PNEUMATIC ON/OFF GLOBE VALVES
PV15
(EN)

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.
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 to 80 ºC.



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:	PV15G – SG iron. PV15S – carbon steel. PV15i – stainless steel.
SIZES:	DN 15 to DN 200.
CONNECTIONS:	PV15G – Flanged EN 1092-2 PN 16. PV15S and PV15i – Flanged EN 1092-1 PN 16 or PN 40. Standard PN 16 DN 65 flanges are supplied with 4 holes. 8 holes, according to EN 1092-1/-2, on request.

CE MARKING – GROUP 2 (PED – EUROPEAN DIRECTIVE)		
PN 16	**PN 40**	**CATEGORY**
DN 15 to 50	DN 15 to 32	SEP
DN 65 to 200	DN 40 to 100	1 (CE marked)
–	DN 125 to 200	2 (CE marked)

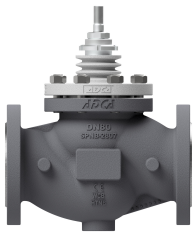
We reserve the right to change the design and material of this product without notice.

BODY LIMITING CONDITIONS

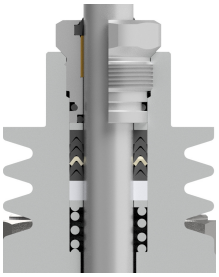
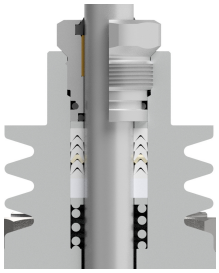
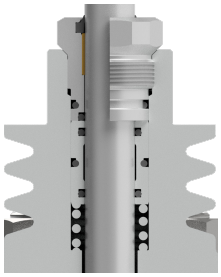
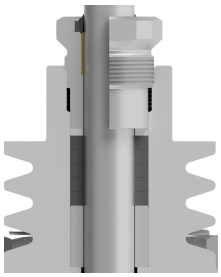
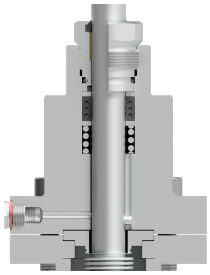
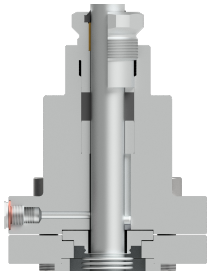
PV15G **		PV15S *				PV15i *			
FLANGED PN 16		FLANGED PN 16		FLANGED PN 40		FLANGED PN 16		FLANGED PN 40	
ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.
16 bar	-10 / 50 ºC	16 bar	-10 / 50 ºC	40 bar	-10 / 50 ºC	16 bar	-10 / 50 ºC	40 bar	-10 / 50 ºC
14,7 bar	200 ºC	13,3 bar	200 ºC	33,3 bar	200 ºC	13,4 bar	200 ºC	33,7 bar	200 ºC
13,9 bar	250 ºC	12,1 bar	250 ºC	27,6 bar	300 ºC	12,7 bar	250 ºC	29,7 bar	300 ºC
12,8 bar	300 ºC	11 bar	300 ºC	25,7 bar	350 ºC	11,8 bar	300 ºC	28,5 bar	350 ºC
11,2 bar	350 ºC	10,2 bar	350 ºC	23,8 bar	400 ºC	11,4 bar	350 ºC	27,4 bar	400 ºC

* Rating according to EN 1092-1:2018; ** Rating according to EN 1092-2:2007.

BONNET DESIGN

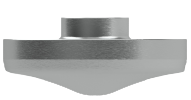
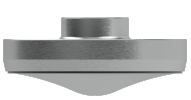
STANDARD	EXTENDED
	
-10 ºC to 250 ºC	Above 250 ºC

STEM SEALING

PTFE/GR V-RINGS (V1.2)	PTFE V-RINGS (V2.2)	EPDM (EP1)	GRAPHITE (G1)	BELLOWS	
				(BV1)	(BG1)
					
-10 to 220 ºC	-10 to 180 ºC	-10 to 150 ºC *	-10 to 400 ºC	- 60 to 220 ºC **	- 60 to 400 ºC **

* Up to 180 ºC in steam and hot water applications.
** Maximum operating pressure: 25 bar.

