

## 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.

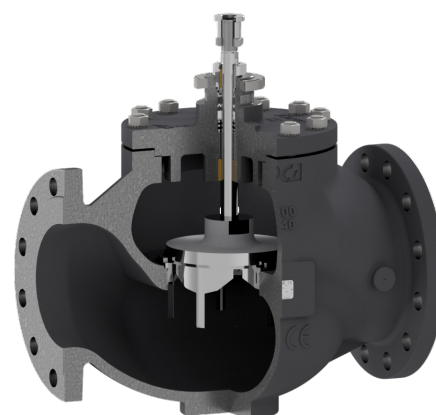
**USE:** Saturated and superheated steam.  
Hot and superheated water.  
Air, gases and others.

#### 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**


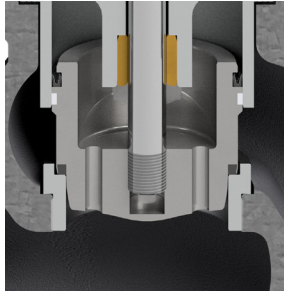
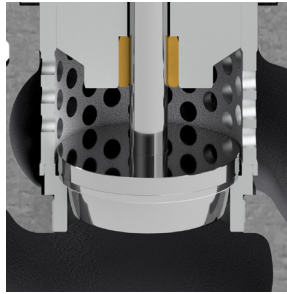
V25/2G – PN 16 **		V25/2S – PN 16 *		V25/2i – PN 16 *		V25/2S – PN 40 *		V25/2i – PN 40 *	
ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.	ALLOW. PRESSURE	RELATED TEMP.
16	-10 °C / 50 °C	16	-10 °C / 50 °C	16	-10 °C / 50 °C	40	-10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

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

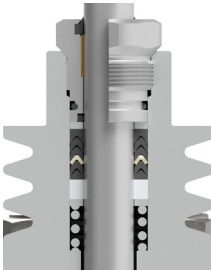
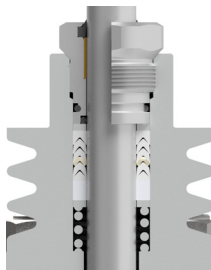
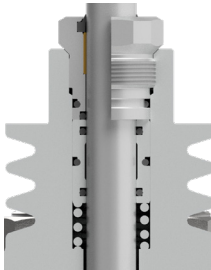
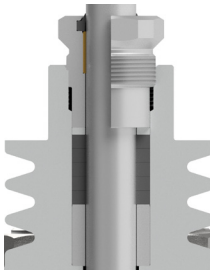
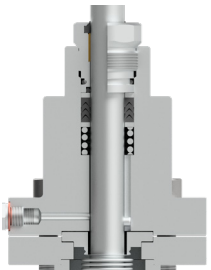
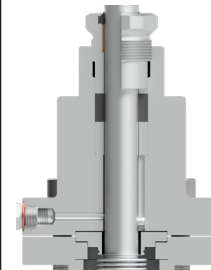
**BONNET DESIGN**

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

**TRIM DESIGN**

UNBALANCED TRIM	BALANCED TRIM	LOW NOISE (FD1)
		

**STEM SEALING**

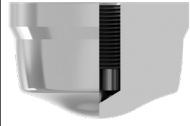
PTFE/GR V-RINGS (V1.2)	PTFE V-RINGS (V2.2)	EPDM (EP1)	GRAPHITE (G1)	BELLOWS	
				(BV1)	(BG1)
 -10 °C to 220 °C	 -10 °C to 180 °C	 -10 °C to 150 °C *	 -10 °C to 400 °C	 - 60 °C to 220 °C **	 - 60 °C to 400 °C **

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

\*\* Maximum operating pressure: 25 bar.

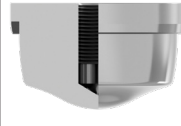
PLUG DESIGN

PARABOLIC



**Sealing:** Metal to metal  
**Characteristic:** Equal percentage (EQP) or linear (PL)  
**Flow direction:** From below  
**Rangeability:** 50:1 (EQP) or 30:1 (PL)  
**Leakage:** Class IV or Class V, acc. to IEC 60534-4

PARABOLIC (SOFT SEALING)



**Sealing:** PTFE/GR  
**Characteristic:** Equal percentage (EQP) or linear (PL)  
**Flow direction:** From below  
**Rangeability:** 50:1 (EQP) or 30:1 (PL)  
**Leakage:** Class VI, acc. to IEC 60534-4  
**Max. temp.:** 200 °C

