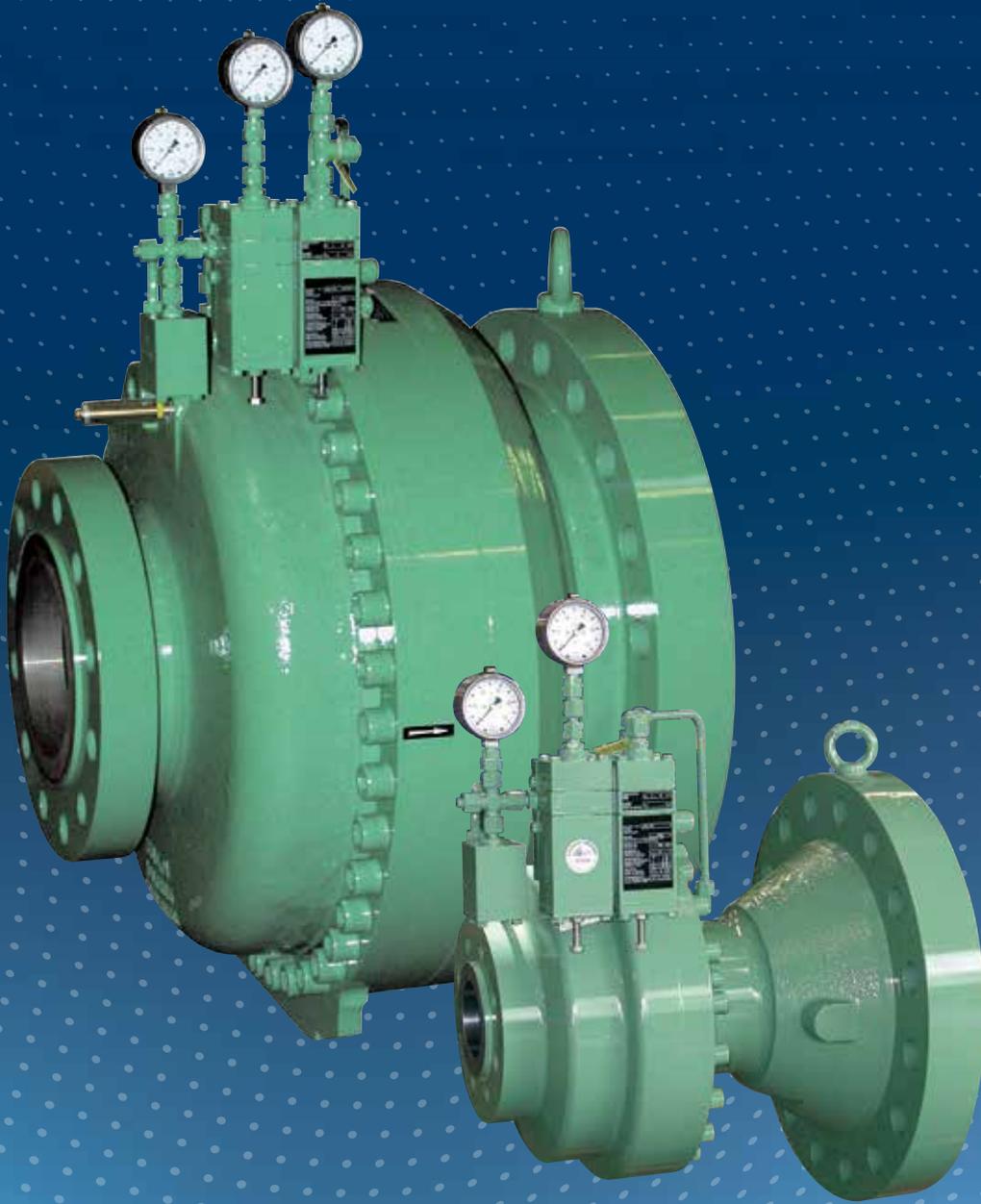


Gas Pressure Regulator HON 512



PRODUCT INFORMATION

**Serving the Gas Industry
Worldwide**

Honeywell

Gas Pressure Regulator HON 512

Application, Features, Technical data

Application

- for offtake stations in gas transmission systems, for gas supply to industrial and power plants
- suitable for outlet pressure control, inlet and differential pressure control
- for sweet natural gas, other gases on request

Features

- valve sleeves are specially coated to eliminate slip stick
- high capacity due to axial flow
- robust and simple design
- purely pneumatic operation
- high pressure cuts
- can be provided with a noise reducing outlet duct and /or an internal silencer
- local position indicator standard
- can be provided with an electric valve-position remote indicator HON 970
- fail to close / fail to open models available