PLUG DESIGN

PARABOLIC	PARABOLIC (SOFT SEALING)
	
Sealing: Metal to metal **Characteristic:** Quick-opening (On/Off) **Flow direction:** From below **Leakage:** Class V, acc. to IEC 60534-4	**Sealing:** PTFE/GR **Characteristic:** Quick-opening (On/Off) **Flow direction:** From below **Leakage:** Class VI, acc. to IEC 60534-4 **Max. temp.:** 200 ºC

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FLOW RATE COEFFICIENTS (m³/h)												
SIZES	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	**DN 100**	**DN 125**	**DN 150**	**DN 200**
Kvs	5,1	6,3	10	16	25	40	63	100	160	240	370	630
SEAT Ø (mm)	19,2	19,2	25	32	38	48	65	76	96	125	150	200
STROKE (mm)	5	8	8	10	10	12,5	20	20	25	32	38	50

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					
		PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	MIN.	MAX.	MIN.	MAX.
DN 15	**PA10 (100cm²)**	40	40	19,9	16,4	36,5	33	40	40	40	40	40	40	40	40	4,2	6	1,4	6
DN 20	**PA10 (100cm²)**	40	40	16,6	13,1	33,2	29,7	40	40	40	40	40	40	40	40	4,2	6	1,4	6
DN 25	**PA10 (100cm²)**	40	40	9,7	7,6	19,5	17,4	35,8	33,7	40	40	40	40	40	40	4,2	6	1,4	6
DN 32	**PA10 (100cm²)**	30,9	29,7	5,1	3,8	11	9,8	21	19,7	30,9	29,7	40	39,6	40	40	4,2	6	1,4	6
	PA25 (250cm²)	40	40	14	12,7	28,9	27,7	40	40	40	40	-	-	-	-	4,2	6	1,4	4
DN 40	**PA10 (100cm²)**	20,5	19,6	3,6	2,7	7,8	6,9	14,8	13,9	21,9	21	28,9	28	36	35,1	4,2	6	1,4	6
	PA25 (250cm²)	40	40	9,9	9	20,5	19,6	38,1	37,2	40	40	-	-	-	-	4,2	6	1,4	4
DN 50	**PA10 (100cm²)**	11,7	11,1	1,7	1,2	4,4	3,8	8,8	8,3	13,2	12,7	17,7	17,1	22,1	21,5	4,2	6	1,4	6
	PA25 (250cm²)	29,9	29,4	5,1	4,5	11,7	11,1	22,7	22,2	33,8	33,2	40	40	40	40	4,2	6	1,4	6
