

**PNEUMATIC CONTROL VALVES
PV928**

(V928 hygienic angle valve with linear actuator PA series)

DESCRIPTION

The PV928 are two or three way control valves with angle connections, specially designed for food, chemical, pharmaceutical and cosmetic industries among others. The PA pneumatic actuator features a rubber diaphragm and multi-springs. Its action can be DA - direct action (air to close) or RA-reverse action (air to open). The PV928 valves have been designed to ensure an accurate control in any process condition and they have self draining design.

MAIN FEATURES

Quick disassembling through clamp body bonnet coupling.
Completely made from solid bar stock material.
Valve bonnet permanently attached to the body, removal is unnecessary for replacing the actuator.
Metal to metal or soft sealing.
Self draining design.

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.
Actuator (stainless steel): Satin bead blast finish 1,6 micron Ra.
Actuator (steel): Electrostatic painted.

OPTIONS: Soft sealing.
Steam barrier.
Low noise and anti-cavitation plugs.
Positioners and position transmitters.
Air filter regulator.

USE: Saturated steam, hot and superheated water.
Process fluids, liquids, air and gases compatible with the construction.

AVAILABLE MODELS: PV928L – Two way angle valve.
PV928H – Two way horizontal valve.
PV928M – Three way mixing valve.
PV928D – Three way diverting valve.

VALVE SIZES: DN 15 to DN 100.
CONNECTIONS: DIN. Others on request.
Tube weld, clamp ferrules and threads.

VALVE PORT: Full port as standard.
Reduced or micro flow on request.

PLUG TYPES: Equal percentage (EQP).
Linear (PL).

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.

HOW TO SELECT: Never size the valve according to the pipe diameter in which it has to be fitted, but according to the required actual flow of fluid. Refer to valve calculation table or consult factory.



Clamp version



Tube weld version

PNEUMATIC ACTUATORS: PA205, PA280, PA340, PA435.

ACTUATOR CONNECTIONS: 1/4" NPT-F.
CONTROL SIGNAL: 0,4–1,2 bar; 0,4–2 bar.
ELECTRIC ACT: Consult IS EL 20.00 E.
MAX. AIR SUPPLY: 3,5 bar.
AMBIENT TEMPERATURE: - 20 °C to +70 °C.

| LIMITING CONDITIONS | |
|--|---------------|
| Valve model | V928 |
| Body design conditions | PN16 |
| 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 |

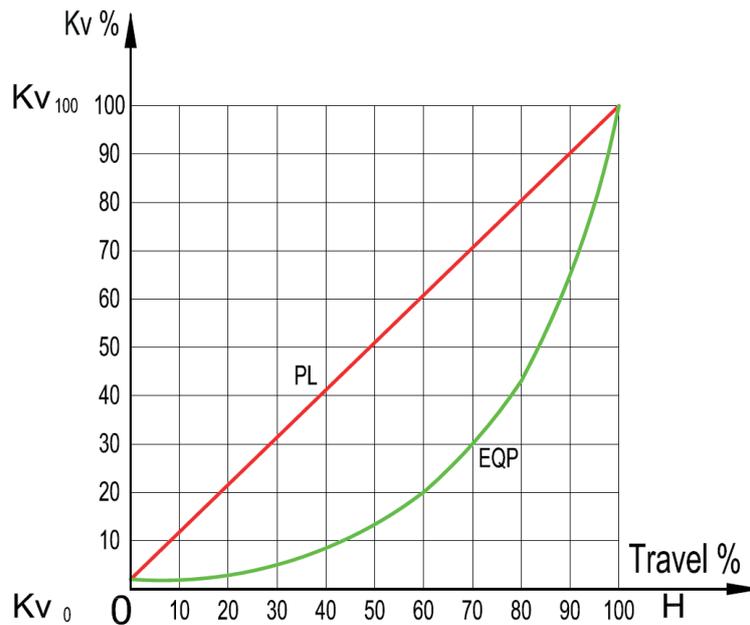
Higher and lower limits on request.