TECHNICAL DATA			
max. operating pressure PS_{max}	100 bar (could be less - acc. to the flange pressure class)		
outlet pressure ranges W_d with pilot HON 650 (for outlet pressure control), accuracy class and closing pressure category	W_d in bar	accuracy class AC	closing pressure category SG
	0.3 ... 90	best class: AC 1	best class: SG 5
specific spring ranges W_{ds} with pilot HON 650	spring No.	spring colour	specific spring range W_{ds} in bar
	1	black	0.30 ... 1.00*
	2	blue	0.50 ... 2.00
	3	black	1.00 ... 5.00
	4	grey	2.00 ... 10.0
	5	brown	5.00 ... 20.0
	6	red	10.0 ... 40.0
7	white	20.0 ... 90.0**	
lock-up pressure zone	SZ 2.5		
further applications with pilots HON 650-659	<ul style="list-style-type: none"> • inlet pressure (p_U) - and differential pressure (Δp) - control • electro pneumatic control stage for pressure and flow control • electric remote control • min. outlet pressure ($p_{d min}$) and max. outlet pressure ($p_{d max}$) - stages 		
min. required differential pressure between inlet and outlet Δp	0.5 bar		
connections	flanged to DIN PN 25, PN 40 and ANSI 300 RF, RTJ, ANSI 600 RF, RTJ		
EX-protection	standard regulators do not apply to ATEX 95 (available electronic accessories fully comply with the ATEX requirements).		
materials	main valve body	A 352-LCC(QT) or equal	
	internal parts	steel, aluminium, brass	
	pilot	aluminium alloy, steel	
	diaphragm	NBR, FKM	
	sealings	NBR	

*) pilot with enlarged diaphragm ; **) metal bellow type pilot

TECHNICAL DATA	
temperature class 2	-20 °C to +60 °C (other ranges on request)
body inlet size	inlet size: DN 25, DN 50, DN 80, DN 100, DN 150, DN 200, DN 250 outlet size: (see the table below)
function and strength	acc. to EN 334
CE - sign acc. to PED	

calculation of KG-value:

$$\text{if } \frac{p_d}{p_u} \geq 0.5 \quad K_G = \frac{Q_n}{\sqrt{p_d \cdot (p_u - p_d)}}$$

$$\text{if } \frac{p_d}{p_u} \leq 0.5 \quad K_G = \frac{2 \cdot Q_n}{p_u}$$

pressures for the formulas to be inserted in absolute values

conversion factor [f] for other gases ($Q_n \text{ gas} = Q_n \text{ NG} \cdot f$):

ethylene	0.97	helium	2.15	propane	0.64
acetylene	0.84	sewer gas	0.85	oxygen	0.76
ethane	0.78	carbon monoxide	0.81	sulphur dioxide	0.53
ammonia	1.04	carbon dioxide	0.65	nitrogen	0.81
butane	0.55	air	0.80	hydrogen	3.04
chlorine	0.51	methane	1.08	natural gas	1.00
landfill gas	0.81	town gas	0.23		

