

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

**DESCRIPTION**

The PV25I 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 PV25I valves have been designed to assure an accurate control in any process condition. Their wide application ranges allows to use 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:** PV25I

**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:**

- Body design conditions: PN25
- 25 bar at 100°C
- 21 bar at 200°C
- 19,8 bar at 250°C
- 18,5 bar at 300°C
- Min.working temperature: -10°C

**MAX. AIR SUPPLY**

**PRESSURE:** 3,5 bar

**AMBIENT**

**TEMPERATURE:** -20°C ...+70°C

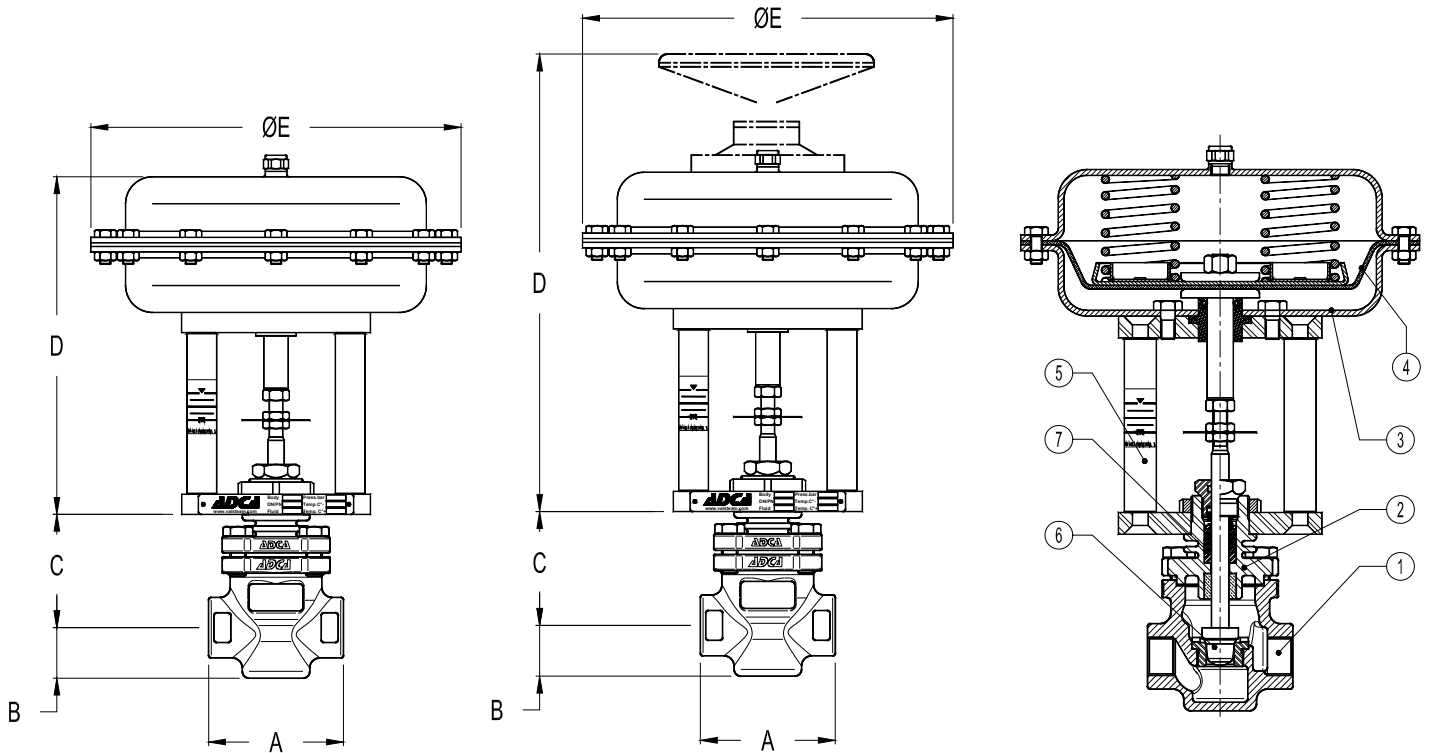
**BONNET :** From -5°C to +200°C (standard)  
Finned for temperature >200°C

**STEM SEALING:** PTFE/GR V-Rings - up to 220°C  
(Standard bonnet)  
Graphite - up to 300°C  
(Finned bonnet)

**PLUG TYPES:** Parabolic equal percentage (EQP)  
Linear (PL)  
On-Off (PT)

**PORT:** Full port as standard  
Reduced or microflow 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)
		DN1/2"-1" DA/RA
PA-205	210	235
PA-280	275	240
PA-340	335	265
PA-435	430	295

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
<b>Kvs</b>	3,8	5,1	9,4

Kvs in m<sup>3</sup>/h , see data sheet IS PV10.00 E ;  
For conversion Kvs = Cv(US) x 0,855

VALVE STROKE IN mm			
	SIZES		
	DN15	DN20	DN25
<b>Stroke</b>	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.



STEAM EQUIPMENT



**ORDERING CODES V25I**

VALVE CODES		V	.25	I				.X.
<b>Actuator Type (1)</b>								
Pneumatic Actuator	P							
Electric Actuator	E							
<b>Group Designation</b>								
Globe valve, two way, straight body	V							
<b>Valve Model</b>								
PN25, two way, complete stainless steel valve	.25	I						
<b>Stem Sealing</b>								
PTFE/GR-V-Rings / Standard bonnet								1
Virgin PTFE V-Rings / Standard bonnet								2
Graphite / Standard bonnet								3
Graphite / Finned bonnet								4
Bellows								8
<b>Valve Plug</b>								
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
<b>Pipe Connection</b>								
Threaded BSP ISO 7/1 Rp								A
Threaded NPT ANSI B1.20.1								C
<b>Size</b>								
DN 1/2"								15
DN 3/4"								20
DN 1"								25
<b>Actuator</b>								(1)
<b>Extras (3)</b>								E

ACTUATOR CODES ( pneumatic )		P.			
<b>Group Designation</b>					
Multi-spring , pneumatic linear actuator	P.				
<b>Actuator Size</b>					
205					1
280					3
340 A - From DN15 to DN25					5
<b>Actuator</b>					
Direct Action					D
Reverse Action					R
<b>Actuator Construction</b>					
Steel construction (painted) - standard					(2)
Stainless steel construction					I
<b>Control Signal</b>					
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).