	PA40 (400cm²)	40	40	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 65	**PA25 (250cm²)**	11,8	11,5	0,9	0,6	4,5	4,2	10,6	10,2	16,6	16,3	22,6	22,3	28,6	28,3	4,2	6	1,4	6
	PA40 (400cm²)	28,6	28,3	4,1	3,8	9,9	9,6	19,6	19,3	29,2	28,9	-	-	-	-	4,5	6	1,4	4
DN 65 M16x1,5	**PA40 (400cm²)**	31,9	31,5	4,1	3,8	9,9	9,6	19,6	19,3	29,2	28,9	38,9	38,6	40	40	5	6	1,4	6
	PA80 (800cm²)	40	40	7,3	6,9	18,9	18,5	38,2	37,7	40	40	40	40	-	-	4,2	6	1,4	5
DN 80	**PA25 (250cm²)**	8,6	8,4	0,6	0,4	3,3	3,1	7,7	7,5	12,1	11,9	16,5	16,3	20,9	20,7	4,2	6	1,4	6
	PA40 (400cm²)	20,9	20,7	3	2,8	7,2	7	14,3	14,1	21,4	21,1	-	-	-	-	4,5	6	1,4	4
DN 80 M16x1,5	**PA40 (400cm²)**	23,3	23	3	2,8	7,2	7	14,3	14,1	21,4	21,1	28,4	28,2	35,5	35,2	5	6	1,4	6
	PA80 (800cm²)	40	40	5,4	5	13,8	13,5	27,9	27,6	42	40	40	40	-	-	4,2	6	1,4	5
DN 100	**PA40 (400cm²)**	13,1	12,9	1,3	1,2	3,9	3,8	8,4	8,2	12,8	12,6	-	-	-	-	5	6	1,4	4
DN 100 M16x1,5	**PA40 (400cm²)**	-	-	1,3	1,2	3,9	3,8	8,4	8,2	12,8	12,6	17,2	17,1	21,6	21,5	-	-	1,4	6
	PA80 (800cm²)	27,7	27,4	3,3	3,1	8,6	8,4	17,5	17,3	26,3	26,1	35,2	35	-	-	4,2	6	1,4	5
DN 125	**PA80 (800cm²)**	15,5	15,4	3,9	3,8	7	6,9	12,2	12,1	17,4	17,3	22,7	22,5	27,9	27,7	4,2	6	1,4	6
	PA80D (1600cm²)	25,9	25,8	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 150	**PA80 (800cm²)**	9,9	9,8	2,4	2,3	4,6	4,5	8,2	8,1	11,8	11,7	15,4	15,3	19,1	19	4,2	6	1,4	6
	PA80D (1600cm²)	18	17,9	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 200	**PA80 (800cm²)**	4,7	4,6	1,1	1,1	2,4	2,3	4,4	4,3	6,4	6,4	8,5	8,4	10,5	10,4	4,2	6	1,4	6
	PA80D (1600cm²)	9,5	9,4	2,4	2,3	4,8	4,7	8,9	8,8	13	12,9	17	16,9	21,1	21	4,2	6	1,4	6
	PA80T (2400cm²)	14,3	14,2	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-

