

PNEUMATIC ON/OFF GLOBE VALVES PV15 (ASME)

DESCRIPTION

The ADCATrol PV15 is a series of single seated, two-way pneumatic on/off globe valves with diaphragm actuator. These valves are suitable for use with the most common process fluids such as steam, water, superheated water, air, neutral gases and oils.

MAIN FEATURES

- Easy to service.
- Compact and cost-effective.
- Class VI shut-off with PTFE/GR soft sealing up to 200 °C.
- Stem guided (up to 2") and post guided (from 2 1/2" to 4").
- Compact actuators with rolling diaphragm.
- High spring thrusts and stroking speeds.
- Yoke and stem coupling with mounting according to NAMUR (DIN IEC 60534-6-1).
- Ambient temperature from -10 °C to 80 °C.

OPTIONS AND

ACCESSORIES: Top mounted handwheel.
Filter regulators, solenoid valves and limit switches.

USE: Saturated steam.
Hot and superheated water.
Air, gases and others.

AVAILABLE MODELS: PV15S – carbon steel.

SIZES: 1/2" to 4".

CONNECTIONS: Flanged ASME B16.5 Class 150 or 300.



CE MARKING – GROUP 2 (PED – European Directive)

Class 150	Class 300	Category
1/2" to 2"	1/2" to 1"	SEP
2 1/2" to 4"	1 1/2" to 4"	1 (CE marked)

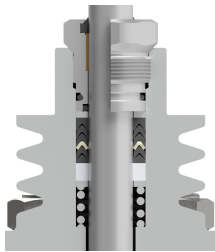
BODY LIMITING CONDITIONS *

CLASS 150		CLASS 300	
ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE
19,3 bar	-10 °C / 50 °C	50 bar	-10 °C / 50 °C
15,8 bar	150 °C	43,9 bar	200 °C
12,1 bar	250 °C	36,9 bar	350 °C
8,4 bar	350 °C	34,6 bar	400 °C

* Rating according to EN 1759-1:2004.

STEM SEALING

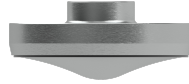
PTFE/GR V-RINGS
(V1.2)



-10 °C to 220 °C

PLUG DESIGN

PARABOLIC (SOFT SEALING)



Sealing: PTFE/GR
Characteristic: Quick-opening (On/Off)
Flow direction: From below
Leakage: Class VI, acc. to IEC 60534-4
Max. temp.: 200 °C

FLOW RATE COEFFICIENTS (m³/h)

	SIZES							
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
Kvs	5,1	6,3	10	25	40	63	100	160
SEAT Ø (mm)	19,2	19,2	25	38	48	65	76	96
STROKE (mm)	5	8	8	10	12,5	20	20	25

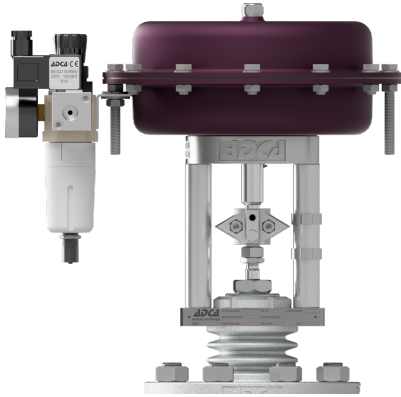
For conversion Kvs = Cv (US) x 0,865.

PV15 – PA SERIES ACTUATORS – FTO, UNBALANCED TRIM, SOFT SEALING (CLASS VI)

VALVE SIZE	ACTUATOR MODEL	MAX. PERMISSIBLE PRESSURE DROP (bar)							MAX. AIR SUPPLY PRESSURE (bar)			
		AIR TO OPEN (stem extends by spring force)	AIR TO CLOSE (stem retracts by spring force)						AIR TO OPEN (stem extends by spring force)		AIR TO CLOSE (stem retracts by spring force)	
			AIR SUPPLY PRESSURE (bar)									
			1,4	2	3	4	5	6	MIN.	MAX.	MIN.	MAX.
1/2"	PA10 (100cm²)	40	17,4	32	40	40	40	4,2	6	1,4	6	
3/4"	PA10 (100cm²)	40	14,5	29,1	40	40	40					
1"	PA10 (100cm²)	40	8,5	17,1	31,3	40	40					
1 1/2"	PA10 (100cm²)	17,9	3,1	6,8	13	19,2	25,3					31,5
2"	PA10 (100cm²)	10,2	1,5	3,8	7,7	11,6	15,5					19,3
	PA25 (250cm²)	26,2	4,4	10,2	19,9	29,6	39,2					40
2 1/2"	PA25 (250cm²)	10,3	0,8	4	9,2	14,5	19,8					25,1
	PA40 (400cm²)	22,1	-	-	-	-	-					-
3"	PA25 (250cm²)	7,5	0,6	2,9	6,7	10,6	14,5					18,3
	PA40 (400cm²)	16,2	-	-	-	-	-					-
4"	PA40 (400cm²)	9	1,1	3,5	7,3	11,2	-	-	4			

