

PRF Series

GAS PRESSURE REGULATOR WITH INCORPORATED FILTER

PRODUCT HANDBOOK



DESCRIPTION

Spring-loaded regulator with inlet pressure compensation and zero shut-off. The outlet pressure is kept constant with changing gas flow as a function of the spring setting. The zero shut-off prevents the outlet pressure from increasing when there is no gas flow through the regulator.

APPLICATION

To regulate gas and air inlet pressure for gas burners, including mixed and combined systems and in industrial distribution systems.

Applicable types of fuel:

- manufactured gases (town gas)
- natural gases (group H - methane)
- liquefied petroleum gas (LPG)
- non-aggressive gases
- air

The gas pressure regulators comply with the requirements of EN88.

SPECIFICATION

Product range

Model PRF (pipe sizes ½" up to 1") with filter.

Dimensions

See dimensional drawings and table on page 2 Table

Pipe size

1/2" up to 1" inlet and outlet internal pipe thread according ISO 7-1.

Capacity

See Capacity curves page 4.

Maximum working pressure

1000 mbar

NOTE: minimum inlet pressure range:

Desired outlet pressure $P_2 + 2.5$ mbar up to 1000 mbar.

Outlet pressure range

10 to 150 mbar

The appropriate outlet pressure range is obtained by the use of different springs.

NOTE: The regulator are supplied standard with a Green spring (10-30mbar)- see „Spring setting range Table

Closing pressure

Conform EN 88 specification (i.e. zero shut-off)

Torsion and bending stress

Pipe connections meet group 2, according to EN 88 requirements.

Set point accuracy

According to EN88, class A group 2

Max. allowed pressure

Up to 5 bar without body damages

Ambient temperature range

-15 °C....+60 °C

Sealing elements

Hydrocarbon resistant NBR rubber

Body material

Aluminum alloy die cast ADC12

Internal parts

302/PA66

Filtering grade

≤50 µm

INSTALLATION

Important

1. Read these instructions carefully. Failure to follow the instructions could damage the product or cause a hazardous condition.
2. The installation has to be carried out by qualified personnel only.
3. Carry out a thorough checkout when installation is completed.



Warning

- Turn off gas supply before installation.
- Do not remove the seal over regulator inlet and outlet, until ready to connect piping.
- Do not remove the perforated diaphragm breather cap (4) and do not obstruct the hole.
- The regulator must be installed so that the arrow on the regulator points in the direction of the gas flow

Mounting position

To ensure perfect regulator operation, regulator should be assembled horizontally. They can however be installed in different positions up to an angle of 90°.

Mounting location

Contact between the regulator and walls or floors is not permitted. Maintain a distance of at least 50 mm. the distance between the bottom and the ground must be at least 400 mm, to facilitate filter cleaning and inspection.

Main gas connection threaded regulators

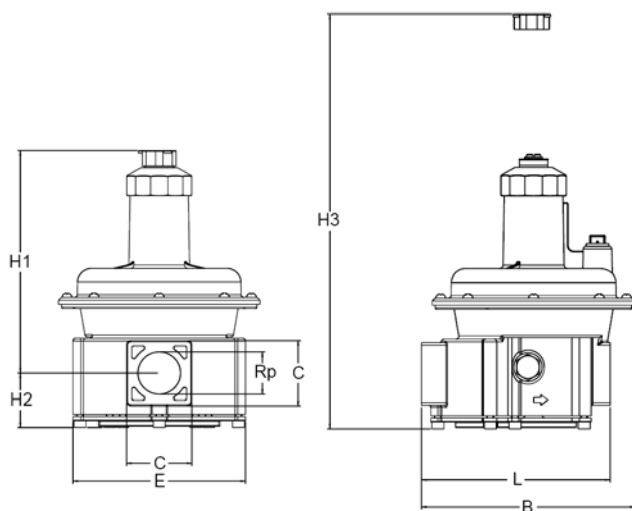
- Take care that dirt cannot enter the gas regulator during handling.
- Ensure the gas flow in the same direction as the arrow on the housing of the gas regulator
- Use a sound taper fitting with thread according to ISO 7-1 or a piece of new, properly reamed pipe, free from swarf.
- Do not thread or fasten the pipe or pipe fitting too far. Otherwise regulator distortion and malfunction could result.
- Apply a moderate amount of good quality thread compound to the pipe or fitting only, leaving the two end threads bare.
- In order to tighten the pipe in the regulator, do not use the sleeve of the upper cover as a lever but use a suitable wrench operating on the wrench bosses.



