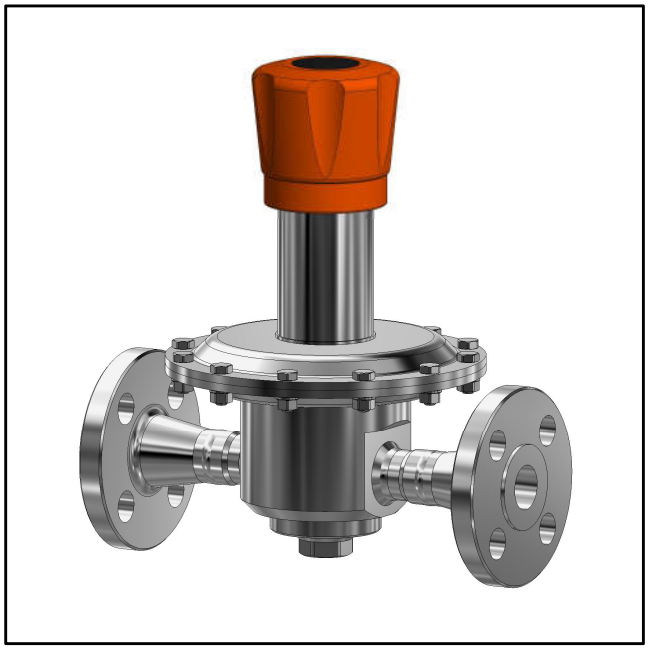
Springloaded Pressure Regulator

Model – GRF15S-16

Description

The GRF15S-16 springloaded pressure regulator reduces the supply pressure on the inletside to a controlled pressure on the outletside.

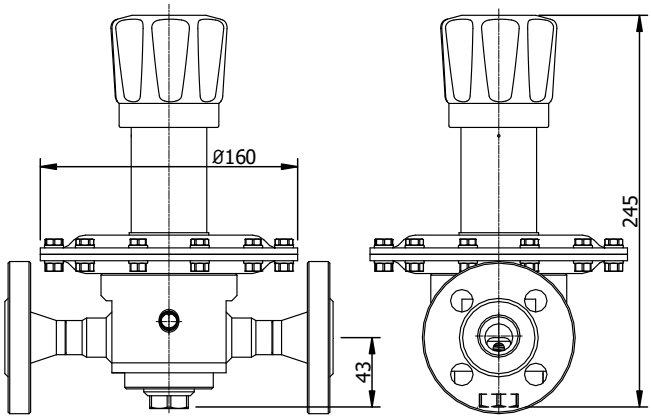


Specifications

Inlet pressure	16 bar
Adjustable	0-3 bar - 2 pressure ranges
Connections	DN15, DN20 or DN25 flanges according EN 1092-1 or 1/2", 3/4" or 1" flanges according ASME B16.5
Seatdiameter	9,5 mm
Cv / Kv	Cv 1.8 / Kv 1.5

Fluids

This pressure regulator is suitable for gases only.



Materials

The regulator is made out of barstock stainless steel material.

Body	ss 316L
Springhousing	ss 316L
Valve	ss 316L
Seat	NBR, FKM or EPDM
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.

Technical details

- all parts cleaned and degreased
- leak-tight seat design
- all regulators tested before delivery

Standards

- EN 12516 - design
- EN 12266-1 - testing
- PED 2014/68/EU - SEP (article 4, paragraph 3)
- ATEX 2014/34/EU - Ex II 2G

Springloaded Pressure Regulator

Model – GRF15S-16

Options

Many options are available. The most requested options are mentioned below.

Materials

Regulators can be produced in higher graded materials than stainless steel 316L.

NACE - MR 0175

All wetted parts of the regulators can be supplied according to NACE MR 0175, including Inconel X750 valvespring and a NACE report.

Spare parts

Spare parts kit is available for the regulator. Mention the serial number in case you need spare parts for existing regulators.

Dependency

Character of the regulator is "dependency".
The set-pressure will increase, when you have a decreasing inletpressure.

Dependency ratios are listed below.

- range 0-1 bar - 1:3000
- range 0-3 bar - 1:3000

The large diaphragm and balanced valve have a positive effect towards dependency.

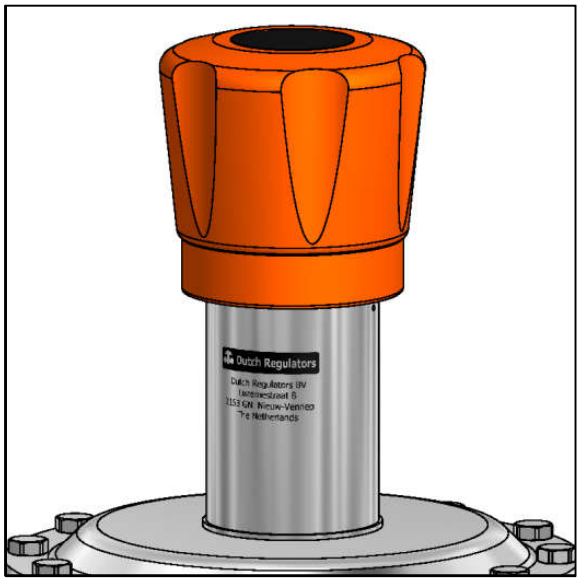
Flow

The regulator has good flow performance over the complete range. Ask 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.



