

## PISTON SENSING PRESSURE REDUCING VALVE P20P

### DESCRIPTION

The ADCA P20P series pressure reducing valves are direct acting, spring loaded, piston sensing balanced plug regulators designed for use with nitrogen, compressed air, water and other gases and liquids compatible with the materials of construction.

Suitable for general purpose pressure reducing applications such as instrumentation systems and industrial equipment where small loads are involved.

### MAIN FEATURES

- Compact design.
- Machined from bar stock materials.
- Non-rising adjustment knob.
- Ultrasonically cleaned and degreased.

- OPTIONS:**
- Different soft valves for water and gases.
  - Relieving – internal relief valve to allow reduce outlet pressure in a no-flow condition.
  - Relieving – captured vent below panel.
  - Panel mounting ring.
  - Bottom mounting.
  - 1/4" outlet gauge connection on body.
  - Top cap (adjustment screw with cover).

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

**AVAILABLE MODELS:** P20P – stainless steel, piston sensing, low flow.

**SIZES:** 1/4".

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

**INSTALLATION:** In any position.  
 See IMI – Installation and maintenance instructions.



CE MARKING – GROUP 2 (PED – European Directive)	
PN 320	Category
1/4"	SEP

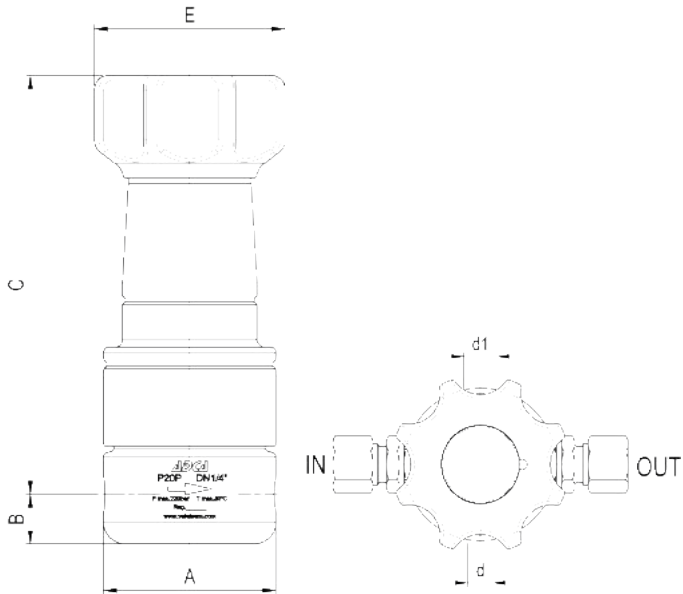
FLOW RATE COEFFICIENTS (m <sup>3</sup> /h)			
SIZE	1/4"		
Kvs	0,043	0,22	0,62

LIMITING CONDITIONS	
Valve model	P20P
Body design conditions	PN 320
Maximum upstream pressure	220 bar
Maximum downstream pressure	200 bar
Minimum downstream pressure	0,2 bar
Maximum design temperature *	80 °C
Maximum recommended reducing ratio	40:1

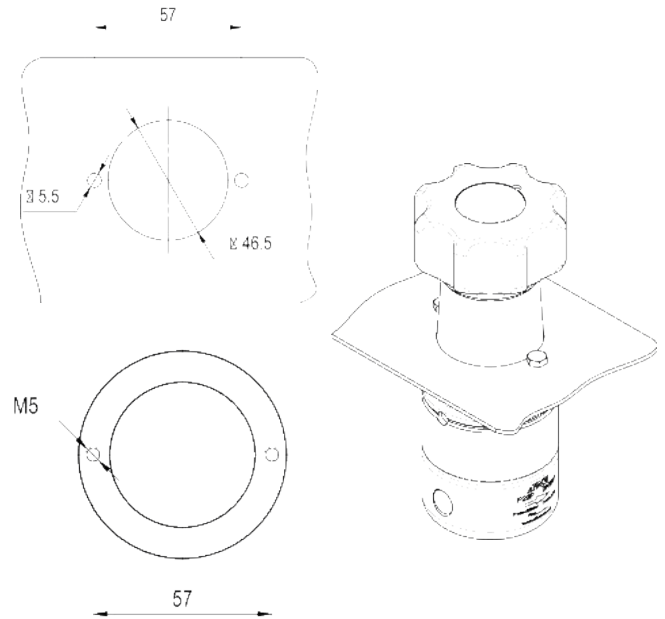
\* Others on request.