| CE MARKING – GROUP 2 (PED – European Directive) | |
|--|-----------------|
| PN16 | Category |
| DN 15 to DN 50 | SEP |
| DN 65 to DN 100 | 1 (CE Marked) |

FLOW RATE COEFFICIENTS (Kvs)

| SEAT Ø (mm) | VALVE STROKE (mm) | SIZES | | | | | | | | |
|----------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| | | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 |
| 4 * | 20 | 0,1 | – | – | – | – | – | – | – | – |
| 4 * | | 0,25 | – | – | – | – | – | – | – | – |
| 4 * | | 0,5 | – | – | – | – | – | – | – | – |
| 8 * | | 1 | – | – | – | – | – | – | – | – |
| 8 * | | 1,5 | – | – | – | – | – | – | – | – |
| 8 * | | 2 | 2,4 | – | – | – | – | – | – | – |
| 12 | | 2,3 | 2,8 | 3 | – | – | – | – | – | – |
| 12 | | 2,9 | 3,7 | 4 | 4,3 | – | – | – | – | – |
| 15 | | 4,2 | 5,2 | 6,5 | 7,8 | 8,4 | – | – | – | – |
| 19 | | – | 7 | 8,7 | 9,8 | 11,2 | 12,3 | – | – | – |
| 25 | | – | – | 12 | 14,7 | 18 | 21,1 | 23 | – | – |
| 32 | | – | – | – | 17,8 | 21 | 25,4 | 31 | 34 | – |
| 38 | | – | – | – | – | 22,2 | 27,7 | 34,6 | 40,8 | 44,7 |
| 50 | | – | – | – | – | – | 40,1 | 49 | 61 | 68 |
| 65 | | 30 | – | – | – | – | – | 63,4 | 79,2 | 91 |
| 76 | – | | – | – | – | – | – | 89,7 | 112,1 | |
| 96 | – | | – | – | – | – | – | – | 136,7 | |

* Microflow available only with contoured linear characteristic.
 For conversion $Kvs = Cv (US) \times 0,855$.



DIMENSIONS (mm) DIN

| SIZE | A1 | A2 | B1 | B2 | A3 | B3 | B0 | B1 | C | D | E | G | H | I | WEIGHT (kg) * |
|--------|-----|-----|----|-----|-----|-----|----|-----|-----|----|----|-----|-----|---------|---------------|
| DN 15 | 50 | 45 | 62 | 65 | 55 | 66 | 34 | 50 | 56 | 25 | 45 | 19 | 16 | M40x1,5 | 2,3 |
| DN 20 | 50 | 45 | 62 | 65 | 57 | 69 | 34 | 50 | 56 | 25 | 45 | 23 | 20 | M40x1,5 | 2,5 |
| DN 25 | 55 | 55 | 55 | 66 | 63 | 84 | 36 | 55 | 59 | 25 | 45 | 29 | 26 | M40x1,5 | 2,7 |
| DN 32 | 56 | 56 | 69 | 71 | 88 | 91 | 40 | 62 | 63 | 25 | 45 | 35 | 32 | M40x1,5 | 3,8 |
| DN 40 | 64 | 64 | 77 | 74 | 74 | 97 | 45 | 73 | 69 | 25 | 45 | 41 | 38 | M40x1,5 | 3,9 |
| DN 50 | 72 | 72 | 83 | 80 | 82 | 107 | 51 | 85 | 75 | 25 | 45 | 53 | 50 | M40x1,5 | 5,1 |
| DN 65 | 86 | 86 | 92 | 92 | 104 | 126 | 64 | 110 | 92 | 25 | 45 | 70 | 66 | M45x1,5 | 9,9 |
| DN 80 | 92 | 109 | 92 | 106 | 109 | 154 | 71 | 125 | 100 | 25 | 45 | 85 | 81 | M45x1,5 | 10,9 |
| DN 100 | 119 | 119 | 98 | 116 | 124 | 173 | 80 | 144 | 109 | 25 | 45 | 104 | 100 | M45x1,5 | 16,2 |

Face to face dimensions are not standardized. Different dimensions available on request.

