Springloaded Pressure Regulator

Model – GRF15S

Description

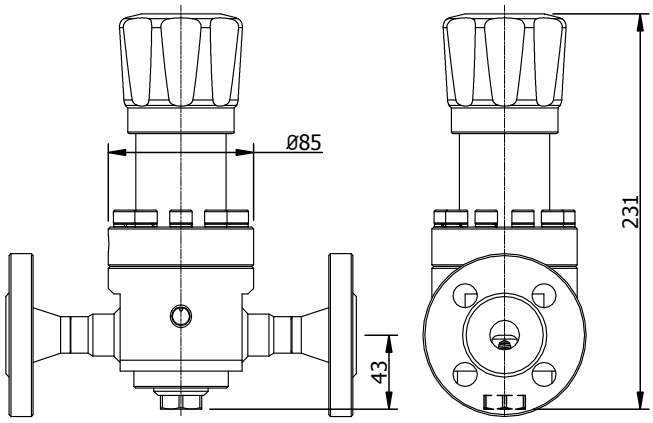
The GRF15S springloaded pressure regulator reduces the supply pressure on the inletside to a controlled pressure on the outletside.

Specifications

Inlet pressure	50, 250 or 420 bar
Adjustable	0-420 bar
Connections	DN15 flanges EN 1092-1 or 1/2" flanges ASME B16.5
Seatdiameter	9.5 mm
Cv / Kv	Cv 1.8 / Kv 1.5

Fluids

This 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, PEEK or rubber
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 inletpressure.

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 or an adjustment knob

Special options

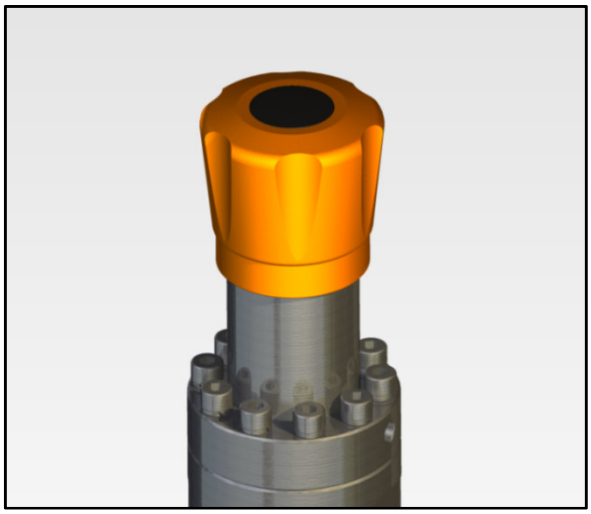
- other seal materials on request
- other body materials on request
- material according to NACE MR0175

Flow

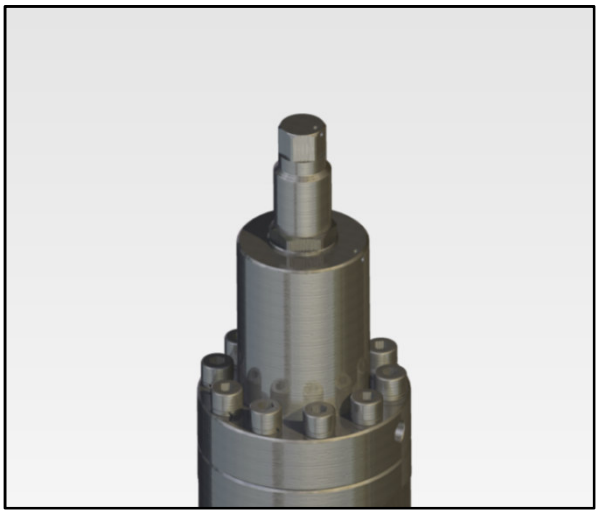
The regulator has good flow performance over the complete range of inlet and outlet pressures. Always ask Dutch Regulators for advice, if this regulator is the best choice for your application.

Adjusting the regulator

The regulator comes standard with a knob. The threadpiece below the knob is designed for frequent adjustment.



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



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Section view

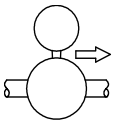
The section view gives an idea of the internals of the regulator.

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

Gaugeports

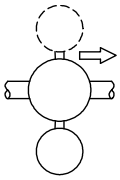
The regulator has standard one 1/4" NPT gaugeport to measure the controlled setpressure.
Option G1 and G2 are optional 1/4" NPT gaugeports, see for the position the pictures below.

On request it is possible to have other gaugeports.



