

**“ADCATROL” PNEUMATIC CONTROL VALVES  
PV16 – ON-OFF  
(V16 globe valves series with linear actuators PA series)**

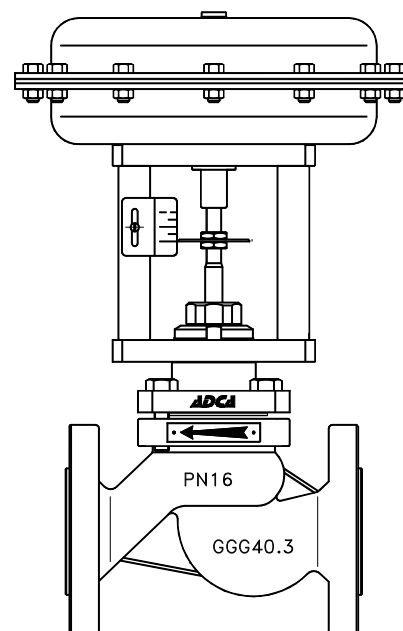
**DESCRIPTION**

The PV16G 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:** PV16G-OF - Nodular iron  
PV16I-OF - Stainless steel

**VALVE SIZES:** DN15 to DN100

**CONNECTIONS:** Flanged EN1092-2 PN16

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

**ACTUATOR**

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

VALVE BODY LIMITING CONDITIONS			
PV16G-OF		PV16I-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

**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)

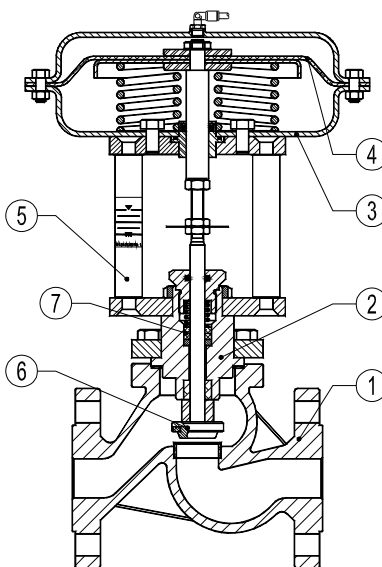
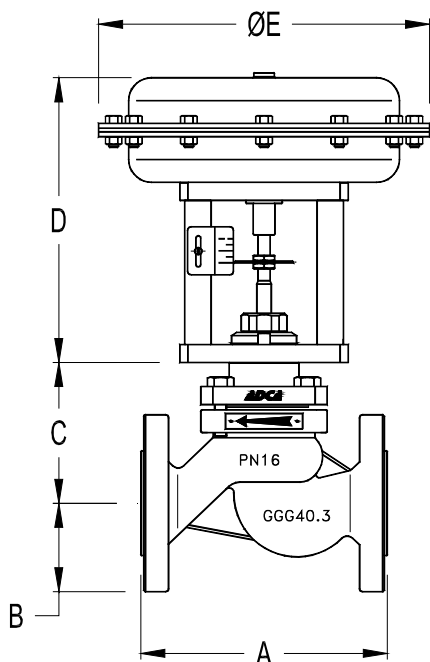
**PLUG DESIGN:** PT - On-off

**PORT:** Full port

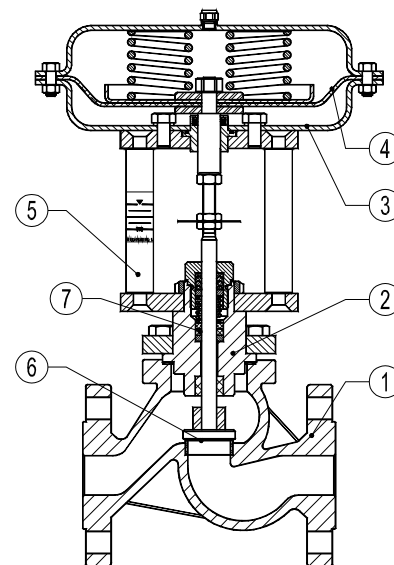
**HOW TO SELECT:**

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 (PED - European Directive 97/23/EC)	
PN 16	Category
DN15 to DN50	SEP - art. 3, paragraph3
DN65 to DN100	1 (CE Marked)



PV16 DA – Direct action



PV16 RA – Reverse action

**DIMENSIONS - VALVE BODY**

DN	A (mm)	B (mm)	C (mm) BONNET	
			STD.	EXT.
15	130	48	80	150
20	150	53	80	150
25	160	58	85	165
32	180	70	90	170
40	200	75	105	185
50	230	83	105	195
65	290	93	165(195)	265(295)
80	310	100	175(205)	270(300)
100	350	110	190(220)	300(330)

(\*)Stainless steel version

**MATERIALS**

POS.	DESIGNATION	MATERIAL PV16G-OF	MATERIAL PV16I-OF
1	Valve Body	GJS-400-18-LT / 0.7043	CF8M / 1.4408
2	Bonnet	CF8 / 1.4308	CF8 / 1.4308
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 seal	PTFE/GR	PTFE/GR
7	Standard packing	PTFE/GR	PTFE/GR

**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

**FLOW RATE COEFFICIENTS**

	SIZES								
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
<b>Kvs</b>	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

**ACTUATOR STROKE IN mm**

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



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 - 2,5 bar)	3,5 bar	12	12	9	6,5	4	—	—	—	—
PA-280A (0 - 2,5 bar)	3,5 bar	25	25	25	16	12	6,5	—	—	—
PA-280B (0 - 2,5 bar)	3,5 bar	—	—	—	—	—	—	5,7	4	2
PA-340A (0 - 2,5 bar)	3,5 bar	—	—	—	25	20	18	—	—	—
PA-340B (0 - 2,5 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 V16/OF

VALVE CODES		V	.16	G				.X.
Actuator Type (1)								
Pneumatic Actuator	P							
Electric Actuator	E							
Group Designation								
Globe valve, two way, straight body	V							
Valve Model								
Class PN16, GJS-400-18-LT body, stainless steel trim			.16	G				
Class PN16, CF8M body, stainless steel trim			.16	I				
Stem Sealing								
PTFE/GR-V-Rings / Standard bonnet					1			
Virgin PTFE V-Rings / Standard bonnet					2			
Graphite / Standard bonnet					3			
Graphite / Finned bonnet					4			
Valve Plug								
PT (on-off) - Soft (PTFE/GR)					9			
Pipe Connection								
Flanged EN1092-2 PN16						L		
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 Constrution					
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:

V16G valve model PT soft plug, PTFE/GR stem sealing DN50 complete with reverse action actuator signal 0,4-1,2bar, size340A steel.

Code: PV.16G.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.
- 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).