (P)	
<b>Working pressure:</b>	0,15 MPa 1,5 bar	0,30 MPa 3,0 bar	
<b>Cracking pressure:</b>	4 to 6 mbar position-independent		
<b>Gas temperature:</b>	-20°C up to +70°C ( Oxygen -20°C up to +50°C)		
<b>Ambient temperature:</b>	-20°C up to +70°C		
<b>Threads:</b> EN 560, ISO 3253	G3/4LH F/M <sup>3)</sup> G1LH F/M <sup>3)</sup> G11/4LH F/M <sup>3)</sup> G11/2LH F/M <sup>3)</sup>		
<b>Measure and weight:</b>	diameter:	length:	weight:
G3/4LH – G1LH	54,5 mm	217,0 mm	ca. 2330 g
G11/4LH – G11/2LH	54,5 mm	224,0 mm	ca. 2350 g
Applications:			
<b>Process:</b>	welding	cutting	heating
	up to 30 mm	> 700 mm	> 100 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

<sup>3)</sup> F = Female, M = Male



## Type: ESFN-20L

### Flow rates [air]:

pv = Primary pressure

ph = Secondary pressure

$\Delta p$  = Primary pressure minus Secondary pressure

### Conversion Factors:

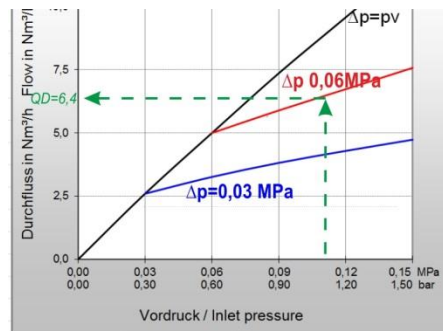
0,1 MPa = 1 bar = 100 kpa = 14,504 psi

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

TRBS German Technical rules for operation safety, DVS German Association for Welding, Cutting and Allied Processes, DGUV German Employer's liability insurance association rules and regulations.

### 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)