Key: A1 – B1 – Tube weld DIN 11866 Series A (DIN 11850).

A2 – B2 – Clamp ferrules DIN 32676 Series A.

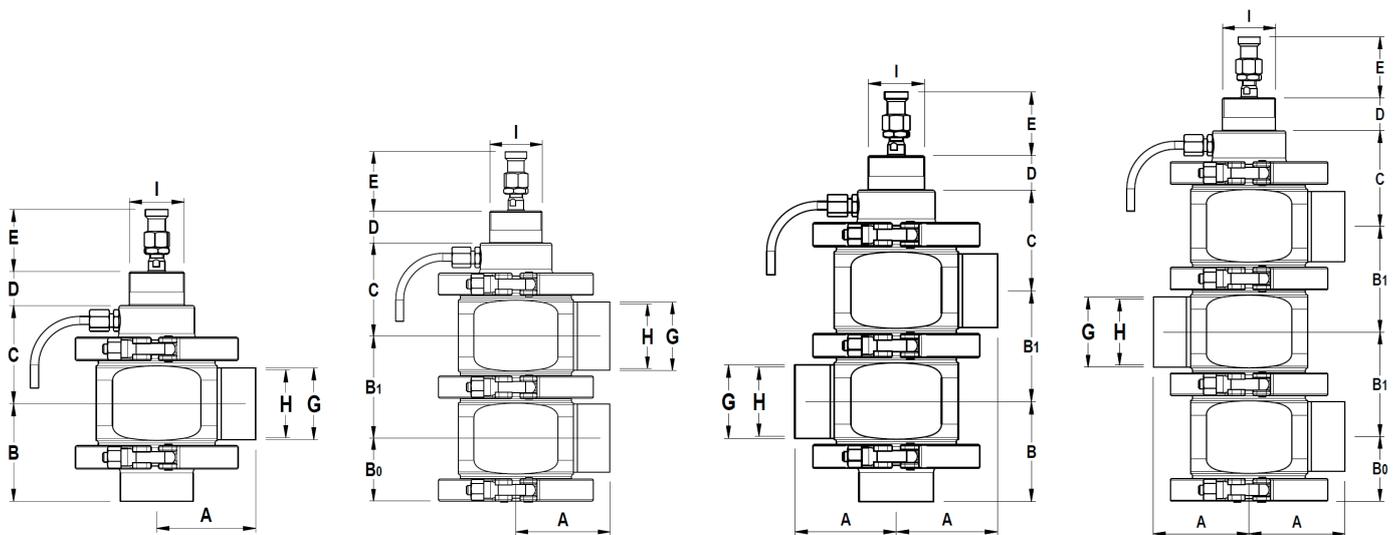
A3 – B3 – Hygienic male threaded ferrule DIN 11851, for pipe DIN 11866 Series A (DIN 11850).

Alternative: Aseptic male threaded ferrule DIN 11864 Series 1 Form A, for pipe DIN 11866 Series A (DIN 11850).

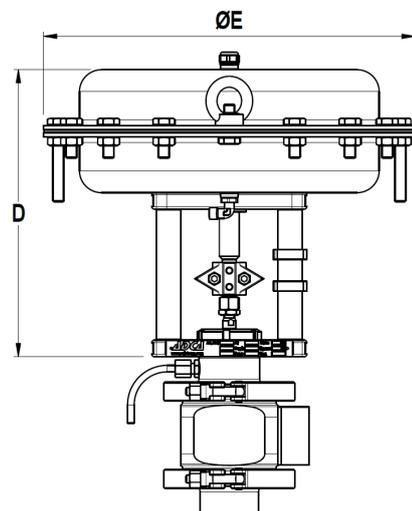
Other dimensions and standards on request.

* Weight is based on the standard valve V928L with tube weld connections. For other versions, consult factory.

