

Springloaded Back-Pressure Regulator

Model – GBF25S

Description

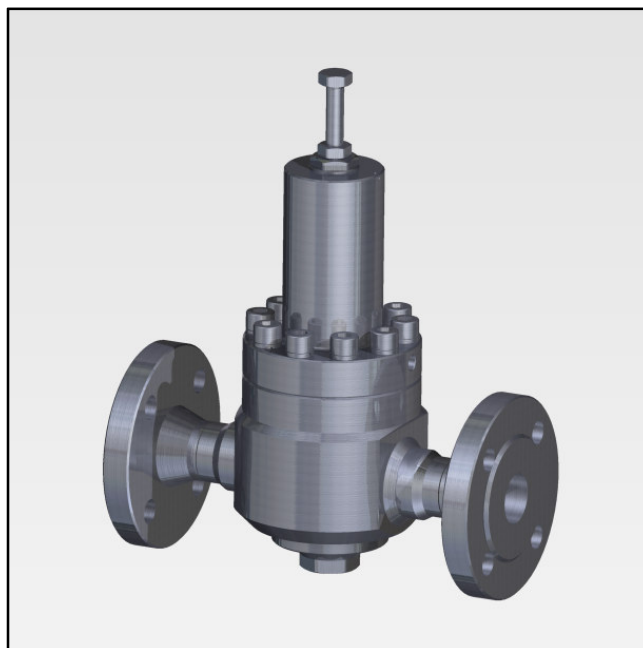
The GBF25S springloaded back-pressure regulator controls the supply pressure on the inlet side. When the supply pressure rises above the set pressure, the fluid starts flowing to the outlet side.

Specifications

| | |
|----------------|--|
| Inlet pressure | 50, 250 or 420 bar |
| Adjustable | 0-420 bar |
| Connections | DN25 flanges EN 1092-1 or 1" flanges ASME B16.5 |
| Seat diameter | 16,5 mm |
| Cv / Kv | Cv 5.5 / Kv 4.7 |

Fluids

This back-pressure regulator is suitable for gases and liquids.



Materials

The regulator is made out of barstock stainless steel material.

| | |
|---------------------|------------------|
| Body | ss 316L |
| Springhousing | ss 316L |
| Valve | ss 316L |
| Seat | KEL-F or PEEK |
| Valve spring | ss 316 |
| Setspring | ss 302 |
| O-rings / diaphragm | NBR, FKM or EPDM |

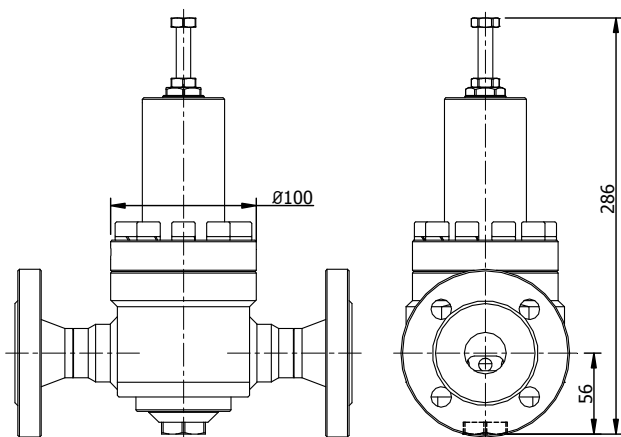
Other materials available on request.

All metal parts are marked with a traceable batch number. Material certificates are available on request.

Temperature

The general temperature range of the regulator is -50 / 200 °C, but could be limited due to the used sealing materials.

| | |
|------------|--------------|
| KEL-F seat | -15 / 60 °C |
| PEEK seat | -50 / 200 °C |
| NBR seals | -35 / 130 °C |
| FKM seals | -20 / 200 °C |
| EPDM seals | -50 / 120 °C |



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Technical details

- all regulators tested before delivery
- leak-tight seat design
- all parts cleaned and degreased
- PED classification SEP
- ATEX classification EXII 3GD

Although this regulator has a leak-tight seat, the regulator should not be used as a shutt-off valve.

Spare parts kits are available for the regulator.

Dependency

A character of the regulator is "dependency". The set-pressure will change, when you have a changing outletpressure.

Options

Dutch Regulators supplies the regulators to your needs. When you have the need for special features or options, Dutch Regulators is the right address.

