

# Gas Pressure Regulator RMG 200



## PRODUCT INFORMATION

**Serving the Gas Industry  
Worldwide**



## Gas Pressure Regulator RMG 200

Application, characteristics, technical data

### Application

- Gas supply to municipal, and individual consumers
- Suitable as regulator for low rate gas reduction stations
- Suitable for outlet pressure control, inlet pressure control, outlet and differential pressure control

### Characteristics

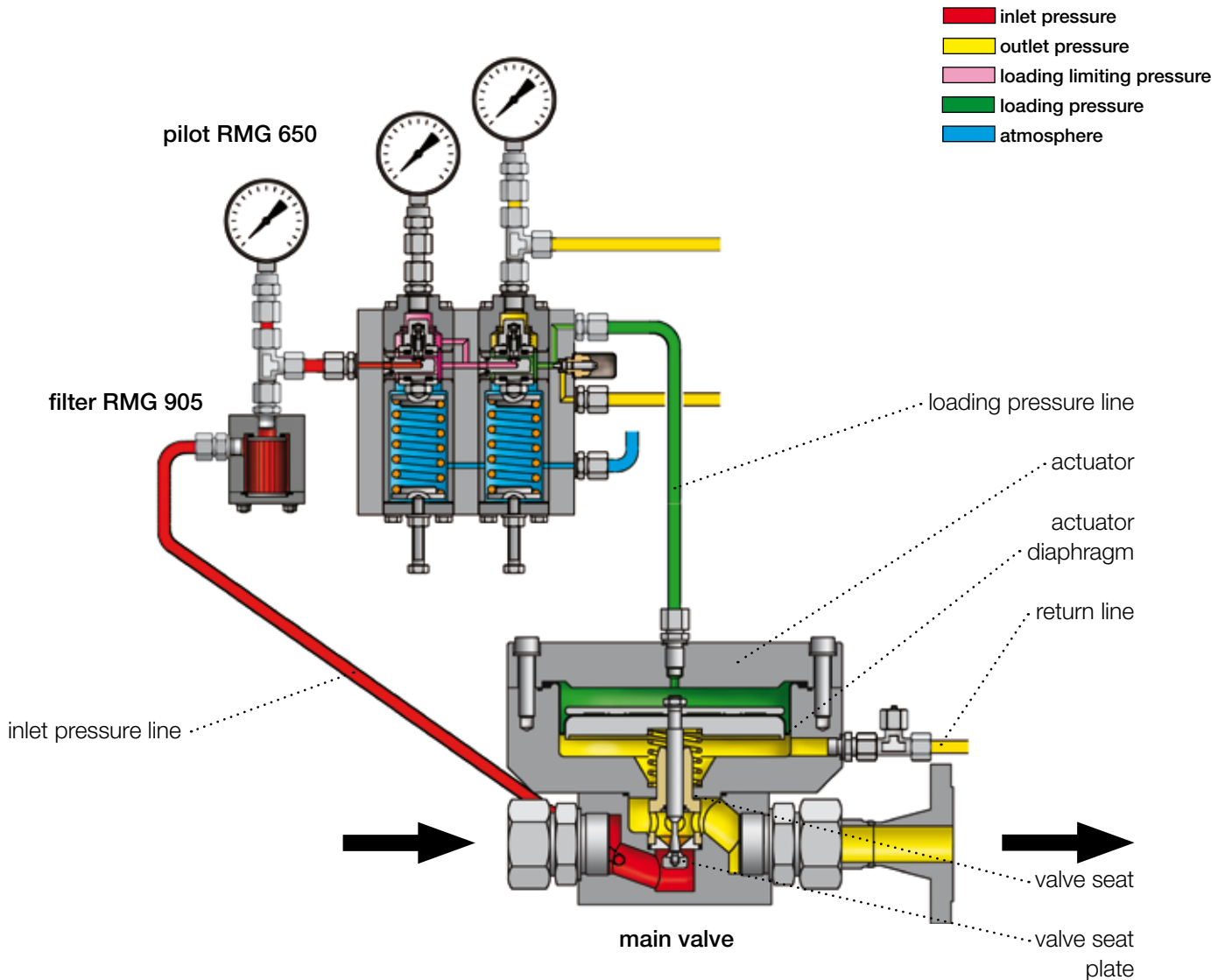
- Simple construction, easily maintained
- Various orifices sizes available
- Suitable for high pressure cuts
- Operated by high quality pilot series RMG 610 (RS 10 d) and RMG 650

