

Gas Pressure Regulator HON 502



PRODUCT INFORMATION

**Serving the Gas Industry
Worldwide**

Honeywell

GAS PRESSURE REGULATOR HON 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 HON 630 - two stage version, higher regulating accuracy (lower AC)	
	pilot HON 632 - two stage version for inlet pressure regulation	
	pilot HON 635 - three stage version with automatic load limiting stage, p_{dmin} and electro-pneumatic control stage	
	pilot HON 638 - four stage version, with automatic load limiting stage, p_{dmin} -stage, p_{dmax} -stage and electro-pneumatic control stage	
	pilot HON 640 - one stage version, application up to 15 bar Δp (inlet pressure)	
pilot HON 642 - one stage version für inlet pressure regulation		
pressure drop between inlet and outlet	min. differential	$\Delta p_{min} = 2$ bar
	max. differential	$\Delta p_{max} = 70$ bar
pipe size and K_G value	DN 25 / 50	$K_G = 400$ m ³ /h
	DN 50 / 100	$K_G = 1600$ m ³ /h
	DN 80 / 150	$K_G = 4200$ m ³ /h
	DN 100 / 200	$K_G = 6400$ m ³ /h
	DN 150 / 300	$K_G = 14000$ m ³ /h
	DN 200 / 300	$K_G = 25000$ m ³ /h
connections	flanged to DIN PN 40 and flanges 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).	

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 HON 630, HON 632, HON 635, HON 638, HON 640, HON 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		
0,5 to 2 bar	2	blue	3,6	control stage with diaphragm assembly		
1 to 5 bar	3	black	4,5	control stage with diaphragm assembly		
2 to 10 bar	4	grey	5,0	control stage with diaphragm assembly		
5 to 20 bar	5	brown	6,3	control stage with diaphragm assembly		
10 to 40 bar	6	red	7,0	control stage with diaphragm assembly		
20 to 90 bar	7	white	9,0	control stage with metal harmonica type measuring unit		
Hilfsdruckstufe für HON 630, HON 632, HON 635, HON 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 HON 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 HON 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				

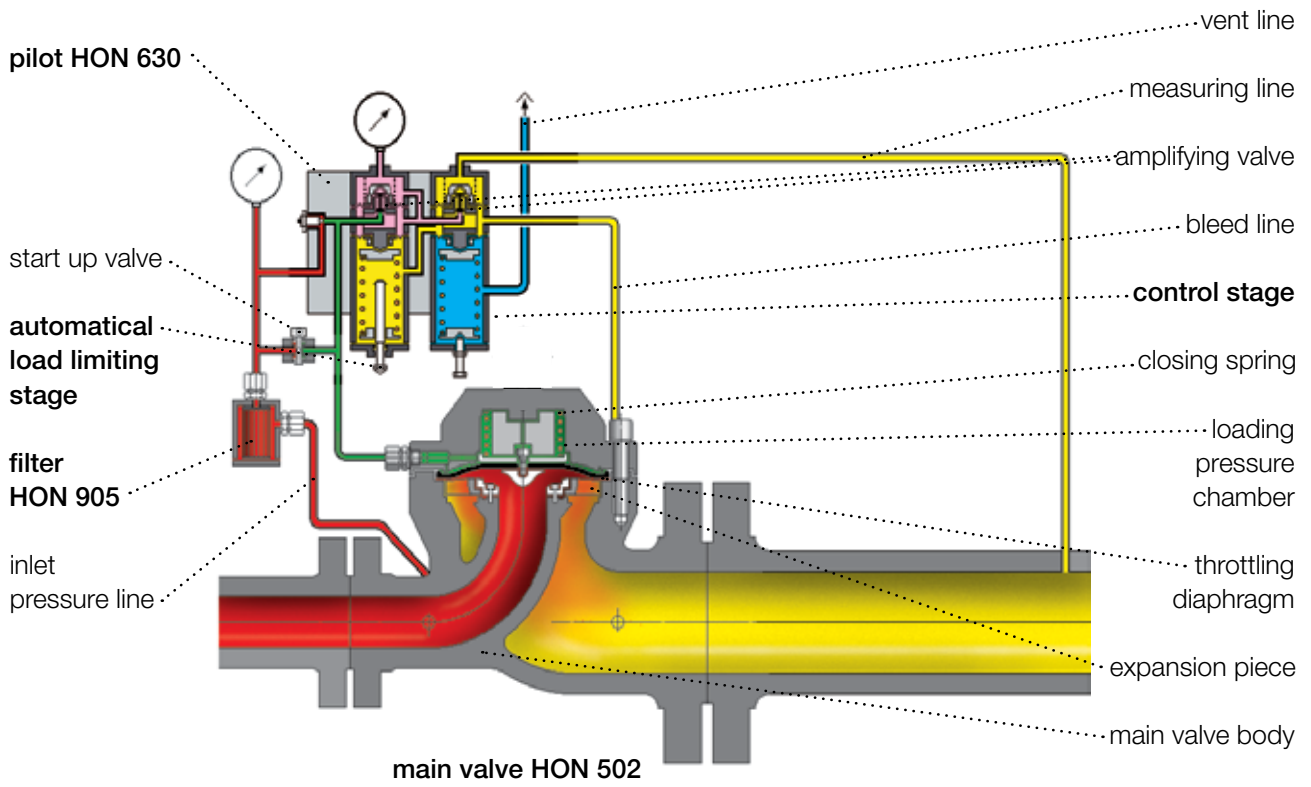
*) For inlet pressure changes $\Delta p_U < 8$ bar the lower (better) accuracy class and closing precision category is valid.

