

# MR PN 6

Gas Pressure Regulator  
Inlet pressure 6 bar  
DN 25 and DN 50



## Applications

Pressure reduction for:

- District distribution
- Industrial uses

## Brief information

The gas pressure regulator MR 6 bar series is spring loaded and fully inlet pressure balanced. The devices have a standard integrated safety shut-off valve (SSV) and a standard integrated limited capacity relief valve (RV). It is a member of the MR regulator family, which is known for excellent regulation and lock-up behaviour and easy maintenance.

The MR 6 bar series is of use for industrial or commercial application and small stations.

The units are approved by DVGW according to the pressure equipment directive 97/23/EC (PED) and accordance with EN 334 / EN 14382.

Registration Number: CE-0085BM0201.

### Technical data:

- Inlet pressure range  $p_U$  100 mbar to 6 bar
- Outlet pressure range  $p_{ds}$  20 to 300 mbar (different setting springs necessary)
- Minimum differential pressure  $\Delta p_{min}$  4 mbar
- Installation of the diaphragm housing horizontal

Pressure set ranges and accuracy classes see table below.

**Ordering example:** Gas governor MR50 SF6 or MR25 SF6 with over and under pressure shut-off valve (identifier "S") and limited capacity relief valve.

- Inlet pressure ... to ... mbar
- Outlet pressure ... mbar
- Over pressure shut-off set ... mbar
- Under pressure shut-off set ... mbar
- Relief valve set ... mbar

## Main features

- Fully inlet pressure balanced
- Internal impulse up to  
MR25:  $Q = 80 \text{ m}^3/\text{h}$   
MR50:  $Q = 700 \text{ m}^3/\text{h}$
- Sizes 25 mm, 50 mm
- Flange connection PN 16  
or male thread ISO 228 1
- Inlet pressure resistant up to 16 bar
- Spring loaded
- Excellent outlet pressure control
- Integrated safety shut-off valve (SSV)  
for over or over and under pressure  
shut-off
- Integrated limited  
capacity relief valve (RV)
- Operation temperature  
-20°C to +60°C
- Integrated filter

### Options

- External impulse
- SSV remote indication
- Safety diaphragm
- Blocked relief valve
- Special length 200mm

Pressure ranges & accuracy classes for outlet pressure and safety devices

Regulator			Safety shut-off valve				Relief valve	
Set range	Accuracy class	Lock up pressure class	Over pressure set range	Over pressure accuracy group	Under pressure set range	Under pressure accuracy group	Set range	Accuracy group
[mbar]	%	%	[mbar]	%	[mbar]	%	[mbar]	%
$p_{ds}$ 20 - 100	AC 10	SG 30	$p_{so}$ 45 - 150	AG <sub>o</sub> 10	$p_{su}$ 6 - 13	AG <sub>u</sub> 30	MR25 20-230	10
$p_{ds}$ 100-300	AC 5	SG 20	$p_{so}$ 150 - 470	AG <sub>o</sub> 5	$p_{su}$ 13 - 150	AG <sub>u</sub> 15	MR50 20-120 above outlet pressure $p_{ds}$	

