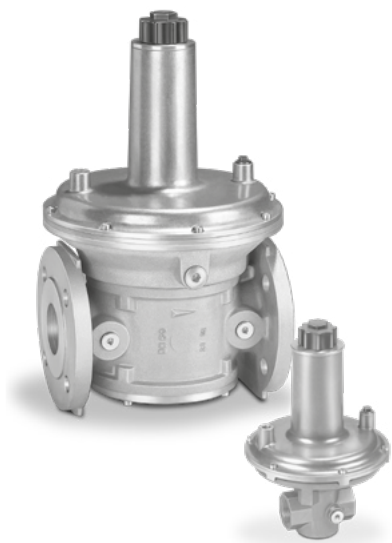
Honeywell

krom schroder

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



CE EAC

EN
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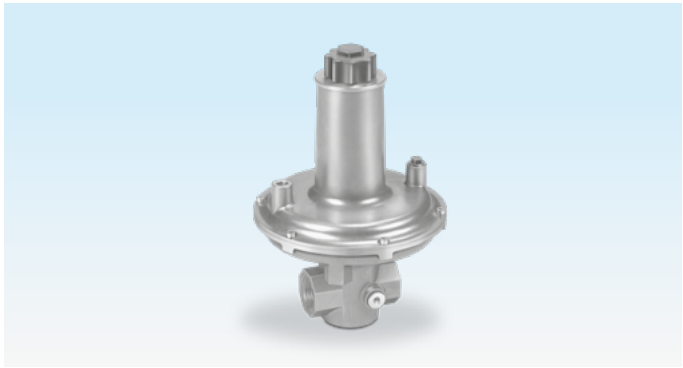
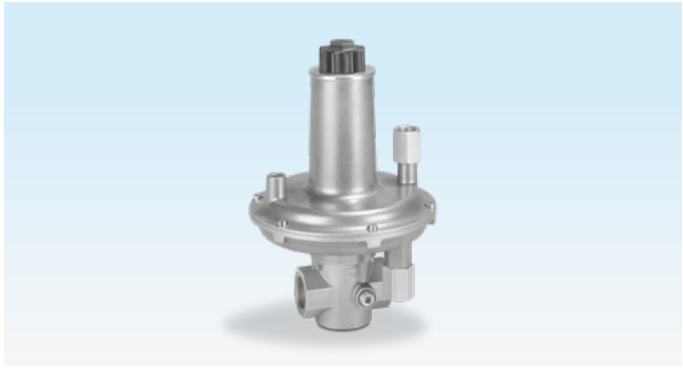
1 Application



VGBF..R



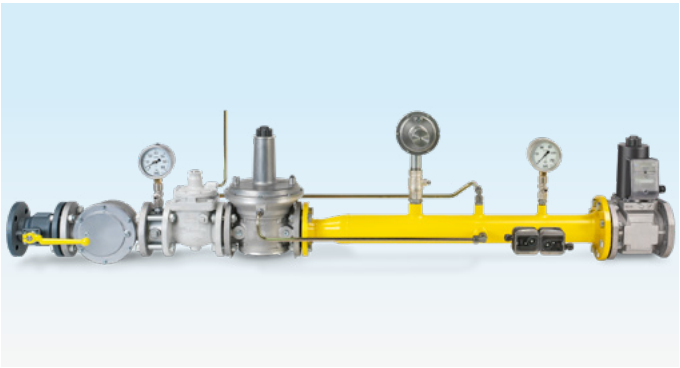
VGBF..TN

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 17 (Installation to NFPA 86).
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

Certificates, see www.docuthek.com

EU certified

CE

VGBF 15 to VGBF 150

- (EU) 2016/426 (GAR) – Gas Appliances Regulation
- DIN EN 88-1:2011
- DIN EN 88-2:2008
- DIN EN 334:2009

VGBF 100F40

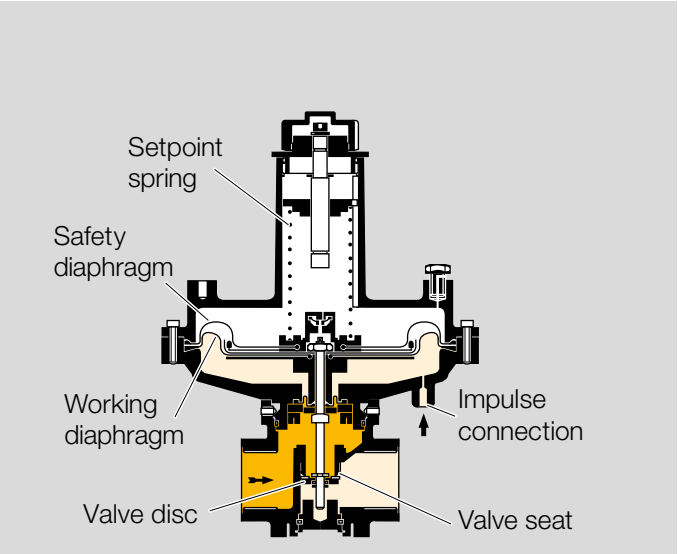
- 2014/68/EU (PED), Pressure Equipment Directive

