

## DIAPHRAGM SENSING PRESSURE REDUCING VALVE P20D

### DESCRIPTION

The ADCA P20D series pressure reducing valves are direct acting, spring-loaded diaphragm sensing balanced plug regulators designed for use with nitrogen, compressed air, water and other gases and liquids compatible with the materials of construction.

They are suitable for pressure reducing stations where small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators.

### MAIN FEATURES

- Compact design.
- Non-rising adjustment knob.
- Balanced valve plug.
- Machined from bar stock materials or investment casting.
- Ultrasonically cleaned and degreased.

- OPTIONS:**
- Different soft valves for water and gases.
  - 1/4" outlet gauge connection on body.
  - Top cap (adjustment screw with cover).
  - Connection for external sensing line.

- USE:** Compressed air, water and other gases and liquids compatible with the construction.

- AVAILABLE MODELS:** P20D – stainless steel, diaphragm sensing.

- SIZES:** 1/4" to 1/2".

- CONNECTIONS:** Female threaded ISO 7 Rp or NPT.

- INSTALLATION:** Horizontal or vertical installation.  
 A strainer should be installed upstream of the valve.  
 See IMI – Installation and maintenance instructions.

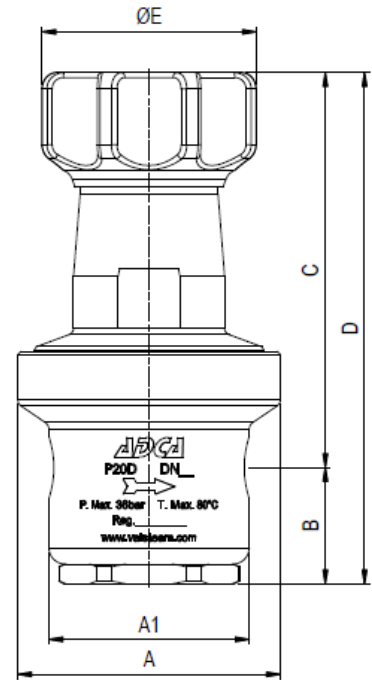
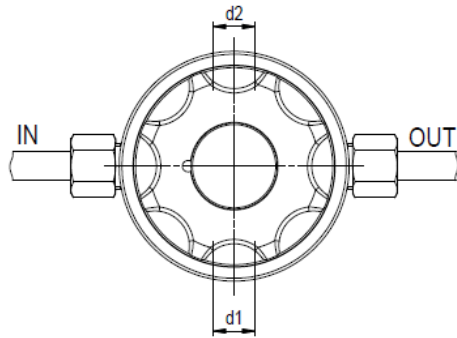


CE MARKING – GROUP 2 (PED – European Directive)	
PN 63	Category
1/4" to 1/2"	SEP

FLOW RATE COEFFICIENTS (m <sup>3</sup> /h)			
SIZE	1/4"	3/8"	1/2"
<b>Kvs</b>	1,2	1,8	1,8

LIMITING CONDITIONS	
Valve model	P20D
Body design conditions	PN 63
Maximum upstream pressure	50 bar
Maximum downstream pressure	15 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	80 °C
Maximum recommended reducing ratio	40:1

\* Others on request.



