

Springloaded Back-Pressure Regulator

Model – GBF20S

Description

The GBF20S 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	DN20 flanges EN 1092-1 or 3/4" flanges ASME B16.5
Seat diameter	12,5 mm
Cv / Kv	Cv 3.2 / Kv 2.7

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

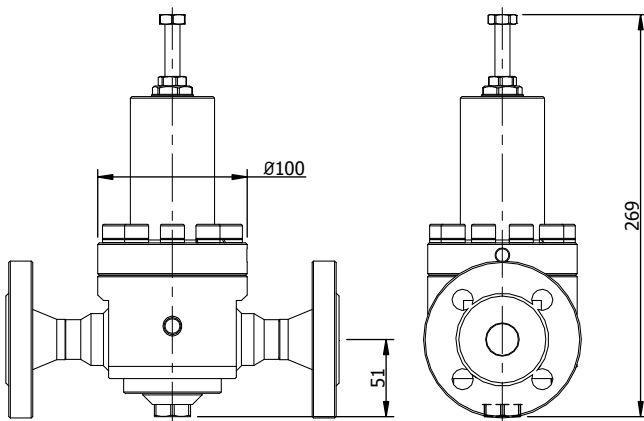
Other materials available on request.

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



Springloaded Back-Pressure Regulator

Model – GBF20S

Technical details

- all regulators tested before delivery
- leak-tight seat design
- all parts cleaned and degreased
- PED 97/23/EC – SEP (article 3, paragraph 3)
- ATEX classification Ex II 3G

Although this regulator has a leak-tight seat, the regulator should not be used as a shut-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

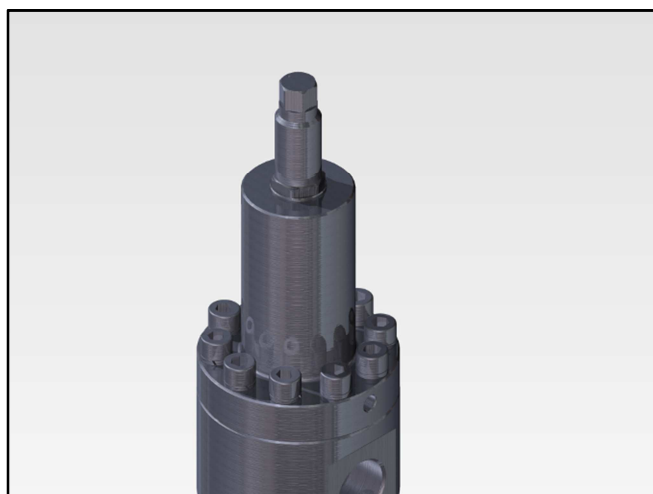
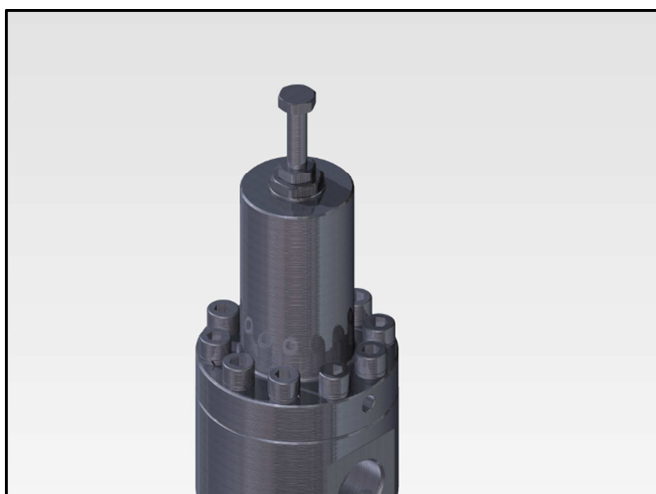
Flow

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.



