

**“ADCATROL” PNEUMATIC CONTROL VALVES
PV25
V25G globe control valves 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. Its 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 to use this valve with the most common process fluids such as water, superheated water, steam, air, gas and other non corrosive fluids (group 1).

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 construction.
 - Soft sealing and stellite seat and plug.
- USE:**
- Saturated and superheated steam.
 - Hot and superheated water.
 - Air, gases and other noncorrosive fluids.

AVAILABLE

MODELS: PV25G - PN16
PV25S - PN25-40

VALVE SIZES: DN15 to DN100

CONNECTIONS: Flanged EN1092-1/-2 PN16 - PN40

ACTUATORS: PA-205; PA-280; PA-340; PA-435

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.


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)

PLUG CHARACT.: EQP - Equal percentage
PL - Linear
PT - On-Off

PORT DESIGN . Parabolic
V-port

PORT : Perforated low noise
Full port as standard
Reduced port on request

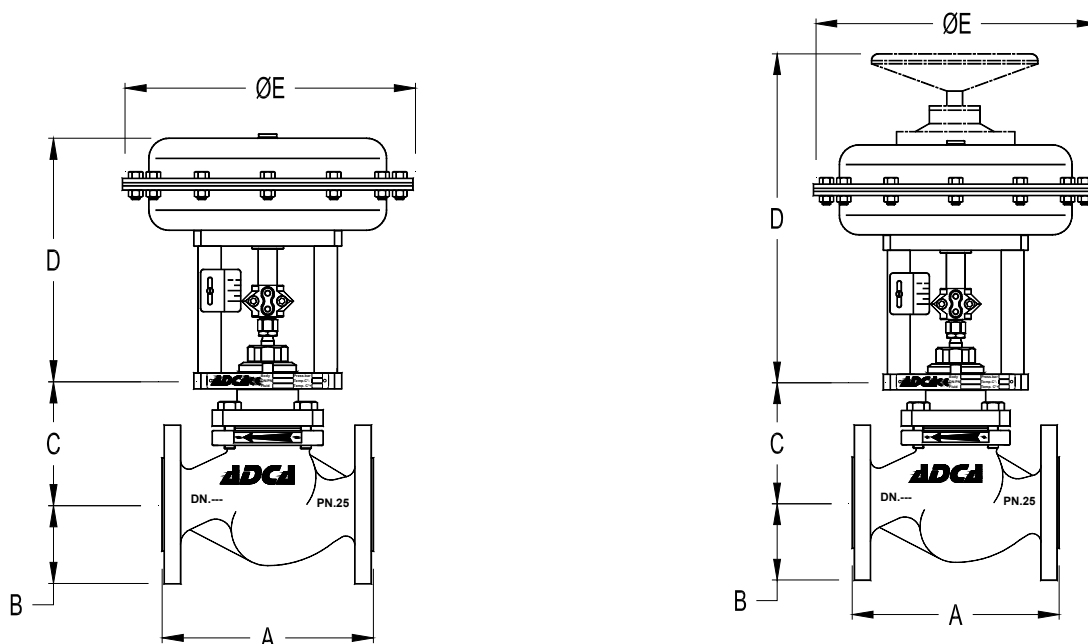
CE MARKING (PED - European Directive 97/23/EC)

PN 16	PN 25	PN 40	Category
DN15 to DN50	DN15 to DN40	DN15 to DN32	SEP - art. 3, paragraph3
DN65 to DN200	DN50 to DN125	DN40 to DN80	1 (CE Marked)
DN250 to DN300	DN150 to DN200	DN100 to DN125	2(CE Marked)

VALVE BODY LIMITING CONDITIONS V25G - PN16		VALVE BODY LIMITING CONDITIONS V25S - PN25		VALVE BODY LIMITING CONDITIONS V25S - PN40	
ALLOWABLE PRESSURES	RELATED TEMPERATURE	ALLOWABLE PRESSURES	RELATED TEMPERATURE	ALLOWABLE PRESSURES	RELATED TEMPERATURE
16 bar	-10 /120° C	25 bar	-10 /50° C	40 bar	-10 /50° C
14,7 bar	200 °C	19,4 bar	200 °C	30,2 bar	200 °C
13,9 bar	250 °C	17,8 bar	250 °C	25,8 bar	300 °C
12,8 bar	300 °C	16,1 bar	300 °C	24 bar	350 °C
11,2 bar	350 °C	15 bar	350 °C	23,1 bar	400 °C

Note: Maximum temperature limited to the valve packing selected.

Valves with soft seat , maximum allowable temperature : 200°C

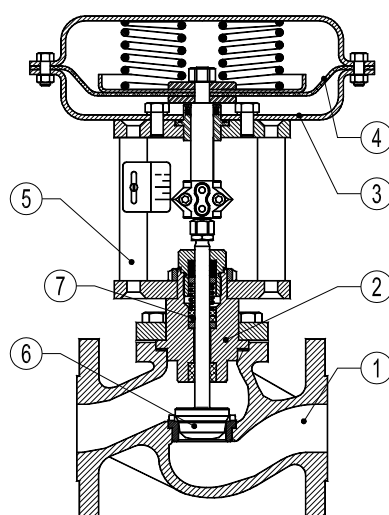


DIMENSIONS - VALVE BODY						
DN	A (mm)	B (mm)	C (mm) BONNET			
			STANDARD	FINNED	EXTENDED	BELLOWS
			15	130	48	80
20	150	53	80	145	145	205
25	160	58	85	165	165	225
32	180	70	90	170	170	230
40	200	75	90	170	170	240
50	230	83	95	185	185	245
65	290	93	155	255	255	355
80	310	100	160	260	260	360
100	350	110	190	310	310	400