** Configuration with overlapped connections only possible for tube weld design.



| PNEUMATIC ACTUATOR DIMENSIONS (mm) | | | |
|------------------------------------|-----|-----|-------------|
| TYPE | D | E | WEIGHT (kg) |
| PA205 | 235 | 210 | 5,7 |
| | 240 | 275 | 8,8 |
| PA340 | 265 | 335 | 14,3 |
| PA435 | 295 | 430 | 24,5 |



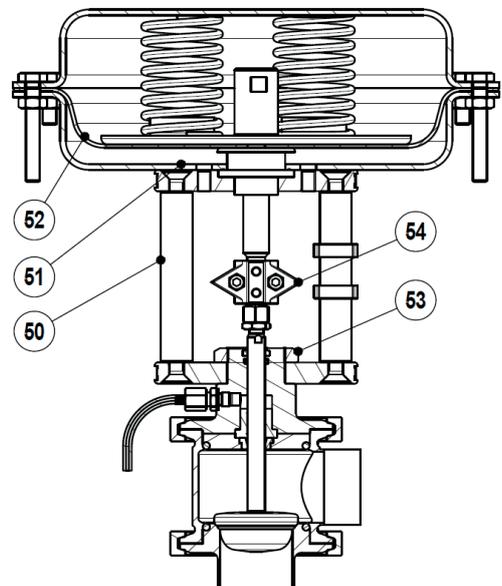
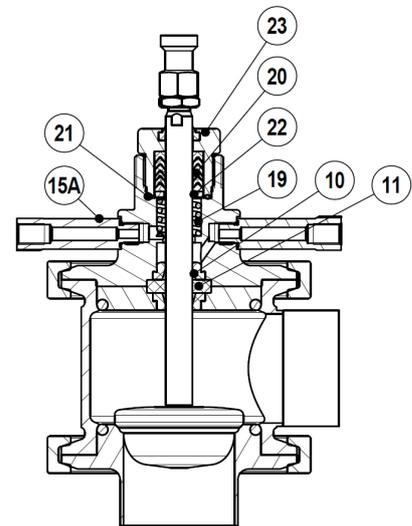
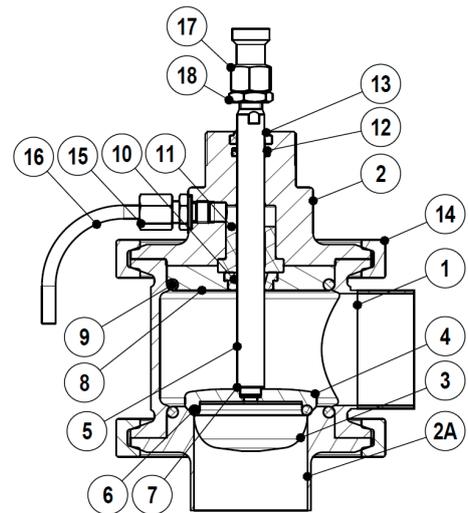
MATERIALS

