



## TWO-WAY GLOBE CONTROL VALVES V16/2 (EN)

### DESCRIPTION

The ADCATrol V16/2 is a series of single seated, two-way globe control valves designed for simple process engineering and industrial applications with non-critical operating conditions. These valves can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

### MAIN FEATURES

Compact and cost-effective.  
Modular design to meet process requirements.  
Stem guided (up to DN 50) and post guided (from DN 65 to DN 100).  
Parabolic plug design.  
Stainless steel trim.

**OPTIONS AND ACCESSORIES:** Bonnet extension for high and low temperatures.  
Various stem sealing options including bellows sealing.  
Soft or stellite valve sealing.  
Reduced bore trims.  
Silencers.

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

**AVAILABLE MODELS:** V16/2G – SG iron.  
V16/2S – carbon steel.  
V16/2i – stainless steel.

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

**CONNECTIONS:** V16/2G – Flanged EN 1092-2 PN 16.  
V16/2S and V16/2i – 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 100	DN 40 to 100	1 (CE marked)

BODY LIMITING CONDITIONS									
V16/2G **		V16/2S *				V16/2i *			
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 °C / 50 °C	16 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C	16 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C
14,7 bar	200 °C	13,3 bar	200 °C	33,3 bar	200 °C	13,4 bar	200 °C	33,7 bar	200 °C
13,9 bar	250 °C	12,1 bar	250 °C	27,6 bar	300 °C	12,7 bar	250 °C	29,7 bar	300 °C
12,8 bar	300 °C	11 bar	300 °C	25,7 bar	350 °C	11,8 bar	300 °C	28,5 bar	350 °C
11,2 bar	350 °C	10,2 bar	350 °C	23,8 bar	400 °C	11,4 bar	350 °C	27,4 bar	400 °C



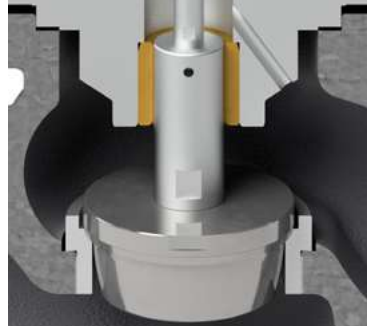
\* Rating according to EN 1092-1:2018; \*\* Rating according to EN 1092-2:2007.

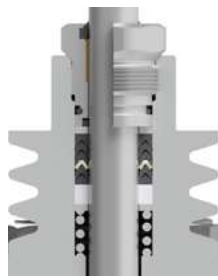


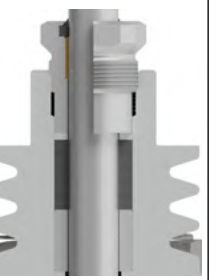

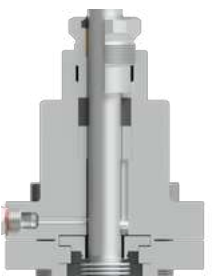


We reserve the right to change the design and material of this product without notice.

IS V162E.015 E 03.21

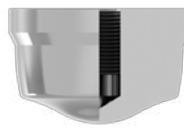



BONNET DESIGN		TRIM DESIGN
STANDARD	EXTENDED	UNBALANCED TRIM
 -10 °C to 250 °C	 Above 250 °C	

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

\* Up to 180 °C in steam and hot water applications.

\*\* Maximum operating pressure: 25 bar.

PLUG DESIGN	
PARABOLIC	PARABOLIC (SOFT SEALING)
	
<b>Sealing:</b> Metal to metal <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class IV, acc. to IEC 60534-4	<b>Sealing:</b> PTFE/GR <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class VI, acc. to IEC 60534-4 <b>Max. temp.:</b> 200 °C

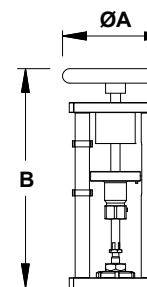
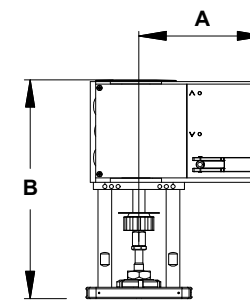
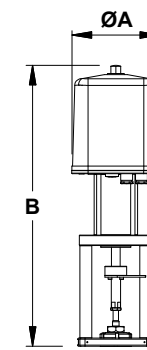
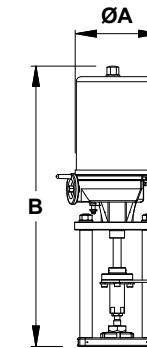
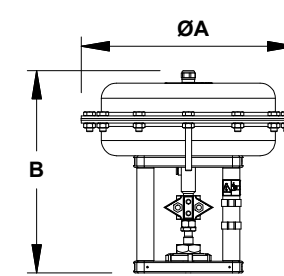
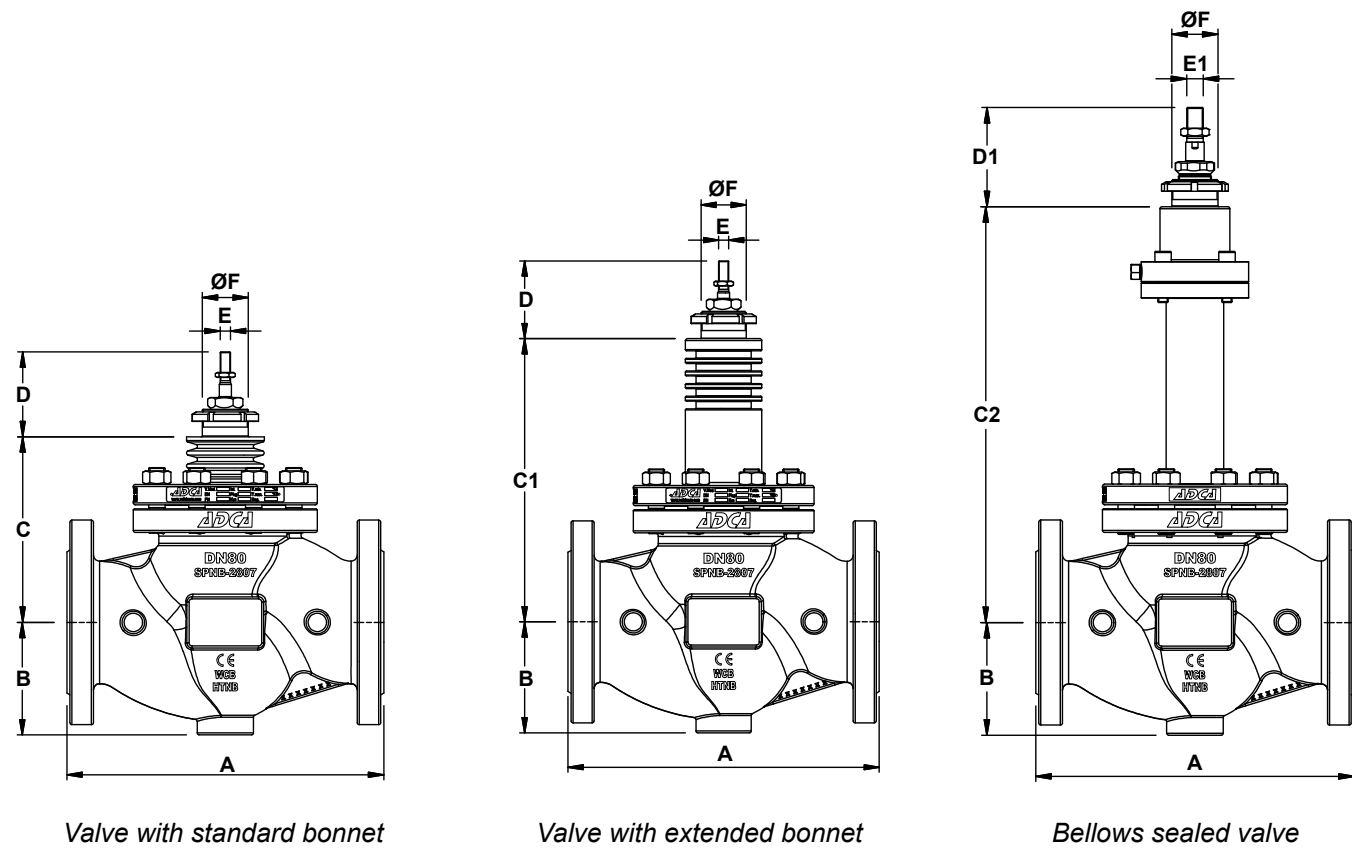
FLOW RATE COEFFICIENTS – PARABOLIC PL AND EQP PLUGS											
SIZE	Kvs (m³/h)										
	2,1	2,7	4	6,3	10	16	25	40	63	100	160
DN 15	•	•	•								
DN 20	•	•	•	•							
DN 25	•	•	•	•	•						
DN 32			•	•	•	•					
DN 40				•	•	•	•				
DN 50					•	•	•	•			
DN 65						•	•	•	•		
DN 80							•	•	•	•	
DN 100								•	•	•	•
SEAT Ø (mm)	12		15	19,2	25	32	38	48	65	76	96
STROKE (mm)	20						30				

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



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IS V162E.015 E 03.21



DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)								
DIMENSION	PA10	PA206	PA25	PA281	PA40	PA341	PA436	PA80
ØA	170	209	250	275	300	336	430	405
B	251	236	260	243	325	288	316 / 336 *	505
WEIGHT (kg)	6,3	6,2	10,1	9,6	18,7	14,3	24,4 / 28 *	50,4

\* For actuators with spring ranges 1 to 2 bar, 1,5 to 3 bar and 2 to 4 bar.  
For more information, please consult IS 3.70 and IS 3.70A – PA Linear pneumatic actuators.

DIMENSIONS – EL SERIES ELECTRIC ACTUATORS (mm)					
DIMENSION	EL12	EL20	EL45	EL80	EL120
ØA	129	148	148	188	188
B	333	485	485	587	587
WEIGHT (kg)	2,1	8	8	13	13

For more information, please consult IS 3.72 – EL Linear electric actuators.

DIMENSIONS – ELR SERIES ELECTRIC ACTUATORS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
ØA	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

\* With PEL electronic positioner.  
For more information, please consult IS 3.73 – ELR Linear electric actuators fail safe.

DIMENSIONS – AV SERIES ELECTRIC ACTUATORS (mm)		
DIMENSION	AVM234S	AVF234S
A	166	166
B	314	314
WEIGHT (kg)	4,1	4,1

For more information, please consult IS 3.74 – AVM234S-AVF234S Linear electric actuators.

DIMENSIONS – MANUAL OPERATION HANDWHEEL (mm)	
DIMENSION	MAH
ØA	160
B	331
WEIGHT (kg)	5,6

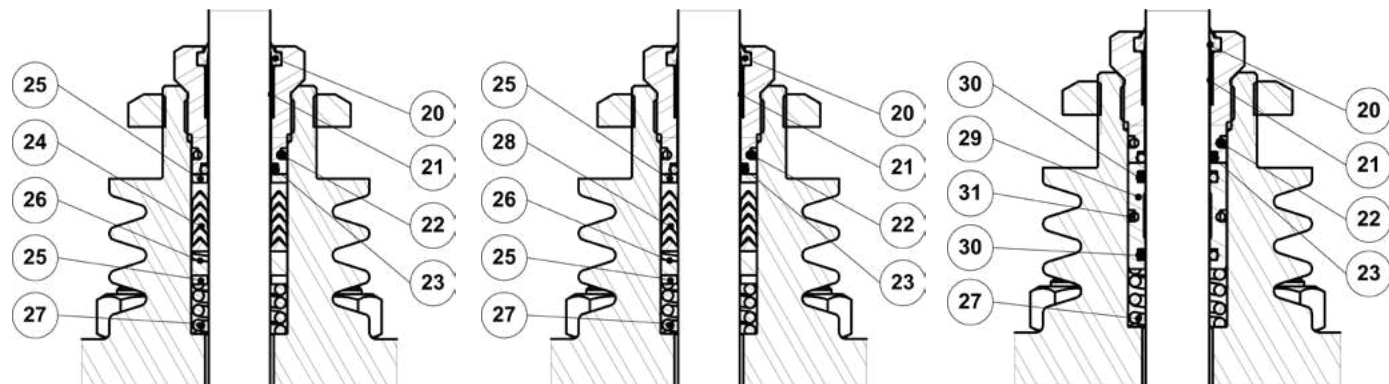
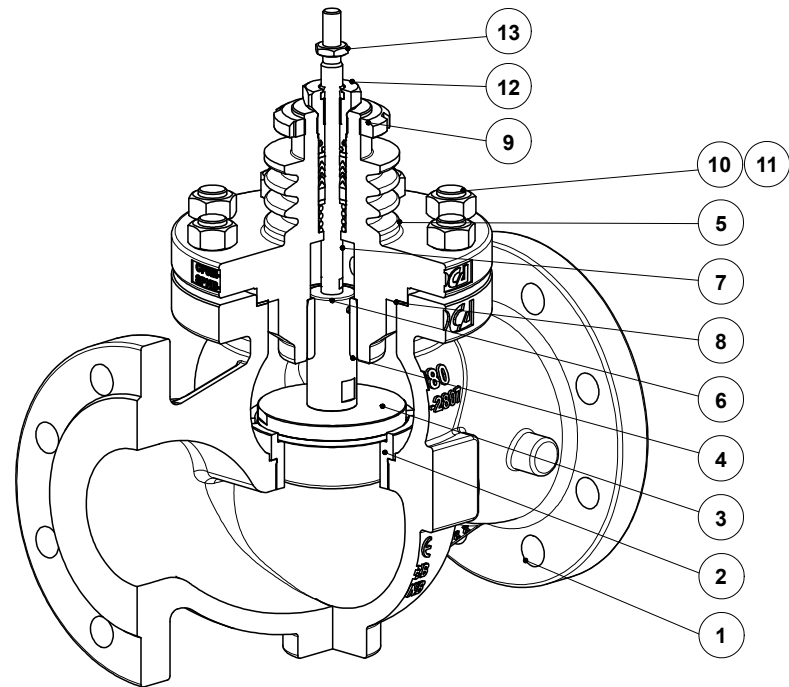
DIMENSIONS (mm)									
DIMENSION	SIZE								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
A	130	150	160	180	200	230	290	310	350
B	52	53	58	70	75	85	100	110	130
C	104	104	109	109	113	125	176	182	194
C1	169	169	189	189	193	204	276	282	314
C2	295	295	298	298	303	303	415	421	424
D	77						82		
D1	77						92		
E	M10 x 1								
E1	M10 x 1						M16 x 1,5		
ØF	M40 x 1,5						M45 x 1,5		

Remarks: 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
STANDARD	5,1	6	6,9	10	12,6	16,4	31,8	38,2	50,6
EXTENDED	5,8	6,7	7,6	10,9	13,9	17,6	32,5	38,9	51,1
BELLOWS	9,3	10,2	10,9	14,1	16,6	20,2	35,6	41,9	53,5

MAX. PERMISSIBLE ACTUATING THRUSTS (kN)									
	SIZE								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
MAX. THRUST	12								

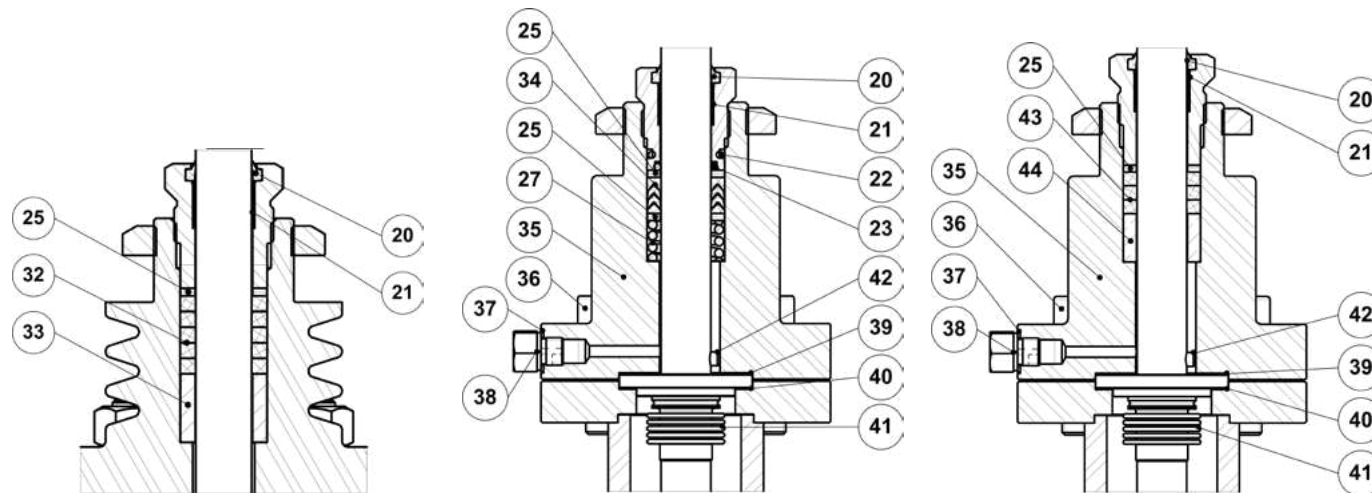
**MATERIALS**



PTFE/GR V-Rings  
(V1.2)

PTFE V-Rings  
(V2.2)

EPDM  
(EP1)



Graphite  
(G1)

Bellows sealing  
(BV1)

Bellows sealing  
(BG1)

**MATERIALS**

POS. N°	DESIGNATION	MATERIAL
1	Valve body (V16/2G)	GJS-400-15 / 0.7040
	Valve body (V16/2S)	A216 WCB / 1.0619
	Valve body (V16/2i)	A351 CF8M / 1.4408
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	Lower stem guide	Bronze CB1
5	Bonnet (V16/2G and V16/2S)	A351 CF8M / 1.4408; A216 WCB / 1.0619
	Bonnet (V16/2i)	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	Nuts (V16/2G and V16/2S)	EN 10269 steel
	Nuts (V16/2i)	Stainless steel A2-70
11	Studs (V16/2G and V16/2S)	EN 10269 steel
	Studs (V16/2i)	Stainless steel A2-70
12	* Packing nut	AISI 303 / 1.4305
13	Lock nut	AISI 304 / 4.4301
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 / 1.4310
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 (V16/2G and V16/2S)	A105 / 1.0432; AISI 316 / 1.4401
	Bellows bonnet (V16/2i)	AISI 316 / 1.4401
36	Bolts or studs and nuts (V16/2G and V16/2S)	EN 10269 steel
	Bolts or studs and nuts (V16/2i)	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

\* Available spare parts.