Springloaded Back-Pressure Regulator

Model – GBF20S

Section view

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

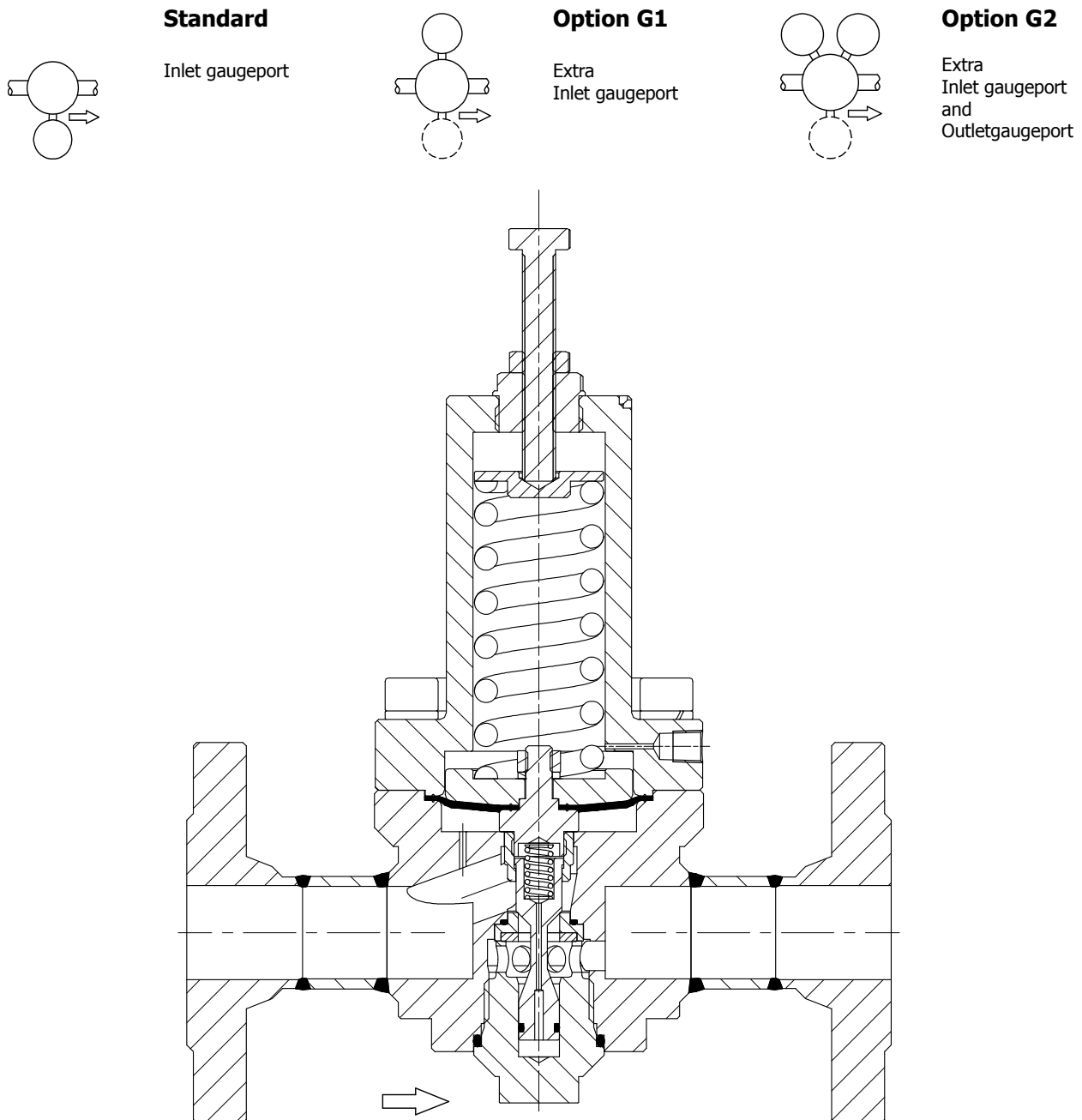
- diaphragm sensing below 20 bar inlet pressure
- piston sensing above 50 bar inlet pressure
- plastic seated for all design pressures

Gaugeports

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

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:
GBF20F25S-40D8-SSPV

Springloaded Back-Pressure Regulator

Model – GBF20S

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

DN20 PN40 40 bar design pressure

ASME – flanges according to ASME B16.5

3/4" 150# 20 bar design pressure
 3/4" 300# 50 bar design pressure
 3/4" 600# 100 bar design pressure
 3/4" 1500# 250 bar design pressure
 3/4" 2500# 420 bar design pressure

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

Mounting holes

The bottom of the regulator has two mounting holes M6 with 8 mm thread and a C-C distance of 50 mm.

Design pressures

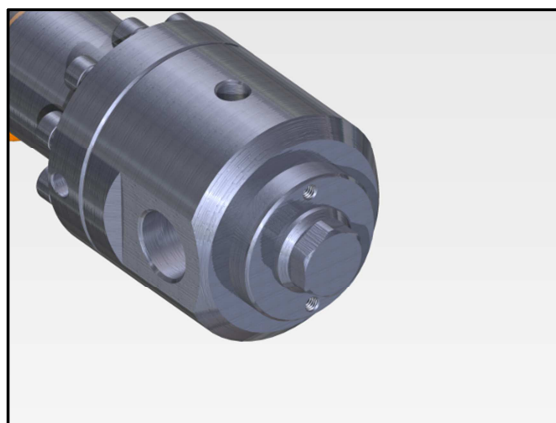
The regulator range consists of 3 design pressure ranges, where the design pressure applies for the inlet and outleside.

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 : GBF20S – 40D20 – SSPV

model	design pressure	connections	adjustable	material	seat	seals	options
GBF20S	20 : 20 bar	D : DIN EN 1092-1	3 : 0-3 bar	SS SS 316L	K kel-f (pctfe)	N nitrile NBR	G1 one extra gaugeport
	40 : 40 bar		8 : 0-8 bar				P Peek
	50 : 50 bar	A : ASME ASME B16.5	20 : 0-20 bar		E EPDM	L locking cap	
	100 : 100 bar		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					

All regulators are marked with a unique 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.