

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 ³ /h) | | | |
|--|-------|------|------|
| SIZE | 1/4" | | |
| Kvs | 0,043 | 0,22 | 0,62 |

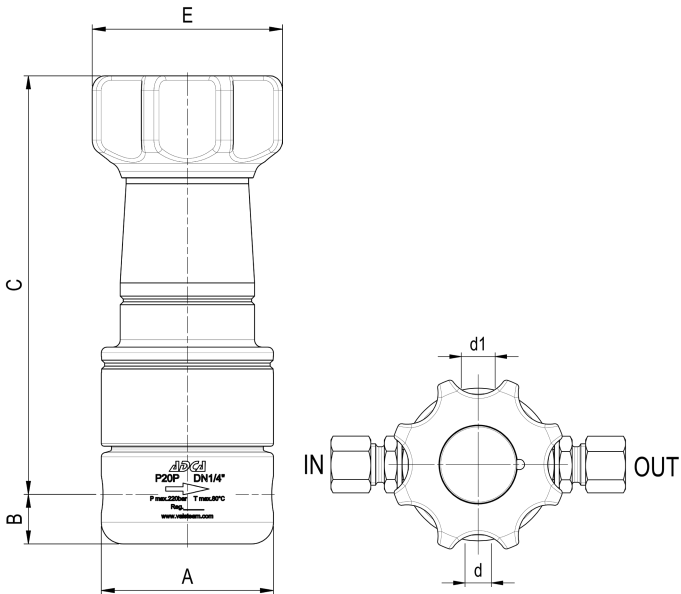
| LIMITING CONDITIONS | |
|------------------------------------|---------|
| Valve model | P20P |
| Body design conditions | PN 320 |
| Maximum upstream pressure | 220 bar |
| Maximum downstream pressure | 200 bar |
| Minimum downstream pressure | 0,2 bar |
| Maximum design temperature * | 80 °C |
|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

* Others on request.

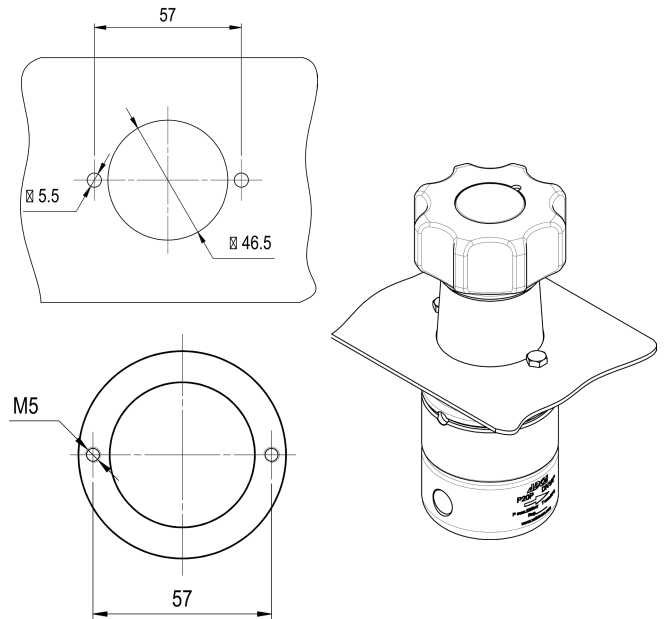
DIMENSIONS (mm)

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

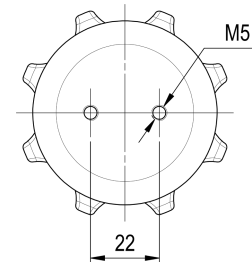
* Optional: Captured vent connection (d); Pressure gauge (d1).
Remark: all optional threaded connections are supplied in accordance with the main connections.



Panel mounting



Bottom mounting

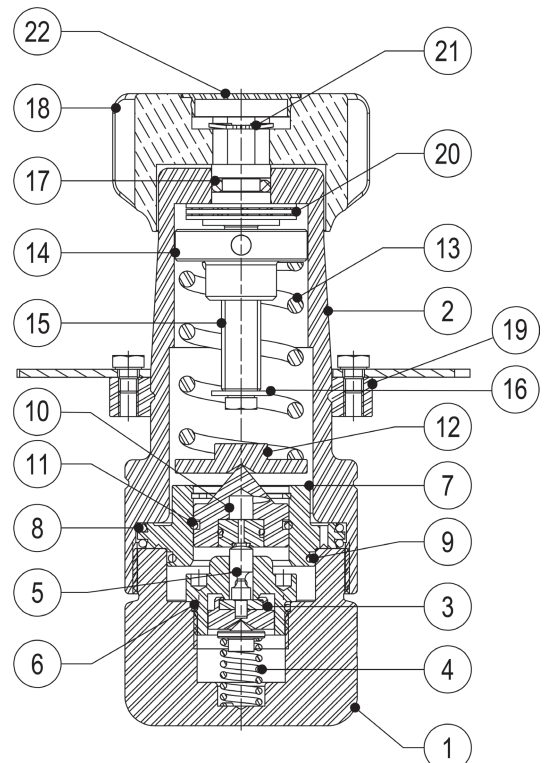


MATERIALS

| 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; etc. |
| 9 | * O-ring | NBR; EPDM; 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; 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.