# PRESSURE REGULATING VALVE
# RP6D and RP6P

DESCRIPTION

The ADCA RP6 series pressure regulating valves are single seated balanced plug, operated without auxiliary energy, designed for use on gases and liquids compatible with the construction.
They are particularly suitable for reducing or sustaining pressure in all industrial process systems where pressures should be kept constant.

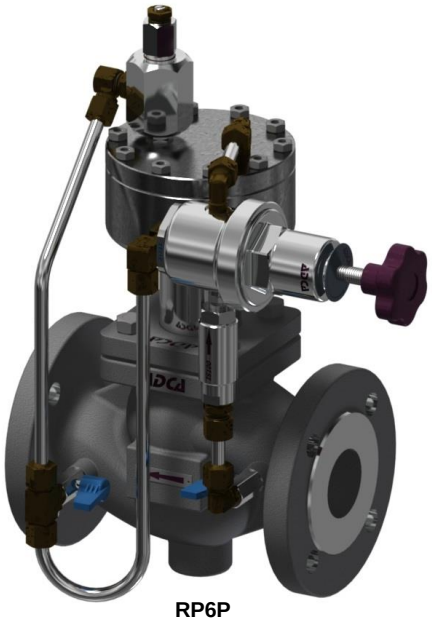
**RP6D**

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 valve's diaphragm (RP6D) or piston (RP6P)

MAIN FEATURES

Robust construction.
Wide range of tailor made versions.



**RP6P**

| | |
|---|---|
| OPTIONS: | Pressure sustaining design (SP6…). |
| USE: | Gases and other fluids compatible with the construction. |
| AVAILABLE MODELS: | RP6DS– PN16 or PN40 diaphragm sensing.<br>RP6DI – PN16 or PN40 diaphragm sensing.<br>RP6PS – PN16 or PN40 piston sensing.<br>RP6PI– PN16 or PN40 piston sensing.<br>Suffix S: Cast steel construction.<br>Suffix I: Stainless steel construction. |
| SIZES: | DN 32 to DN 100. |
| CONNECTIONS: | Flanged EN 1092-1 PN16 and PN40.<br>ANSI on request. |
| INSTALLATION: | Horizontal installation.<br>An "Y" strainer should be installed upstream the valve. |

| 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 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **RP6...S – PN16 *** | | **RP6...I – PN16 *** | | **RP6...S – PN40 *** | | **RP6...I – PN40 *** | |
| **ALLOW. PRESS.** | **RELATED TEMP.** | **ALLOW. PRESS.** | **RELATED TEMP.** | **ALLOW. PRESS.** | **RELATED TEMP.** | **ALLOW. PRESS.** | **RELATED TEMP.** |
| **16 bar** | -10 ºC / 50 ºC | **16 bar** | -10 ºC / 50 ºC | **40 bar** | -10 ºC / 50 ºC | **40 bar** | -10 ºC / 50 ºC |
| **13,3 bar** | 200 ºC | **13,4 bar** | 200 ºC | **33,3 bar** | 200 ºC | **33,7 bar** | 200 ºC |
| **12,1 bar** | 250 ºC | **12,7 bar** | 250 ºC | **27,6 bar** | 250 ºC | **29,7 bar** | 300 ºC |
| **11 bar** | 300 ºC | **11,8 bar** | 300 ºC | **25,7 bar** | 300 ºC | **28,5 bar** | 350 ºC |
| **10,2 bar** | 350 ºC | **11,4 bar** | 350 ºC | **23,8 bar** | 350 ºC | **27,4 bar** | 400 ºC |

Note: Maximum temperatures limited by materials used, such as o-rings, diaphragms, etc.
* Rating according to EN1092-1:2018;

