

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

<https://adca.nt-rt.ru/> || acd@nt-rt.ru



SANITARY PRESSURE REDUCING VALVES P161



SANITARY PRESSURE REDUCING VALVES P161

DESCRIPTION

The ADCAPure P161 is a series of angle design direct acting diaphragm sensing pressure reducing valves.

These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

- Spring or dome-loading.
- Non-rising adjustment knob.
- Compact design with clamped body.
- Available with low pressure diaphragm.
- FDA / USP Class VI compliant seals.
- Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

- Internal wetted parts: $\leq 0,51 \mu\text{m Ra} - \text{SF1}$.
- External: $\leq 0,76 \mu\text{m Ra} - \text{SF3}$.
- Other surface conditions see TIS.GIA – General information ADCAPure.
- Ultrasonic cleaning.

- OPTIONS:**
- Leakage line connection.
 - Dome-loading.
 - Top cap (adjustment screw with cover).
 - Gauge connection on body.
 - Lock system, allows inline clean-in-place (CIP) and sterilization-in-place (SIP) operations.
 - Different soft sealings for liquids and gases.
 - Degreased for oxygen application.

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

- AVAILABLE MODELS:** P161.

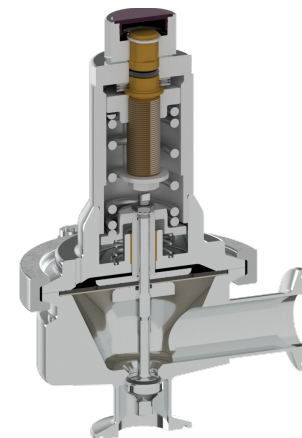
- SIZES:** 1/2" to 2"; DN 15 to DN 50.

- REGULATING RANGES:** 0,3 to 1,1 bar; 0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 5 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:** Horizontal installation. Vertical inlet and horizontal outlet. See IMI – Installation and maintenance instructions.



| CE MARKING – GROUP 2 (PED – European Directive) | |
|--|----------|
| PN 10 | Category |
| 1/2" to 2" – DN 15 to 50 | SEP |

| LIMITING CONDITIONS * | |
|-----------------------------------|---------|
| Maximum allowable pressure | 10 bar |
| Maximum upstream pressure | 8 bar |
| Maximum downstream pressure | 5 bar |
| Minimum downstream pressure ** | 0,3 bar |
| Maximum operating temperature *** | 180 °C |

* Other limits on request. Maximum operating conditions may be limited by the valve end connections due to normative restrictions.
 ** For tight shut off, with adjustment spring relaxed, ensure a minimum downstream pressure of 0,2 bar.
 *** See "Ordering Codes" table for restrictions.

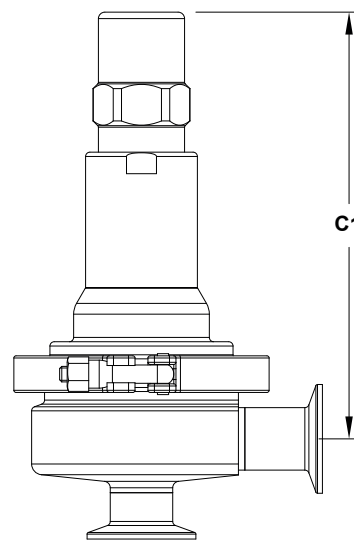
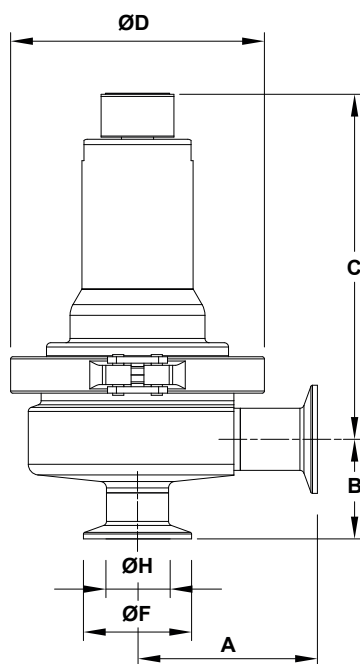
FLOW RATE COEFFICIENTS (m³/h)

| SIZE | ASME BPE | | | | | DIN | | | | | | ISO | | | | | | |
|------|----------|------|-----|--------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|
| | 1/2" | 3/4" | 1" | 1 1/2" | 2" | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | DN 50 | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | | |
| Kvs | 1,3 | 3 | 4,2 | 7 | 7 | 13 | 2,1 | 3 | 4,2 | 4,2 | 7 | 7 | 13 | 2,1 | 4,2 | 4,2 | 7 | 7 |

