## Safety device with multiple function: DGN

### Type DGN for protection of cylinder regulators, tapping points and distribution lines


BAM Certified and under surveillance
Certification N°: BAM/ZBA/002/08

The safety device DGN 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 safety device DGN:

- 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.

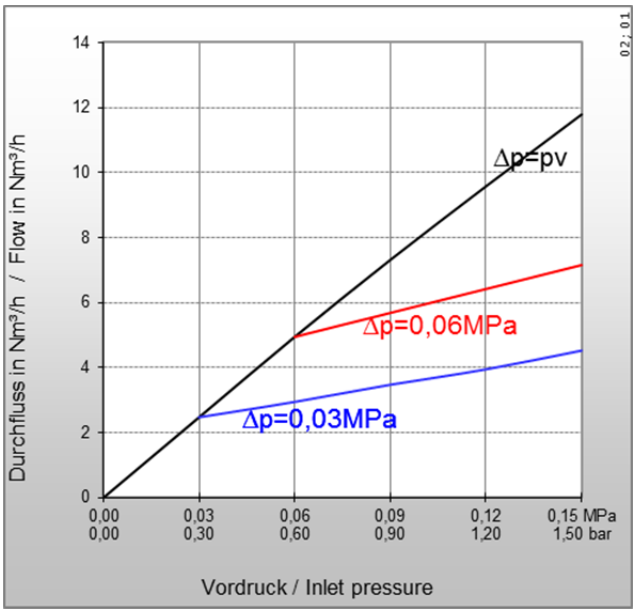
## Technical Data:

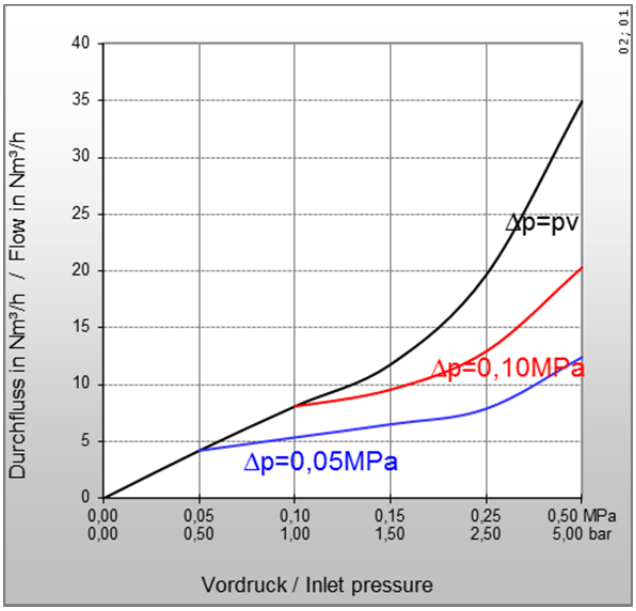
| **Gas types:** | Acetylene (A) | Hydrogen (H) Industrial Gas (C) | Natural Gas (Methane), (M) Propane (P) Ethylene[2)] (E) Propylene[2)] (L) | Oxygen (O) | Compressed Air (D) |
|---|---|---|---|---|---|
| **Cracking pressure:** | 50 to 70 mbar position-independent | | | | |
| **Working pressure:** | 0,15 MPa 1,5 bar | 0,35 MPa 3,5 bar | 0,50 MPa 5,0 bar | 2,5 MPa 25 bar | 2,5 MPa 25 bar |
| **Ambient temperature:** | -20°C up to +70°C | | | | |
| **Threads:** EN 560 ISO / TR 28821 | G3/8LH 1/4NPT | | | G1/4RH 1/4NPT | |

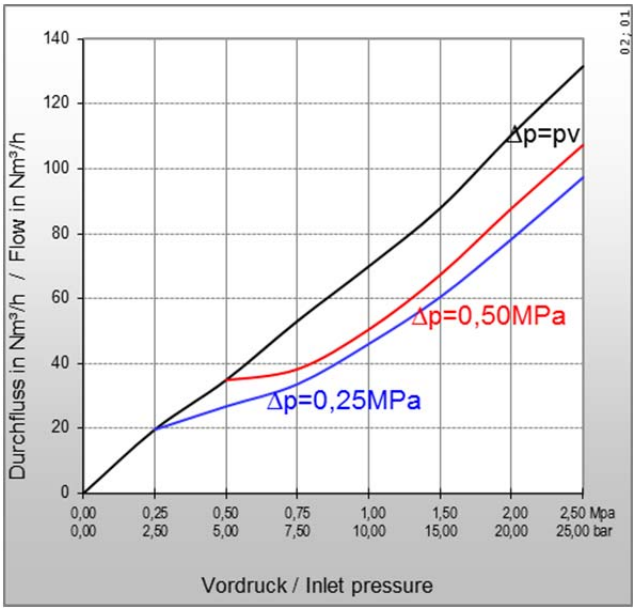
| **Measure and weight:** | diameter: | length: | weight: |
|---|---|---|---|
| | 22,0 mm | 87,0 mm | 153,0 g |

| **Applications:** | | | |
|---|---|---|---|
| **Process:** | welding | cutting | heating |
| | up to 30 mm | up to 200 mm | up to 100 mm |

Other materials, surface finishing, gas types and additional connections available on request.
The working pressures approved by the UL are different to what is stated above.
Further information in this regard can be provided on request
[2)] These gas types are not covered by the BAM certification.




# Type: **DGN**

**Flow rates [air]:**

pv = Primary pressure

ph = Secondary pressure

Δp = Primary pressure minus Secondary pressure

**Conversion Factors:**

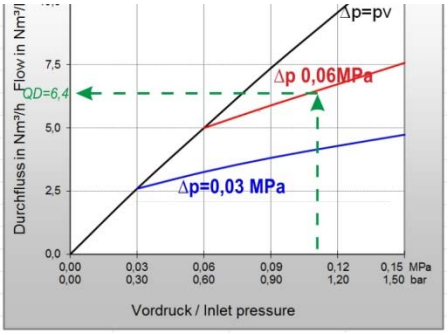
0,1 MPa = 1 bar = 100 kpa = 14,504 psi

1 $m^3$/h = 35,31 cu ft/h

| | A | H | P | M | M | O | E | L |
|---|---|---|---|---|---|---|---|---|
| QG ► | $C_2H_2$ | $H_2$ | $C_3H_8$ | $CH_4$+C | $CH_4$ | $O_2$ | $C_2H_4$ | $C_3H_6$ |
| 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 x F

QG ► A = 6,4 x 1,2 = 7,68 m³/h $C_2H_2$

QG = flow / gas type
F = conversion factor
QD = flow / air

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(Subject to alteration without prior notice)