

## Safety device with multiple function: **DS2000**

### Type DS2000 for connecting at cylinder regulators and tapping points

The safety device DS2000 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)
- interrupts the further gas flow on pressure shocks by a resettable pressure-sensitive cut-off valve (PV)
- 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 DS2000:

- NV Gas non-return valve
- FA Flame arrestor
- TV Temperature-sensitive cut-off valve
- PV Pressure-sensitive gas 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:

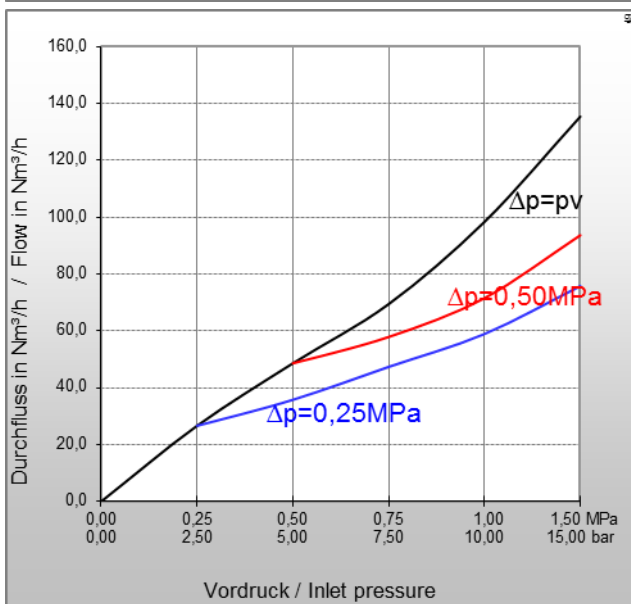
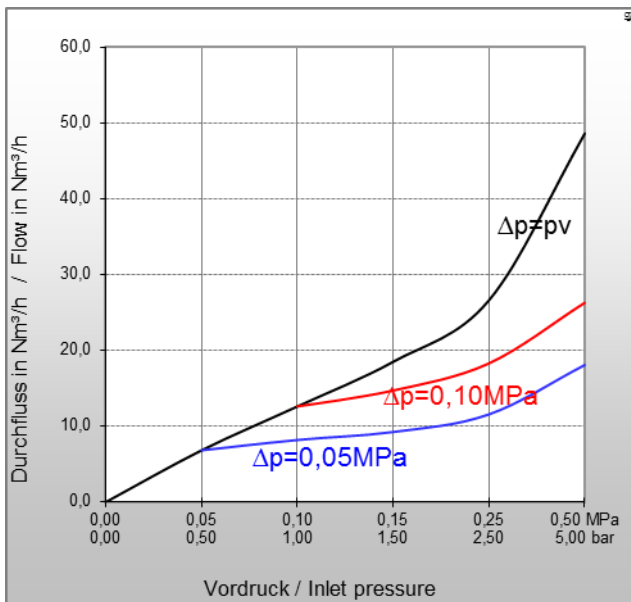
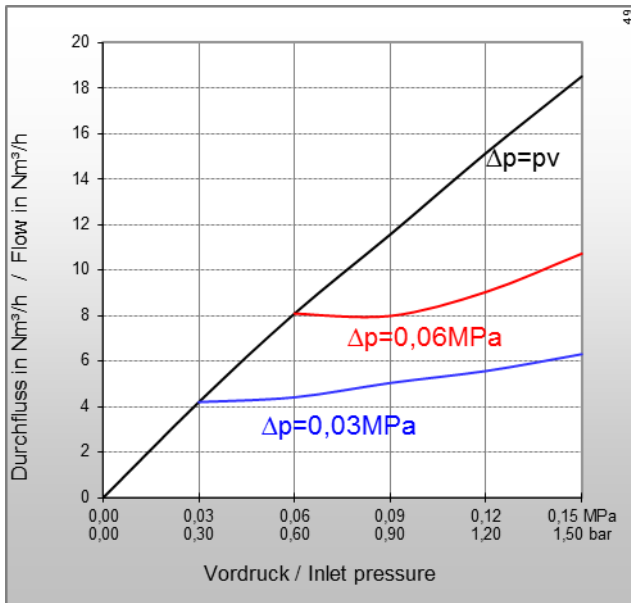
Gas types:	Acetylene (A)	Hydrogen (H) Industrial gas (C)	Natural Gas (Methane) (M) Propane (P)	Oxygen (O)	Compressed Air (D)
Working pressure:	0,15 MPa 1,5 bar	0,40 MPa 4,0 bar	0,50 MPa 5,0 bar	1,50 MPa 15,0 bar	
Cracking pressure:	10 mbar position-independent				
Gas temperature:	-20°C up to +70°C ( Oxygen -20°C up to +60°C)				
Ambient temperature:	-20°C up to +70°C				
Threads: EN 560 ISO / TR 28821	G3/8LH M16x1,5LH UNF9/16-18LH UNF5/8-18LH 1/4NPT			G1/4RH G3/8RH M16x1,5RH UNF9/16-18RH UNF5/8-18RH 1/4NPT	
Measure and weight:	diameter:		length:		weight:
	46,0 mm		122,0 mm		491,0 g
Applications:					
Process:	welding		cutting		heating
	up to 30 mm		up to 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

The working pressures approved by the UL are different to what is stated above.

Further information in this regard can be provided on request



## Type: DS2000

### Flow rates [air]:

$p_v$  = Primary pressure

$p_h$  = Secondary pressure

$\Delta p$  = Primary pressure minus Secondary pressure

### Conversion Factors:

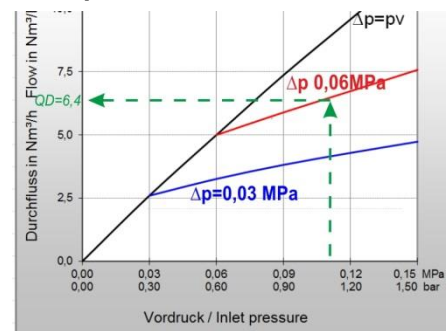
0,1 MPa = 1 bar = 100 kPa = 14,504 psi

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 arrestor  
The conversion factor for free flow is 3.8.  
(Reference: BAM report 220, D. Lietze)

### Example:



$$QG = QD \times F$$

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

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)