Standard options

- gauge ports
- locking cap

Special options

- other seal materials on request
- other body materials on request
- material according to NACE MR0175

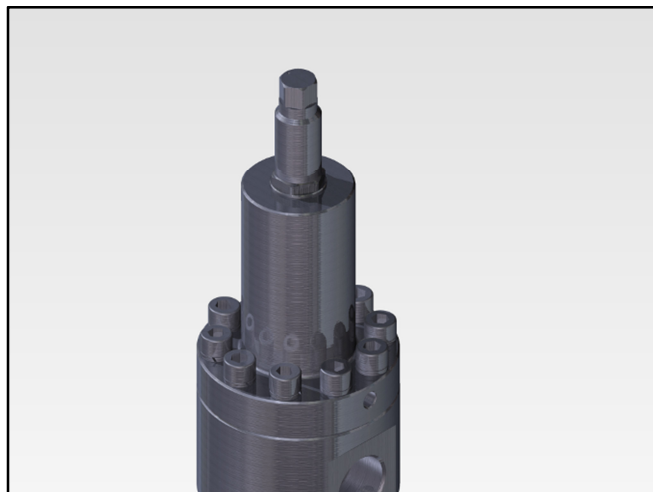
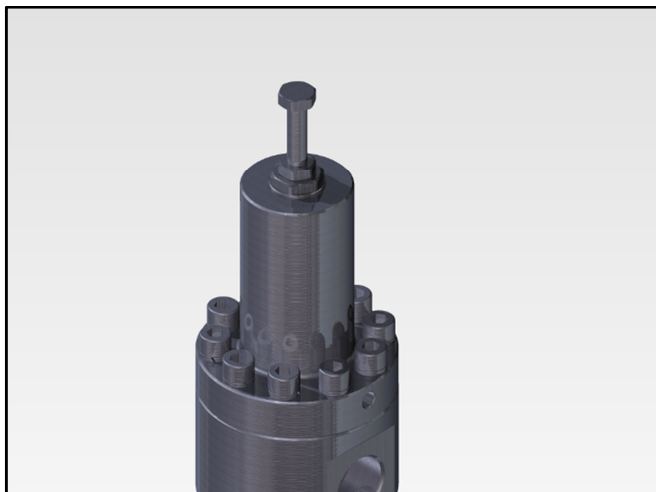
Flow

The regulator has good flow performance over the complete range of inlet and outlet pressures. Always ask Dutch Regulators for advice, if this regulator is the best choice for your application.

Adjusting the regulator

The regulator comes standard with a setscrew.

Regulators that have a fixed setpoint, can be equipped with a locking cap.



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Section view

The section view gives an idea of the internals of the regulator.

