



# REXI-HC

English

## GAS REGULATOR Medium pressure RG series



MADE IN ITALY



### GAS REGULATOR

RGD025-HC/D-LP-RV



- 1 GAS REGULATOR:**  
RGD = Flanged connection
- 2 DIMENSIONS:**  
025 = 1"  
040 = 1 1/2"  
050 = 2"
- 3 ACTION TYPE**  
- HC = Balanced act  
- HC/D = Direct act
- 4 PRESSURE:**  
- LP = Low pressure  
- MP = Medium pressure  
- HP = Reduced head
- 5 - RV:**  
Relief Valve

### GENERAL DESCRIPTION

RG series pressure regulators are direct action devices, with a balanced shutter, for low and medium pressures.

They are suitable for non corrosive gases. The balanced shutter provides a high flow rate coefficient, high regulation precision (even at high flow rates), a lock-up zone, and a relatively low lock-up pressure, with no internal losses at zero flow rate, and short response times.

The constancy and precision of the regulated pressure, even when there are significant fluctuations in the pressure and/or flow rate upstream and downstream, make the RG series regulator particularly suitable for energy distribution systems in civil and industrial settings. The basic version of the RG series regulator is made in accordance with European Standard EN 334, as a Fail to Open regulator.

A vent and discharge pipe is not indispensable.

### INSTALLATION

Read the instruction leaflet carefully before use.

This device must be installed in accordance with current laws, and at least in conformity to the EN12186 and EN12279 standards.

Installation in accordance with these standards reduces the formation of potentially explosive atmospheres and risk of fire to a minimum.

The RG series GAS REGULATOR must be installed in a horizontal position, at an angle of not more than 90° as shown in figure 1.

It must be located adjacent to the regulating devices, and preferably outside the space in which the user is housed.

RG model gas regulators do not have internal pressure limiting devices, and so they must be installed making sure that the operating pressure never exceeds the maximum admissible pressure (PS).

Where required, the installer is responsible for installing the relevant pressure limiting devices, and related vent systems.

**N.B.** Install the REGULATOR where it is protected against the weather.

If the user does not call for a gas flow, the shutter closes.

The pressure between the user and the GAS REGULATOR can increase by up to 20% compared to the pressure setting (Pd). This phenomenon is called lock-up.

### COMMISSIONING

Commissioning must be done by technically qualified personnel.

The action zone must be marked put using specific signs, and UN-authorized personnel must be kept away.

Assess any risks posed by possible discharges of harmful and/or inflammable gases into the atmosphere, and proceed as follows:

1 • Before installing / commissioning, or maintenance, make sure the gas supply is closed upstream.

2 • Check that there is sufficient space between the pipes to insert the gas regulator, and that the pipes have not been damaged. Make sure that the feed and delivery pipes are at the same level, and are able to support the weight of the gas regulator.

3 • The RG series GAS REGULATOR must be installed with the arrows pressed into the regulator's body pointing in the direction in which the gas flows.

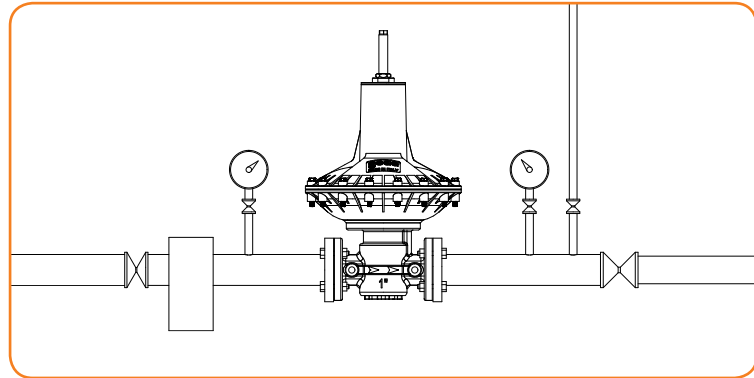
4 • Make sure there are no foreign bodies or debris inside the regulator or the piping.

5 • Check that the line pressure does not exceed the declared maximum pressure for the GAS REGULATOR.

6 • Check that there are no leaks in the plant.

The RG series GAS REGULATOR does not require any safety device to allow for any feed pressure that exceeds the max pressure it can convey.

This figure shows an example of standard use of the gas regulator.



### POSITIONING

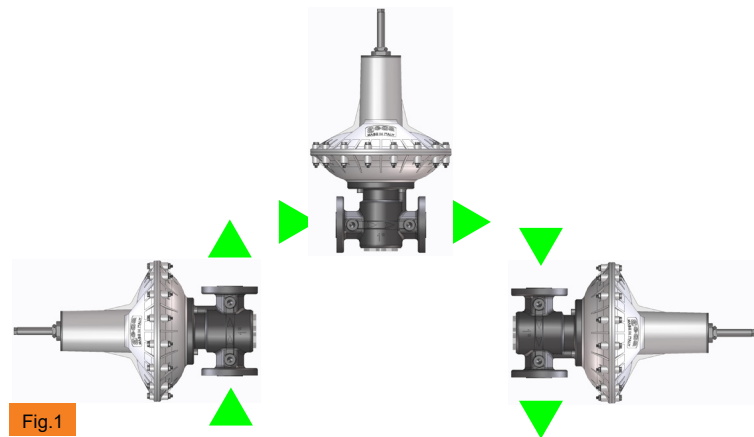


Fig.1

### MARKINGS

Depending on the model, the RG series GAS REGULATORS are marked, indicating their technical characteristics, as shown on the label below:

|                        |                      |
|------------------------|----------------------|
| <b>RGD025-HC-MP-RV</b> |                      |
| Body: 1"-1"            | Relief: YES          |
| Pumax:20bar            | Pd: 60÷500mbar       |
| PS:20bar               | AC:10                |
| bpu:20-0,5bar          | SG:20                |
| Wds:100÷180mbar        | Tamb.: -20°C.. +60°C |
| S/N: 2133302           |                      |
|                        |                      |

### PRESSURE CALIBRATION

To release the spring-loaded presser, unscrew the upper cap (2) Fig.2.

The outlet pressure is regulated by rotating the spring-loaded presser (1) Fig. 2. Rotate the spring-loaded presser clockwise to increase the pressure, or anti-clockwise to reduce it.

having completed regulation, put the upper cap (2) back in place.