* “PTFE” specified pressure drops are applicable in case of V-ring and O-ring stem seals independently of the material.
“GRAPH.” specified pressure drops are applicable in case of graphite and bellow stem seals.

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PV15 – PA SERIES ACTUATORS – FTO, UNBALANCED TRIM, METAL SEALING (CLASS V)

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					
		PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	PTFE	GRAPH.	MIN.	MAX.	MIN.	MAX.
DN 15	PA10 (100cm²)	40	40	12,1	8,6	28,7	25,1	40	40	40	40	40	40	40	40	4,2	6	1,4	6
DN 20	PA10 (100cm²)	40	40	8,8	5,2	25,4	21,8	40	40	40	40	40	40	40	40	4,2	6	1,4	6
DN 25	PA10 (100cm²)	40	40	3,7	1,6	13,5	11,4	29,8	27,7	40	40	40	40	40	40	4,2	6	1,4	6
DN 32	PA10 (100cm²)	26,2	25	-	-	6,3	5,1	16,3	15	26,2	25	36,2	34,9	40	40	4,2	6	1,4	6
	PA25 (250cm²)	40	40	9,3	8	24,2	23	40	40	40	40	-	-	-	-	4,2	6	1,4	4
DN 40	PA10 (100cm²)	20,5	19,6	-	-	3,8	2,9	10,9	10	17,9	17	25	24,1	32	31,1	4,2	6	1,4	6
	PA25 (250cm²)	40	40	5,9	5	16,5	15,6	34,2	33,3	40	40	-	-	-	-	4,2	6	1,4	4
DN 50	PA10 (100cm²)	8,6	8	-	-	1,3	0,7	5,7	5,1	10,1	9,5	14,5	14	18,9	18,4	4,2	6	1,4	6
	PA25 (250cm²)	26,8	26,2	1,9	1,4	8,6	8	19,6	19	30,7	30,1	40	40	40	40	4,2	6	1,4	6
	PA40 (400cm²)	40	40	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 65	PA25 (250cm²)	9,4	9,1	-	-	2,2	1,9	8,2	7,9	14,3	14	20,3	20	26,3	26	4,2	6	1,4	6
	PA40 (400cm²)	26,3	26	1,8	1,5	7,6	7,3	17,3	16,9	26,9	26,6	-	-	-	-	4,5	6	1,4	4
DN 65 M16x1,5	PA40 (400cm²)	29,6	29,2	1,8	1,5	7,6	7,3	17,3	16,9	26,9	26,6	36,5	36,2	40	40	5	6	1,4	6
	PA80 (800cm²)	40	40	5	4,6	16,6	16,1	35,9	35,4	40	40	40	40	-	-	4,2	6	1,4	5
DN 80	PA25 (250cm²)	6,6	6,4	-	-	1,3	1,1	5,7	5,5	10,1	9,9	14,5	14,3	19	18,7	4,2	6	1,4	6
	PA40 (400cm²)	19	18,7	1	0,8	5,3	5	12,3	12,1	19,4	19,1	-	-	-	-	4,5	6	1,4	4
DN 80 M16x1,5	PA40 (400cm²)	21,4	21	1	0,8	5,3	5	12,3	12,1	19,4	19,1	26,4	26,2	33,5	33,3	5	6	1,4	6
	PA80 (800cm²)	40	40	3,4	3	11,8	11,5	26	25,6	40	39,7	40	40	-	-	4,2	6	1,4	5
DN 100	PA40 (400cm²)	11,5	11,3	-	-	2,4	2,2	6,8	6,7	11,2	11,1	-	-	-	-	5	6	1,4	4
DN 100 M16x1,5	PA40 (400cm²)	-	-	-	-	2,4	2,2	6,8	6,7	11,2	11,1	15,6	15,5	20,1	19,9	-	-	1,4	6
	PA80 (800cm²)	26,1	25,9	1,8	1,6	7,1	6,9	15,9	15,7	24,8	24,5	33,6	33,4	-	-	4,2	6	1,4	5
DN 125	PA80 (800cm²)	14,3	14,2	2,7	2,6	5,8	5,7	11	10,9	16,2	16,1	21,5	21,3	26,7	26,5	4,2	6	1,4	6
	PA80D (1600cm²)	24,7	24,6	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 150	PA80 (800cm²)	8,9	8,8	1,4	1,3	3,6	3,5	7,2	7,1	10,8	10,7	14,4	14,3	18,1	18	4,2	6	1,4	6
	PA80D (1600cm²)	17	16,9	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-
DN 200	PA80 (800cm²)	3,9	3,9	0,4	0,3	1,6	1,5	3,6	3,6	5,7	5,6	7,7	7,6	9,8	9,7	4,2	6	1,4	6
	PA80D (1600cm²)	8,7	8,7	1,6	1,5	4,1	4	8,1	8	12,2	12,1	16,3	16,2	20,3	20,3	4,2	6	1,4	6
	PA80T (2400cm²)	13,5	13,4	-	-	-	-	-	-	-	-	-	-	-	-	4,2	6	-	-

* “PTFE” specified pressure drops are applicable in case of V-ring and O-ring stem seals independently of the material.
“GRAPH.” specified pressure drops are applicable in case of graphite and bellow stem seals.

