

Domeloaded Pressure Regulator

Model – GRF50D

Description

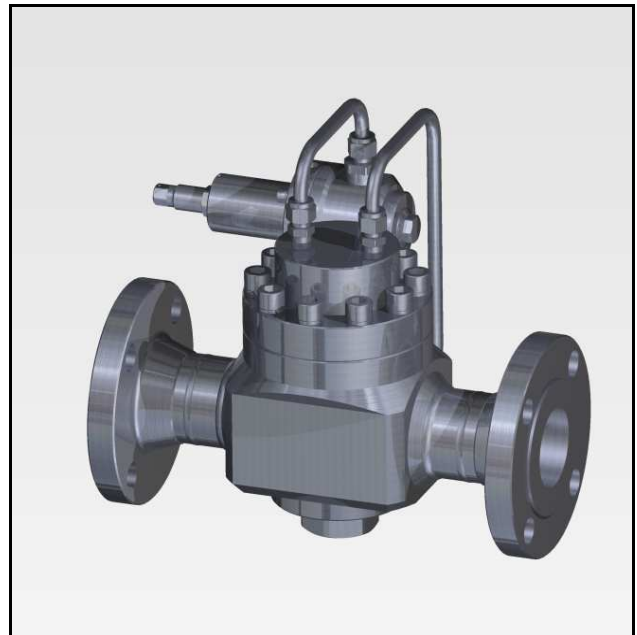
The GRF50D domeloaded pressure regulator reduces the supply pressure on the inlet side to a controlled pressure on the outlet side.

Specifications

Inlet pressure	50 or 280 bar
Adjustable	0-280 bar
Connections	DN50 flanges EN 1092-1 or 2" flanges ANSI B16.5
Seat diameter	28 mm
Cv / Kv	Cv 16 / Kv 13.7

Fluids

This pressure regulator is suitable for gases and liquids.



Materials

The regulator is made out of barstock stainless steel material.

Body	ss 316L
Dome	ss 316L
Valve	ss 316L
Seat	KEL-F, PEEK or rubber
Valve spring	ss 316
O-rings / diaphragm	NBR, FKM or EPDM

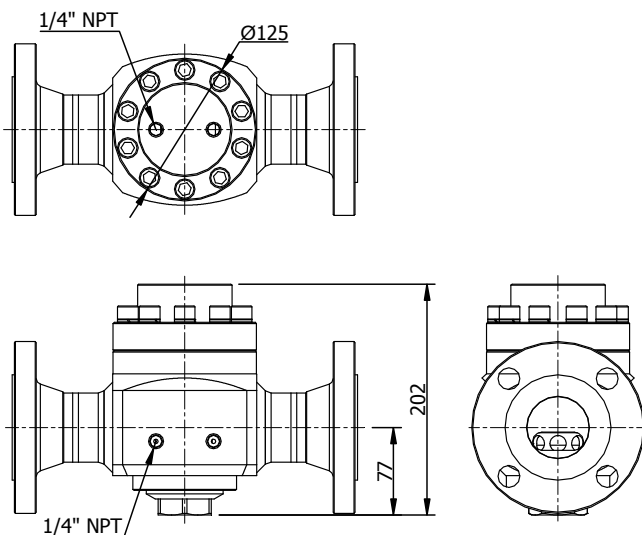
Other materials available on request.

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 cat I or II
- 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.

- all pressure ranges - 1:120

This value only applies for the regulator without a pilot regulator.

Adjusting the regulator

The regulator comes standard with two 1/4" NPT dome connections. The setpressure of the regulator equals to the pressure in the dome.



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

- pilot regulator
- pilot regulator with external feedback

Special options

- other seal materials on request
- other body materials on request

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.