DIMENSIONS - ACTUATOR			
Type	ø E (mm)	D (mm)	
		DN15-100 DA/RA	DN125-200 DA
PA-205	210	235	—
PA-280	275	240	—
PA-340	335	265	—
PA-435	430	295	—

PV25 DA - Direct action from DN15 to DN200, PV25 RA - Reverse action from DN15 to DN100

MATERIALS			
POS.	DESIGNATION	MATERIAL VG25G	MATERIAL V25S
1	Valve Body	GJS-400-18-LT / 0.7033	ASTM A216WCB / 1.0619 ; GP240GH / 1.0619
2	Bonnet	CF8 / 1.4308	CF8 / 1.4308
3	Actuator (Steel)	S235JRG2 / 1.0038	S235JRG2 / 1.0038
	Actuator (Stainless steel)	AISI304 / 1.4301	AISI304 / 1.4301
4	Diaphragm	NBR 70	NBR 70
5	Yoke (Seel)	C45E / 1.1191	C45E / 1.1191
	Yoke (Stainless steel)	AISI304 / 1.4301	AISI304 / 1.4301
6	Valve plug	PTFE/GR ; St.Steel	PTFE/GR ; St.Steel
7	Standard packing	PTFE/GR	PTFE/GR



FLOW RATE COEFFICIENTS									
	SIZES								
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
Kvs	3,8	5,1	9,4	15,4	22,2	40,1	63,4	89,7	136,7

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	DN32	DN40	DN50	DN65	DN80	DN100
Stroke	20	20	20	20	20	20	30	30	30

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



STEAM EQUIPMENT

MAX. PERM.PRESS.DROP IN bar - N.C.(fluid to open) -Reverse action actuator (air signal to open)

ACTUATOR	CONTROL SIGNAL	SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
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	8	6	3,5	—	—	—
	0,4 ÷ 1,2 bar	40	38	20	12	10	5	—	—	—
	0,4 ÷ 2 bar	50	45	25	16	12	6,5	—	—	—
PA-340A	0,2 ÷ 1 bar	60	60	50	20	12	10	—	—	—
	0,4 ÷ 1,2 bar	80	80	60	30	16	13	—	—	—
	0,4 ÷ 2 bar	100	100	80	40	20	18	—	—	—
PA-340B	0,2 ÷ 1 bar	—	—	—	—	—	—	4	2,5	1
	0,4 ÷ 1,2 bar	—	—	—	—	—	—	5	3,5	1,5
	0,4 ÷ 2 bar	—	—	—	—	—	—	6	4	2
PA435A	0,2 ÷ 1 bar	—	—	—	—	40	25	—	—	—
	0,4 ÷ 1,2 bar	—	—	—	—	48	30	—	—	—
	0,4 ÷ 2 bar	—	—	—	—	55	45	—	—	—
PA435B	0,2 ÷ 1 bar	—	—	—	—	—	—	6	5	3
	0,4 ÷ 1,2 bar	—	—	—	—	—	—	8	7	5
	0,4 ÷ 2 bar	—	—	—	—	—	—	10	8	6
	0,4 ÷ 2,5 bar	—	—	—	—	—	—	16	15	12

* For valve size DN125 and above please consult catalogue IS PV25G.125 E .

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.

If higher differential pressures are required please consult PA45 pneumatic actuators catalogue.

MAX. PERM.PRESS.DROP IN bar - N.O.(fluid to open) -Direct action actuator (air signal to close)

ACTUATOR	CONTROL SIGNAL	SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
PA-205	0,2 ÷ 1 bar	16	16	12	5	—	—	—	—	—
	0,4 ÷ 2 bar	25	24	16	7,5	—	—	—	—	—
PA-280	0,2 ÷ 1 bar	—	—	19	10	8	4	—	—	—
	0,4 ÷ 2 bar	—	—	25	20	16	7	—	—	—
PA-340A	0,2 ÷ 1 bar	—	—	—	17	16	10	—	—	—
	0,4 ÷ 2 bar	—	—	—	28	26	25	—	—	—
PA-340B	0,2 ÷ 1 bar	—	—	—	—	—	—	5	3,5	1,5
	0,4 ÷ 2 bar	—	—	—	—	—	—	8	7	3
PA435B	0,2 ÷ 1 bar	—	—	—	—	—	—	8	5	3
	0,4 ÷ 2 bar	—	—	—	—	—	—	16	10	7,5

* For valve size DN125 and above please consult.

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.



We reserve the right to change the design and material of this product without notice.



ORDERING CODES V25

VALVE CODES		V	.25	G							.X.
Actuator Type (1)											
Pneumatic Actuator		P									
Electric Actuator		E									
Group Designation											
Globe valve, two way, straight body		V									
Valve Model											
GJS-400-18-LT body, stainless still trim			.25	G							
ASTM A216 WCB body, stainless steel trim			.25	S							
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	
Pipe Connection											
Flanged EN1092-2 PN16											L
Flanged EN1092-1 PN40											N
Size											
DN15											15
DN20											20
...											
Actuator											(1)
Extras (3)											E

ACTUATOR CODES (pneumatic)		P.				
Group Designation						
Multi-spring , pneumatic linear actuator		P.				
Actuator Size						
205				1		
280				3		
340 A - From DN15 to DN50				5		
340 B - From DN65 to DN100				6		
435 A - From DN15 to DN50				7		
435 B - From DN65 to DN100				8		
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:
 V25G valve model EQP soft plug, PTFE/GR stem sealing DN50 complete with reverse action actuator signal 0,4-1,2bar, size340A steel.

Code: PV.25G.11L50.5R18

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).