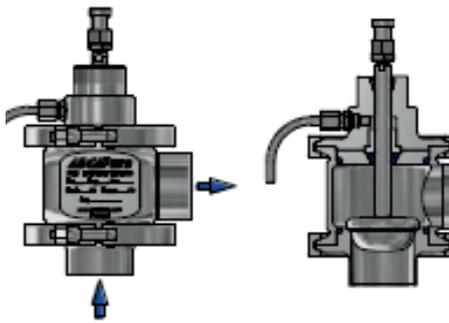
| POS. N° | DESIGNATION | MATERIAL |
|---------|-----------------------------|-------------------------|
| 1 | Valve body | AISI 316L / 1.4404 |
| 2 | Bonnet | AISI 316L / 1.4404 |
| 2A | Bottom cover / connection | AISI 316L / 1.4404 |
| 3 | * Valve plug | AISI 316L / 1.4404 |
| 4 | Plug disc | AISI 316L / 1.4404 |
| 5 | * Stem | AISI 316L / 1.4404 |
| 6 | Valve plug seal | High performance EPDM |
| 7 | O-ring | High performance EPDM |
| 8 | Centering ring | AISI 316L / 1.4404 |
| 9 | * O-ring | High performance EPDM |
| 10 | * Shaft seal | High performance EPDM |
| 11 | * Guide bushing | TFM 1600 |
| 12 | * O-ring | EPDM |
| 13 | * Scraper ring | Viton |
| 14 | Clamp | AISI 316 / 1.4401 |
| 15 | Leak-off connection | AISI 304 / 1.4301 |
| 15A | Nipple | AISI 316L / 1.4404 |
| 16 | Discharge pipe | AISI 316 / 1.4401 |
| 17 | Nut adapter | AISI 316 / 1.4401 |
| 18 | Lock nut | Stainless Steel A2 – 70 |
| 19 | Spring | AISI 302 / 1.4300 |
| 20 | * Packing (chevron rings) | PTFE |
| 21 | * O-ring | High performance EPDM |
| 22 | * Washer | AISI 304 / 1.4301 |
| 23 | Gland nut | AISI 316L / 1.4404 |
| 50 | Yoke (steel) | C45E / 1.1191 |
| | Yoke (stainless steel) | AISI 304 / 1.4301 |
| 51 | Actuator (steel) | S235JRG2 / 1.0038 |
| | Actuator (stainless steel) | AISI 304 / 1.4301 |
| 52 | * Diaphragm | NBR 70 |
| 53 | Lock nut | CF8 / 1.4308 |
| 54 | Coupling (travel indicator) | CF8 / 1.4308 |

* Available spare parts.

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.



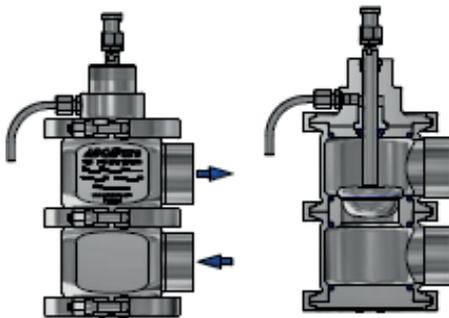


V928 Type L

Two way basic hygienic standard design with one angle main valve body type connection.

The vertical valve inlet has the integrated valve seat.

The flow connection should always be against the plug closing direction.

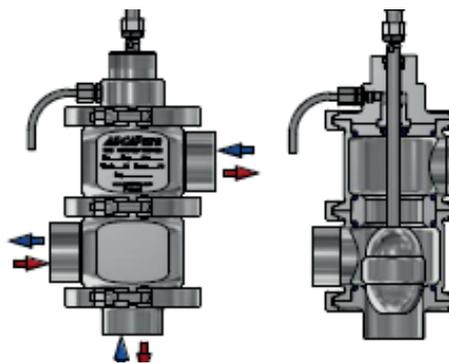


V928 Type H

Two way design with two main valve bodies each one with an horizontal connection.

The valve seat is placed between the two main bodies.

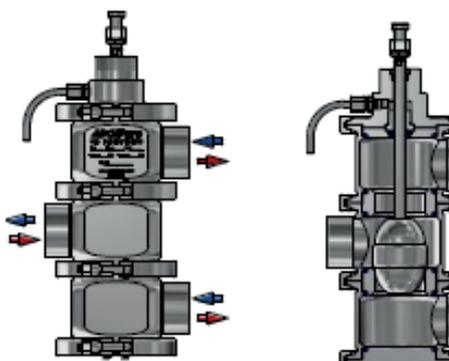
Configuration with overlapped connections only possible for tube weld design.



V928 Type MV

Three way valve design with two main valve bodies and with a bottom vertical connection.

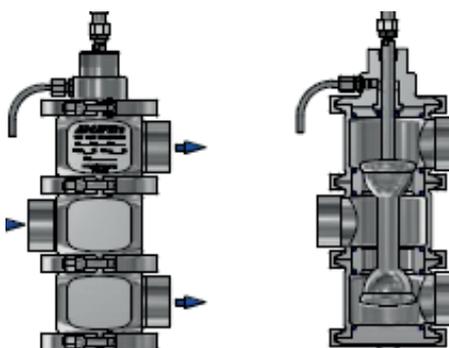
This valve can be used for mixing or diverting.



