



Gas Pressure Regulator RMG 320

ΡΥΘΜΙΣΤΕΣ ΠΙΕΣΗΣ ΑΕΡΙΩΝ



General description

320.00

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Serving the gas industry - worldwide



Gas Pressure Regulator

RMG 320



Application

- for domestic and industrial use
- suitable for regulating systems requiring quick response (gas furnace)
- can be used for natural gas and all non-corrosive gaseous media

Characteristics

- noise reduction option (not available for all valve seat diameters)
- large inlet pressure range
- various valve seat diameters can be fitted
- main valve with pressure compensation
- pilot optionally with safety relief valve (SBV) for gas leakages or safety diaphragm
- easy maintenance due to interchangeable functional units (plug-in module)
- noise reduction optional (not available for all valve seat diameters)
- at option: version as zero governor

1. Technical data

max. inlet pressure p_{emax}	16 bar			
specific setpoint ranges W_a	specific outlet pressure range p_a in bar	spring no. / colour	wire dia. in mm for diaphragm assembly	
			size 1	size 2
	0.020 to 0.030	0 / blue	3.6	5.0
	0.025 to 0.050	1 / grey	4.0	6.3
	0.045 to 0.100	2 / yellow	4.5	7.0
	0.090 to 0.2	3 / brown	5.3	8.0
	0.150 to 0.3	4 / light red	6.3	9.0
	0.250 to 0.4	5 / dark red	7.0	10.0
	0.350 to 0.5	6 / light blue	7.5	11.0
	0.450 to 0.6	7 / white	8.5	12.0
0.550 to 0.8	8 / green	9.5	13.0	
0.650 to 1.0	9 / black	10.5	14.0	
accuracy class and lock-up pressure class	outlet pressure range p_a in bar	accuracy class AC	lock-up pressure class SG	
	0.020 to 0.030	10*/20	20*/ 30	
	> 0.030 to 0.100	5*/10	10*/ 20	
	> 0.100 to 0.5	5	10	
> 0.500 to 1.0	2.5	10		
	* values apply to inlet pressure changes of max. 6 bar.			
sizes	DN 25, DN 50, DN 80 and DN 100			



Gas Pressure Regulator RMG 320

connection type	flanged to DIN PN 16 and acc. to ANSI 150 RF	
material	main valve main valve body internal components diaphragms, seals	cast steel, spheroidal graphite iron sheet steel aluminium alloy, brass, steel NBR (plastic-like rubber material)
temperature range classe 2	-20 °C to +60 °C	
function and strength	acc. to EN 334	
DIN DVGW reg. no.	NG - 4301AT0093 (applicable to all sizes)	
CE reg. no.	CE-0085AT0059 (applicable to all sizes)	

integrated safety relief valve for gas leakages (optional)

regulating unit	spring no.	wire dia. in mm	setpoint range above p_a (p_a max. 500 mbar)
1	1	3.5	0.010 bar to 0.1 bar above p_a
1	2	5.0	0.075 bar to 0.3 bar above p_a
2	1	3.0	fixed at 0.015 bar above p_a
2	2	3.6	fixed at 0.040 bar above p_a
2	3	4.5	fixed at 0.130 bar above p_a

design with safety diaphragm (optional)

Can only be fitted to regulating unit 1 with setpoint spring no. 1 to 6 (0.020 bar to 0.5 bar).



Gas Pressure Regulator RMG 320



Valve data

size	valve seat dia. in mm	flow rate coefficient K_G (for natural gas, $\rho_n=0,83 \text{ kg/m}^3$)	inlet pressure range Δp_e *		face to face dimensions (mm)
			in bar for diaphragm assembly (max. inlet pressure in brackets)		
			size 1	size 2	
DN 25	20	200	16 (16)		184
	33	420	10 (16)		
DN 50	20	400	16 (16)	16 (16)	230
	33	800	10 (16)	16 (16)	
	41	1300	8 (16)	16 (16)	
	50	1600	5 (10)	16 (16)	
DN 80	25	400		16 (16)	420
	31	900		16 (16)	
	41	1500		16 (16)	
	50	1800		10 (16)	
	60	2700		10 (16)	
	80	4000		6 (12)	
DN 100	25	400		16 (16)	500
	31	900		16 (16)	
	41	1500		16 (16)	
	50	1800		10 (16)	
	60	3100		10 (16)	
	80	4500		6 (12)	
	100	5800		4 (8)	

