

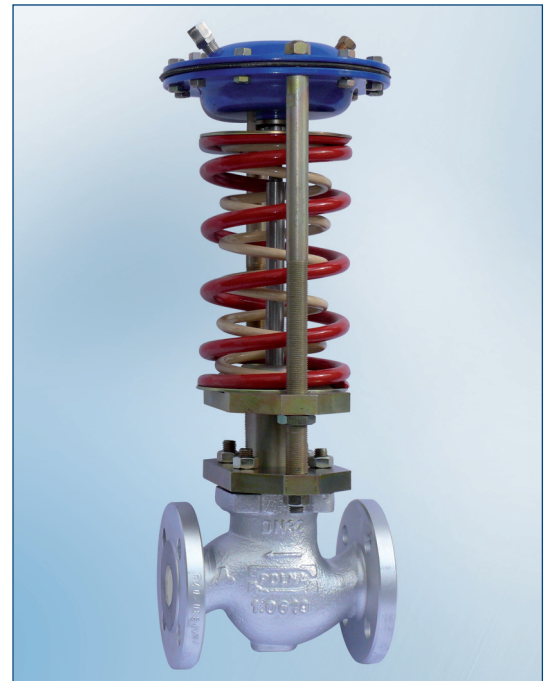
PRESSURE REGULATOR RCP-3

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 (4) 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:

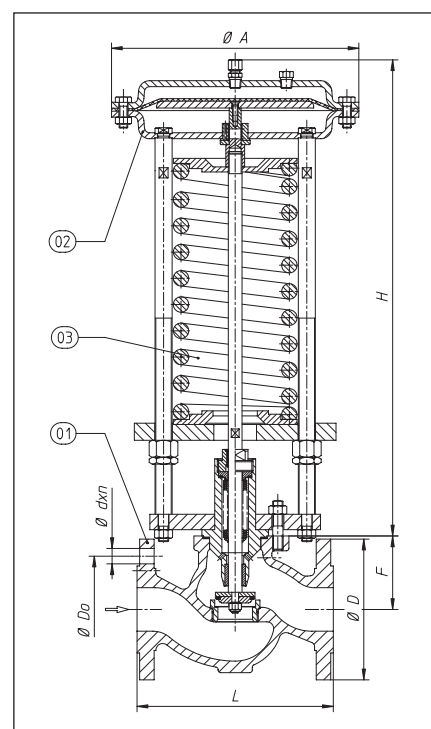
1. In order to avoid excess noise, it is recommended to maintain $p_r (abs) > \frac{1}{2} p_{zas} (abs)$.
2. Kvs values of regulators are selected by the manufacturer according to individual needs of Customer.
3. Please advise regulated pressure of the regulator while ordering, and the regulator will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

Pressure		
Nominal pressure	valve	PN40
	flanges	PN16/40
Max. fluid pressure	2,5 MPa	
Proportionality range	Xp=16%	

Medium	Max. fluid temp	Szczelność zamknięcia
air, gases	90°C	VI kl. wg. PN-EN 60534-4
water	130°C	VI kl. wg. PN-EN 60534-4
Steam	240°C PTFE	VI kl. wg. PN-EN 60534-4
	340°C „metal-metal”	IV kl. wg. PN-EN 60534-4

SPECIFICATION OF MATERIALS

	Materials		Norm
Body	GP240GH	1.0619	PN-EN 10213-2
	GX5CrNiMo19-11-2	1.4408	PN-EN 10213-4
Bonnet	C15E	1.1141	PN-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	
Elastic Bellow	X6CrNiMoTi17-12-2	1.4571	
Plug sealing	PTFE+ bronze		
	EPDM		
	NBR		
Diaphragm	EPDM with polyester insert		
	NBR with polyester insert		



DIMENSIONS

Regulator's Size DN		15	20	25	32	40	50
Dimensions [mm]	Max. coefficient Kvs ¹⁾	4	5	6,5	13,5	22	33
	D [mm]	95	105	115	140	150	165
	L [mm]	130	150	160	180	200	230
	Do [mm]	65	75	85	100	110	125
	d	14	14	14	18	18	18
	n	4	4	4	4	4	4
	F [mm]	63	63	63	80	82	86
	Regulator's weight [kg]	18	20	30	33	38	41

1) Other Kvs coefficients available on request

SETTING RANGES OF REGULATED PRESSURE ²⁾

Actuator		Setting ranges [kPa]					
Area [cm ²]	Ø A [mm]						
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	H	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.