

# Gas pressure regulators VGBF

## TECHNICAL INFORMATION

- Pressure regulators for gaseous media for installation in all types of gas appliances
- Design with inlet pressure compensation diaphragm ensures high control accuracy
- High flow rate due to optimal dimensioning
- Internal impulse on VGBF..05
- Feedforwarding the furnace chamber pressure is possible
- No breather line required
- Suitable for hydrogen

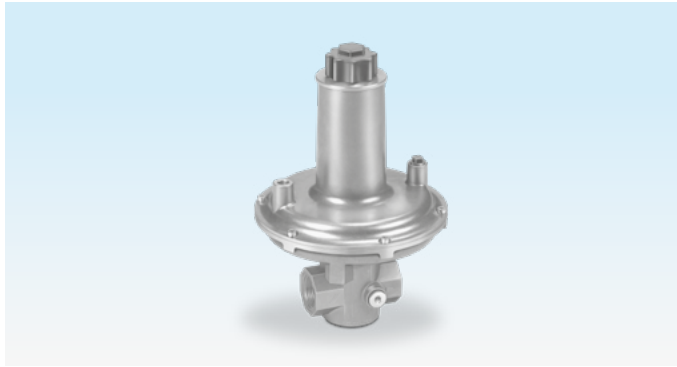


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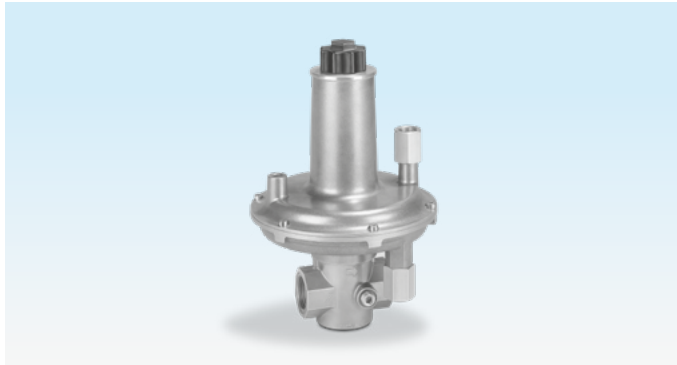
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## 1 Application



VGBF..R



VGBF..TN



VGBF..F



VGBF..TA

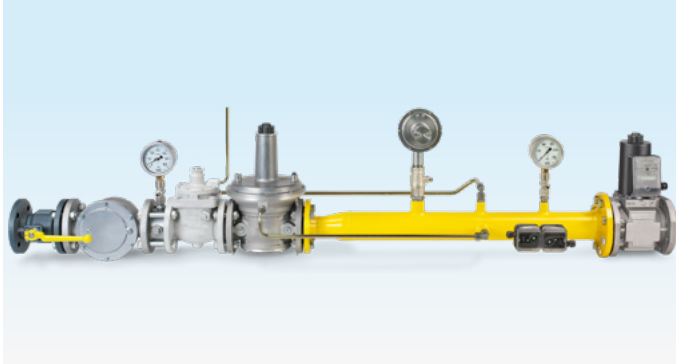
The spring-loaded gas pressure regulator VGBF with inlet pressure compensation diaphragm and zero shut-off serves to maintain the set outlet pressure constant despite changing gas flow rates and inlet pressures in gas pipelines. Thanks to an additional safety diaphragm, no breather line is required, except for installation pursuant to NFPA 86, see page 19 (6.4 Installation to NFPA 86).

## 1 Application

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For use in gas inlet sections in all sectors of the iron, steel, glass and ceramics industries as well as in commercial heat generation, such as the packaging, paper and foodstuffs industries.

### 1.1 Application examples



*Gas inlet section*

## 2 Certification

### 2.1 Certificate download

Certificates – see [www.docuthek.com](http://www.docuthek.com)

### 2.2 Declaration of conformity



We, the manufacturer, hereby declare that the products VG-BF with product ID No. CE-0085AQ0973 comply with the requirements of the listed Directives and Standards.

VGBF 15–150:

Regulation:

- (EU) 2016/426 – GAR

Standards:

- EN 88-1
- EN 88-2:2008
- EN 334:2009

VGBF 100F40:

Directives:

- 2014/68/EU – PED
- 2011/65/EU – RoHS II
- 2015/863/EU – RoHS III

The relevant product corresponds to the tested type sample.

The production is subject to the surveillance procedure pursuant to Regulation (EU) 2016/426 Annex III and for VGBF 100F40 pursuant to Directive 2014/68/EU Annex III

Module D1. This declaration of conformity is issued under the sole responsibility of the manufacturer.  
Elster GmbH

### 2.3 UKCA certified



Gas Appliances (Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019)

BS EN 88-1:2011+A1:2016, BS EN 88-2:2007, BS EN 334:2005+A1:2009, BS EN 13611:2019

### 2.4 Eurasian Customs Union



The products VGBF meet the technical specifications of the Eurasian Customs Union.

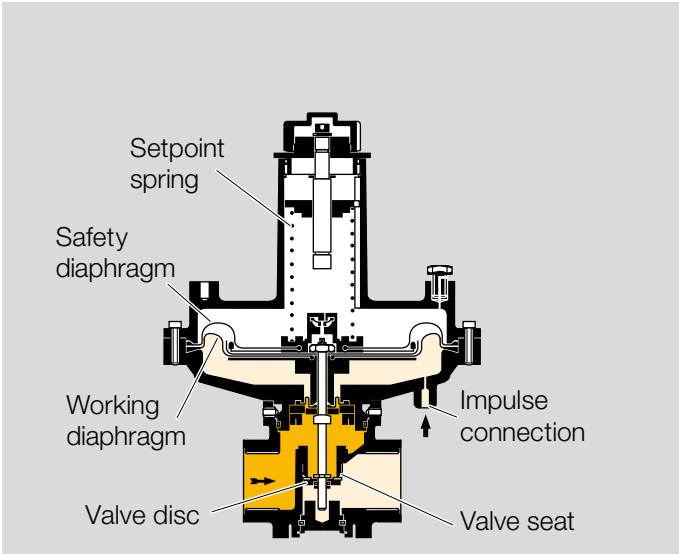
### 2.5 REACH Regulation

The device contains substances of very high concern which are listed in the Candidate List of the European REACH Regulation No. 1907/2006. See Reach list HTS at [www.docuthek.com](http://www.docuthek.com).