The discharge pressure is regulated by rotating the spring-loaded presser (4). Adjust the spring so that it is activated by pressures greater than that set using the calibration spring.

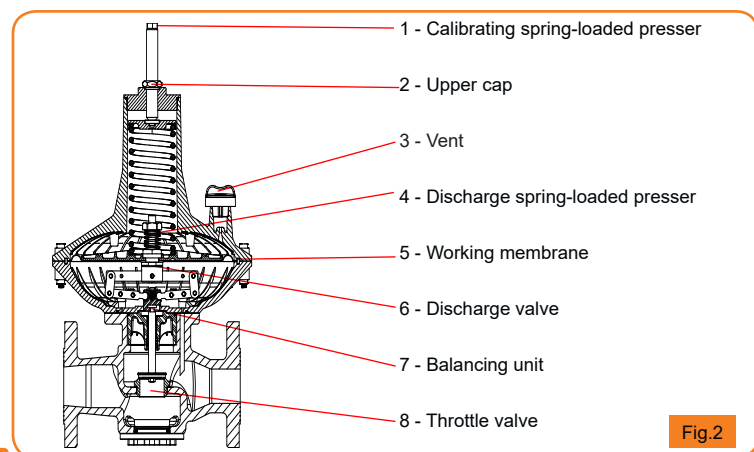


Fig.2

## PLANT CONNECTION

RG series GAS REGULATORS are supplied with:

- Internal impulse socket.
- Internal and external impulse socket.
- External impulse socket.

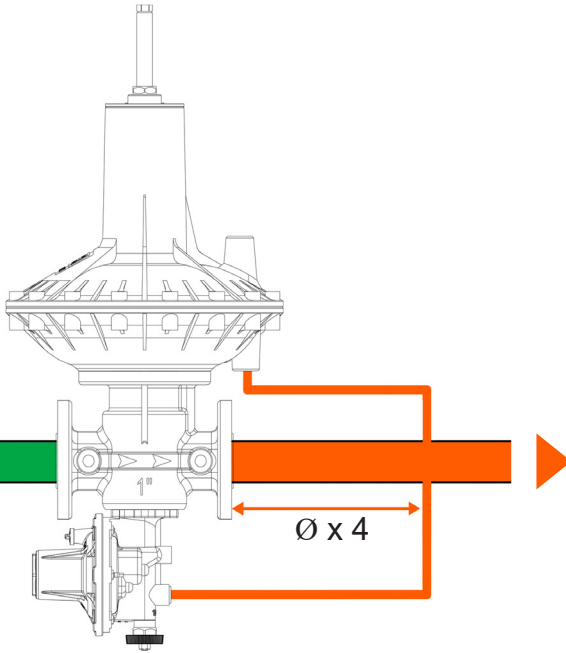
The connections between the GAS REGULATOR and the piping must be formed using copper or stainless steel piping, with an internal diameter of at least 8mm (Fig.3).

The speed of the gas leaving the regulator, must not exceed the following values:

$$V_{\max} = 25 \text{ m/s for } 1,5 < P_d < 5 \text{ bar}$$

$$V_{\max} = 20 \text{ m/s for } 0,5 < P_d < +1,5 \text{ bar}$$

$$V_{\max} = 15 \text{ m/s for } P_d \leq 0,5 \text{ bar}$$



**WARNING:** The external pressure sockets must be connected at a distance greater than or equal to 4 times the DN ( $\varnothing$ ) of the discharge pipe.

Fig. 3

Install the RG series GAS REGULATORS with the arrow on the body pointing in the same direction as the gas flow.

Apply the requirements laid down by the EN 12186 or EN 12279 standards, of the regulator is installed in gas "pressure reducing stations".

Make sure that any gas that escapes via the vent sockets, is conveyed in accordance with the EN 12186 or EN 12279 standards.

Install the pressure socket pipes, making sure that the incline on the discharge piping is between 5 and 10%.

Use the gas regulator within the limits indicated on its data plate.

## MAINTENANCE

RG model GAS REGULATORS do not require any specific maintenance.

Maintenance must be done by technically qualified personnel.

If necessary, before doing anything with the RG model GAS REGULATOR, make sure the gas supply has been shut off.

Should a fault occur, we recommend a service and related testing in the factory.

These tasks must be done in accordance with current regulations in this regard. Before doing anything, make sure the regulator is not pressurised at the intake or outlet.

Carry out maintenance tasks that are suitable for the type of gas conveyed (humidity, impurities, corrosive substances, etc.), and the filtration efficacy.

We recommend preventive and routine maintenance, based on the quality of the gas conveyed, the quality / reliability of the plant, and the cleanliness of the pipes upstream of the regulator.

For greater safety, replace all the rubber elements.

N.B. Any warranties and responsibility lapses if pirate spare parts are used.

Depressurisation must be done, making sure the vents are discharged in a safe area. We recommend maintaining a fluid speed of less than 5 m/sec, in order to avoid moving any debris inside the plant.

We recommend lubricating all o-rings and sliding mechanical parts before refitting them (using silicone grease).

Check the outside of the equipment for any leaks, before putting it back into service. Also check the internal seal on the blocking devices and the monitors used as safety devices, to ensure adequate pressure to guarantee the internal seal at the maximum operating pressure laid down in accordance with the PED directive.

These checks must conform to the national regulations in force.

## DECOMMISSIONING

To "decommission" RG model gas regulators, proceed as follows:

- Unscrew the "**Upper cap**".
- Unscrew the "**Calibrating spring-loaded presser**".
- Replace the "**Spring**" with the spacer (optional).
- Tighten the "**Calibration spring-loaded presser**" fully and put the "**Upper cap**" back in position.



# REXI BLOCK Slam Shut Valve

English



SHUT - OFF

MADE IN ITALY



## SSV025-LP-OPSO

- 1** DIMENSIONS:  
025 = 1" - 1"  
02540 = 1" - 1" 1/2  
040 = 1" 1/2 - 1" 1/2  
050 = 2" - 2"  
D40 = DN40  
D50 = DN50
- 2** PRESSURE:  
- LP = Low pressure  
- MP = Medium pressure  
- HP = Reduced head
- 3** ACTIVATION TYPE:  
UPSO: 6mbar-3500mbar  
OPSO: 30mbar-6000mbar

### GENERAL DESCRIPTION

RG model GAS REGULATORS can be fitted with an SSV model shut-off device that acts if a fault occurs.