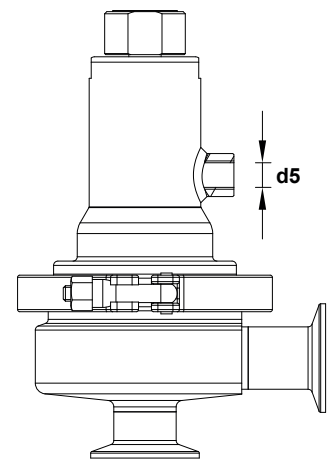
OPTIONS

| LEAKAGE LINE CONNECTION | DOME-LOADING | TOP CAP | GAUGE CONNECTION | LOCK SYSTEM |
|-------------------------|--------------|---------|------------------|-------------|
| | | | | |

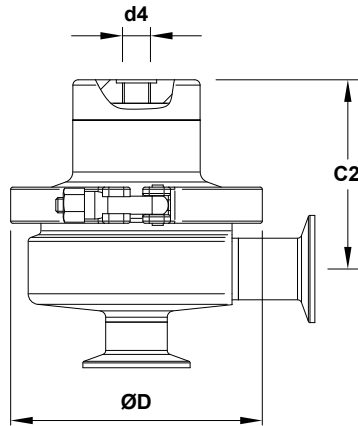
DIMENSIONS



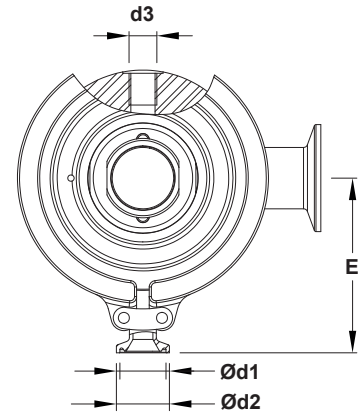
Optional top cap



Optional leakage line connection



Optional dome-loading



Optional gauge connection

DIMENSIONS – ASME BPE (mm)

| REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar | | | | | | | | | | | | | | | | REGULATING RANGE 0,3 to 1,1 bar | | | |
|--|----|----|-----|-----|-----|-----|-------|-----|------|------|------|----|------|------|--------------|------------------------------------|-----|-----|--------------|
| SIZE | A | B | C | C1 | C2 | ØD | Ød1 | Ød2 | d3 | d4 | d5 | E | ØF | ØH | WGT. (kg) | A | ØD | E | WGT. (kg) |
| 1/2" | 77 | 53 | 156 | 193 | 84 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 25 | 9,4 | 4,1 | 85 | 134 | 91 | 4,9 |
| 3/4" | 77 | 56 | 160 | 197 | 88 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 25 | 15,8 | 4,4 | 85 | 134 | 91 | 5,1 |
| 1" | 77 | 52 | 163 | 200 | 91 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,4 | 22,1 | 4,6 | 85 | 134 | 91 | 5,4 |
| 1 1/2" | 85 | 61 | 204 | 247 | 124 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 50,4 | 34,8 | 8 | 101 | 170 | 109 | 11,1 |
| 2" | 85 | 67 | 207 | 244 | 127 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 63,9 | 47,5 | 8,6 | 101 | 170 | 109 | 12 |

DIMENSIONS – DIN (mm)

| REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar | | | | | | | | | | | | | | | | REGULATING RANGE 0,3 to 1,1 bar | | | |
|--|----|----|-----|-----|-----|-----|-------|-----|------|------|------|----|------|----|--------------|------------------------------------|-----|-----|--------------|
| SIZE | A | B | C | C1 | C2 | ØD | Ød1 | Ød2 | d3 | d4 | d5 | E | ØF | ØH | WGT. (kg) | A | ØD | E | WGT. (kg) |
| DN 15 | 77 | 45 | 160 | 197 | 88 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 34 | 16 | 4,4 | 85 | 134 | 91 | 5,1 |
| DN 20 | 77 | 40 | 158 | 195 | 86 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 34 | 20 | 4,3 | 85 | 134 | 91 | 4,9 |
| DN 25 | 84 | 47 | 161 | 198 | 89 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,5 | 26 | 4,6 | 92 | 134 | 91 | 5,3 |
| DN 32 | 84 | 50 | 163 | 200 | 91 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,5 | 32 | 4,8 | 84 | 134 | 83 | 5,5 |
| DN 40 | 93 | 69 | 202 | 239 | 122 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 50,5 | 38 | 8 | 109 | 170 | 109 | 11 |
| DN 50 | 93 | 75 | 206 | 243 | 126 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 64 | 50 | 8,6 | 109 | 170 | 109 | 12 |