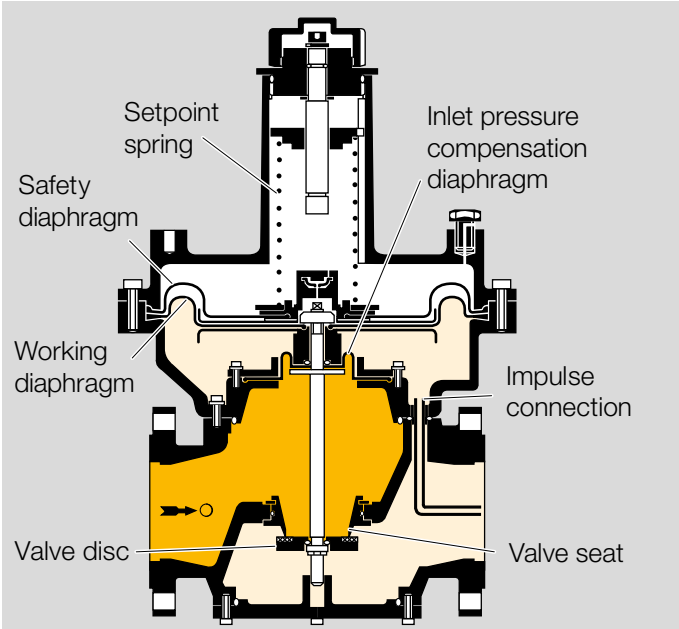
### 2.6 China RoHS

Directive on the restriction of the use of hazardous substances (RoHS) in China. Scan of the Disclosure Table China RoHS2, see certificates at [www.docuthek.com](http://www.docuthek.com).

3 Function

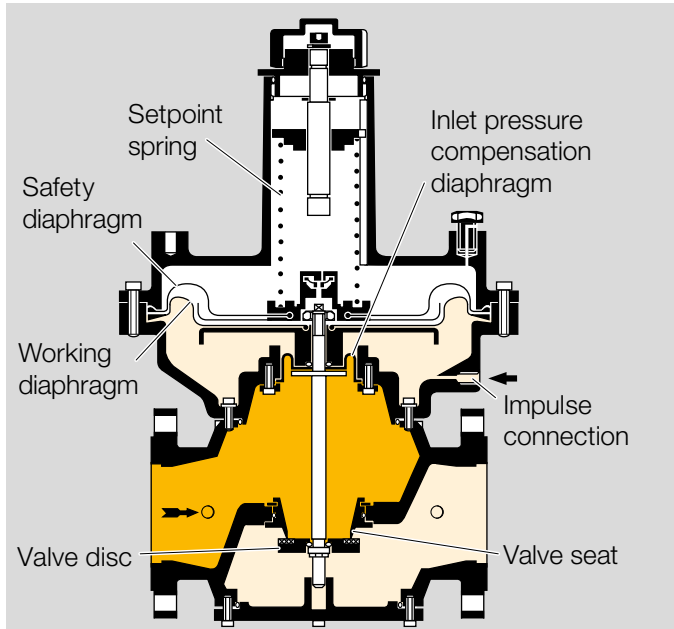


VGBF..R10, VGBF..R40



VGBF..F05

### 3 Function

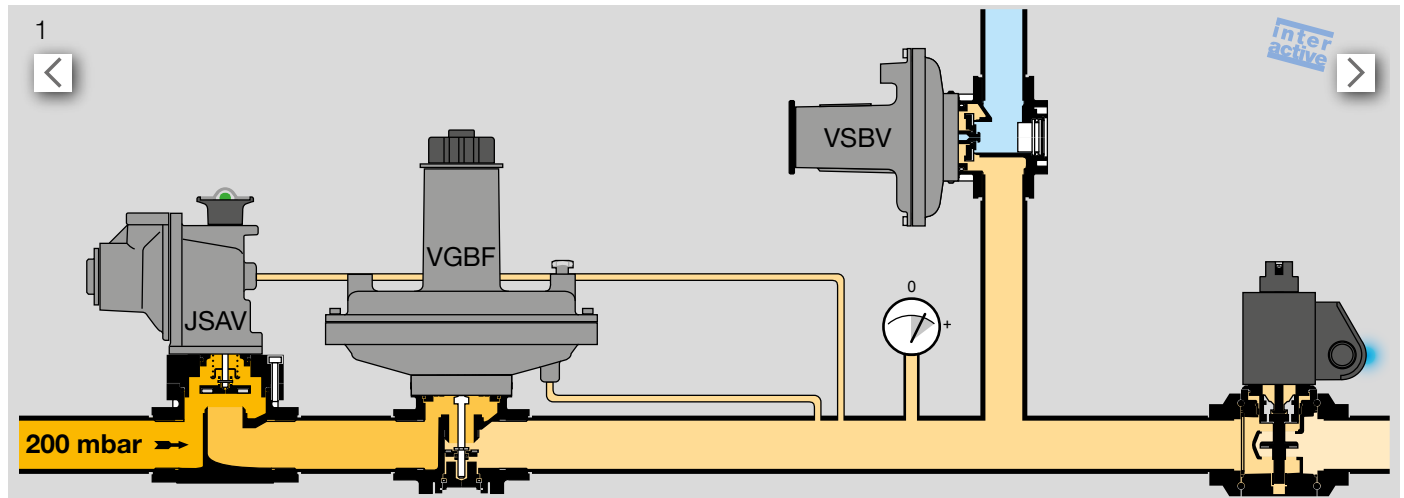


VGBF..F10, VGBF..F40

Gas pressure regulator VGBF is open when no pressure is applied. The gas supply is opened slowly and the gas flows via the open valve seat to the pressure regulator outlet. The outlet pressure is applied to the space beneath the working diaphragm via the impulse line. As soon as the outlet pressure corresponds to the set spring force, the working diaphragm lifts and the valve disc connected to it reduces the flow rate. If the outlet pressure drops, e.g. due to switching on a consumer, the valve disc is opened further and the outlet pressure increases again. If the outlet pressure increases, e.g. due to reduced consumption, the valve disc is closed further and the outlet pressure decreases again.

Thus, the outlet pressure is maintained constant despite changing gas flow rates. If consumption is stopped, the valve disc cuts off the flow completely (zero shut-off). Fluctuations in the inlet pressure are compensated by the inlet pressure compensation diaphragm. Pressure test nipples can be installed to measure the inlet and outlet pressures.