Warning

Tightness test after installation

- Spray all pipe connections and gaskets with a good quality gas leak detection spray.
- Start the appliance and check for bubbles. If a leak is found in a pipe connection, should reassemble or replace the gas pressure regulator.



Dimensions

Type	Screw Connection (inch)	Max. Inlet Pressure	Dimensions (mm)							Weight
			RP	mbar	L	B	H1	H2	H3	
PRF015	1/2	1000	104	120.2	117.8	26	212	86	35	0.64
PRF020	3/4	1000	133	150.7	160.5	39.3	303	122.5	45	1.26
PRF025	1	1000	133	150.7	160.5	39.3	303	122.5	45	1.23

ADJUSTMENTS



Caution

- Adjustments must be made by qualified personnel only!

Outlet pressure adjustment

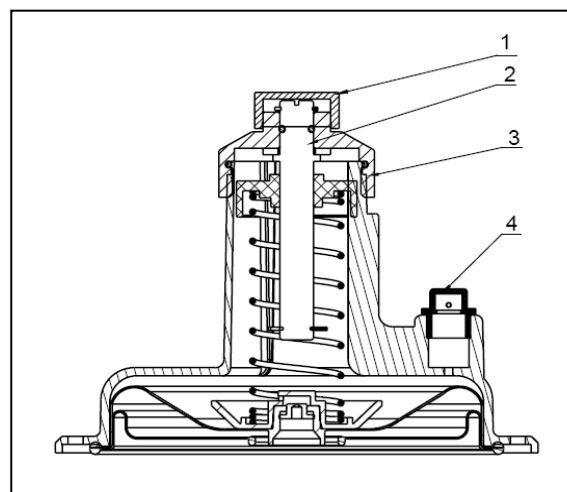
1. Remove the upper cap (1).
2. To obtain the required outlet pressure value, turn the set screw (2). Turn this set screw clockwise to increase the outlet pressure, counter-clockwise to decrease it.
3. Clearly mark the adjusted value of the outlet pressure.
4. Replace the upper-cap (1).

Replacing spring

1. Remove the upper-cap (1) of the pressure regulator.
2. Fully unscrew the ring nut (3)
3. Remove old and replace new spring.
4. Screw the ring-nut (3) back in.
5. Adjust the required outlet pressure by proceeding with step 1 to 4 of "Outlet pressure adjustment" section on this page.

Final checkout of the installation

Set the appliance in operation after any adjustment and observe several complete cycles to ensure that all burner components function correctly.



MAINTENANCE

The regulators are completely maintenance-free. In the event of a breakdown, a general overhaul and factory testing is recommended.

Filter maintenance

1. Remove the screws at the bottom of the gas regulator and remove the cover.
2. Remove the filter cartridge and clean the filter housing thoroughly.
3. Replace the old filter element with the new one.
4. If the seal is deformed or damaged, please replace the filter seal.
5. Reassemble the cover, ensuring that the guides inside the cover be aligned with the filter cartridge.
6. Tighten the screws, and check for gas leak by performing a tightness test.

REPLACEMENT

Regulator	Balancing Diaphragm	Filter Cartridge	Filter Seal
PRF015	50050844-001	50050846-001	50050847-001
PRF020	50050852-001	50050854-001	50050855-001
PRF025			

Spring Setting range: P₂ mbar (outlet pressure)

Regulator	Spring setting range				
	Green (standard) 10-30mbar	Cyan 25-55mbar	Yellow 30-70mbar	Blue 60-110mbar	Black 100-150mbar
PRF015	50050849-001	50050849-002	50050849-003	50050849-004	50050849-005
PRF020	50050856-001	50050856-002	50050856-003	50050856-004	50050856-005
PRF025	50050856-001	50050856-002	50050856-003	50050856-004	50050856-005



Capacity curves with regulators in mechanically open position (capacity m^3/h natural gas at 1013 mbar, dry, 15° C)