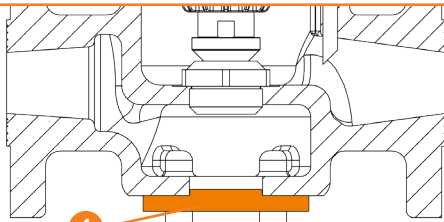
When the plant pressure reaches the value set, the SSV shut-off device uses the OPSO (Over Pressure Shut Off) and UPSO (Under Pressure Shut Off) springs to interrupt the gas flow, making the system safe. Once the problem has been checked and eliminated, the valve must be reset manually.

### INSTALLATION

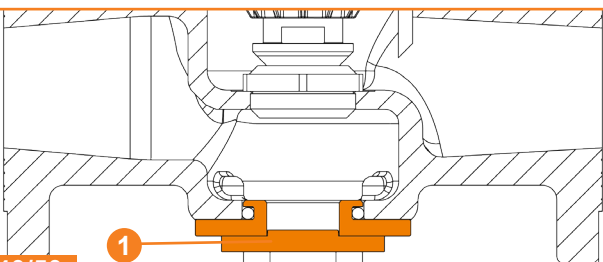
Read the instruction leaflet carefully before use.  
This device must be installed in accordance with current laws, and at least in conformity to the EN12186 and EN12279 standards.  
Installation in accordance with these standards reduces the formation of potentially explosive atmospheres and risk of fire to a minimum.

Then proceed as follows:

- 1** - Replace the regulator's bottom cap with the SSV shut-off valve.

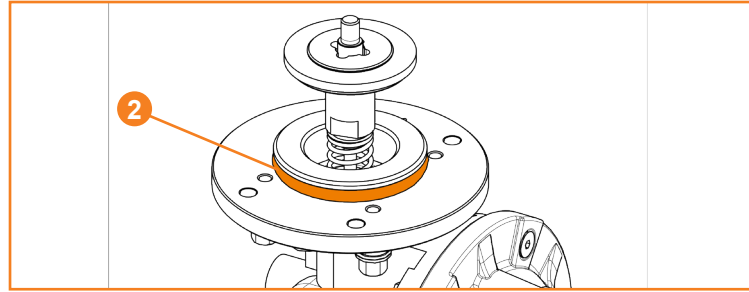
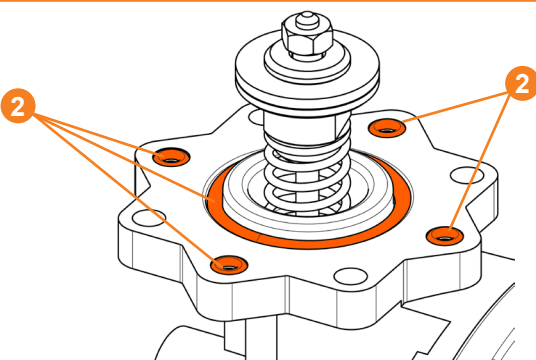


DN25

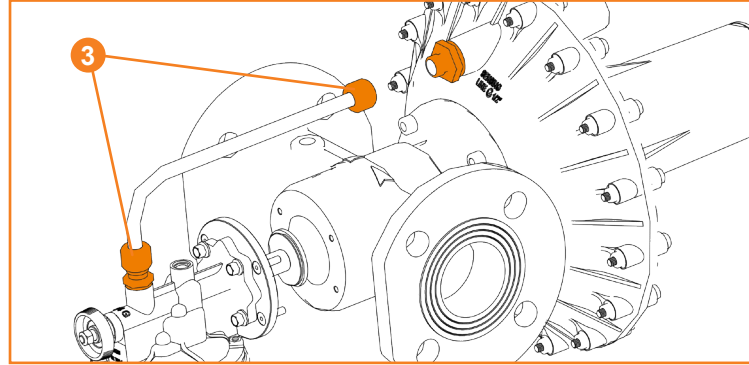


DN40/50

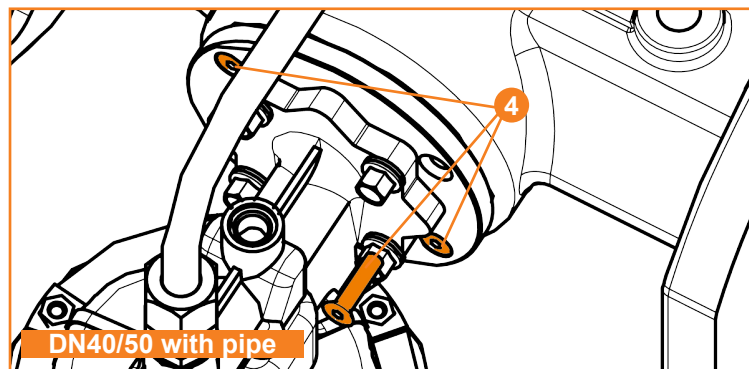
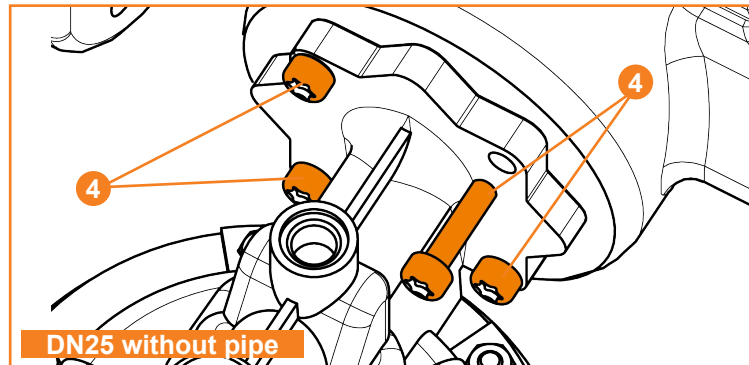
- 2** - Make sure that ALL the gaskets are positioned correctly.



- 3** - Install the external pipe to make the SSV feel the internal pressure of the regulator or remove it to free the installation for a different piping to feel the pressure at an external point.



- 4** - Fix the SSV shut-off valve using the cap screws.



## PRESSURE CALIBRATION

Unscrew the knob **8** to open the shutter, **1** and pull to activate the SSV shut-off valve.