GAS PRESSURE REGULATOR HON 502

Design and Operation

HON 502 with pilot HON 630

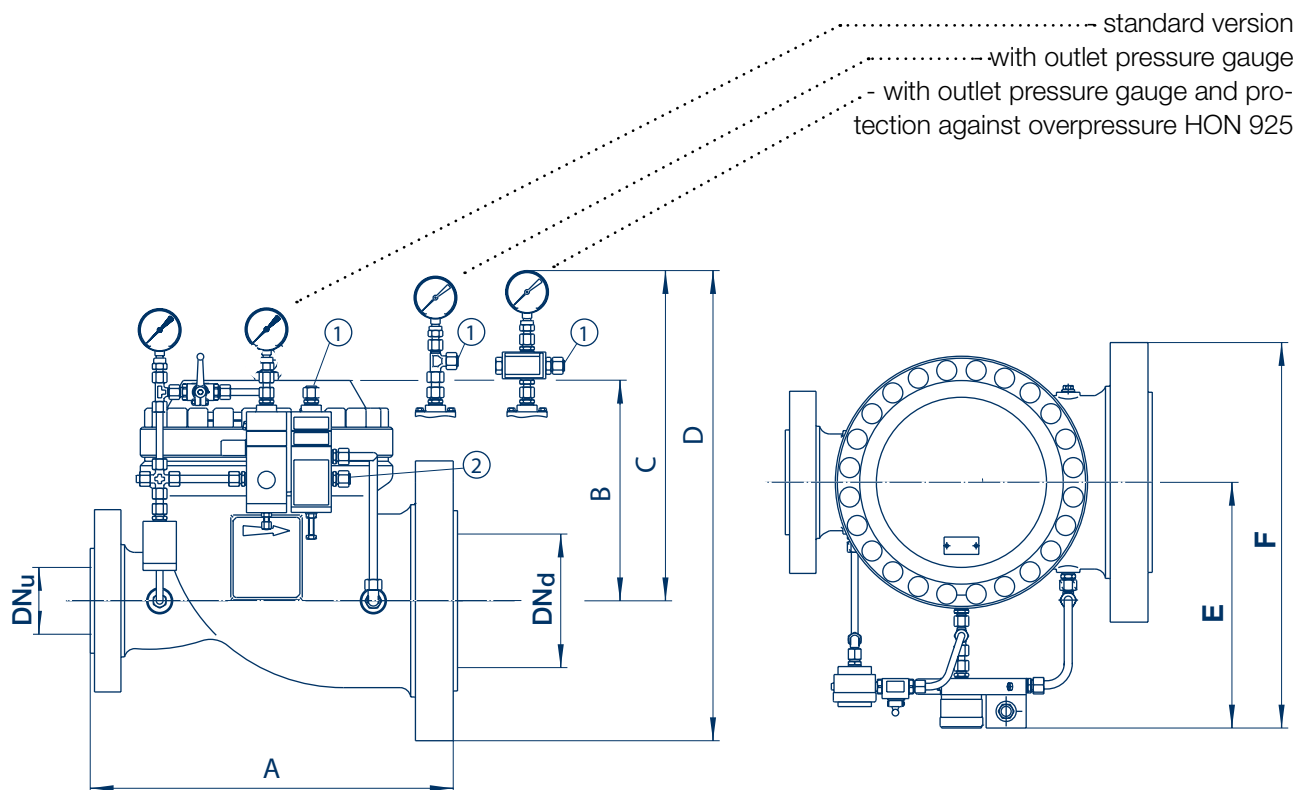
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- █ inlet pressure
- █ load limiting pressure
- █ loading pressure
- █ outlet pressure
- █ atmosphere

GAS PRESSURE REGULATOR HON 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

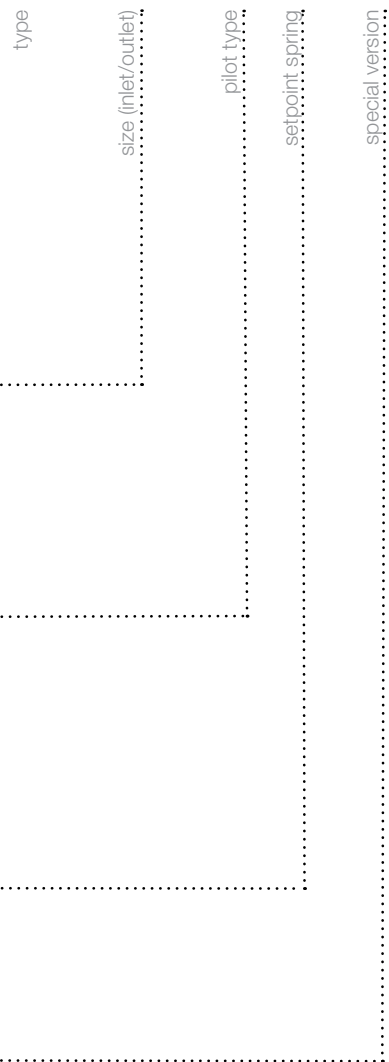
WEIGHTS	
size	weight in kg (appr.)
DN _u / DN _d	
25 / 50	65
50 / 100	85
80 / 150	215
100 / 200	270
150 / 300	630
200 / 300	650

*) 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

Example

502 - 80 / 150 - 630 / 2 - So



SIZE	
DN	
25 / 50	
50 / 100	
80 / 150	
100 / 200	
150 / 300	
200 / 300	
PILOT TYPE	
HON 630	
HON 632	
HON 635	
HON 638	
HON 640	
HON 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	

For More Information

To learn more about Honeywell's
Advanced Gas Solutions, visit
www.honeywellprocess.com or contact
your Honeywell account manager

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