PERFORATED



**Sealing:** Metal to metal  
**Characteristic:** Equal percentage (EQP) or linear (PL)  
**Flow direction:** From above (liquids) or from below (gases)  
**Rangeability:** 40:1 (EQP) or 30:1 (PL)  
**Leakage:** Class IV, acc. to IEC 60534-4

PARABOLIC MICROFLOW



**Sealing:** Metal to metal  
**Characteristic:** Linear (PL)  
**Flow direction:** From below  
**Rangeability:** 30:1  
**Leakage:** Class IV or Class V, acc. to IEC 60534-4

V-PORT GUIDED



**Sealing:** Metal to metal  
**Characteristic:** Equal percentage (EQP) or linear (PL)  
**Flow direction:** From below  
**Rangeability:** 30:1  
**Leakage:** Class IV or Class V, acc. to IEC 60534-4

V-PORT GUIDED (SOFT SEALING)



**Sealing:** Metal to metal  
**Characteristic:** Equal percentage (EQP) or linear (PL)  
**Flow direction:** From below  
**Rangeability:** 30:1  
**Leakage:** Class VI, acc. to IEC 60534-4

**FLOW RATE COEFFICIENTS – PARABOLIC AND V-PORT GUIDED PL AND EQP PLUGS**

SIZE	Kvs (m³/h)																				
	0,1 *	0,16 *	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.

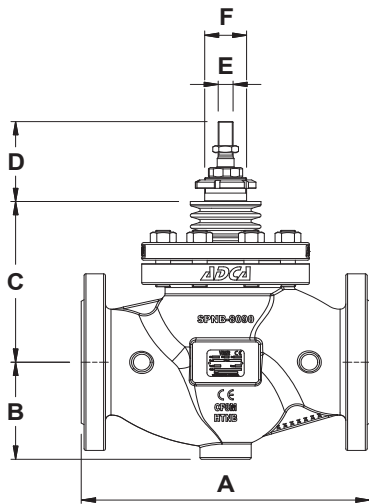
**FLOW RATE COEFFICIENTS – PERFORATED PL PLUGS**

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

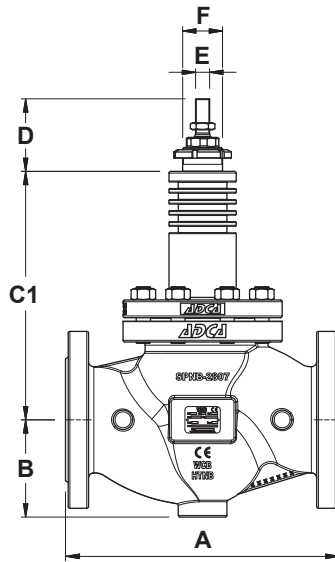
**FLOW RATE COEFFICIENTS – PERFORATED EQP PLUGS**

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

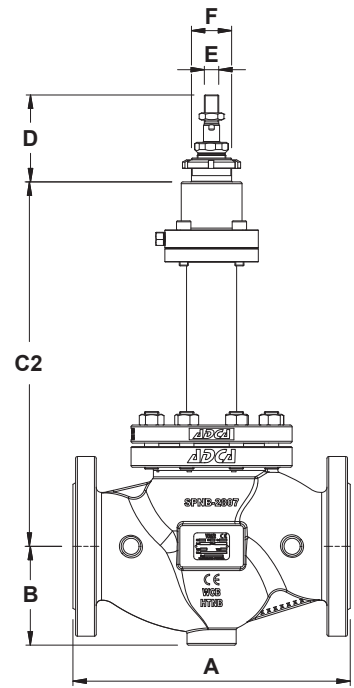
For conversion Kvs = Cv (US) x 0,865.



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	215	276	282	314	305	320	400
C2	288	288	288	288	288	292	382	388	390	590	590	–
D	77	77	77	77	77	77	96	96	96	110	110	135
E	M10 x 1						M16 x 1,5					M27 x 1,5
F	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.

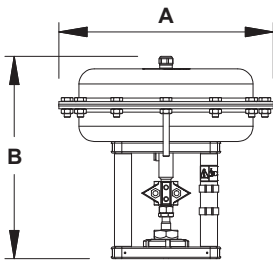
**WEIGHTS (kg)**

	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	13,5	17,3	32,2	38,5	49,4	80,9	107,3	237,6
BELLOWS	7,8	8,7	9,5	12,6	15,3	18,8	32,6	38,7	49,9	85,9	112,3	–

**MAX. PERMISSIBLE ACTUATING FORCES (kN)**

	SIZE											
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	125	150	200
MAX. FORCE	12						32,5			40,1		89,7