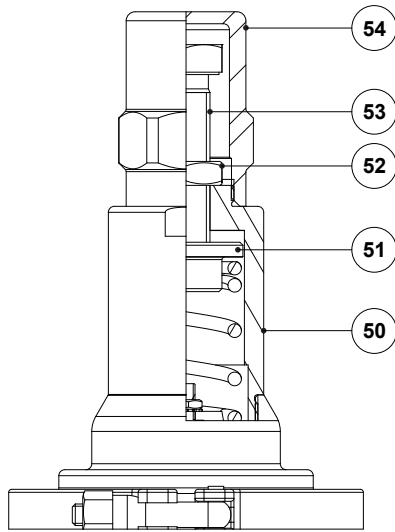
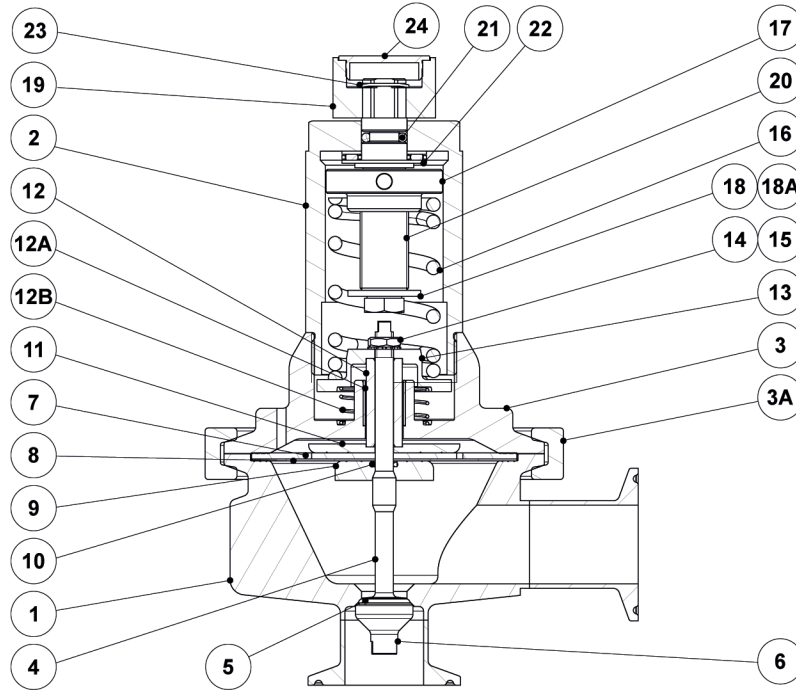
Remarks: Clamp ferrules according to DIN 32676-A. Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS – ISO (mm)

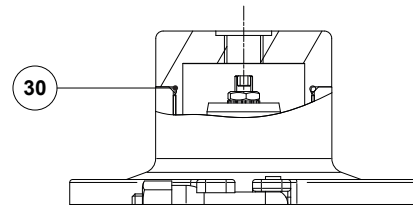
| REGULATING RANGES 0,8 to 1,5 bar, 1 to 3 bar and 1,5 to 5 bar | | | | | | | | | | | | | | | | REGULATING RANGE 0,3 to 1,1 bar | | | |
|--|----|----|-----|-----|-----|-----|-------|-----|------|------|------|----|------|------|--------------|------------------------------------|-----|-----|--------------|
| SIZE | A | B | C | C1 | C2 | ØD | Ød1 | Ød2 | d3 | d4 | d5 | E | ØF | ØH | WGT. (kg) | A | ØD | E | WGT. (kg) |
| DN 15 | 84 | 43 | 159 | 196 | 87 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,5 | 18,1 | 4,4 | 92 | 134 | 91 | 5,1 |
| DN 20 | 84 | 46 | 162 | 199 | 90 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,5 | 23,7 | 4,6 | 92 | 134 | 91 | 5,4 |
| DN 25 | 84 | 49 | 164 | 201 | 92 | 119 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 83 | 50,5 | 29,7 | 4,8 | 92 | 134 | 91 | 5,6 |
| DN 32 | 93 | 70 | 202 | 239 | 122 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 64 | 38,4 | 8,2 | 109 | 170 | 109 | 11,3 |
| DN 40 | 93 | 75 | 206 | 243 | 126 | 134 | 15,75 | 25 | 1/4" | 1/4" | 1/4" | 96 | 64 | 44,3 | 8,8 | 109 | 170 | 109 | 12,1 |

Remarks: Clamp ferrules according to DIN 32676-B. Tube weld (ETO) according to DIN 11866-B (ISO 1127).