ORDERING CODES V16/2 a)													
Valve model	V1	2	G	S	1	U	1	1	1	E	FD	L	015
Globe control valve, two-way, straight body	V1												
<b>Valve series</b>													
Series 2		2											
<b>Body material</b>													
GJS-400-15 / 0.7040 SG iron				G									
A216 WCB / 1.0619 carbon steel				S									
A351 CF8M / 1.4408 stainless steel				I									
<b>Bonnet design</b>													
Standard				S									
Extended				E									
<b>Trim design</b>													
Unbalanced trim					1								
<b>Flow direction</b>													
Flow under the plug						U							
Flow over the plug						O							
<b>Stem sealing</b>													
PTFE/GR V-Rings (V1.2)										1			
Virgin PTFE V-Rings (V2.2)										2			
Graphite (G1)										3			
EPDM (EP1)										4			
Stainless steel bellows with PTFE/GR safety packing (BV1)										8			
Stainless steel bellows with graphite safety packing (BG1)										9			
<b>Plug design</b>													
Parabolic												1	
<b>Valve sealing</b>													
Metal to metal (class IV)													1
Soft sealed with PTFE/GR (class VI)													3
Stellited (class IV)													4
<b>Characteristic</b>													
Equal percentage (EQP)													E
Linear (PL)													L
<b>Flow rate coefficient</b>													
Kvs 4													FD
See table below for other Kvs value codes													
<b>Pipe connection</b>													
Flanged EN 1092-1/-2 PN 16													L
Flanged EN 1092-1 PN 40													N
<b>Size</b>													
DN 15													015
DN 20													020
...													
<b>Special valves / Extras</b>													
Full description or additional codes have to be added in case of a non-standard combination													E

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

FLOW RATE COEFFICIENT CODES												
Kvs	2,1	2,7	4	6,3	10	16	25	40	63	100	160	
Code	R2	R1	FD	FE	FF	FG	FH	FI	FJ	FL	FM	



## TWO-WAY GLOBE CONTROL VALVES V16/2 (ASME)

### DESCRIPTION

The ADCATrol V16/2 is a series of single seated, two-way globe control valves designed for simple process engineering and industrial applications with non-critical operating conditions. These valves can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

### MAIN FEATURES

Compact and cost-effective.  
Modular design to meet process requirements.  
Stem guided (up to 2") and post guided (from 2 1/2" to 4").  
Parabolic plug design.  
Stainless steel trim.

### OPTIONS AND ACCESSORIES:

Bonnet extension for high and low temperatures.  
Various stem sealing options including bellows sealing.  
Soft or stellited valve sealing.  
Reduced bore trims.  
Silencers.

### USE:

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

### AVAILABLE MODELS:

V16/2S – 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.

BONNET DESIGN		TRIM DESIGN
STANDARD	EXTENDED	UNBALANCED TRIM
-10 °C to 250 °C	Above 250 °C	

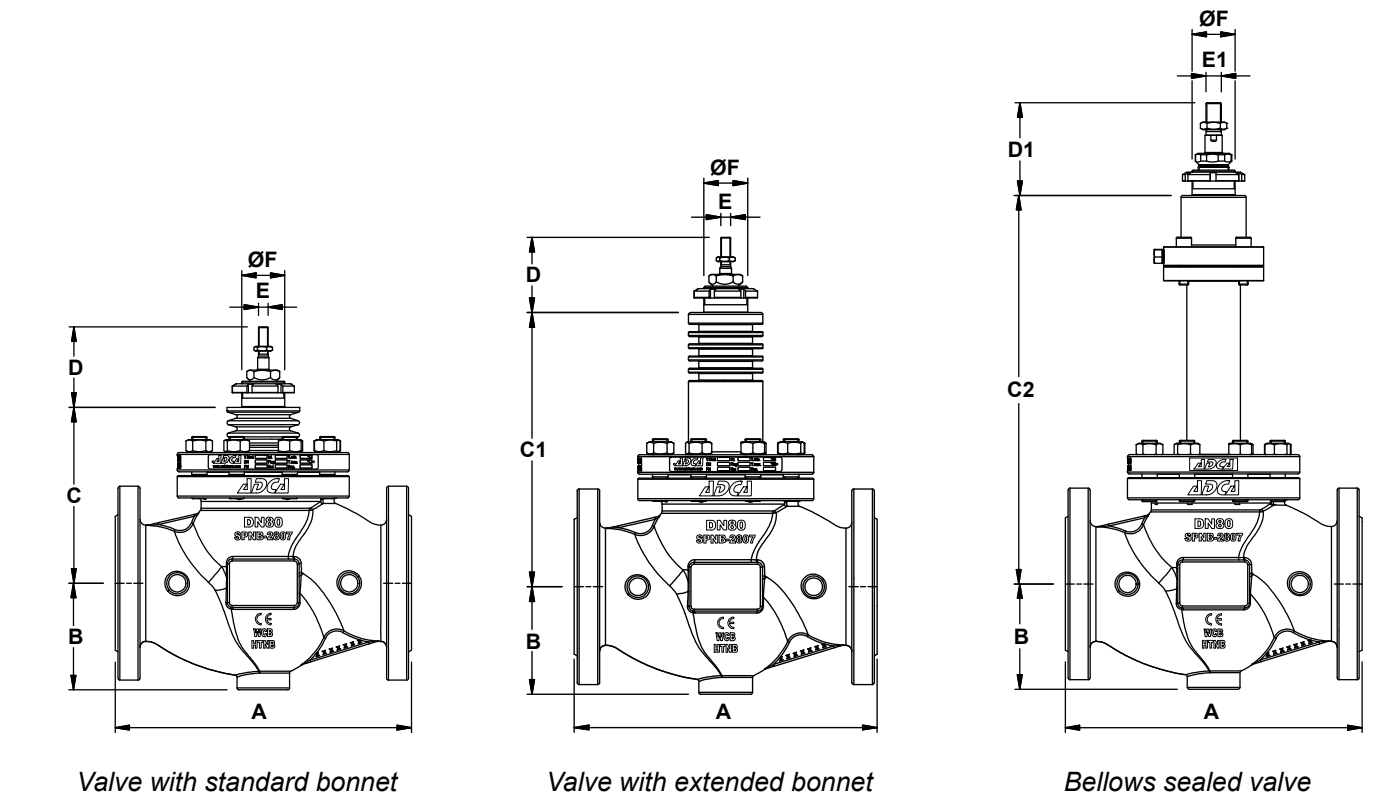
STEM SEALING					
PTFE/GR V-RINGS (V1.2)	PTFE V-RINGS (V2.2)	EPDM (EP1)	GRAPHITE (G1)	BELLOWS	
				(BV1)	(BG1)
-10 °C to 220 °C	-10 °C to 180 °C	-10 °C to 150 °C *	-10 °C to 400 °C	-60 °C to 220 °C **	-60 °C to 400 °C **

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

PLUG DESIGN	
PARABOLIC	PARABOLIC (SOFT SEALING)
<b>Sealing:</b> Metal to metal <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class IV, acc. to IEC 60534-4	<b>Sealing:</b> PTFE/GR <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class VI, acc. to IEC 60534-4 <b>Max. temp.:</b> 200 °C

FLOW RATE COEFFICIENTS – PARABOLIC PL AND EQP PLUGS												
SIZE	Kvs (m³/h)											
	2,1	2,7	4	6,3	10	16	25	40	63	100	160	
1/2"	•	•	•									
3/4"	•	•	•	•								
1"	•	•	•	•	•							
1 1/2"				•	•	•	•					
2"					•	•	•	•				
2 1/2"						•	•	•	•			
3"							•	•	•	•		
4"								•	•	•	•	
SEAT Ø (mm)	12	15	19,2	25	32	38	48	65	76	96		
STROKE (mm)	20								30			

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



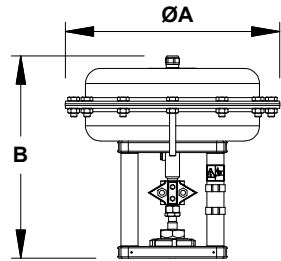
DIMENSIONS (mm)										
DIMENSION	SIZE									
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"		
A	CLASS 150	184 a)	184 a)	184	222	254	276	298	352	
	CLASS 300	190 a)	194 a)	197	235	267	292	318	368	
B	CLASS 150	44,5	49	54	65	85	100	110	130	
	CLASS 300	47,5	58,5	62	78	85	100	110	130	
C	85	85	90	115	125	176	175	190		
C1	150	150	170	195	204	276	275	310		
C2	314	314	322	317	317	415	442	451		
D									77	
D1									77	
E	M10 x 1									
E1						M10 x 1		M16 x 1,5		
ØF						M40 x 1,5		M45 x 1,5		

a) With welded-on flanges.

Remark: In the beginning of year 2022 new face to face dimensions have been defined for some Class 150 valves. Valves may still be supplied with the previous face to face dimensions under request. Consult the manufacturer.

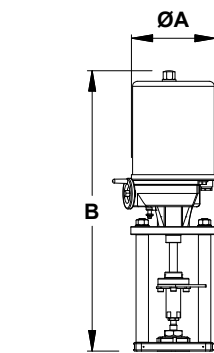
WEIGHTS (kg)									
		SIZE							
		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
STANDARD	CLASS 150	4,5	5	6,1	11,1	15,2	29,4	35	50,6
	CLASS 300	4,9	6	7,5	13,9	17,5	32,5	40,3	58,5
EXTENDED	CLASS 150	5,2	5,7	6,8	12,4	16,4	30,1	35,7	51,1
	CLASS 300	5,6	6,7	8,2	15,2	18,7	33,2	41	59
BELLOWS	CLASS 150	8,7	9,2	10,2	15,1	19	33,2	38,7	53,5
	CLASS 300	9,1	10,2	11,6	17,9	21,3	36,3	44	61,4

MAX. PERMISSIBLE ACTUATING THRUSTS (kN)								
MAX. THRUST	SIZE							
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
	12							



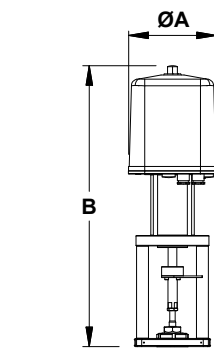
DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)								
DIMENSION	PA10	PA206	PA25	PA281	PA40	PA341	PA436	PA80
ØA	170	209	250	275	300	336	430	405
B	251	236	260	243	325	288	316 / 336 *	505
WEIGHT (kg)	6,3	6,2	10,1	9,6	18,7	14,3	24,4 / 28 *	50,4

\* For actuators with spring ranges 1 to 2 bar, 1,5 to 3 bar and 2 to 4 bar.  
For more information, please consult IS 3.70 and IS 3.70A – PA Linear pneumatic actuators.



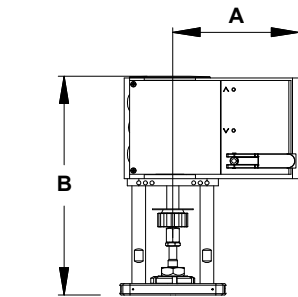
DIMENSIONS – EL SERIES ELECTRIC ACTUATORS (mm)					
DIMENSION	EL12	EL20	EL45	EL80	EL120
ØA	129	148	148	188	188
B	333	485	485	587	587
WEIGHT (kg)	2,1	8	8	13	13

For more information, please consult IS 3.72 – EL Linear electric actuators.



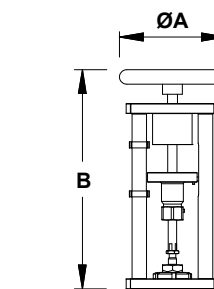
DIMENSIONS – ELR SERIES ELECTRIC ACTUATORS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
ØA	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

\* With PEL electronic positioner.  
For more information, please consult IS 3.73 – ELR Linear electric actuators fail safe.



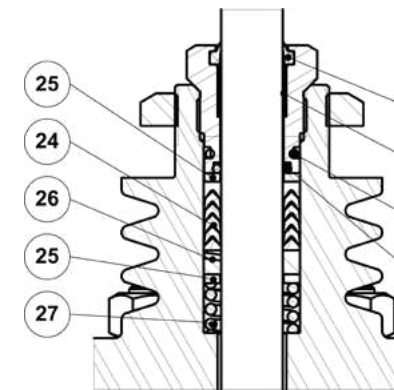
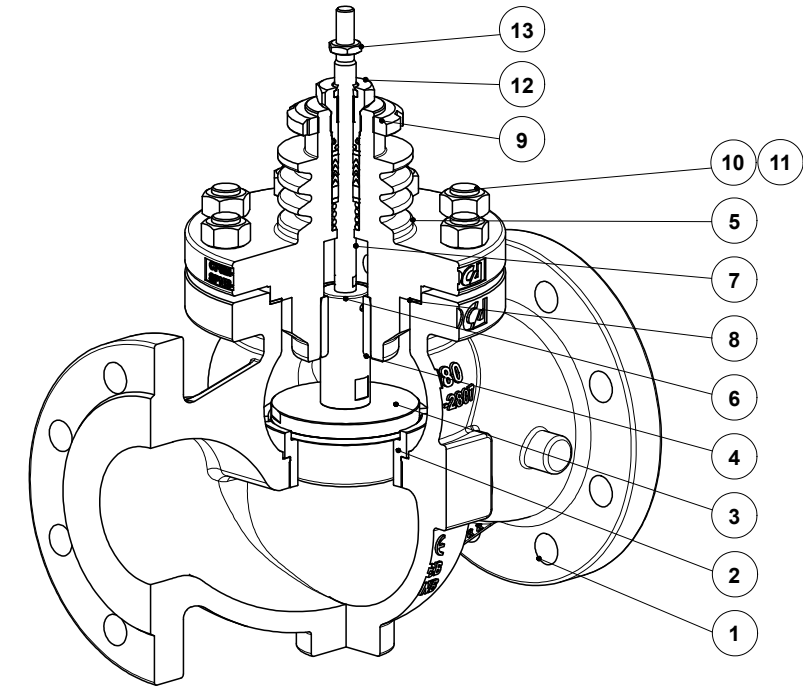
DIMENSIONS – AV SERIES ELECTRIC ACTUATORS (mm)		
DIMENSION	AVM234S	AVF234S
A	166	166
B	314	314
WEIGHT (kg)	4,1	4,1

For more information, please consult IS 3.74 – AVM234S-AVF234S Linear electric actuators.

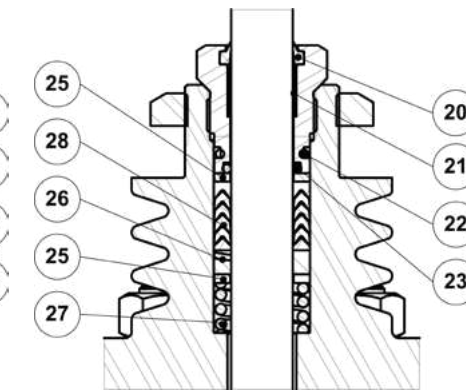


DIMENSIONS – MANUAL OPERATION HANDWHEEL (mm)	
DIMENSION	MAH
ØA	160
B	331
WEIGHT (kg)	5,6

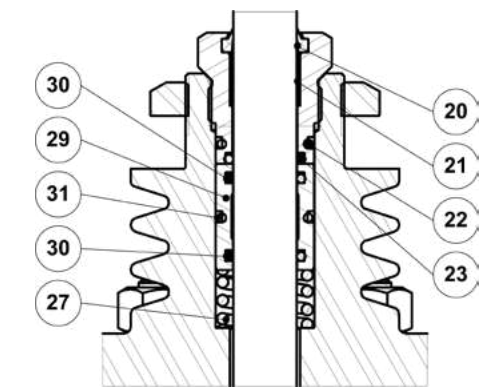
**MATERIALS**



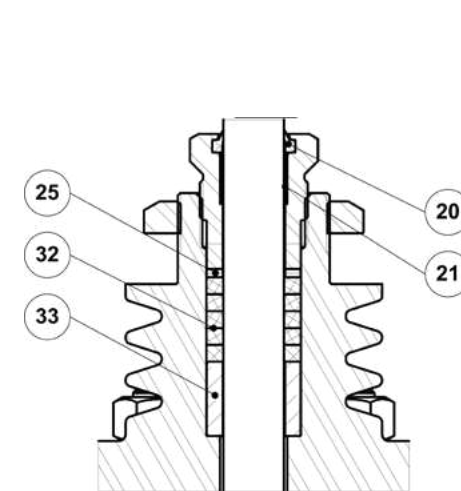
PTFE/GR V-Rings  
(V1.2)



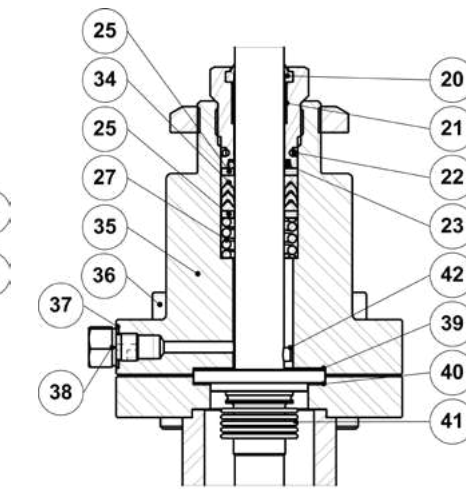
PTFE V-Rings  
(V2.2)



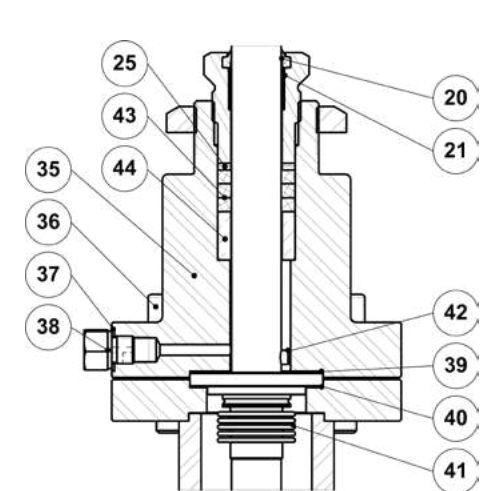
EPDM  
(EP1)



Graphite  
(G1)



Bellows sealing  
(BV1)



Bellows sealing  
(BG1)



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
4	Lower stem guide	Bronze CB1
5	Bonnet	A351 CF8M / 1.4408; A216 WCB / 1.0619
6	* Post stem (21/2" to 4")	AISI 316L / 1.4404
7	* Stem	AISI 316L / 1.4404
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
13	Lock nut	AISI 304 / 4.4301
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 / 1.4310
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	A105 / 1.0432; AISI 316 / 1.4401
36	Bolts or studs and nuts	EN 10269 steel
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

\* Available spare parts.



