

THREE-WAY HYGIENIC CONTROL VALVES V928

DESCRIPTION

The ADCAPure V928 is a series of two or three-way hygienic control valves with angle or horizontal connections. These valves are designed to regulate and accurately control flow of liquids and gases and are suitable for hygienic applications found in the pharmaceutical, cosmetic, fine chemical and food & beverage industries.

The V928 can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

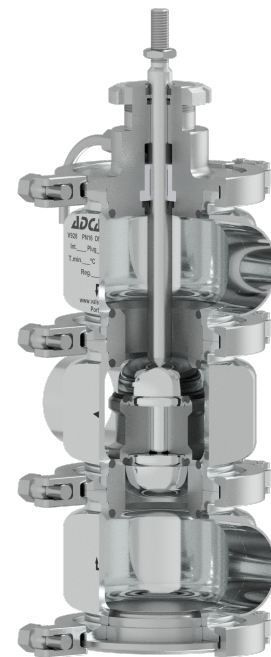
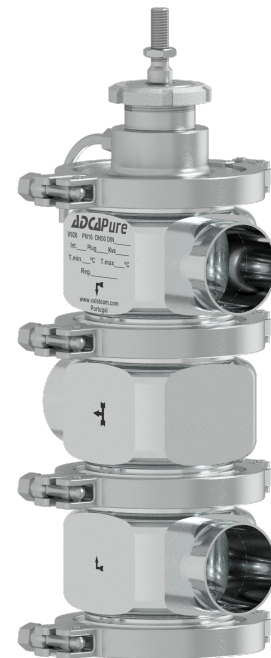
MAIN FEATURES

Completely manufactured from bar stock material.
Body and bonnet are connected by a clamp connection, allowing fast and easy maintenance procedures.
Cavity-free with no air trap locations.
Metal to metal or soft sealing.

STANDARD SURFACE FINISH

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

- OPTIONS:** Soft valve sealing.
Reduced bore trims.
Steam barrier.
- USE:** Saturated steam, hot and superheated water.
Process fluids, liquids, air and gases compatible with the construction.
- AVAILABLE MODELS:** V928MV – three-way angle design.
V928MH – three-way horizontal design.
V928D – three-way diverting.
- SIZES:** DN 15 to DN 100.
- CONNECTIONS:** DIN threads, 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. See IMI - Installation and maintenance instructions.



| CE MARKING – GROUP 2 (PED – European Directive) | |
|--|---------------|
| PN 16 | Category |
| DN 15 to DN 50 | SEP |
| DN 65 to DN 100 | 1 (CE Marked) |

| LIMITING CONDITIONS * | |
|--|---------------|
| Valve model | V928 |
| Body design conditions | PN 16 |
| Maximum operating pressure | 13 bar @ 38°C |
| Maximum operating steam pressure | 6 bar |
| Max. operating temp. (steam and water) | 170 °C |
| Maximum operating temperature (air) | 150 °C |
| Minimum operating temperature | - 10 °C |

* Higher or lower limits on request.