* The accuracy class and the lock-up pressure class stipulated by the DVGW type tests are confirmed under the following conditions:

"The inlet pressure may exceed the Δp_e -figure stated in the table at the most by twice its value, provided the inlet pressure deviations Δp_e do not exceed the $p_{e \max}$ - value stated in the table. However, it may not exceed the nominal pressure rating."

The limitation of the inlet pressure range Δp_e for a diaphragm assembly is not given for reasons of material strength but in the interest of maintaining the regulating accuracy.

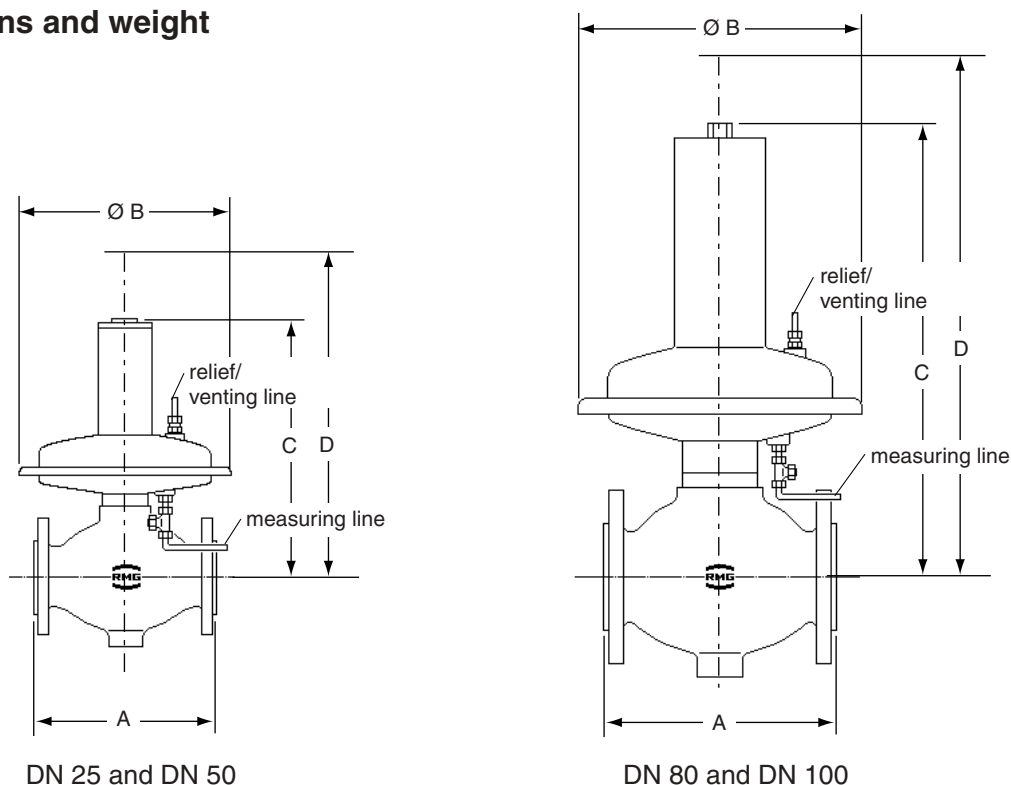
Connections

	diaphragm assembly 1	diaphragm assembly 2
measuring line (p_a line)	pipe	pipe
relief- / venting line (to the open atmosphere)	E12 E12 (thread G 1/2)	E 16 E 12 (thread G 1/2)



