

**The safety device (non-return valve / check valve) GRV20:**
**Type GRV20 for protection of pipelines, tapping points and equipment**

The safety device GRV20:

- avoids dangerous gas mixtures by a gas non-return valve (NV)
- 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 non-return valve / check valve GRV20:**

- NV Gas non-return valve

**Additional features:**

- DF Dust filter

**For further information:** <https://www.ibeda.com/en/gas-non-return-valves>


NG-4390CQ0062

**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 and gas return at least once a year.

It is not allowed to open the safety devices.

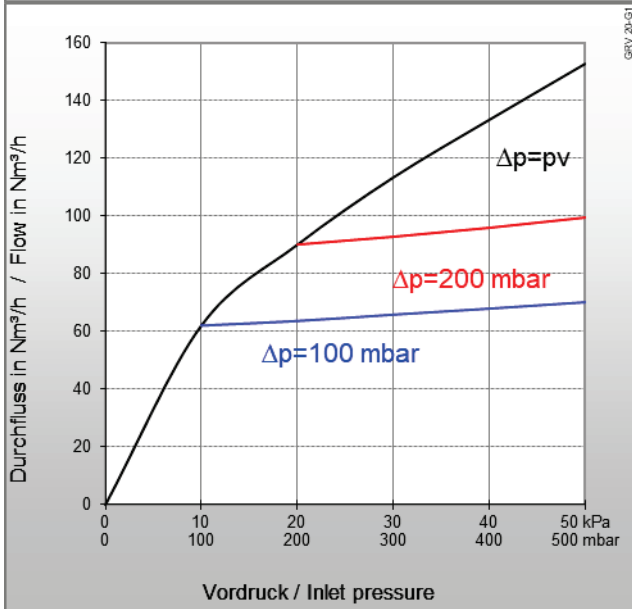
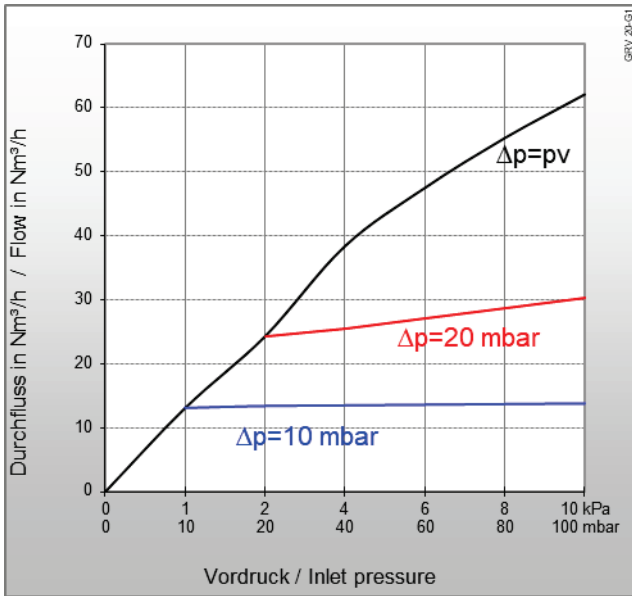
The dust filter may be replaced by a qualified person.

**Technical Data:**
**Safety device GRV according to DIN EN ISO 5175-2: not flashback resistant, not flashback proof**

<b>Gas types:</b>	Industrial gas (C)	Hydrogen (H)	Natural Gas (Methane) (M) cleaned Bio gas (M)	Propane (P)	Oxygen (O)	Com pressed Air (D) Nitrogen (N) Carbon dioxide (N) Argon (N) Helium (N)
<b>Working pressure:</b>	2,5 MPa 25,0 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> DIN ISO 228 ANSI/ASME B1.20.1	G1RH F/F <sup>3)</sup> G3/4RH F/F <sup>3)</sup> G1/2RH F/F <sup>3)</sup> 1NPT F/F <sup>3)</sup> 3/4NPT F/F <sup>3)</sup> 1/2NPT F/F <sup>3)</sup>					
<b>Measure and weight:</b>	diameter:	length:		weight:		
G1 - 1NPT:	50 mm	65 mm		0,50 kg		
G3/4 - 3/4NPT:	50 mm	65 mm		0,51 kg		
G1/2 - 1/2NPT:	50 mm	65 mm		0,55 kg		
<b>Application:</b>	Heating burner, gas mixing- and control systems, applications according to EN 746-2					

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

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



Example flow rate type: GRV20 G1 IG.  
Values for other connections on request.

**Declaration of conformity**

We, the manufacturer, hereby declare that the safety devices in accordance with the requirement of the following directives and standards

Directive: 2014/68/EU Pressure Equipment Directive  
Standard: DIN EN ISO 5175 Part 2

As per the Pressure Equipment Directive 2014/68/EU for pressure keeping equipment with DN ≤ 25 mm for gases of group 1 and gases of group 2 Model GRV, Article 4 Para. 3, Article 5 Para. 1 (Good engineer practice and knowledge).

The manufacturer of these products is neither allowed to issue an EU-conformity declaration nor to provide CE-marking on the product.

**Type: GRV20**

**Flow rates [air]:**

pv = Primary pressure  
ph = Secondary pressure  
Δp = Primary pressure minus Secondary pressure

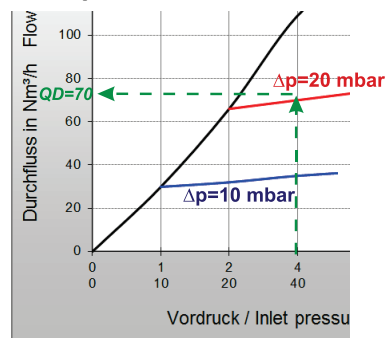
**Conversion Factors:**

10 kPa = 100 mbar = 0,01 MPa = 0,1 bar = 1,45 psi  
1 m<sup>3</sup>/h = 35,31 cu ft/h

	H	P	L	M	M	O
QG ►	H <sub>2</sub>	C <sub>3</sub> H <sub>8</sub>	C <sub>3</sub> H <sub>6</sub>	CH <sub>4</sub> +C	CH <sub>4</sub>	O <sub>2</sub>
F	3,8*	0,90	0,92	1,25	1,4	0,95

\* 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 ► P = 70 x 0,9 = 63 m<sup>3</sup>/h C<sub>3</sub>H<sub>8</sub>

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

**Certification / Technical Standards / Rules**

BAM Federal Institute for Materials Research and Testing, DVGW German Technical and Scientific Association for Gas and Water, DGUV German Health and Safety 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)