PLUG DESIGN

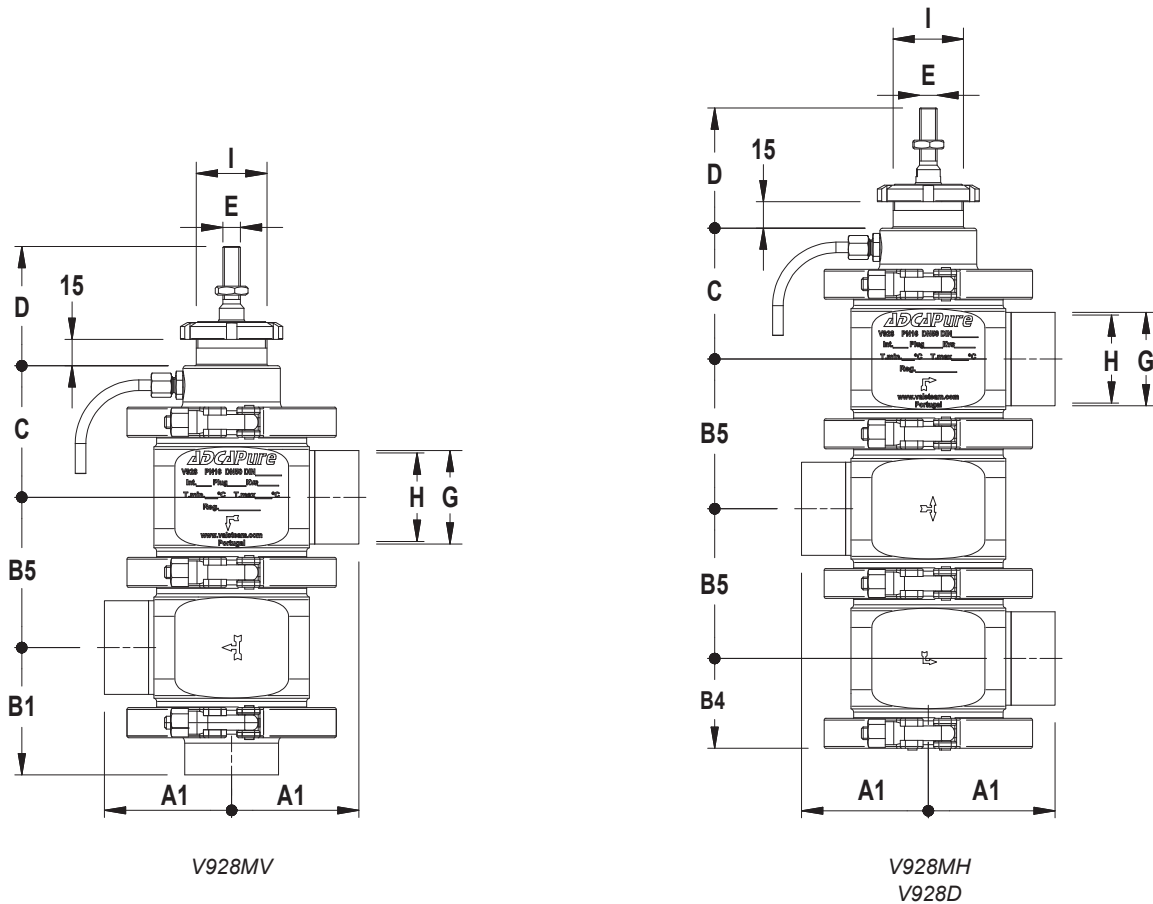
| MIXING | | MIXING (SOFT SEALING) | |
|-----------|--|--------------------------|---|
| | Sealing: Metal to metal Characteristic: Linear (PL) Rangeability: 30:1 Leakage: Class IV, acc. to IEC 60534-4 | | Sealing: EPDM, PTFE or FPM Characteristic: Linear (PL) Rangeability: 30:1 Leakage: Class VI, acc. to IEC 60534-4 |
| DIVERTING | | DIVERTING (SOFT SEALING) | |
| | Sealing: Metal to metal Characteristic: Linear (PL) Rangeability: 30:1 Leakage: Class IV, acc. to IEC 60534-4 | | Sealing: EPDM, PTFE or FPM Characteristic: Linear (PL) Rangeability: 30:1 Leakage: Class VI, acc. to IEC 60534-4 |

FLOW RATE COEFFICIENTS – MIXING AND DIVERTING PLUGS

| SIZE | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--|
| Kvs (m³/h) | 4 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | 160 | |
| SEAT Ø * | 15 | 19,2 | 25 | 32 | 38 | 50 | 65 | 76 | 96 | |
| STROKE (mm) | 20 | | | | | | 30 | | | |

For conversion, Kvs = Cv (US) x 0,865.

