

## PRESSURE REGULATOR TYPE RC-5-2

### FUNCTION:

Pressure regulators are designed to maintain constant fluid pressure upstream the valve. Regulators are used in water 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)
- adjusterset (3).

Diaphragm actuator can have the following effective diaphragm area: 50 cm<sup>2</sup>, 100 cm<sup>2</sup>, 160 cm<sup>2</sup>, 320 cm<sup>2</sup>, 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. Fluid flows through valve from the actuator.



### PRINCIPLE OF OPERATION:

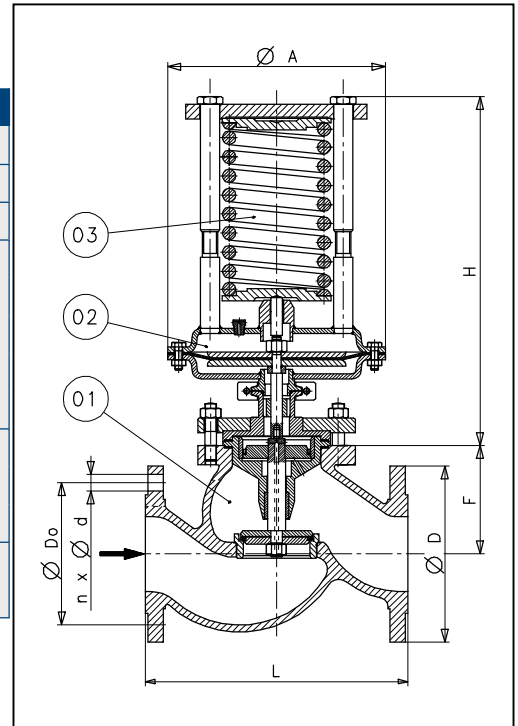
Regulated pressure, which is applied to actuator inner chamber causes spring compression in adjuster set. Resulting spring tension should allow for attaining equilibrium of forces, when fluid pressure upstream the valve achieves required boundary value. Further increase in fluid pressure will disturb 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 lose. 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 life cycle.

Pressure		
Nominal pressure	Body	PN40
	Flange	PN16/40
Max. medium pressure		1,1 MPa
Proportional range		Xp=16%

Seat-plug seal	Max. medium temp.	Tightness class
NBR	90°C	VI kl. wg. PN-EN 60534-4
EPDM	130°C	VI kl. wg. PN-EN 60534-4
PTFE	130°C	VI 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
	X6CrNiTi18-10	1.4541	PN-EN 10088
Plug, seat	X17CrNi16-2	1.4057	
	X6CrNiTi18-10	1.4541	
Stem	X17CrNi16-2	1.4057	
	X6CrNiTi18-10	1.4541	
Plug seal	PTFE+ brąz lub grafit		
	EPDM		
	NBR		
Diaphragm	EPDM with poliester texture		
	NBR with poliester texture		



## DIMENSIONS:

Regulator dimensions DN	15	20	25	32	40	50	65	80	100	125	150	200	
Kvs coefficient <sup>1)</sup>	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 <sub>0</sub> [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	4
	PN25-40									8	8	8	12
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:

Acutator		Spring range [kPa]										
Surface [cm <sup>2</sup> ]	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. Flow should be with accordance with arrow on the valve body. It is recommended to use net strainer type FS. Reducer is adjusted for order pressure.