

Gas Pressure Regulator RMG 502



PRODUCT INFORMATION

**Serving the Gas Industry
Worldwide**



ITT Controls

GAS PRESSURE REGULATOR RMG 502


Application, Characteristics, Technical Data

Application

- for offtake stations in gas transmission systems, for gas supply to industrial and power plants
- suitable for natural gas and all non-corrosive gaseous media

Characteristics

- large inlet pressure range
- special diaphragm system as regulating valve device, therefore small number of internal parts
- easy maintenance, low noise level
- outlet pipe diameter is four times the diameter of inlet size (2.25 times at DN 200/300)

TECHNICAL DATA		
max. inlet pressure p_{max}	100 bar	
outlet pressure ranges W _d 0,3 to 40 bar (with diaphragm assembly) W _d 20 to 90 bar (with metal harmonica type measuring unit)	pilot RMG 630 - two stage version, higher regulating accuracy (lower AC)	
	pilot RMG 632 - two stage version for inlet pressure regulation	
	pilot RMG 635 - three stage version with automatic load limiting stage, p_{dmin} and electro-pneumatic control stage	
	pilot RMG 638 - four stage version, with automatic load limiting stage, p_{dmin} -stage, p_{dmax} -stage and electro-pneumatic control stage	
	pilot RMG 640 - one stage version, application up to 15 bar Δp (inlet pressure)	
pressure drop between inlet and outlet	min. differential	$\Delta p_{min} = 2$ bar
	max. differential	$\Delta p_{max} = 70$ bar
pipe size and KG value	DN 25 / 50	KG = 400 m ³ /h
	DN 50 / 100	KG = 1600 m ³ /h
	DN 80 / 150	KG = 4200 m ³ /h
	DN 100 / 200	KG = 6400 m ³ /h
	DN 150 / 300	KG = 14000 m ³ /h
	DN 200 / 300	KG = 25000 m ³ /h
connections	flanged to DIN PN 40 and ϕ anges acc. to ANSI 300, ANSI 600	
temperature range class II	-20°C to +60°C	
function and strength	acc. to DIN EN 334	
CE - sign acc. to PED		
CE-Reg.-No.	CE-0085AT0083	
Ex-protection	The device does not have any potential ignition sources and thus ATEX 95 does not apply to it (applied electronic accessories comply with the ATEX requirements).	

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MATERIALS	
main valve body	cast steel
internal parts of main valve	steel, aluminium alloy
pilot	steel, aluminium alloy
diaphragms	synthetic rubber (NBR, ECO)
sealings	synthetic rubber (NBR)

ADJUSTMENT RANGES							
pilot RMG 630, RMG 632, RMG 635, RMG 638, RMG 640, RMG 642							
specific adjustment range W_{ds} regulating stage	setpoint spring			special features			
	No.	colour	wire- \emptyset in mm				
0,3 to 1 bar	1	black	4,5	larger measuring diaphragm control stage with diaphragm assembly control stage with diaphragm assembly control stage with diaphragm assembly control stage with diaphragm assembly control stage with diaphragm assembly control stage with metal harmonica type measuring unit			
0,5 to 2 bar	2	blue	3,6				
1 to 5 bar	3	black	4,5				
2 to 10 bar	4	grey	5,0				
5 to 20 bar	5	brown	6,3				
10 to 40 bar	6	red	7,0				
20 to 90 bar	7	white	9,0				
Hilfsdruckstufe für RMG 630, RMG 632, RMG 635, RMG 638							
5 to 15 bar	green	5,0	automatically above p_d				
accuracy class and closing precision category		adjustment range W_d		accuracy class		closing precision category	
pilot RMG 630		0,3 to 0,5 bar	AC 20	SG 30			
		>0,5 to 1 bar	AC 10	SG 20			
		>1 to 5 bar	AC 2,5	SG 10			
		>5 to 90 bar	AC 1	SG 5			
pilot RMG 640		0,3 to 1 bar	AC 20*/30	SG 30*/50			
		>1 to 3 bar	AC 20	SG 30			
		>2,5 to 5 bar	AC 10	SG 20			
		>5 to 10 bar	AC 5	SG 10			
		>10 to 90 bar	AC 2,5	SG 10			
lock-up pressure zone class		SZ 2,5					

