

**PNEUMATIC CONTROL VALVES**  
**PV25 Threaded**  
**V25 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. 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 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.  
 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 non-corrosive fluids.  
 Group 1 fluids (consult factory).
- AVAILABLE MODELS:** PV25S – carbon steel.  
 PV25I – stainless steel.
- VALVE SIZES:** 1/2" to 1".
- CONNECTIONS:** Threaded ISO or ANSI.
- ACTUATORS:** PA205, PA280, PA340.
- ACTUATORS CONNECTIONS:** 1/4" NPT-F.
- CONTROL SIGNAL:** 0,2 – 1bar; 0,4 – 1,2 bar; 0,4 – 2 bar.
- MAX. AIR SUPPLY PRES.:** 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 400 °C.  
 Stainless steel bellows.
- PLUG TYPES:** EQP – Equal percentage;  
 PL – Linear;  
 PT – On/Off.
- PLUG DESIGN:** Contoured;  
 Perforated (low noise, anti-cavitation);  
 Microflow.
- PORT:** Full port or reduced on request.

For more information, consult IS PV10.00 E – Technical information.

**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 the valve calculation data sheet or consult the factory.

CE MARKING – GROUP 2 (PED – European Directive)	
PN40	Category
1/2" to 1"	SEP

BODY LIMITING CONDITIONS			
V25S – PN40 *		V25I – PN40 *	
ALLOWABLE PRESSURE	RELATED TEMP.	ALLOWABLE PRESSURE	RELATED TEMP.
40 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C
33,3 bar	200 °C	33,7 bar	200 °C
27,6 bar	300 °C	29,7 bar	300 °C
25,7 bar	350 °C	28,5 bar	350 °C
23,8 bar	400 °C	27,4 bar	400 °C

Note: Maximum temperatures limited to the valve packing selected.  
Valves with soft seal, max. allowable temperature: 200 °C.

\* Rating according to EN1092-1:2018;

FLOW RATE COEFFICIENTS			
	SIZES		
	1/2"	3/4"	1"
<b>Kvs</b>	3,8	5,1	9,4

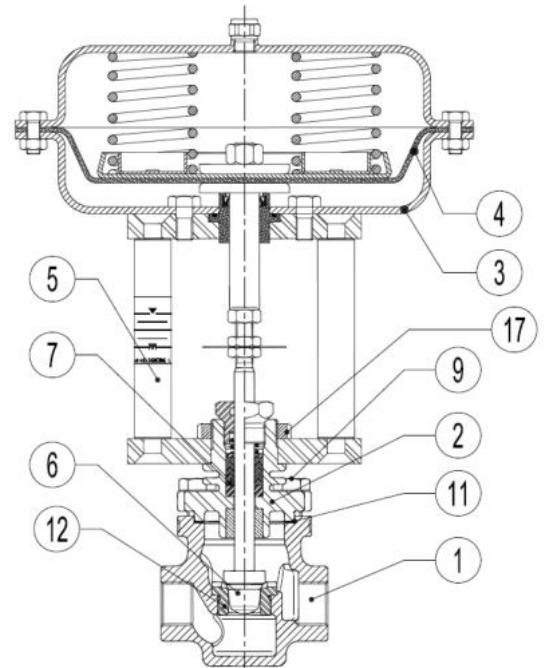
Kvs in m<sup>3</sup>/h, see IS PV10.00 E ;  
For conversion Kvs = Cv (US) x 0,855.

VALVE STROKES (mm)			
	SIZES		
	1/2"	3/4"	1"
<b>STROKE</b>	20	20	20

Perforated plug and on/off valves may have different strokes, please see technical information or consult factory.