Gas Pressure Regulator RMG 320

2. Dimensions and weight



Dimensions in mm

DN	main valve body A	regulator with diaphragm assembly					
		size 1			size 2		
		B	C	D*	B	C	D*
25	184	297	385	510			
50	254	297	410	510	395	550	660
80	298				395	650	800
100	352				395	650	800

* dimension needed for dismantling

approx. weight in kg

pipe size DN	diaphragm assembly 1	diaphragm assembly 2
25	15	
50	33	36
80		61
100		67

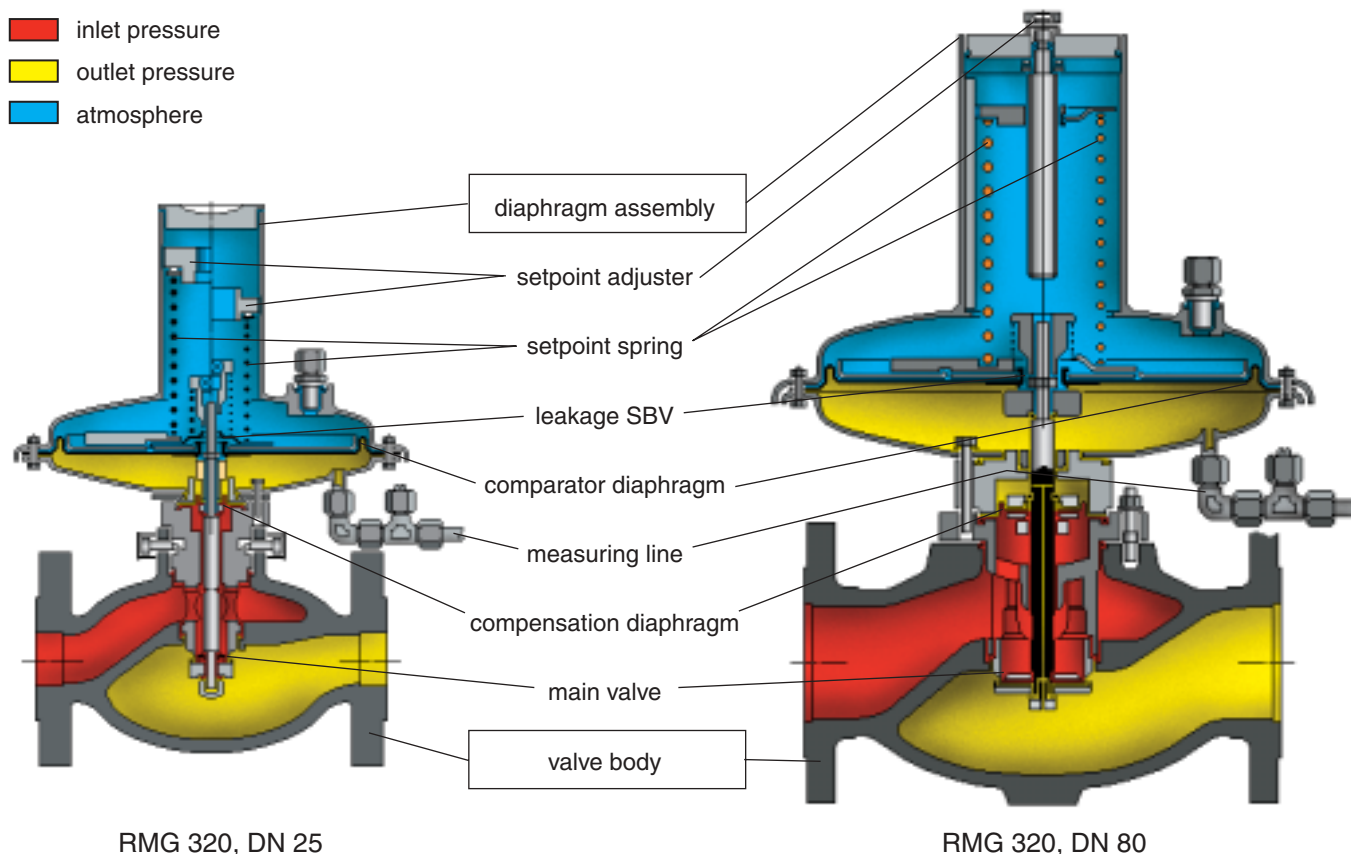


Gas Pressure Regulator RMG 320



3. Operation

- inlet pressure
- outlet pressure
- atmosphere



The gas pressure regulator RMG 320 is designed to keep the outlet pressure of a gas medium in a controlled system constant irrespective of the influence of disturbance variables like inlet pressure and/or flow changes. The outlet pressure to be regulated is fed into the diaphragm assembly via the measuring line. The comparator diaphragm captures the actual outlet pressure value and compares it with the preset value of the setpoint spring. A deviation results in a direct change of the main valve position via the valve rod. The resulting flow change produces an alignment of the actual outlet pressure and the setpoint. At zero consumption the unit shuts off completely. The main valve is inlet pressure compensated and can be fitted with different valve seat diameters.

The pilot can optionally be fitted with a safety relief valve for gas leakages or a safety diaphragm.

The gas pressure regulator RMG 320 consists of the main valve body and the functional element "diaphragm assembly". After loosening the connecting bolts the functional element can easily be removed from the main valve body. This has the advantage of making maintenance particularly easy. During regular maintenance intervals the functional element can be taken from the casing and examined visually. In case of a defect the functional element can be exchanged for a tested spare part, and the subsequent repair work can be carried out away from the gas regulating station in the workshop.



