

## 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 comprises a 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 allow 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. 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 no corrosive fluids.

**AVAILABLE MODELS:** PV25G-OF – SG iron.  
PV25I-OF – stainless steel.

**VALVE SIZES:** DN 15 to DN 100.

**CONNECTION:** Flanged EN 1092-1/-2 PN16.

**PNEUMATIC ACTUATORS:** PA205, PA280, PA340, PA435.

**ACTUATOR CONN:** 1/4" NPT-F.

**ELECTRIC ACT.:** Consult catalogue IS EL20.00 E.

**MAX. AIR SUPPLY:** 3,5 bar.

**AMBIENT TEMP.:** -20 °C to 70 °C

**BONNET:** Standard – up to 220 °C;  
Extended finned – above 220 °C.

**STEM SEALING:** PTFE/GR V-Rings – up to 220 °C.  
Graphite – up to 300 °C.

**PLUG DESIGN:** PT – On-off.

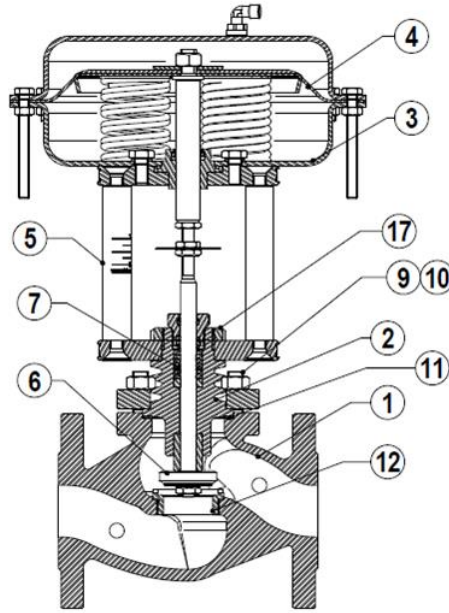
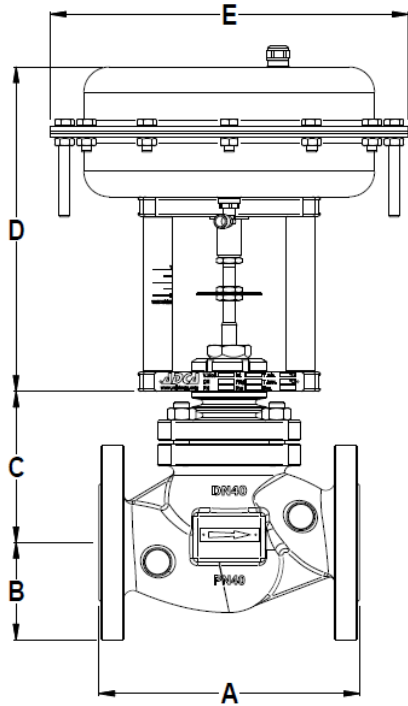
**PORT:** Full port.

**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.

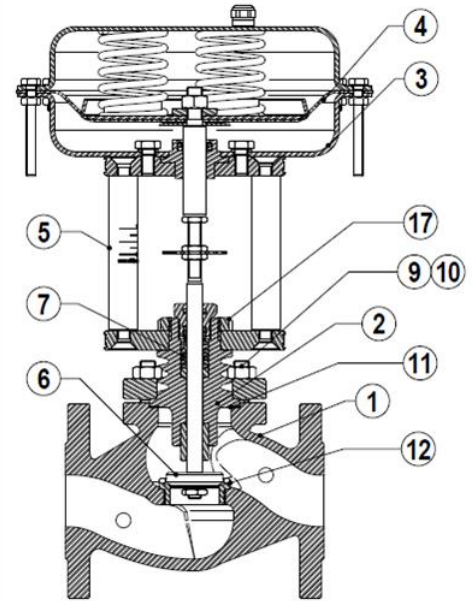
CE MARKING – GROUP 2 (PED – European Directive)	
PN16	Category
DN 15 to DN 50	SEP
DN 65 to DN 100	1 (CE Marked)

BODY LIMITING CONDITIONS			
PV25G-OF		PV25I-OF	
ALLOW. PRESS.	RELATED TEMP.	ALLOW. PRESS.	RELATED TEMP.
16 bar	-10 °C / 120 °C	16 bar	-10 °C / 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 temperatures limited to the valve packing selected. Valves with soft seal, maximum allow. temp: 200 °C.