ORDERING CODES V16/2 a)													
Valve model	V1	2	S	S	1	U	1	1	1	E	FD	U	015
Globe control valve, two-way, straight body	V1												
<b>Valve series</b>													
Series 2		2											
<b>Body material</b>													
A216 WCB / 1.0619 carbon steel			S										
<b>Bonnet design</b>													
Standard				S									
Extended					E								
<b>Trim design</b>													
Unbalanced trim						1							
<b>Flow direction</b>													
Flow under the plug												U	
Flow over the plug													O
<b>Stem sealing</b>													
PTFE/GR V-Rings (V1.2)													1
Virgin PTFE V-Rings (V2.2)													2
Graphite (G1)													3
EPDM (EP1)													4
Stainless steel bellows with PTFE/GR safety packing (BV1)													8
Stainless steel bellows with graphite safety packing (BG1)													9
<b>Plug design</b>													
Parabolic													1
<b>Valve sealing</b>													
Metal to metal (class IV)													1
Soft sealed with PTFE/GR (class VI)													3
Stellited (class IV)													4
<b>Characteristic</b>													
Equal percentage (EQP)													E
Linear (PL)													L
<b>Flow rate coefficient</b>													
Kvs 4													FD
See table below for other Kvs value codes													
<b>Pipe connection</b>													
Flanged ASME B16.5 Class 150													U
Flanged ASME B16.5 Class 300													V
<b>Size</b>													
1/2"													015
3/4"													020
...													
<b>Special valves / Extras</b>													
Full description or additional codes have to be added in case of a non-standard combination													
E													

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

FLOW RATE COEFFICIENT CODES											
Kvs	2,1	2,7	4	6,3	10	16	25	40	63	100	160
Code	R2	R1	FD	FE	FF	FG	FH	FI	FJ	FL	FM



## TWO-WAY GLOBE CONTROL VALVES V25/2 (EN)

### DESCRIPTION

The ADCATrol V25/2 is a series of single seated, two-way globe valves designed for process engineering and industrial applications, where events such as erosion, cavitation or flashing may occur. These valves can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

### MAIN FEATURES

Robust construction.  
Modular design to meet process requirements.  
Stainless steel trim.

### OPTIONS AND ACCESSORIES:

Bonnet extension for high and low temperatures.  
Various stem sealing options including bellows sealing.  
Soft, stellite and high-performance metal valve sealing.  
V-port guided and perforated plugs.  
Low noise, anti-cavitation single and multi-stage trims.  
Reduced bore trims including microflow.  
Pressure balancing trims.  
Silencers.

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

AVAILABLE MODELS: V25/2G – SG iron.  
V25/2S – carbon steel.  
V25/2i – stainless steel (only available from DN 15 to DN 100).

VALVE SIZES: DN 15 to DN 200.

CONNECTIONS: V25/2G – Flanged EN 1092-2 PN 16.  
V25/2S and V25/2i – 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)





### BODY LIMITING CONDITIONS

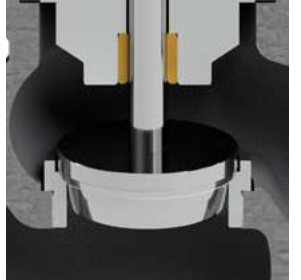
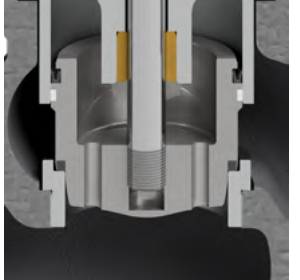
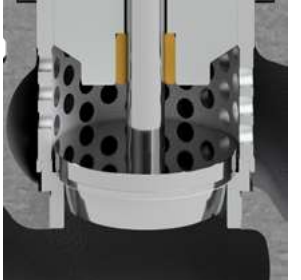
V25/2G **		V25/2S *				V25/2i *			
FLANGED PN 16		FLANGED PN 16		FLANGED PN 40		FLANGED PN 16		FLANGED PN 40	
ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.
16 bar	-10 °C / 50 °C	16 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C	16 bar	-10 °C / 50 °C	40 bar	-10 °C / 50 °C
14,7 bar	200 °C	13,3 bar	200 °C	33,3 bar	200 °C	13,4 bar	200 °C	33,7 bar	200 °C
13,9 bar	250 °C	12,1 bar	250 °C	27,6 bar	300 °C	12,7 bar	250 °C	29,7 bar	300 °C
12,8 bar	300 °C	11 bar	300 °C	25,7 bar	350 °C	11,8 bar	300 °C	28,5 bar	350 °C
11,2 bar	350 °C	10,2 bar	350 °C	23,8 bar	400 °C	11,4 bar	350 °C	27,4 bar	400 °C

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




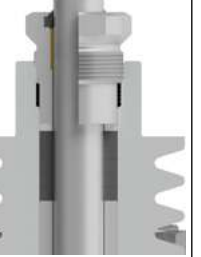

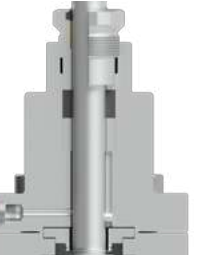
### BONNET DESIGN

STANDARD	EXTENDED
 -10 °C to 250 °C	 Above 250 °C

### TRIM DESIGN



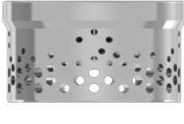



UNBALANCED TRIM	BALANCED TRIM	LOW NOISE (FD1)
		

### STEM SEALING

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

\* Up to 180 °C in steam and hot water applications; \*\* Maximum operating pressure: 25 bar.



PLUG DESIGN	
<p><b>PARABOLIC</b></p>  <p><b>Sealing:</b> Metal to metal <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>	<p><b>PARABOLIC (SOFT SEALING)</b></p>  <p><b>Sealing:</b> PTFE/GR <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class VI, acc. to IEC 60534-4 <b>Max. temp.:</b> 200 °C</p>
<p><b>PERFORATED</b></p>  <p><b>Sealing:</b> Metal to metal <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From above (liquids) or from below (gases) <b>Rangeability:</b> 40:1 (EQP) or 30:1 (PL) <b>Leakage:</b> Class IV, acc. to IEC 60534-4</p>	<p><b>PARABOLIC MICROFLOW</b></p>  <p><b>Sealing:</b> Metal to metal <b>Characteristic:</b> Linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 30:1 <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>
<p><b>V-PORT GUIDED</b></p>  <p><b>Sealing:</b> Metal to metal <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 30:1 <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>	<p><b>V-PORT GUIDED (SOFT SEALING)</b></p>  <p><b>Sealing:</b> PTFE/GR * <b>Characteristic:</b> Equal percentage (EQP) or linear (PL) <b>Flow direction:</b> From below <b>Rangeability:</b> 30:1 <b>Leakage:</b> Class VI, acc. to IEC 60534-4</p>

\* In soft sealing valves with seat Ø125 mm to Ø200 mm the PTFE/GR insert is placed on the seat rather than on the valve plug.

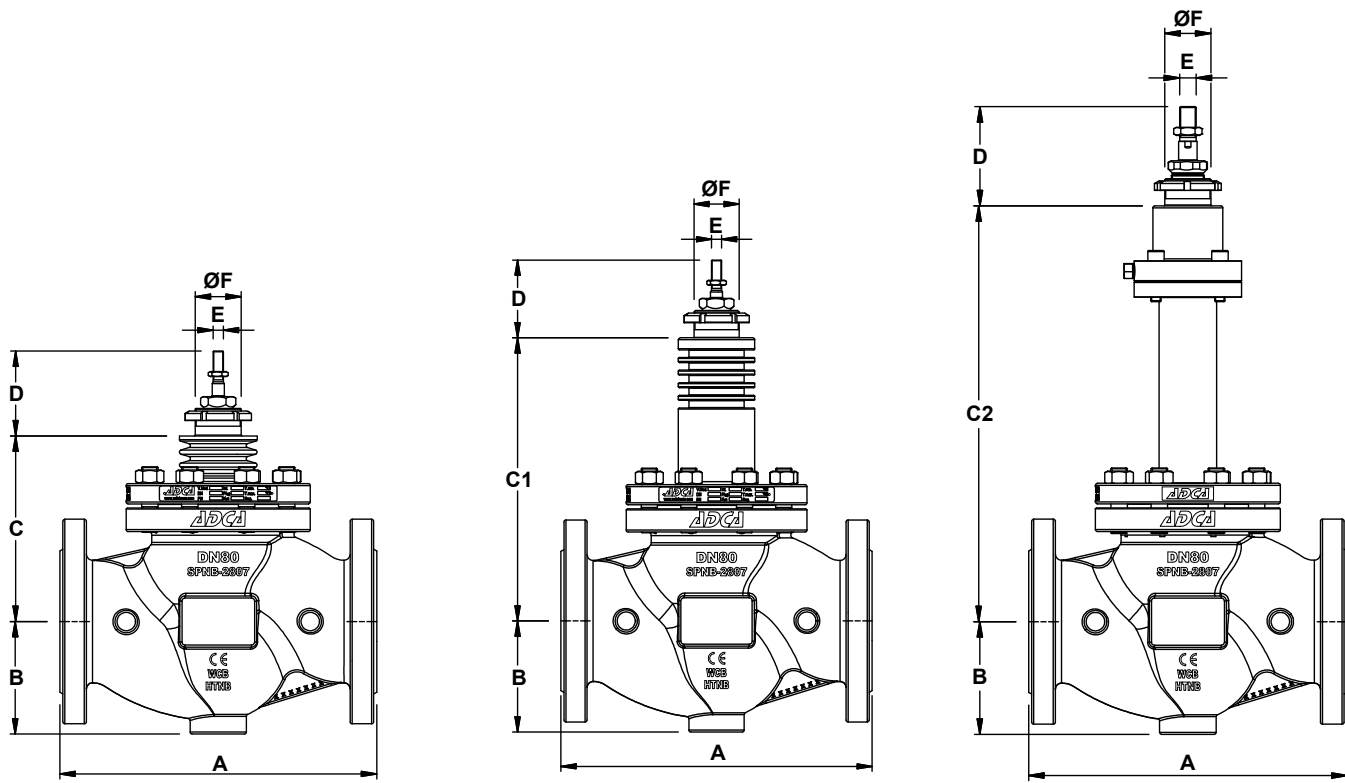
FLOW RATE COEFFICIENTS – PARABOLIC AND V-PORT GUIDED PL AND EQP PLUGS																					
SIZE	Kvs (m³/h)																				
	0,1 *	0,16 *	0,25 *	0,5 *	1	1,7	2,1	2,7	4	6,3	10	16	25	40	63	100	160	240	370	630	
DN 15	•	•	•	•	•	•	•	•	•												
DN 20	•	•	•	•	•	•	•	•	•	•											
DN 25	•	•	•	•	•	•	•	•	•	•	•										
DN 32									•	•	•	•									
DN 40										•	•	•	•								
DN 50											•	•	•	•							
DN 65												•	•	•	•						
DN 80													•	•	•	•					
DN 100														•	•	•	•				
DN 125															•	•	•	•			
DN 150																•	•	•	•		
DN 200																	•	•	•	•	•
SEAT Ø (mm)		4			8			12	15	19,2	25	32	38	48	65	76	96	125	150	200	
STROKE (mm)								20								30		50		60	

\* Microflow only available with linear characteristic.

FLOW RATE COEFFICIENTS – PERFORATED PL PLUGS												
SIZE	Kvs (m³/h)											
	2,5	4	6,3	10	25	36	50	63	120	180	300	450
DN 15	•											
DN 20	•	•										
DN 25	•	•	•									
DN 32	•	•	•	•								
DN 40		•	•	•	•							
DN 50			•	•	•	•						
DN 65				•	•	•	•					
DN 80					•	•	•	•				
DN 100						•	•	•	•			
DN 125							•	•	•	•		
DN 150								•	•	•	•	
DN 200									•	•	•	•
SEAT Ø (mm)	15	19,2	25	32	38	48	65	76	96	125	150	200
STROKE (mm)				20				30		50		60

FLOW RATE COEFFICIENTS – PERFORATED EQP PLUGS												
SIZE	Kvs (m³/h)											
	2,5	4	6,3	10	16	25	36	50	80	120	250	360
DN 15	•											
DN 20	•	•										
DN 25	•	•	•									
DN 32	•	•	•	•								
DN 40		•	•	•	•							
DN 50			•	•	•	•						
DN 65				•	•	•	•					
DN 80					•	•	•	•				
DN 100						•	•	•	•			
DN 125							•	•	•	•		
DN 150								•	•	•	•	
DN 200									•	•	•	•
SEAT Ø (mm)	15	19,2	25	32	38	48	65	76	96	125	150	200
STROKE (mm)				20				30		50		60

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



Valve with standard bonnet

Valve with extended bonnet

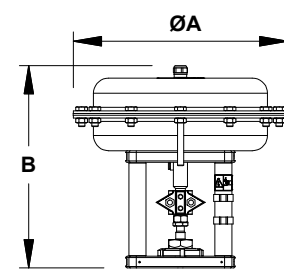
Bellows sealed valve

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	–
D	77						92			110	110	135
E	M10 x 1						M16 x 1,5				M27 x 1,5	
ØF	M40 x 1,5						M45 x 1,5			M65 x 2		M80 x 2

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	–

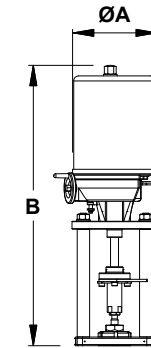
MAX. PERMISSIBLE ACTUATING THRUSTS (kN)													
MAX. THRUST	SIZE												
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	125	150	200	
	12						32,5			40,1		89,7	



DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)										
DIMENSION	PA10	PA206	PA25	PA281	PA40	PA341	PA436	PA80	PA80D	PA80T
ØA	170	209	250	275	300	336	430	405	405	405
B	251	236	260	243	325 / 360	323	351 / 371 *	505 / 515 / 545	741 / 771	967
WEIGHT (kg)	6,3	6,2	10,1	9,6	18,7	14,3	24,4 / 28 *	50,4 / 55,4 / 60	108 / 112	166

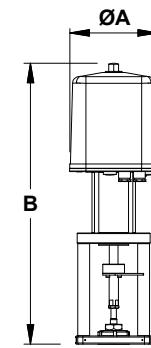
\* For actuators with spring ranges 1 to 2 bar, 1,5 to 3 bar and 2 to 4 bar.

For more information, please consult IS 3.70 and IS 3.70A – PA Linear pneumatic actuators.



DIMENSIONS – EL SERIES ELECTRIC ACTUATORS (mm)						
DIMENSION	EL12	EL20	EL45	EL80	EL120	EL250
ØA	129	148	148	188	188	216
B	333	485	485	587	587	683
WEIGHT (kg)	2,1	8	8	13	13	19

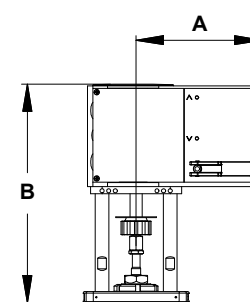
For more information, please consult IS 3.72 – EL Linear electric actuators.



DIMENSIONS – ELR SERIES ELECTRIC ACTUATORS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
ØA	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

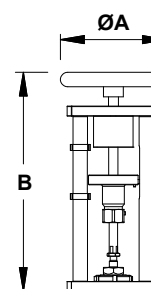
\* With PEL electronic positioner.

For more information, please consult IS 3.73 – ELR Linear electric actuators fail safe.



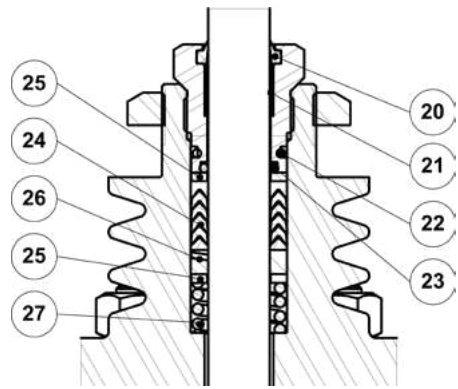
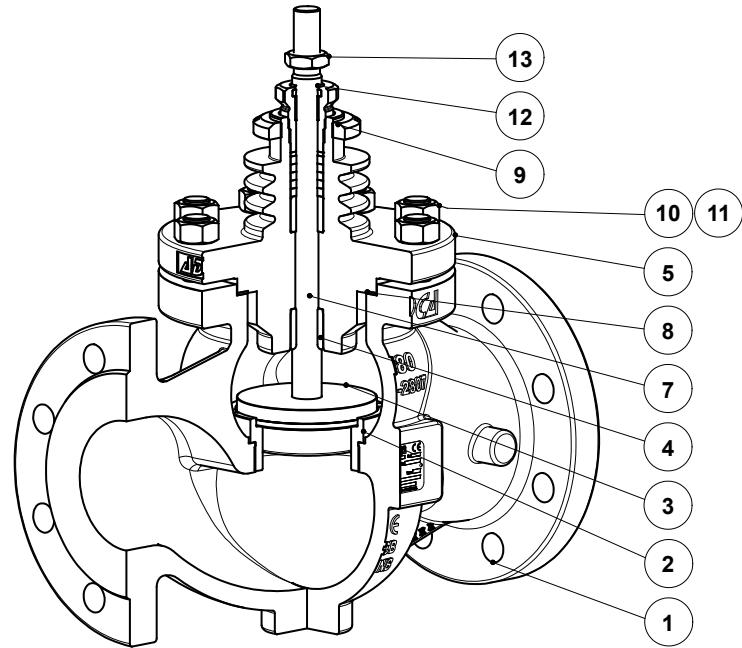
DIMENSIONS – AV SERIES ELECTRIC ACTUATORS (mm)		
DIMENSION	AVM234S	AVF234S
A	166	166
B	314	314
WEIGHT (kg)	4,1	4,1

For more information, please consult IS 3.74 – AVM234S-AVF234S Linear electric actuators.

