

## THREE-WAY GLOBE CONTROL VALVES V253

### DESCRIPTION

The ADCATrol V253 is a series of three-way globe control valves designed to ensure accurate control in mixing or diverting general service applications.

These valves can be assembled with pneumatic, hydraulic or electric actuators and used with the most common process fluids such as water, superheated water, thermal oil, steam, air, gas and other non corrosive fluids.

### MAIN FEATURES

Compact and cost-effective design.  
Mixing and diverting versions.

### OPTIONS AND

**ACCESSORIES:** Various stem sealing options including bellows sealed versions.

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

### AVAILABLE

**MODELS:** V253G – SG iron.

**SIZES:** DN 15 to DN 150.

**CONNECTIONS:** Flanged EN 1092-2 PN 16 or PN 25.  
Standard PN 16 DN 65 flanges are supplied with 4 holes. 8 holes, according to EN 1092-2, on request.

### STEM

**SEALING:** PTFE/GR V-Rings – up to 220 °C.  
Graphite packing – up to 350 °C.  
Stainless steel bellows – up to 350 °C.



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

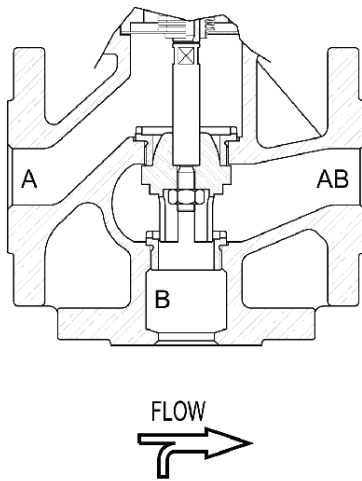
PN 16	PN 25	Category
DN 15 to 50	DN 15 to 40	SEP
DN 65 to 150	DN 50 to 125	1 (CE marked)
–	DN 150	2 (CE marked)

BODY LIMITING CONDITIONS *			
FLANGED PN 16		FLANGED PN 25	
ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE
16 bar	-10 °C / 120 °C	25 bar	-10 °C / 120 °C
15,5 bar	150 °C	24,3 bar	150 °C
14,7 bar	200 °C	23 bar	200 °C
14,3 bar	220 °C	22,5 bar	220 °C
13,9 bar	250 °C	21,8 bar	250 °C
12,8 bar	300 °C	20 bar	300 °C
11,2 bar	350 °C	17,5 bar	350 °C

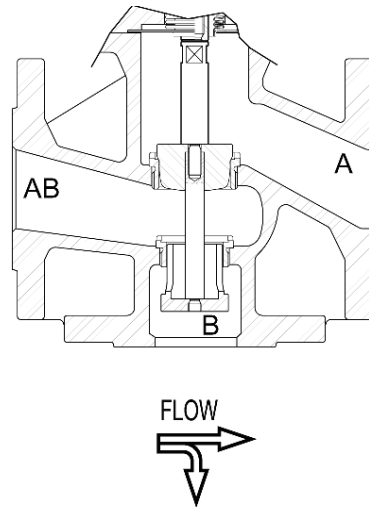
\* Rating according to EN 1092-2:2007.

TRIM DESIGN

MIXING

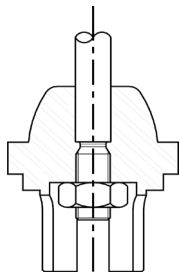


DIVERTING



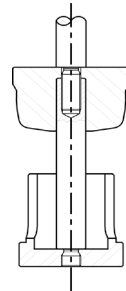
PLUG DESIGN

MIXING



**Sealing:** Metal to metal  
**Characteristic:** Linear (PL)  
**Rangeability:** 30:1 to 50:1  
**Leakage:** Class IV, acc. to IEC 60534-4

DIVERTING



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FLOW RATE COEFFICIENTS – MIXING PLUGS