PV25 DA – Direct action



PV25 RA – Reverse action

DIMENSIONS – VALVE BODY				
SIZE DN	A (mm)	B (mm)	C (mm) BONNET	
			STAND.	FINNED
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	118	190	310

DIMENSIONS – PNEUMATIC ACTUATOR			
TYPE	E (mm)	D (mm)	WEIGHT (kg)
PA205	210	235	6
PA280	275	245	10
PA340	335	265	15
PA435	430	295	25

MATERIALS			
POS. N°	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)	S235JR / 1.0038	S235JR / 1.0038
	Actuator (Stainl. st.)	AISI 304 / 1.4301	AISI 304 / 1.4301
4	*Diaphragm	NBR 70	NBR 70
5	Yoke (Steel)	C45E / 1.1191	C45E / 1.1191
	Yoke (Stainl. St.)	AISI 304 / 1.4301	AISI 304 / 1.4301
6	*Valve plug (soft)	PTFE/GR; St. steel	PTFE/GR; St. steel
6	*Valve plug (metal)	AISI 316 / 1.4401	AISI 316 / 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	Stainless steel / Graphite	Stainless steel / Graphite
12	Seat	AISI 316 / 1.4401	AISI 316 / 1.4401
17	Lock nut	Stainless steel	Stainless steel

\* Available spare parts.

FLOW RATE COEFFICIENTS									
	SIZES								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
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 IS PV10.00 E – Technical information; For conversion Kvs = Cv (US) x 0,855.

VALVE STROKE (mm)									
	SIZES								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
STROKE	5	5	7	8	10	13	17	20	25

**MAX. PERM. PRESSURE DROP (bar) – Normally closed valve (fluid to open)  
Reverse action actuator (air signal to open)**

ACTUATOR	CONTROL SIGNAL	SIZES								
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
PA205	0 ÷ 2,4 bar	12	12	9	6,5	4	–	–	–	–
PA280A	0 ÷ 2,4 bar	25	25	25	16	12	6,5	–	–	–
PA280B	0 ÷ 2,4 bar	–	–	–	–	–	–	5,7	4	2
PA340A	0 ÷ 2,4 bar	–	–	–	25	20	18	–	–	–
PA340B	0 ÷ 2,4 bar	–	–	–	–	–	–	6,2	5	3

For valve sizes DN 125 and above, consult factory.

Special spring drops available on request.

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

**MAX. PERM. PRESSURE DROP (bar) – Normally closed valve (fluid to close)  
Reverse action actuator (air signal to open)**

ACTUATOR	CONTROL SIGNAL	SIZES								
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
PA205	0 ÷ 1 bar	25	25	25	25	25	15	–	–	–
PA280B	0 ÷ 1 bar	–	–	–	–	–	–	21	14	7
PA340B	0 ÷ 1 bar	–	–	–	–	–	–	25	19	12

Remarks: Not recommended for water and other liquids if fluid direction is over the plug (fluid to close).

Pressure drop values refer to closed valves.

**MAX. PERM. PRESSURE DROP (bar) – Normally open valve (fluid to open)  
Direct action actuator (air signal to close)**

ACTUATOR	CONTROL SIGNAL	SIZES								
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
PA205	0 ÷ 1 bar	25	25	25	25	17	14,5	–	–	–
PA280A	0 ÷ 1 bar	–	–	–	–	25	24	–	–	–
PA280B	0 ÷ 1 bar	–	–	–	–	–	–	13	7,5	4
PA340B	0 ÷ 1 bar	–	–	–	–	–	–	25	16	10

For valve sizes DN125 and above, consult factory.

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 at 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 see catalogue IS EL.20.00 E or consult factory.

ORDERING CODES V25 – ON-OFF																		
VALVE CODES										P	V	.25G	1	9	L	50	.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>																		
GJS-400-15 body, stainless steel trim												.25G						
CF8M body, stainless steel trim												.25I						
<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 EN 1092 PN16															L			
<b>Size</b>																		
DN 15																		15
DN 20																		20
...																		
<b>Actuator</b>																		(1)
<b>Extras</b>																		
Full description or additional codes have to be added in case of non-standard combination																		E

ACTUATOR CODES (pneumatic) *				P.	5	R	15
<b>Group designation</b>							
Multi-spring, pneumatic linear actuator				P.			
<b>Actuator size</b>							
205					1		
280					3		
340A – From DN 15 to DN 50					5		
340B – From DN 65 to DN 100					6		
<b>Actuator type</b>							
Direct action (air to close)						D	
Reverse action (air to open)						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 (on-off) soft plug, PTFE/GR stem sealing, DN 50, complete with reverse action actuator signal 0 – 1 bar, size 340A steel:

Code: PV.25G.19L50.5R15

REMARKS:

- (1) – Indicate actuator type.
- (2) – Omitted if the standard valve is selected.

ADCATrol control valves are identified by a serial number on a nameplate, located on the actuator yoke. When ordering spares, always use that serial number. If the valve has non-standard extras the serial number has also an E (extras).

\* For electric actuators ordering codes, please consult our technical department