Valsteam ADCA is an EHEDG Member

# SANITARY PRESSURE REDUCING VALVE
# P130L

## DESCRIPTION

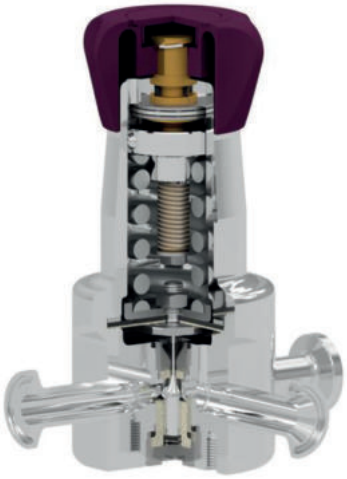
The ADCA P130L low flow series direct acting, spring-loaded diaphragm sensing pressure reducing valves are designed for use with clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction materials and valve design. This valve is specifically designed for the high purity gas systems found in the pharmaceutical, cosmetic, fine chemical and food & beverage processes.


## MAIN FEATURES

Compact design.
Completely machined from 316L stainless steel bar stock, no castings or forgings are used.
FDA / USP Class VI compliant seals.
Non-rising adjustment knob.

## STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.



**OPTIONS:** Self relieving.
Leakage line connection 1/8" (captured vent).
Panel mounting version (thread M45).
Gauge connection on body.
Different soft valves for liquids and gases.
Wall mounting.

**USE:** Clean air, nitrogen, carbon dioxide, oxygen, argon and other gases or liquids compatible with the construction.

**AVAILABLE MODELS:** P130L – low flow.

**SIZES:** 1/2" to 3/4"; DN 08 to DN 20.

**REGULATING RANGES:** 0,2 to 1,5 bar; 0,3 to 3 bar; 2 to 8 bar.

**CONNECTIONS:** ASME BPE, DIN and ISO clamp ferrules or tube weld (ETO) ends.
Others on request.

**PACKAGING:** Assembling and packaging in a clean room certified according to ISO 14644-1.
The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.

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

| LIMITING CONDITIONS | |
|---|---|
| **Valve model** | **P130L** |
| Body design conditions | PN 16 |
| Maximum upstream pressure | 16 bar |
| Maximum downstream pressure | 8 bar |
| Minimum downstream pressure | 0,2 bar |
| Maximum design temperature * | 150 ºC |

* Others on request.

| CE MARKING – GROUP 2 (PED – European Directive) | |
|---|---|
| **PN 16** | **Category** |
| 1/2" to 3/4" – DN 08 to 20 | SEP |

| FLOW RATE COEFFICIENTS (m³/h) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ASME BPE | | | DIN | | | ISO | | |
| SIZE | 1/2" to 3/4" | | | DN 10 to DN 20 | | | DN 08 to DN 15 | | |
| Kvs | 0,06 | 0,19 | 0,25 | 0,06 | 0,19 | 0,25 | 0,06 | 0,19 | 0,25 |

| DIMENSIONS (mm) ASME BPE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | A | B | C | D | d1 | d2 | E | F | H | WEIGHT (kg) * |
| 1/2" | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 25 | 9,4 | 2,13 |
| 3/4" | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 25 | 15,75 | 2,14 |

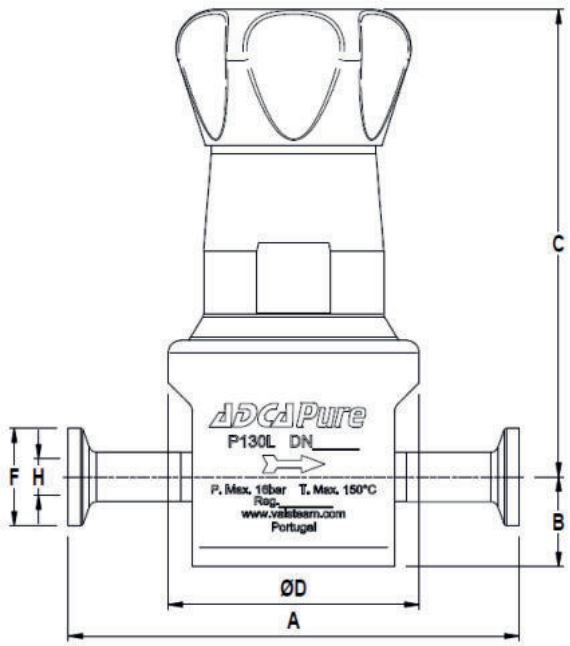
* Valves with nylon adjustment knob weigh 0,3 kg less.

