

**“ADCATROL” PNEUMATIC CONTROL VALVES  
PV25 – ON-OFF  
(V25 globe valves series with linear actuators PA series)**

**DESCRIPTION**

The PV25 On-Off 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).

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. Soft sealing as standard.



**OPTIONS:** Air filter regulator  
Top-work manual handwheel  
Stainless steel construction.

**USE:** Saturated and superheated steam.  
Hot and superheated water.  
Air, gases and other noncorrosive fluids.

**AVAILABLE MODELS:** PV25G-OF - SG iron  
PV25I-OF - Stainless steel

**VALVE SIZES:** DN15 to DN100

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

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

**ACTUATOR CONNECTION:** 1/4" NPT-F

**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 BODY LIMITING CONDITIONS			
PV25G-OF		PV25I-OF	
Press.	Temp.	Press.	Temp.
16 bar	-10 / 120°C	16 bar	-10 / 100°C
15,5 bar	150°C	14,5 bar	150°C
14,7 bar	200°C	13,4 bar	200°C
13,9 bar	250°C	12,7 bar	250°C
12,8 bar	300°C	11,8 bar	300°C

Note: Maximum temperature limited to the valve packing selected.  
Valves with soft seat , maximum allowable temperature : 200°C

**MAX. AIR SUPPLY**

**PRESSURE:** 3,5 bar

**AMBIENT TEMPERATURE:** -20°C ...+70°C

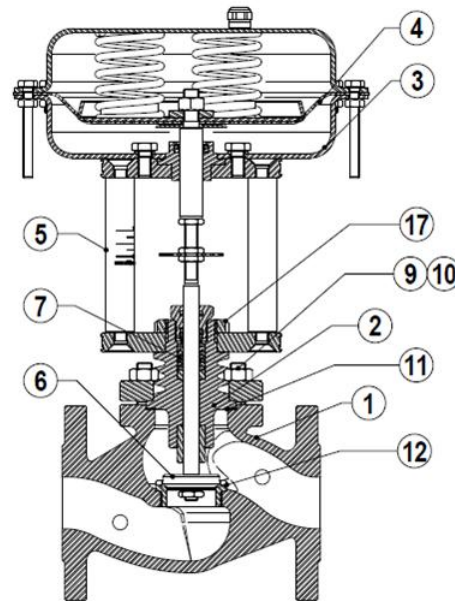
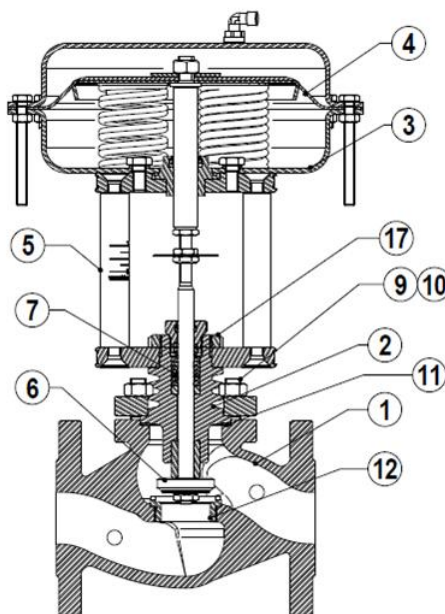
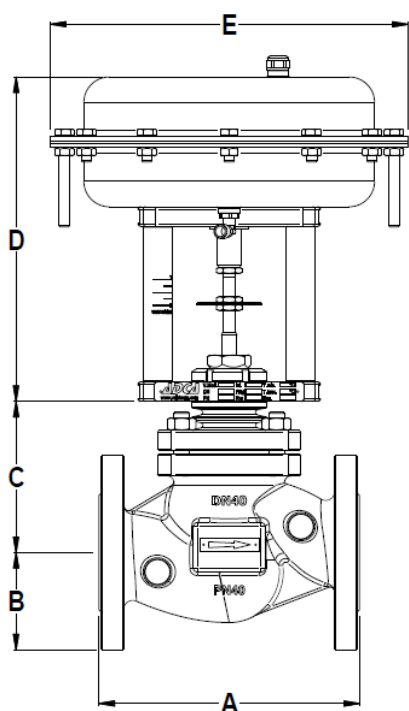
**BONNET :** From -5°C to +220°C (standard)  
Finned for temperature >220°C (from DN32 to DN100)

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

**PLUG DESIGN:** PT - On-off

**PORT:** Full port

CE MARKING (PED - European Directive)	
PN 16	Category
DN15 to DN50	SEP
DN65 to DN100	1 (CE Marked)



PV25 DA – Direct action

PV25 RA – Reverse action

**DIMENSIONS - VALVE BODY**

DN	A (mm)	B (mm)	C (mm) BONNET	
			STD.	FINN.
15	130	48	85	150
20	150	53	85	150
25	160	58	90	170
32	180	70	110	190
40	200	75	115	195
50	230	83	125	215
65	290	93	175	275
80	310	100	175	275
100	350	110	190	310

