

PNEUMATIC CONTROL VALVES
PV25I-Stainless steel (Threaded DN 1/2" - 1")
(V25I globe valves series with linear actuators PA series)

DESCRIPTION

The PV25 control valves are single seated, two-way body constructed with in-line straight connections. The PA pneumatic actuator is rubber diaphragm and multi-springs. It's action can be DA - direct action (air to close) or RA-reverse action (air to open). The PV25 valves have been designed to assure an accurate control in any process condition. Their wide application ranges allows the use of this valve with the most common process fluids such as water, superheated water, steam, air, gas and other non corrosive fluids.

MAIN FEATURES

Single seated, two way , direct or reverse action valve.
 Valve top flange permanently attached to the body, removal is unnecessary for replacing the actuator.
 Metal to metal sealing as standard.

- OPTIONS:**
- Position transmitter 4-20 mA
 - Pneumatic pilot positioner
 - Electropneumatic pilot positioner
 - Air filter regulator
 - Top-work manual handwheel
 - Stainless steel actuator.
 - Soft sealing and stellite seat and plug.
- USE:**
- Saturated and superheated steam.
 - Hot and superheated water.
 - Air, gases and other noncorrosive fluids

AVAILABLE

- MODELS:**
- PV25S - Carbon steel
 - PV25I - Stainless steel
- VALVE SIZES:** DN 1/2" to 1"

CONNECTIONS: Threaded ISO or ANSI

ACTUATORS: PA-205; PA-280; PA-340.

ACTUATOR CONN: 1/4" NPT-F

CONTROL SIGNAL: 0,2 - 1 bar ; 0,4 - 1,2 bar ; 0,4 - 2 bar.

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 steam or water. Refer to valve calculation data sheet or consult the factory.



| VALVE LIMITING CONDITIONS | | | |
|---------------------------|------------|----------|------------|
| V25S | | V25I | |
| PRESS. | Rel. Temp. | PRESS. | Rel. Temp. |
| 25 bar | -10/50 °C | 25 bar | 10/50 °C |
| 20,8 bar | 200 °C | 21 bar | 200 °C |
| 19 bar | 250 °C | 19,8 bar | 250 °C |
| 17,2 | 300 °C | 18,5 bar | 300 °C |

Maximum temperature limited to the valve packing selected.

Valves with soft seating: max.temperature 200°C

MAX. AIR SUPPLY

PRESSURE: 3,5 bar

AMBIENT

TEMPERATURE: -20°C ...+70°C

BONNET : From -5°C to +220°C (standard)

Finned for temperature >220°C

STEM SEALING: PTFE/GR V-Rings - up to 220°C (Standard bonnet)

Graphite - up to 400°C

(Finned bonnet)