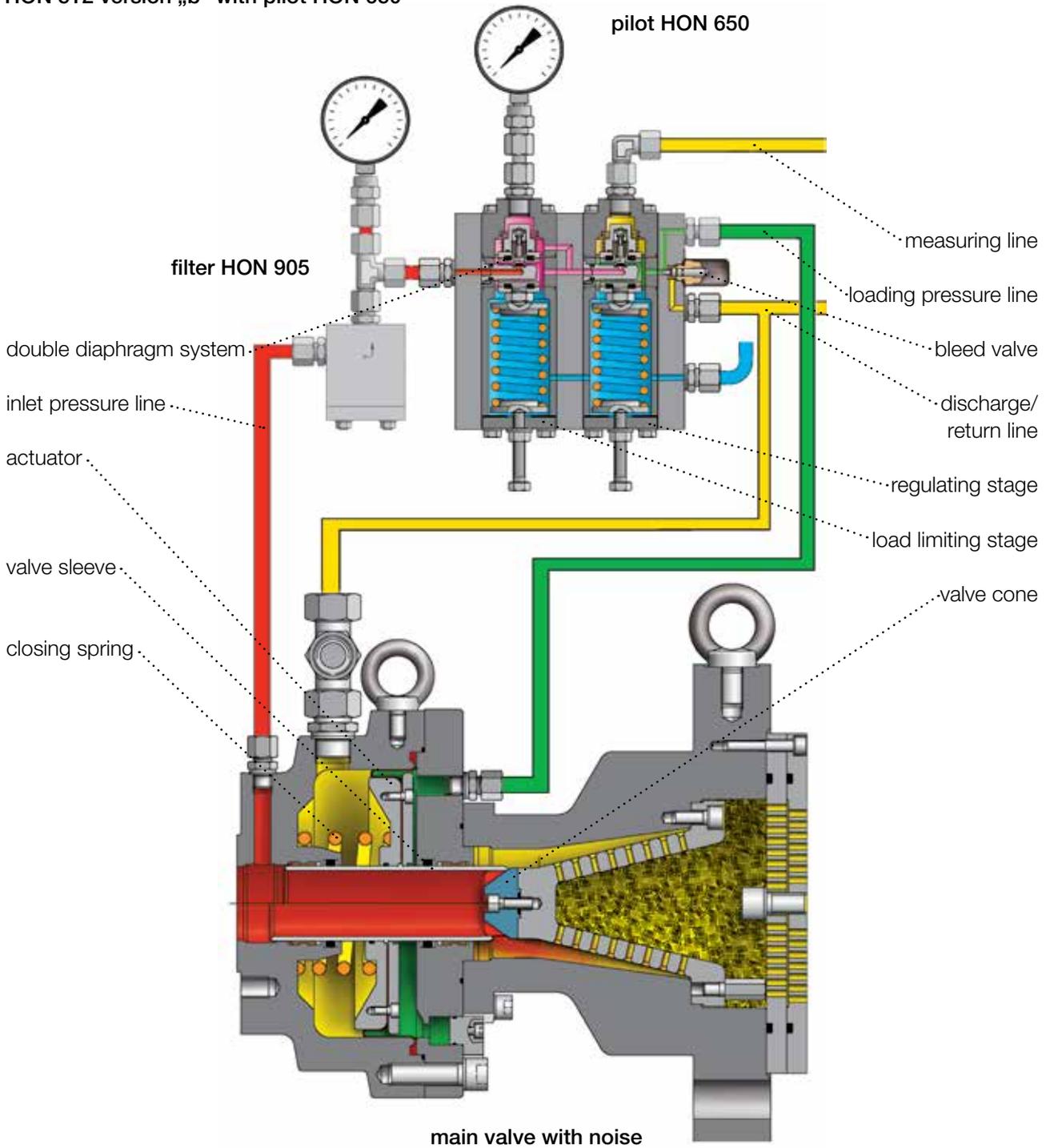
PARAMETERS						
valve data flow rate coeff. K_G for natural gas	size DN		KG - value [m ³ /h]			
	inlet	outlet	$(\rho_n = 0.83 \text{ kg/m}^3)$		$(\rho_n = 0.77 \text{ kg/m}^3)$	
	25 full bore	25	550	570		
		100	490	510		
		150	490	510		
	50 full bore	50	2200	2280		
		150	1920	1990		
		200	1980	2050		
	80 full bore	80	5610	5820		
		250	5060	5250		
	100 full bore	100	8800	9130		
		300	7810	8100		
150 full bore	150	19800	20550			
	300	14630	15180			
	400	16830	17470			
200 full bore	200	37400	38820			
	400	25850	26830			
	500	30800	31970			
250 reduced bore	250	41800	43380			
	400	25850	26780			
	500	30800	31970			
250 full bore	250	55000	57090			
	500	39600	41100			
	600	46750	48520			

CONNECTIONS						
version „b“						
inlet size	measuring line		bleed/return line		vent line	
	pipe	thread	pipe	thread	pipe	bleed
25			12 x 1.5	M16 x 1.5		
50	12 x 1.5	M14 x 1.5	12 x 1.5	M16 x 1.5	12 x 1.5	M14 x 1.5
80			16 x 2.0	M22 x 1.5		
100			16 x 2.0	M22 x 1.5		
version „c“						
150	12 x 1.5	M14 x 1.5	16 x 2.0	M22 x 1.5	12 x 1.5	M14 x 1.5
200						
250						