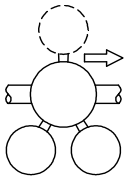
Standard

Outlet gaugeport



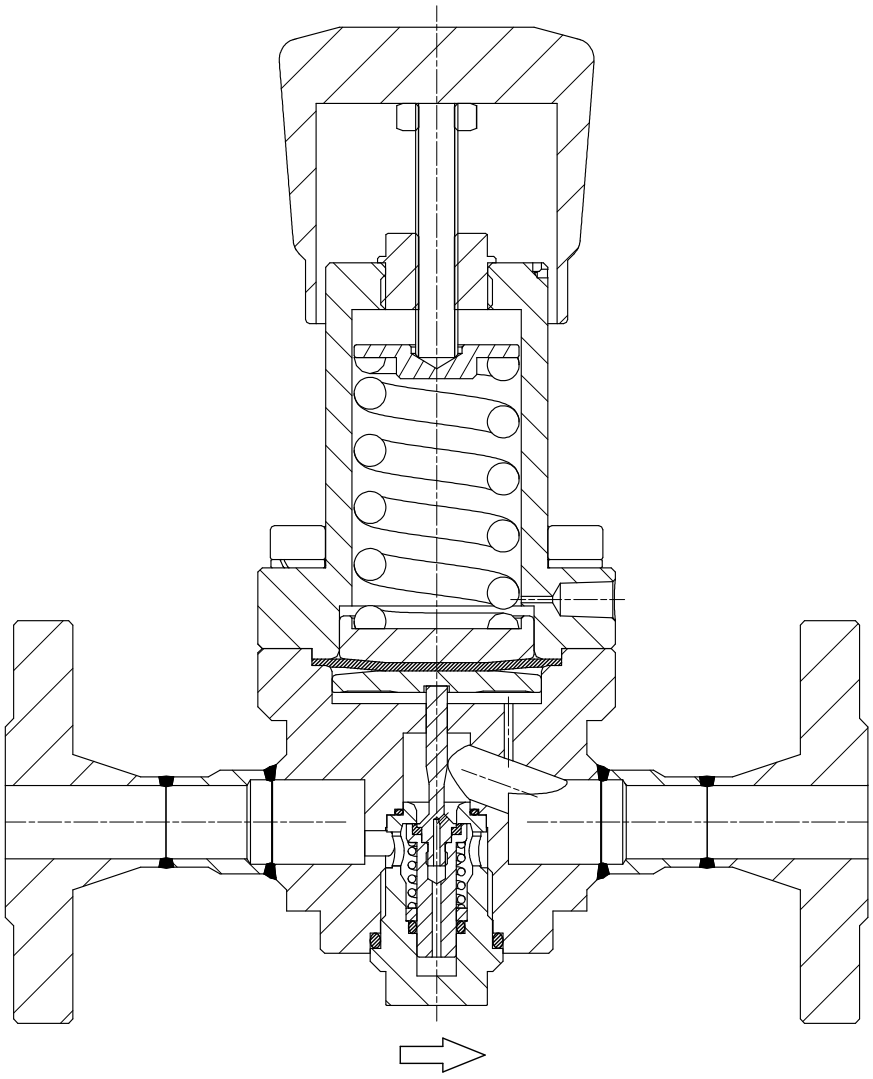
Option G1

Extra
Outlet gaugeport



Option G2

Extra
Inlet gaugeport
and
Outlet gaugeport



Section view of:
GRF15S-40D8-SSNN

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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

DN15 PN40	40 bar	design pressure

ASME – flanges according to ASME B16.5

1/2" 150#	20 bar	design pressure
1/2" 300#	50 bar	design pressure
1/2" 600#	100 bar	design pressure
1/2" 1500#	250 bar	design pressure
1/2" 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 45 mm.

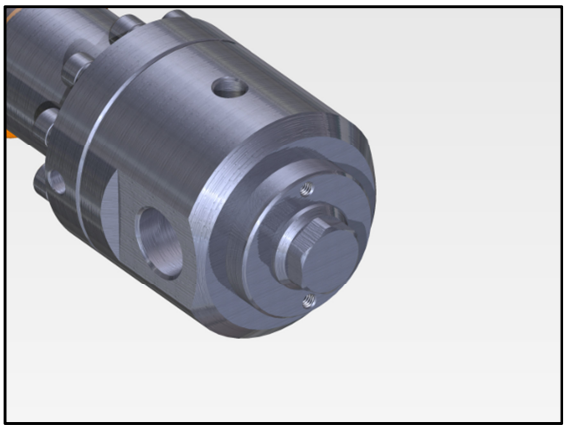
Design pressures

The regulator range consists of 3 design pressure ranges, where the design pressure applies for the inlet and outletside.
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 : GRF15S – 40D8 – SSNN - L

model	design pressure	connections	adjustable	material	seat	seals	options
GRF15S	**20** : 20 bar	**D** : DIN EN 1092-1	**3** : 0-3 bar	**SS** SS 316L	**N** nitrile NBR	**N** nitrile NBR	**G1** one extra gaugeport
	40 : 40 bar		**8** : 0-8 bar				
	50 : 50 bar	**A** : ASME B16.5	**20** : 0-20 bar		**V** viton FKM	**V** viton FKM	**G2** two extra gaugeports
	100 : 100 bar		**50** : 0-50 bar				
	250 : 250 bar		**100** : 0-100 bar		**E** EPDM	**E** EPDM	**L** locking cap
	420 : 420 bar	**S** : weld stubs	**250** : 0-250 bar		**K** kel-f (pctfe)		**xxx** codes for special option
			420 : 0-420 bar		**P** Peek		

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.