DIMENSIONS (mm)							
SIZE	A	B	C	E	d *	d1 *	WEIGHT (kg)
1/4"	59	17	143,5	69	1/8"	1/4"	2,5

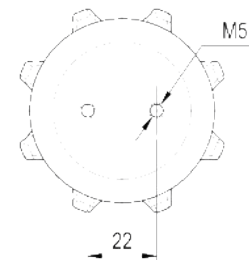
\* Optional: Captured vent connection (d); Pressure gauge (d1).  
Remark: all optional threaded connections are supplied in accordance with the main connections.



Panel mounting



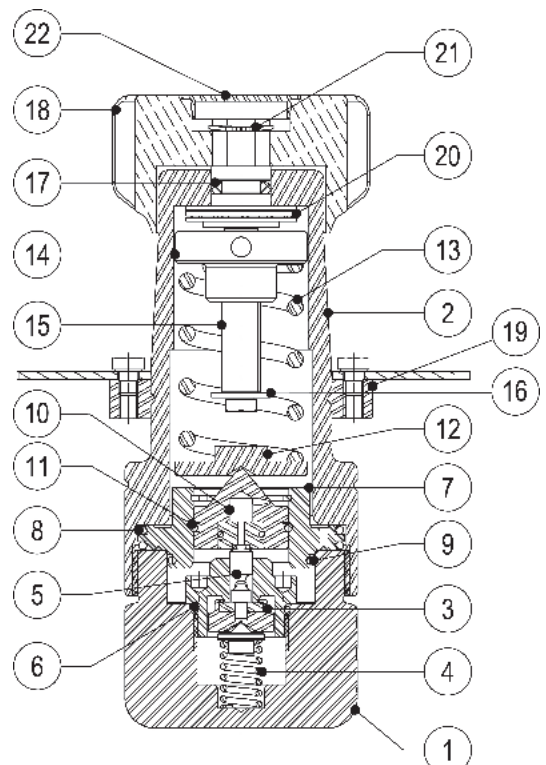
Bottom mounting



MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Top cover	AISI 316L / 1.4404
3	* Valve head	NBR; EPDM; PTFE; etc.
4	* Valve spring	AISI 302 / 1.4300
5	Pushrod	AISI 316L / 1.4404
6	* O-ring	NBR; EPDM; PTFE; etc.
7	Piston sleeve	AISI 316L / 1.4404
8	* O-ring	NBR; EPDM; PTFE; etc.
9	* O-ring	NBR; EPDM; PTFE; etc.
10	Piston	AISI 316L / 1.4404
11	* O-ring	NBR; EPDM; Viton; etc.
12	Spring plate	AISI 316L / 1.4404
13	* Adjustment spring	Spring steel
14	Top spring plate	AISI 316L / 1.4404
15	Adjustment screw	AISI 316L / 1.4404
16	Retaining washer	Stainless steel A2-70
17	* O-ring	NBR; EPDM; PTFE; etc.
18	Handwheel	Painted aluminium
19	** Panel mounting ring	AISI 316L / 1.4404
20	Bearing	Corrosion resistant steel
21	Ext. bowed shaft ring	Stainless steel
22	Cover nut	Plastic

\* Available spare parts; \*\* Optional.

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 P20P													
Valve model	P20P	.	1	W	N	E	4	R	P	.	A	108	
P20P – stainless steel piston sensing pressure reducing valve	P20P												
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										
N°5 – 3 to 30 bar			5										
N°6 – 5 to 50 bar			6										
N°7 – 20 to 200 bar			7										
Application													
Water				W									
Gases				G									
Oxygen (degreased)				O									
Seal material a)													
NBR					N								
EPDM					E								
PTFE b)					T								
FPM / Viton					V								
Maximum inlet pressure													
80 bar						E							
220 bar						F							
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						
Relieving													
Non-relieving							(1)						
Relieving (only for non dangerous gases)							R						
Relieving with captured vent							L						
Panel mounting													
Without panel mounting ring							(1)						
With panel mounting ring							P						
Pipe connection													
Female threaded ISO 7 Rp											A		
Female threaded NPT ASME B1.20.1											C		
Size													
1/4" – Kvs 0,043												108	
1/4" – Kvs 0,22												208	
1/4" – Kvs 0,62												308	
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) Valve seal only, other seals in Viton.

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