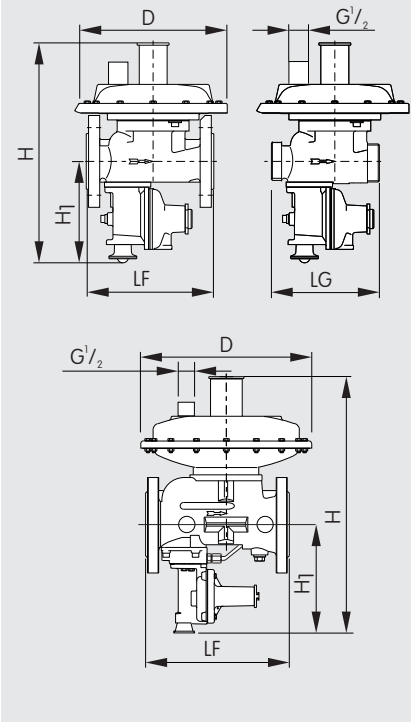
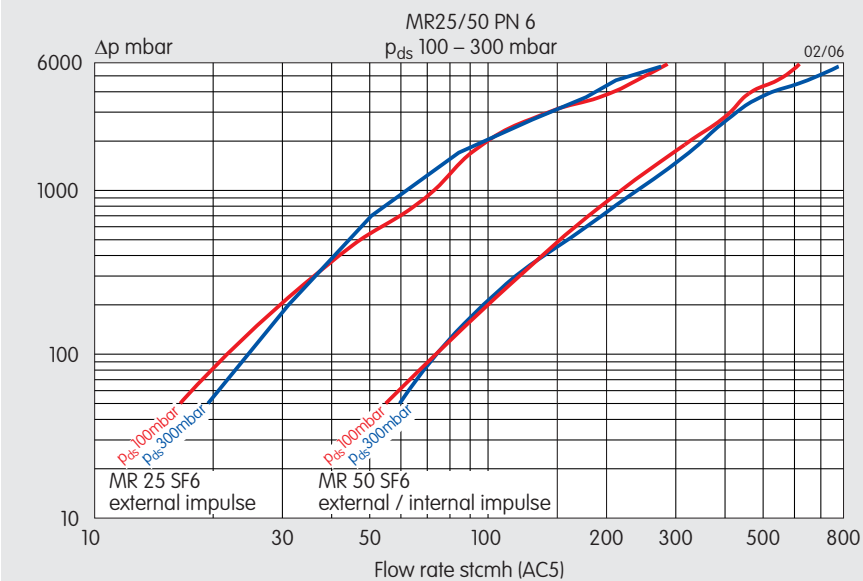
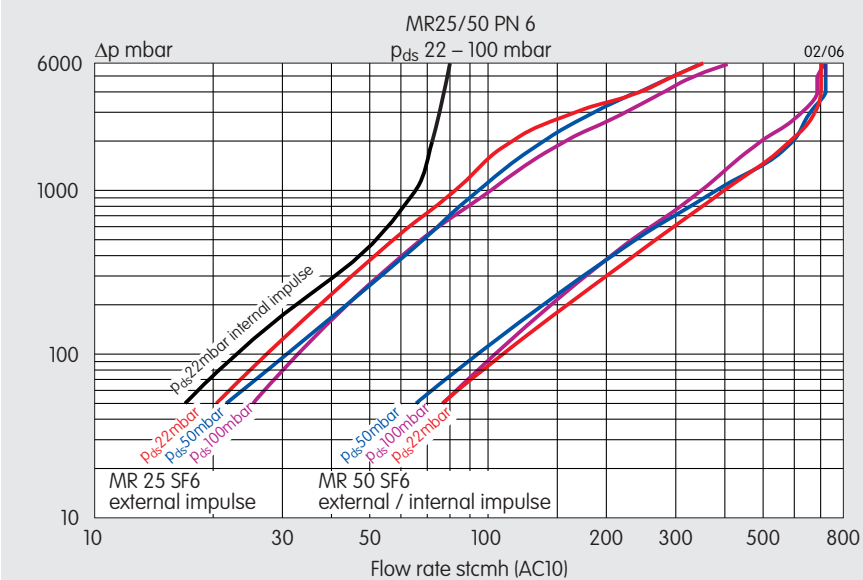
# MR PN 6: Gas Pressure Regulator, inlet pressure 6 bar, nominal diameter DN 25 and 50

