

Angle Seat Motor Valve compact 7210

DN 8 up to DN 50



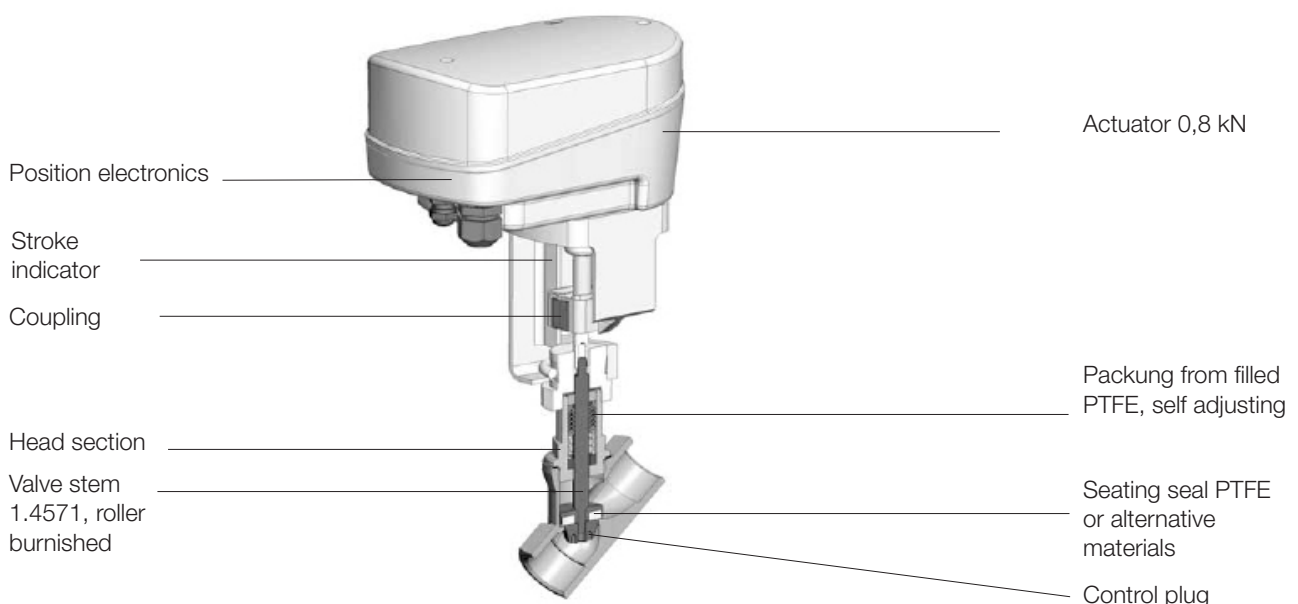
Motor valve for on/off- and modulating operation for neutral and aggressive media.

- Compact design
- Self calibration
- Unaffected by lightly contaminated media
- For operating temperatures from -30°C up to +200°C
- Working pressure up to 40 bar
- Versatile actuator options
- Actuators with control function also available with safety position



Technical Information Valve

Body material	Bronze CC491K	Stainless steel 1.4408
Nominal size	DN 15 up to DN 50 1/2" up to 2"	DN 8 up to DN 50 1/4" up to 2"
Connections:		
Pipe threads acc. ISO 228-1	DN 15 - 50 / 1/2"-2"	DN 8 - 50 / 1/4"-2"
NPT thread	DN 15 - 50 / 1/2"-2"	DN 8 - 50 / 1/4"-2"
Welding ends	-	DN15 - 50 / 1/2"-2"
Clamp connections		DN15 - 50 / 1/2"-2"
Nominal pressure	PN 16	PN 40
Max. fluid temperature	-30°C up to 200°C	
Viscosity	max. 600 mm ² /s (600 cSt)	
Vacuum	max. 0,001 bar,abs. / 0,015 psia	
Operating pressure packing underneath	max. 12 bar / 174 psig	



