

PRESSURE REGULATING VALVE RP4D and RP4P

DESCRIPTION

The ADCA RP4 series pressure regulating valves are single seated, operated without auxiliary energy, designed for use on water and other liquids compatible with the construction.

They are particularly suitable for reducing or sustaining water pressure in all industrial process systems where pressures should be kept constant.

OPERATION

Pressure reduction is achieved by means of variable throttling of the inlet flow at the valve seat by variation of the flow area between seat and disc. The basic control element is composed by a pilot valve type P20 (see IS P20D.01 E), externally piped. It can vary according with the foreseen options, but always with basic function of controlling pressure in the chamber above the valve's diaphragm (RP4D) or piston (RP4P).

MAIN FEATURES

Robust construction.

Wide range of tailor made versions.

OPTIONS: Anti-cavitation plugs (flow over the seat).
Pressure sustaining design (SP4...).

USE: Water, gases and other fluids compatible with the construction.

AVAILABLE MODELS: RP4DS – PN16 or PN40 diaphragm sensing.
RP4DI – PN16 or PN40 diaphragm sensing.
RP4PS – PN16 or PN40 piston sensing.
RP4PI – PN16 or PN40 piston sensing.
Suffix S: Cast steel construction.
Suffix I: Stainless steel construction.

SIZES: DN 32 to DN 100.

CONNECTIONS: Flanged EN 1092-1 PN16 and PN40.
ANSI on request.

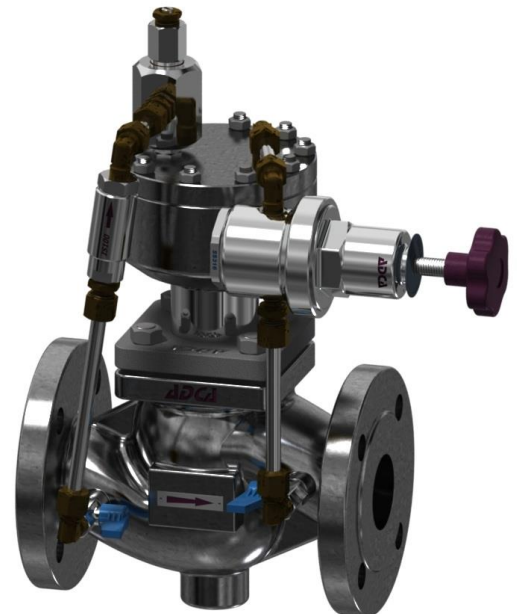
MAX. PRESS.

DROP: With standard plug – 10 bar.
With perforated plug – 10 to 20 bar
(water at ambient temperature).

INSTALLATION: Horizontal installation.
An "Y" strainer should be installed upstream the valve.



RP4D



RP4P

CE MARKING – GROUP 2 (PED – European Directive)

PN16	PN40	Category
DN 32 to DN 50	DN 32	SEP
DN 65 to DN 100	DN 40 to DN 100	1 (CE marked)

BODY LIMITING CONDITIONS

RP4...S – PN16 *		RP4...I – PN16 *		RP4...S – PN40 *		RP4...I – PN40 *	
ALLOW. PRESS.	RELATED TEMP.	ALLOW. PRESS.	RELATED TEMP.	ALLOW. PRESS.	RELATED TEMP.	ALLOW. PRESS.	RELATED TEMP.
16 bar	-10 °C / 50 °C	16 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C
13,3 bar	200 °C	13,4 bar	200 °C	33,3 bar	200 °C	33,7 bar	200 °C
12,1 bar	250 °C	12,7 bar	250 °C	27,6 bar	250 °C	29,7 bar	300 °C
11 bar	300 °C	11,8 bar	300 °C	25,7 bar	300 °C	28,5 bar	350 °C
10,2 bar	350 °C	11,4 bar	350 °C	23,8 bar	350 °C	27,4 bar	400 °C

Note: Maximum temperatures limited by materials used, such as o-rings, diaphragms, etc.