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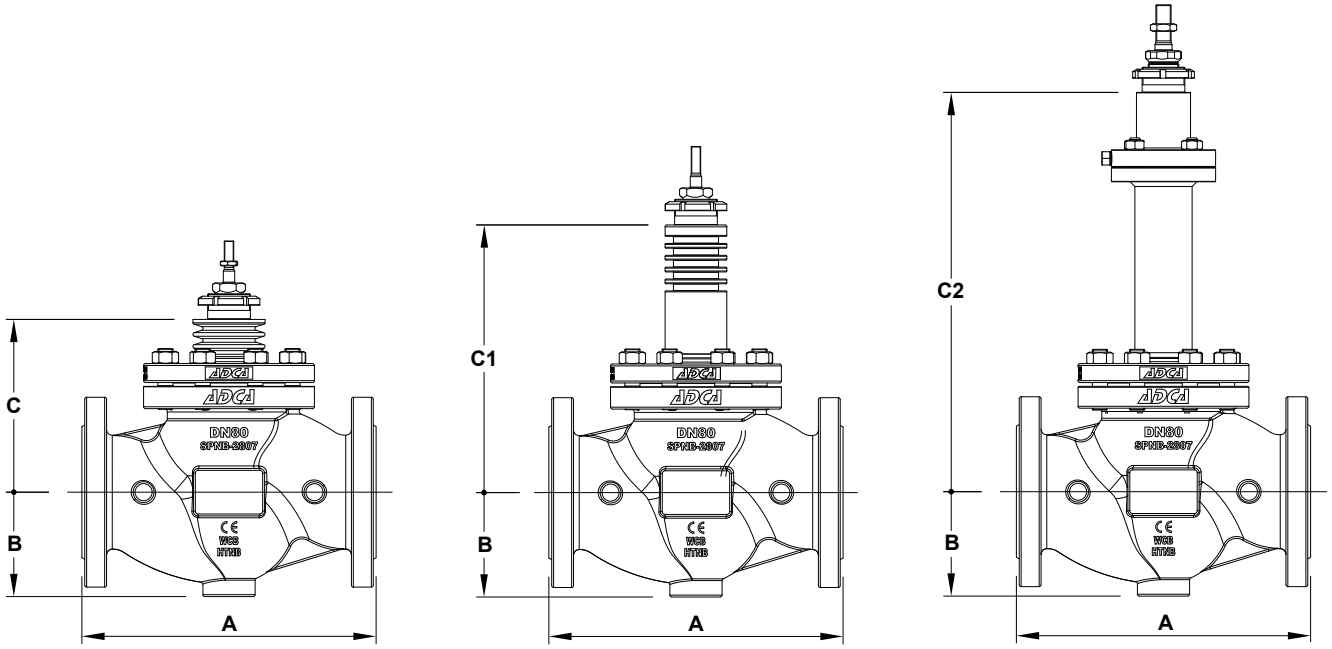

Valve with standard bonnet *Valve with extended bonnet* *Bellows sealed valve*

DIMENSIONS (mm)												
DIMENSION	**SIZE**											
	DN 15	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	**DN 100**	**DN 125**	**DN 150**	**DN 200**
A	130	150	160	180	200	230	290	310	350	400	480	600
B	52	53	58	70	75	85	100	110	130	160	180	225
C	104	104	109	109	113	125	176	182	194	210	216	277
C1	169	169	189	189	193	204	276	282	314	315	320	400
C2	295	295	298	298	303	303	415	421	424	590	590	–

Remark: Standard PN 16 DN 65 flanges are supplied with 4 holes. 8 holes, according to EN 1092-1/-2, on request.

WEIGHTS (kg)												
	SIZE											
	DN 15	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	**DN 100**	**DN 125**	**DN 150**	**DN 200**
STANDARD	5,1	6	6,9	10	12,6	16,4	31,8	38,2	48,9	79,1	105,5	232,3
EXTENDED	5,8	6,7	7,6	10,9	13,9	17,6	32,5	38,9	49,4	81,5	107,3	237,6
BELLOWS	9,3	10,2	10,9	14,1	16,6	20,2	35,6	41,9	53,5	85,9	112,3	–

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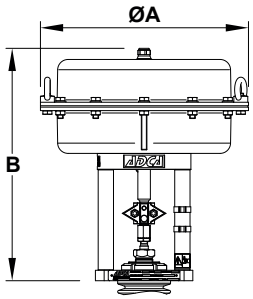
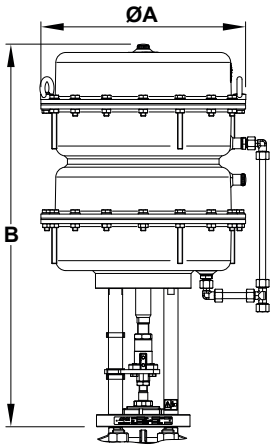
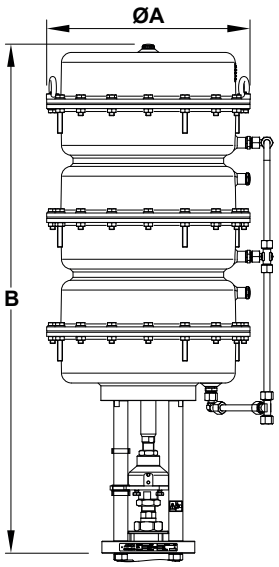