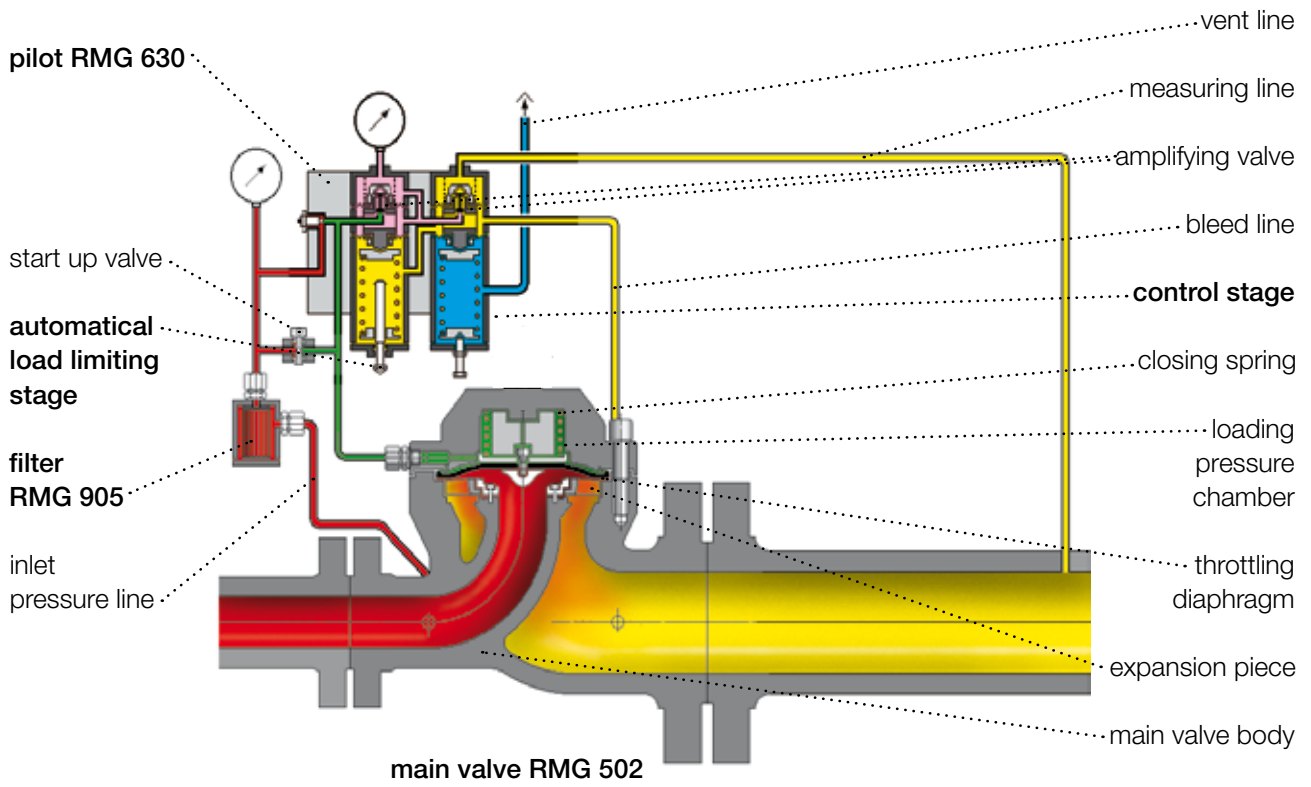
*) For inlet pressure changes $\Delta p_u < 8$ bar the lower (better) accuracy class and closing precision category is valid.

