



PRESSURE REGULATOR RCP-8

FUNCTION

Pressure regulators are designed to maintain constant pressure downstream the valve regardless of fluctuation of supply pressure. Regulators are used in steam- and air- pipe networks in order to prevent the installation against excess pressure increase. Other fluids are also permissible.

CONSTRUCTION

Regulator comprises three main units: valve (1), actuator (2) and adjuster set (3). In case of using a regulator for reducing steam pressure (steam temperature exceeding 135° C), it is necessary to equip it with a condenser 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



Fluid flowing through the valve constitutes the driving force of the regulator. The impulse of regulated pressure, as measured downstream the valve, is applied to the actuator pressure chamber (2). The resulting pressure on the actuator diaphragm is counterbalanced by the spring tension in the adjuster set (3). Thus, a change in the regulated pressure causes valve (1) opening or closing, and allows for keeping the reduced pressure constant at the valve outlet.

NOTE:

- 1. In order to avoid excess noise, it is recommended to maintain pr (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	valve	PN40			
	flanges	PN16/40			
Max. fluid pre	2,5 MPa				
Proportionalit	Xp=16%				

Medium	Max. fluid temp	Szczelność zamknięcia
air, gases	90ºC	VI kl. wg. PN-EN 60534-4
water	130ºC	VI kl. wg. PN-EN 60534-4
Steam	240°C	VI kl. wg. PN-EN 60534-4

SPECIFICATION OF MATERIALS

	Materials	Norm	
Padu	GP240GH	1.0619	PN-EN 10213-2
body	GX5CrNiMo19-11-2	1.4408	PN-EN 10213-4
D	C15E	1.1141	PN-EN 10084
bonnet	X6CrNiTi18-10	1.4541	
	X17CrNi16-2	1.4057	
Plug, Seat	X6CrNiTi18-10	1.4541	DN EN 10099
Charm	X17CrNi16-2	1.4057	PIN-EN 10000
Stem	X6CrNiTi18-10	1.4541	
Elastic Bellow	X6CrNiMoTi17-12-2	1.4571	
	PTFE+ bronz		
Plug sealing	EPDM		
	NBR		
Diaphragm	EPDM with polyeste		
Diapiliagili	NBR with polyester		



DIMENSIONS

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

1) Other Kvs coefficients available on request

SETTING RANGES OF REGULATED PRESSURE ²⁾

Actuator		Sotting ranges [kPa]		
Area [cm²]	ØA	Setting langes [Kra]		
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	
Max. height	Н	400	625	

2) Other setting ranges available on request

INSTALLATION

Regulator should be mounted on a horizontal pipeline with the spring facing downward. Direction of fluid flow must be as indicated on the regulator's valve body. It is recommended to install strainer type FS in front of the regulator. Regulators are equipped with impulse pipe connections, which are already fastened, and impulse pipes to be fastened. Additionally, steam regulators are equipped with condensers and connection stubs for the pipeline. Regulator is set at the regulated pressure required when supplied. Installation diagram on page 53.