ACCESSORIES

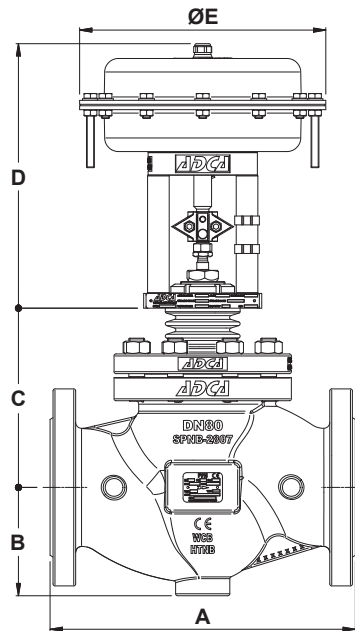
AIR FILTER REGULATOR AND SOLENOID VALVE



INDUCTIVE LIMIT SWITCH BOX



MECHANICAL LIMIT SWITCHES



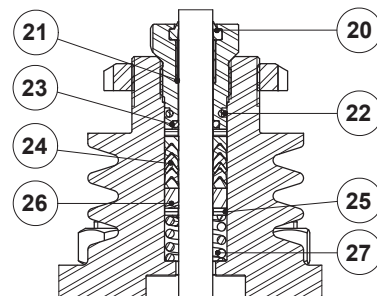
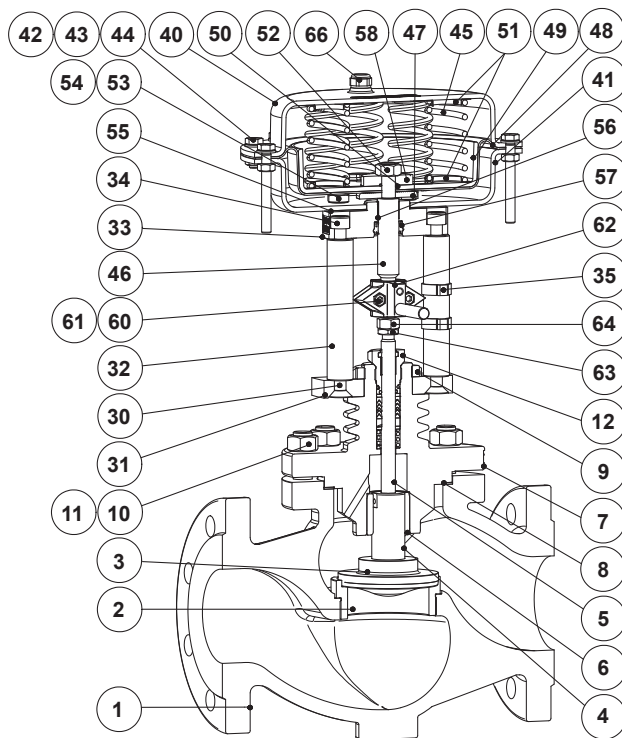
DIMENSIONS (mm)

SIZE	A		B		C	PA10 *		PA25 *		PA40 *	
	CLASS 150	CLASS 300	CLASS 150	CLASS 300		D	ØE	D	ØE	D	ØE
3/4"	184	194	49	59	85	267	170	-	-	-	-
1"	184	197	54	62	90	267	170	-	-	-	-
1 1/2"	222	235	65	78	115	267	170	-	-	-	-
2"	254	267	85	85	125	267	170	270	250	-	-
2 1/2"	276	292	100	100	176	-	-	270	250	334	300
3"	298	318	110	110	175	-	-	270	250	334	300
4"	352	368	130	130	190	-	-	-	-	334	300

* For more information, including top mounted handwheel dimensions, please consult IS 3.70 – PA linear pneumatic actuators.