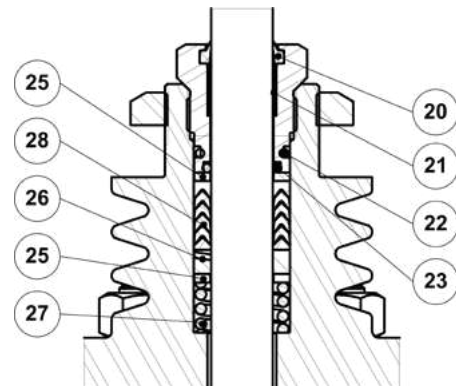


DIMENSIONS – MANUAL OPERATION HANDWHEEL (mm)	
DIMENSION	MAH
ØA	160
B	331
WEIGHT (kg)	5,6

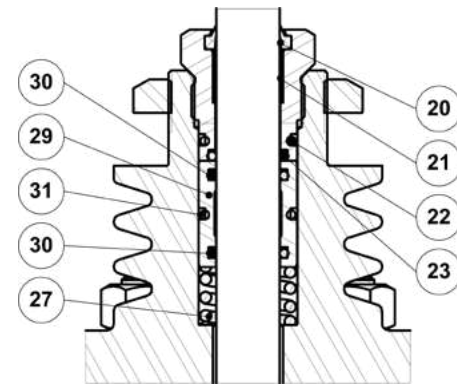
**MATERIALS**



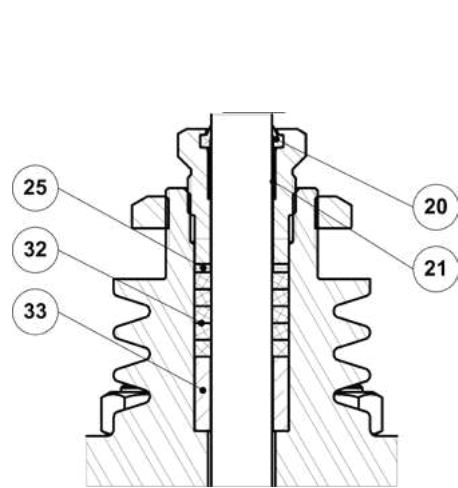
PTFE/GR V-Rings  
(V1.2)



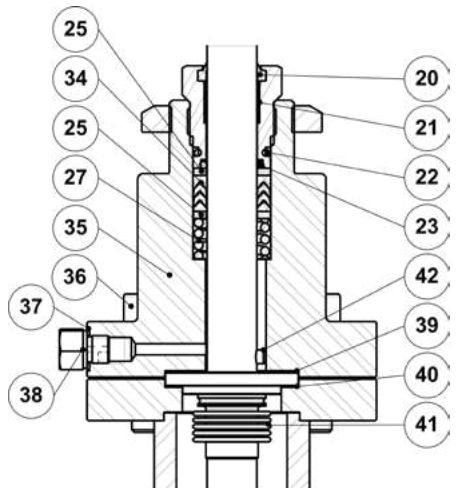
PTFE V-Rings  
(V2.2)



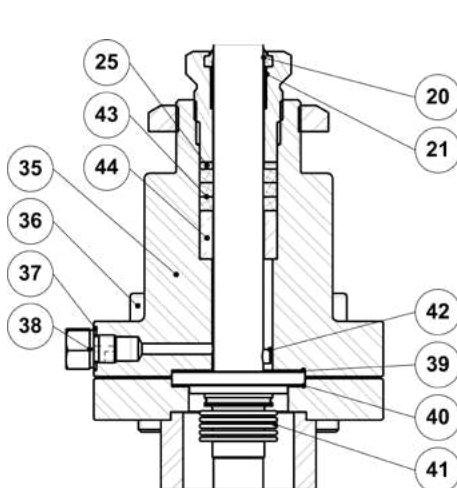
EPDM  
(EP1)



Graphite  
(G1)



Bellows sealing  
(BV1)



Bellows sealing  
(BG1)

**MATERIALS**

POS. N°	DESIGNATION	MATERIAL
1	Valve body (V25/2G)	GJS-400-15 / 0.7040
	Valve body (V25/2S)	A216 WCB / 1.0619
	Valve body (V25/2i)	A351 CF8M / 1.4408
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	Stem guide	Bronze CB1
5	Bonnet (V25/2G and V25/2S)	A351 CF8M / 1.4408; A216 WCB / 1.0619
	Bonnet (V25/2i)	A351 CF8M / 1.4408
7	* Stem	AISI 316 / 1.4401
8	* Gasket	Stainless steel / Graphite
9	Lock nut	A351 CF8 / 1.4308
10	Nuts (V25/2G and V25/2S)	EN 10269 steel
	Nuts (V25/2i)	Stainless steel A2-70
11	Studs (V25/2G and V25/2S)	EN 10269 steel
	Studs (V25/2i)	Stainless steel A2-70
12	* Packing nut	AISI 303 / 1.4305
13	Lock nut	AISI 302 / 1.4310
20	* Scraper ring	Viton; NBR
21	* Plain bearing	Bronze / PTFE
22	* O-ring	EPDM
23	* O-ring	Viton
24	* Chevron packing set	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; Graphite filled 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 (V16/2G and V16/2S)	A105 / 1.0432; AISI 316 / 1.4401
	Bellows bonnet (V16/2i)	AISI 316 / 1.4401
36	Bolts or studs and nuts (V16/2G and V16/2S)	EN 10269 steel
	Bolts or studs and nuts (V16/2i)	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

\* Available spare parts.



ORDERING CODES V25/2 a)																
Valve model	V2	2	G	S	1	U	1	1	1	E	FD	L	015			
Globe control valve, two-way, straight body	V2															
Valve series																
Series 2	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															
Bonnet design																
Standard	S															
Extended	E															
Trim design																
Unbalanced trim	1															
Balanced trim	2															
Unbalanced trim with FD1 low noise cage	3															
Balanced trim with FD1 low noise cage	4															
Flow direction																
Flow under the plug	U															
Flow over the plug	O															
Stem sealing																
PTFE/GR V-Rings (V1.2)	1															
Virgin PTFE V-Rings (V2.2)	2															
Graphite (G1)	3															
EPDM (EP1)	4															
Stainless steel bellows with PTFE/GR safety packing (BV1)	8															
Stainless steel bellows with graphite safety packing (BG1)	9															
Plug design																
Parabolic	1															
V-port guided (standard for sizes DN 125 to DN 200)	2															
Perforated	3															
Valve sealing																
Metal to metal (class IV)	1															
Metal to metal (class V)	2															
Soft sealed with PTFE/GR (class VI)	3															
Stellited (class IV)	4															
Characteristic																
Equal percentage (EQP)	E															
Linear (PL)	L															
Flow rate coefficient																
Kvs 4	FD															
See table below for other Kvs value codes																
Pipe connection																
Flanged EN 1092-1/-2 PN 16	L															
Flanged EN 1092-1 PN 40	N															
Size																
DN 15	015															
DN 20	020															
...																
Special valves / Extras																
Full description or additional codes have to be added in case of a non-standard combination	E															

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

FLOW RATE COEFFICIENT CODES																
Kvs	0,1	0,16	0,25	0,5	1	1,7	2,1	2,5 *	2,7	4	6,3	10	16	25	36 *	40
Code	M4	M3	M2	M1	R4	R3	R2	PA	R1	FD	FE	FF	FG	FH	PB	FI
Kvs	50 *	63	80 *	100	120 *	160	180 *	240	250 *	300 *	360 *	370	450 *	630	-	-
Code	PC	FJ	PD	FL	PE	FM	PF	FN	PG	PH	PI	FO	PJ	FP	-	-

\* Only available with perforated plug design.



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

IS V252E.015 E 02.21



## TWO-WAY GLOBE CONTROL VALVES V25/2 (ASME)

### DESCRIPTION

The ADCATrol V25/2 is a series of single seated, two-way globe valves designed for process engineering and industrial applications, where events such as erosion, cavitation or flashing may occur. These valves can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

### MAIN FEATURES

Robust construction.  
Modular design to meet process requirements.  
Stainless steel trim.

### OPTIONS AND ACCESSORIES:

Bonnet extension for high and low temperatures.  
Various stem sealing options including bellows sealing.  
Soft, stellited and high-performance metal valve sealing.  
V-port guided and perforated plugs.  
Low noise, anti-cavitation single and multi-stage trims.  
Reduced bore trims including microflow.  
Pressure balancing trims.  
Silencers.

### USE:

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

### AVAILABLE MODELS:

V25/2S – carbon steel.

### VALVE SIZES:

1/2" to 6".

### 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 6"	1 1/2" to 4"	1 (CE marked)
-	6"	2 (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

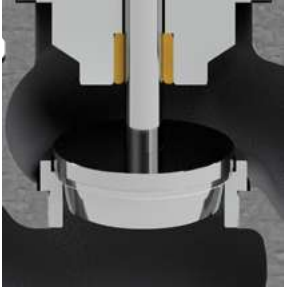
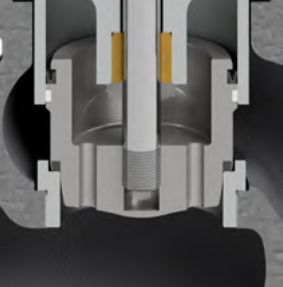
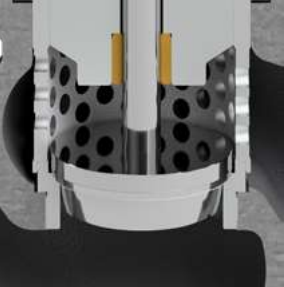
\* Rating according to EN 1759-1:2004.

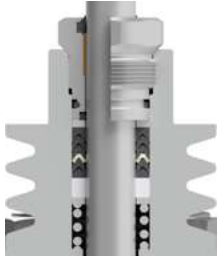

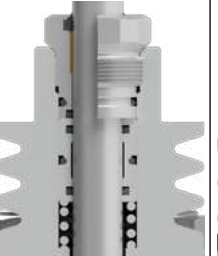
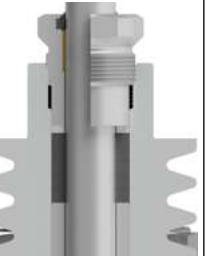
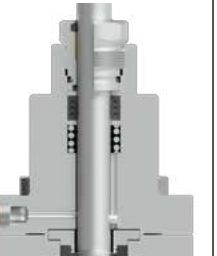
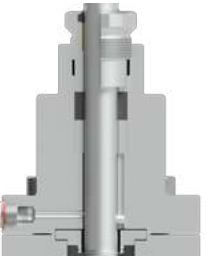


We reserve the right to change the design and material of this product without notice.



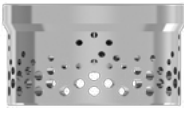



IS V252A.015 E 00.22

BONNET DESIGN	
STANDARD	EXTENDED
 <p>-10 °C to 250 °C</p>	 <p>Above 250 °C</p>

TRIM DESIGN		
UNBALANCED TRIM	BALANCED TRIM	LOW NOISE (FD1)
		

STEM SEALING					
PTFE/GR V-RINGS (V1.2)	PTFE V-RINGS (V2.2)	EPDM (EP1)	GRAPHITE (G1)	BELLOWS	
				(BV1)	(BG1)
 <p>-10 °C to 220 °C</p>	 <p>-10 °C to 180 °C</p>	 <p>-10 °C to 150 °C *</p>	 <p>-10 °C to 400 °C</p>	 <p>-60 °C to 220 °C **</p>	 <p>-60 °C to 400 °C **</p>

\* Up to 180 °C in steam and hot water applications; \*\* Maximum operating pressure: 25 bar.

PLUG DESIGN	
 <p><b>PARABOLIC</b></p> <p><b>Sealing:</b> Metal to metal  <b>Characteristic:</b> Equal percentage (EQP) or linear (PL)  <b>Flow direction:</b> From below  <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL)  <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>	 <p><b>PARABOLIC (SOFT SEALING)</b></p> <p><b>Sealing:</b> PTFE/GR  <b>Characteristic:</b> Equal percentage (EQP) or linear (PL)  <b>Flow direction:</b> From below  <b>Rangeability:</b> 50:1 (EQP) or 30:1 (PL)  <b>Leakage:</b> Class VI, acc. to IEC 60534-4  <b>Max. temp.:</b> 200 °C</p>
 <p><b>PERFORATED</b></p> <p><b>Sealing:</b> Metal to metal  <b>Characteristic:</b> Equal percentage (EQP) or linear (PL)  <b>Flow direction:</b> From above (liquids) or from below (gases)  <b>Rangeability:</b> 40:1 (EQP) or 30:1 (PL)  <b>Leakage:</b> Class IV, acc. to IEC 60534-4</p>	 <p><b>PARABOLIC MICROFLOW</b></p> <p><b>Sealing:</b> Metal to metal  <b>Characteristic:</b> Linear (PL)  <b>Flow direction:</b> From below  <b>Rangeability:</b> 30:1  <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>
 <p><b>V-PORT GUIDED</b></p> <p><b>Sealing:</b> Metal to metal  <b>Characteristic:</b> Equal percentage (EQP) or linear (PL)  <b>Flow direction:</b> From below  <b>Rangeability:</b> 30:1  <b>Leakage:</b> Class IV or Class V, acc. to IEC 60534-4</p>	 <p><b>V-PORT GUIDED (SOFT SEALING)</b></p> <p><b>Sealing:</b> PTFE/GR *  <b>Characteristic:</b> Equal percentage (EQP) or linear (PL)  <b>Flow direction:</b> From below  <b>Rangeability:</b> 30:1  <b>Leakage:</b> Class VI, acc. to IEC 60534-4</p>

\* In soft sealing valves with seat Ø125 mm to Ø150 mm the PTFE/GR insert is placed on the seat rather than on the valve plug.

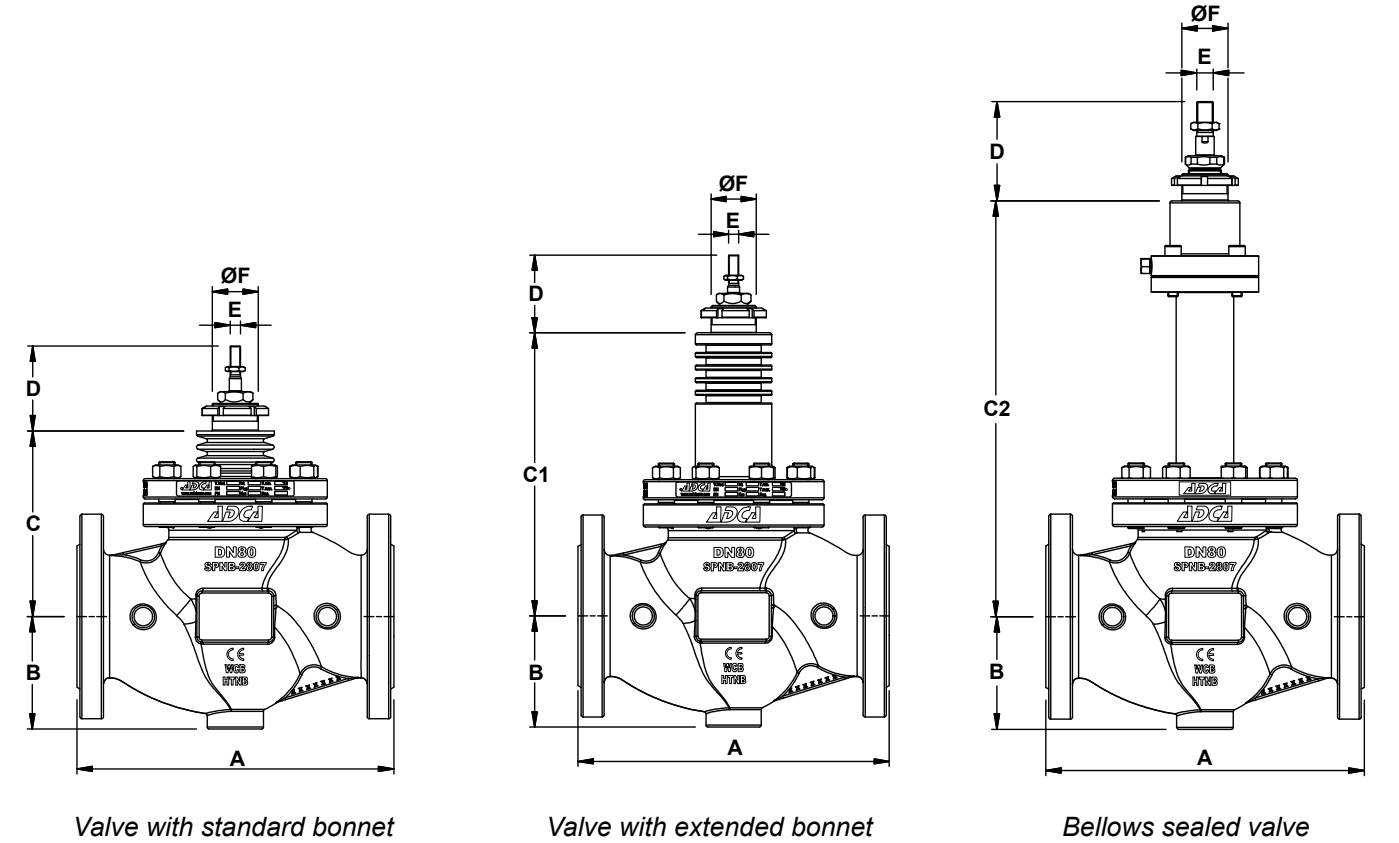
FLOW RATE COEFFICIENTS – PARABOLIC AND V-PORT GUIDED PL AND EQP PLUGS																																																								
SIZE	Kvs (m³/h)																																																							
	0,1 *	0,16 *	0,25 *	0,5 *	1	1,7	2,1	2,7	4	6,3	10	16	25	40	63	100	160	240	370																																					
1/2"	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																																				
3/4"	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																																				
1"	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																																				
1 1/2"										•	•	•	•	•	•	•	•	•	•	•																																				
2"										•	•	•	•	•	•	•	•	•	•	•																																				
2 1/2"																																																								
3"																																																								
4"																																																								
6"																																																								
SEAT Ø (mm)	4				8				12				15				19,2				25				32				38				48				65				76				96				125				150			
STROKE (mm)	20										30										50																																			

\* Microflow only available with linear characteristic.

FLOW RATE COEFFICIENTS – PERFORATED PL PLUGS																		
SIZE	Kvs (m³/h)																	
	2,5	4	6,3	10	25	36	50	63	120	180	300							
1/2"	•																	
3/4"	•	•																
1"	•	•	•															
1 1/2"		•	•	•	•													
2"			•	•	•	•												
2 1/2"				•	•	•	•											
3"					•	•	•	•										
4"						•	•	•	•									
6"							•	•	•	•								
SEAT Ø (mm)	15	19,2	25	32	38	48	65	76	96	125	150							
STROKE (mm)	20						30						50					

FLOW RATE COEFFICIENTS – PERFORATED EQP PLUGS																		
SIZE	Kvs (m³/h)																	
	2,5	4	6,3	10	16	25	36	50	80	120	250							
1/2"	•																	
3/4"	•	•																
1"	•	•	•															
1 1/2"		•	•	•	•													
2"			•	•	•	•												
2 1/2"				•	•	•	•											
3"					•	•	•	•										
4"						•	•	•	•									
6"							•	•	•	•								
SEAT Ø (mm)	15	19,2	25	32	38	48	65	76	96	125	150							
STROKE (mm)	20						30						50					

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



Valve with standard bonnet

Valve with extended bonnet

Bellows sealed valve

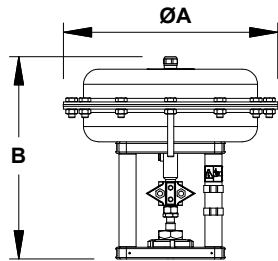
DIMENSIONS (mm)										
DIMENSION	SIZE									
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	
A	CLASS 150	184 a)	184 a)	184	222	254	276	298	352	451
	CLASS 300	190 a)	194 a)	197	235	267	292	318	368	473
B	CLASS 150	44,5	49	54	65	85	100	110	130	182
	CLASS 300	47,5	58,5	62	78	85	100	110	130	182
C	85	85	90	115	125	176	175	190	216	
C1	150	150	170	195	204	276	275	310	320	
C2	314	314	322	317	317	415	442	451	590	
D	77						92			110
E	M10 x 1						M16 x 1,5			
ØF	M40 x 1,5						M45 x 1,5			M65 x 2

a) With welded-on flanges.