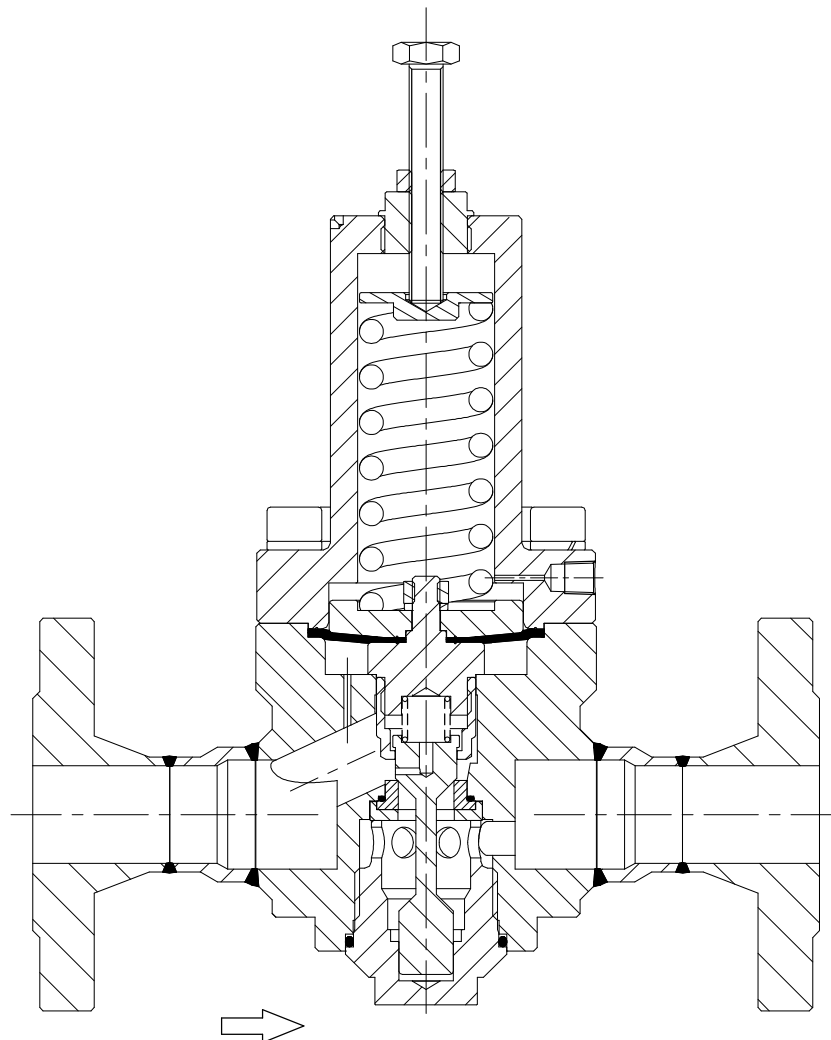
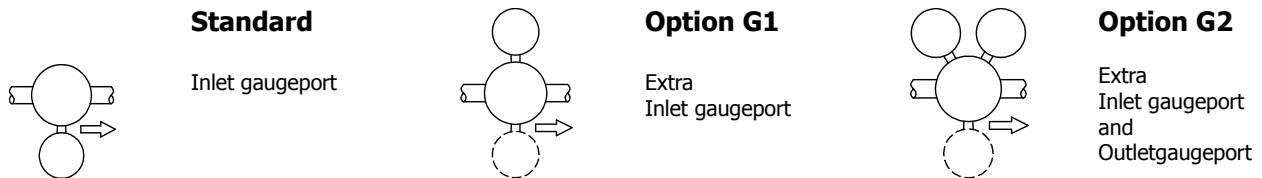
- diaphragm sensing below 8 bar outletpressure
- piston sensing above 20 bar outletpressure
- rubber seated for design pressure below 50 bar
- plastic seated for design pressure above 50 bar

Gaugeports

The regulator has standard one 1/4" NPT gaugeport to measure the controlled setpressure.

Option G1 and G2 are optional 1/4" NPT gaugeports, see for the position the pictures below.

On request it is possible to have other gaugeports.



Section view of:
GBF25S-40D8-SSPN

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Connections

The regulator is designed for flanged connections. The flanges are welded to the regulator with butt-welds.

DIN – flanges according to EN 1092-1

DN25 PN40 40 bar design pressure

ASME – flanges according to ASME B16.5

1" 150# 20 bar design pressure

1" 300# 50 bar design pressure

1" 600# 100 bar design pressure

1" 1500# 250 bar design pressure

1" 2500# 420 bar design pressure

Other connections like weld-stubs for example are available on request.

Design pressures

The regulator range consists of 3 design pressure ranges, where the design pressure applies for the inlet and outleside.

The design pressure could be limited to the maximum pressure of the flanges.

The design pressure comes standard together with specific seat materials.

- 50 bar - NBR, FKM or EPDM
- 250 bar - Kel-f
- 420 bar - PEEK

Depending on temperature or special wishes, the seatmaterial could be different as mentioned above.

Typenumber explanation

Example : GBF25S – 50A20 – SSPV

| model | design pressure | connections | adjustable | material | seat | seals | options | |
|----------------------|-----------------------|------------------------|------------------------|-------------------|---------------------------|-------------------------|-------------------------------------|--------------------------------|
| GBF25S | 20 : 20 bar | D : DIN | 3 : 0-3 bar | SS SS 316L | K KEL-F (pctfe) | N nitrile NBR | G1 one extra gaugeport | |
| | 40 : 40 bar | EN 1092-1 | 8 : 0-8 bar | | | | V viton | G2 two extra gaugeports |
| | 50 : 50 bar | A : ASME | 20 : 0-20 bar | | | | E EPDM | L locking cap |
| | 100 : 100 bar | ASME B16.5 | 50 : 0-50 bar | | | | | |
| | 250 : 250 bar | | 100 : 0-100 bar | | | | | |
| 420 : 420 bar | S : weld stubs | 250 : 0-250 bar | | | | | | |
| | | | 420 : 0-420 bar | | | | xxx codes for special option | |

All regulators are marked with an ID number, the exact configuration of the regulator is stored in this ID number. Always mention the ID number in case you need spare parts.