TECHNICAL DATA							
inlet pressure range $p_{e\max}$	up to 100 bar						
pressure range	auxiliary pressure range			control stage			
	tool	pressure range $W_a$ (bar)	spring-wire- $\varnothing$ (mm)	tool	pressure range $W_a$ (bar)	spring-wire- $\varnothing$ (mm)	spring colour
pilot RMG 610 (RS10d) (preferably with actuator 2)	M	0.5 to 5.0	4.7 (brown)	N	0.010 to 0.040	2.5	white
					0.020 to 0.060	3.0	yellow
0.040 to 0.120	3.5	green					
0.080 to 0.200	4.0	red					
0.100 to 0.500	5.0	blue					
				M	0.1 to 1.5	3.3	green
					0.2 to 2.5	4.0	blue
					0.3 to 3.5	4.5	brown
pilot RMG 650 (preferably with actuator 1)		1.0 bis 50	8.0 (green)	*)	1.0 to 5.0	5.6	yellow
					2.0 to 10.0	6.3	brown
5.0 to 20.0	7.0	red					
10.0 to 40.0	8.0	green					
		to 10 + $p_a$	5.0 (green)	**)	20.0 to 90.0	9.0	white
	*) diaphragm-tool **) for $p_a > 40$ bar: tool for metal plate						
choice of actuator	size 1 for $p_a$ 1 bar (with pilot RMG 650) size 2 for $p_a$ 3,5 bar (preferably with pilot RMG 610)						

TECHNICAL DATA							
accuracy class and closing pressure category							
outlet pressure range ( $p_a$ -range) in bar	accuracy class AC with valve seat-Ø 8 mm	accuracy class AC with valve seat-Ø 12 mm	lock-up pressure class SG				
0.010 to 0.030	5	10	30				
> 0.030 to 0.100	5	5*/10	20				
> 0.1 to 0.5	5	5	10				
> 0.5 to 1.0	2.5	2.5/5	10				
> 1.0 to 2.5	2.5	2.5	10				
> 2.5 to 5.0	1	1	10				
> 5.0	1	1	5				
class of lock-up pressure zone SZ 2.5							
min. differential pressure $p_{min}$	approx. 1 bar to 1.5 bar						
GerätekenngroÙe	valve seat-diameter in mm	5	6	8	12	18	23
	max. inlet pressure $p_{emax}$ in bar*	100	100	100	80	40	25
	flow coefficient $K_G$ in $m^3/h$ (natural gas $r_n = 0,83 \text{ kg}/m^3$ )	12	25	50	125	200	250
size	DN 25 (dimensions and connections see pages 5 and 6)						
material	main valve	aluminium alloy or steel					
	main valve body	aluminium alloy					
	internal parts	aluminium, brass, steel, polyamid					
	diaphragms, O-rings	perbunan					
temperature range (class 2)	-20°C to +60°C						
function and strength	acc. to DIN EN 334						
DIN-DVGW-reg.-no.	NG-4301AR0881						

# Gas Pressure Regulator RMG 200

Design and operation



The gas pressure regulator RMG 200 is designed to keep the outlet pressure of gaseous media constant in the main and independent from disturbing influences like inlet pressure and flow rate changes. The RMG 200 consists of a main regulator unit (containing the actuator and the main valve) and of the pilot (type with two stages with control stage and auxiliary pressure stage). Additionally, a fine filter is pre-switched to protect the pilot.

The differential between inlet pressure and outlet pressure is used as an auxiliary energy. The adjustable auxiliary loading pressure can influence the static amplification and adjust the regulator to the condition of the line.

The outlet pressure to regulate is measured on site and conducted over the measuring line of the control stage of the pilot. The outlet pressure acts upon the diaphragm assembly and is compared to the reference values (setpoint spring force). Corresponding to the difference of regulation the flow of the auxiliary pressure is changed as loading pressure and therefore the loading pressure is regulated in conformity with the setpoint value to compensate the outlet pressure. The loading pressure acts upon the actuator which proportionally acts upon the valve plate and therefore provokes a flow rate variation.

The valve seat was designed without inlet pressure compensation. The single-seated valve can be supplied with 6 different orifice sizes. The maximum permissible inlet pressure depends on the size of the orifice. The regulator gives tight-shut off on zero flow.

The construction of the regulator RMG 200 is such as to ensure easy maintenance. The regulating assembly (actuator, valve plate and valve seat) can be removed by simple slackening of 4 screws.