PA10, PA25, PA40 and PA80



PA80D



PA80T

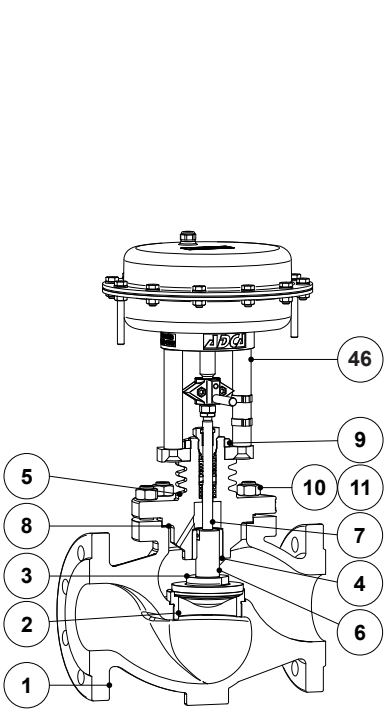
DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)

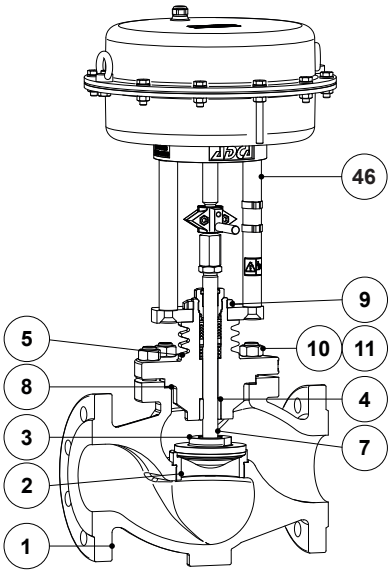
DIMENSION	PA10	PA25	PA40	PA80	PA80D	PA80T
ØA	170	250	300	405	405	405
B	267	269	334 **(a)** 369 **(b)**	521 **(b)** 530 **(c)** 560 **(d)**	757 **(c)** 787 **(d)**	1014
WEIGHT (kg)	6,3	10,1	18,7	50,4 **(b)** 55,4 **(c)** 60 **(d)**	108 **(c)** 112 **(d)**	166

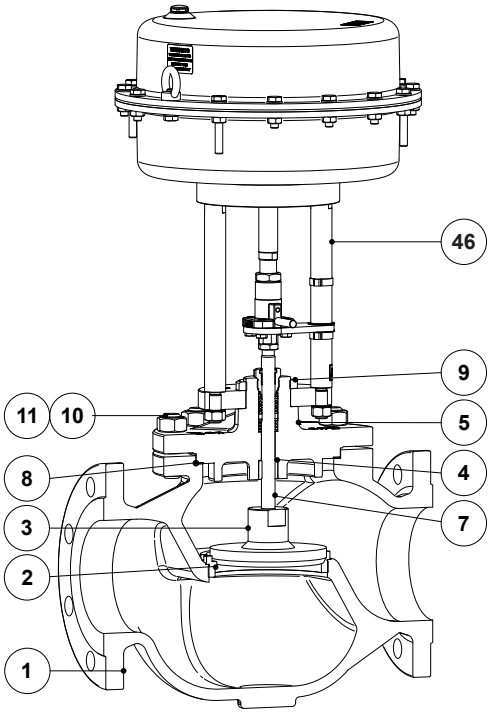
(a) DN 50 to 100; **(b)** DN 65 to 100; **(c)** DN 125 to 150; **d)** DN 200.
For more information, please consult IS PA.010 – PA Linear pneumatic actuators.