Technical data and dimensions										
Type	Capacities natural gas [stcm/h]			Connections		Dimensions [mm]				Weight in kg approx.
	at $\Delta p$ 50 mbar	$q_{\max 1}$	$q_{\max 3}$	Line	Flanges /Threads	LF	H	H1	D	
MR25 (S)F6	20*	28*	340*	DN 25	Flange PN 16	160	285	134	186	6
MR25 (S)F-G6	20*	28*	340*	DN 25	PN 16 - G 1 1/2"	140	285	134	186	5
MR25 (S)G6	20*	28*	340*	DN 25	G 1 1/2"	140	285	134	186	4
MR50 (S)F6	25	90	700	DN 50	Flange PN 16	220 (200)	400	170	262	14.7
MR50 (S)G6	25	90	700	DN 50	G 2 3/4"	220	400	170	262	10.7

\* External impulse at  $p_{ds}$  22 mbar

$q_{\max 1} = q_{p_{\min}}$  maximum flow rate at minimum differential pressure  $\Delta p_{\min}$   
 $q_{\max 3} = q_{p_{\max}}$  maximum flow rate at maximum differential pressure  $\Delta p_{\max}$   
Flow rates  $\pm 20\%$  Flange: EN 1092-2 Thread ISO 228-1

## Maximum capacity



Horizontal installation of the gas regulator

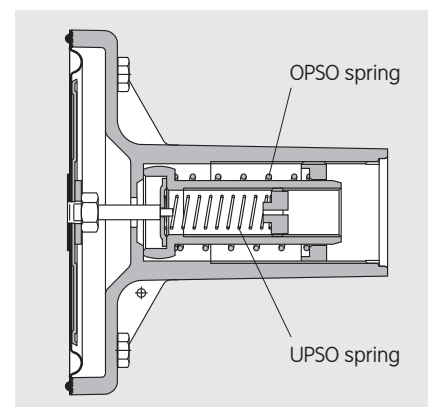
These regulators are suitable for use with previously filtered, non-corrosive gases.

Material Specifications		
	Regulator	SSV
Body	Spheroidal graphite cast Iron: EN-GJS-400-15	Spheroidal graphite cast iron: EN-GJS-400-15
Covers	Sheet steel	Aluminium alloy
Valve seats (orifices)	Brass	Brass
Valve discs and "O" ring	Nitrile synthetic rubber	Nitrile synthetic rubber
Spindle	Brass / Stainless steel	Stainless steel
Diaphragms	Reinforced nitrile synthetic rubber	Nitrile synthetic rubber
Bearings	Moulded plastic (POM)	Moulded plastic (POM)
Loading springs	Carbon steel, zinc plated and passivated	Carbon steel, zinc plated and passivated

Spring ranges outlet pressure regulator MR25					
Order No.	73008974	73008950	73008975	73017779	73017667
Adjuster ring	33470005	33470005	33470005	73002114	73009514
<b>MR25 (S)F6</b>	19 - 32	25 - 50	45 - 70	55 - 130	120 - 300
Colour	ochre	light blue	blue	yellow	anthracite

Spring ranges outlet pressure regulator MR50					
Order No.	33470063	73008998	73008999	73011389	73009287
<b>MR50 (S)F6</b>	20 - 29	26 - 54	50 - 122	66 - 192	100 - 300
Colour	brown	blue	black	none	blue grey

Spring ranges SSV MR50				
OPSO				
Order No.	73008954	73008955	73008956	73008957
Adjuster ring	73011076	73011076	73007626	73007626
$P_{SO}$	31 - 67	59 - 138	117 - 276	236 - 500
Colour	orange	white	light blue	yellow
UPSO				
Order No.	73010871	73008959	73008960	
$P_{SU}$	6 - 18	16 - 49	47 - 146	
Colour	yellow	white	light blue	



Spring ranges SSV MR25						
OPSO						
Order No.	J12506-281	J12506-282	J12506-283	J12506-284	J12506-287	J12506-288
$P_{SO}$	18 - 60	50 - 80	60 - 110	100 - 210	200 - 350	280 - 500
Colour	black	orange	red	dark green	yellow	white
UPSO						
Order No.	J12506-285	J12506-286	J12506-289			
$P_{SU}$	8 - 16	16 - 60	60 - 150			
Colour	light blue	brown	purple			

Set points in mbar (horizontal installation of the regulator)