DIMENSIONS



| DIMENSIONS (mm) | | | | | | | | | | |
|----------------------|-----------|-------|-------|-------|-------|-------|-----------|-------|--------|--|
| DIMENSION | SIZE | | | | | | | | | |
| | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 | |
| A1 | 49 | 49 | 55 | 64 | 64 | 72 | 84 | 92 | 119 | |
| A2 | 61 | 61 | 55 | 77 | 77 | 83 | 89 | 92 | 118 | |
| A3 | 54 | 57 | 63 | 73 | 74 | 82 | 101 | 137 | 124 | |
| B1 | 45 | 45 | 55 | 62 | 64 | 72 | 86 | 109 | 119 | |
| B2 | 63 | 65 | 66 | 72 | 74 | 80 | 92 | 105 | 125 | |
| B3 | 66 | 69 | 84 | 94 | 97 | 107 | 126 | 154 | 173 | |
| B4 | 34 | 36 | 36 | 43 | 45 | 51 | 64 | 71 | 84 | |
| B5 | 51 | 55 | 55 | 68 | 73 | 85 | 110 | 125 | 144 | |
| C | 57 | 59 | 59 | 66 | 69 | 75 | 91 | 99 | 108 | |
| D | 67 | | | | | | 70 | | | |
| E | M10 x 1,5 | | | | | | | | | |
| F | 34 | 34 | 50,5 | 50,5 | 50,5 | 64 | 91 | 106 | 119 | |
| G | 19 | 23 | 29 | 35 | 41 | 53 | 70 | 85 | 104 | |
| H | 16 | 20 | 26 | 32 | 38 | 50 | 66 | 81 | 100 | |
| I | M40 x 1,5 | | | | | | M45 x 1,5 | | | |
| WEIGHT (kg) * | 2,4 | 2,5 | 2,6 | 4,3 | 4,4 | 4,7 | 10,8 | 11,8 | 17,1 | |

Remarks: Face to face dimensions are not standardized. Other dimensions and standards on request.

Configurations with overlapped connections are only possible for tube weld (ETO) versions.

A1 and B1 – Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

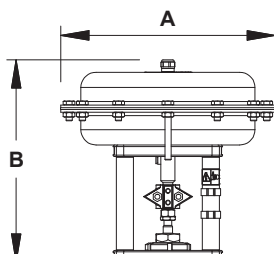
A2, B2 and F – Clamp ferrules DIN (DIN 32676-A).

A3 and B3 – Hygienic male threads DIN (DIN 11851) for pipes according to DIN 11866-A (DIN 11850-2).

Alternative: Aseptic male threads DIN (DIN 11864 -1 Form A) for pipes according to DIN 11866-A (DIN 11850-2).

* Based on the standard valve V928L with tube weld (ETO) connections. For other versions, consult manufacturer.

PA SERIES PNEUMATIC ACTUATORS

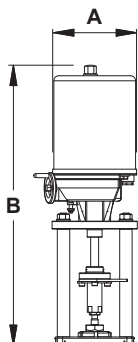


| DIMENSIONS (mm) | | | | | |
|--------------------|------|-------|-------|-------|-------------|
| DIMENSION | PA10 | PA206 | PA281 | PA341 | PA436 |
| A | 170 | 209 | 275 | 336 | 430 |
| B | 251 | 236 | 243 | 323 | 291 / 311 * |
| WEIGHT (kg) | 6,3 | 6,2 | 9,6 | 14,3 | 24,4 / 28 * |

* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.

For more information, please consult IS 3.05 – PA Linear pneumatic actuators.

EL SERIES ELECTRIC ACTUATORS



| DIMENSIONS (mm) | | | |
|--------------------|------|-------------|------|
| DIMENSION | EL12 | EL20 – EL45 | EL80 |
| A | 129 | 148 | 188 |
| B | 333 | 485 | 587 |
| WEIGHT (kg) | 2,1 | 8 | 13 |

For more information, please consult IS 3.72 – EL Linear electric actuators.