#### 3.1 Slide show – combination of JSAV, VGBF and VSBV



- 1 The gas pressure regulator VGBF keeps the outlet pressure constant when the gas flow rate fluctuates due to varying capacity requirements. The safety shut-off valve JSAV protects downstream fittings against excessive gas inlet pressure. The safety relief valve VSBV is designed to eliminate brief pressure surges to prevent the undesired actuation of safety shut-off valve JSAV.
- 2 Specimen setting values using the pressure level diagram: VGBF: 60 mbar, VSBV: 100 mbar, JSAV: 180 mbar. The gas train therefore has reliable protection up to a maximum operating pressure of 200 mbar, see "- Pressure levels for setting GPR, SRV and SSV" app.
- 3 The gas solenoid valve is closed.
- 4 The pressure downstream of the VGBF rises and is reduced by the VSBV when it reaches the set value.
- 5 The VSBV opens until the pressure falls below the set value.
- 6 As no more gas is flowing, the VGBF closes (zero shut-off) and prevents the outlet pressure rising again.
- 7 New example with a large pipe volume:
- 8 With a large pipe volume, it is possible that the VSBV cannot reduce the pressure quickly enough. In this case, the JSAV will trip.
- 9 The gas solenoid valve is closed.
- 10 The pressure downstream of the VGBF rises and is reduced by the VSBV when it reaches the set value.

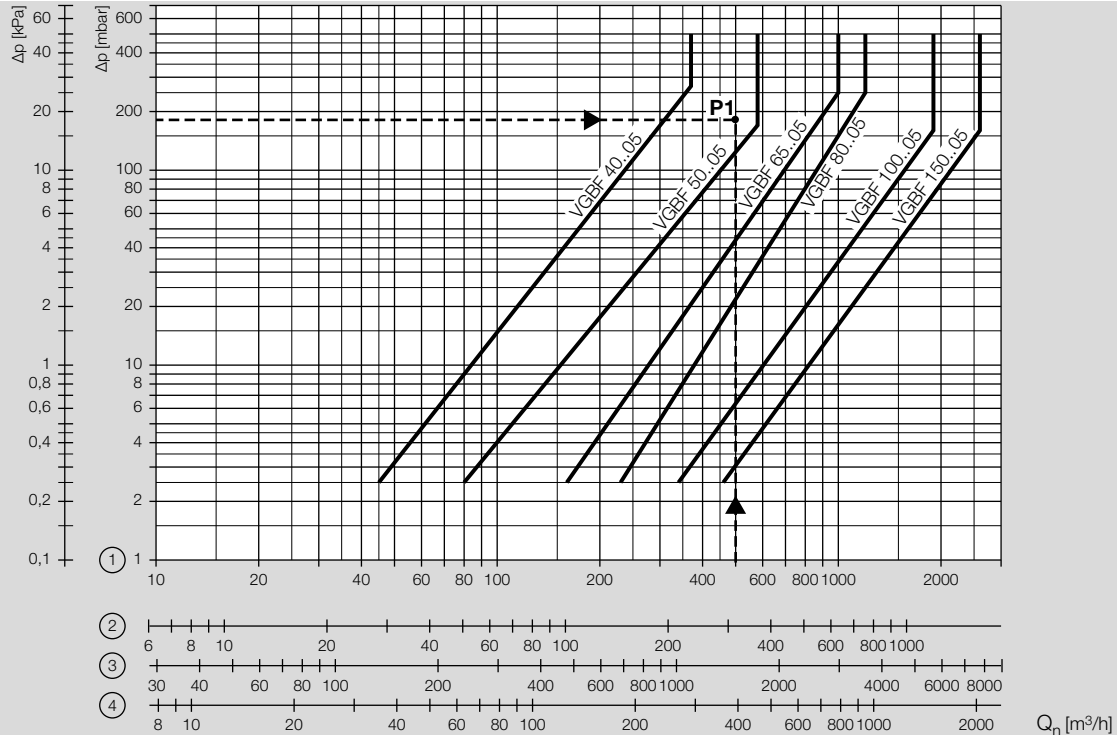
### **3 Function**

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- 11** As the pressure cannot be reduced quickly enough, it will continue to rise until the JSAV trips.
- 12** The JSAV must then be reset manually.

## 4 Flow rate

## 4.1 VGBF..05



1 = natural gas ( $\rho = 0.80 \text{ kg/m}^3$ )

2 = propane ( $\rho = 2.01 \text{ kg/m}^3$ )

3 = hydrogen ( $\rho = 0.09 \text{ kg/m}^3$ )

4 = air ( $\rho = 1.29 \text{ kg/m}^3$ )

**Example**

Gas type: natural gas,  
 flow rate  $Q = 500 \text{ m}^3\text{/h}$ ,  
 inlet pressure  $p_u = 200 \text{ mbar}$  (20 kPa),  
 outlet pressure  $p_d = 20 \text{ mbar}$  (2 kPa),  
 pressure loss  $\Delta p = p_u - p_d = 180 \text{ mbar}$  (18 kPa).