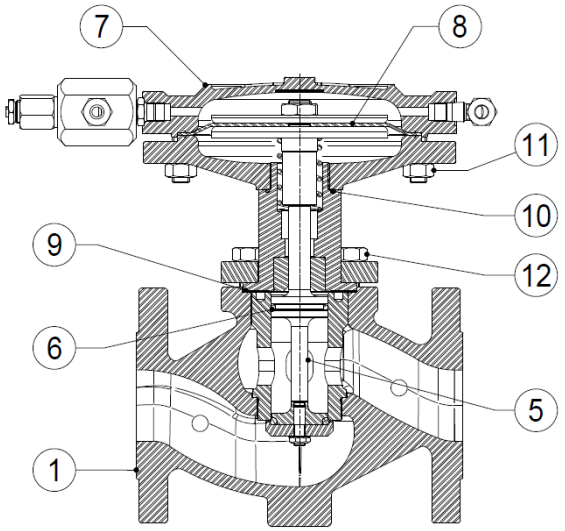
| MATERIALS | | | |
|---|---|---|---|
| **POS. Nº** | **DESIGNATION** | **MATERIAL RP6DS** | **MATERIAL RP6DI** |
| **1** | Valve body | ASTM A216WCB / 1.0619; GP240GH / 1.0619 | CF8M / 1.4408 |
| **2** | Pilot valve | AISI 316 / 1.4401 | AISI 316 / 1.4401 |
| **3** | Needle valve | AISI 316 / 1.4401 | AISI 316 / 1.4401 |
| **5** | Trim | Stainless steel | Stainless steel |
| **6** | O-ring | NBR | NBR |
| **7** | Actuator | Steel | Stainless steel |
| **8** | Diaphragm | Rubber | Rubber |
| **9** | Gasket | Non asbestos | Non asbestos |
| **10** | O-ring | NBR | NBR |
| **11, 12** | Bolts | Steel 8.8 | A2-70 |

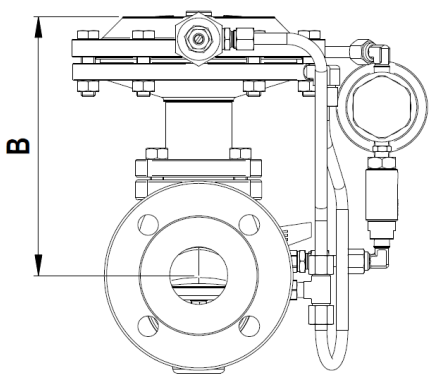
| DIMENSIONS – RP6D | | | |
|---|---|---|---|
| **SIZE DN** | **A (mm)** | **B (mm)** | **WGT. (kg)** |
| 32 | 180 | 210 | 17 |
| 40 | 200 | 215 | 18,8 |
| 50 | 230 | 225 | 26,5 |
| 65 | 290 | 260 | 32 |
| 80 | 310 | 263 | 38 |
| 100 | 350 | 270 | 54 |

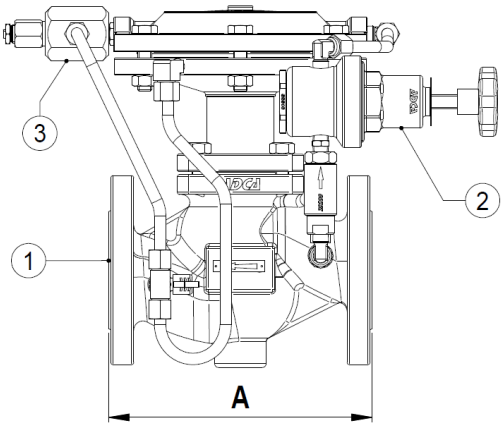
* Approximate dimensions and weight, consult factory for certified dimensions

| FLOW RATE COEFFICIENTS ($m^3/h$) | | |
|---|---|---|
| **SIZE DN** | **RP6D** | **RP6P** |
| | **Full bore Stand. Plug** | **Full bore Stand. Plug** |
| **32** | 15,4 | 15,4 |
| **40** | 22,2 | 22,2 |
| **50** | 40,1 | 40,1 |
| **65** | – | 63,4 |
| **80** | – | 89,7 |
| **100** | – | 136,7 |

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



| MATERIALS | | | |
|---|---|---|---|
| **POS. Nº** | **DESIGNATION** | **MATERIAL RP6PS** | **MATERIAL RP6PI** |
| **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 |
| **5** | Trim | Stainless steel | Stainless steel |
| **6** | O-ring | NBR | NBR |
| **7** | Bonnet | CF8M / 1.4408 | CF8M / 1.4408 |
| **8** | O-ring | NBR | NBR |
| **9** | Gasket | Non asbestos | Non asbestos |
| **10** | Piston | AISI 316 / 1.4401 | AISI 316 / 1.4401 |
| **11** | O-ring | NBR | NBR |
| **12** | Cover | S355J2G3 / 1.0570 | AISI 316 / 1.4401 |
| **13** | O-ring | NBR | NBR |
| **14** | Bolts | Steel 8.8 | A2-70 |

| DIMENSIONS – RP6P | | | |
|---|---|---|---|
| **SIZE DN** | **A (mm)** | **B (mm)** | **WGT. (kg)** |
| 32 | 180 | 305 | 19 |
| 40 | 200 | 310 | 21 |
| 50 | 230 | 320 | 28,5 |
| 65 | 290 | 355 | 34 |
| 80 | 310 | 355 | 40 |
| 100 | 350 | 360 | 56 |

* Approximate dimensions and weight, consult factory for certified dimensions