

Safety Device according to DIN EN ISO 5175-1, AS 4603
with Hose Coupling

Safety device with multiple function: **DGNK**

Type DGNK for connecting at cylinder regulators and tapping points

The safety device DGNK 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)
- safe interruption of gas flow by automatic gas cut-off when disconnecting
- 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 DGNK:

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

Couplings are wearing parts and have to be tested by a qualified and authorised person (at least once a year). The tests have to be performed when the couplings are connected as well as disconnected.

Leakage tests are to be performed with inert gas or air (free from oil and grease) or the operating gas.

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)
Working pressure:	0,15 MPa 1,5 bar	0,35 MPa 3,5 bar	0,50 MPa 5,0 bar	2,0MPa 20 bar
Cracking pressure:	50 to 70 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			G1/4RH G3/8RH M16x1,5RH UNF9/16-18RH UNF5/8-18RH
Outlet:	IBEDA-coupling series N			
Measure and weight:	diameter:	length:	weight:	
	22,0 mm	115,0 mm	221,0 g	
Applications:				
Process:	welding	cutting	heating	
	up to 30 mm	up to 200 mm	up to 100 mm	
Compatible with:	Coupling pin N1 and N2			

Other materials, surface finishing, gas types and additional connections available on request.

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Flow rates [air]:

p_v = Primary pressure

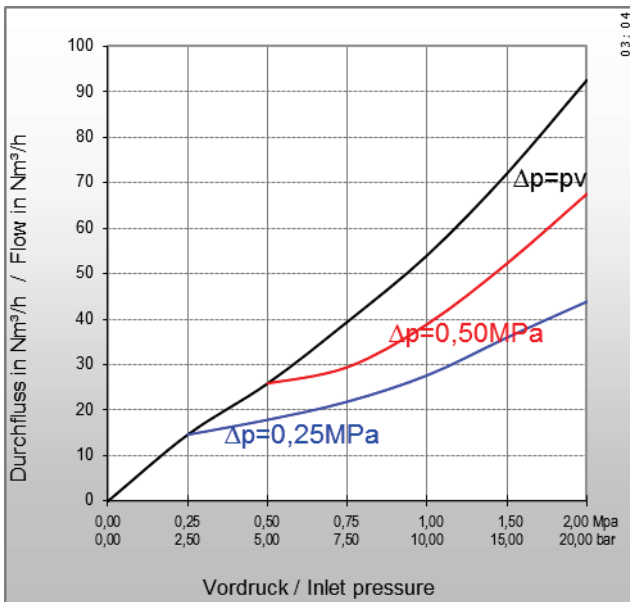
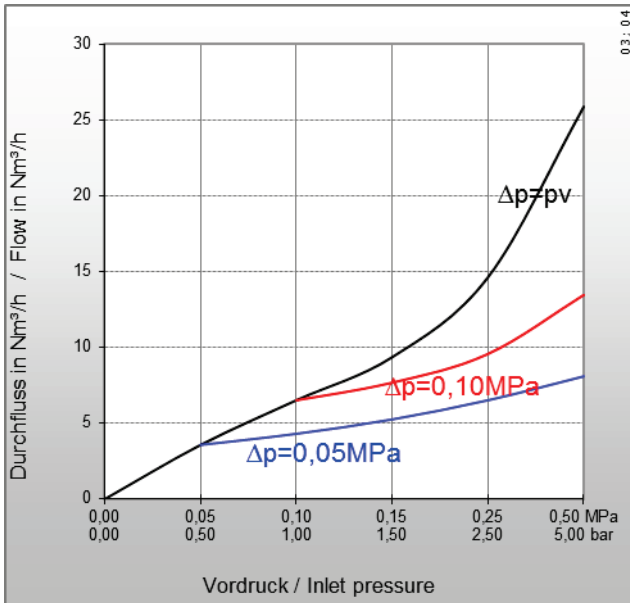
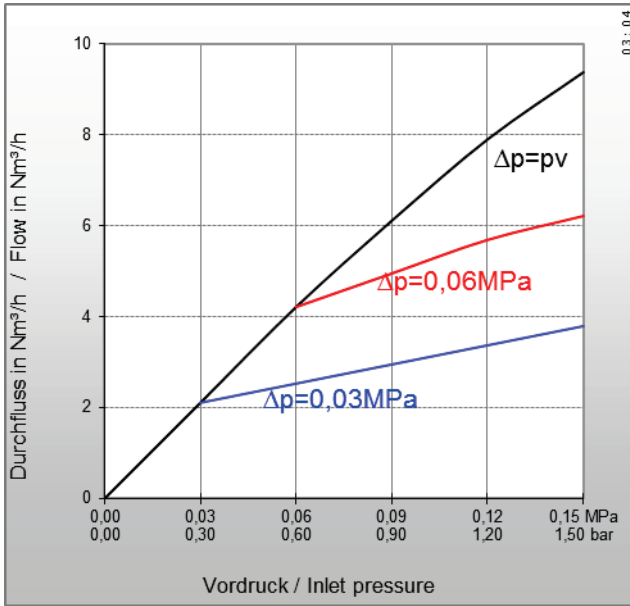
p_h = Secondary pressure

Δp = Primary pressure minus Secondary pressure

Conversion Factors:

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

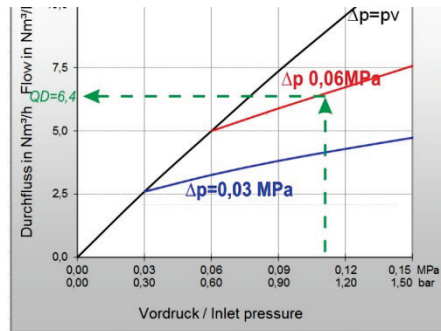
1 m³/h = 35,31 cu ft/h



	A	H	P	M	M	O	E	L
QG ▶	C ₂ H ₂	H ₂	C ₃ H ₈	CH ₄ +C	CH ₄	O ₂	C ₂ H ₄	C ₃ H 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:



$QG = QD \times F$

QG ▶ A = 6,4 x 1,2 = 7,68 m³/h C₂H₂

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)