Gas Pressure Regulator RMG 320

4. Type description (example)

RMG 330 - 50 - 25 / 2* / 4 - So

type
pipe size DN
valve seat diameter
pilot design
setpoint spring no. in pilot
special feature

pipe size DN	flange design / casing material		25	50	80	100			
25, 50	PN 16 / GS-C25N or ANSI 150 / GS-C25N		25	50	80	100			
80, 100	PN 16 / GGG-40, PN 16 / GS-C25, ANSI 150 / GS-C25N		25	50	80	100			
pipe size DN	diaphragm assembly size	with safety diaphragm	with safety relief valve	valve seat dia.	RMG part no.*				
					normal design		with safety diaphragm		
					W _h 0.020..0.5	W _h 0.5..1 bar	W _h 0,020..0,5		
25	1	SM	L	20	10004835	10004840	10026310	20	1
				33	10004836	10004841	10026311	33	1
50	1	SM	L	25	10006152	10006153	10004834	25	1
				31	10009027	10009023	10004813	31	1
				41	10009028	10009024	10004814	41	1
				50	10009029	10009025	10004817	50	1
50	2	-	L	25	10006179	10006180		25	2
80				31	10009016	10009019		31	2
100				41	10009026	10009018		41	2
				50	10009126	10009017		50	2
80	2	-	L	60	10009170	10009173		60	2
100				80	10009171	10009174		80	2
100	2	-	L	100	10009172	10009175		100	2
setpoint spring no. colour		setpoint range		RMG part no. of setpoint spring					
				diaphragm assembly 1	diaphragm assembly 2				
0	black	0.020 to 0.03 bar		10 007 241		19 083 654		0	
1	grey	0.025 to 0.05 bar		10 003 629		10 009 068		1	
2	yellow	0.045 to 0.10 bar		10 003 630		10 009 069		2	
3	brown	0.090 to 0.20 bar		10 003 631		10 009 070		3	
4	light red	0.150 to 0.30 bar		10 003 632		10 009 071		4	
5	dark red	0.250 to 0.40 bar		10 003 633		10 009 072		5	
6	light blue	0.350 to 0.50 bar		10 003 634		10 009 073		6	
7	white	0.450 to 0.60 bar		10 012 563		10 009 163		7	
8	green	0.550 to 0.80 bar		10 012 564		10 009 164		8	
9	black	0.650 to 1.0 bar		10 004 894		10 009 165		9	

special features (to be detailed)

So

- *) example: 2 - standard
2L - diaphragm assembly with integrated safety relief valve
1SM - diaphragm assembly with safety diaphragm