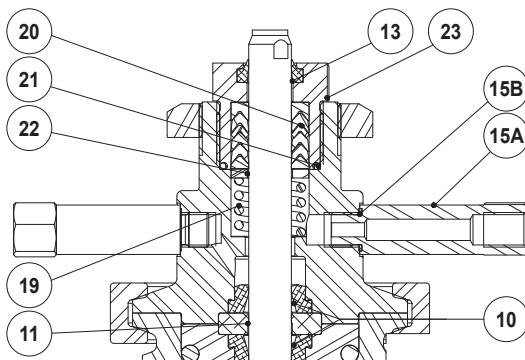
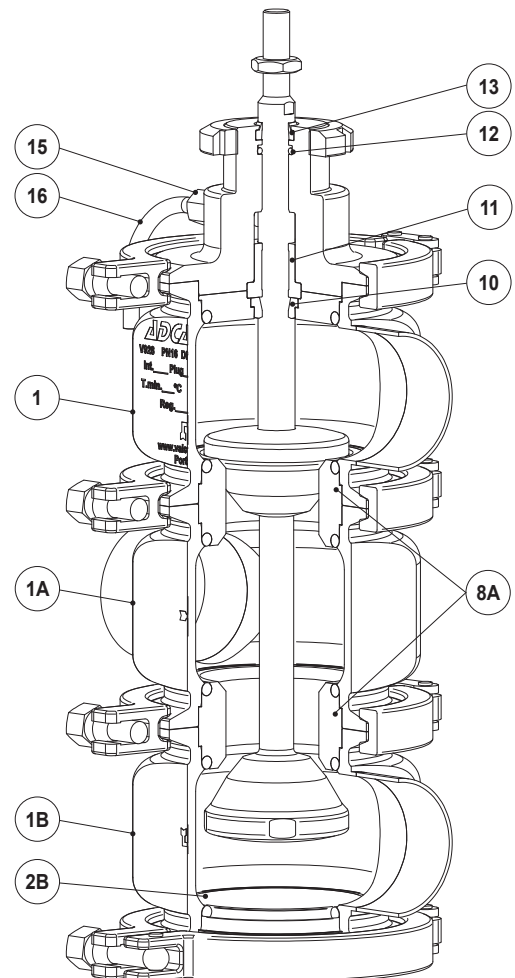
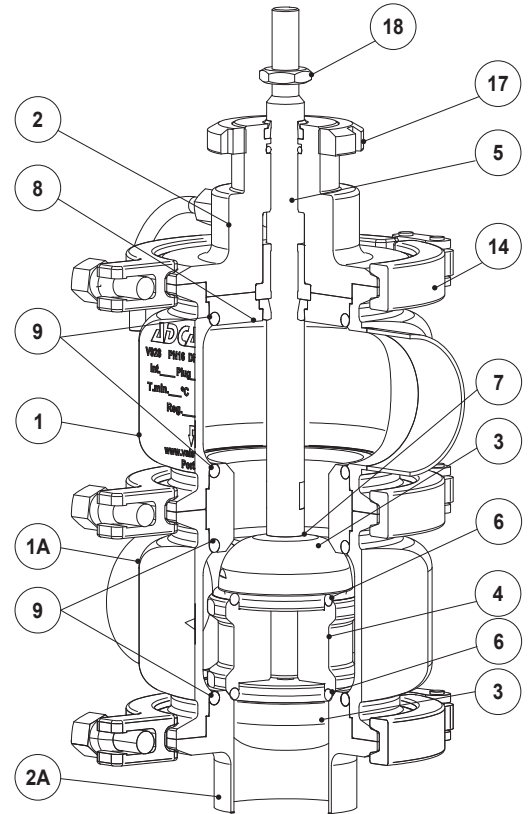
MATERIALS