Remark: In the beginning of year 2022 new face to face dimensions have been defined for some Class 150 valves. Valves may still be supplied with the previous face to face dimensions under request. Consult the manufacturer.

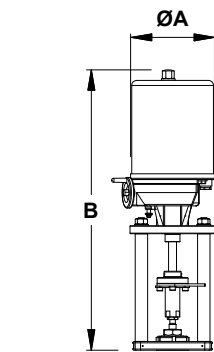
WEIGHTS (kg)										
STANDARD	CLASS	SIZE								
		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
STANDARD	CLASS 150	4,5	5	6,1	11,1	15,2	30,9	36,5	52,5	103,1
	CLASS 300	4,9	6	7,5	13,9	17,5	34	41,9	60,5	119,3
EXTENDED	CLASS 150	5,2	5,7	6,8	12,4	16,4	31,6	37	53,2	109,8
	CLASS 300	5,6	6,7	8,2	15,2	18,7	34,7	42,5	61,2	121,1
BELLOWS	CLASS 150	8,7	9,2	10,2	15,1	19	34,7	39,5	55,6	114,8
	CLASS 300	9,1	10,2	11,6	17,9	21,3	37,8	45,5	63,5	126,1

MAX. PERMISSIBLE ACTUATING THRUSTS (kN)									
MAX. THRUST	SIZE								
	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"
			12				32,5		40,1



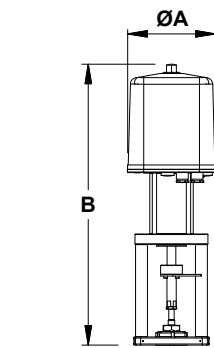
DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)										
DIMENSION	PA10	PA206	PA25	PA281	PA40	PA341	PA436	PA80	PA80D	PA80T
ØA	170	209	250	275	300	336	430	405	405	405
B	251	236	260	243	325 / 360	323	351 / 371 *	505 / 515 / 545	741 / 771	967
WEIGHT (kg)	6,3	6,2	10,1	9,6	18,7	14,3	24,4 / 28 *	50,4 / 55,4 / 60	108 / 112	166

\* For actuators with spring ranges 1 to 2 bar, 1,5 to 3 bar and 2 to 4 bar.  
For more information, please consult IS 3.70 and IS 3.70A – PA Linear pneumatic actuators.



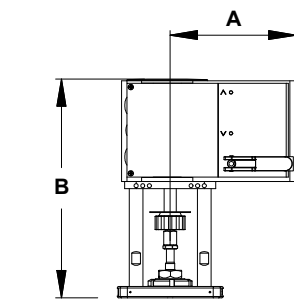
DIMENSIONS – EL SERIES ELECTRIC ACTUATORS (mm)						
DIMENSION	EL12	EL20	EL45	EL80	EL120	EL250
ØA	129	148	148	188	188	216
B	333	485	485	587	587	683
WEIGHT (kg)	2,1	8	8	13	13	19

For more information, please consult IS 3.72 – EL Linear electric actuators.



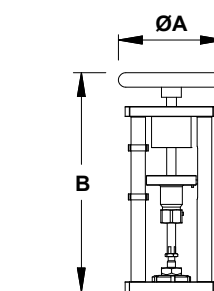
DIMENSIONS – ELR SERIES ELECTRIC ACTUATORS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
ØA	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

\* With PEL electronic positioner.  
For more information, please consult IS 3.73 – ELR Linear electric actuators fail safe.



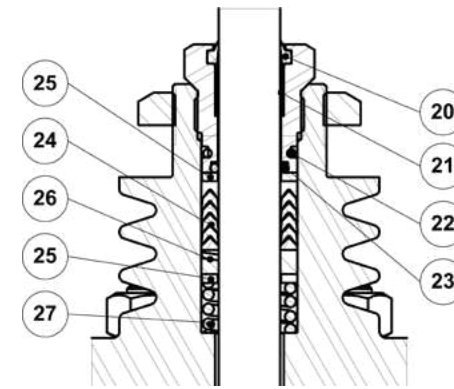
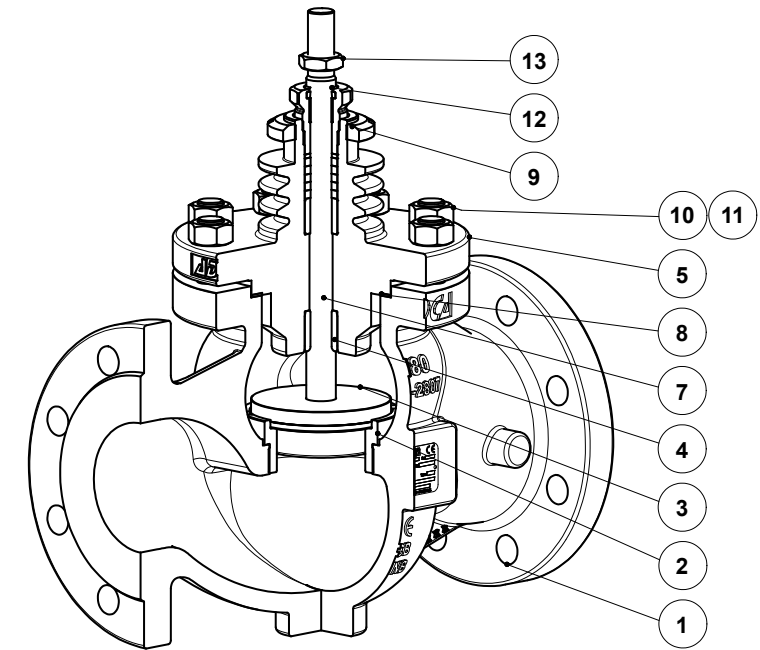
DIMENSIONS – AV SERIES ELECTRIC ACTUATORS (mm)		
DIMENSION	AVM234S	AVF234S
A	166	166
B	314	314
WEIGHT (kg)	4,1	4,1

For more information, please consult IS 3.74 – AVM234S-AVF234S Linear electric actuators.

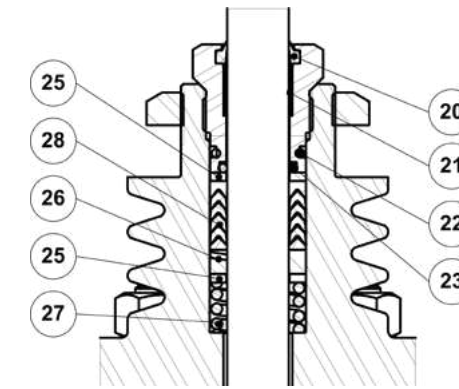


DIMENSIONS – MANUAL OPERATION HANDWHEEL (mm)	
DIMENSION	MAH
ØA	160
B	331
WEIGHT (kg)	5,6

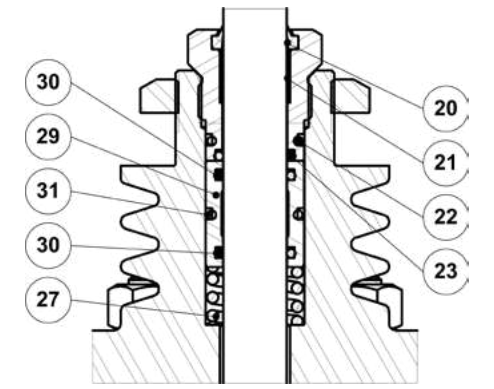
**MATERIALS**



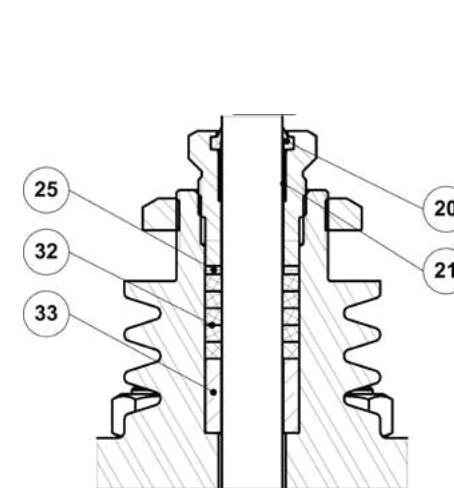
PTFE/GR V-Rings  
(V1.2)



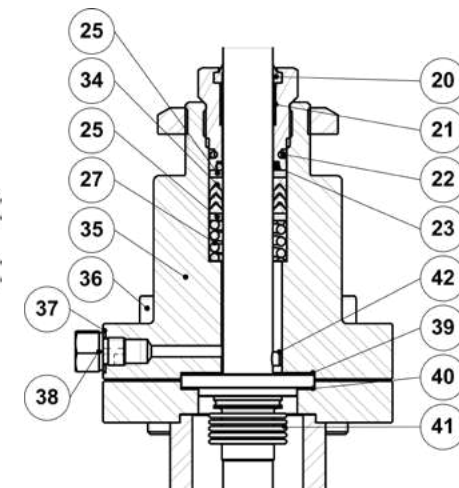
PTFE V-Rings  
(V2.2)



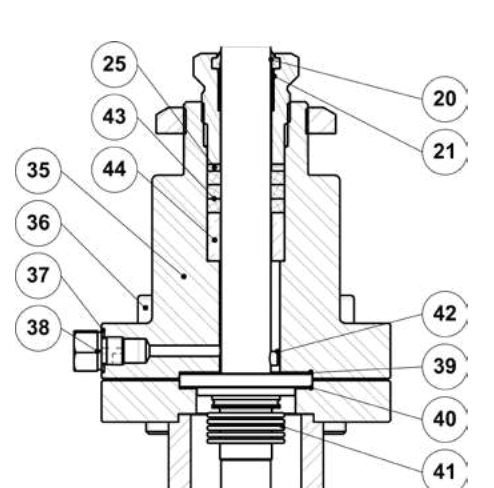
EPDM  
(EP1)



Graphite  
(G1)



Bellows sealing  
(BV1)



Bellows sealing  
(BG1)



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
4	Stem guide	Bronze CB1
5	Bonnet	A351 CF8M / 1.4408; A216 WCB / 1.0619
7	* Stem	AISI 316 / 1.4401
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
13	Lock nut	AISI 302 / 1.4310
20	* Scraper ring	Viton; NBR
21	* Plain bearing	Bronze / PTFE
22	* O-ring	EPDM
23	* O-ring	Viton
24	* Chevron packing set	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; Graphite filled 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	A105 / 1.0432; AISI 316 / 1.4401
36	Bolts or studs and nuts	EN 10269 steel
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

\* Available spare parts.



ORDERING CODES V25/2 a)														
Valve model	V2	2	S	S	1	U	1	1	1	E	FD	L	015	
Globe control valve, two-way, straight body	V2													
<b>Valve series</b>														
Series 2		2												
<b>Body material</b>														
A216 WCB / 1.0619 carbon steel			S											
<b>Bonnet design</b>														
Standard				S										
Extended				E										
<b>Trim design</b>														
Unbalanced trim													1	
Balanced trim													2	
Unbalanced trim with FD1 low noise cage													3	
Balanced trim with FD1 low noise cage													4	
<b>Flow direction</b>														
Flow under the plug													U	
Flow over the plug													O	
<b>Stem sealing</b>														
PTFE/GR V-Rings (V1.2)													1	
Virgin PTFE V-Rings (V2.2)													2	
Graphite (G1)													3	
EPDM (EP1)													4	
Stainless steel bellows with PTFE/GR safety packing (BV1)													8	
Stainless steel bellows with graphite safety packing (BG1)													9	
<b>Plug design</b>														
Parabolic													1	
V-port guided (standard for size 6")													2	
Perforated													3	
<b>Valve sealing</b>														
Metal to metal (class IV)													1	
Metal to metal (class V)													2	
Soft sealed with PTFE/GR (class VI)													3	
Stellited (class IV)													4	
<b>Characteristic</b>														
Equal percentage (EQP)													E	
Linear (PL)													L	
<b>Flow rate coefficient</b>														
Kvs 4													FD	
See table below for other Kvs value codes														
<b>Pipe connection</b>														
Flanged ASME B16.5 Class 150													U	
Flanged ASME B16.5 Class 300													V	
<b>Size</b>														
1/2"														015
3/4"														020
...														
<b>Special valves / Extras</b>														
Full description or additional codes have to be added in case of a non-standard combination														E

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.

FLOW RATE COEFFICIENT CODES														
Kvs	0,1	0,16	0,25	0,5	1	1,7	2,1	2,5 *	2,7	4	6,3	10	16	25
Code	M4	M3	M2	M1	R4	R3	R2	PA	R1	FD	FE	FF	FG	FH
Kvs	36 *	40	50 *	63	80 *	100	120 *	160	180 *	240	250 *	300 *	370	-
Code	PB	FI	PC	FJ	PD	FL	PE	FM	PF	FN	PG	PH	FO	-

\* Only available with perforated plug design.



**PNEUMATIC CONTROL VALVES  
PV25 (ANSI)  
V25S globe control valves 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 cast steel.
- VALVE SIZES:** 1/2" to 6".
- CONNECTIONS:** Flanged ANSI B16.5 Class 150 lb / 300 lb.
- ACTUATORS:** PA205, PA280, PA340, PA435.
- 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;  
V-ported;  
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.

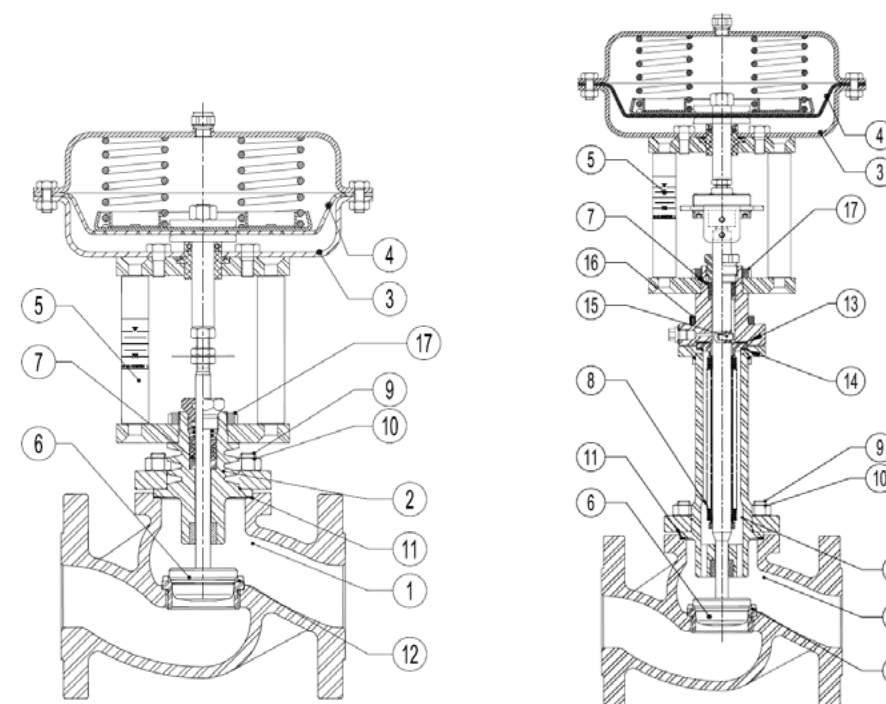
CE MARKING – GROUP 2 (PED – European Directive)		
ANSI 150 lb	ANSI 300 lb	Category
1/2" to 2"	1/2" to 1"	SEP
3" to 6"	1 1/2" to 4"	1 (CE Marked)
–	6"	2 (CE Marked)

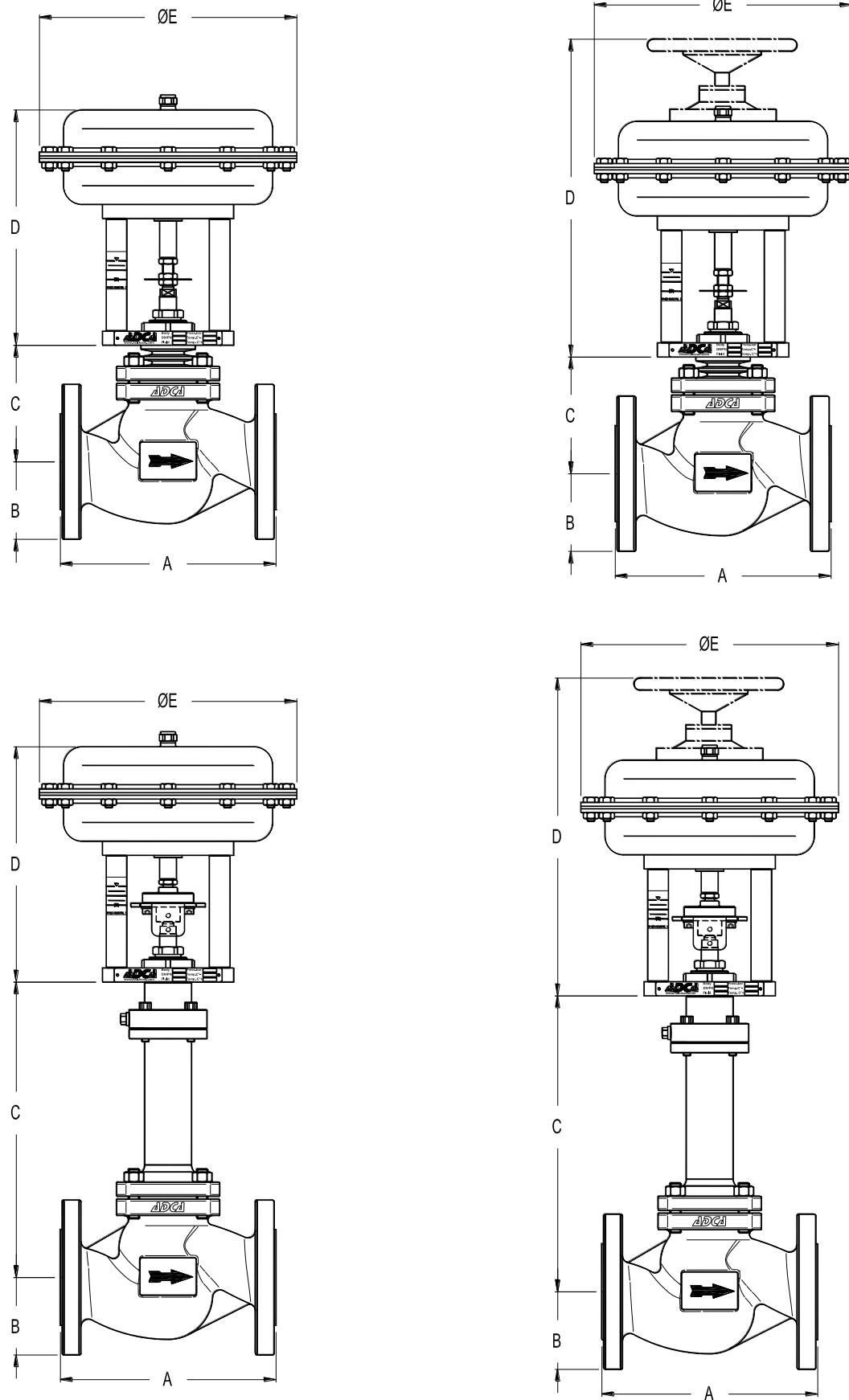
BODY LIMITING CONDITIONS			
ANSI 150 lb		ANSI 300 lb	
ALLOWABLE PRESSURES	RELATED TEMPERATURES	ALLOWABLE PRESSURES	RELATED TEMPERATURES
19,3 bar	-10 °C / 50 °C	50 bar	-10 °C / 50 °C
15,8 bar	150 °C	43,9 bar	200 °C
12,1 bar	250 °C	36,9 bar	350 °C
8,4 bar	350 °C	34,6 bar	400 °C

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

MATERIALS		
POS. Nº	DESIGNATION	MATERIAL V25S
1	Valve body	ASTM A216WCB / 1.0619 GP240GH / 1.0619
2	Bonnet	CF8M / 1.4408 **
3	Actuator (Steel)	S235JR / 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	34CrNiMo6 / 1.6582
10	Nuts	Steel 8.8
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	Steel 10.9
17	Lock nut	Stainless steel

\* Available spare parts.; \*\* Except 6" version, completely in cast steel.





