

ELSTER 10 BAR REGULATOR – A MOVE INTO NEW PRESSURE RANGES

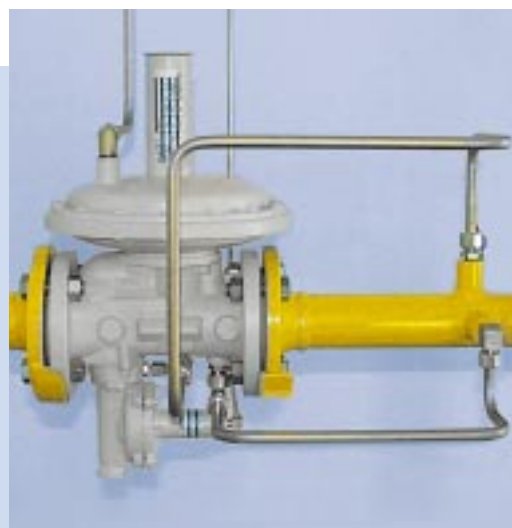
# MR 50 PN 10 with Inlet Pressure Compensation

In recent times we've had more and more inquiries, both from international and home markets, for devices with an inlet pressure in the range between 7 and 8 bar – mostly for use in the industrial sector but also in the field of public gas supply. As a result, one of ELSTER'S development projects was aimed at extending the nominal pressure range of our existing medium-pressure series of devices.

And so, based on the platform of the well-known MR 50 PN 4 / PN 6, a new device with an extended range of features was developed:

- ▶ Pressure rate PN 10
- ▶ Outlet pressure range extended to between 20 and 500 mbar.
- ▶ Over pressure set range of the safety shut-off valve extended to between 45 and 900 mbar.
- ▶ New devices with a nominal pressure of PN 10 fitted with external impulse detection.

The full performance above a flow rate of 400 m<sup>3</sup>/h will only be achieved with an external pulse connection. For special applications there is still the possibility of having an internal impulse detection, as is the case with the devices in the PN 4 / 6.



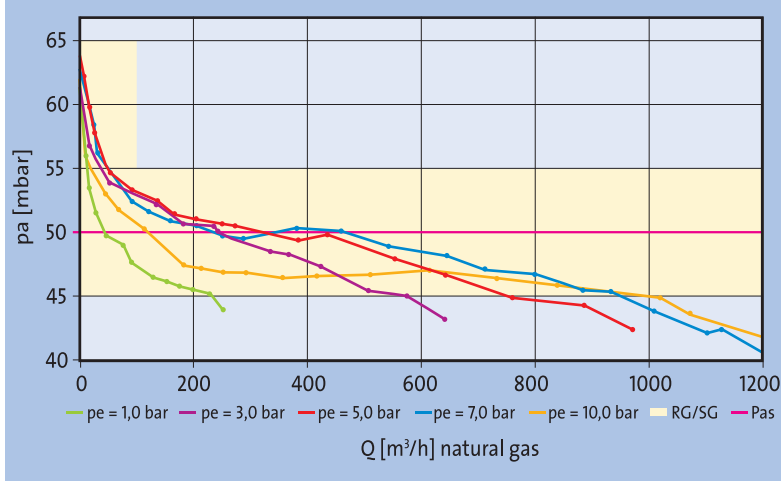
Because the existing platform has been used, the MR50 SF10 also has the robust spheroidal graphite body (GGG 40) with the normal length of 220 mm. If it is necessary to extend the length of 254 mm in accordance with EN 334, an adaptor is available.

In order to fulfill the requirements stipulated by EN 334 concerning integral strength, both the measuring unit and several internal components have been strengthened, which has resulted in a more solid appearance of the measuring unit compared to previous PN 4 / 6 models. The integral strength requires that the inlet and outlet sides of the regulator can withstand the full inlet pressure.

Our successful inlet pressure compensation enables us to realise a high flow capacity without having to change orifice diameters.

With the new device we have maintained the most important features of the devices in the existing series: for example, the integrated safety shut-off valve (SSV) and the standard integrated limited capacity relief valve (RV). Of course, as already mentioned, our reliable inlet pressure regulation, which ensures excellent regulating and closing pressure behaviour, and an inlet pressure resistance up to 16 bar, which is common to all ELSTER gas pressure regulators, have also been maintained. The corrosion protection guaranteed by the electrophoretic paint of the spheroidal graphite body will also set standards for the future. The extremely compact design is exactly the same as all of the devices in the ELSTER MR regulator series.

Flow diagram for MR 50 SF 10



# PRODUCTS

## Here is the most important data once again:

Nominal Pressure:	PN10
Inlet pressure:	0.2 – 10 bar
Outlet pressure range	20 – 500 mbar
SSV over pressure set range	45 – 900 mbar
SSV under pressure set range	10 – 150 mbar
RV set range	30 –130 mbar over $p_{as}$

The MR50 SF10 has been given European approval in accordance with the pressure equipment directive (PED) 97/23/EC and the standards DIN EN 334, DIN 3381 as well as prEN 14382.

To recap, we have here a typically compact gas pressure regulator with excellent regulating features from the lowest to the highest flow capacity. On account of its simple and already well known handling, the 10 bar regulator guarantees low installation and maintenance costs.

Typical ELSTER – all of the parameters have to be right!

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