The safety device (non-return valve / flashback resistant) GRS32:

Type GRS32 for protection of pipelines, tapping points and equipment

The safety device GRS32:

- avoids dangerous gas mixtures by a gas non-return valve (NV)
- flashback-resistant if compressed air is used as oxidant
- 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 non-return valve GRS32:

- NV Gas non-return valve

Additional features:

- DF Dust filter

DG-4390CQ0061

Maintenance:

The safety devices are to be tested by a qualified and authorized 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 GRS according to DIN EN ISO 5175-2:
Flashback resistant if compressed air is used as oxidant.

Gas types :	Industrial gas C	Hydrogen (H)	Natural Gas (Methane) (M)	Propane (P)	cleaned Bio gas (M)
Working pressure:	0,15 MPa 1,5 bar		0,5 MPa 5 bar		0,5 MPa 5 bar
Cracking pressure:	4 to 6 mbar position-independent				
Gas temperature:	-20°C up to +70°C (Oxygen -20°C up to +50°C)				
Ambient temperature:	-20°C up to +70°C				
Threads: DIN ISO 228 ANSI/ASME B1.20.1	G1 1/4RH F/F[3)] G1RH F/F[3)] 1 1/4NPT F/F[3)] 1NPT F/F[3)]				

Measure and weight:	diameter:	length:	weight:
G1 1/4 - 1 1/4NPT:	65 mm	157 mm	2,5 kg
G1 - 1NPT:	65 mm	150 mm	2,2 kg

Application:	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.
[3)] F = Female, M = Male

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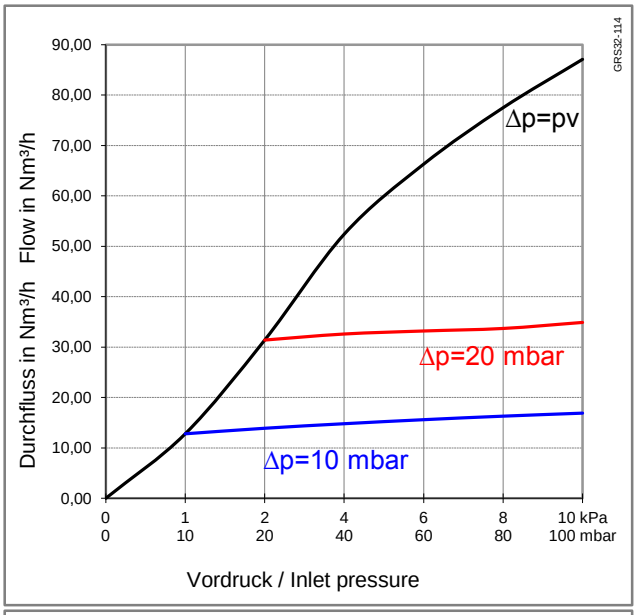
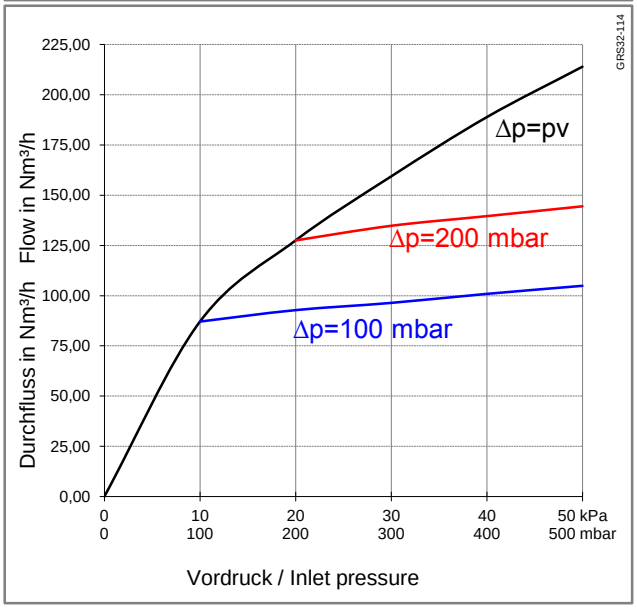




Example flow rate type: GRS32 G1 1/4RH F/F.
Values for other connections on request.

Type: **GRS32**

Flow rates [air]:

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

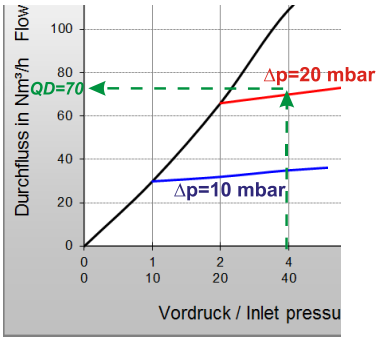
Conversion Factors:

10 kPa = 100 mbar = 0.01 MPa = 0.1 bar = 1.45 psi 1 m^3/h = 35.31 cu ft/h

	H	P	L	M	M	O
QG ►	H_2	C_3H_8	C_3H_6	CH_4+C	CH_4	O_2
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^3/h C_3H_8

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

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

Safety devices in accordance with DIN EN ISO 5175-2 for combustible or oxidising gases (group 1), Model GRV, are subject to the conformity assessment procedure pursuant to Pressure Equipment Directive 2014/68/EU, Category I, Module A.

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)