The shutter is closed when the rod **9** is retracted into the shut-off valve.

Once the valve is activated, make sure the knob is tightened again to allow the valve to close again if necessary.

To access the spring-loaded presser, unscrew the upper cap **5**.

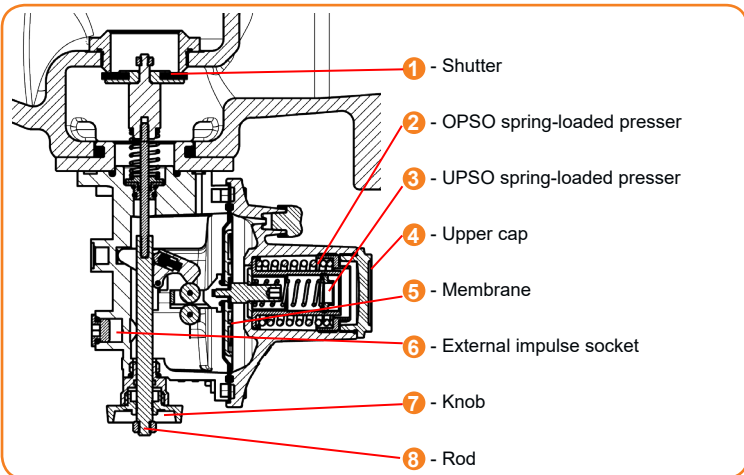
The activation pressure is adjusted by rotating the calibrating spring-loaded presser for the OPSO **3** and UPSO **4** springs.

Rotate the spring-loaded presser clockwise to increase the activation pressure, or anti-clockwise to reduce it.

Regulate by connecting a controlled auxiliary pressure downstream.

Having completed regulation, put the upper cap back in place **5**.

**WARNING: The SSV shut-off valve cannot work if the knob **8** is not tightened again.**



## SSV MARKINGS

Depending on the model, the SSV model shut-off devices are marked, indicating their technical characteristics, as shown on the label below:

### SSV-LP/MP-UPSO/OPSO

UPSO: 6÷60 mbar  
 OPSO: 50÷180 mbar  
 Tamb.: -20°C...+60°C  
 S/N: 21333402

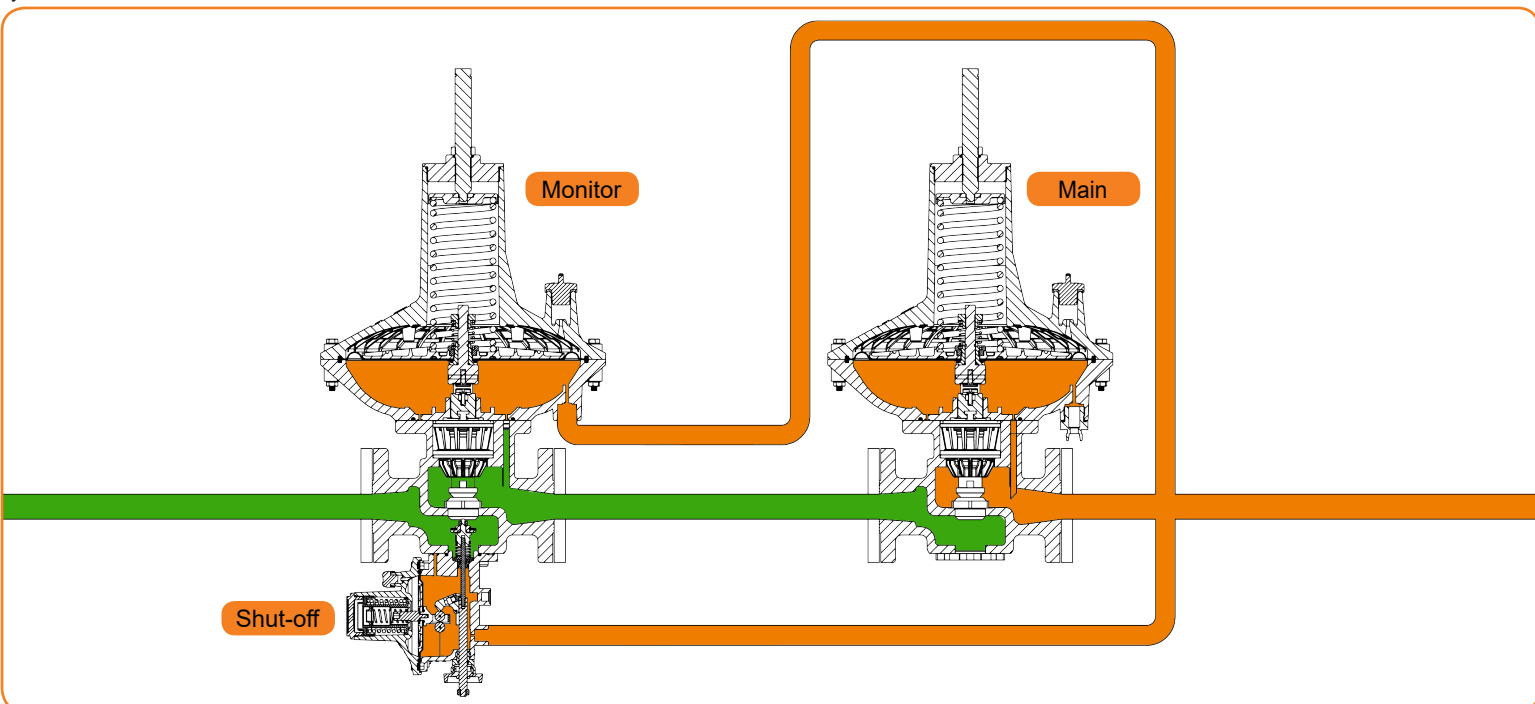


## MONITOR

The Monitor is a Gas Regulator, used as a safety system.

It is installed upstream of the main regulator so that, if a fault occurs, it intervenes, regulating the pressure in place of the latter.

The image below shows an example of a plant in a line on which a monitor is installed that has a built-in shut-off connected via external sockets, as a safety system.