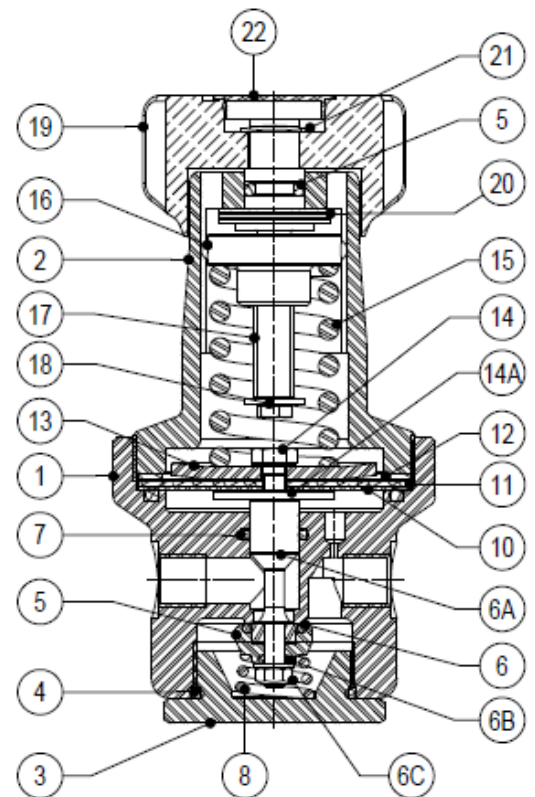
DIMENSIONS (mm)									
SIZE	A	A1	B	C	D	E	d1 *	d2 *	WEIGHT (kg)
1/4"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
3/8"	80	61	35,5	120,5	156	69	1/4"	1/4"	1,8
1/2"	80	80	35,5	120,5	156	69	1/4"	1/4"	2,5

\* Optional: Captured vent connection (d1); Pressure gauge (d2).

Remark: all optional threaded connections are supplied in accordance with the main connections.

**MATERIALS**

POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316 / 1.4401; A351 CF8M / 1.4408
2	Top cover	AISI 316 / 1.4401; A351 CF8M / 1.4408
3	Seat cover	AISI 316 / 1.4401; A351 CF8M / 1.4408
4	* O-ring	NBR
5	* Piston valve	AISI 316 / 1.4401
6	* Valve head	NBR, EPDM, PTFE, etc.
6A	Pushrod	AISI 316 / 1.4401
6B	* O-ring	NBR
6C	Nut	Stainless steel A2-70
7	* O-ring	NBR, EPDM, PTFE, etc.
8	Valve spring	AISI 302 / 1.4300
10	* Diaphragm	PTFE
11	* Diaphragm	NBR
12	Gasket	Aluminium
13	Spring plate	AISI 304 / 1.4301
14	Bolt	Stainless steel A2-70
14A	Pusher disc	AISI 304 / 1.4301
15	* Adjustment spring	Spring steel
16	Top spring plate	Brass
17	Adjustment screw	AISI 304 / 1.4301
18	Retaining washer	Stainless steel A2-70
19	Handwheel	Aluminium painted
20	Bearing	Corrosion resistant steel
21	Ext. bowed shaft ring	Stainless steel
22	Cover nut	Plastic



\* Available spare parts.

Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.

ORDERING CODES P20D												
Valve model	P20	.	1	W	N	C	R	4	.	A	08	
P20D – diaphragm sensing pressure reducing valve	P20											
Regulating range												
N°1 – 0,2 to 1,5 bar			1									
N°2 – 0,3 to 3 bar			2									
N°3 – 0,8 to 8 bar			3									
N°4 – 1,5 to 15 bar			4									
Application												
Water				W								
Gases				G								
Oxygen (degreased)				O								
Seal material a)												
NBR					N							
EPDM					E							
PTFE					T							
FPM / Viton					V							
Maximum inlet pressure												
30 bar						C						
50 bar b)						D						
Diaphragm												
Rubber/PTFE							R					
Gauge port 1/4" c)												
Without gauge ports								(1)				
Gauge port on the left side (relative to the flow direction)								4				
Gauge port on the right side (relative to the flow direction)								3				
Gauge ports on both sides								2				
Pipe connection												
Female threaded ISO 7 Rp										A		
Female threaded NPT ASME B1.20.1										C		
Size												
1/4"											08	
3/8"											10	
1/2"											15	
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination.												E

(1) Omitted if a standard valve is requested.

a) Valve limited to the materials' maximum operating temperature. Consult manufacturer for more details.

b) 50 bar inlet only available with spring n°4.

c) Gauge port can also be used as external sensing line.