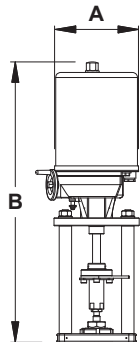
### PA SERIES PNEUMATIC ACTUATORS



DIMENSIONS (mm)								
DIMENSION	PA10	PA206	PA281	PA341	PA436	PA80	PA80D	PA80T
<b>A</b>	170	209	275	336	430	405	405	405
<b>B</b>	251	236	243	323	291 / 311 *	505 / 515 / 545	741 / 771	967
<b>WEIGHT (kg)</b>	6,3	6,2	9,6	14,3	24,4 / 28 *	50,4 / 55,4 / 60	108 / 112	166

\* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.  
For more information, please consult IS 3.05 – PA Linear pneumatic actuators.

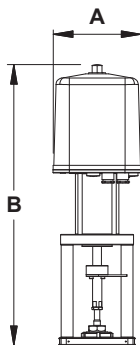
### EL SERIES ELECTRIC ACTUATORS



DIMENSIONS (mm)				
DIMENSION	EL12	EL20 – EL45	EL80 – EL120	EL250
<b>A</b>	129	148	188	216
<b>B</b>	333	485	587	683
<b>WEIGHT (kg)</b>	2,1	8	13	19

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

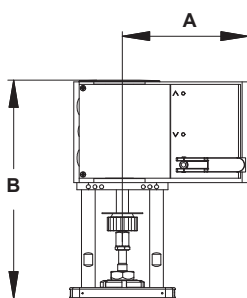
### ELR SERIES ELECTRIC ACTUATORS



DIMENSIONS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
<b>A</b>	162	162	162
<b>B</b>	518 / 555 *	536 / 573 *	557 / 593 *
<b>WEIGHT (kg)</b>	8,7	9,3	10

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

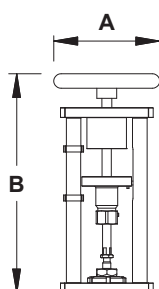
### AV SERIES ELECTRIC ACTUATORS



DIMENSIONS (mm)	
DIMENSION	AVM234S – AVF234S
<b>A</b>	166
<b>B</b>	289
<b>WEIGHT (kg)</b>	4,1

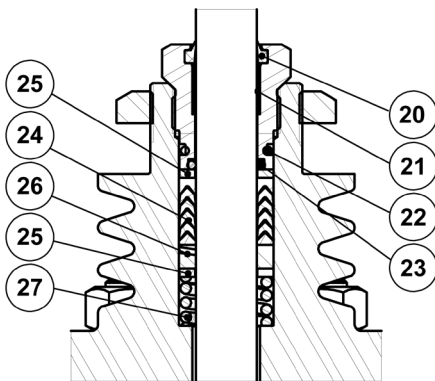
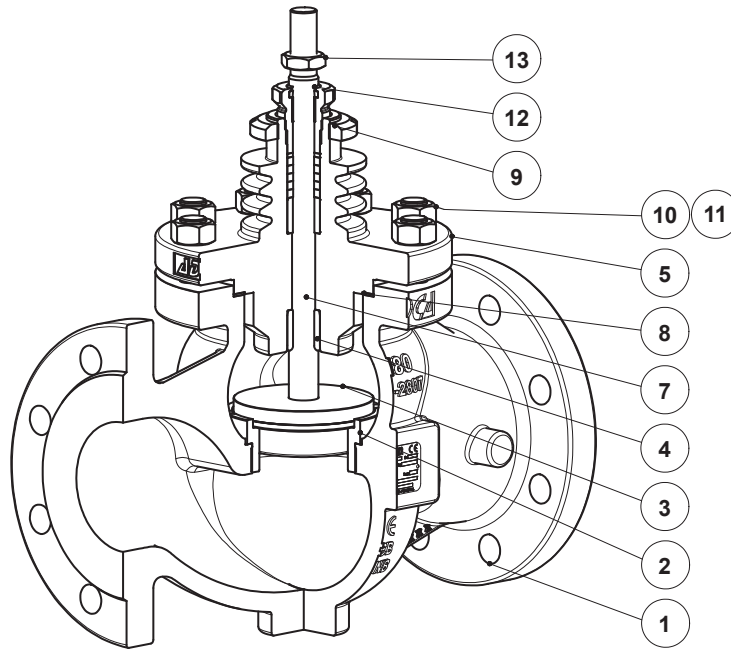
For more information, please consult IS 3.74 – AVM234S-AVF234S Linear electric actuators.