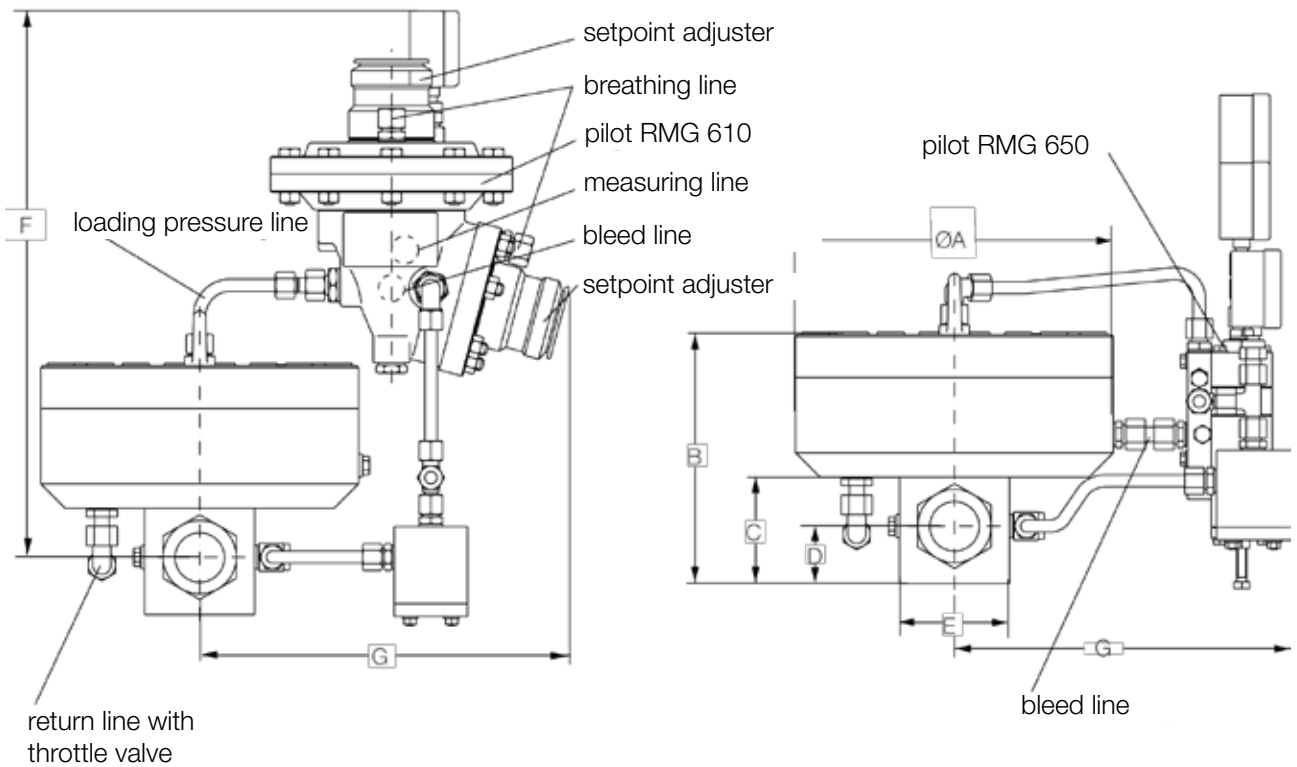
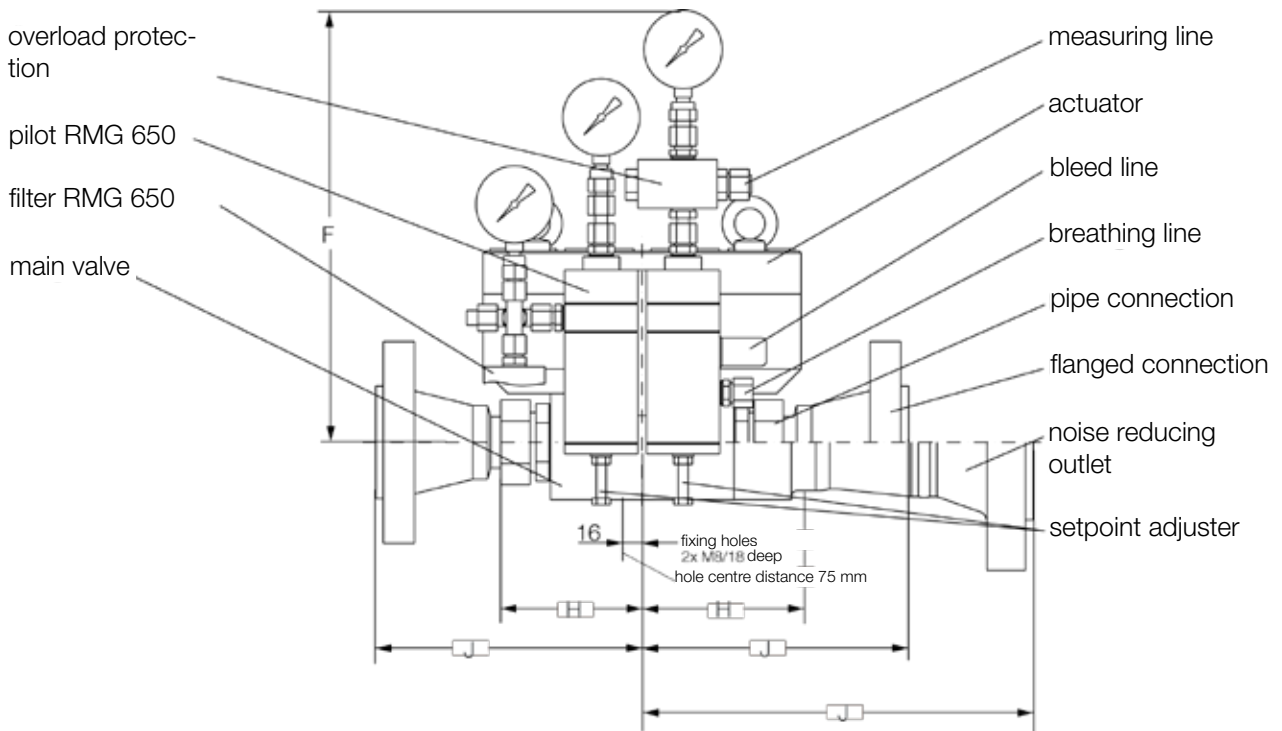
DIMENSIONS AND CONNECTIONS										
dimensions in mm										
RMG 200 with	Ø A	B	C	D	E	F*		G		
						RMG 610	RMG 650	RMG 610	RMG 650	
actuator 1	200	194	87	47	90		max. 345		245	
actuator 2	260	204	87	47	90	max. 447	max. 353	302	275	
installation length for pipe-connection**, PS = 100 bar										
outside pipe diameter in mm					18	22	25	28	38	42
dimension „H“ in mm					120	122	136	123	130	115
installation length for flanged connection										
DN	dimension „J“ in mm	flange (joining with solderless screw connection)			with noise-reducing pressure-outlet (welded part)					
		PN 40	ANSI 300 RF/RTJ	ANSI 600 RF/RTJ	PN 40	ANSI 600 RF				
25		188	213	213	-	-				
40		188	212	218	-	-				
50		188	218	218	-	-				
80		-	-	-	290	320				
100		-	-	-	305	350				
pipe connection**										
for pilot RMG 610		actuator		control unit						
		return line	measuring line	bleed line	breathing line					
outside pipe diameter in mm		12	12	12	12					
connection thread		M 16x1.5	G 3/8	G1/2	M 16x1.5					
for pilot RMG 650		actuator		control unit						
		return line	measuring line	bleed line	breathing line					
outside pipe diameter in mm		12	12	direct connection on main valve		12				
connection thread		M 16x1.5	M 14x1.5			M 14x1.5				