## REGULATOR SPRING 20 bar

| LP VERSION - |            | mbar   |
|--------------|------------|--------|
| SPN-RG-HC    | NEUTRAL    | 5÷13   |
| SPY-RG-HC    | YELLOW     | 10÷18  |
| SPG-RG-HC    | GREEN      | 15÷30  |
| SPLB-RG-HC   | LIGHT BLUE | 25÷50  |
| SPW-RG-HC    | WHITE      | 40÷75  |
| SPOR-RG-HC   | ORANGE     | 60÷120 |

| MP VERSION - |       | mbar    |
|--------------|-------|---------|
| SPB-RG-HC    | BLUE  | 100÷170 |
| SPR-RG-HC    | RED   | 145÷270 |
| SPBK-RG-HC   | BLACK | 230÷350 |

| HP VERSION -  |            | mbar      |
|---------------|------------|-----------|
| SPW-RG-HC-HP  | WHITE      | 280÷720   |
| SPG-RG-HC-HP  | GREEN      | 590÷1000  |
| SPLB-RG-HC-HP | LIGHT BLUE | 840÷1250  |
| SPP-RG-HC-HP  | ORANGE     | 1050÷2300 |
| SPPU-RG-HC-HP | PURPLE     | 2000÷4500 |

## SHUT-OFF SPRINGS - SSV 20 bar

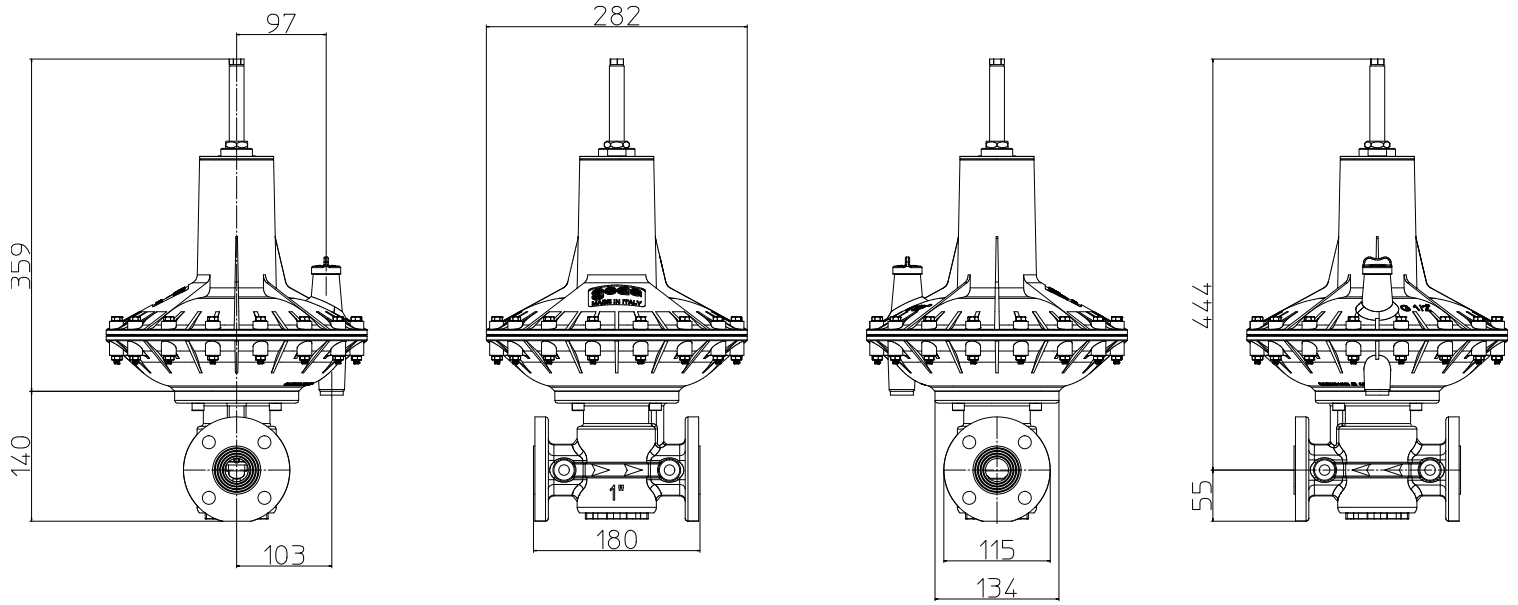
### OPSO

| LP VERSION - |           | mbar      |
|--------------|-----------|-----------|
| RED          | SPR-OPSO  | 30÷100    |
| LIGHT BLUE   | SPLB-OPSO | 80÷350    |
| MP VERSION - |           | mbar      |
| LIGHT BLUE   | SPLB-OPSO | 80÷350    |
| GREEN        | SPG-OPSO  | 150÷500   |
| HP VERSION - |           | mbar      |
| GREEN        | SPG-OPSO  | 200÷850   |
| BLUE         | SPB-OPSO  | 650÷1200  |
| YELLOW       | SPY-OPSO  | 1000÷1800 |
| PURPLE       | SPPU-OPSO | 1600÷3000 |
| WHITE        | SPW-OPSO  | 2200÷4000 |
| BLACK        | SPBK-OPSO | 3500÷6000 |