DIMENSIONS (mm) – VALVE BODY							
SIZE	A ANSI 150 lb	A ANSI 300 lb	B ANSI 150 lb	B ANSI 300 lb	C – BONNET (mm)		
					STANDARD	FINNED	BELLOWS
1/2"	184 (a)	190 (a)	44,5	47,5	85	150	290
3/4"	184 (a)	194 (a)	49	58,5	85	150	290
1"	184 (a)	197	54	62	90	170	295
1 1/2"	235	235	63,5	78	115	195	285
2"	267	267	76	82,5	125	215	285
3"	318	318	95	105	175	275	392
4"	368	368	114,5	127	190	310	400
6"	* 480	473	140	159	210	320	610

a) Welded-on flanges;  
\* Same length as EN PN16.

FLOW RATE COEFFICIENTS (m <sup>3</sup> /h) & VALVE STROKES (mm)										
	SIZES									
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
<b>Kvs</b>	3,8	5,1	9,4	–	22,2	40,1	–	89,7	136,7	316,1
<b>STROKE</b>	20	20	20	–	20	20	–	30	30	40 / 50

Perforated plugs have different flow rates, see IS PV 10.00 E – Technical Information.  
For conversion Kvs = Cv (US) x 0,855.

DIMENSIONS – ACTUATOR			
TYPE	E (mm)	D (mm) 1/2" to 4" DA / RA	WGT. (kg)
PA280	275	240	10
PA340	335	265	15
PA435	430	295	25

PLUG DESIGN					
Microflow Linear PL	Countoured Equal % or Linear EQP – PL	V-Ported Equal Percentage EQP	V-Ported Linear PL	Perforated Equal Percentage EQP	Perforated Linear PL

V-Ported and perforated plugs are also available in balanced pressure version.

PLUG DESIGN					
Microflow Linear PL	Countoured Equal % or Linear EQP – PL	V-Ported EQP - PL	V-Ported Perforated EQP - PL	V-Ported Balanced EQP – PL	Perforated Balanced EQP - PL



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 1/2"	2"	3"	4"
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	6	3,5	–	–
	0,4 ÷ 1,2 bar	40	38	20	10	5	–	–
	0,4 ÷ 2 bar	50	45	25	12	6,5	–	–
PA340A	0,2 ÷ 1 bar	60	60	50	12	10	–	–
	0,4 ÷ 1,2 bar	80	80	60	16	13	–	–
PA340B	0,2 ÷ 1 bar	–	–	–	–	–	2,5	1
	0,4 ÷ 1,2 bar	–	–	–	–	–	3,5	1,5
PA435A	0,2 ÷ 1 bar	–	–	–	40	25	–	–
	0,4 ÷ 1,2 bar	–	–	–	48	30	–	–
PA435B	0,2 ÷ 1 bar	–	–	–	–	–	5	3
	0,4 ÷ 1,2 bar	–	–	–	–	–	7	5
	0,4 ÷ 2,4 bar	–	–	–	–	–	15	12

For valve size 6", consult factory.  
 The pressure drop values are referred 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 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.  
 If higher differential pressures are required please consult PA45 pneumatic actuators catalogue.

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 1/2"	2"	3"	4"
PA205	0,2 ÷ 1 bar	16	16	12	–	–	–	–
	0,4 ÷ 2 bar	25	24	16	–	–	–	–
PA280	0,2 ÷ 1 bar	–	–	19	8	4	–	–
	0,4 ÷ 2 bar	–	–	25	16	7	–	–
PA340A	0,2 ÷ 1 bar	–	–	–	16	10	–	–
	0,4 ÷ 2 bar	–	–	–	26	25	–	–
PA340B	0,2 ÷ 1 bar	–	–	–	–	–	3,5	1,5
	0,4 ÷ 2 bar	–	–	–	–	–	7	3
PA435B	0,2 ÷ 1 bar	–	–	–	–	–	5	3
	0,4 ÷ 2 bar	–	–	–	–	–	10	7,5

For valve size 6", 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 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																			
VALVE CODES										P	V	.25S	1	1	U	50	.X.		
Actuator type (1)																			
Pneumatic actuator										P									
Electric actuator										E									
Group designation																			
Globe valve, two-way, straight body										V									
Valve model																			
ASTM A216 WCB body, stainless steel trim												.25S							
Stem sealing																			
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						
Valve plug																			
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						
Pipe connection																			
Flanged ANSI B16.5 150lb															U				
Flanged ANSI B16.5 300lb															V				
Size																			
1/2"																	15		
3/4"																		20	
...																			
Actuator																		(1)	
Extras																			
Full description or additional codes have to be added in case of non-standard combination.																		E	

ACTUATOR CODES (pneumatic) *				P.	5	R	18
Group designation							
Multi-spring, pneumatic linear actuator				P.			
Actuator size							
205					1		
280					3		
340A – From DN 15 to DN 50					5		
340B – From DN 65 to DN 100					6		
435A – From DN 15 to DN 50					7		
435B – From DN 65 to DN 100					8		
Actuator type							
Direct action (air to close)						D	
Reverse action (air to open)						R	
Actuator Construction							
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
0,4 – 2,4 bar (6/35 psi)							35

→ To be introduced on ".X.", if supplied in combination with the valve.

Example:

V25S valve model, EQP soft plug, PTFE/GR stem sealing, 2", ANSI 150 lb, complete with reverse action actuator signal 0,4 – 1,2 bar, size 340A steel:

Code: PV.25S.11U50.5R18

REMARKS:

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

ADCArol 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 actuator ordering codes, consult our technical department



## 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)

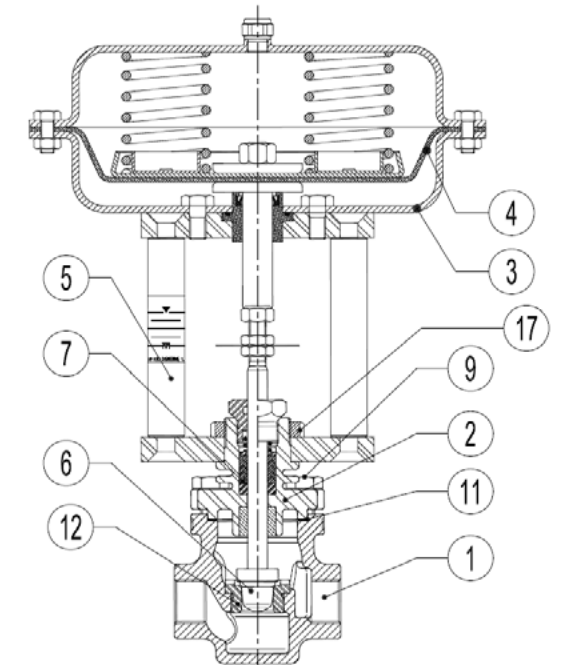
	SIZES		
	1/2"	3/4"	1"
<b>STROKE</b>	20	20	20

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

#### MATERIALS

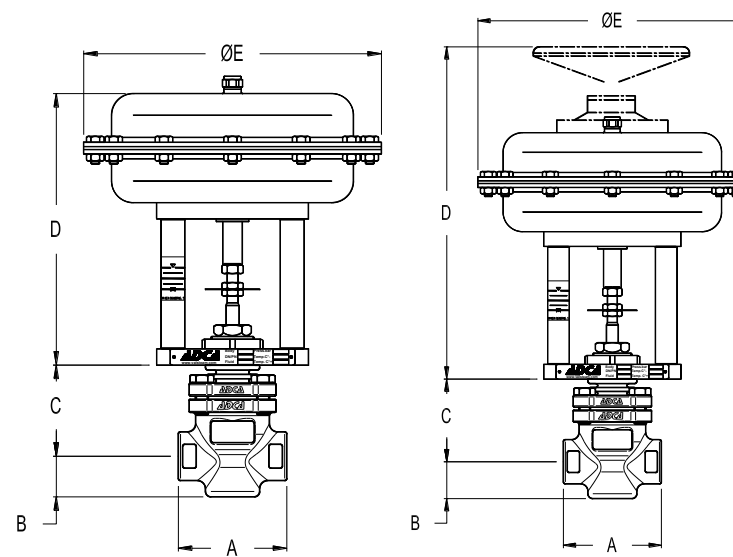
POS. N°	DESIGNATION	MATERIAL
1	Valve body	CF8M / 1.4408
2	Bonnet	CF8M / 1.4408
3	Actuator (Steel)	S235JR / 1.0038
	Actuator (Stainl. st.)	AISI 304 / 1.4301
4	* Diaphragm	NBR 70
5	Yoke (Steel)	C45E / 1.1191
	Yoke (Stainl. St.)	AISI 304 / 1.4301
6	* Valve plug	PTFE/GR; St. steel
7	* Standard packing	PTFE/GR
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									
Actuator type (1)									
Pneumatic actuator	P								
Electric actuator	E								
Group designation									
Globe valve, two-way, straight body	V								
Valve model									
PN40, two way, cast steel valve								.25S	
PN40, two way, complete stainless steel valve								.25I	
Stem sealing									
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
Valve plug									
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
Pipe connection									
Threaded ISO 7/1 Rp									A
Threaded NPT									C
Size									
1/2"									15
3/4"									20
1"									25
Actuator									
									(1)
Extras									
Full description or additional codes have to be added in case of non-standard combination.									E

ACTUATOR CODES (pneumatic) *			
Group designation	P.	R.	18
Multi-spring, pneumatic linear actuator	P.		
Actuator size			
205	1		
280	3		
340A – From DN 15 to DN 25	5		
Actuator type			
Direct action (air to close)	D		
Reverse action (air to open)	R		
Actuator Construction			
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:

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.

ADCArol 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.

**PNEUMATIC CONTROL VALVES  
PV40**

**(V40 globe valves series with linear actuators PA or EL series)**

**DESCRIPTION**

The PV40 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 PV40 valves have been designed to ensure 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:** Soft sealing.  
Position transmitter.  
Pneumatic pilot positioner.  
Air filter regulator.  
Top-work manual handwheel.
- USE:** Saturated and superheated steam.  
Hot and superheated water.  
Diathermic oil.  
Air, gases and other no corrosive fluids.
- AVAILABLE MODELS:** PV40S and EV40S – steel.  
PV40I and EV40I – stainless steel.
- SIZES:** 1/2" to 2"; DN 15 to DN 50.
- CONNECTION:** Flanged EN 1092-1 PN 40.  
Flanged ASME B16.5 Class 150 or 300.  
Threaded connections on request.

- 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.  
Stainless steel bellows.
- PLUG CHARACT.:** EQP – equal percentage;  
PL – linear;  
PT – on/off.
- PLUG DESIGN:** Contoured;  
Perforated (Low noise, anti-cavitation);  
Microflow.
- PORT:** Full or reduced on request.

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

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

**CONTROL SIGNAL:** 0,2 – 1bar; 0,4 – 1,2 bar; 0,4 – 2 bar.

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

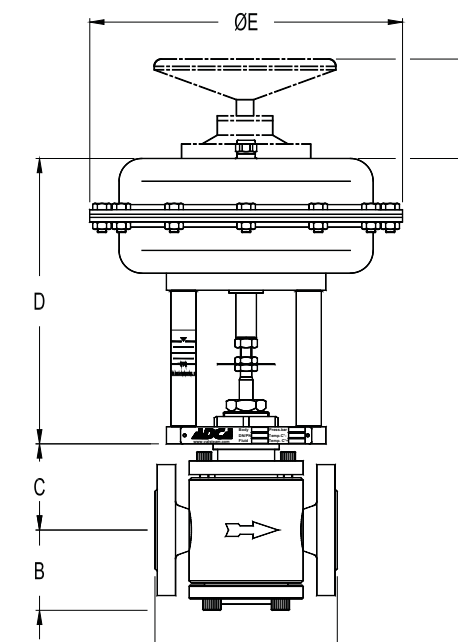
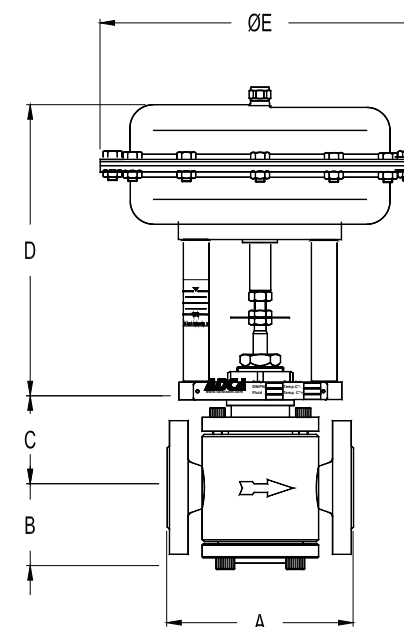
CE MARKING – GROUP 2 (PED – European Directive)	
PN 40	Category
DN 15 to 32	SEP
DN 40 to 50	1 (CE Marked)

BODY LIMITING CONDITIONS				
V40S		V40I		RELATED TEMP.
FLANGED PN 40 *	FLANGED PN 40 *	FLANGED CLASS 300 **	FLANGED CLASS 300 **	
ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	ALLOW. PRESSURE	
40 bar	50 °C	40 bar	39,9 bar	50 °C
33,3 bar	150 °C	37,9 bar	34,4 bar	100 °C
30,4 bar	250 °C	30 bar	26,6 bar	250 °C
27,6 bar	300 °C	27,6 bar	25,2 bar	300 °C

\* Rating acc. to EN 1092-1:2018; \*\* Rating acc. to EN 1759-1:2004.  
Remarks: Maximum temperatures limited to the valve packing selected.  
Valves with soft seal, maximum allow. temp: 200 °C.  
PN 63 and PN 100 designs on request.

**DIMENSIONS (mm)**

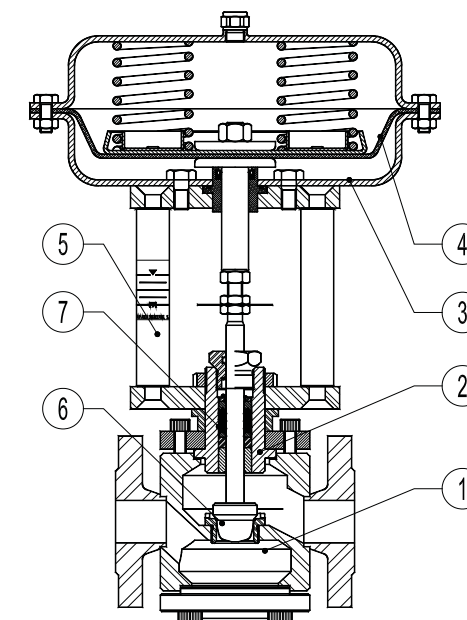
SIZE	A PN40	A CLASS 150	A CLASS 300	B	C - BONNET		
					STANDARD	FINNED	BELLOWS
1/2" – DN 15	150	184	190	71	75	140	267
3/4" – DN 20	150	184	194	71	75	140	267
1" – DN 25	160	184	197	71	75	140	267
1 1/4" – DN 32	180	–	–	75	83	163	285
1 1/2" – DN 40	200	222	235	82	96	163	285
2" – DN 50	230	254	267	97	100	182	298



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.	DESIGNATION	PV40S	PV40I
1	Valve body	S355JR / 1.0045	AISI 316 / 1.4401
2	Bonnet	A351 CF8 / 1.4308	A351 CF8 / 1.4308
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	PTFE/GR; St. steel	PTFE/GR; St. steel
7	* Standard packing	PTFE/GR	PTFE/GR

\* Available spare parts.  
For electric actuator materials and dimensions, consult IS EL 20.00 E.





VALVE STROKE (mm)						
TYPE	SIZES					
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
STROKE	20					

FLOW RATE COEFFICIENTS						
TYPE	SIZES					
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
Kvs	3,8	5,1	9,4	15,4	22,2	40,1

Kvs in m³/h, see IS PV10.00 E – Technical information;  
For conversion Kvs = Cv (US) x 0,855.

MAX. PERM. PRESSURE DROP (bar) – N.C. (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
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	8	6	3,5
	0,4 ÷ 1,2 bar	40	38	20	12	10	5
	0,4 ÷ 2 bar	50	45	25	16	12	6,5
PA340A	0,2 ÷ 1 bar	60	60	50	20	12	10
	0,4 ÷ 1,2 bar	80	80	60	30	16	13
	0,4 ÷ 2 bar	100	100	80	40	20	18
PA435A	0,2 ÷ 1 bar	–	–	–	–	40	25
	0,4 ÷ 1,2 bar	–	–	–	–	48	30
	0,4 ÷ 2 bar	–	–	–	–	55	45

The pressure drop values are referred 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 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.