Eurasian Customs Union

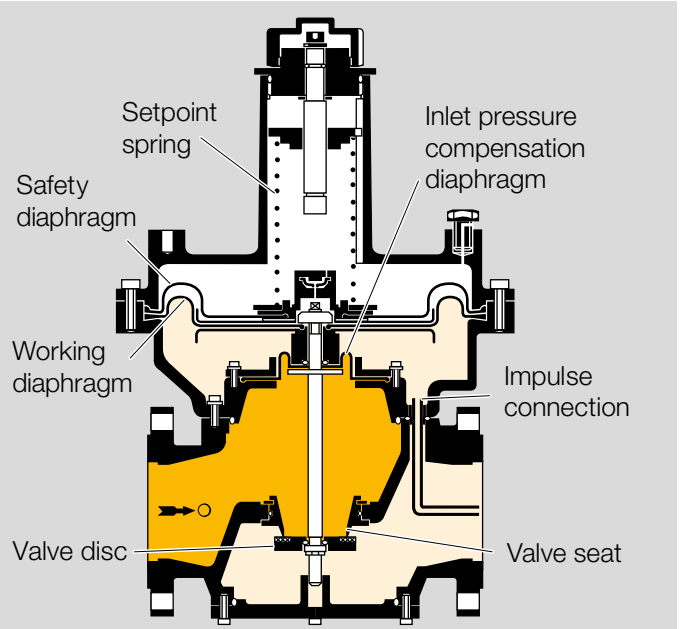
EAC

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

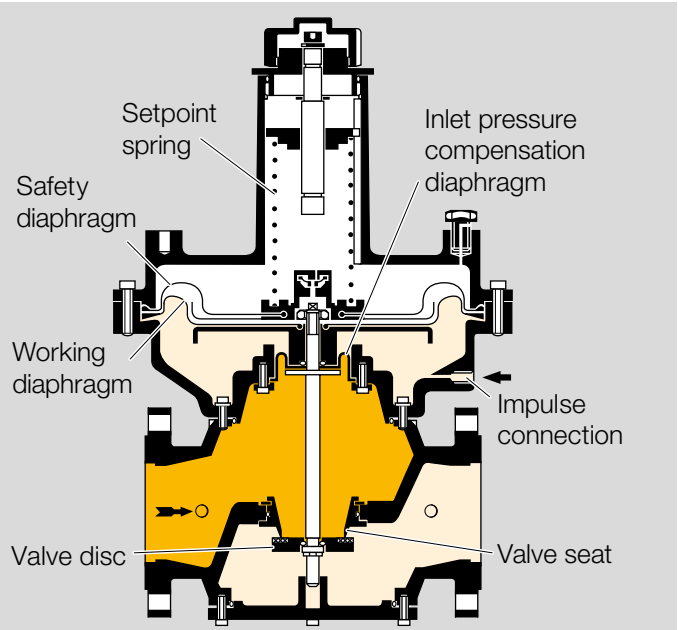
3 Function



VGBF..R10, VGBF..R40



VGBF..F05



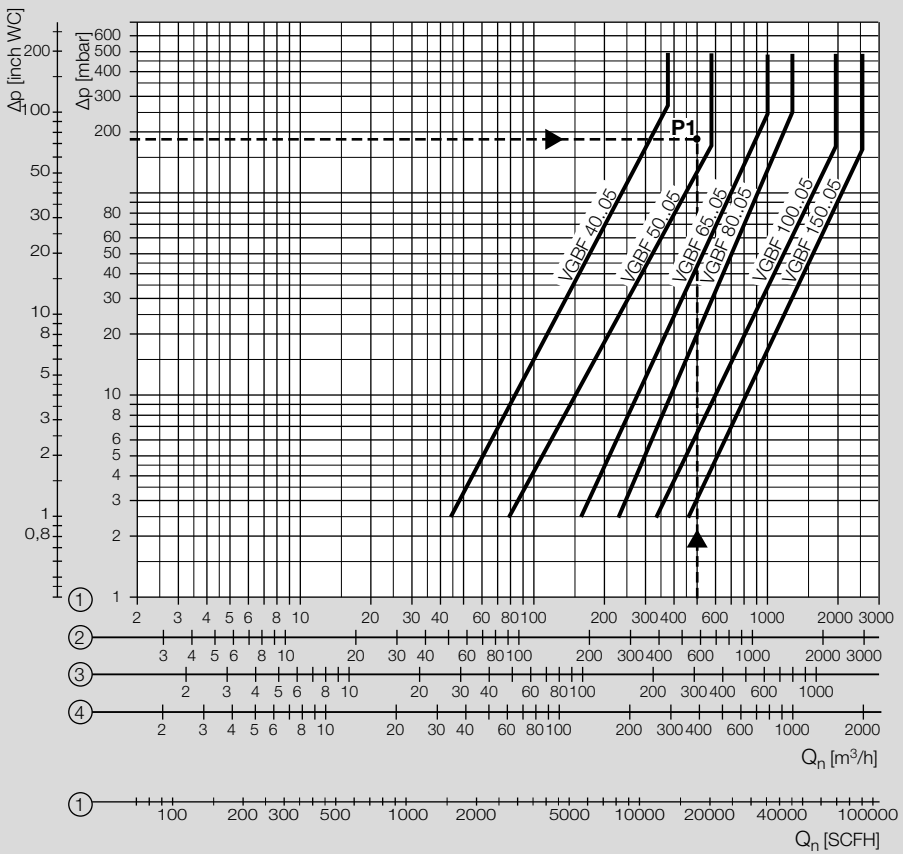
VGBF..F10, VGBF..F40

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.

4 Flow rate

4.1 VGBF..05



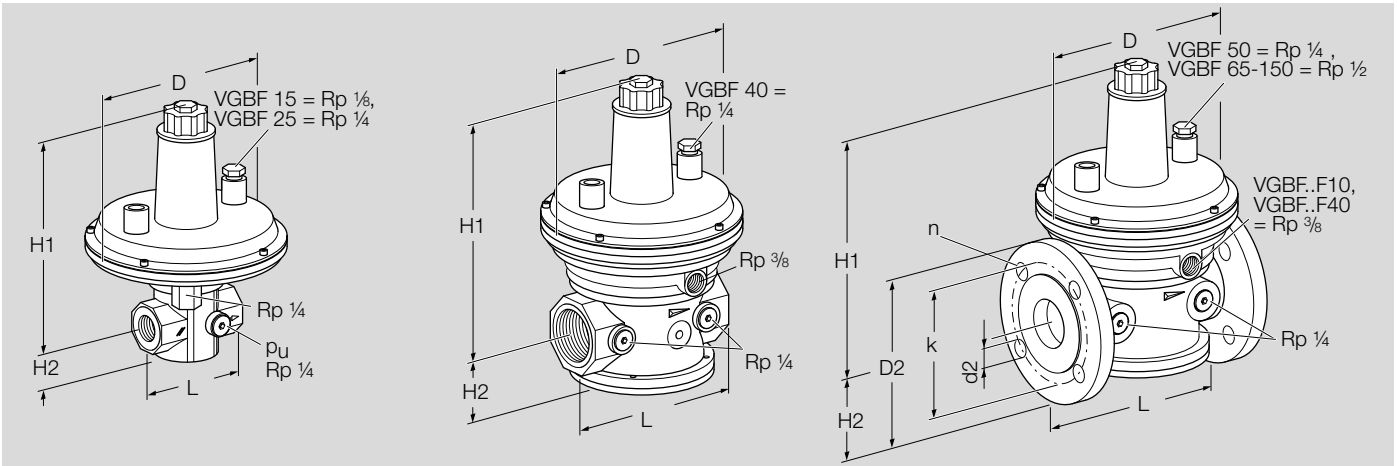
1 = natural gas (ρ = 0.80 kg/m³)
2 = town gas (ρ = 0.64 kg/m³)
3 = LPG (ρ = 2.01 kg/m³)
4 = air (ρ = 1.29 kg/m³)

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

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

At a pressure loss of Δp = 180 mbar, the max. flow rate is $Q_{max.}$:
580 m^3/h, the min. flow rate is $Q_{min.}$ derived from $Q_{min.}$ = $Q_{max.}$ x 10 % = 58 m^3/h.

8.1 Dimensions VGBF with Rp internal thread or with ISO flange



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

Typ	DN	Connection	L [mm]	H1 [mm]	H2 [mm]	D [mm]	$p_{u\ max.}$ [bar]	D2 [mm]	k [mm]	d2 [mm]	n No.	Weight [kg]
VGBF 15R	15	Rp ½	70	151	24	132	4	–	–	–	–	0.9
VGBF 25R	25	Rp 1	90	250	33	190	1; 4	–	–	–	–	1.9
VGBF 40R	40	Rp 1½	150	260	56	190	1; 4	–	–	–	–	2.9
VGBF 40F	40	40	200	260	75	190	0.5; 1; 4	150	110	18	4	4.8
VGBF 50F	50	50	230	316	83	240	0,5; 1; 4	165	125	18	4	7.7
VGBF 65F	65	65	290	412	89	260	0.5	185	145	18	4	12.0
VGBF 80F	80	80	310	446	100	310	0.5; 1; 4	200	160	18	8	16.1
VGBF 100F	100	100	350	501	115	396	0.5; 1; 4	229	180	18	8	26.0
VGBF 150F	150	150	480	573	150	520	0.5; 1	285	240	22	8	46.5