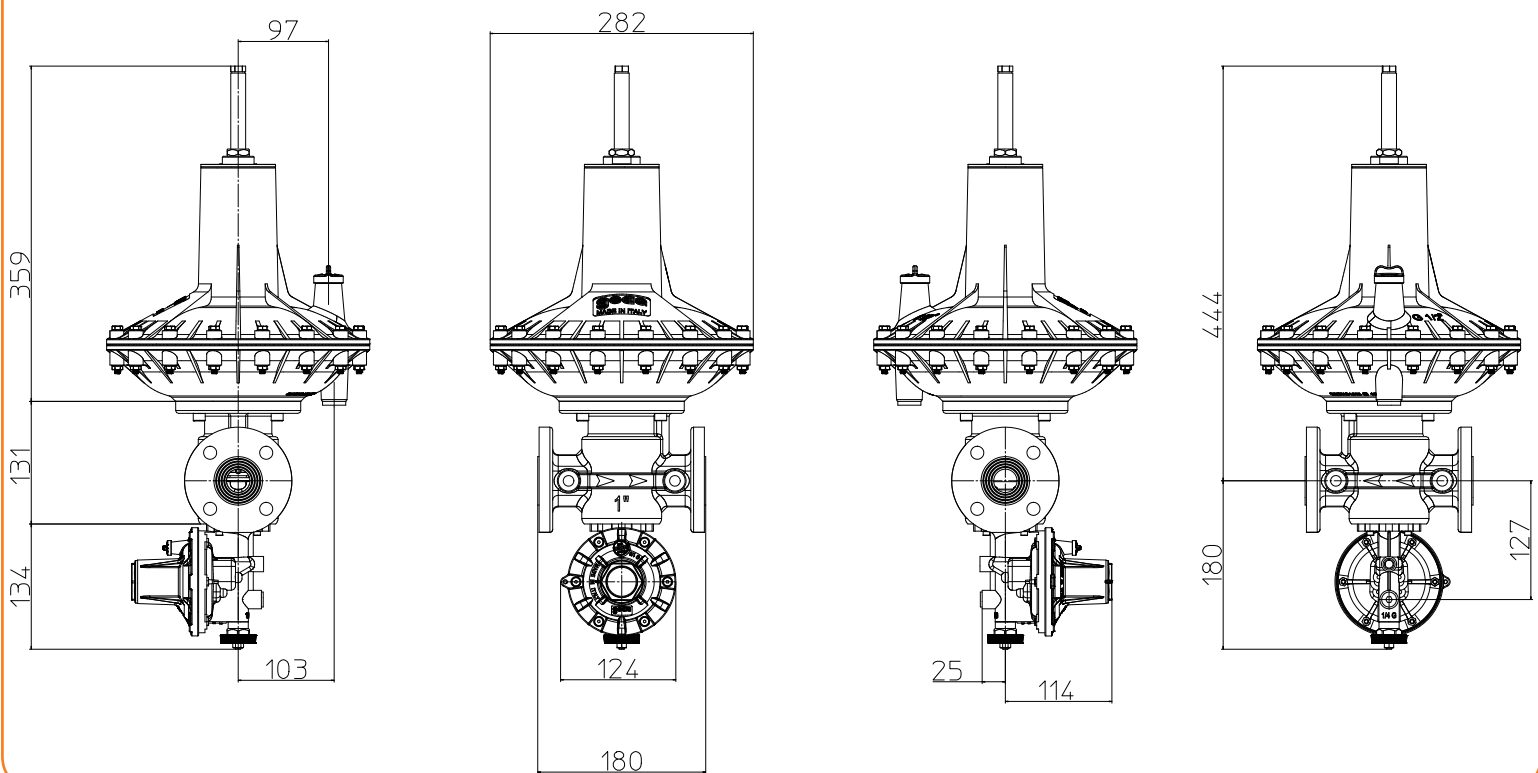
### UPSO

| LP VERSION - |           | mbar      |
|--------------|-----------|-----------|
| LIGHT BLUE   | SPLB-UPSO | 6÷60      |
| MP VERSION - |           | mbar      |
| 6÷60         | SPLB-UPSO | 6÷60      |
| RED          | SPR-UPSO  | 60÷500    |
| HP VERSION - |           | mbar      |
| RED          | SPR-UPSO  | 60÷500    |
| BLACK        | SPBK-UPSO | 500÷1000  |
| YELLOW       | SPY-UPSO  | 1000÷2000 |
| BLUE         | SPB-UPSO  | 2000÷3500 |

GAS REGULATOR 1"