| POS. N° | DESIGNATION | MATERIAL |
|---------|-------------------------|--------------------|
| 1 | Upper valve body | AISI 316L / 1.4404 |
| 1A | Intermediate valve body | AISI 316L / 1.4404 |
| 1B | Lower valve body | AISI 316L / 1.4404 |
| 2 | Bonnet | AISI 316L / 1.4404 |
| 2A | Bottom connection | AISI 316L / 1.4404 |
| 2B | Bottom cover | AISI 316L / 1.4404 |
| 3 | * Valve plug | AISI 316L / 1.4404 |
| 4 | * Plug disc | AISI 316L / 1.4404 |
| 5 | * Stem | AISI 316L / 1.4404 |
| 6 | * Valve plug seal | ** EPDM; PTFE; FPM |
| 7 | * O-ring | EPDM |
| 8 | Centering ring | AISI 316L / 1.4404 |
| 9 | * O-ring | EPDM; PTFE; FPM |
| 10 | * Shaft seal | EPDM; PTFE; FPM |
| 11 | * Guide bushing | TFM 1600 |
| 12 | * O-ring | EPDM |
| 13 | * Scraper ring | FPM; NBR |
| 14 | Clamp | AISI 316 / 1.4401 |
| 15 | Compression fitting | AISI 304 / 1.4301 |
| 15A | Nipple | AISI 316L / 1.4404 |
| 15B | * O-ring | FPM |
| 16 | Discharge pipe | AISI 316 / 1.4401 |
| 17 | Lock nut | CF8 / 1.4308 |
| 18 | Lock nut | AISI 304 / 1.4301 |
| 19 | * Spring | AISI 302 / 1.4310 |
| 20 | * Chevron packing set | PTFE |
| 21 | * O-ring | EPDM |
| 22 | * Washer | AISI 304 / 1.4301 |
| 23 | Gland nut | AISI 316L / 1.4404 |

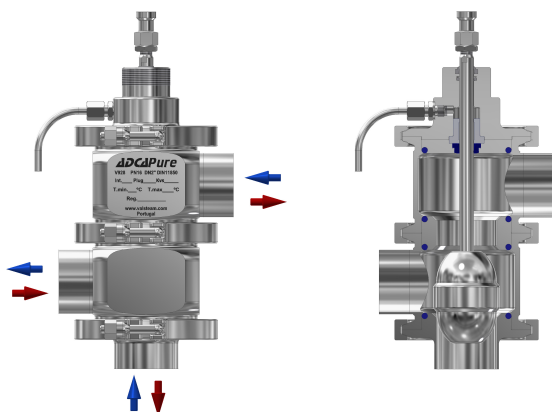
* Available spare parts; ** Others on request.

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.



Optional steam barrier

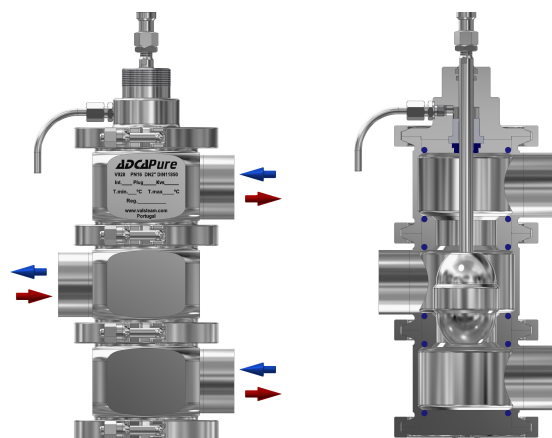


V928MV

Three-way design with two valve bodies (upper and lower) and a bottom vertical connection.

The valve can be used for mixing or diverting duty.

Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.

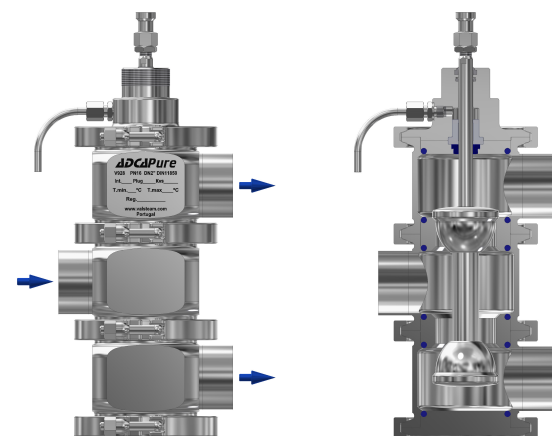


V928MH

Three-way design with three valve bodies (upper, intermediate and lower) and all the connections in the horizontal plain.