Stainless steel bellows

PLUG CHARACT.: EQP - Equal percentage

PL - Linear

PT - On-Off

PLUG DESIGN : Contoured

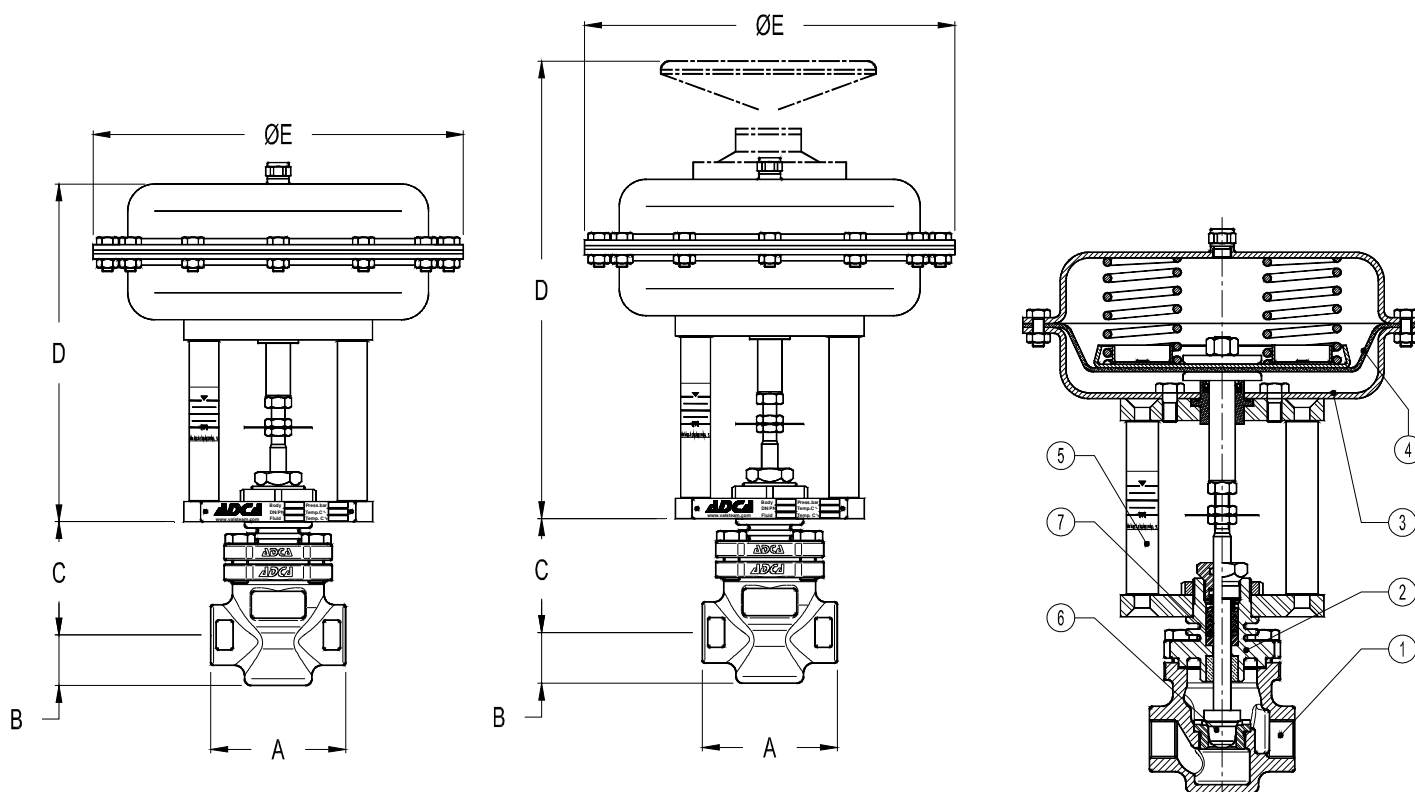
Microflow

Perforated

(Low noise, anti-cavitation)

PORT : Full port or reduced on request

| CE MARKING (PED - European Directive 97/23/EC) | |
|--|--------------------------|
| PN 25 | Category |
| DN 1/2" to 1" | SEP - art. 3, paragraph3 |



| DIMENSIONS - VALVE BODY | | | | | | |
|-------------------------|--------|--------|------------------|--------|----------|---------|
| DN | A (mm) | B (mm) | C (mm) BONNET | | | |
| | | | STANDARD | FINNED | EXTENDED | BELLOWS |
| 1/2" | 100 | 37,5 | 84 | 145 | 145 | 205 |
| 3/4" | 100 | 37,5 | 84 | 145 | 145 | 205 |
| 1" | 100 | 37,5 | 84 | 165 | 165 | 225 |

| DIMENSIONS - ACTUATOR | | | |
|-----------------------|----------|-----------------------|------------|
| Type | ø E (mm) | D (mm) | WEIGHT Kgs |
| | | DN 1/2" - 1" DA/RA | |
| PA-205 | 210 | 235 | 5,7 |
| PA-280 | 275 | 240 | 8,8 |
| PA-340 | 335 | 265 | 14,3 |
| PA-435 | 430 | 295 | 24,5 |

| MATERIALS | | |
|-----------|----------------------------|-------------------|
| POS. | DESIGNATION | MATERIAL |
| 1 | Valve Body | CF8M / 1.4408 |
| 2 | Bonnet | CF8M / 1.4408 |
| 3 | Actuator (Steel) | S235JRG2 / 1.0038 |
| | Actuator (Stainless steel) | AISI304 / 1.4301 |
| 4 | * Diaphragm | NBR 70 |
| 5 | Yoke (Seel) | C45E / 1.1191 |
| | Yoke (Stainless steel) | AISI304 / 1.4301 |
| 6 | Valve Seal | PTFE/GR |
| 7 | * Standard packing | PTFE/GR |