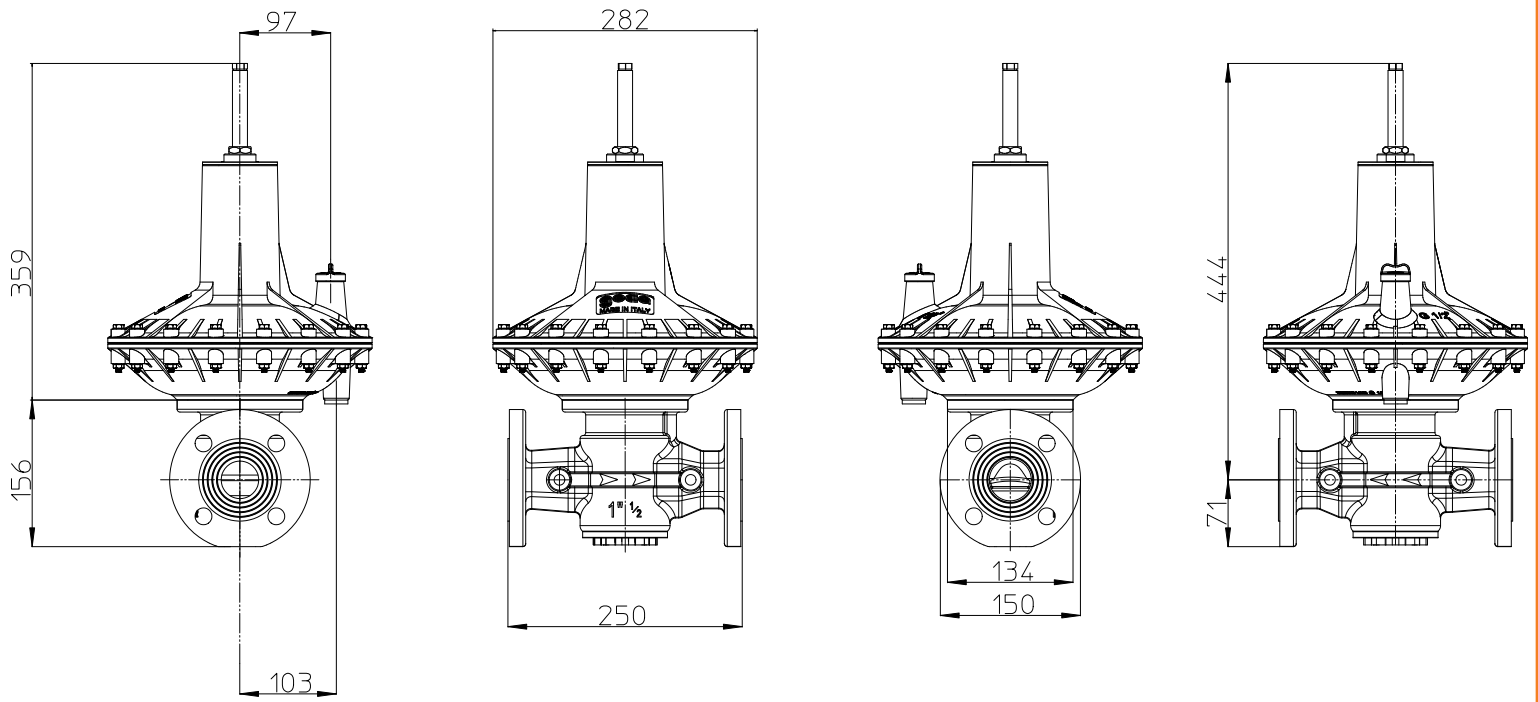


GAS REGULATOR 1" + SSV

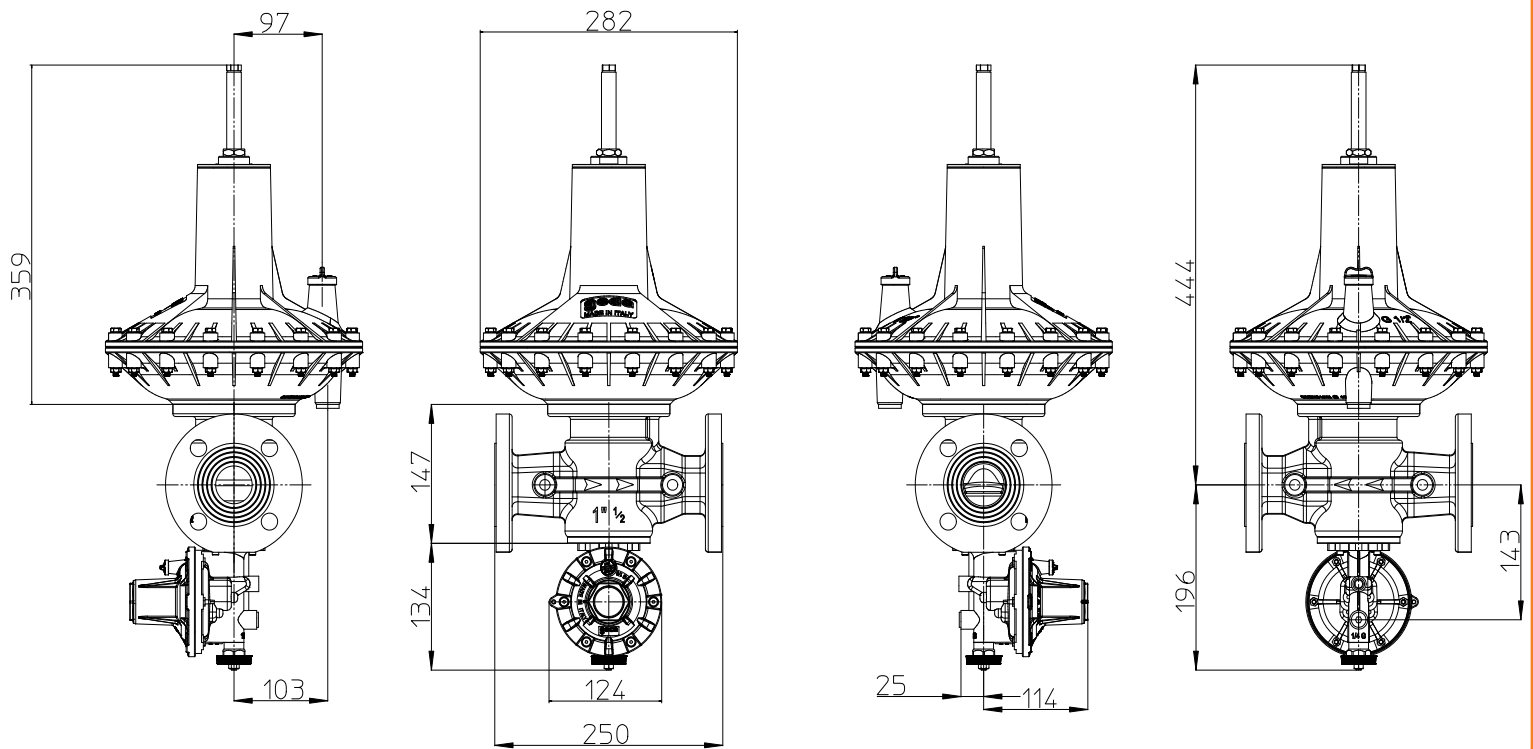




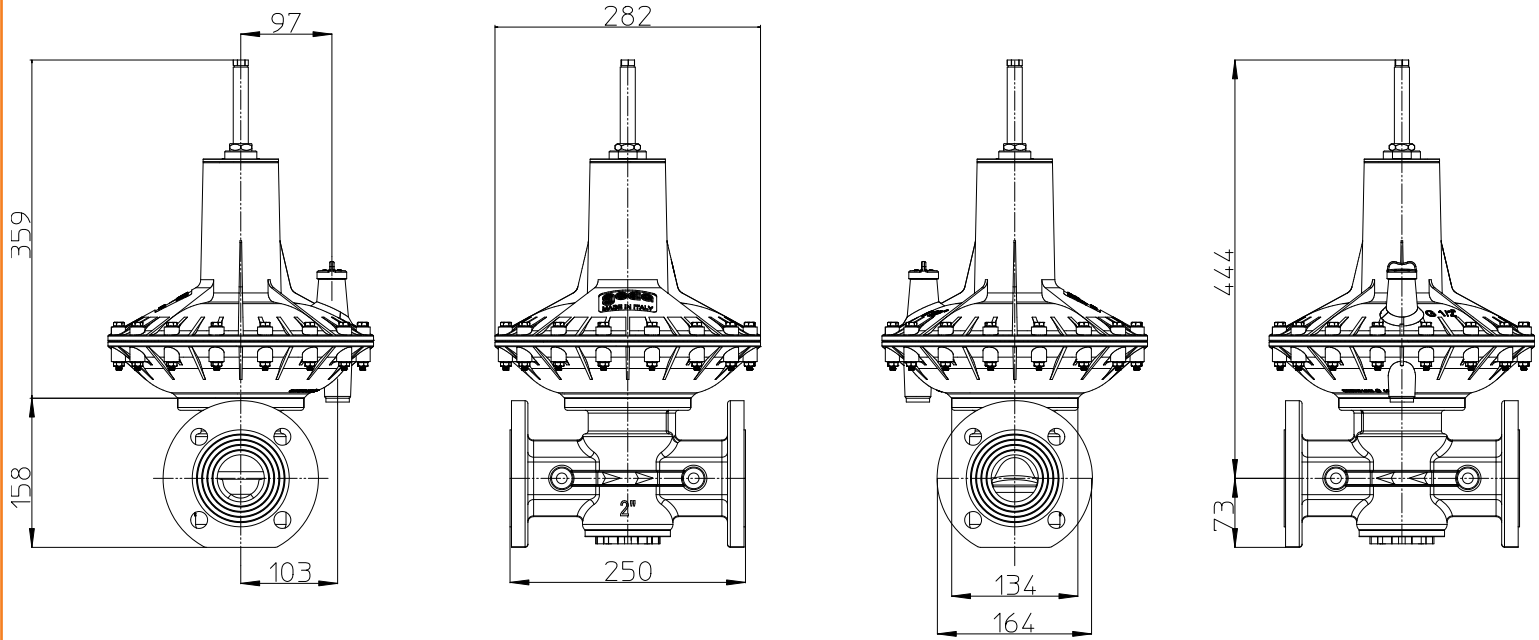
**GAS REGULATOR 1" 1/2**



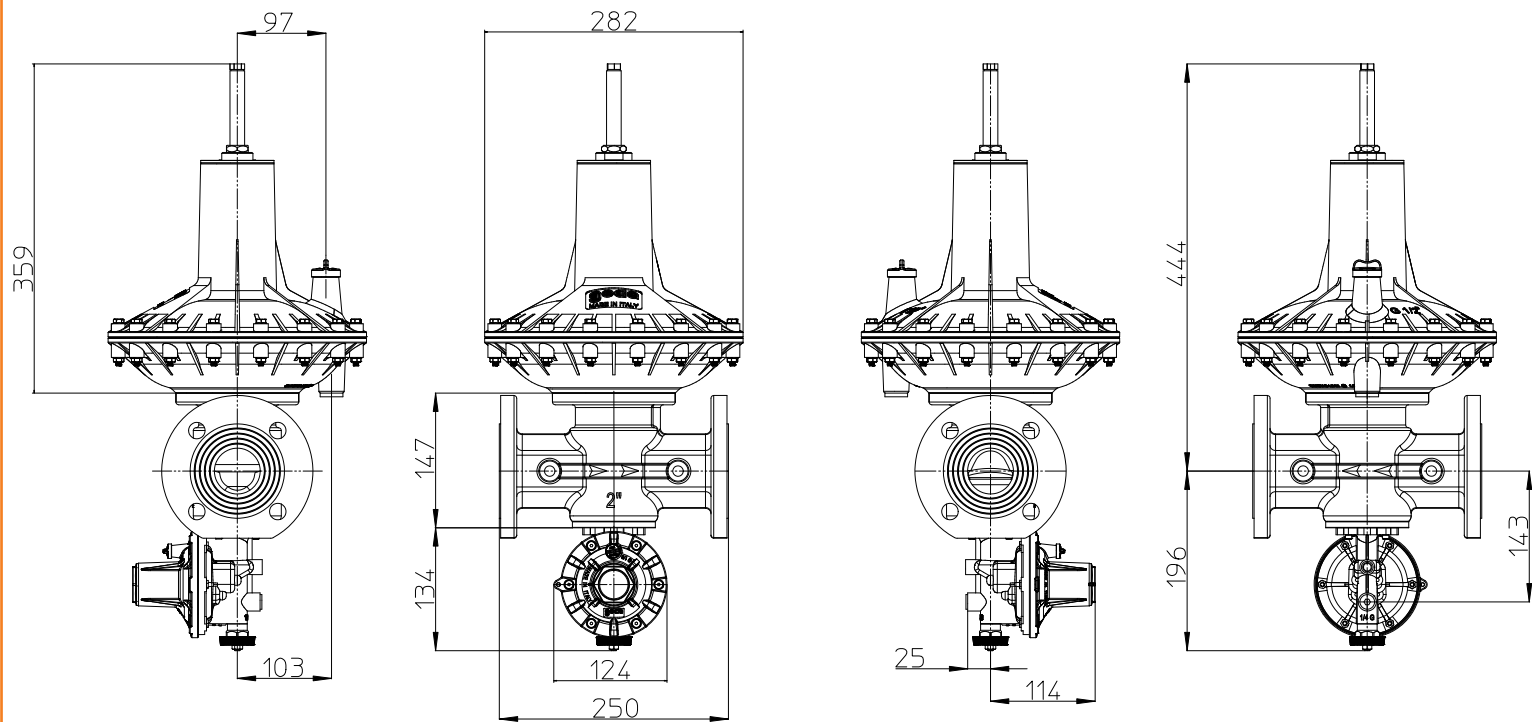
**GAS REGULATOR 1" 1/2 +SSV**



## GAS REGULATOR 2"



## GAS REGULATOR 2" +SSV



## TECHNICAL CHARACTERISTICS

|                                   |   |
|-----------------------------------|---|
| Max intake pressure:              | from 10 bar to 20 bar.                              |
| Regulation:                       | 15mbar ÷ 4500mbar                                   |
| <b>UPSO</b>                       | 6mbar ÷ 3500 mbar                                   |
| <b>OPSO</b>                       | 30mbar ÷ 6000 mbar                                  |
|                                   | Other configurations by request.                    |
| <b>Intake/outlet connections:</b> | Flanged DN25; DN40; DN50 UNI EN1092 - PN16/ANSI 150 |
| <b>Test point:</b>                | Input / outlet by request – Test point 1/4" NPT     |
| <b>Operating temperature :</b>    | - 20 °C ÷ + 60 °C                                   |
| <b>Use:</b>                       | Non aggressive gases - Methane - LPG - City gas     |

## MATERIALS

|                            |  |
|----------------------------|--|
| <b>GAS REGULATOR body:</b> | Head – Die-case aluminium Gd.<br>Body - Spheroidal cast iron Gd. |
| <b>SSV body :</b>          | Die-cast aluminium.  |
| <b>Membrane:</b>           | NBR 60Sh.  |



Part n° 8034117a

MADE IN ITALY



### Directive 2012/19/UE (Waste Electrical and Electronic Equipment - WEEE):



WEEE

#### Information for users:

The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream.

To prevent possible harm to the environment or human health please separate this product from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on available collection facilities please contact your local government office or the retailer where you purchased this product.

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