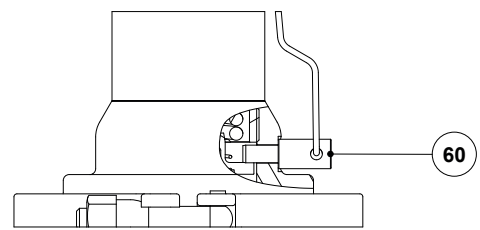
MATERIALS



Optional top cap



Optional dome-loading



Optional lock system

| MATERIALS | | |
|-----------|-----------------------|---------------------------|
| POS. N° | DESIGNATION | MATERIAL |
| 1 | Valve body | AISI 316L / 1.4404 |
| 2 | Cover | AISI 316L / 1.4404 |
| 3 | Intermediate flange | AISI 316L / 1.4404 |
| 3A | Clamp | AISI 316 / 1.4401 |
| 4 | * Valve stem | AISI 316L / 1.4404 |
| 5 | * Valve seal | ** EPDM; PTFE; FPM |
| 6 | * Valve plug | AISI 316L / 1.4404 |
| 7 | * Upper diaphragm | EPDM |
| 8 | * Lower diaphragm | PTFE (Gylon) |
| 9 | Lower diaphragm plate | AISI 316L / 1.4404 |
| 10 | * O-ring | ** EPDM; PTFE; FPM |
| 11 | Upper diaphragm plate | AISI 316L / 1.4404 |
| 12 | Stem guide | AISI 316L / 1.4404 |
| 12A | Plain bearing | Bronze |
| 12B | Spring | AISI 302 / 1.4300 |
| 13 | Spring plate | AISI 316L / 1.4404 |
| 14 | Nut | Stainless steel A2-70 |
| 15 | * Washer | Stainless steel A2 |
| 16 | * Adjustment spring | AISI 302 / 1.4300 |
| 17 | Top spring plate | AISI 316L / 1.4404 |
| 18 | Washer | Stainless steel A2 |
| 18A | Bolt | Stainless steel A2-70 |
| 19 | Adjustment knob | AISI 316L / 1.4404 |
| 20 | Adjustment screw | Brass |
| 21 | O-ring | NBR |
| 22 | Bearing | Corrosion resistant steel |
| 23 | Shaft ring | Stainless steel |
| 24 | Cover nut | Plastic |
| 30 | * O-ring | EPDM |
| 50 | Cover | AISI 316L / 1.4404 |
| 51 | Spring guide | Brass |
| 52 | Lock nut | Stainless steel A2-70 |
| 53 | Adjustment screw | Stainless steel A2-70 |
| 54 | Top cap | AISI 316L / 1.4404 |
| 60 | Locking pin | AISI 316L / 1.4404 |

* Available spare parts. ** Others on request.

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.

