

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).

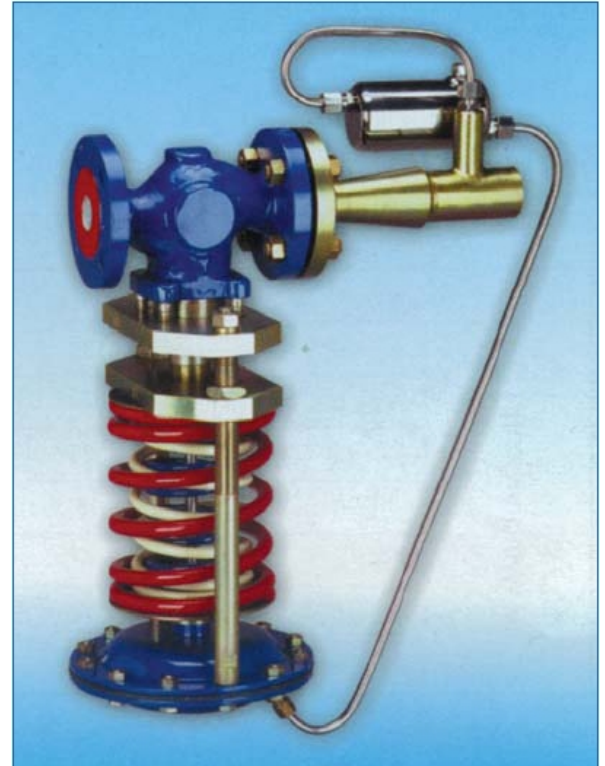
Pressure regulator type RCP-8 has a valve plug balanced.

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.

Pressure regulators are available in two design variations:

- standard – IV kl. IEC 534/4 : - metal-to-metal sealing of trim ,
0,05%kvs shut-off leakage
- tight – VI kl. IEC 534/4 : - metal-PTFE sealing for steam or metal
- EPDM sealing for other fluids ; **0% leakage** .



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.

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 $p_r (\text{abs}) > \frac{1}{2} p_{\text{zas}} (\text{abs})$.
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.

SPECIFICATION OF MATERIALS

EN

Body	GP240GH	1.0619
Bonnet	C22	1.0402
Plug	X17CrNi16-2	1.4057
Seat	X17CrNi16-2	1.4057
Stem	X6Cr17	1.4016
Elastic Bellow	X6CrNiMoTi17-12-2	1.4571
Diaphragm	EPDM with polyester insert	
Plug sealing	PTFE + bronze	

TECHNICAL DATA

Nominal pressure:

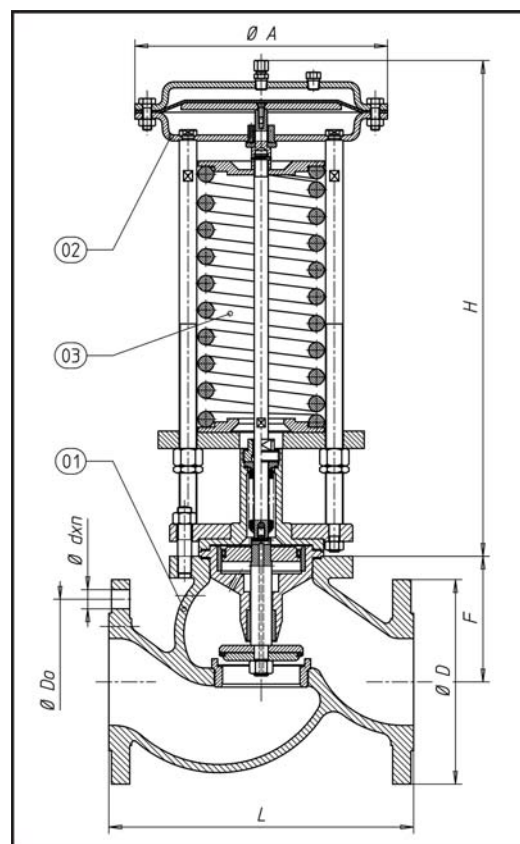
- VALVE: PN 40
- FLANGES: PN 16...40

Max. fluid pressure: 2,5 Mpa

Proportionality range Xp: 16%

Max. fluid temp.:

- Steam: "metal – to metal" +350°C ; "tight" +240 °C
- Inflammable gas: +80 °C



Regulator Nominal Diameter DN		65	80	100	125	150	200
Max. Kvs coefficient ¹⁾ [m ³ /h]		45	66	90	130	170	250
D I M E N S I O N S	Ø D [mm] PN16	185	200	220	250	285	340
	PN25-40			235	270	300	375
	L [mm]	290	310	350	400	480	600
	Ø D ₀ [mm] PN16	145	160	180	210	240	295
	PN25-40			190	220	250	320
	Ø d [mm] PN16	18	18	18	18	22	22
	PN25-40			22	26	26	30
	n	PN16	4	8	8	8	8
	PN25-40	8					
F [mm]		118	118	124	150	173	216
Weight [kg]		49	58	75	110	157	220

SETTING RANGES OF REGULATED PRESSURE²⁾

Actuator		Setting ranges [kPa]	
Area [cm ²]	Ø A		
50			400 ... 2200
100	190		250... 1200
120	230	60 ...320 150 ...740	200...1000 300...1500
160	230	30 ...160 50...240 60...300 80...400 100...480 100...560	150 ...700 200 ...1100
320	290	10...40 15...80 25...120 30...160 40...200 50...280	100 ...550
Max. height	H	400	625

1) other Kvs coefficients available on request; 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.