* Available spare parts

| FLOW RATE COEFFICIENTS | | | |
|------------------------|-------|------|------|
| | SIZES | | |
| | DN15 | DN20 | DN25 |
| Kvs | 3,8 | 5,1 | 9,4 |

Kvs in m³/h , see data sheet IS PV10.00 E ;
For conversion Kvs = Cv(US) x 0,855

| VALVE STROKE IN mm | | | |
|--------------------|-------|------|------|
| | SIZES | | |
| | DN15 | DN20 | DN25 |
| Stroke | 20 | 20 | 20 |

Perforated plug and on-off valves may have different strokes, please see literature or consult factory.



| MAX. PERM.PRESS.DROP IN bar N.C. (fluid to open) - Reverse action actuator (air signal to open) | | | | | | | |
|--|----------------|--------|--------|------|---------|---------|------|
| ACTUATOR | CONTROL SIGNAL | SIZES | | | | | |
| | | DN1/2" | DN3/4" | DN1" | DN11/4" | DN11/2" | DN2" |
| PA-205 | 0,2 ÷ 1 bar | 6 | 6 | 5 | — | — | — |
| | 0,4 ÷ 1,2 bar | 10 | 10 | 7 | — | — | — |
| | 0,4 ÷ 2 bar | 12 | 12 | 9 | — | — | — |
| PA-280 | 0,2 ÷ 1 bar | 28 | 26 | 16 | — | — | — |
| | 0,4 ÷ 1,2 bar | 40 | 38 | 20 | — | — | — |
| | 0,4 ÷ 2 bar | 50 | 45 | 25 | — | — | — |
| PA-340A | 0,2 ÷ 1 bar | 60 | 60 | 50 | — | — | — |
| | 0,4 ÷ 1,2 bar | 80 | 80 | 60 | — | — | — |
| | 0,4 ÷ 2 bar | 100 | 100 | 80 | — | — | — |

The pressure drop values are referred to closed valves. They have been verified by a control signal coming from an electro-pneumatic converter with an enduring minimum signal of 0,2 bar.

The actuator press. drops given with closed valve for the actuator signal 0,4 - 2 bar are also valid for ON-OFF service with air supply at 2,5 bar. Special spring drops available on request.

The pressure drop values must be used within the body rating limits.

For electric actuator selection please consult catalogue IS EL.20.00 E or our technical department.

| MAX. PERM.PRESS.DROP IN bar N.O. (fluid to open) -Direct action actuator (air signal to close) | | | | | | | |
|---|----------------|--------|--------|------|---------|---------|------|
| ACTUATOR | CONTROL SIGNAL | SIZES | | | | | |
| | | DN1/2" | DN3/4" | DN1" | DN11/4" | DN11/2" | DN2" |
| PA-205 | 0,2 ÷ 1 bar | 16 | 16 | 12 | — | — | — |
| | 0,4 ÷ 2 bar | 25 | 24 | 16 | — | — | — |
| PA-280 | 0,2 ÷ 1 bar | — | — | 19 | — | — | — |
| | 0,4 ÷ 2 bar | — | — | 25 | — | — | — |
| PA-340A | 0,2 ÷ 1 bar | — | — | — | — | — | — |
| | 0,4 ÷ 2 bar | — | — | — | — | — | — |

The actuator pressure drops given with closed valve, are obtained with the following air pressures supply:

Actuator signal 0,2 to 1 bar : air supply 1,2 bar

Actuator signal 0,4 to 2 bar : air supply 2,5 bar

The actuator press. drops given with closed valve for the actuator signal 0,4- 2 bar are also valid for ON-OFF service with air supply at 2,5 bar.

Special spring drops available on request.

The pressure drop values must be used within the body rating limits.

