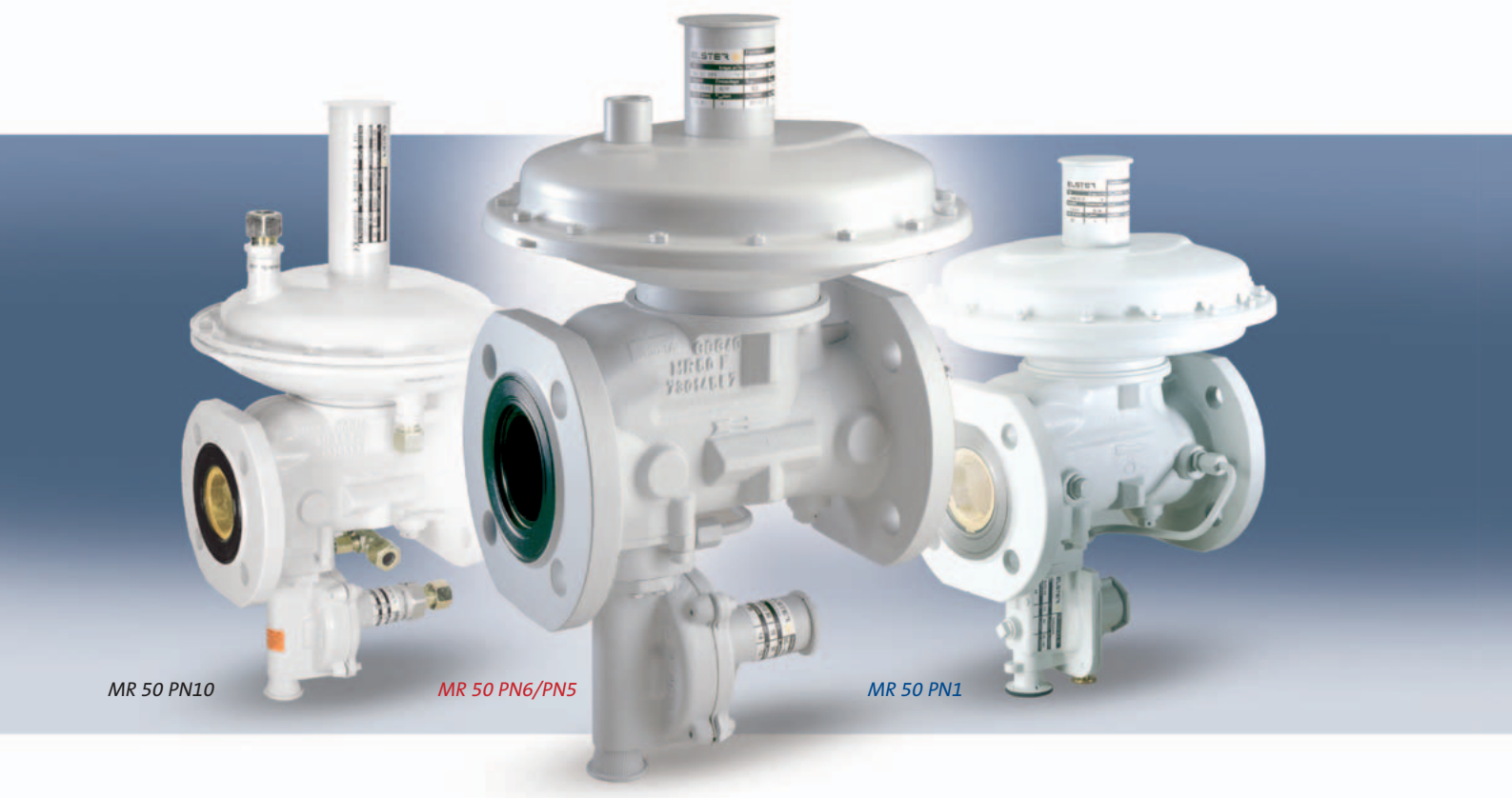
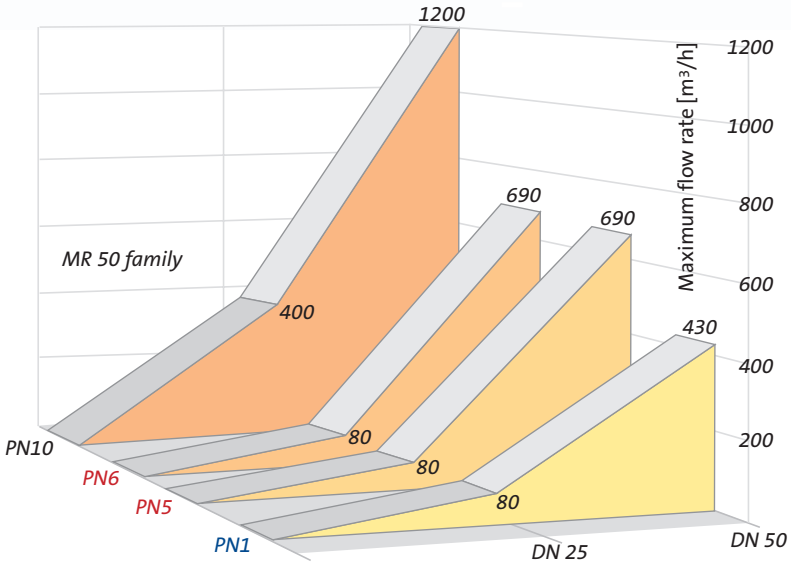
GAS PRESSURE REGULATORS

A new member of the MR family: MR 50 PN6

As far as our range of gas pressure regulators is concerned, there will be no major changes resulting from the merger of the Elster and Instromet groups. In the field of domestic connections, the new Elster-Instromet group covers a wide range of possibilities with their HR and ZR series of low-pressure regulators as well as the one and two-stage medium-pressure regulators belonging to the MR and M2R series. On top of that, when it comes to commercial and industrial applications, the MR 50 series of gas pressure regulators provides a range of reliable, high-performance devices.





