

## DIAPHRAGM SENSING PRESSURE REDUCING VALVE P20D

### DESCRIPTION

The ADCA P20D series direct acting, spring-loaded diaphragm sensing, balanced plug pressure reducing valves are designed for use on compressed air, water and other gases or 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.
- Balanced valve.
- Machined from barstock materials or investment casting.
- Ultrasonically cleaned and degreased.



**OPTIONS:** Different soft valves for water and gases.  
Outlet 1/4" gauge connection on body.  
Regulating screw with top cap.  
Connection for external sensing line.

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

**AVAILABLE MODELS:** P20D – Diaphragm sensing.

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

**CONNECTIONS:** Female screwed ISO7/1Rp (BS 21) or NPT.

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

**ORDER REQUIREMENTS:** Type of fluid.  
Maximum operating temperature.  
Inlet pressure and required outlet pressure.  
Capacity (maximum and minimum).

CE MARKING – GROUP 2 (PED – European Directive)	
PN16 / PN63	Category
DN 08 to 15	SEP

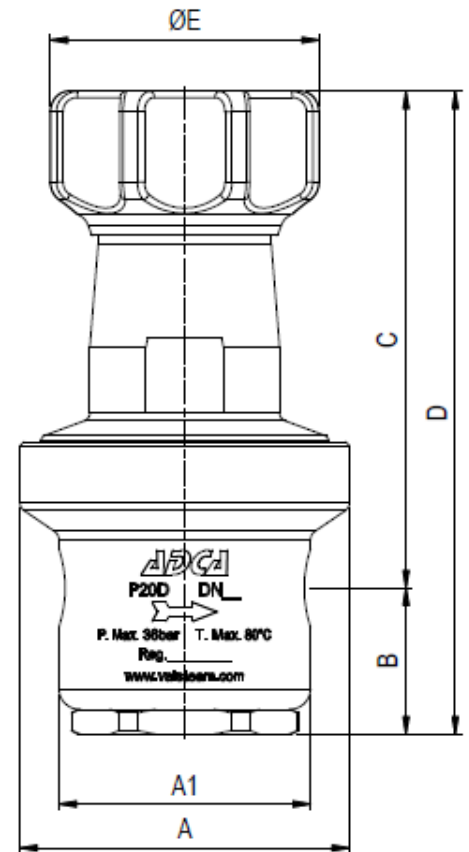
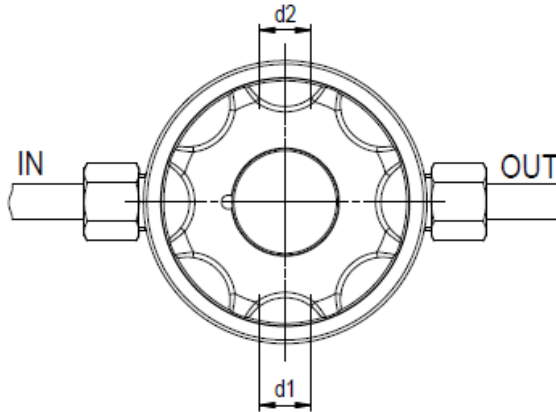
CAPACITIES			
Valve size	1/4"	3/8"	1/2"
Kvs (m <sup>3</sup> /h)	1,2	1,8	1,8

LIMITING CONDITIONS	
Valve model	P20D
Body design conditions	PN63
Max. upstream pressure	50 bar
Max. downstream pressure	15 bar
Min. downstream pressure	0,2 bar
Max. design temperature *	80 °C
Max. recommended reducing ratio	40:1

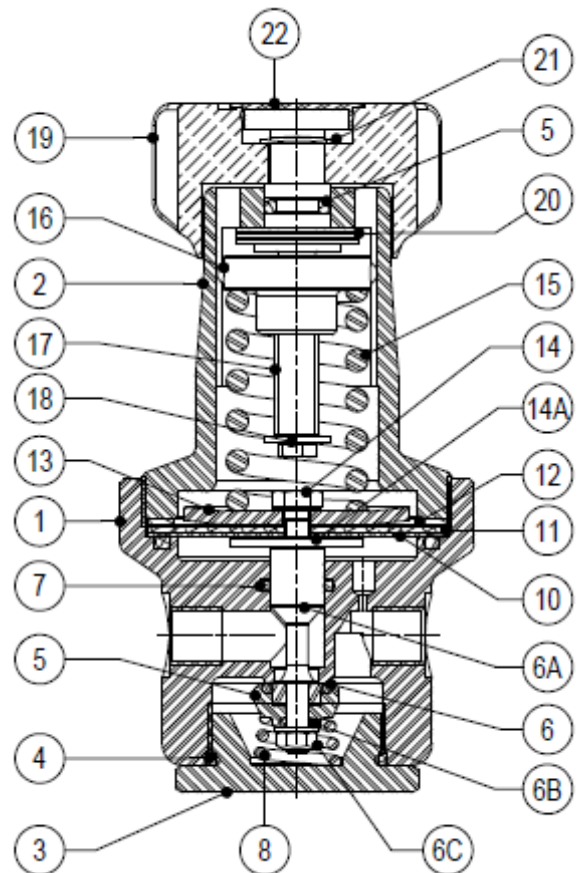
\* Others on request.

DIMENSIONS (mm)									
SIZE	A	A1	B	C	D	E	d1 *	d2 *	WGT. (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).



MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316 / 1.4401 ; CF8M / 1.4408
2	Top cover	AISI 316 / 1.4401 ; CF8M / 1.4408
3	Seat cover	AISI 316 / 1.4401 ; 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
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
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
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		.A	08	
P20D – Diaphragm sensing	P20										
<b>Outlet spring range</b>											
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								
<b>Application</b>											
Water				W							
Gases				G							
Oxygen (degreased)				O							
<b>Seal material</b>											
NBR					N						
EPDM					E						
PTFE					T						
FPM / Viton					V						
<b>Maximum inlet pressure</b>											
30 bar						C					
50 bar a)						D					
<b>Diaphragm material</b>											
Rubber/PTFE							R				
<b>Gauge port 1/4" *</b>											
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
<b>Pipe connection</b>											
Threaded BSP ISO 7/1 Rp										A	
Threaded NPT ANSI B1.20.1											C
<b>Size</b>											
1/4"											08
3/8"											10
1/2"											15
<b>Special valves / Extras</b>											
Full description or additional codes have to be added in case of non-standard combination.											E

\*Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested.

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