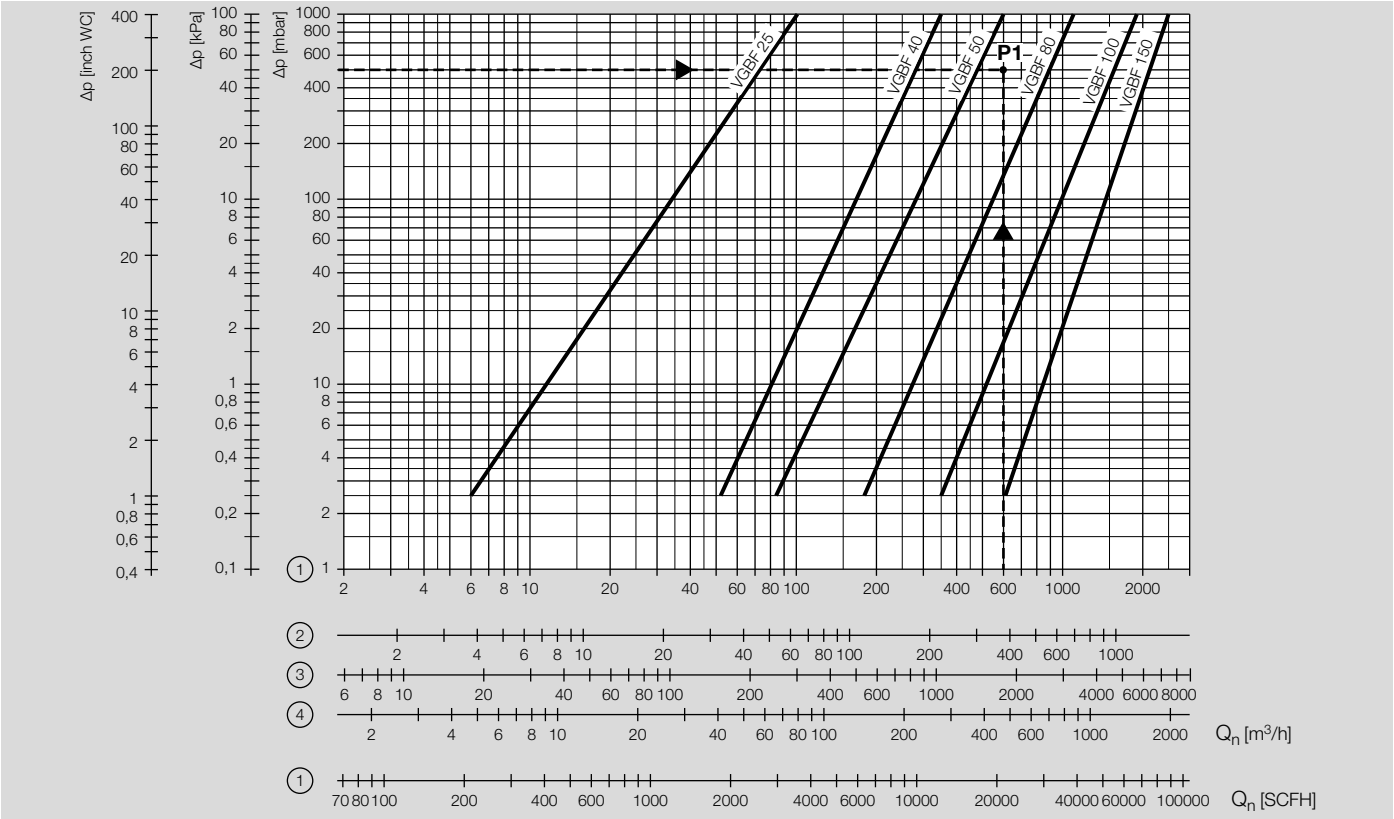
#### 4 Flow rate

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The result is intersection P1. The next largest nominal size is selected: VGBF 50..05.

At a pressure loss of  $\Delta p = 180 \text{ mbar}$  (18 kPa), the max. flow rate is  $Q_{\text{max.}}: 580 \text{ m}^3/\text{h}$ , the min. flow rate  $Q_{\text{min.}}$  is derived from  $Q_{\text{min.}} = Q_{\text{max.}} \times 10\% = 58 \text{ m}^3/\text{h}$ .

4.2 VGBF.10



- 1 = natural gas ( $\rho = 0.80 \text{ kg/m}^3$ )
- 2 = propane ( $\rho = 2.01 \text{ kg/m}^3$ )
- 3 = hydrogen ( $\rho = 0.09 \text{ kg/m}^3$ )
- 4 = air ( $\rho = 1.29 \text{ kg/m}^3$ )

**Example**  
Gas type: natural gas,  
flow rate  $Q = 600 \text{ m}^3/\text{h}$ ,  
inlet pressure  $p_u = 600 \text{ mbar}$  (60 kPa),  
outlet pressure  $p_d = 100 \text{ mbar}$  (10 kPa),  
pressure loss  $\Delta p = p_u - p_d = 500 \text{ mbar}$  (50 kPa).

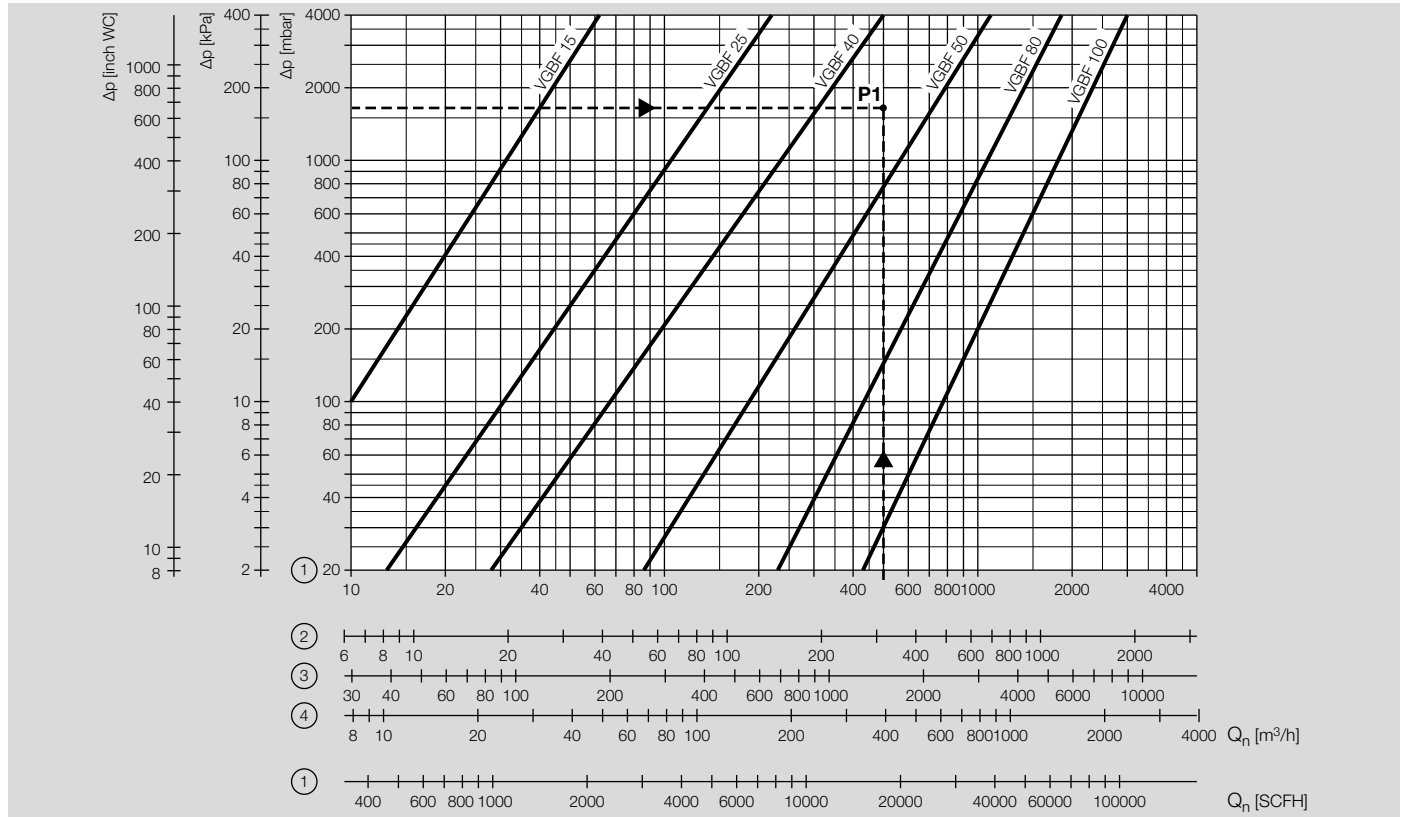
#### 4 Flow rate

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The result is intersection P1. The next largest nominal size is selected: VGBF 80..10.