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Design and Operation

RMG 502 with pilot RMG 630

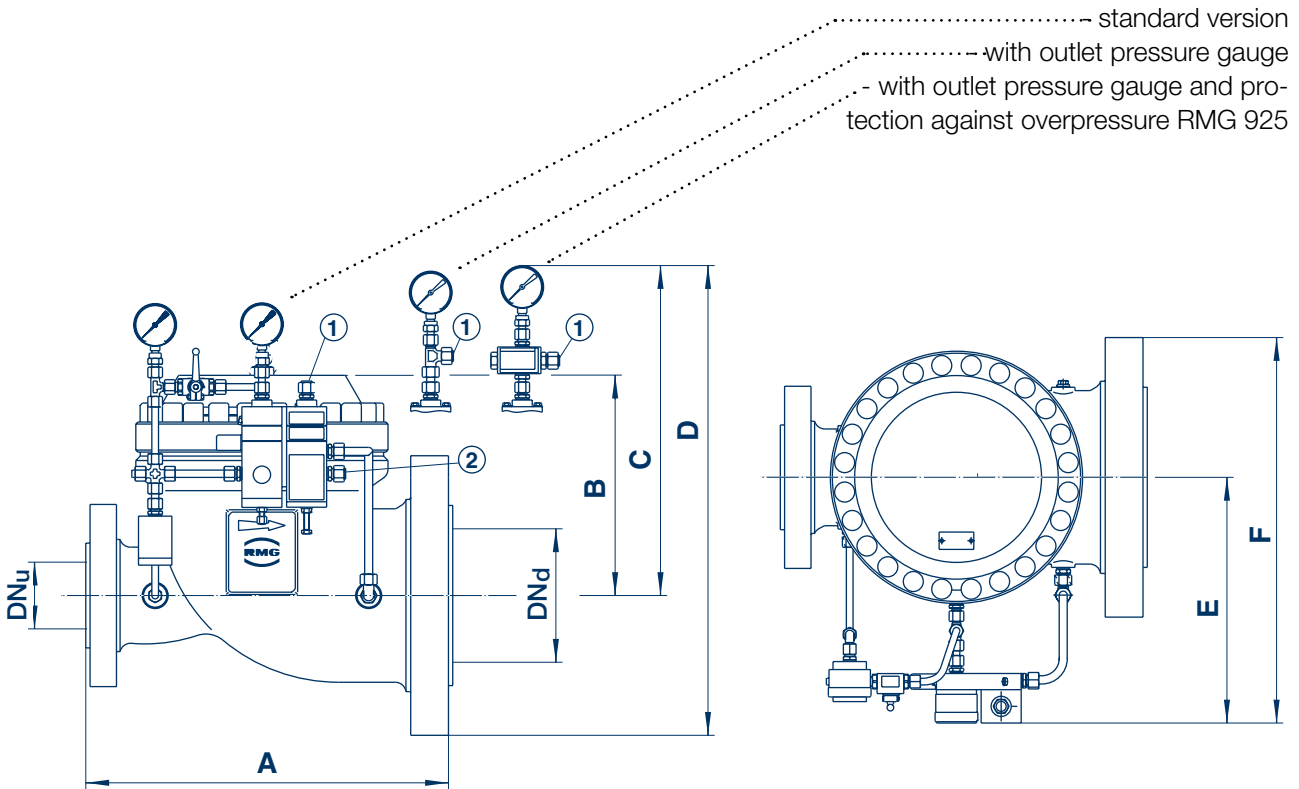
4



- inlet pressure
- load limiting pressure
- loading pressure
- outlet pressure
- atmosphere

GAS PRESSURE REGULATOR RMG 502

Dimensions, Weights, Connections



DIMENSIONS						
size	dimensions in mm					
DN _u / DN _d	A	B	C	D	E*	F*
25 / 50	340	240	430	510	300	390
50 / 100	380	240	430	545	300	420
80 / 150	550	330	495	645	370	520
100 / 200	550	330	495	705	370	580
150 / 300	750	505	640	920	460	740
200 / 300	775	430	570	850	460	740

WEIGHTS	
size	weight in kg (appr.)
DN _u / DN _d	
25 / 50	65
50 / 100	85
80 / 150	215
100 / 200	270
150 / 300	630
200 / 300	650

*) variations of dimension E/F depend on pilot and pressure stage

CONNECTIONS	
pilot	
inlet pressure line (internal)	E 10
loading pressure line (internal)	E 10
measuring line (Pos. ① - at p _d -line)	E 12
bleed line (internal)	E 12
breathing line (Pos. ② - to the open air)	E 12

5

GAS PRESSURE REGULATOR RMG 502

6

GAS PRESSURE REGULATOR RMG 502

Type description

Example

502 - 80 / 150 - 630 / 2 - So

SIZE	
DN	
25 / 50	
50 / 100	
80 / 150	
100 / 200	
150 / 300	
200 / 300	
PILOT TYPE	
RMG 630	
RMG 632	
RMG 635	
RMG 638	
RMG 640	
RMG 642	
OUTLET PRESSURE RANGE	
outlet pressure range W_d in bar	setpoint spring
0,30 ... 1,0	1
0,50 ... 2,0	2
1,00 ... 5,0	3
2,00 ... 10,0	4
5,00 ... 20,0	5
10,0 ... 40,0	6
20,0 ... 90,0	7
SPECIAL VERSION (to be specified in detail)	
So	

type

size (inlet/outlet)

pilot type

setpoint spring

special version