WEIGHTS (kg)						
SIZE	PA10 *		PA25 *		PA40 *	
	CLASS 150	CLASS 300	CLASS 150	CLASS 300	CLASS 150	CLASS 300
1/2"	10,9	11,3	–	–	–	–
3/4"	11,3	12,3	–	–	–	–
1"	12,3	13,7	–	–	–	–
1 1/2"	17,3	20,1	–	–	–	–
2"	21,2	23,5	24,9	27,2	–	–
2 1/2"	–	–	37,9	41	46,5	52
3"	–	–	43,4	48,5	49,6	57,1
4"	–	–	–	–	66,8	74,2

* For more information, including top mounted handwheel dimensions, please consult IS 3.70 – PA linear pneumatic actuators.



PTFE/GR V-Rings
(V1.2)

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	A216 WCB / 1.0619
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404; Graphite filled PTFE
4	* Post stem	AISI 316L / 1.4404
5	* Stem	AISI 316L / 1.4404
6	Stem guide	Bronze
7	Bonnet	A351 CF8M / 1.4408; A216 WCB / 1.0619
8	* Gasket	Stainless steel / Graphite
9	Lock nut	A351 CF8 / 1.4308
10	Nuts	EN 10269 steel
11	Studs	EN 10269 steel
12	Packing nut	AISI 303 / 1.4305

* Available spare parts.

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
20	* Scraper ring	Viton; NBR
21	* Plain bearing	Bronze / PTFE
22	* O-ring	EPDM
23	* O-ring	Viton
24	* Chevron packing set	PTFE; Graphite filled PTFE
25	Washer	AISI 304 / 1.4301
26	* Stem guide	Stainless steel filled PTFE
27	Spring	AISI 302 / 1.4300
30	Bolts (steel)	Zinc plated steel
	Bolts (stainless steel)	Stainless steel A2-70
31	Lower actuator flange	A351 CF8 / 1.4308
32	Yoke columns	C45E / 1.1191
33	Upper actuator flange	A351 CF8 / 1.4308
34	Bolts	Zinc plated steel
35	Crimp clamps	Zinc plated steel
40	Upper actuator cover (steel)	DD13 / 1.0335
	Upper actuator cover (stainless steel)	AISI 304 / 1.4301
41	Lower actuator cover (steel)	DD13 / 1.0335
	Lower actuator cover (stainless steel)	AISI 304 / 1.4301
42	Bolts (steel)	Zinc plated steel
	Bolts (stainless steel)	Stainless steel A2-70
43	Washer (steel)	Zinc plated steel
	Washer (stainless steel)	Stainless steel A2
44	Nuts (steel)	Zinc plated steel
	Nuts (stainless steel)	Stainless steel A2-70
45	* Springs	Spring steel
46	Actuator stem	AISI 316L / 1.4404
47	Lower diaphragm disc	C45E / 1.1191
48	* Diaphragm	Reinforced NBR
49	Diaphragm plate	DD13 / 1.0335
50	* O-ring	NBR
51	Spring guide	DC01 / 1.0330
52	Nuts	Zinc plated steel
53	Bolts	Zinc plated steel
54	Washers	Zinc plated steel
55	* Gasket (PA10 and PA25)	NBR
56	* Plain bearing	Steel / PTFE
57	* Seal ring	Polyurethane
58	Spacer	C45E / 1.1191
60	Bolts	Zinc plated steel
61	Nuts	Zinc plated steel
62	Coupling / travel indicator	A351 CF8 / 1.4308
63	Lock nut	AISI 304 / 1.4301
64	Adapter Lock nut	AISI 304 / 1.4301
66	Vent plug	Brass; plastic

* Available spare parts.

ORDERING CODES PV15													
Valve model	PV15	1	S	U	1	3	10	S	R	X	U	15	
Pneumatic on/off globe valve, two-way, straight body	PV15												
Valve series													
Series 1		1											
Body material													
A216 WCB / 1.0619 carbon steel			S										
Flow direction													
Flow under the plug				U									
Stem sealing													
PTFE/GR V-Rings (V1.2)					1								
Valve sealing													
Soft sealed with PTFE/GR (class VI)						3							
Actuator model													
PA10 (100 cm ²)							10						
PA25 (250 cm ²)							25						
PA40 (400 cm ²)							40						
Actuator construction													
Mild steel construction (standard)								S					
Stainless steel construction								I					
Actuator direction of action													
Air to open (stem extends by spring force)									R				
Air to close (stem retracts by spring force)									D				
Options													
None										X			
Top mounted handwheel a)										H			
Pipe connection													
Flanged ASME B16.5 Class 150											U		
Flanged ASME B16.5 Class 300											V		
Size													
1/2"												15	
3/4"												20	
...													
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													E

a) Not available in actuators with stainless steel construction (e.g. PA10i).