At a pressure loss of  $\Delta p = 500 \text{ mbar}$  (50 kPa), the max. flow rate is  $Q_{\text{max.}}: 910 \text{ m}^3/\text{h}$ , the min. flow rate  $Q_{\text{min.}}$  is derived from  $Q_{\text{min.}} = Q_{\text{max.}} \times 10\% = 91 \text{ m}^3/\text{h}$ .

## 4.3 VGBF..40



## 4 Flow rate

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The result is intersection P1. The next largest nominal size is selected: VGBF 50..40.

At a pressure loss of  $\Delta p = 1.7$  bar (170 kPa), the max. flow rate is  $Q_{\max.}$ : 700 m<sup>3</sup>/h, the min. flow rate  $Q_{\min.}$  is derived from  $Q_{\min.} = Q_{\max.} \times 10\% = 70$  m<sup>3</sup>/h.

### 4.4 Calculating the nominal size

A web app for calculating the nominal size is available at [www.adlatus.org](http://www.adlatus.org).

5 Selection

5.2 VGBF with Rp internal thread or with ISO flange

5.1 ProFi

A web app selecting the correct product is available at [www.adlatus.org](http://www.adlatus.org).

| Description                                       | Code   | VGBF 15 | VGBF 25 | VGBF 40 | VGBF 50 | VGBF 65 | VGBF 80–100 | VGBF 150 | Condition                                                                      |
|---------------------------------------------------|--------|---------|---------|---------|---------|---------|-------------|----------|--------------------------------------------------------------------------------|
| Gas pressure regulator                            | VGBF   | •       | •       | •       | •       | •       | •           | •        |                                                                                |
| Nominal size                                      | 15–150 | 15      | 25      | 40      | 50      | 65      | 80, 100     | 150      |                                                                                |
| Pipe connection                                   |        |         |         |         |         |         |             |          |                                                                                |
| Rp internal thread                                | R      | •       | •       | •       |         |         |             |          |                                                                                |
| Flange to ISO 7005                                | F      |         |         | •       | •       | •       | •           | •        |                                                                                |
| Inlet pressure                                    |        |         |         |         |         |         |             |          |                                                                                |
| p <sub>U</sub> max. 500 mbar (50 kPa, 7.25 psig)  | 05     |         |         | •       | •       | •       |             |          | 500 mbar (50 kPa) for flange version only                                      |
| p <sub>U</sub> max. 1 bar (100 kPa, 14.5 psig)    | 10     |         | •       | •       | •       |         | •           | •        |                                                                                |
| p <sub>U</sub> max. 4 bar (400 kPa, 58 psig)      | 40     | •       | •       | •       | •       |         | •           |          |                                                                                |
| Pressure test point                               |        |         |         |         |         |         |             |          |                                                                                |
| Screw plug at the inlet                           | -1     | •       | •       |         |         |         |             |          |                                                                                |
| Screw plug at the inlet and outlet                | -3     |         |         | •       | •       | •       | •           | •        |                                                                                |
| Viton equipment for gas or air (without approval) | V      |         |         | •       | •       | •       | •           | •        | Viton equipment for flange version and max. 1 bar (100 kPa) only               |
| Special outlet pressure range                     | Z      | •       | •       | •       | •       | •       | •           | •        | When ordering a VGBF..Z, be sure to specify the desired outlet pressure range. |

Order example

VGBF 50F05-3

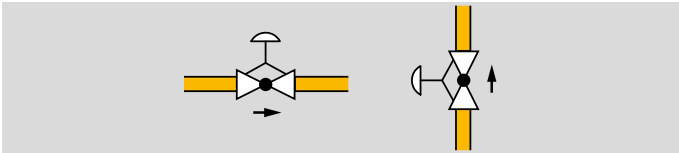
5.3 VGBF..T with NPT internal thread or with ANSI flange

| Description                                    | Code    | VGBF..T 15–25 | VGBF..T 40 | VGBF..T 50 | VGBF..T 80–100 | Condition                                                                         |
|------------------------------------------------|---------|---------------|------------|------------|----------------|-----------------------------------------------------------------------------------|
| Gas pressure regulator                         | VGBF..T | •             | •          | •          | •              |                                                                                   |
| Nominal size                                   | 15–100  | 15, 25        | 40         | 50         | 80, 100        |                                                                                   |
| Pipe connection                                |         |               |            |            |                |                                                                                   |
| NPT internal thread                            | N       | •             | •          | •          |                |                                                                                   |
| ANSI flange                                    | A       |               |            | •          | •              |                                                                                   |
| Inlet pressure                                 |         |               |            |            |                |                                                                                   |
| p <sub>U</sub> max. 1 bar (100 kPa, 14.5 psig) | 10      | •             | •          | •          | •              |                                                                                   |
| p <sub>U</sub> max. 4 bar (400 kPa, 58 psig)   | 40      | •             | •          | •          | •              |                                                                                   |
| Pressure test point                            |         |               |            |            |                |                                                                                   |
| Screw plug at the outlet                       | -2      | •             |            |            |                |                                                                                   |
| Screw plug at the inlet and outlet             | -3      |               | •          | •          | •              |                                                                                   |
| Special outlet pressure range                  | Z       | •             | •          | •          | •              | When ordering a VGBF..T..Z, be sure to specify the desired outlet pressure range. |

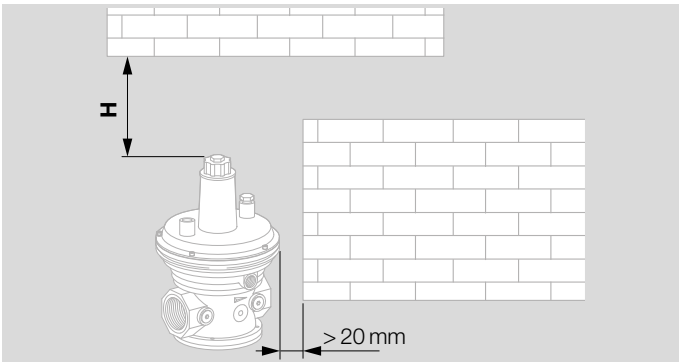
Order example  
VGBF 50TN40-3

## 6 Project planning information

### 6.1 Installation



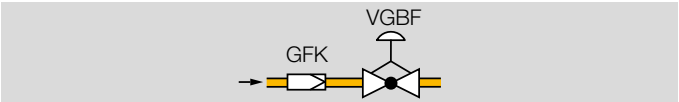
Installation position: any, not upside down. Recommended installation position as of nominal size DN 65: spring dome pointing vertically upwards.