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Section view

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

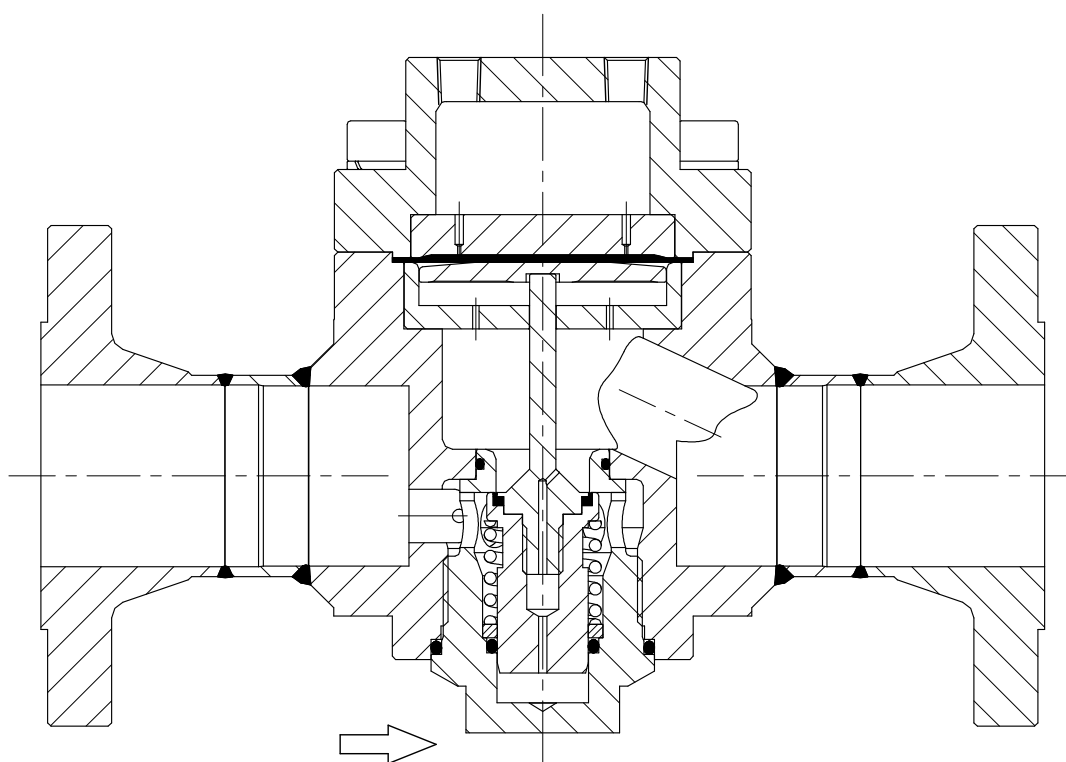
- diaphragm sensing from 0-280 bar outlet pressure
- rubber seated for design pressure below 50 bar
- plastic seated for design pressure above 50 bar

Gaugeports

The regulator has standard two 1/4" NPT gaugeports to measure the inlet and outlet pressure.

When the regulator is pilot operated, these gaugeports are used to mount the pilot regulator.

On request it is possible to have other gaugeports.



Section view of:
GRF50D-20A20-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

DN50 PN40 40 bar design pressure

ANSI – flanges according to ANSI B16.5

2" 150# 20 bar design pressure

2" 300# 50 bar design pressure

2" 600# 100 bar design pressure

2" 1500# 280 bar design pressure

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

Design pressures

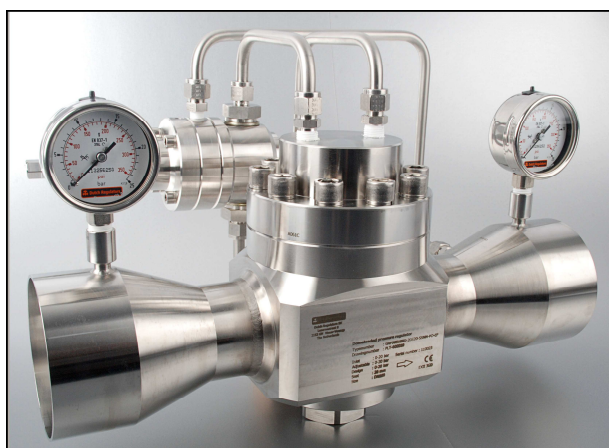
The regulator range consists of 2 design pressure ranges, where the design pressure applies for the inlet and outleside.

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
- 280 bar - Kel-f or PEEK

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



Typenumber explanation

Example : GRF50D – 50A20 – SSVV – PO

model	design pressure	connections	adjustable	material	seat	seals	options
GRF50D	20 : 20 bar	D : DIN EN 1092-1	X : 0-X bar range depending on the mounted pilot regulator	SS SS 316L	N nitrile NBR V viton FKM E EPDM K kel-f (pctfe) P Peek	N nitrile NBR V viton FKM E EPDM	PO pilot operated codes for xxx special option
	40 : 40 bar						
	50 : 50 bar	A : ANSI ANSI B16.5					
	100 : 100 bar						
280 : 280 bar	S : weld stubs						

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.