

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 P-20 (see IS P20D.01E), externally piped. It can vary according with the foreseen options, but always with basic function of controlling pressure in the chamber above 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

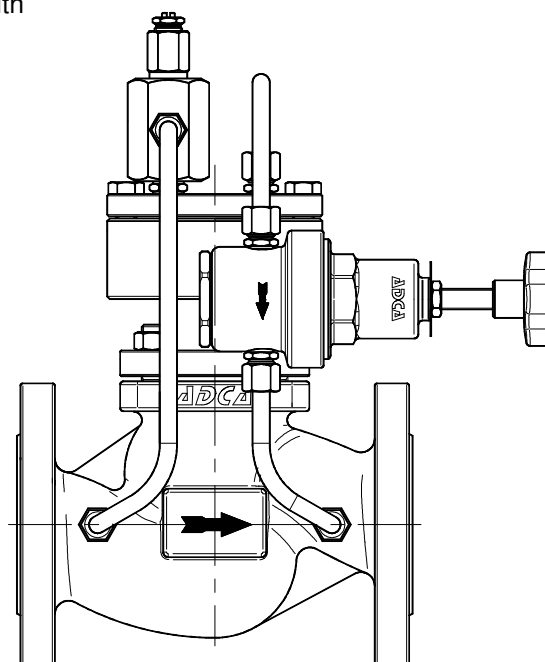
MAX. PRESSURE

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 provided upstream the valve.



RP4D



RP4P

CE MARKING (PED - European Directive 97/23/EC)		
PN 16	PN 40	Category
DN32 to DN50	DN32	SEP - art. 3, paragraph3
DN65 to DN100	DN40 to DN80	1 (CE Marked)
/	DN100	2 (CE Marked)

VALVE BODY LIMITING CONDITIONS

RP4...S - PN16 *		RP4...I - PN16 *		RP4...S - PN40 *		RP4...I - PN40 *	
ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.
16 bar	-10 /120° C	16 bar	-10 /50° C	40 bar	-10 /50° C	40 bar	-10 /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	300 °C	29,7 bar	300 °C
11 bar	300 °C	11,8 bar	300 °C	25,7 bar	350 °C	28,5 bar	350 °C
10,2 bar	350 °C	11,4 bar	350 °C	23,8 bar	400 °C	27,4 bar	400 °C

* Rating according to EN1092-1:2007

Maximum temperature limited by the materials used such as o-rings, diaphragms, etc

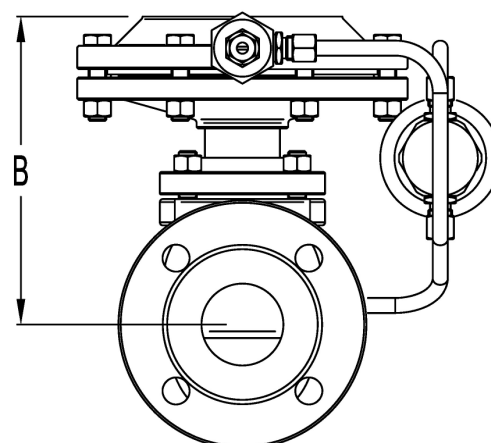
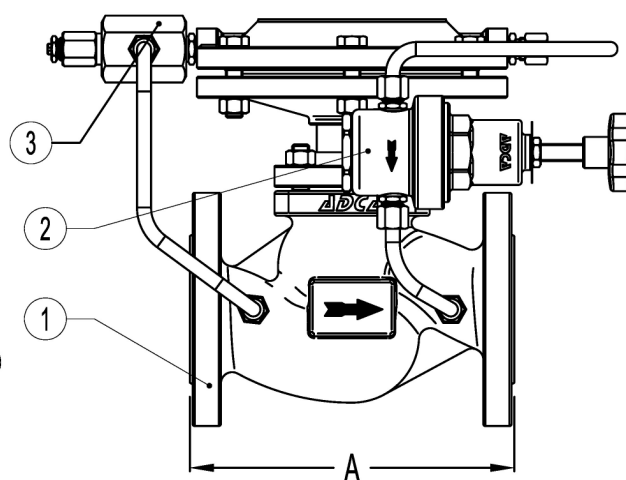
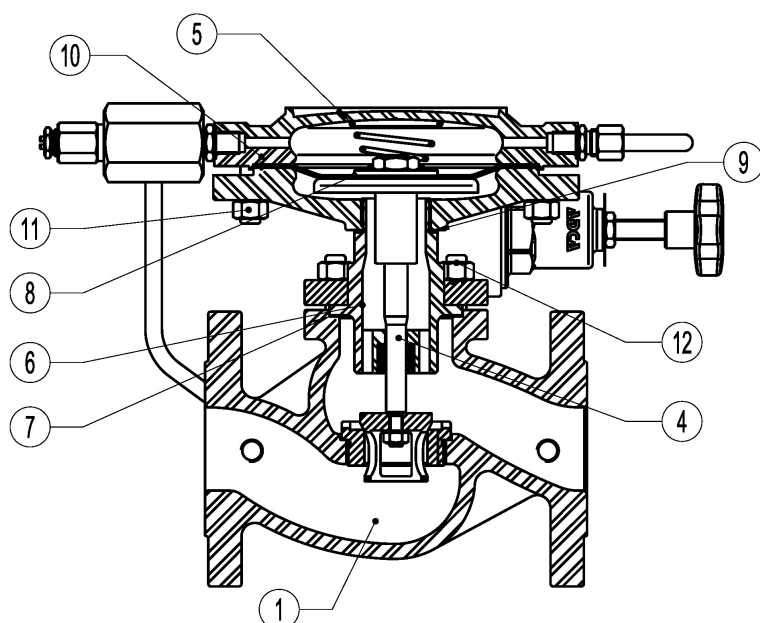
MATERIALS

POS.	DESIGNATION	MATERIAL RP4DS	MATERIAL RP4DI
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI302 / 1.4300	AISI302 / 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 (mm)

SIZE DN	A	B	WGT. Kgs
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 figures.



FLOW RATE COEFFICIENTS

DN	RP4D		RP4P		
	Kvs (m3/h)		Kvs (m3/h)		
	Full bore Std. Plug	Red. Flow Std.Plug	Full bore Std. Plug	Red. Flow Std.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

Kvs in m3/h , Sizing: see data sheet IS PV 10.00 E ; For conversion $Kvs = Cv(US) \times 0,855$

DIMENSIONS RP4P (mm)

SIZE DN	A	B	WGT. Kgs
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 figures.

MATERIALS

POS.	DESIGNATION	MATERIAL RP4PS	MATERIAL RP4PI
1	Valve Body	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619	CF8M / 1.4408
2	Pilot valve	AISI316 / 1.4401	AISI316 / 1.4401
3	Needle valve	AISI316 / 1.4401	AISI316 / 1.4401
4	Trim	Stainless steel	Stainless steel
5	Spring	AISI302 / 1.4300	AISI302 / 1.4300
6	Bonnet	CF8M / 1.4408	CF8M / 1.4408
7	Gasket	Non asbestos	Non asbestos
8	Piston	AISI316 / 1.4401	AISI316 / 1.4401
9	O-ring	NBR	NBR
10	Nut	A2-70	A2-70
11	Cover	S355J2G3 / 1.0570	AISI316 / 1.4401
12	O-ring	NBR	NBR
13	Bolts	Steel 8.8	A2-70