The gas pressure regulator VGBF must not be in contact with masonry. Minimum clearance 20 mm. Ensure that there is sufficient space for installation and for changing the spring **H**.

| Type               | Distance H [mm] |
|--------------------|-----------------|
| VGBF 15            | 120             |
| VGBF25, VGBF 40    | 180             |
| VGBF 50            | 200             |
| VGBF 65, VGBF 80   | 320             |
| VGBF 100, VGBF 150 | 360             |

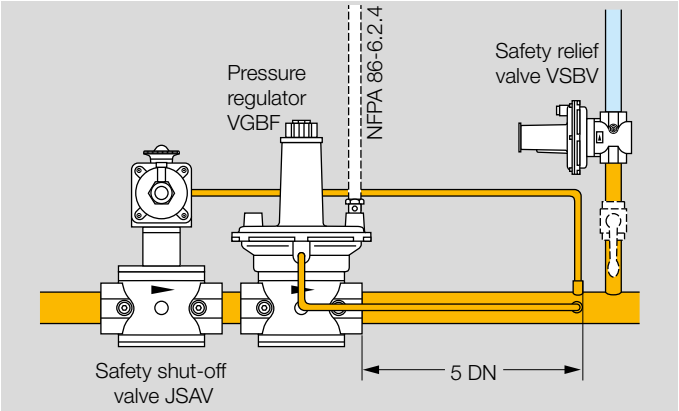
Do not store or install the unit in the open air.



Sealing material and dirt, e.g. thread cuttings, must not be allowed to get into the regulator housing. Install a filter (GFK) upstream of every system.

### 6.2 Installation to EN 746-2

In accordance with EN 746-2, a safety shut-off valve upstream of the gas pressure regulator and a safety relief valve are required for gas pressure control systems.



These valves are not required if the highest possible operating pressure upstream of the regulator cannot exceed the maximum allowable operating pressure of the downstream devices.

### 6.3 Installing the impulse line

Gas pressure regulator VGBF..F05 features an internal feed-back function. On VGBF..F10 and VGBF..F40, the feedback function is performed via an external impulse line (5 x DN), see illustration at 6.2.

### 6.4 Installation to NFPA 86

#### NFPA 86-8.2.10 and NFPA 86-6.2.4

If the inlet pressure to a fuel pressure regulator exceeds the pressure rating of any component, overpressure protection shall be provided.

#### With reference to NFPA 86-6.2.4:

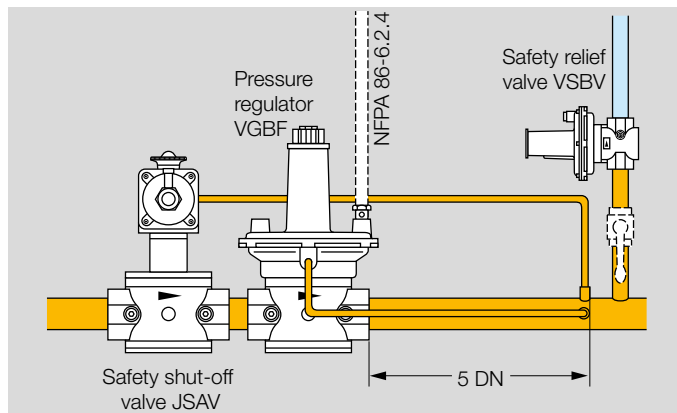
The gas pressure regulator requires a relief line on the spring dome, see illustration at 6.2.

It is always recommended to consult the respective local field inspector on this topic.

### 6.5 Feedforwarding the furnace chamber pressure

If furnace pressure varies, a combustion chamber control line can be connected to the breather orifice in order to maintain a constant burner capacity. Connecting thread, see page 24 (9.1 VGBF with Rp internal thread or with ISO flange).

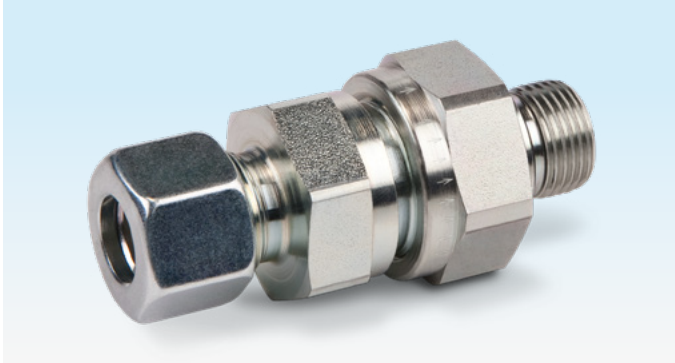
This application is only permitted for a maximum furnace chamber pressure between 0 and +100 mbar (10 kPa) and for slow pressure changes.





## 7 Accessories

### 7.1 Damping valve



VGBF..10 and VGBF..40: damping valve for Rp 3/8 impulse line.

VGBF..T: damping valve not available.

VGBF 15–25: not required.

VGBF 40–100..40: loosely enclosed.

Can be ordered on request for VGBF 40–150..10.

Order No. 74924681.

## 8 Technical data

### 8.1 Ambient conditions

Icing, condensation and dew in and on the unit are not permitted.

Avoid direct sunlight or radiation from red-hot surfaces on the unit. Note the maximum medium and ambient temperatures!

Avoid corrosive influences, e.g. salty ambient air or SO<sub>2</sub>.

In outdoor installations, the gas line must be protected against weather influence, e.g. by adequate enclosure or roofing.

Ambient temperature: -20 to +60°C (-4 to +140°F), VGBF.V: 0 to 60°C (32 to 140°F).

Long-term use in the upper ambient temperature range accelerates the ageing of the elastomer materials and reduces the service life (please contact manufacturer).

This unit is not suitable for cleaning with a high-pressure cleaner and/or cleaning products.

### 8.2 Mechanical data

Gas type: natural gas, town gas, LPG (gaseous), hydrogen and biogas (max. 0.02 %-by-vol. H<sub>2</sub>S), VGBF.V for air.

Transport, storage and medium temperatures = ambient temperature.

The outlet pressure range is reached through the use of different springs, see page 23 (8.3 Spring table).

Rp 1/4 for test points or even for a pilot gas supply line:  
at the inlet: VGBF 15 and 25,

at inlet and outlet: VGBF 40–150.

Strainers that are possibly fitted serve as flow conditioners.

Housing: aluminium,  
diaphragms: NBR or Viton,  
valve seat: aluminium,  
valve stem: aluminium,  
valve plate: vulcanized NBR or Viton seal.

Internal thread: Rp to ISO 7-1,  
flanged connection: PN 16 to ISO 7005,  
DN 15–50 available with NPT thread,  
DN 50–100 available with ANSI flange.  
Impulse line connections: NPT.

#### VGBF..10

Max. inlet pressure  $p_{u \max.}$ : 1 bar (100 kPa).

Feedback via impulse line: Rp 1/4 connection for DN 15 and 25, Rp 3/8 connection for DN 40–150.