The valve can be used for mixing or diverting duty.

Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.



V928D

Three-way design with three valve bodies (upper, intermediate and lower) and all the connections in the horizontal plain.

The valve is exclusively meant for diverting duty.

Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.

| ORDERING CODES V928 a) | | | | | | | | | | | | |
|---|-----|---|---|---|---|---|---|----|---|----|-----|-----|
| Valve model | V8V | 1 | S | U | E | M | L | FD | X | FX | 015 | |
| V928MV - AISI 316L hygienic control valve, three-way, angle | V8V | | | | | | | | | | | |
| V928MH - AISI 316L hygienic control valve, three-way, horizontal | V8M | | | | | | | | | | | |
| V928D - AISI 316L hygienic control valve, three-way, horizontal, diverting | V8D | | | | | | | | | | | |
| Valve series | | | | | | | | | | | | |
| Series 1 | | 1 | | | | | | | | | | |
| Bonnet design | | | | | | | | | | | | |
| Standard | | | S | | | | | | | | | |
| With steam barrier | | | B | | | | | | | | | |
| Flow direction | | | | | | | | | | | | |
| Flow under the plug | | | | U | | | | | | | | |
| Stem and body sealing b) | | | | | | | | | | | | |
| EPDM | | | | | E | | | | | | | |
| PTFE | | | | | T | | | | | | | |
| FPM / Viton | | | | | V | | | | | | | |
| Valve sealing | | | | | | | | | | | | |
| Metal to metal (class IV) | | | | | | M | | | | | | |
| Soft sealed with EPDM (class VI) | | | | | | E | | | | | | |
| Soft sealed with PTFE (class VI) | | | | | | T | | | | | | |
| Soft sealed with FPM/Viton (class VI) | | | | | | V | | | | | | |
| Characteristic | | | | | | | | | | | | |
| Linear (PL) | | | | | | | L | | | | | |
| Flow rate coefficient | | | | | | | | | | | | |
| Kvs 4 | | | | | | | | FD | | | | |
| See table below for other Kvs value codes | | | | | | | | | | | | |
| Surface finish c) | | | | | | | | | | | | |
| Standard surface finish | | | | | | | | | X | | | |
| Mirror mechanical polished external surfaces (SF1) | | | | | | | | | P | | | |
| Electropolished internal wetted parts (SF5) | | | | | | | | | E | | | |
| Pipe connection | | | | | | | | | | | | |
| Clamp ferrule DIN (DIN 32676-A) | | | | | | | | | | FX | | |
| Hygienic male threads DIN (DIN 11851) | | | | | | | | | | G1 | | |
| Aseptic male threads DIN (DIN 11864-1 Form A) | | | | | | | | | | G2 | | |
| Tube weld (ETO) according to DIN 11866-A (DIN 11850-2) | | | | | | | | | | FI | | |
| Size | | | | | | | | | | | | |
| DN 15 | | | | | | | | | | | | 015 |
| DN 20 | | | | | | | | | | | | 020 |
| ... | | | | | | | | | | | | |
| Special valves / Extras | | | | | | | | | | | | |
| Full description or additional codes have to be added in case of a non-standard combination | | | | | | | | | | | | E |

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

b) When the bonnet with heating chamber is selected the stem sealing is achieved through a PTFE V-Rings/chevron packing set. In which case this field only specifies the body sealing material.

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

| FLOW RATE COEFFICIENT CODES | | | | | | | | | |
|-----------------------------|----|-----|----|----|----|----|----|-----|-----|
| Kvs | 4 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | 160 |
| Code | FD | FE | FF | FG | FH | FI | FJ | FL | FM |