And now, the family of gas pressure regulator products based on the modern DN 50 medium-pressure housing has a new member: the MR 50 PN6, approved in accordance with EN 334 and EN 14382 has now joined the family.

Other members of the family include the MR 50 PN10, which was successfully launched last year, and the PN1 version of the MR 50, which has been every bit as successful for a number of years now.

Using an existing platform means that the MR50 PN6 can also take full advantage of the tried and trusted spheroidal graphite (GGG) housing with a length of 220 mm.

If it is necessary to replace older devices which have a diameter of DN 50 and a length of 200 mm, the new MR 50 PN6 is also available in a shorter version.

We have of course kept the most important features:

- Integrated safety shut-off valve (SSV) with either over pressure or over and under pressure settings
- Integrated limited capacity relief valve (RV)
- Fully inlet-pressure balanced – guarantees stable control and lock up behaviour
- Internal impulse over the entire control range (external sensing line is also possible).
- Inlet pressure resistance up to 16 bar – standard in all Elster gas pressure regulators
- Corrosion protection with the help of electrophoretic paint on the housing – in this respect we are also setting standards
- Extremely compact design – as in all of the regulators in the MR family

On top of this, the large capacity range, which was a characteristic of the previous model of the MR 50 PN6, has been extended by 9% to reach 690 m³/h.

This means that this regulator is suitable for a wide range of commercial applications such as the supply of gas to large apartment blocks or public buildings and can also be used for industrial purposes such as in medium-sized district stations and burner trains in the field of process gas supply.

The device is certified in accordance with the EU guideline 97/23/EG covering gas pressure regulating devices. When the new model is launched in the second half of 2005, it will automatically replace the previous models.

Fig. 1: MR 50 SF 6 at low capacities

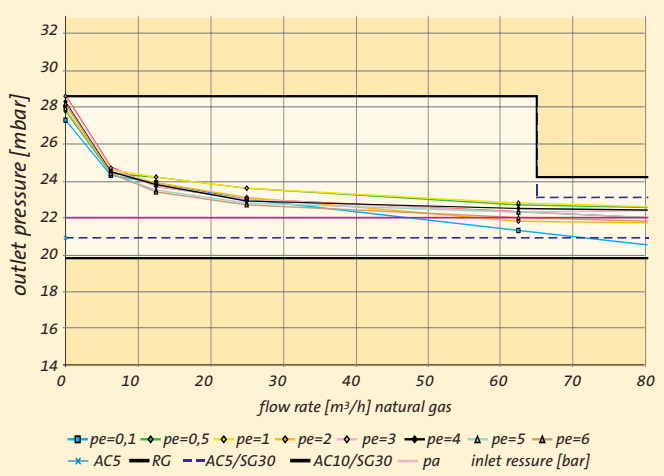
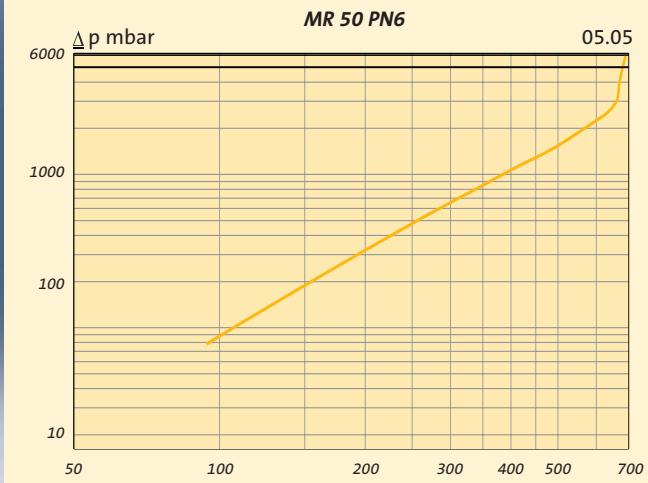


Fig. 2: Flow rate [m³/h] natural gas (AC10)



As can be seen in the characteristic curve for small capacities, the above-mentioned inlet pressure compensation ensures excellent control behaviour even at very low flow rates. A control accuracy of ± 5% is maintained over the entire inlet pressure range of 0.1 to 6 bar. When it comes to larger flow rates of up to 400 m³/h, the same ± 5% accuracy is also achieved.

All in all, we will have a characteristically compact gas pressure regulator with an excellent regulating performance from the smallest of flow rates all the way up to large capacities. As always, the PN6 device is easy to handle, which guarantees low installation and maintenance costs.

Paul Ladage *p.ladage@elster-instromet.com*

Pressure rate: PN6 in accordance with EN 334, EN 14382 **Inlet pressure:** 0.1 – 6 bar

Pressure ranges and accuracy classes for outlet pressure and safety devices

Regulator			Safety shut-off valve				Relief valve	
control pressure set range	control accuracy class	lock up pressure class	over pressure set range	over pressure accuracy class	under pressure set range	under pressure accuracy class	set range	accuracy class
[mbar]	%	%	[mbar]	%	[mbar]	%	[mbar]	%
p_{as} 20 – 100	AC 10	SG 30	p_{so} 45 – 150	AG_o ±10	p_{su} 8 – 13	AG_u ±30	20 – 120	±10
p_{as} 100 – 300	AC 5	SG 20	p_{so} 150 – 470	AG_o ±5	p_{su} > 13– 150	AG_u ±15	above outlet pressure	