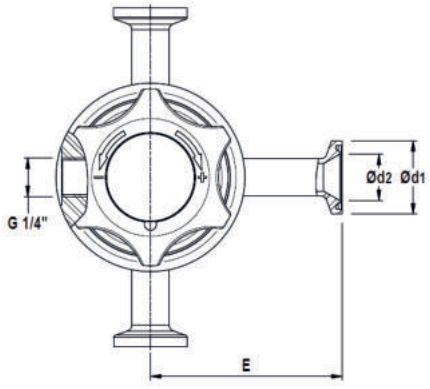
| DIMENSIONS (mm) DIN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | A | B | C | D | d1 | d2 | E | F | H | WEIGHT (kg) * |
| DN 10 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 34 | 10 | 2,11 |
| DN 15 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 34 | 16 | 2,13 |
| DN 20 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 34 | 20 | 2,15 |

* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

| DIMENSIONS (mm) ISO | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | A | B | C | D | d1 | d2 | E | F | H | WEIGHT (kg) * |
| DN 08 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 25 | 10,3 | 2,11 |
| DN 10 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 25 | 14 | 2,12 |
| DN 15 | 115 | 23 | 120 | 64 | 25 | 15,75 | 65 | 50,5 | 18,1 | 2,13 |

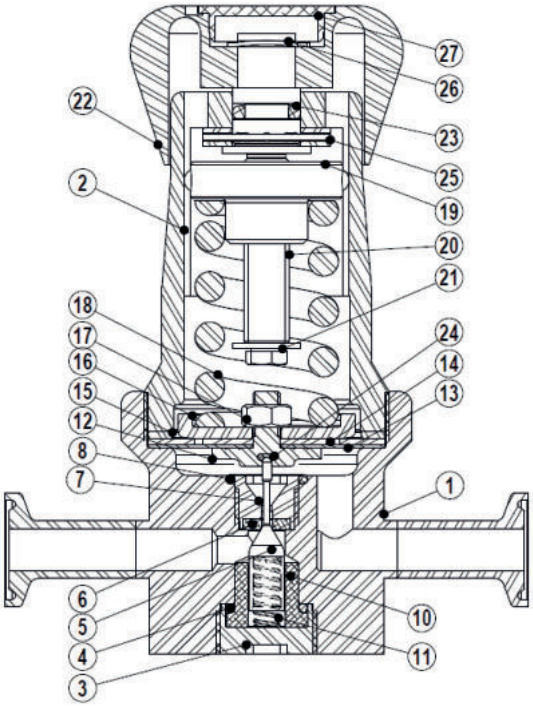
* Valves with nylon adjustment knob weigh 0,3 kg less.
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).

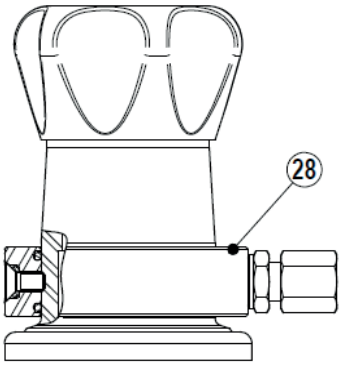


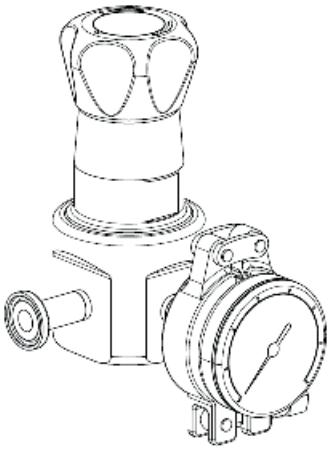

*Optional pressure gauge connection.*

| MATERIALS | | |
|---|---|---|
| **POS. Nº** | **DESIGNATION** | **MATERIAL** |
| **1** | Valve body | AISI 316L / 1.4404 |
| **2** | Cover | AISI 316L / 1.4404 |
| **3** | Seat cover | AISI 316L / 1.4404 |
| **4** | * O-ring | Viton ; EPDM |
| **5** | * Valve | AISI 316L / 1.4404 |
| **6** | * Valve seat seal | TFM 1600 ; EPDM ; ... |
| **7** | * Valve seat | AISI 316L / 1.4404 |
| **8** | * O-ring | EPDM |
| **10** | Guide | TFM 1600 |
| **11** | * Valve spring | AISI 316 / 1.4401 electropolished |
| **12** | Pusher disc | AISI 316L / 1.4404 |
| **13** | * Lower diaphragm | PTFE (Gylon) |
| **14** | * Upper diphragm | EPDM |
| **15** | Washer | AISI 304 / 1.4301 |
| **16** | Spring plate | AISI 316 / 1.4401 |
| **17** | Nut | Stainless steel A2-70 |
| **18** | * Adjustment spring | AISI 302 / 1.4300 |
| **19** | Spring plate | AISI 316 / 1.4401 |
| **20** | Adjustment screw | Brass |
| **21** | Retaining washer | Stainless steel A2-70 |
| **22** | Adjustment knob | AISI 316L / 1.4404 |
| | | Nylon |
| **23** | O-ring | NBR |
| **24** | ** O-ring | EPDM |
| **25** | Bearing | Corrosion resistant steel |
| **26** | Ext. bowed shaft ring | Stainless steel |
| **27** | Cover nut | Plastic |
| **28** | Captured vent ring | AISI 316L / 1.4404 |

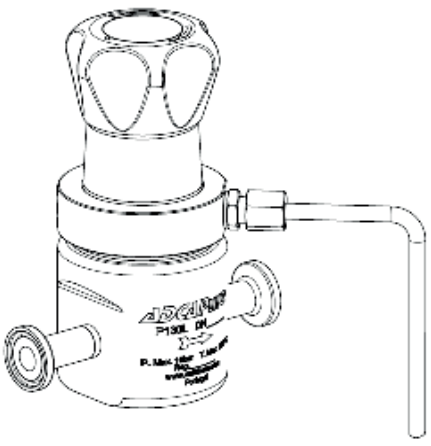



* Available spare parts; ** If applicable.
Remarks: FDA / USP Class VI seals certificate on request.
All valves have a serial number. In case of non-standard valves, this number must be supplied if spare parts are ordered.



