

DIFFERENTIAL PRESSURE REGULATOR TYPE RRC-3

FUNCTION:

Pressure regulators are designed to maintain set-up, constant pressure difference in process installations, which are connected in series to regulator's valve outlet. Regulators are adjusted to steam, liquids and inflammable gases.

CONSTRUCTION:

Regulator comprises three main units:

- double-seated valve (01),
- actuator (02)
- adjuster set (03).

CHARACTERISTIC:

Diaphragm actuator can have the following effective diaphragm area: 100 cm², 160 cm², 320 cm², depending on the pressure difference required.

Actuator is connected to the valve through adjuster set (which consists of a spring /s/ with spring spacers). Valve's and actuator's stems are sealed by means of elastic bellows made from stainless steel.

The bellows do not require service during operation. Regulator's valve is closed on power failure.



PRINCIPLE OF OPERATION:

Regulator RRC-2:

- higher pressure impulse (P⁺) is applied to actuator chamber through adjuster set;
- lower pressure impulse (P⁻) is applied to actuator outer chamber.

The spring tension should be such as to allow for equilibrium of forces, when pressure difference achieves its set-up value. If the set-up value is exceeded, equilibrium of forces gets disturb, which causes valve plug to open and flow rate through the valve to increase till the regulated pressure drops down to its set-up value.

NOTE:

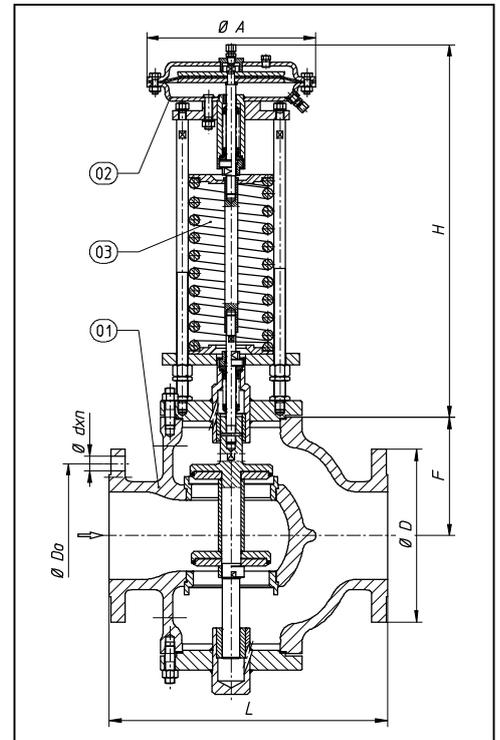
1. In order to avoid excess noise, it is recommended to maintain $p_r(abs) > \frac{1}{2} p_{zas}(abs)$.
2. Kvs values of regulators are selected by the manufacturer according to individual needs of Customer.
3. Please advise regulated pressure of the regulator while ordering, and the regulator will be set accordingly..

Pressure		
Nominal pressure	korporu	PN40
	kotnierzy	PN16/40
Max. medium pressure		2,5 MPa
Proportional range		Xp=16%

Medium	Max. medium temp.	Tightness class
air, gases	90°C	VI kl. acc. PN-EN 60534-4
steam	240°C	VI kl. acc. PN-EN 60534-4
	300°C DN15-50 "hard" colsing	IV kl. acc. PN-EN 60534-4

MATERIALS:

	Materials		Norm
Body	GP240GH	1.0619	PN-EN 10213-2
	GX5CrNiMo19-11-2	1.4408	PN-EN 10213-4
Bonnet	C15E	1.1141	EN 10084
	X6CrNiTi18-10	1.4541	PN EN 10088
Plug, seat	X17CrNi16-2	1.4057	
	X6CrNiTi18-10	1.4541	
Stem	X17CrNi16-2	1.4057	PN EN 10088
	X6CrNiTi18-10	1.4541	
Plug seal	PTFE+ brąz lub grafit		PN EN 10088
	EPDM		
	NBR		
Diaphragm	EPDM with poliester texture		PN EN 10088
	NBR with poliester texture		



DIMENSIONS

Reducer size DN		65	80	100	150	200
Kvs coefficient ¹⁾		95	120	150	320	400
D [mm]	PN16	185	200	220	285	340
	PN25-40	185	200	235	300	375
L[mm]	PN 16-40	290	310	350	480	600
D ₀ [mm]	PN16	145	160	180	240	295
	PN25-40	145	160	190	250	320
d [mm]	PN16	18	18	18	22	22
	PN25-40	18	18	22	26	30
n	PN16	4	8	8	8	12
	PN25-40	8	8	8	8	12
F [mm]		111	133,5	149	205	250
Weight[kg]		49	58	75	157	220

SPRING RANGE:

Acuator		Spring range [kPa]					
Surface [cm ²]	Ø A	30-160	50-240	60-300	80-400	100-480	100-560
160	230	30-160	50-240	60-300	80-400	100-480	100-560
320	290	10-40	15-80	30-160	50-280	80-375	100-550
Max. height	H	400				625	

MONTAGE:

Reducer should be installed on the horizontal pipe and with down direct spring. Flow should be with accordance with arrow on the valve body. It is recommended to use net strainer type FS. Reducer is delivered with impulse pipe and with necessary impulse pipe connection (reducer for steam is also equipment with condensation vessels). Reducer is adjusted for order pressure.