Technical Information BM-Actuator

Type of motor	BM24C	BM24C/I	BM24C/IOS2	BM250C/IO2	BM24	BM115	BM230
Function	Control	Control	Control	Control	On/Off	On/Off	On/Off
Nominal voltage	24 V AC/DC	24 V AC/DC	20-30V AC 20-45V DC	85-250V AC 120-250V DC	24 V AC/DC	115V AC	230 V AC
Set point	2 - 10 V	4 - 20 mA	4 - 20 mA	4 - 20 mA	3-step	3-step	3-step
Load	100 kOhm	500 Ohm	500 Ohm	500 Ohm	-	-	-
Position feedback	2 - 10 V	2 - 10 V	4 - 20 mA	4 - 20 mA	-	-	-
external load	-	-	< 700 Ohm	< 700 Ohm	-	-	-
limit switches	-	-	2 x	2 x	-	-	-
max. switching load	-	-	24V AC/DC 70mA	24V AC/DC 70mA	-	-	-
Power consumption	3 W	3 W	3 W	4 W	3 W	6 W	6 W
Stroking time (standard)	3,50 s/mm	3,50 s/mm	3,50 s/mm	3,50 s/mm	7,5 s/mm	7,5 s/mm	7,5 s/mm
Thrust	800 N						
Class of protection	IP 65						
Ambient temperature	-10°C up to +60°C						

Technical Information CA-Actuator

Function	Control				On/Off	
	CA24C	CA260C	CA24C-R	CA260C-R	CA24	CA260
Mains connection	24V AC/DC	90-260V AC	24V AC/DC	90-260V AC	24V AC/DC	90-260V AC
Set point range	(0)2-10V / (0)4-20mA				(2)3-term	
Feedback	(0)2-10V / (0)4-20mA				optional	
Dead band	±0.6% of the entire stroke				-	
Repeatability	±0.3% of the entire stroke				-	
Limit switch	2				optional	
Potentiometer feedback	-				optional	
Max. switching capacity	24V AC/DC 200 mA				250V AC/DC 1A	
Actuating speed	1.5 / 2 / 3 s/mm (Standard: 2 s/mm)				2 or 3 s/mm (Standard: 3 s/mm)	
Safety functions	Monitoring of tensile force, set point, temperature of the electronics, etc.				Tensile force monitoring	
Diagnostic functions	Storage of motor and total operating time, temperature and directional classes, etc.				-	
Fail Safe position	-	-	freely adjustable		-	
Load	500 Ω for current set point / 95 kΩ for voltage set point				-	
Max. input	13 W	12 W	13 W	12 W	13 W	12 W
Input heating resistor	10 W					
Starting current	6 A	2,5 A	6 A	2,5 A	6 A	2,5 A
Actuating power	800 N					
Protection class (EN 60529)	IP 65					
Adm. Ambient temperature	-10°C to +60°C					
Duty cycle	100%					

*: for control with volt-signal split range adjustments are possible

Wiring diagrams of the actuators can be found in the manual.

Admissible Differential Pressures

Nominal size	p max [bar]													
	DN8		DN15		DN20		DN25		DN32		DN40		DN50	
	On/off	Control	On/off	Control	On/off	Control	On/off	Control	On/off	Control	On/off	Control	On/off	Control
Stainless steel body	-	16	40	16	20	16	12	12	7	7	4,8	4,8	2,8	2,8
Bronze body	-	-	16	-	16	-	12	-	7	-	4,8	-	2,8	-

Kvs-Values

Characteristic	linear							equal percentage						
	8	15	20	25	32	40	50	8	15	20	25	32	40	50
100 %	0,6	3,8	8,8	14	20	27	37	0,6	3	6	10	16	25	-
40 %	0,24	1,5	3,5	5,8	8	11	-	-	1,2	2,4	4	6	10	-
25 %	0,15	0,93	2,2	3,6	-	-	-	-	0,8	1,5	2,6	-	-	-
15%	-	-	-	-	-	-	-	-	0,46	-	-	-	-	-
10%	-	0,4	-	-	-	-	-	-	-	-	-	-	-	-
7,5%	-	-	-	-	-	-	-	-	0,23	-	-	-	-	-
On-Off	0,95	3,8	9	17	28	35	45							

