

**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)**

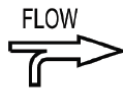
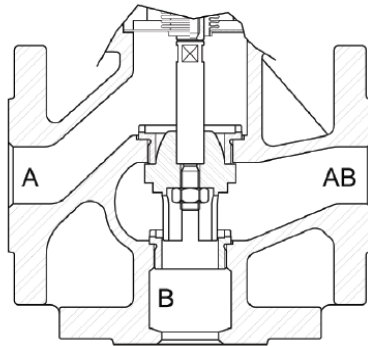
PN 16	PN 25	Category
DN 15 to 50	DN 15 to 40	SEP
DN 65 to 150	DN 50 to 125	1 (CE marked)
–	DN 150	2 (CE marked)

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

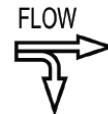
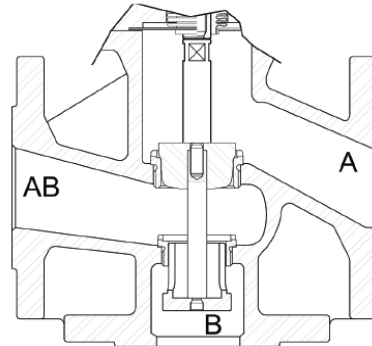
\* Rating according to EN 1092-2:2007.

## TRIM DESIGN

### MIXING

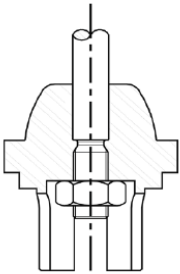


### DIVERTING



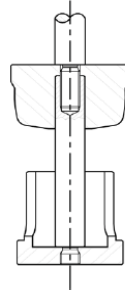
## PLUG DESIGN

### MIXING



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

### DIVERTING



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

## FLOW RATE COEFFICIENTS – MIXING PLUGS

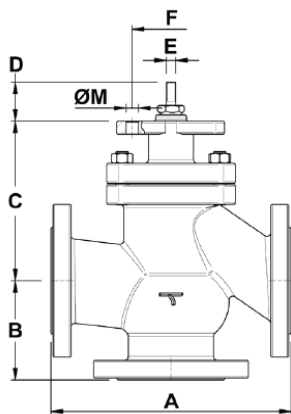
SIZE	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
Kvs (m³/h)	4	6,3	10	16	25	40	63	100	160	230	330
SEAT Ø *	20 / 15	20 / 15	25 / 20	32 / 25	40 / 32	50 / 40	65 / 50	80 / 65	100 / 80	125 / 120	150 / 140
STROKE (mm)	20						30			35	40

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

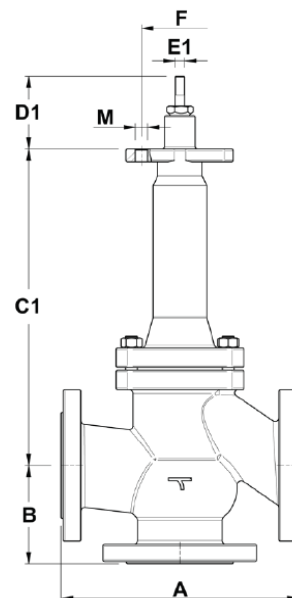
## FLOW RATE COEFFICIENTS – DIVERTING PLUGS

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

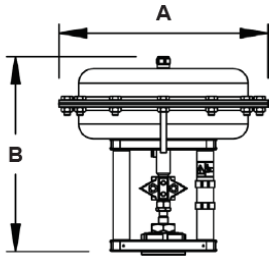
**WEIGHTS (kg)**

	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										

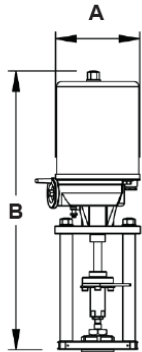
**PA SERIES PNEUMATIC ACTUATORS**



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

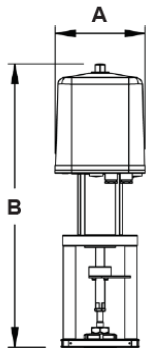
\* For actuators with spring ranges 1 - 2 bar, 1,5 - 3 bar and 2 - 4 bar.

**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

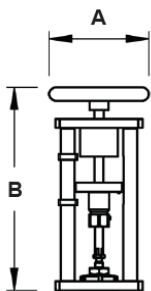
**ELR SERIES ELECTRIC ACTUATORS**



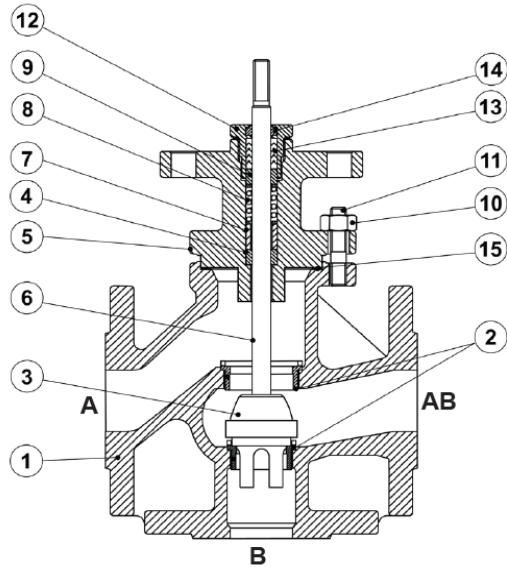
DIMENSIONS (mm)			
DIMENSION	ELR2.1	ELR2.2	ELR2.3
A	162	162	162
B	518 / 555 *	536 / 573 *	557 / 593 *
WEIGHT (kg)	8,7	9,3	10

\* With PEL electronic positioner.

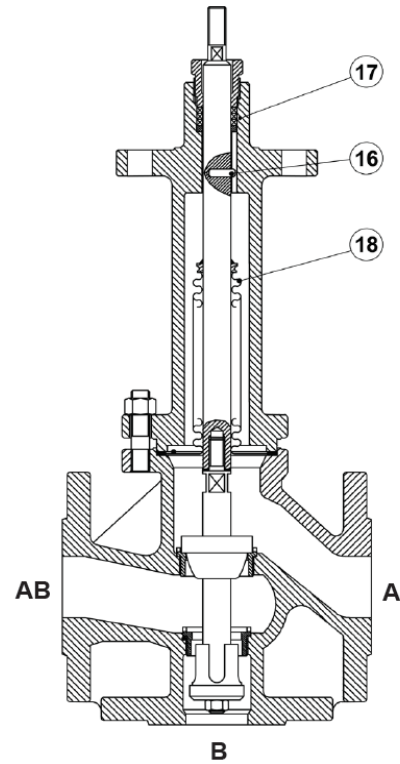
**MANUAL OPERATION HANDWHEEL**



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.