**DIMENSIONS - ACTUATOR**

Type	ø E (mm)	D (mm)	WEIGHT Kgs
		DN15-100 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 PV25G-OF	MATERIAL PV25I-OF
1	Valve Body	GJS-400-15 / 0.7040	CF8M / 1.4408
2	Bonnet	CF8M / 1.4408	CF8M / 1.4408
3	Actuator (Steel)	S235JRG2 / 1.0038	S235JRG2 / 1.0038
	Actuator (St. steel)	AISI 304 / 1.4301	AISI 304 / 1.4301
4	Diaphragm	NBR 70	NBR 70
5	Yoke (Steel)	C45E / 1.1191	C45E / 1.1191
	Yoke (St. Steel)	AISI 304 / 1.4301	AISI 304 / 1.4301
6	Valve plug (Soft)	St. Steel / PTFE/GR	St. Steel / PTFE/GR
6	Valve plug (Metal)	AISI316 / 1.4401	AISI316 / 1.4401
7	Standard packing	PTFE/GR	PTFE/GR
9	Studs	34CrNiMo6 / 1.6582	A4 - 70
10	Nuts	Steel 8.8	A4 - 70
11	Gasket	St. Steel / Graphite	St. Steel / Graphite
12	Seat	AISI316 / 1.4401	AISI316 / 1.4401
17	Lock nut	St. Steel	St. Steel

**VALVE STROKE IN mm**

	SIZES								
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
Stroke	5	5	7	8	10	13	17	20	25

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



MAX. PERMISSIBLE PRESS.DROP IN bar - Normally closed valve (fluid to open) - Reverse action actuator (air signal to open)										
ACTUATOR (Pressure)	MIN. AIR PRESSURE	SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
PA-205 (0 - 2,4 bar)	3,5 bar	12	12	9	6,5	4	—	—	—	—
PA-280A (0 - 2,4 bar)	3,5 bar	25	25	25	16	12	6,5	—	—	—
PA-280B (0 - 2,4 bar)	3,5 bar	—	—	—	—	—	—	5,7	4	2
PA-340A (0 - 2,4 bar)	3,5 bar	—	—	—	25	20	18	—	—	—
PA-340B (0 - 2,4 bar)	3,5 bar	—	—	—	—	—	—	6,2	5	3

For valve sizes DN125 and above please consult.  
Special spring drops available on request.  
The pressure drop values must be used within the body rating limits

MAX. PERMISSIBLE PRESS.DROP IN bar - Normally closed valve (fluid to close) - Reverse action actuator (air signal to open)										
ACTUATOR (Pressure)	MIN. AIR PRESSURE	SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
PA-205 (0 - 1 bar)	3,5 bar	25	25	25	25	25	15	—	—	—
PA-280B (0 - 1 bar)	3,5 bar	—	—	—	—	—	—	21	14	7
PA-340B (0 - 1 bar)	3,5 bar	—	—	—	—	—	—	25	19	12

**Important:** not recommended for water and other liquids if fluid direction is over the plug (fluid to close).  
The pressure drop values are referred to closed valves.

MAX. PERMISSIBLE PRESS.DROP IN bar - Normally open valve (fluid to open) - Direct action actuator (air signal to close)										
ACTUATOR (Pressure)	MIN. AIR PRESSURE	SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
PA-205 (0 - 1 bar)	3,5 bar	25	25	25	25	17	14,5	—	—	—
PA-280A (0 - 1 bar)	3,5 bar	—	—	—	—	25	24	—	—	—
PA-280B (0 - 1 bar)	3,5 bar	—	—	—	—	—	—	13	7,5	4
PA-340B (0 - 1 bar)	3,5 bar	—	—	—	—	—	—	25	16	10

For valve sizes 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 3,5 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/OF**

VALVE CODES		V	.25	G					.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>									
Class PN16, GJS-400-15 body, stainless steel trim	.25	G							
Class PN16, CF8M body, stainless steel trim	.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		
<b>Valve Plug</b>									
PT (on-off) - Soft (PTFE/GR)								9	
PT (on-off) - Metal AISI 316 / 1.4401								10	
<b>Pipe Connection</b>									
Flanged EN1092-2 PN16									L
<b>Size</b>									
DN15									15
DN20									20
...									
<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 DN50					5
340 B - From DN65 to DN100					6
<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 - 1 bar (0/15 psi)					15
0 - 2,4 bar (0/35 psi)					35

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

Example:

V25G valve model PT soft plug, PTFE/GR stem sealing DN50 complete with reverse action actuator signal 0,4-1,2bar, size340A steel.

Code: PV.25G.19L50.5R18

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.
- ADCA TROL 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).