Gas Pressure Regulator HON 512

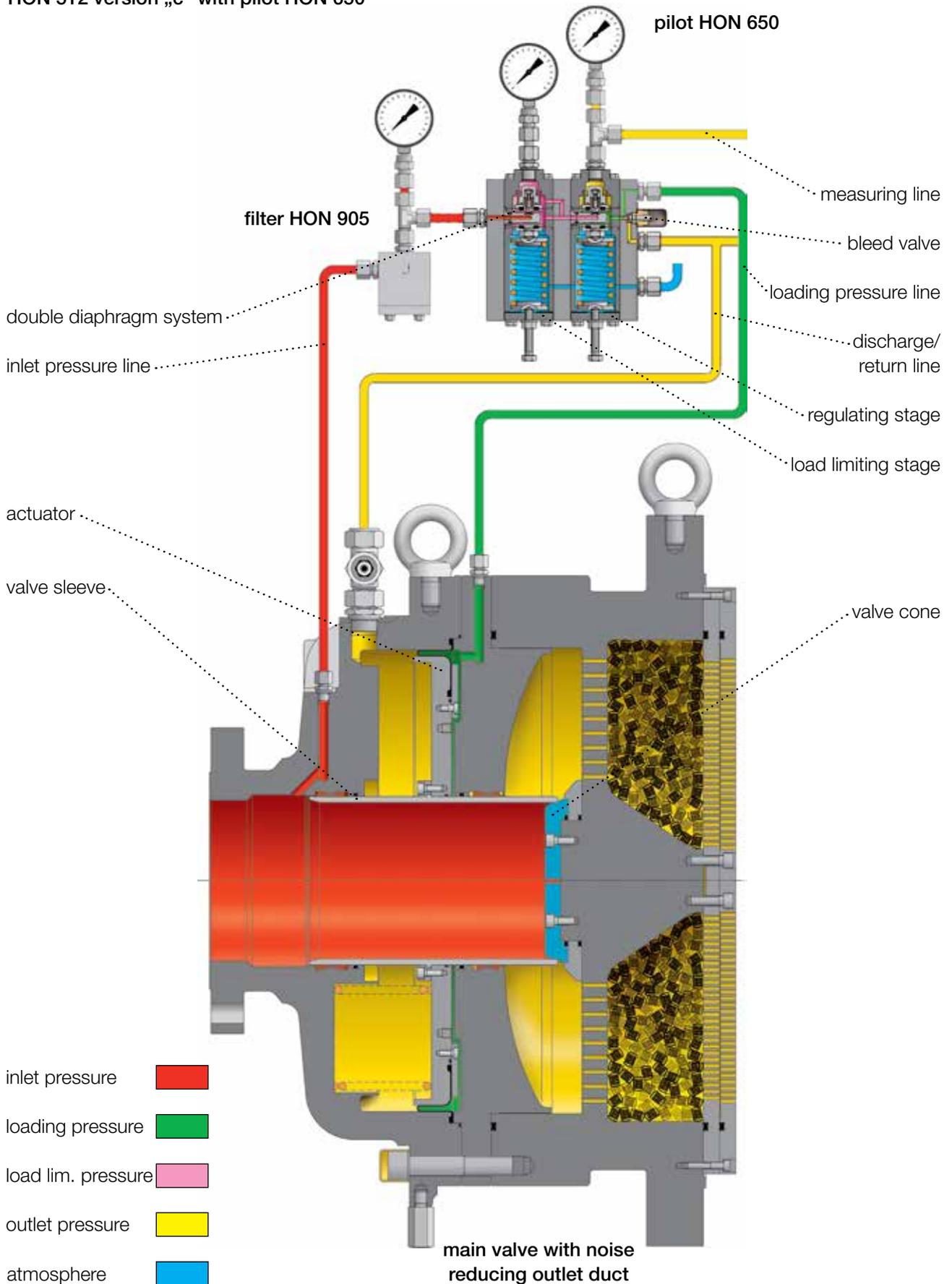
Design

HON 512 version „b“ with pilot HON 650



- inlet pressure
- loading pressure
- load lim. pressure
- outlet pressure
- atmosphere