\*) acc. to construction

\*\*) **solderless screw connection** with compression ring acc. to DIN 2353. Please notice the required and max. allowed pressure load for pipe rating. Piping with reduced connection lines should be avoided because of functional reasons.

# Gas Pressure Regulator RMG 200

## Dimensions and connections



example:

RMG 200 - 42/42 - AL - 1 / 6 - 610MN - 703 - So

TYPE DESCRIPTION			
<b>inlet-/outlet-connection</b>			
outside pipe diameter 18		18	
outside pipe diameter 22		22	
outside pipe diameter 25		25	
outside pipe diameter 28		28	
outside pipe diameter 38		38	
outside pipe diameter 42		42	
flange PN 40	DN 25	25/40	
corresponding to PN 25	DN 40	40/40	
for these sizes	DN 50	50/50	
flange ANSI 300 RF	DN 25	25/3F	
	DN 40	40/3F	
	DN 50	50/3F	
flange ANSI 300 RTJ	DN 25	25/3J	
	DN 40	40/3J	
	DN 50	50/3J	
flange ANSI 600 RF	DN 25	25/6F	
	DN 40	40/6F	
	DN 50	50/6F	
flange ANSI 600 RTJ	DN 25	25/6J	
	DN 40	40/6J	
	DN 50	50/6J	
noise reducing (on the outlet side)	PN 40	DN 80	80/40
		DN 100	100/40
	ANSI 600 RF	DN 80	80/6F
		DN 100	100/6F
<b>main valve body</b>			
aluminium alloy construction		AL	
steel construction		ST	
size 1	Ø 5	1 / 5	
	Ø 6	1 / 6	
	Ø 8	1 / 8	
	Ø 12	1 / 12	
	Ø 18	1 / 18	
	Ø 23	1 / 23	
size 2	Ø 5	2 / 5	
	Ø 6	2 / 6	
	Ø 8	2 / 8	
	Ø 12	2 / 12	
	Ø 18	2 / 18	
	Ø 23	2 / 23	
<b>pilot</b>			
RMG 610	with MN-measuring element	610 MN	
	mit MM-measuring element	610 MM	
RMG 650		650	
connectione-combined with SSV (inlet connection only E 42)	RMG 703	703	
	RMG 704	704	
special versions are to be specified in detail		So	

### **For More Information**

To learn more about RMG's Advanced Gas Solutions, contact your RMG account manager or visit [www.rmg.com](http://www.rmg.com)

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