*Optional Pressure gauge connection.*



*Optional 1/8" captured vent and/or leakage connection (compression fitting and tube not included).*

## ORDERING CODES P130L

| Valve model | P3L | 1 | 3 | T | T | X | I | X | X | X | D | 08 | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P130L – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve | **P3L** | | | | | | | | | | | | |
| **Regulating range** | | | | | | | | | | | | | |
| 0,2 to 1,5 bar | | **1** | | | | | | | | | | | |
| 0,3 to 3 bar | | **2** | | | | | | | | | | | |
| 2 to 8 bar | | **3** | | | | | | | | | | | |
| **Flow rate coefficient** | | | | | | | | | | | | | |
| Kvs 0,06 | | | **3** | | | | | | | | | | |
| Kvs 0,19 | | | **6** | | | | | | | | | | |
| Kvs 0,25 | | | **7** | | | | | | | | | | |
| **Diaphragm** | | | | | | | | | | | | | |
| PTFE (Gylon) | | | | **T** | | | | | | | | | |
| EPDM (non-standard) | | | | **E** | | | | | | | | | |
| **Seat material** | | | | | | | | | | | | | |
| TFM 1600 | | | | | **T** | | | | | | | | |
| EPDM | | | | | **E** | | | | | | | | |
| **Relieving** | | | | | | | | | | | | | |
| Non-relieving | | | | | | **X** | | | | | | | |
| Relieving (only for non-dangerous gases) | | | | | | **R** | | | | | | | |
| Relieving with captured vent | | | | | | **L** | | | | | | | |
| **Adjustment knob and top cap** | | | | | | | | | | | | | |
| Stainless steel adjustment knob | | | | | | | **I** | | | | | | |
| Nylon adjustment knob | | | | | | | **P** | | | | | | |
| Top cap (adjustment screw with cover) | | | | | | | **T** | | | | | | |
| **Gauge port options** | | | | | | | | | | | | | |
| Without gauge ports | | | | | | | | **X** | | | | | |
| Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure | | | | | | | | **7** | | | | | |
| Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure | | | | | | | | **6** | | | | | |
| Tri-clamp gauge port on both sides – downstream pressure | | | | | | | | **5** | | | | | |
| Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4” | | | | | | | | **4** | | | | | |
| Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 7 Rp 1/4” | | | | | | | | **3** | | | | | |
| Threaded gauge port on both sides – downstream pressure – ISO 7 Rp 1/4” | | | | | | | | **2** | | | | | |
| Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4” NPT | | | | | | | | **W** | | | | | |
| Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4” NPT | | | | | | | | **Y** | | | | | |
| Threaded gauge port on both sides – downstream pressure – 1/4” NPT | | | | | | | | **Z** | | | | | |
| **Surface finish a)** | | | | | | | | | | | | | |
| Standard surface finish | | | | | | | | | **X** | | | | |
| Mirror mechanical polished external surfaces (SF1) | | | | | | | | | **P** | | | | |
| Electropolished internal wetted parts (SF5) | | | | | | | | | **E** | | | | |
| **Special features** | | | | | | | | | | | | | |
| None | | | | | | | | | | **X** | | | |
| Degreased for oxygen | | | | | | | | | | **O** | | | |
| **Pipe connection** | | | | | | | | | | | | | |
| Clamp ferrule ASME BPE | | | | | | | | | | | **D** | | |
| Clamp ferrule DIN (DIN 32676-A) | | | | | | | | | | | **F** | | |
| Clamp ferrule ISO (DIN 32676-B) | | | | | | | | | | | **E** | | |
| Tube weld (ETO) according to ASME BPE | | | | | | | | | | | **DI** | | |
| Tube weld (ETO) according to DIN 11866-A (DIN 11850-2) | | | | | | | | | | | **FI** | | |
| Tube weld (ETO) according to DIN 11866-B (ISO 1127) | | | | | | | | | | | **EI** | | |
| **Size** | | | | | | | | | | | | | |
| DN 08 | | | | | | | | | | | | **08** | |
| DN 10 | | | | | | | | | | | | **10** | |
| 1/2” or DN 15 | | | | | | | | | | | | **15** | |
| 3/4” or DN 20 | | | | | | | | | | | | **20** | |
| **Special valves / Extras** | | | | | | | | | | | | | |
| Full description or additional codes have to be added in case of non-standard combination | | | | | | | | | | | | | **E** |

**a)** Consult IS PV20.00 for further details and other surface finish options.