HON 512 version „c“ with pilot HON 650



Gas Pressure Regulator HON 512

Dimensions and Weights

flanged version only
DN 150, DN 200, DN 250

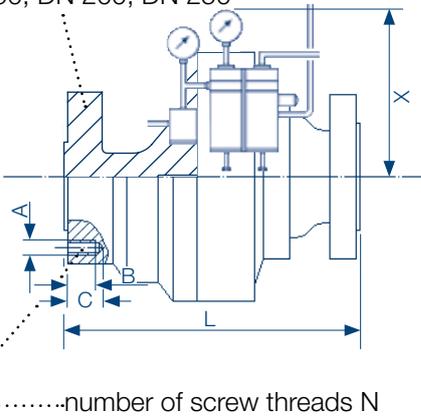


fig. 1: HON 512 - main valve with pilot HON 650

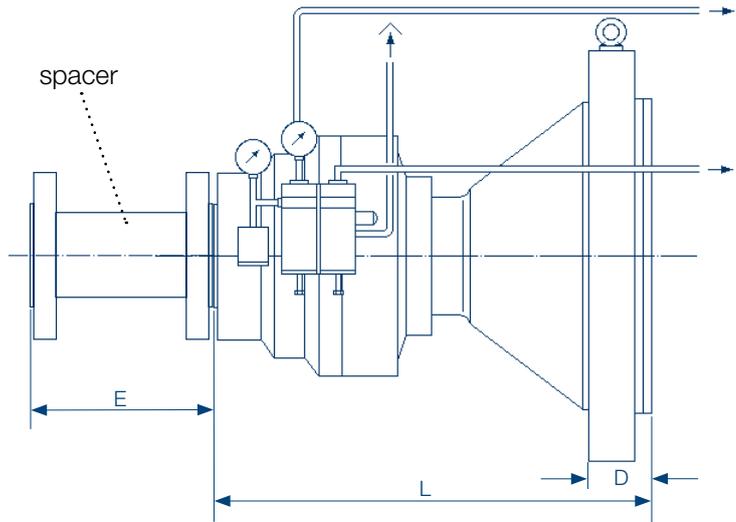


fig. 2: HON 512 - main valve with pilot HON 650, noise reducing outlet duct and spacer

DIMENSIONS																									
version „b“ - inlet with threaded holes / outlet with standard flanges																									
size DN		PN 25 and PN 40						ANSI 300 RF					ANSI 300 RTJ					ANSI 600 RF/RTJ					min. length (spacer)		
inlet	outlet	L	A	B	C	N	L	A	B	C	N	L	A	B	C	N	L	A	B	C	N	D	X	E**	
25	25	200					197					210					210								
	100*	360	M12	16	21	4	359	M16	20	25	4	365	M16	20	25	4	365	M16	20	25	4	75	415	180	
	150*	360					359					365					365					84	415	180	
50	50	270					267					283					286								
	150*	422	M16	20	25	4	421	M16	20	25	8	429	M16	20	25	8	430	M16	20	25	8	84	460	220	
	200*	422					421					429					430					92	460	220	
80	80	310					318					333					337								
	250*	512	M16	20	25	8	516	M20	26	32	8	523	M20	26	32	8	525	M20	26	32	8	100	505	260	
100	100	370					368					384					394								
	300*	548	M20	26	32	8	548	M20	26	32	8	555	M20	26	32	8	560	M24	31	38	8	103	540	300	
version „c“ - inlet / outlet with standard flanges																									
150	150	508					508					508					508								
	300*	550					550					550					550					103	585	350	
	400*	550					550					550					550					113	585	350	
200	200	610					610					610					610								
	400*	650					650					650					650					113	670	380	
	500*	650					650					650					650					137	670	380	
250 ¹	250	630					630					630					630								
	400*	660					660					660					660					113	670	420	
	500*	660					660					660					660					137	670	420	
250 ²	250	752					752					752					752								
	500*	752					752					752					752					137	740	420	
	600*	752					752					752					752					148	740	420	

*) with noise reducing outlet duct (outlet flanged to ANSI 600 RF)

**) We recommend to install a spacer in front of the regulator to enable easy removing of the regulator without removing the outlet duct.
Spacer length acc. to table above

1) reduced bore

2) full bore

WEIGHTS IN KG (APPROX.)																						
version „b“											version „c“											
inlet DN											inlet DN											
25		50			80			100			150			200			250 ¹			250 ²		
outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		outlet DN		
25	100	150	50	150	200	80	250	100	300	150	300	400	200	400	500	250	400	500	250	500	600	
35	80	90	70	130	150	120	300	180	425	500	580	770	850	1000	1100	980	1100	1200	*	*	*	

1) reduced bore; 2) full bore

*) weights on request

example

HON 512 - 50 / 200 - 650 - So

PIPE SIZE		
size DN (main valve without noise reducing outlet duct)		
inlet	outlet	version
25	25	b
50	50	b
80	80	b
100	100	b
150	150	c
200	200	c
250	250	c - rb and fb
size DN (main valve with noise reducing outlet duct)		
inlet	outlet	version
25	100	b
25	150	b
50	150	b
50	200	b
80	250	b
100	300	b
150	300	c
150	400	c
200	400	c
200	500	c
250	400	c - rb
250	500	c - rb
250	500	c - fb
250	600	c - fb
PILOT TYPE		
		e.g. HON 650
SPECIAL FEATURE		
to be described in detail		So

type

inlet

outlet

pilot

special feature

rb = reduced bore
fb = full bore



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INSTRUMENTATION & FILTRATION

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Advanced Gas Solutions, visit
www.honeywellprocess.com or contact
your Honeywell account manager

GERMANY

Honeywell Process Solutions

Honeywell Gas Technologies GmbH
Osterholzstrasse 45
34123 Kassel, Deutschland
Tel: +49 (0)561 5007-0
Fax: +49 (0)561 5007-107

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