For electric actuator selection please consult catalogue IS EL.20.00 E or our technical department.



ORDERING CODES V25 - THREADED

| VALVE CODES | | V | .25 | S | | | | | | .X. |
|---|-----|---|-----|---|--|--|--|--|---|-----|
| Actuator Type (1) | | | | | | | | | | |
| Pneumatic Actuator | P | | | | | | | | | |
| Electric Actuator | E | | | | | | | | | |
| Group Designation | | | | | | | | | | |
| Globe valve, two way, straight body | V | | | | | | | | | |
| Valve Model | | | | | | | | | | |
| PN25, two way, cast steel valve | .25 | S | | | | | | | | |
| PN25, two way, complete stainless steel valve | .25 | I | | | | | | | | |
| Stem Sealing | | | | | | | | | | |
| PTFE/GR-V-Rings / Standard bonnet | | | | | | | | | 1 | |
| Virgin PTFE V-Rings / Standard bonnet | | | | | | | | | 2 | |
| Graphite / Standard bonnet | | | | | | | | | 3 | |
| Graphite / Finned bonnet | | | | | | | | | 4 | |
| Bellows | | | | | | | | | 8 | |
| Valve Plug | | | | | | | | | | |
| EQP (equal percentage) - Soft (PTFE-GR) | | | | | | | | | | 1 |
| EQP (equal percentage) - Metal AISI316 / 1.4401 | | | | | | | | | | 3 |
| EQP (equal percentage) - Stellite | | | | | | | | | | 4 |
| PL (linear) - Soft (PTFE/GR) | | | | | | | | | | 6 |
| PL (linear) - Metal AISI316 / 1.4401 | | | | | | | | | | 7 |
| PT (on-off) - Soft (PTFE/GR) | | | | | | | | | | 9 |
| PT (on-off) - Metal AISI316 / 1.4401 | | | | | | | | | | 10 |
| Pipe Connection | | | | | | | | | | |
| Threaded BSP ISO 7/1 Rp | | | | | | | | | | A |
| Threaded NPT ANSI B1.20.1 | | | | | | | | | | C |
| Size | | | | | | | | | | |
| DN 1/2" | | | | | | | | | | 15 |
| DN 3/4" | | | | | | | | | | 20 |
| DN 1" | | | | | | | | | | 25 |
| Actuator | | | | | | | | | | (1) |
| Extras (3) | | | | | | | | | | E |

ACTUATOR CODES (pneumatic)

| | | | | | | | | | | |
|--|----|----|--|--|--|--|--|--|--|-----|
| Group Designation | | P. | | | | | | | | |
| Multi-spring , pneumatic linear actuator | P. | | | | | | | | | |
| Actuator Size | | | | | | | | | | |
| 205 | | | | | | | | | | 1 |
| 280 | | | | | | | | | | 3 |
| 340 A - From DN15 to DN25 | | | | | | | | | | 5 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Actuator | | | | | | | | | | |
| Direct Action | | | | | | | | | | D |
| Reverse Action | | | | | | | | | | R |
| Actuator Construction | | | | | | | | | | |
| Steel construction (painted) - standard | | | | | | | | | | (2) |
| Stainless steel construction | | | | | | | | | | I |
| Control Signal | | | | | | | | | | |
| 0,2 - 1 bar (3/15 psi) | | | | | | | | | | 15 |
| 0,4 - 1,2 bar (6/18 psi) | | | | | | | | | | 18 |
| 0,4 - 2 bar (6/30 psi) | | | | | | | | | | 30 |

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

Example:

V25I valve model EQP soft plug, PTFE/GR stem sealing DN1"BSP complete with reverse action actuator signal 0,4-1,2bar, size340A steel.

Code: PV.25I.11A25.5R18

REMARKS:

- (1)- Indicate actuator type.
 - (2)- Omitted if the standard actuator is selected.
 - (3)- To be used only when a non-standard combination valve is supplied.
- ADCATROL control valves are identified by a serial number on a nameplate, located on the actuator yoke.
- Always order spares by using that serial number. If the valve has non-standard extras the serial number has also an E (extras).