Springloaded Pressure Regulator

Model – GRF15S-16

Internals

The internals of the regulator are important for the performance. The different internals are mentioned below.

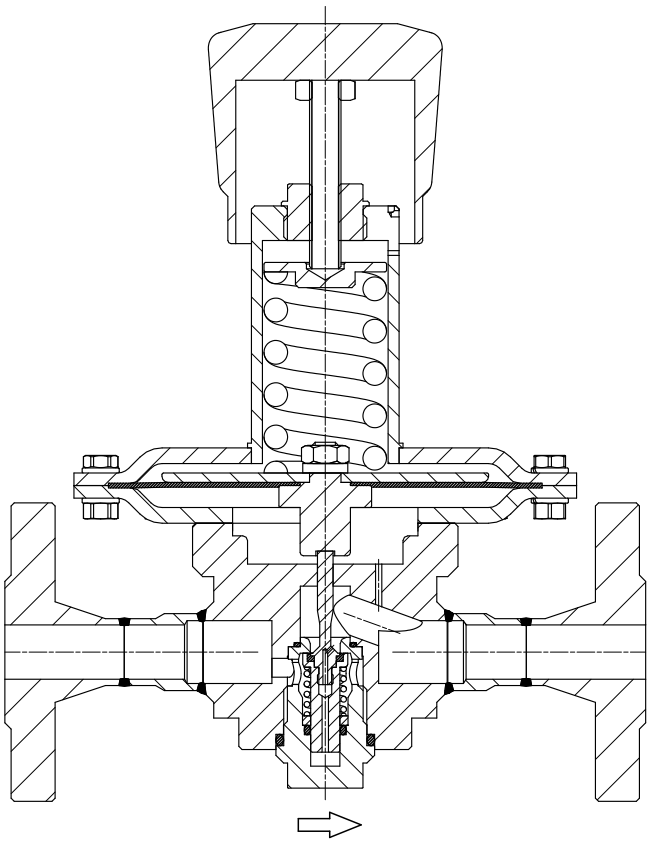
Diaphragm sensing
The model has a large diaphragm to handle pressures below 3 bar accurately.

Rubber seated
A rubber seat is less sensitive to dirt.

Valvespring and setspring
The valvespring gives high spring force to ensure seat-tightness.

The setspring is produced according to our high quality specifications. The low spring rate ensures good performance at high flow.

Section view

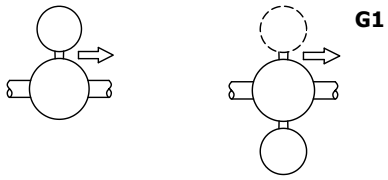


Section view of:
GRF15S-16D1-SSNN

Gaugeports

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

Additional 1/4" NPT gaugeport is available, see option G1 below.



Standard
Outlet gaugeport

Additional
Outlet gaugeport

Gauges

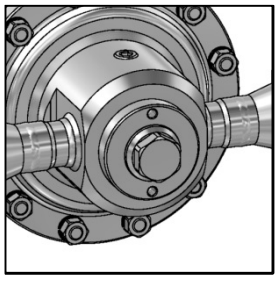
Regulators can be supplied with gauges.

Below ranges are available:
0-1 bar / 0-4 bar

- case diameter 63 mm
- internals ss 316
- bottom connection 1/4" NPT

Mounting

The regulator can be mounted in every position (horizontal / vertical).



The bottom of the regulator has two mounting holes M6 with 8 mm thread and a C-C distance of 45 mm.

For regulators installed outdoors, make sure that rain cannot enter the springhousing or mount it drainable.

Springloaded Pressure Regulator

Model – GRF15S-16

Connections

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

Model - flange size

GRF15S	DN15 or 1/2″
GRF15F20S	DN20 or 3/4″
GRF15F25S	DN25 or 1″

EN 1092-1 - flanges - design pressure

DN15 - DN20 - DN25	PN40	16	bar

ASME B16.5 - flanges - design pressure

1/2" - 3/4″ - 1″	150#	16	bar
1/2" - 3/4″ - 1″	300#	16	bar

Weld stub connections

Regulator can be supplied with weld-stubs.
They have the model name as below.

GRF15S15S	1/2″	weld stubs
GRF15S20S	3/4″	weld stubs
GRF15S25S	1″	weld stubs

Design pressure

The design pressure applies for inlet and outletside.

Temperature

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

NBR	seat / seals	- 35 / 130 °C
FKM	seat / seals	- 20 / 200 °C
EPDM	seat / seals	- 50 / 120 °C

Typenumber explanation

Example : GRF15S - 16D3 - SSNN

model	design pressure	connections	adjustable	material	seat	seals	options
GRF15S	**16** : 16 bar	**D** : EN 1092-1	**1** : 0-1 bar	**SS** SS 316L	**N** NBR nitrile	**N** NBR nitrile	**G1** one extra gaugeport
GRF15F20S		**A** : ASME B16.5	**3** : 0-3 bar		**V** FKM viton	**V** FKM viton	**G2** two extra gaugeports
GRF15F25S		**S** : weld stubs			**E** EPDM	**E** EPDM	**L** locking cap
							xx codes for special option

All regulators are marked with a typenumber, a drawingnumber and a unique serialnumber.
Dutch Regulators stores the exact configuration of the regulator in the serialnumber.