V928 Type MH

Three way valve design with three main bodies and all the connections on the horizontal plan.

This valve can be used for mixing or diverting.



V928 Type D

Three way valve design with three main bodies and connection in an horizontal plan.

This valve is designed for flow diverting.

ORDERING CODES V926

| VALVE CODES | P | V | .98L | 1 | G1 | 15 | .X. |
|--|---|---|-------|---|-----|----|-----|
| Actuator type (1) | | | | | | | |
| Pneumatic actuator | P | | | | | | |
| Electric actuator | E | | | | | | |
| Group designation | | | | | | | |
| Globe valve, two / three way | | V | | | | | |
| Valve model | | | | | | | |
| V928L – Two way angle valve | | | .98L | | | | |
| V928H – Two way horizontal valve | | | .98H | | | | |
| V928MV – Three way angle mixing / diverting valve | | | .98MV | | | | |
| V928MH – Three way horizontal mixing / diverting valve | | | .98MH | | | | |
| V928D – Three way diverting valve | | | .98D | | | | |
| Valve plug | | | | | | | |
| EQP (equal percentage) – Soft (High performance EPDM) | | | | 1 | | | |
| EQP (equal percentage) – Metal (AISI 316L / 1.4404) | | | | 3 | | | |
| PL (linear) – Soft (High performance EPDM) | | | | 6 | | | |
| PL (linear) – Metal (AISI 316L / 1.4404) | | | | 7 | | | |
| Pipe connection | | | | | | | |
| Tri-clamp ferrules DIN (DIN 32676-A) | | | | | F | | |
| Hygienic male threads DIN (DIN 11851) | | | | | G1 | | |
| Aseptic male threads DIN (DIN 11864-1 Form A) | | | | | G2 | | |
| Tube weld DIN (DIN 11866-A) | | | | | F I | | |
| Size | | | | | | | |
| DN15 | | | | | | 15 | |
| DN20 | | | | | | 20 | |
| DN25 | | | | | | 25 | |
| ... | | | | | | | |
| Actuator | | | | | | | (1) |
| Extras (3) | | | | | | | E |

| ACTUATOR CODES | P. | 5 | R | P | 30 |
|---|----|---|---|---|----|
| Group designation | | | | | |
| Multi-spring, pneumatic linear actuator | P. | | | | |
| Actuator size | | | | | |
| 205 | | 1 | | | |
| 280 | | 3 | | | |
| 340A – From DN 15 to DN 50 | | 5 | | | |
| 340B – From DN 65 to DN 100 | | 6 | | | |
| 435A – From DN 15 to DN 50 | | 7 | | | |
| 435B – From DN 65 to DN 100 | | 8 | | | |
| Actuator type | | | | | |
| Direct action (air to close) | | | D | | |
| Reverse action (air to open) | | | R | | |
| Actuator Construction | | | | | |
| Steel construction (painted) – AdcaPure range | | | | P | |
| Stainless steel construction – AdcaPure range | | | | H | |
| Control signal | | | | | |
| 0,4 – 1,2 bar (6-18 psi) | | | | | 18 |
| 0,4 – 2 bar (6-30 psi) | | | | | 30 |
| 0,4 – 2,4 bar (6-35 psi) | | | | | 35 |

→ To be introduced on “.X.”, if supplied in combination with the valve.

Example:

PV928L two way angle valve DN 50, male threads DIN 11851, complete with reverse action actuator signal 0,4 – 2 bar, size 340A steel:

Code: PV.98L1G150.5RP30

REMARKS:

(1) – Indicate actuator type.

(3) – To be used only when a non-standard combination valve is supplied.

Adcapture control valves are identified by a serial number on a nameplate, located on the valve and/ or actuator yoke.

When ordering spares, always use that serial number. If the valve has non-standard extras the serial number also has an E (extras).