MAX. PERM. PRESSURE DROP (bar) – N.O. (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
PA205	0,2 ÷ 1 bar	16	16	12	5	–	–
	0,4 ÷ 2 bar	25	24	16	7,5	–	–
PA280	0,2 ÷ 1 bar	–	–	19	10	8	4
	0,4 ÷ 2 bar	–	–	25	20	16	7
PA340A	0,2 ÷ 1 bar	–	–	–	17	16	10
	0,4 ÷ 2 bar	–	–	–	28	26	25

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 V40									
VALVE CODES		P	V	.40S	1	1	A	15	
Actuator type									
Pneumatic actuator		P							
Electric actuator		E							
Group designation									
Globe valve, two way, straight body			V						
Valve model									
PN40 Steel body				.40S					
PN40 Stainless steel body				.40I					
Stem sealing									
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				
Valve plug									
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				
Pipe connection									
Threaded ISO 7 Rp							A		
Flanged EN 1092-1 PN40							N		
Flanged ANSI B16.5 300 lb							V		
Size									
DN 15								15	
DN 20								20	
...									
Actuator									(1)
Extras									
Full description or additional codes have to be added in case of non-standard combination.									E

ACTUATOR CODES (PNEUMATIC) *				
VALVE CODES	P.	1	D	15
Group designation				
Multi-spring, pneumatic linear actuator				
Actuator size				
205		1		
280		3		
340A – From DN 15 to DN 50		5		
435A – From DN 15 to DN 50		7		
Actuator type				
Direct action (air to close)				
Reverse action (air to open)				
Actuator Construction				
Steel construction (painted) – standard				
Stainless steel construction				
Control signal				
0,2 – 1 bar (3/15 psi)				
0,4 – 1,2 bar (6/18 psi)				
0,4 – 2 bar (6/30 psi)				

→ To be introduced on ".X.", if supplied in combination with the valve.

Example:

V40S valve model, EQP soft plug, PTFE/GR stem sealing, EN flanges, DN 15, complete with reverse action actuator signal 0,4 – 1,2 bar, size 340A steel:

Code: PV.40S11N50.5R18

REMARKS:

(1) – Indicate actuator.

(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 actuator ordering codes, consult our technical department.

**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.
- Class VI shut-off with PTFE/GR soft sealing up to 200 °C.
- Stem guided (up to DN 50) and post guided (from DN 65 to DN 100).
- 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:**

- PV15G – SG iron.
- PV15S – carbon steel.
- PV15i – stainless steel.

**SIZES:**

DN 15 to DN 100.

**CONNECTIONS:**

- PV15G – Flanged EN 1092-2 PN 16.
- PV15S and PV15i – Flanged EN 1092-1 PN 16 or PN 40.



**CE MARKING – GROUP 2 (PED – European Directive)**

PN 16	PN 40	Category
DN 15 to 50	DN 15 to 32	SEP
DN 65 to 100	DN 40 to 100	1 (CE marked)

**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 °C/50 °C	16 bar	-10 °C/50 °C	40 bar	-10 °C/50 °C	16 bar	-10 °C/50 °C	40 bar	-10 °C/50 °C
14,7 bar	200 °C	13,3 bar	200 °C	33,3 bar	200 °C	13,4 bar	200 °C	33,7 bar	200 °C
13,9 bar	250 °C	12,1 bar	250 °C	27,6 bar	300 °C	12,7 bar	250 °C	29,7 bar	300 °C
12,8 bar	300 °C	11 bar	300 °C	25,7 bar	350 °C	11,8 bar	300 °C	28,5 bar	350 °C
11,2 bar	350 °C	10,2 bar	350 °C	23,8 bar	400 °C	11,4 bar	350 °C	27,4 bar	400 °C

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

**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								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
<b>Kvs</b>	5,1	6,3	10	16	25	40	63	100	160
<b>SEAT Ø (mm)</b>	19,2	19,2	25	32	38	48	65	76	96
<b>STROKE (mm)</b>	5	8	8	10	10	12,5	20	20	25

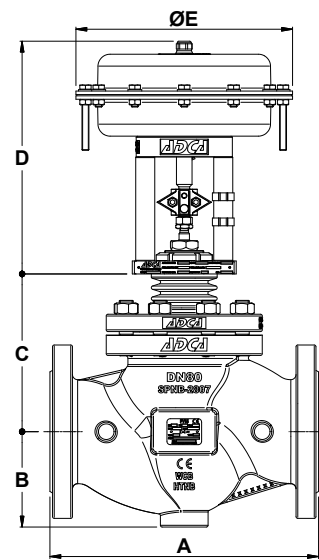
For conversion Kvs = Cv (US) x 0,865.

**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.
DN 15	PA10 (100cm²)	40	17,4	32	40	40	40	40	4,2	6	1,4	6
DN 20	PA10 (100cm²)	40	14,5	29,1	40	40	40	40				
DN 25	PA10 (100cm²)	40	8,5	17,1	31,3	40	40	40				
DN 32	PA10 (100cm²)	27,1	4,4	9,7	18,4	27,1	35,8	40				
DN 40	PA10 (100cm²)	17,9	3,1	6,8	13	19,2	25,3	31,5				
DN 50	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				
DN 65	PA25 (250cm²)	10,3	0,8	4	9,2	14,5	19,8	25,1				
	PA40 (400cm²)	22,1	-	-	-	-	-	-				
DN 80	PA25 (250cm²)	7,5	0,6	2,9	6,7	10,6	14,5	18,3				
	PA40 (400cm²)	16,2	-	-	-	-	-	-				
DN100	PA40 (400cm²)	9	1,1	3,5	7,3	11,2	-	-				4

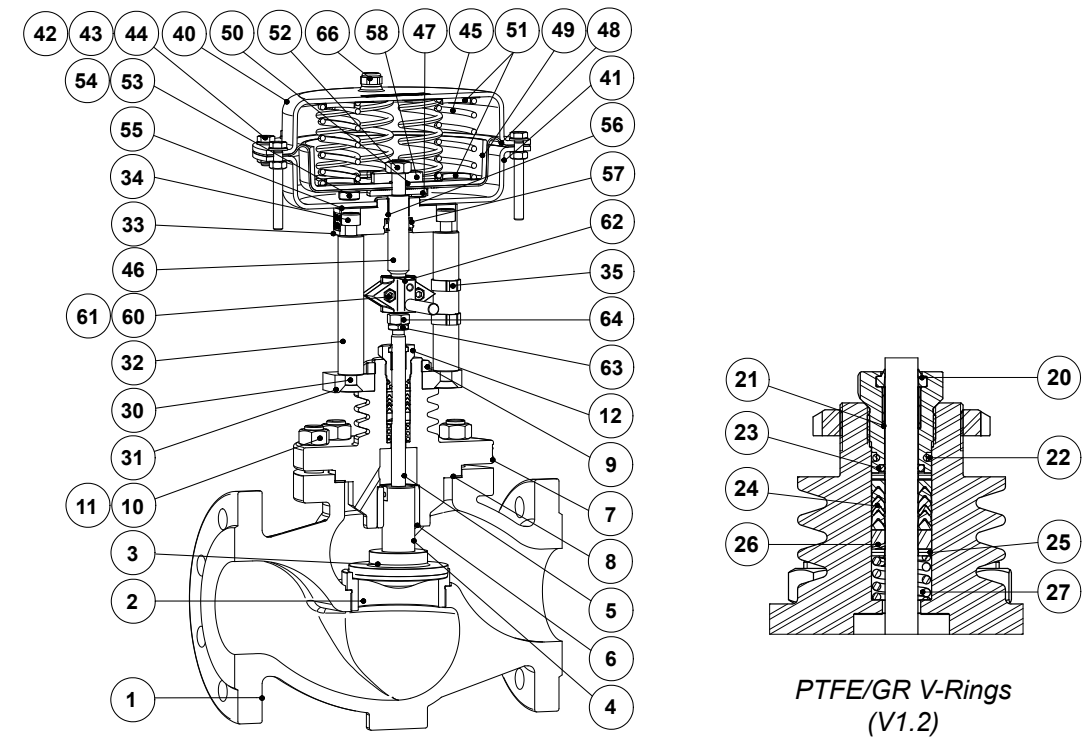


ACCESSORIES		
AIR FILTER REGULATOR AND SOLENOID VALVE	INDUCTIVE LIMIT SWITCH BOX	MECHANICAL LIMIT SWITCHES



DIMENSIONS (mm)												
SIZE	A	B	C	PA10 *			PA25 *			PA40 *		
				D	ØE	WEIGHT (kg)	D	ØE	WEIGHT (kg)	D	ØE	WEIGHT (kg)
DN 15	130	52	104	267	170	11,5	-	-	-	-	-	-
DN 20	150	53	104	267	170	12,3	-	-	-	-	-	-
DN 25	160	58	109	267	170	13,1	-	-	-	-	-	-
DN 32	180	70	109	267	170	16,3	-	-	-	-	-	-
DN 40	200	75	113	267	170	18,8	-	-	-	-	-	-
DN 50	230	85	125	267	170	22,4	270	250	26,1	-	-	-
DN 65	290	100	176	-	-	-	270	250	40,3	334	300	48,9
DN 80	310	110	182	-	-	-	270	250	46,6	334	300	55,2
DN 100	350	130	194	-	-	-	-	-	-	334	300	66,8

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



MATERIALS		
POS. N°	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; 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
8	Gasket	Stainless steel / Graphite
9	Lock nut	A351 CF8 / 1.4308
10	Nuts (PV15G and PV15S)	EN 10269 steel
	Nuts (PV15i)	Stainless steel A2-70
11	Studs (PV15G and PV15S)	EN 10269 steel
	Studs (PV15i)	Stainless steel A2-70
12	Packing nut	AISI 303 / 1.4305
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

\* Available spare parts.



MATERIALS		
POS. N°	DESIGNATION	MATERIAL
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	G	U	1	3	10	S	R	X	L	15	
Pneumatic on/off globe valve, two-way, straight body	PV15												
<b>Valve series</b>													
Series 1		1											
<b>Body material</b>													
GJS-400-15 / 0.7040 SG iron			G										
A216 WCB / 1.0619 carbon steel			S										
A351 CF8M / 1.4408 stainless steel			I										
<b>Flow direction</b>													
Flow under the plug				U									
<b>Stem sealing</b>													
PTFE/GR V-Rings (V1.2)					1								
<b>Valve sealing</b>													
Soft sealed with PTFE/GR (class VI)						3							
<b>Actuator model</b>													
PA10 (100 cm²)							10						
PA25 (250 cm²)							25						
PA40 (400 cm²)							40						
<b>Actuator construction</b>													
Mild steel construction (standard)								S					
Stainless steel construction								I					
<b>Actuator direction of action</b>													
Air to open (stem extends by spring force)									R				
Air to close (stem retracts by spring force)									D				
<b>Options</b>													
None										X			
Top mounted handwheel a)										H			
<b>Pipe connection</b>													
Flanged EN 1092-1/-2 PN 16											L		
Flanged EN 1092-1 PN 40											N		
<b>Size</b>													
DN 15												15	
DN 20												20	
...													
<b>Special valves / Extras</b>													
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).



**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.

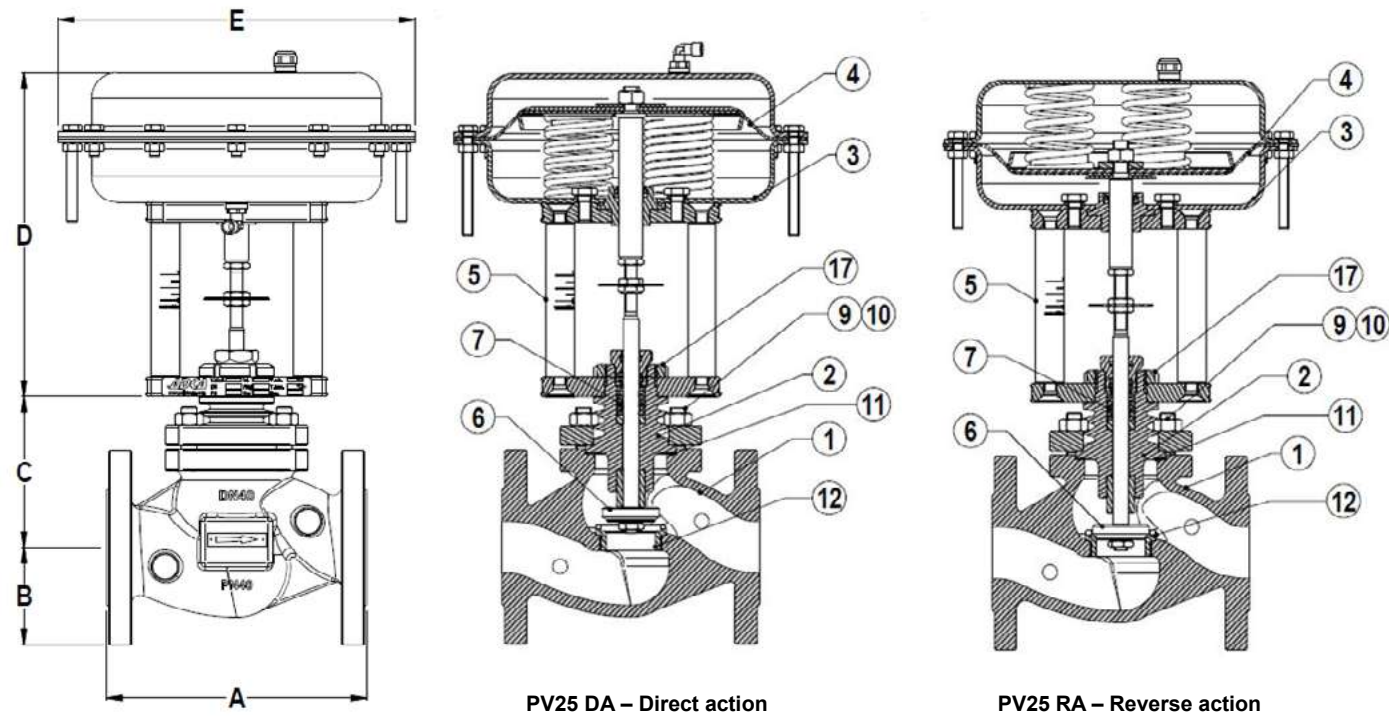
- MAX. AIR SUPPLY:** 3,5 bar.
- AMBIENT TEMP.:** -20 °C to 70 °C
- BONNET:** Standard – up to 220 °C;  
Extended finned – above 220 °C.
- STEM SEALING:** PTFE/GR V-Rings – up to 220 °C.  
Graphite – up to 300 °C.
- PLUG DESIGN:** PT – On-off.
- PORT:** Full port.

**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.	
Actuator type (1)									
Pneumatic actuator	P								
Electric actuator	E								
Group designation									
Globe valve, two-way, straight body		V							
Valve model									
GJS-400-15 body, stainless steel trim			.25G						
CF8M body, stainless steel trim			.25I						
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				
PT (on-off) – Metal AISI 316 / 1.4401					10				
Pipe connection									
Flanged EN 1092 PN16						L			
Size									
DN 15									15
DN 20									20
...									
Actuator									(1)
Extras									
Full description or additional codes have to be added in case of non-standard combination									E

ACTUATOR CODES (pneumatic) *	P.	5	R	15
Group designation				
Multi-spring, pneumatic linear actuator	P.			
Actuator size				
205		1		
280		3		
340A – From DN 15 to DN 50		5		
340B – From DN 65 to DN 100		6		
Actuator type				
Direct action (air to close)			D	
Reverse action (air to open)			R	
Actuator Construction				
Steel construction (painted) – standard				(2)
Stainless steel construction				I
Control signal				
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.

ADCA<sup>Trol</sup> 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

**PNEUMATIC ON/OFF GLOBE VALVES  
PPV15  
(EN)**

**DESCRIPTION**

The ADCA<sup>Trol</sup> PPV15 is a series of single seated, two-way pneumatic on/off globe valves with piston 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.  
Robust and compact piston actuator with 360° rotation.  
Ambient temperature from -10 °C to 80 °C.

**OPTIONS AND ACCESSORIES:**

M26 x 1,5 threaded connection on actuator.  
Solenoid valves and limit switches.

**USE:**

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

**AVAILABLE MODELS:**

PPV15G – SG iron.  
PPV15S – carbon steel.  
PPV15i – stainless steel.

**SIZES:**

DN 15 to DN 50.

**CONNECTIONS:**

PPV15G – Flanged EN 1092-2 PN 16.  
PPV15S and PPV15i – Flanged EN 1092-1 PN 16 or PN 40.