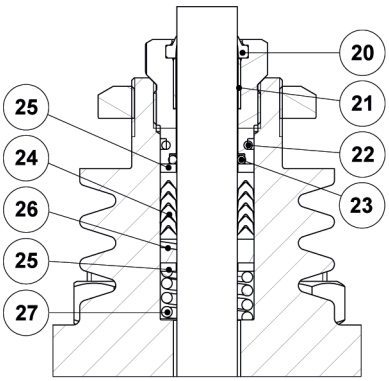
We reserve the right to change the design and material of this product without notice.

MATERIALS

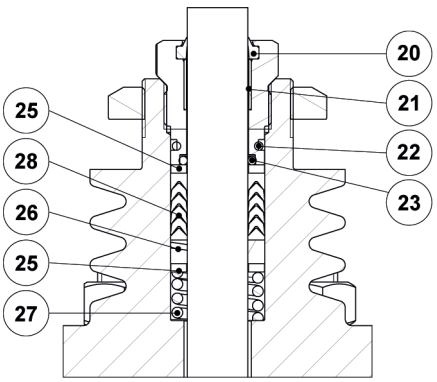




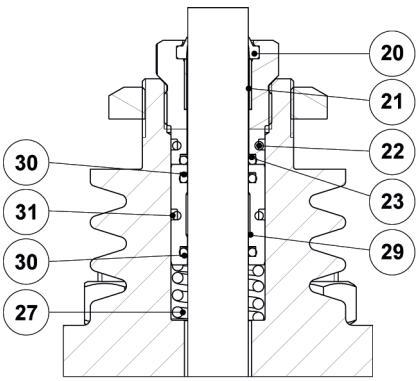




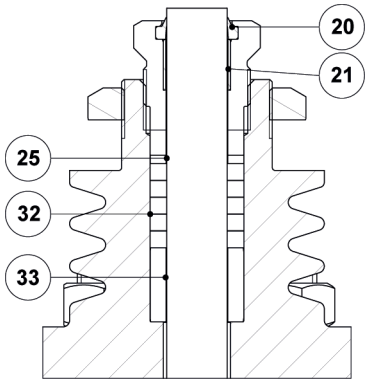
PTFE/GR V-Rings
(V1.2)



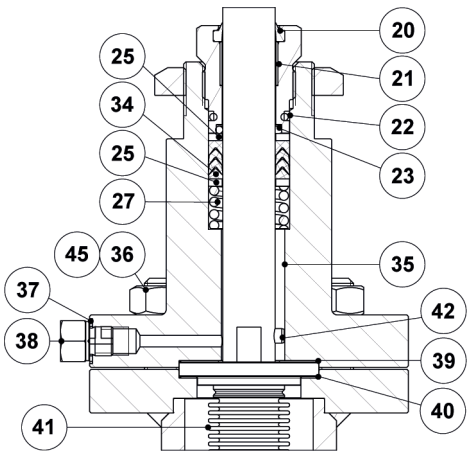
PTFE V-Rings
(V2.2)



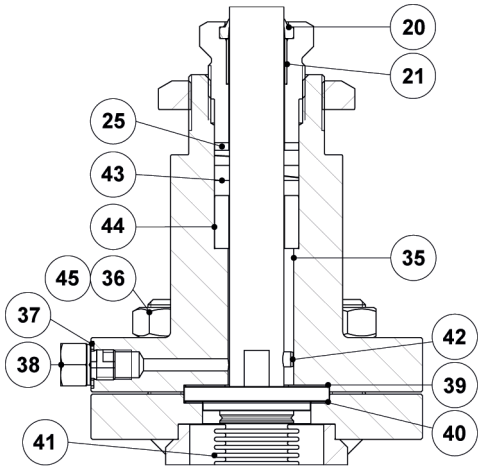
EPDM
(EP1)



Graphite
(G1)



Bellows sealing
(BV1)



Bellows sealing
(BG1)