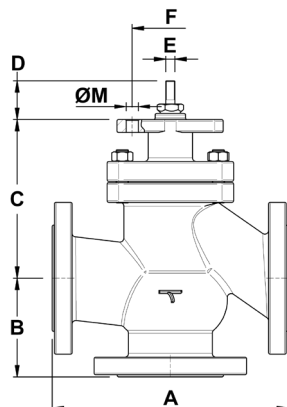
SIZE	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
<b>Kvs (m³/h)</b>	4	6,3	10	16	25	40	63	100	160	230	330
<b>SEAT Ø *</b>	20 / 15	20 / 15	25 / 20	32 / 25	40 / 32	50 / 40	65 / 50	80 / 65	100 / 80	125 / 120	150 / 140
<b>STROKE (mm)</b>	20						30			35	40

\* Upper and lower seat diameters respectively.  
 For conversion, Kvs = Cv (US) x 0,865.

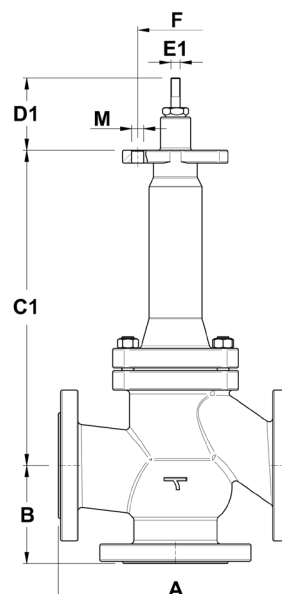
FLOW RATE COEFFICIENTS – DIVERTING PLUGS

SIZE	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
<b>Kvs (m³/h)</b>	12	20	27	50	83	123	190	250
<b>SEAT Ø *</b>	32 / 25	40 / 32	50 / 40	65 / 50	80 / 65	100 / 80	100 / 100	120 / 120
<b>STROKE (mm)</b>	20			30			35	40

\* Upper and lower seat diameters respectively.  
 For conversion, Kvs = Cv (US) x 0,865.



Valve with standard bonnet



Bellows sealed valve

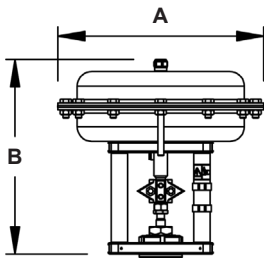
DIMENSIONS (mm)											
DIMENSION	SIZE										
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
A	130	150	160	180	200	230	290	310	350	400	480
B	65	70	75	80	90	100	120	130	150	200	210
C	143	157	151	158	163	166	209	209	217	319	334
C1	265	279	273	280	285	288	418	418	426	529	544
D	56										
D1	96										
E	M10										
E1	M12										
F	100										
M	17										

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

WEIGHTS (kg)											
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
STANDARD	8	9	10	12,5	14	16	32	36	51	107	130
BELLOWS	10	11	11,5	14,5	16	19	36	40	54	95	125

MAX. PERMISSIBLE ACTUATING FORCES (kN)											
	SIZE										
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
STANDARD	12										
BELLOWS	16										

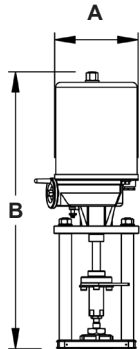
### PA SERIES PNEUMATIC ACTUATORS



DIMENSIONS (mm)					
DIMENSION	PA206	PA281	PA341	PA436	PA80
A	209	275	336	430	405
B	236	243	323	291 / 311 *	505
WEIGHT (kg)	6,2	9,6	14,3	24,4 / 28 *	50,4

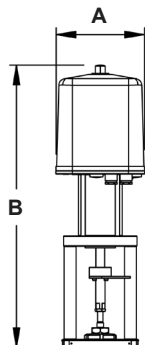
\* For actuators with spring ranges 1 - 2 bar, 1,5 - 3 bar and 2 - 4 bar.