* Rating according to EN1092-1:2018;

MATERIALS

POS. Nº	DESIGNATION	MATERIAL RP4DS	MATERIAL RP4DI
1	Valve body	ASTM A216WCB / 1.0619; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI 316 / 1.4401	AISI 316 / 1.4401
3	Needle valve	AISI 316 / 1.4401	AISI 316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI 302 / 1.4300	AISI 302 / 1.4300
6	Bonnet	CF8M / 1.4408	CF8M / 1.4408
7	Gasket	Non asbestos	Non asbestos
8	Diaphragm	Rubber	Rubber
9	Gasket	NBR	NBR
10	Actuator	Steel	St. steel
11, 12	Bolts	Steel 8.8	A2-70

DIMENSIONS – RP4D

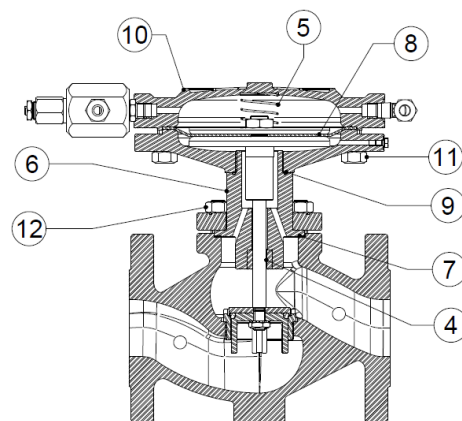
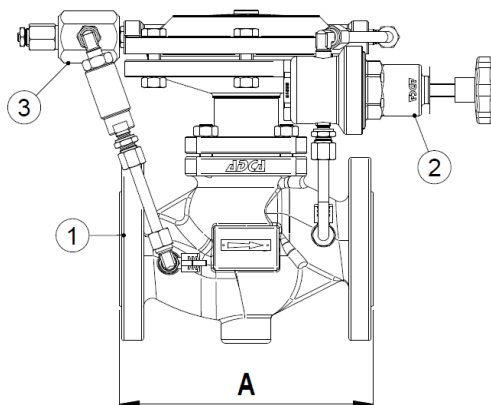
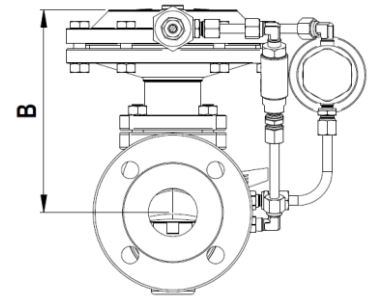
SIZE DN	A (mm)	B (mm)	WGT. (kg)
32	180	195	17
40	200	200	18,8
50	230	210	26,5
65	290	245	32
80	310	248	38
100	350	255	54

* Approximate dimensions and weight, consult factory for certified dimensions

FLOW RATE COEFFICIENTS (m³/h)

SIZE DN	RP4D		RP4P		
	Full bore Stand. Plug	Red. Flow Stand. Plug	Full bore Stand. Plug	Red. Flow Stand. Plug	Perforated plug
32	15,4	–	15,4	11,7	11,8
40	22,2	–	22,2	19,2	18
50	40,1	–	40,1	27,7	28
65	–	49	63,4	49	48
80	–	79,2	89,7	79,2	74
100	–	112,1	136,7	112,1	115

Sizing: see data sheet IS PV10.00 E;
For conversion Kvs = Cv(US) x 0,855.



MATERIALS			
POS. Nº	DESIGNATION	MATERIAL RP4PS	MATERIAL RP4PI
1	Valve body	ASTM A216WCB / 1.0619; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI 316 / 1.4401	AISI 316 / 1.4401
3	Needle valve	AISI 316 / 1.4401	AISI 316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI 302 / 1.4300	NBR
6	Bonnet	CF8M / 1.4408	CF8M / 1.4408
7	Gasket	Non asbestos	Non asbestos
8	Piston	AISI 316 / 1.4401	AISI 316 / 1.4401
9	O-ring	NBR	NBR
10	Nut	A2-70	A2-70
11	Cover	S355J2G3 / 1.0570	AISI 316 / 1.4401
12	O-ring	NBR	NBR
13	Bolts	Steel 8.8	A2-70

DIMENSIONS – RP4P			
SIZE DN	A (mm)	B (mm)	WGT. (kg)
32	180	275	19,2
40	200	280	22
50	230	290	29
65	290	325	34
80	310	328	40,5
100	350	335	56

* Approximate dimensions and weight, consult factory for certified dimensions