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MATERIALS		
POS. No.	**DESIGNATION**	**MATERIAL**
1	Valve body (PV15G)	GJS-400-15 / 0.7040
	Valve body (PV15S)	A216 WCB / 1.0619
	Valve body (PV15i)	A351 CF8M / 1.4408
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	Stem guide	Bronze CB1
5	Bonnet (PV15G and PV15S)	A351 CF8M / 1.4408; A216 WCB / 1.0619
	Bonnet (PV15i)	A351 CF8M / 1.4408
6	* Post stem (DN 65 to DN 100)	AISI 316L / 1.4404
7	* Stem	AISI 316L / 1.4404
8	* Gasket	Stainless steel / Graphite
9	Lock nut	A351 CF8 / 1.4308
10	Nut (PV15G and PV15S)	EN 10269 steel
	Nut (PV15i)	Stainless steel A2-70
11	Stud (PV15G and PV15S)	EN 10269 steel
	Stud (PV15i)	Stainless steel A2-70
12	* Packing nut	AISI 303 / 1.4305
13	Lock nut	AISI 304 / 4.4301
20	* Scraper ring	FPM; NBR
21	* Plain bearing	Bronze / PTFE
22	* O-ring	EPDM
23	* O-ring	FPM
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 / 1.4310
28	* Chevron packing set	PTFE
29	O-ring guide	AISI 304 / 1.4301
30	* O-ring	EPDM
31	* O-ring	EPDM
32	* Packing set	Expanded graphite
33	Packing spacer	AISI 304 / 1.4301
34	* Safety packing set	Graphite filled PTFE
35	Bellows bonnet (PV15G and PV15S)	A105 / 1.0432; AISI 316 / 1.4401
	Bellows bonnet (PV15i)	AISI 316 / 1.4401
36	Stud (PV15G and PV15S)	EN 10269 steel
	Stud (PV15i)	Stainless steel A2-70
37	Gasket	Copper
38	Compression fitting	AISI 316 / 1.4401
39	* Gasket	Stainless steel / Graphite
40	* Gasket	Stainless steel / Graphite
41	* Metal bellows	AISI 316Ti / 1.4571
42	* Locking pin	AISI 303 / 1.4305
43	* Safety packing set	Expanded graphite
44	Packing spacer	AISI 304 / 1.4301
45	Nut (PV15G and PV15S)	EN 10269 steel
	Nut (PV15i)	Stainless steel A2-70
46	PA Linear pneumatic actuator	See IS PA.010 – PA Linear pneumatic actuators

* Available spare parts.

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ORDERING CODES PV15

VALVE MODEL	PV15	1	G	U	1	2	10	S	R	X	L	015	
PV15 – Pneumatic on/off globe valve, two-way, straight body	**PV15**												
VALVE SERIES													
Series 1 (DN 15 to DN 100)		**1**											
Series 2 (DN 65 to DN 100 / M16x1,5; DN 125 to DN 200)		**2**											
BODY MATERIAL													
GJS-400-15 / 0.7040 SG iron			**G**										
A216 WCB / 1.0619 carbon steel			**S**										
A351 CF8M / 1.4408 stainless steel			**I**										
FLOW DIRECTION													
Flow under the plug				**U**									
STEM SEALING													
PTFE/GR V-Rings (V1.2)					**1**								
Virgin PTFE V-Rings (V2.2)					**2**								
Graphite (G1)					**3**								
EPDM (EP1)					**4**								
Graphite (G1) with extended bonnet					**6**								
Stainless steel bellows with PTFE/GR safety packing (BV1)					**8**								
Stainless steel bellows with graphite safety packing (BG1)					**9**								
VALVE SEALING													
Metal to metal (class V)						**2**							
Soft sealed with PTFE/GR (class VI)						**3**							
ACTUATOR MODEL													
PA10 (100 cm²)							**10**						
PA25 (250 cm²)							**25**						
PA40 (400 cm²)							**40**						
PA80 (800 cm²)							**80**						
PA80D (1600 cm²)							**8D**						
PA80T (2400 cm²)							**8T**						
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 CONNECTIONS													
Flanged EN 1092-1/-2 PN 16											**L**		
Flanged EN 1092-1 PN 40											**N**		
SIZE													
DN 15												**015**	
DN 20												**020**	
...													
SPECIAL CONSTRUCTION / ADDITIONAL OPTIONS													
A full description must to be provided and validated in case of a non-standard construction													**E**

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

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