### MANUAL OPERATION HANDWHEEL

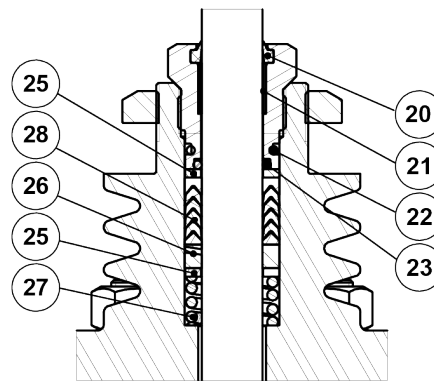


DIMENSIONS (mm)	
DIMENSION	MAH
<b>A</b>	160
<b>B</b>	331
<b>WEIGHT (kg)</b>	5,6

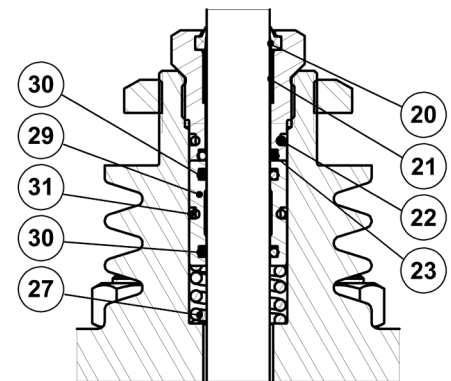
**MATERIALS**



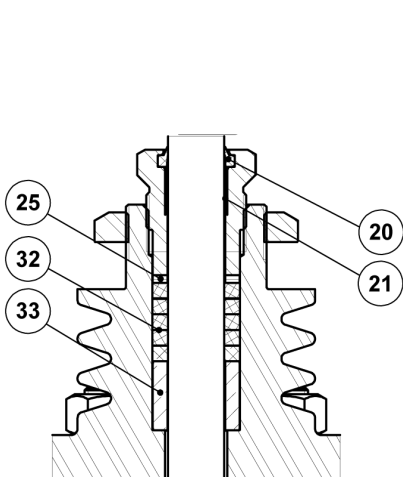
**PTFE/GR V-RINGS  
 (V1.2)**



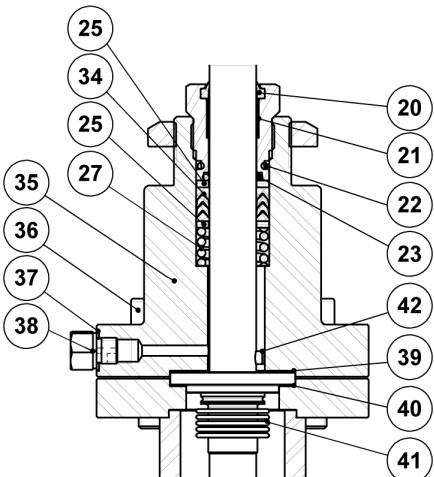
**PTFE V-RINGS  
 (V2.2)**



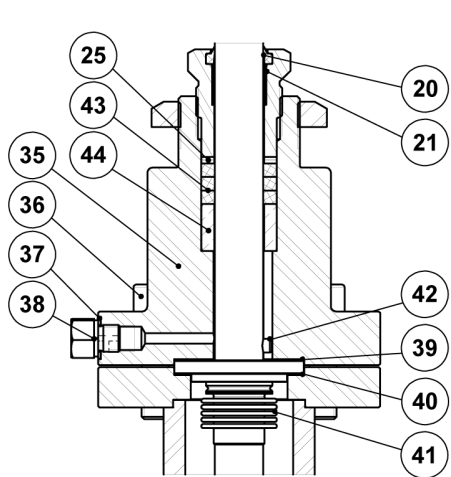
**EPDM  
 (EP1)**



**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)	Zinc plated steel
	Nuts (V25/2i)	Stainless steel A2-70
11	Studs (V25/2G and V25/2S)	34CrNiMo6 / 1.6582
	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
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	AISI 316L / 1.4404
36	Bolts	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)															
<b>Valve model</b>	V2	2	G	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>															
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										
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 sizes DN 125 to DN 200)								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 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															
<b>Kvs</b>	0,1	0,16	0,5	1	1,7	2,1	2,5 *	2,7	4	6,3	10	16	25	36 *	40
<b>Code</b>	M3	M2	M1	R4	R3	R2	PA	R1	FD	FE	FF	FG	FH	PB	FI
<b>Kvs</b>	50 *	63	80 *	100	120 *	160	180 *	240	250 *	300 *	360 *	370	450 *	630	-
<b>Code</b>	PC	FJ	PD	FL	PE	FM	PF	FN	PG	PH	PI	FO	PJ	FP	-

\* Only available with perforated plug design.