### EL SERIES ELECTRIC ACTUATORS



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

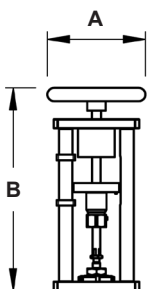
### ELR SERIES ELECTRIC ACTUATORS



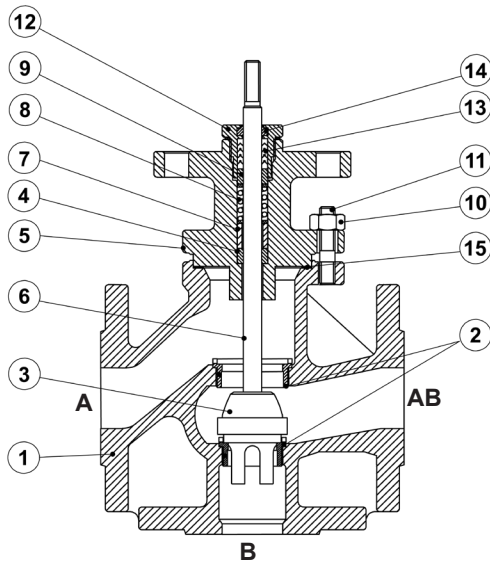
DIMENSIONS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
A	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

\* With PEL electronic positioner.

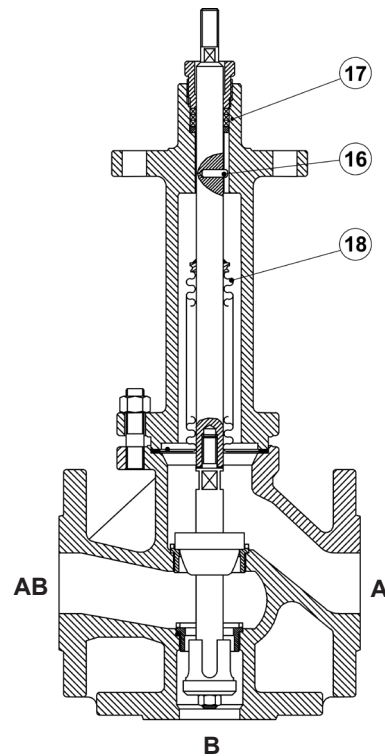
### MANUAL OPERATION HANDWHEEL



DIMENSIONS (mm)	
DIMENSION	MAH
A	160
B	331
WEIGHT (kg)	5,6



Mixing valve with  
 standard bonnet



Diverting bellows  
 sealed valve

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Body	GJS-400-18-LT / 5.3103
2	* Seats	AISI 420 / 1.4021
3	* Valve plug	AISI 420 / 1.4021
4	Lower stem guide	Graphite filled PTFE
5	Bonnet	GJS-400-18-LT / 5.3103
6	* Stem	AISI 420 / 1.4021
7	Packing spacer	AISI 303 / 1.4305
8	Spring	AISI 301 / 1.4310
9	Upper stem guide	Graphite filled PTFE
10	Nuts	C35E / 1.1181
11	Studs	C35E / 1.1181
12	Packing nut	AISI 303 / 1.4305
13	* Chevron packing set	Graphite filled PTFE
14	Scraper ring	FPM
15	* Gasket	Stainless steel / Graphite
16	Locking pin	Stainless steel A2-70
17	* Safety packing set	Stainless steel / Graphite
18	* Metal bellows	AISI 316Ti / 1.4571

\* Available spare parts.

ORDERING CODES V253 a)								
<b>Valve model</b>	V.23	G	M	1	7	L	15	
Globe valve, three-way, straight body	V.23							
<b>Body material</b>								
GJS-400-18-LT / 0.7043 SG iron		G						
<b>Trim design</b>								
Mixing			M					
Diverting (only available for size DN 32 and above)			D					
<b>Stem sealing</b>								
PTFE/GR V-Rings / Standard bonnet				1				
Graphite / Standard bonnet				3				
Stainless steel bellows with graphite safety packing				8				
<b>Valve plug</b>								
Linear (PL) – metal to metal (class IV)					7			
<b>Pipe connection</b>								
Flanged EN 1092-2 PN 16						L		
Flanged EN 1092-2 PN 25						M		
<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) Codification for valve only. For actuator codes, refer to the respective datasheet.