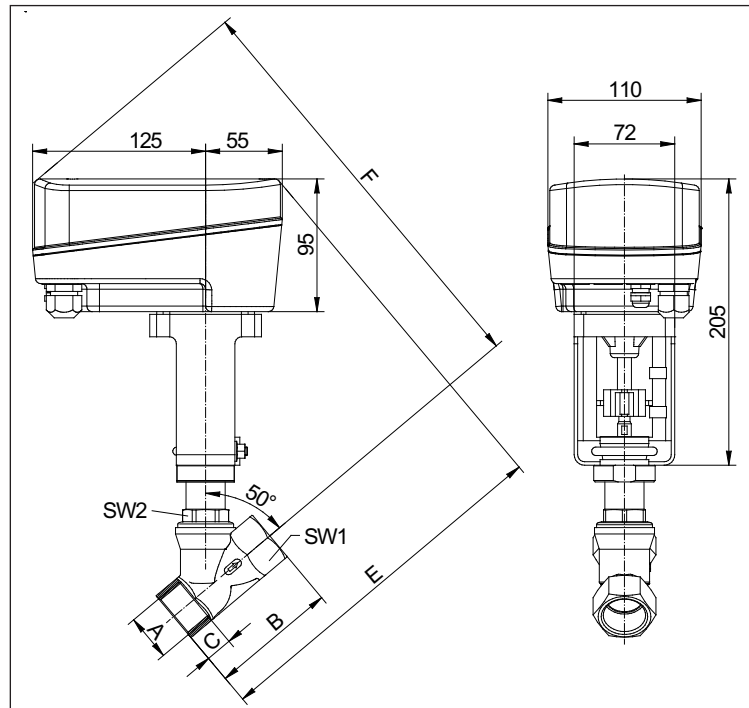
Ordering Number System

		Article number									
		7210/									S
Nominal size:											
DN 8 (only with seating seal PEEK)		008									
DN 15		015									
DN 20		020									
DN 25		025									
DN 32		032									
DN 40		040									
DN 50		050									
Item:											
Valve		V									
Valve without actuator		U									
Actuator		A									
Body design:											
Angle bodied			1								
Connection:											
Whitworth-thread							0				
NPT thread							5				
without thread							6				
Welding ends acc. ISO							H				
Welding ends acc. DIN 11850							D				
Body material:											
Bronze							1				
Stainless steel							2				
Seating seal:											
PTFE							0				
FKM (Viton)							1				
EPDM							2				
NBR							3				
PEEK							7				
Actuator:											
Control actuator BM250C/IOS2 85-250V AC/ 120-250V DC- control electr. 4-20mA - feedb. 4-20mA -2 limit switch.							0				
Control actuator BM24C - 24V AC/DC - control electronics 2-10V - feedback 2-10V							1				
Control actuator BM24C/I - 24V AC/DC - control electronics 4-20mA - feedback 2-10V							2				
On-Off actuator BM24 - 24V AC/DC							6				
On-Off actuator BM230 - 230V AC							7				
On-Off actuator BM115 - 115V AC							8				
Control actuator BM24C/IOS2 20-30V AC/ 20-45V DC- control electr. 4-20mA - feedback 4-20mA -2 limit switches							9				
Control actuator CA24C, 24V AC/DC, with pos. electronic, stanard adjustm.: control sig. 4-20mA, feedback 4-20mA, 2							C				
Control Actuator CA260C, 90-260V 50/60Hz, with pos. electronic, Standard adjustm. 4-20mA, feedb. 4-20mA, 2 limit switch							D				
On-Of (3-point) actuator CA24, 24V AC/DC							E				
On-Off (3-point) actuator CA260, 90-260V, 50/60Hz							F				
Control plug:											
without							-				
linear 100%							1				
equal percentage 100%							2				
linear 40%							3				
equal percentage 40%							4				
linear 25%							5				
equal percentage 25%							6				
Safety position:											
without safety position							-				
spring to close							0				
spring to open							1				
Stroking times:											
Standard (3,5 s/mm for control actuators - 7,5 s/mm for on-off-actuators)							-				
4,5 s/mm (on-off actuators only)							L				
1,75 s/mm (control actuators only), with safety spring return 3,0s/mm							1				
7,0 s/mm (control actuators only)							2				
14,0 s/mm (control actuators only)							3				
3 s/mm (CA-actuators)							4				
1,5 s/mm (CA-actuators)							5				
Ordering example:		7210/025VK10201									
		Angle seat motor valve type 7210, DN 25, pipe thread acc. ISO228-1, stainless steel body, seating seal PTFE, control actuator BM24C/I , 24V AC/DC, 0,8 kN, control electronics 4-20 mA, position feedback 2-10V, linear characteristic, Kvs-value 14 (100 %).									