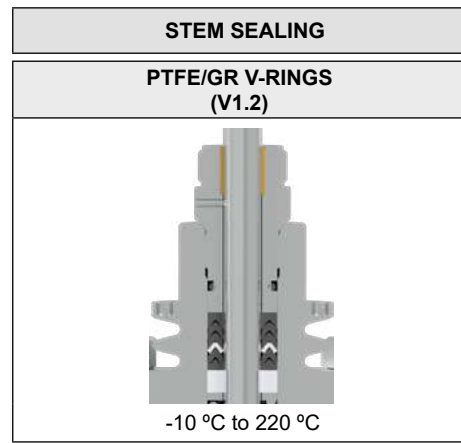
**CE MARKING – GROUP 2 (PED – European Directive)**

PN 16	PN 40	Category
DN 15 to 50	DN 15 to 32	SEP
–	DN 40 to 50	1 (CE marked)

**BODY LIMITING CONDITIONS**

PPV15G **		PPV15S *				PPV15i *			
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 °C/50 °C	16 bar	-10 °C/50 °C	40 bar	-10 °C/50 °C	16 bar	-10 °C/50 °C	40 bar	-10 °C/50 °C
14,7 bar	200 °C	13,3 bar	200 °C	33,3 bar	200 °C	13,4 bar	200 °C	33,7 bar	200 °C
13,9 bar	250 °C	12,1 bar	250 °C	27,6 bar	300 °C	12,7 bar	250 °C	29,7 bar	300 °C
12,8 bar	300 °C	11 bar	300 °C	25,7 bar	350 °C	11,8 bar	300 °C	28,5 bar	350 °C
11,2 bar	350 °C	10,2 bar	350 °C	23,8 bar	400 °C	11,4 bar	350 °C	27,4 bar	400 °C

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



**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

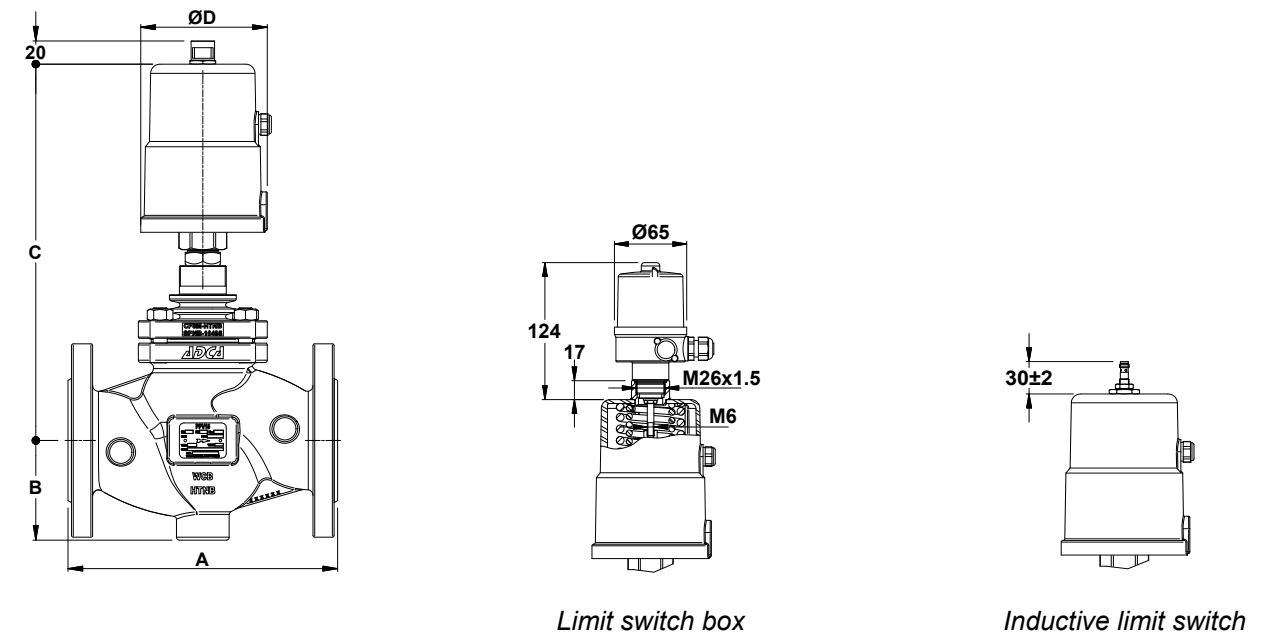
**FLOW RATE COEFFICIENTS (m³/h)**

	SIZES					
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
Kvs	5,1	6,3	10	16	25	40
SEAT Ø (mm)	19,2	19,2	25	32	38	48
STROKE (mm)	5	8	8	10	10	12,5

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

**PPV15 – PPI SERIES ACTUATORS – FTO, UNBALANCED TRIM, SOFT SEALING (CLASS VI)**

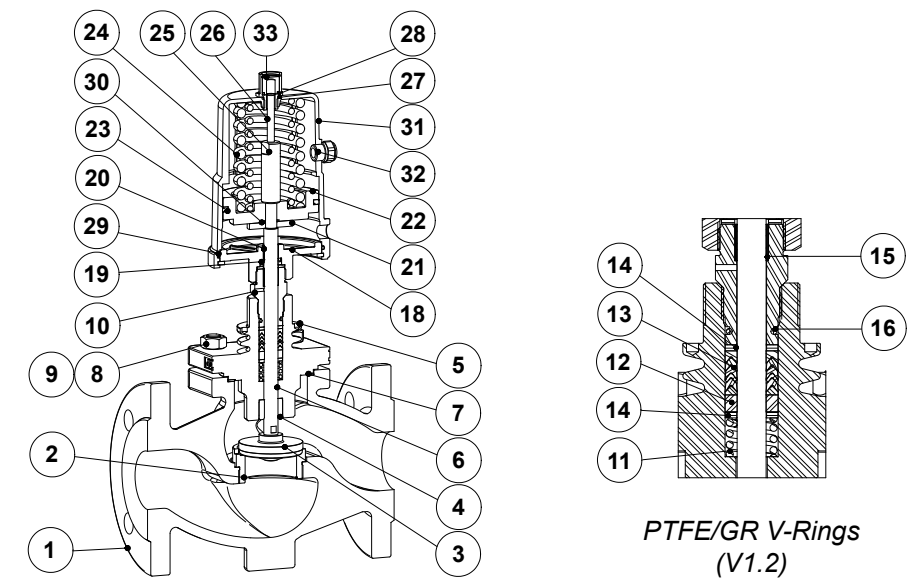
VALVE SIZE	ACTUATOR MODEL	MAX. PERMISSIBLE PRESSURE DROP (bar)										AIR SUPPLY PRESSURE (bar)			
		AIR TO OPEN (stem extends by spring force)	AIR TO CLOSE (stem retracts by spring force)								AIR TO OPEN (stem extends by spring force)	AIR TO CLOSE (stem retracts by spring force)	MIN.	MAX.	
			AIR SUPPLY PRESSURE (bar)												
			1	2	3	4	5	6	7	8					
DN 15	PPI63 (30cm²)	22	2,5	9,7	17	24,2	31,5	38,7	46	53,2	5	8	1	8	
DN 20	PPI63 (30cm²)	22	2,5	9,7	17	24,2	31,5	38,7	46	53,2	5				
DN 25	PPI63 (30cm²)	12	1,4	5,6	9,9	14,2	18,5	22,8	27	31,3	5				
	PPI90 (60cm²)	28	3,1	11,6	20,2	28,8	37,3	45,9	54,4	63	5,5				
DN 32	PPI63 (30cm²)	8	0,8	3,4	6	8,6	11,2	13,8	16,4	19,1	5				
	PPI90 (60cm²)	21	1,8	7	12,3	17,5	22,7	27,9	33,2	38,4	5,5				
DN 40	PPI90 (60cm²)	15	1,3	5	8,7	12,4	16,1	19,8	23,5	27,2	5,5				
DN 50	PPI90 (60cm²)	9	0,8	3,1	5,4	7,7	10	12,4	14,7	17	6				



**DIMENSIONS (mm)**

SIZE	A	B	PPI63			PPI90		
			C	ØD	WEIGHT (kg)	C	ØD	WEIGHT (kg)
DN 15	130	52	246	75	6,4	–	–	–
DN 20	150	53	246	75	7,2	–	–	–
DN 25	160	58	251	75	7,6	306	106	9,6
DN 32	180	70	251	75	10,5	304	106	12,7
DN 40	200	75	–	–	–	309	106	15,3
DN 50	230	85	–	–	–	321	106	18,9

**MATERIALS**





MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body (PPV15G)	GJS-400-15 / 0.7040
	Valve body (PPV15S)	A216 WCB / 1.0619
	Valve body (PPV15i)	A351 CF8M / 1.4408
2	* Seat	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404; Graphite filled PTFE
4	Stem guide	Bronze CB1
5	Bonnet (PPV15G and PPV15S)	A351 CF8M / 1.4408; A216 WCB / 1.0619
	Bonnet (PPV15i)	A351 CF8M / 1.4408
6	* Stem	AISI 316L / 1.4404
7	* Gasket	Stainless steel / Graphite
8	Nuts (PPV15G and PPV15S)	EN 10269 steel
	Nuts (PPV15i)	Stainless steel A2-70
9	Studs (PPV15G and PPV15S)	EN 10269 steel
	Studs (PPV15i)	Stainless steel A2-70
10	* Packing nut	AISI 303 / 1.4305
11	Spring	AISI 302 / 1.4310
12	* Stem guide	Stainless steel filled PTFE
13	* Chevron packing set	PTFE; Graphite filled PTFE
14	Washer	AISI 304 / 1.4301
15	* Plain bearing	Bronze / PTFE
16	* O-ring	EPDM
18	Actuator body	A351 CF8M / 1.4408
19	* O-ring	NBR
20	* Plain bearing	Bronze / PTFE
21	Plate	AISI 304 / 1.4301
22	Piston	Alluminium
23	* O-ring	NBR
24	Spring	AISI 302 / 1.4310
25	Rod	Alluminium
26	Indicator rod	Plastic
27	* O-ring	NBR
28	* O-ring	NBR
29	* O-ring	NBR
30	* O-ring	NBR
31	Actuator cover	A351 CF8 / 1.4308
32	Silencer	Brass; Plastic
33	Visual position indicator	A351 CF8 / 1.4308; Acrylic

\* Available spare parts.



ORDERING CODES PPV15													
Valve model	PPV	1	G	U	1	3	06	I	R	X	L	15	
Pneumatic on/off globe valve, two-way, straight body	PPV												
<b>Valve series</b>													
Series 1		1											
<b>Body material</b>													
GJS-400-15 / 0.7040 SG iron			G										
A216 WCB / 1.0619 carbon steel			S										
A351 CF8M / 1.4408 stainless steel			I										
<b>Flow direction</b>													
Flow under the plug				U									
<b>Stem sealing</b>													
PTFE/GR V-Rings (V1.2)					1								
<b>Valve sealing</b>													
Soft sealed with PTFE/GR (class VI)						3							
<b>Actuator model</b>													
PPI63 (30 cm²)							06						
PPI90 (60 cm²)							09						
<b>Actuator construction</b>													
Stainless steel construction								I					
<b>Actuator direction of action</b>													
Air to open (stem extends by spring force)									R				
Air to close (stem retracts by spring force)									D				
<b>Options</b>													
None										X			
M26 x 1,5 threaded connection on actuator a)										T			
<b>Pipe connection</b>													
Flanged EN 1092-1/-2 PN 16											L		
Flanged EN 1092-1 PN 40											N		
<b>Size</b>													
DN 15												15	
DN 20												20	
...													
<b>Special valves / Extras</b>													
Full description or additional codes have to be added in case of a non-standard combination													E

a) Required for the assembly of top mounted limit switch box.

**PNEUMATIC ON/OFF ANGLE SEAT VALVES  
PAV21**

**DESCRIPTION**

The ADCATrol PAV21 is a series of pneumatic angle seat shut-off valves with piston actuators. These valves are suitable for use with the most common process fluids such as steam, water, superheated water, air, neutral gases and oils. The PAV21 is recommended for applications where flexibility and affordability are important requirements.

**MAIN FEATURES**

- Corrosion resistant stainless steel body.
- Easy to service.
- Compact and cost-effective with high flow capacity.
- Self-centering plug with Class VI shut-off and PTFE/GR soft sealing up to 200 °C.
- Robust and compact piston actuator with 360° rotation.
- Ambient temperature from -10 °C to 80 °C.

**OPTIONS AND ACCESSORIES:**

M26 x 1,5 threaded connection on actuator.  
Solenoid valves and limit switches.

**USE:**

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

**AVAILABLE MODELS:**

PAV21.

**SIZES:**

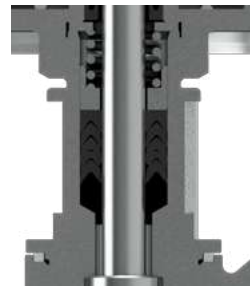
1/2" to 2".


**CONNECTIONS:**

Female threaded ISO 7 Rp or NPT.



CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	Category
1/2" to 2"	SEP

STEM SEALING
PTFE/GR V-RINGS

-10 °C to 200 °C

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

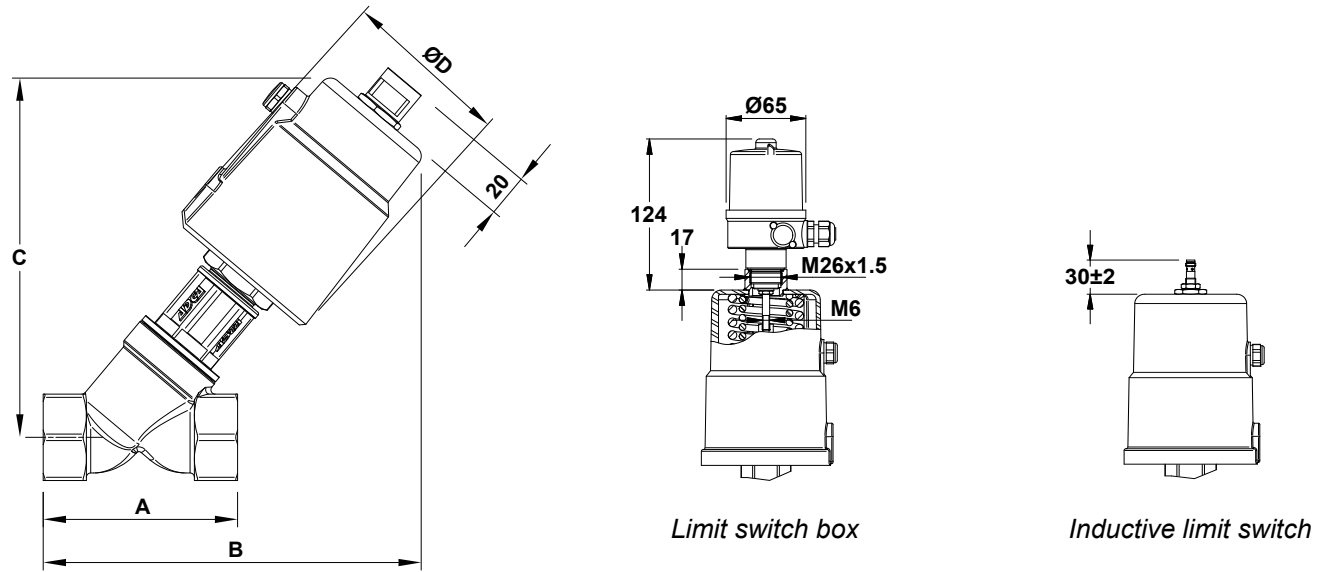
FLOW RATE COEFFICIENTS (m³/h)						
	SIZES					
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
<b>Kvs</b>	4,8	9,5	18	23,2	32,7	52,6
<b>SEAT Ø (mm)</b>	13	18	24	31	35	45

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

PAV21 – PPI SERIES ACTUATORS – FTO, UNBALANCED TRIM, SOFT SEALING (CLASS VI)														
VALVE SIZE	ACTUATOR MODEL	MAX. PERMISSIBLE PRESSURE DROP (bar)										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)											
										MIN.	MAX.	MIN.	MAX.	
1/2"	PPI63 (30cm²)	16	6,2	16	16	16	16	16	16	16	5	8	1	8
3/4"	PPI63 (30cm²)	16	3,1	11,4	16	16	16	16	16	16				
1"	PPI63 (30cm²)	14	1,7	6,3	10,9	15,6	16	16	16	16				
1 1/4"	PPI90 (60cm²)	16	2	7,5	13,1	16	16	16	16	16				
1 1/2"	PPI90 (60cm²)	16	1,5	5,9	10,2	14,6	16	16	16	16				
2"	PPI90 (60cm²)	10	0,9	3,5	6,1	8,8	11,4	14,1	16	16				

ACCESSORIES		
SOLENOID VALVE	INDUCTIVE LIMIT SWITCH	LIMIT SWITCH BOX
		



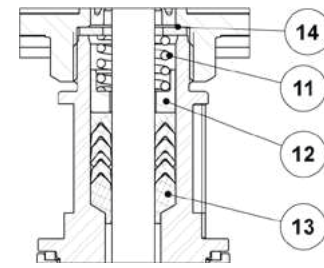
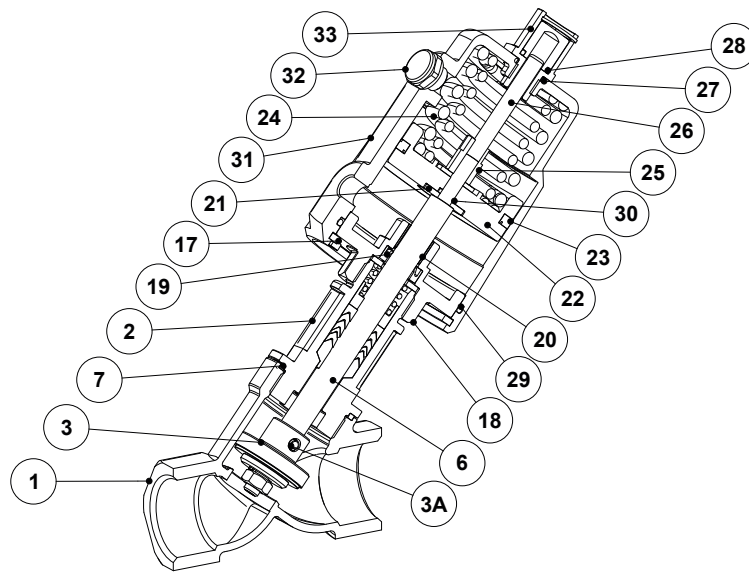


Limit switch box

Inductive limit switch

DIMENSIONS (mm)					
SIZE	A	B	C	ØD	WEIGHT (kg)
1/2"	68	174	155	75	1,4
3/4"	75	182	158	75	1,5
1"	90	190	166	75	1,7
1 1/4"	116	261	227	110	3,3
1 1/2"	116	265	229	110	3,5
2"	138	282	238	110	4,7

**MATERIALS**



PTFE/GR V-Rings

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Valve body	A351 CF8M / 1.4408
2	Bonnet	A351 CF8M / 1.4408
3	* Valve plug	AISI 316L / 1.4404; Graphite filled PTFE
3A	* Pin	Bronze CB1
6	* Stem	AISI 316L / 1.4404
7	* Gasket	PTFE
11	Spring	AISI 302 / 1.4310
12	* Spring guide	AISI 304 / 1.4301
13	* Chevron packing set	Graphite filled PTFE
14	Washer	AISI 304 / 1.4301
17	Circlip	AISI 431 / 1.4057
18	Actuator body	A351 CF8M / 1.4408
19	* Seal ring	NBR
20	Plain bearing	Bronze / PTFE
21	Plate	AISI 304 / 1.4301
22	Piston	Aluminium
23	* O-ring	NBR
24	* Springs	AISI 302 / 1.4310
25	Rod	Aluminium
26	Indicator rod	Plastic
27	O-ring	NBR
28	O-ring	NBR
29	* O-ring	NBR
30	* O-ring	NBR
31	Actuator cover	A351 CF8 / 1.4308
32	Silencer	Brass; Plastic
33	Visual position indicator	A351 CF8 / 1.4308; Acrylic

\* Available spare parts.



ORDERING CODES PAV21								
<b>Valve model</b>	PAV.21	1	A	15	B	.63	.R	
Pneumatic on/off angle seat valve	PAV.21							
<b>Valve sealing</b>								
Soft sealed with PTFE/GR (class VI)		1						
<b>Pipe connection</b>								
Female threaded ISO 7 Rp			A					
Female threaded NPT			C					
<b>Size</b>								
1/2"				15				
3/4"				20				
...								
<b>Flow direction</b>								
Flow under the plug					B			
<b>Actuator model</b>								
PPI63 (30 cm <sup>2</sup> )						.63		
PPI90 (60 cm <sup>2</sup> )						.90		
<b>Actuator direction of action</b>								
Air to open (stem extends by spring force)							.R	
Air to close (stem retracts by spring force)							.D	
<b>Special valves / Extras</b>								
Full description or additional codes have to be added in case of non-standard combination.								E