EN 334, accuracy class AC 10, lock-up pressure class:  
5–50 mbar (0.5–5 kPa) = SG 30, > 50 mbar (5 kPa) = SG 20.

#### VGBF..40

Max. inlet pressure  $p_{u \max.}$ : 4 bar (400 kPa).

Feedback via impulse line: Rp 1/4 connection for DN 15 and 25, Rp 3/8 connection for DN 40–100.

EN 334, accuracy class AC 10, lock-up pressure class:  
5–50 mbar (0.5–5 kPa) = SG 30, > 50 mbar (5 kPa) = SG 20.

#### VGBF..05

Max. inlet pressure  $p_{u \max.}$ : 500 mbar (50 kPa).

Internal feedback.

EN 88, Class A, Group 2.

8.3 Spring table

| Outlet pressure range |          |          | Order No. |          |          |                        | Marking      |
|-----------------------|----------|----------|-----------|----------|----------|------------------------|--------------|
| mbar                  | kPa      | "WC      | VGBF 15   | VGBF 25  | VGBF 40  | VGBF 50                |              |
| 5–12.5                | 0.5–1.25 | 2–5      | 75421911  | 75421961 | 75421961 | 75422031               | –            |
| 10–30 <sup>1)</sup>   | 1–3      | 4–12     | 75421921  | 75421971 | 75421971 | 75422041               | red          |
| 25–45                 | 2.5–4.5  | 10–18    | 75421931  | 75421980 | 75421980 | 75422051               | yellow       |
| 40–60                 | 4–6      | 16–32    | 75421941  | 75421990 | 75421990 | 75422061               | green        |
| 55–75                 | 5.5–7.5  | 21–29    | 75421951  | 75422000 | 75422000 | 75422071               | blue         |
| 70–90                 | 7–9      | 27–35    | 75442046  | 75422010 | 75422010 | 75422081               | black        |
| 85–105                | 8.5–10.5 | 33–41    | 75442047  | 75422020 | 75422020 | 75422091               | white        |
| 100–160 <sup>2)</sup> | 10–16    | 39–62    | 75442048  | 75438978 | 75438978 | 75438981               | black/red    |
| 150–230               | 15–23    | 58.5–90  | 75442049  | 75438979 | 75438979 | 75438982               | black/yellow |
| 220–350               | 22–35    | 86–136.5 | 75442050  | 75438980 | 75438980 | 75438983 <sup>3)</sup> | black/green  |

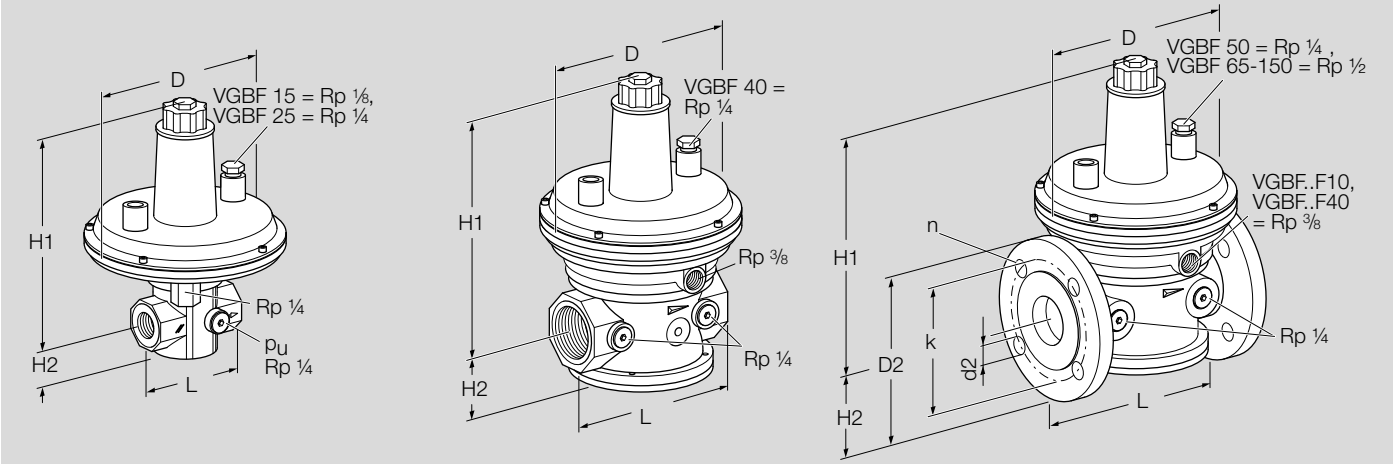
| Outlet pressure range |          |          | Order No. |          |          |          | Marking      |
|-----------------------|----------|----------|-----------|----------|----------|----------|--------------|
| mbar                  | kPa      | "WC      | VGBF 65   | VGBF 80  | VGBF 100 | VGBF 150 |              |
| 5–12.5                | 0.5–1.25 | 2–5      | 75426160  | 75426230 | 75426310 | 75426450 | –            |
| 10–30 <sup>1)</sup>   | 1–3      | 4–12     | 75426170  | 75426240 | 75426320 | 75426460 | red          |
| 25–45                 | 2.5–4.5  | 10–18    | 75426180  | 75426250 | 75426330 | 75426470 | yellow       |
| 40–60                 | 4–6      | 16–32    | 75426190  | 75426260 | 75426340 | 75426480 | green        |
| 55–75                 | 5.5–7.5  | 21–29    | 75426200  | 75426270 | 75426350 | 75426490 | blue         |
| 70–90                 | 7–9      | 27–35    | 75426210  | 75426280 | 75426360 | 75426500 | black        |
| 85–105                | 8.5–10.5 | 33–41    | 75426220  | 75426290 | 75426370 | 75426510 | white        |
| 100–160 <sup>2)</sup> | 10–16    | 39–62    | 75446329  | 75438984 | 75438987 | 75438990 | black/red    |
| 150–230               | 15–23    | 58.5–90  | –         | 75438985 | 75438988 | –        | black/yellow |
| 220–350               | 22–35    | 86–136.5 | –         | 75428986 | 75438989 | –        | black/green  |

Dispatch complete with label for changed outlet pressure.

- <sup>1)</sup> Standard spring.
- <sup>2)</sup> T-products range standard spring.
- <sup>3)</sup> Spring set comprising two springs.