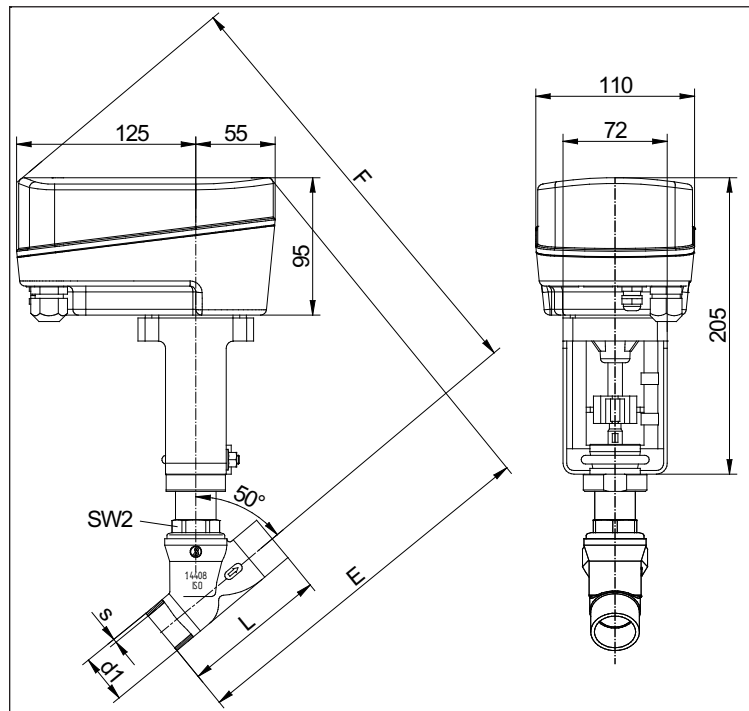
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Dimensions and Weights for BM-actuators

Body with threaded ends Rp/NPT



Body with welding ends DIN/ISO



DN	A G / NPT	C G NPT	ISO		DIN		B G / NPT	L DIN/ISO	E	F	SW1	SW2	Stroke	Weight kg	
			d1	s	d1	s									
08	1/4"	12	10,7	-	-	-	60	-	245	295	20	30	8,5	1,9	
15	1/2"	15	14,5	21,3	2	18	1,5	65	80	250	25	30	9	2	
20	3/4"	16,3	15	26,9	2,3	22	1,5	75	90	255	300	31	30	14	2,2
25	1"	19,1	18	33,7	2,6	28	1,5	90	100	260	305	39	30	18	2,4
32	1 1/4"	21,4	18,5	42,4	2,6	34	1,5	110	110	280	325	48	30	21	2,8
40	1 1/2"	21,4	18,5	48,3	2,6	40	1,5	120	120	285	325	55	30	22	3,1
50	2"	25,7	19	60,3	2,9	52	1,5	150	150	300	330	68	32	22	3,7

