

PRESSURE REGULATOR RC-5

FUNCTION:

Pressure regulators are designed to maintain constant fluid pressure upstream the valve. Regulators are used in steam- and air-pipe networks (other fluids are also permissible). Regulator does not require external supply of energy

CONSTRUCTION:

Regulator comprises three main units:

- a single-seated valve (1),
- actuator (2)
- and adjuster set (3).

Diaphragm actuator can have the following effective diaphragm area: 50 cm², 100 cm², 160 cm², 320 cm², depending on the regulated pressure 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. In case of fluid being steam, it is necessary to equip regulator with condensation tank filled with water. In this case, it is also recommended to use a conical decompressing connection on the valve's outlet pipe.



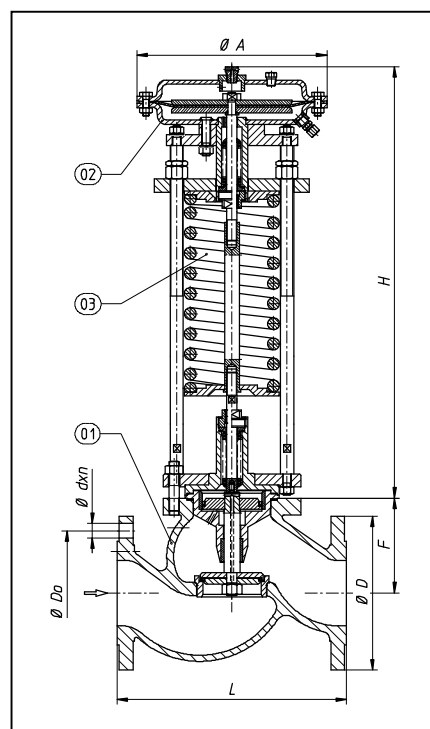
PRINCIPLE OF OPERATION:

Regulated pressure, which is applied to actuator inner chamber causes spring compression in adjuster set. Resulting spring tension should allow for attaining equilibrium of forces, when fluid pressure upstream the valve achieves required boundary value. Further increase in fluid pressure will disturb the equilibrium and cause valve plug to open and regulated pressure to drop down to its set-up value. Valves are in principle hydrostatically balanced at flow close. With tight design it is absolutely necessary to install a strainer on the supply side. In case of standard design, strainer's installation guarantees a safe operation of the regulator and increases its lifecycle.

Pressure		Seat-plug gasket	Max. medium temp.	Tightness class	
Nominal pressure	body	PN40	EPDM	130°C	VI kl. wg. PN-EN 60534-4
	bonnet	PN16/40	NBR	90°C	VI kl. wg. PN-EN 60534-4
Max. medium pressure		2,5 MPa	PTFE	240°C	VI kl. wg. PN-EN 60534-4
Proportional range		Xp=16%	„metal-metal” DN15-50	300°C	IV kl. wg. 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
	X6CrNiTi 18-10	1.4541	PN EN 10088
Plug, seat	X17CrNi 16-2	1.4057	
	X6CrNiTi 18-10	1.4541	
Stem	X17CrNi 16-2	1.4057	
	X6CrNiTi 18-10	1.4541	
Bellow seal	X6CrNiMoTi17-12-2	1.4571	
Plug seal	PTFE+ bronze or grafit		
	EPDM		
	NBR		
Diaphragm	EPDM with poliester texture		
	NBR with poliester texture		



DIMENSIONS:

Regulator size DN	15	20	25	32	40	50	65	80	100	125	150	200	
Kvs coefficient ¹⁾	4	5	6,5	13,5	22	33	46	66	94	130	170	250	
D [mm]	PN16	95	105	115	140	150	165	185	200	220	250	285	340
	PN25-40									235	270	300	375
L[mm]	PN 16-40	130	150	160	180	200	230	290	310	350	400	480	600
D ₀ [mm]	PN16	65	75	85	100	110	125	145	160	180	210	240	295
	PN25-40									190	220	250	320
d [mm]	PN16	14	14	14	18	18	18	18	18	18	18	22	22
	PN25-40									22	26	26	30
n	PN16	4	4	4	4	4	4	4	4	4	4	4	12
	PN25-40									8	8	8	8
F [mm]		63	63	63	80	82	86	118	118	124	150	173	216
Weight [kg]		18	20	30	33	38	41	49	58	75	110	157	220

1) Other Kvs for individual order

SPRING RANGE:

Acuator		Spring Range [kPa]										
Surface [cm ²]	Ø A											
80	190	200-950 200-1100										
100	190	150-750										
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
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 vessel). Reducer is adjusted for order pressure.