ORDERING CODES P161

| Valve model | P16 | 1 | 3 | 1 | T | M | I | X | X | X | DI | 15 | E |
|---|-----|---|---|---|---|---|---|---|---|---|----|----|---|
| P161 – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve | P16 | | | | | | | | | | | | |
| Valve series | | | | | | | | | | | | | |
| Series 1 | | 1 | | | | | | | | | | | |
| Regulating range | | | | | | | | | | | | | |
| 0,3 to 1,1 bar | | | 3 | | | | | | | | | | |
| 0,8 to 1,5 bar | | | 4 | | | | | | | | | | |
| 1 to 3 bar | | | 5 | | | | | | | | | | |
| 1,5 to 5 bar | | | 6 | | | | | | | | | | |
| 0,8 to 5 bar (dome-loading) a) | | | A | | | | | | | | | | |
| 0,3 to 1,1 bar (dome-loading) a) | | | B | | | | | | | | | | |
| Flow rate coefficient | | | | | | | | | | | | | |
| Kvs 1,3 (only applicable to ASME BPE 1/2" size) | | | | 1 | | | | | | | | | |
| Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15) | | | | 2 | | | | | | | | | |
| Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20) | | | | 3 | | | | | | | | | |
| Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25) | | | | 4 | | | | | | | | | |
| Kvs 7 (applicable to sizes ASME BPE 1 1/2" to 2", DIN DN 40 to DN 50 and ISO DN 32 to DN 40) | | | | 6 | | | | | | | | | |
| Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50) | | | | 8 | | | | | | | | | |
| Diaphragm | | | | | | | | | | | | | |
| PTFE (Gylon) | | | | | T | | | | | | | | |
| EPDM (non-standard) – Tmax 150 °C | | | | | E | | | | | | | | |
| Valve sealing b) | | | | | | | | | | | | | |
| Metal to metal (non-standard, except in ASME BPE 1/2" size) | | | | | | M | | | | | | | |
| EPDM – Tmax 150 °C (180 °C with steam and hot water) | | | | | | E | | | | | | | |
| PTFE | | | | | | T | | | | | | | |
| FPM / Viton (USP Class VI on request) | | | | | | V | | | | | | | |
| Adjustment knob, top cap and leakage line connection | | | | | | | | | | | | | |
| Stainless steel adjustment knob | | | | | | | I | | | | | | |
| Top cap (adjustment screw with cover) | | | | | | | T | | | | | | |
| Stainless steel adjustment knob w/ ISO 228 G 1/4" leakage line connection | | | | | | | L | | | | | | |
| Stainless steel adjustment knob w/ 1/4" NPT leakage line connection | | | | | | | M | | | | | | |
| Top cap (adjustment screw with cover) w/ ISO 228 G 1/4" leakage line connection | | | | | | | U | | | | | | |
| Top cap (adjustment screw with cover) w/ 1/4" NPT leakage line connection | | | | | | | V | | | | | | |
| Dome-loading – ISO 228 G 1/4" c) | | | | | | | X | | | | | | |
| Dome-loading – 1/4" NPT c) | | | | | | | C | | | | | | |
| Gauge connections | | | | | | | | | | | | | |
| Without gauge connections | | | | | | | | X | | | | | |
| Tri-clamp gauge connection on the left side (relative to flow direction) – downstream pressure | | | | | | | | 7 | | | | | |
| Tri-clamp gauge connection on the right side (relative to flow direction) – downstream pressure | | | | | | | | 6 | | | | | |
| Tri-clamp gauge connections on both sides – downstream pressure | | | | | | | | 5 | | | | | |
| Threaded gauge connection on the left side (relative to flow direction) – downstream pressure – ISO 228 G 1/4" | | | | | | | | 4 | | | | | |
| Threaded gauge connection on the right side (relative to flow direction) – downstream pressure – ISO 228 G 1/4" | | | | | | | | 3 | | | | | |
| Threaded gauge connections on both sides – downstream pressure – ISO 228 G 1/4" | | | | | | | | 2 | | | | | |
| Threaded gauge connection on the left side (relative to flow direction) – downstream pressure – 1/4" NPT | | | | | | | | W | | | | | |
| Threaded gauge connection on the right side (relative to flow direction) – downstream pressure – 1/4" NPT | | | | | | | | Y | | | | | |
| Threaded gauge connections on both sides – downstream pressure – 1/4" NPT | | | | | | | | Z | | | | | |
| Surface finish d) | | | | | | | | | | | | | |
| 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 | | | |
| CIP / SIP lock system | | | | | | | | | | C | | | |
| 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 | | | | | | | | | | | | | |
| 1/2" or DN 15 | | | | | | | | | | | | 15 | |
| 3/4" or DN 20 | | | | | | | | | | | | 20 | |
| 1" or DN 25 | | | | | | | | | | | | 25 | |
| DN 32 | | | | | | | | | | | | 32 | |
| 1 1/2" or DN 40 | | | | | | | | | | | | 40 | |
| 2" or DN 50 | | | | | | | | | | | | 50 | |
| Special construction / Additional options | | | | | | | | | | | | | |
| Full description or additional codes have to be added in case of a non-standard combination | | | | | | | | | | | | | E |

a) The loading control pressure can be up to a maximum of 0,2 bar above the required downstream pressure. b) ASME BPE 1/2" size is only available with metal to metal sealing. c) Mandatory in case of dome-loading. d) Consult TIS.GIA – General information ADCAPure – for further details and other surface finish options.

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47