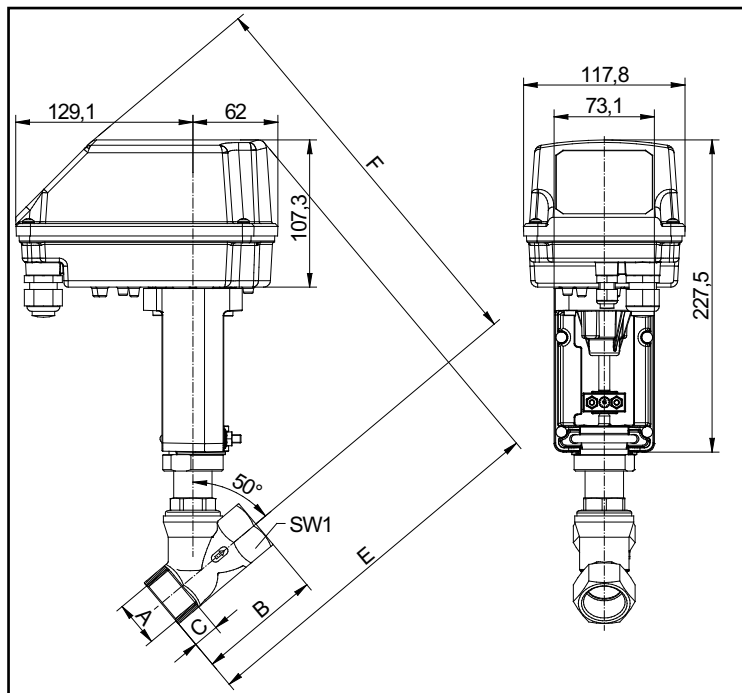
Other body designs on request

Dimensions in mm

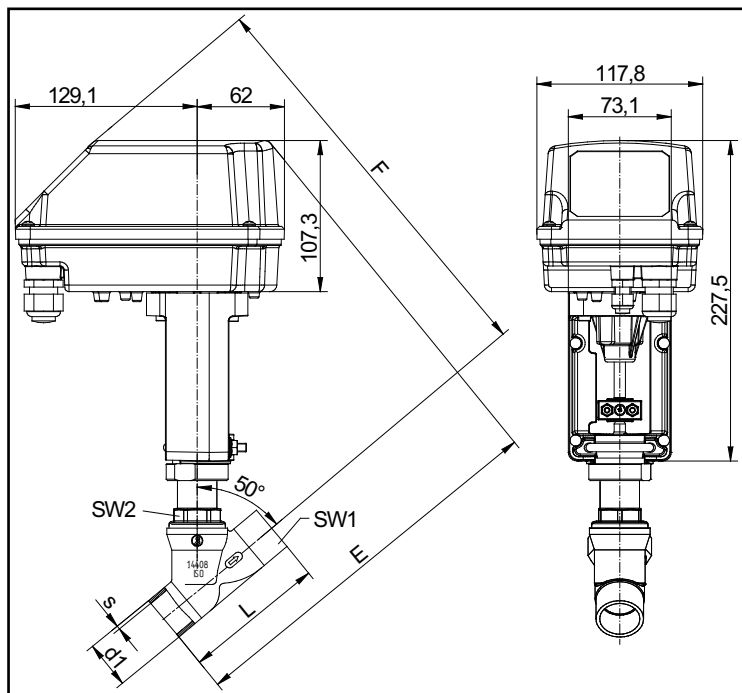
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Dimensions and Weights for CA-actuators

Body with threaded ends Rp/NPT



Body with welding ends DIN/ISO



DN	A	C		ISO		DIN		B	L	E	F	SW1	SW2	Stroke	Weight kg
	G / NPT	G	NPT	d1	s	d1	s	G / NPT	DIN/ISO						
08	1/4"	12	10,7	-	-	-	-	60	-	258	306	20	30	8,5	2,3
15	1/2"	15	14,5	21,3	2	18	1,5	65	80	263	310	25	30	9	2,4
20	3/4"	16,3	15	26,9	2,3	22	1,5	75	90	270	310	31	30	14	2,6
25	1"	19,1	18	33,7	2,6	28	1,5	90	100	275	314	39	30	18	2,8
32	1 1/4"	21,4	18,5	42,4	2,6	34	1,5	110	110	291	330	48	30	21	3,2
40	1 1/2"	21,4	18,5	48,3	2,6	40	1,5	120	120	295	334	55	30	22	3,5
50	2"	25,7	19	60,3	2,9	52	1,5	150	150	311	341	68	32	22	4,1