

## Safety Device – DS1000

The safety device DS1000 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 shock 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 Hi-Lo UK DS1000

- 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:

<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	0.35 MPa 3.5 bar	0.50 MPa 5.0 bar	1.50 MPa 15.0 Bar	1.50 MPa 15.0 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>Threads: EN 560 ISO / TR 28821</b>	G3/8LH M16x1.5LH UNF9/16-18LH UNF5/8-18LH			G1/4RH G3/8RH M16x1.5RH UNF9/16-18RH UNF5/8-8RH	

<b>Measure and weight</b>	Diameter	Length	Weight
	35.0mm	107.0mm	253.0g
<b>Applications</b>			
<b>Process:</b>	Welding	Cutting	Heating
	Up to 30mm	Up to 200mm	Up to 100mm

Type: DS1000

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

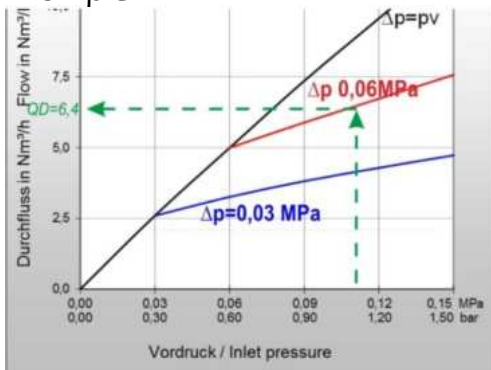
	A	H	P	M	M	O	E	L
OG >	C <sub>2</sub> H <sub>2</sub>	H <sub>2</sub>	C <sub>3</sub> H <sub>8</sub>	CH <sub>4</sub> +C	CH <sub>4</sub>	O <sub>2</sub>	C <sub>2</sub> H <sub>4</sub>	C <sub>3</sub> H <sub>6</sub>
F	1.2	3.8*	0.90	1.25	1.4	0.95	1.02	0.92

\* 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:



$$QG = QD \times F$$

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

$$QG = \text{flow} / \text{gas type}$$

$$F = \text{conversion factor}$$

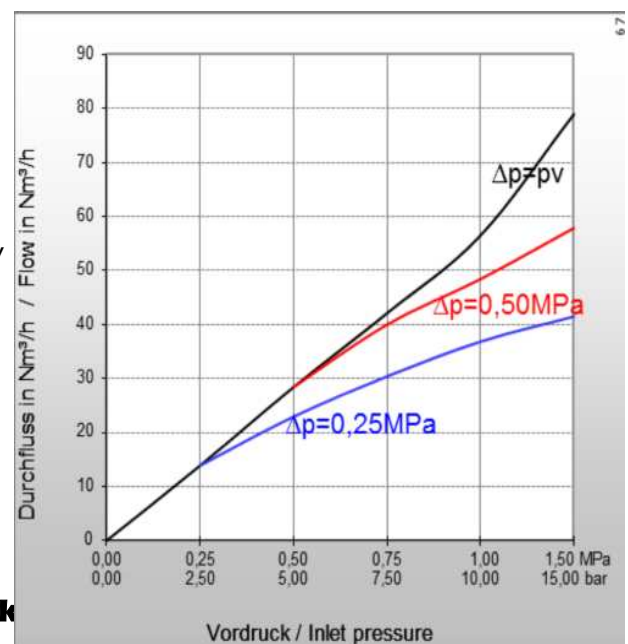
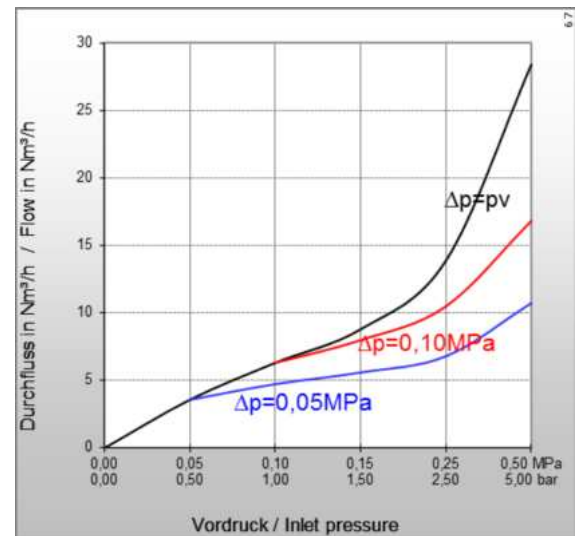
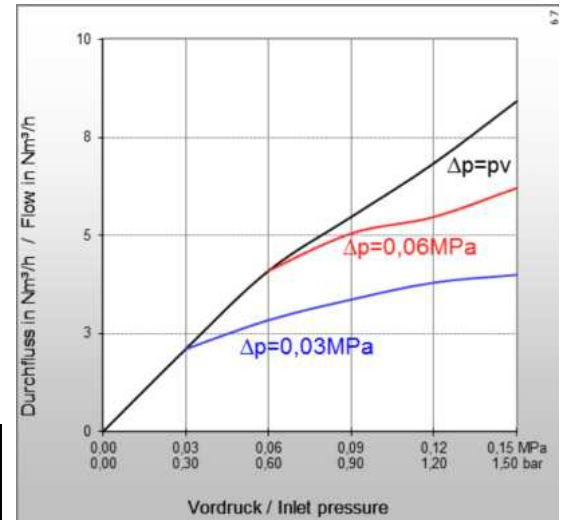
$$QD = \text{flow} / \text{air}$$

### 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



# hi-lo

GAS CUTTING  
AND WELDING EQUIPMENT



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