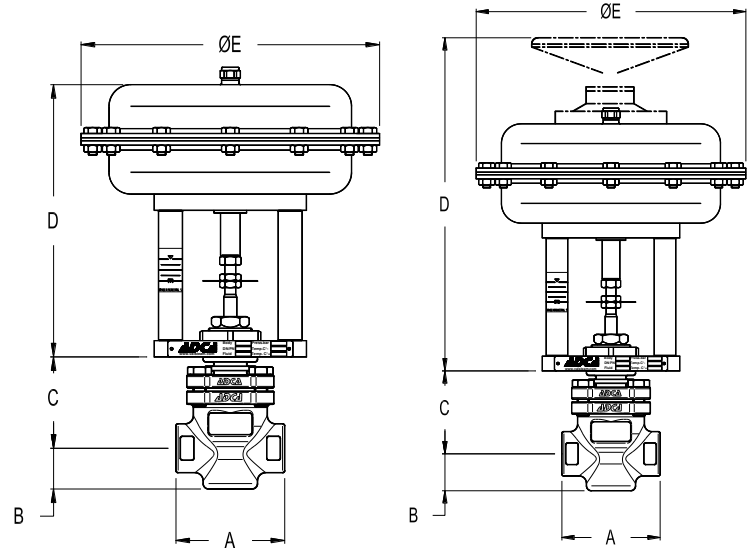
MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	CF8M / 1.4408
2	Bonnet	CF8M / 1.4408
3	Actuator (Steel)	S235JRG2 / 1.0038
	Actuator (Stainl. st.)	AISI 304 / 1.4301
4	* Diaphragm	NBR 70
5	Yoke (Steel)	C45E / 1.1191
	Yoke (Stainl. St.)	AISI 304 / 1.4301
6	* Valve plug	PTFE/GR; St. steel
7	* Standard packing	PTFE/GR
8	* Bellows	AISI 316Ti / 1.4571
9	Studs	A4-70
10	Nuts	A4-70
11	Gasket	Stainless steel / Graphite
12	Seat	Stainless steel
13	Gasket	Stainless steel / Graphite
14	Gasket	Stainless steel / Graphite
15	Straight pin	Stainless steel
16	Bolts	A4-70
17	Lock nut	Stainless steel

\* Available spare parts.



DIMENSIONS – VALVE BODY					
SIZE	A (mm)	B (mm)	C (mm) – BONNET		
			STAND.	FINNED	BELLOWS
1/2"	100	37,5	85	150	275
3/4"	100	37,5	85	150	275
1"	100	37,5	85	165	275

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



MAX. PERM. PRESSURE DROP (bar)							
N.C. (Fluid to open) – Reverse action actuator (air signal to open)							
ACTUATOR	CONTROL SIGNAL	SIZES					
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
PA205	0,2 ÷ 1 bar	6	6	5	–	–	–
	0,4 ÷ 1,2 bar	10	10	7	–	–	–
	0,4 ÷ 2 bar	12	12	9	–	–	–
PA280	0,2 ÷ 1 bar	28	26	16	–	–	–
	0,4 ÷ 1,2 bar	40	38	20	–	–	–
	0,4 ÷ 2 bar	50	45	25	–	–	–
PA340A	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 refer 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 pressure drops given with closed valve for the actuator signal 0,4 - 2 bar are also valid for ON-OFF service with air supply at 2,4 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. PRESSURE DROP (bar)							
N.O. (Fluid to open) – Direct action actuator (air signal to close)							
ACTUATOR	CONTROL SIGNAL	SIZES					
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
PA205	0,2 ÷ 1 bar	16	16	12	–	–	–
	0,4 ÷ 2 bar	25	24	16	–	–	–
PA280	0,2 ÷ 1 bar	–	–	19	–	–	–
	0,4 ÷ 2 bar	–	–	25	–	–	–
PA340A	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 2,4 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 2,4 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	P	V	.25I	1	1	A	25	.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>									
PN40, two way, cast steel valve			.25S						
PN40, two way, complete stainless steel valve			.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					
Stainless steel bellows				8					
<b>Valve plug</b>									
EQP (equal percentage) – Soft (PTFE-GR)				1					
EQP (equal percentage) – Metal AISI 316 / 1.4401				3					
EQP (equal percentage) – Stellite				4					
PL (linear) – Soft (PTFE/GR)				6					
PL (linear) – Metal AISI 316 / 1.4401				7					
PL (linear) – Stellite				8					
PT (on-off) – Soft (PTFE/GR)				9					
PT (on-off) – Metal AISI 316 / 1.4401				10					
PT (on-off) – Stellite				11					
<b>Pipe connection</b>									
Threaded ISO 7/1 Rp						A			
Threaded NPT						C			
<b>Size</b>									
1/2"							15		
3/4"							20		
1"							25		
<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	18
<b>Group designation</b>				
Multi-spring, pneumatic linear actuator	P.			
<b>Actuator size</b>				
205		1		
280		3		
340A – From DN 15 to DN 25		5		
<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>				
0,2 – 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, 1" BSP, complete with reverse action actuator signal 0,4 – 1,2 bar, size 340A steel:

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

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 also has an E (extras).

\* For electric actuator ordering codes, consult our technical department.