9 Dimensions

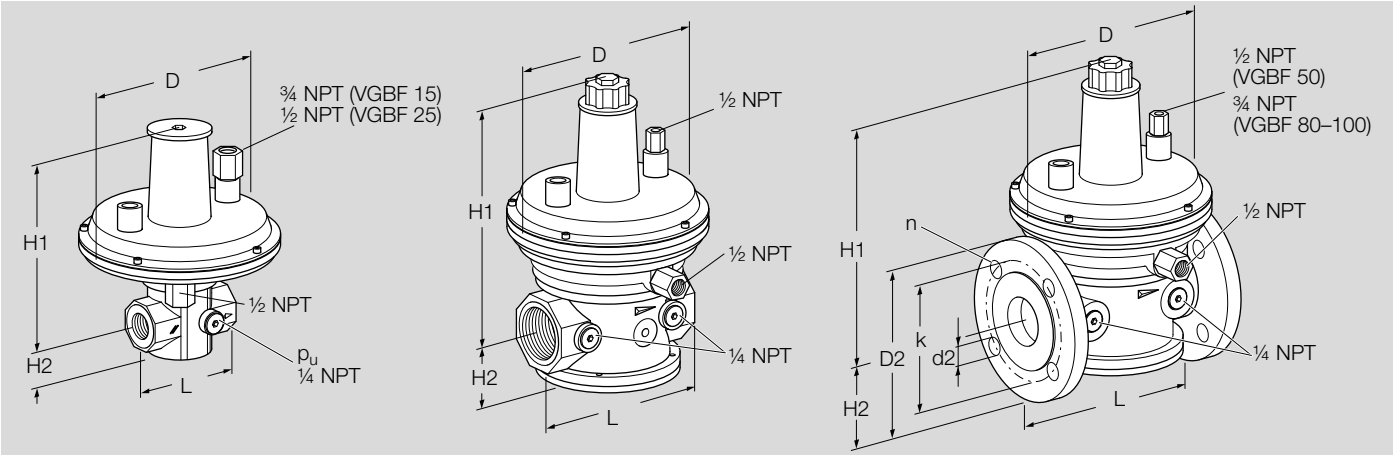
9.1 VGBF with Rp internal thread or with ISO flange



VGBF 15R, VGBF 25R, VGBF 40R, VGBF 40–150F

| Type      | DN  | Connection | L [mm] | H1 [mm] | H2 [mm] | D [mm] | p <sub>u</sub> max. [bar] | p <sub>u</sub> max. [kPa] | D2 [mm] | k [mm] | d2 [mm] | n Number | Weight [kg] |
|-----------|-----|------------|--------|---------|---------|--------|---------------------------|---------------------------|---------|--------|---------|----------|-------------|
| VGBF 15R  | 15  | Rp 1/2     | 70     | 151     | 24      | 132    | 4                         | 400                       | –       | –      | –       | –        | 0.9         |
| VGBF 25R  | 25  | Rp 1       | 90     | 250     | 33      | 190    | 1; 4                      | 100; 400                  | –       | –      | –       | –        | 1.9         |
| VGBF 40R  | 40  | Rp 1 1/2   | 150    | 260     | 56      | 190    | 1; 4                      | 100; 400                  | –       | –      | –       | –        | 2.9         |
| VGBF 40F  | 40  | 40         | 200    | 260     | 75      | 190    | 0.5; 1; 4                 | 50; 100; 400              | 150     | 110    | 18      | 4        | 4.8         |
| VGBF 50F  | 50  | 50         | 230    | 316     | 83      | 240    | 0.5; 1; 4                 | 50; 100; 400              | 165     | 125    | 18      | 4        | 7.7         |
| VGBF 65F  | 65  | 65         | 290    | 412     | 89      | 260    | 0.5                       | 50                        | 185     | 145    | 18      | 4        | 12.0        |
| VGBF 80F  | 80  | 80         | 310    | 446     | 100     | 310    | 0.5; 1; 4                 | 50; 100; 400              | 200     | 160    | 18      | 8        | 16.1        |
| VGBF 100F | 100 | 100        | 350    | 501     | 115     | 396    | 0.5; 1; 4                 | 50; 100; 400              | 229     | 180    | 18      | 8        | 26.0        |
| VGBF 150F | 150 | 150        | 480    | 573     | 150     | 520    | 0.5; 1                    | 50; 100                   | 285     | 240    | 22      | 8        | 46.5        |

9.2 VGBF..T with NPT internal thread or with ANSI flange



VGBF 15–25TN; VGBF 40–50TN; VGBF 50–100TA

| Type       | DN  | Connection | L<br>[inch] | H1<br>[inch] | H2<br>[inch] | D<br>[inch] | P <sub>u</sub> max.<br>["WC] | D2<br>[inch] | k<br>[inch] | d2<br>[inch] | n<br>Number | Weight<br>[lbs] |
|------------|-----|------------|-------------|--------------|--------------|-------------|------------------------------|--------------|-------------|--------------|-------------|-----------------|
| VGBF 15TN  | 15  | ½ NPT      | 2.76        | 5.91         | 0.94         | 5.20        | 1.5                          |              |             |              |             | 2.0             |
| VGBF 25TN  | 25  | 1 NPT      | 3.54        | 9.84         | 1.30         | 7.48        | 0.4; 1.5                     |              |             |              |             | 4,2             |
| VGBF 40TN  | 40  | 1½ NPT     | 5.91        | 10.24        | 2.20         | 7.48        | 0.4; 1.5                     |              |             |              |             | 6.4             |
| VGBF 50TN  | 50  | 2 NPT      | 7.17        | 12.44        | 2.72         | 9.45        | 0.2; 0.4; 1.5                |              |             |              |             | 12.6            |
| VGBF 50TA  | 50  | 2 ANSI     | 9.06        | 12.44        | 3.01         | 9.45        | 0.2; 0.4; 1.5                | 6.50         | 4.75        | 0.75         | 4           | 17,0            |
| VGBF 80TA  | 80  | 3 ANSI     | 12,20       | 17.56        | 3.78         | 12.20       | 0.2; 0.4; 1.5                | 7.50         | 6.00        | 0.75         | 4           | 35,5            |
| VGBF 100TA | 100 | 4 ANSI     | 13.78       | 19.72        | 4.53         | 15.59       | 0.2; 0.4; 1.5                | 9.02         | 7.50        | 0.75         | 8           | 57.3            |

## **10 Converting units**

See [www.adlatus.org](http://www.adlatus.org)

### **11 Maintenance cycles**

At least once a year, at least twice a year in the case of biologically produced methane.

## For more information

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Eclipse, Exothermics, Hauck, Kromschroder and Maxon. To learn more about our products, visit [ThermalSolutions.honeywell.com](https://ThermalSolutions.honeywell.com) or contact your Honeywell Sales Engineer.

Elster GmbH  
Strotheweg 1, D-49504 Lotte  
T +49 541 1214-0  
[hts.lotte@honeywell.com](mailto:hts.lotte@honeywell.com)  
[www.kromschroeder.com](http://www.kromschroeder.com)

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