# MR PN 6: Gas Pressure Regulator, inlet pressure 6 bar, nominal diameter DN 25 and 50

## Spring ranges Relief Valve

Order No.	73012343	33470052	73010839
Regulator	set point in mbar above $p_{ds}$		
MR25 (S)F6	8 - 90	15 - 125	100 - 230
MR50 (S)F6	6 - 40	16 - 54	40 - 120

## Accessories

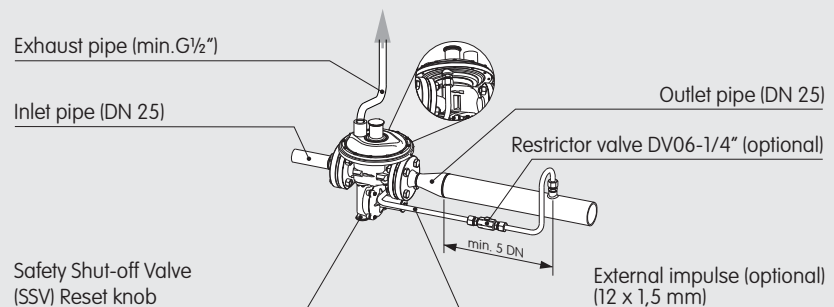
Order No.	Description
73018966	Remote indicator
73019054	Restrictor DV06-1/4"
73020146	Soft spares kit MR50 since 08 2005
73020207	Soft spares kit MR50 until 08 2005
73020206	Soft spares kit MR25

## Connecting patterns

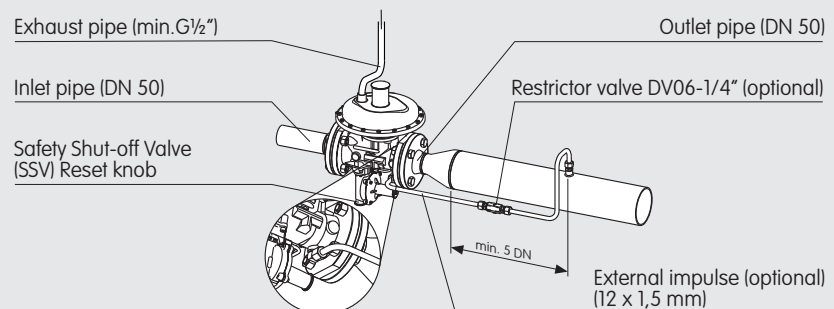
### Diameters for exhaust pipe

Length	Min. line diameter
< 3 m	DN 15
3 - 5 m	DN 20
5 - 10 m	DN 25
> 10 m	DN 50

### MR25 (S)F6



### MR50 (S)F6



## Installation

- Any installation position (horizontal, vertical, etc.) can be selected. The outlet pressure is factory set in the horizontal position (referring the position of the main diaphragm). In case of other installation positions, a sub-sequent adjustment may be required under certain circumstances.
- The devices of the MR PN6 series are, in general, equipped with an internal-impulse sensing. Optionally, it is also possible to use an external pulse (please see connecting pattern above). Might be necessary in case of quick-acting solenoid valves and if  $q > 40\%$  of  $q_{max}$ , or for MR25 at higher flow rates (see flow diagram).
- In case of oscillation in the installation, a separate damping valve DV06 1/4", can be installed in the line for the external impulse. (please observe the operating instructions).
- When connecting an external-impulse line, it is absolutely necessary (to ensure that the quality of regulation is maintained) that the downstream line has the same nominal size of the pipe, a minimum length of  $5 \times DN$  and consists of a straight piece of pipe. The external impulse can be connected either upstream or downstream of a possible expansion.
- Exhaust pipe for the gas pressure regulator (G1/2") shall be sized and connected in accordance with the connecting pattern and shall be led out of the housing.
- It is recommended to install a gas filter upstream of the gas pressure regulator.
- In addition, it is necessary to install a valve each upstream and downstream of the gas pressure regulator.

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