

Angle Seat Motor Valve 7310



DN 15 up to DN 80

Fast and high resolution motorvalve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Low operation noise level (quiet operation)
- Control of high differential pressures with small actuators
- Fast stroking speed
- Small dead band
- Smooth start and slow down
- Stainless steel body
- For temperatures from -50°C up to +220°C



Technical Information of the Valve

Body material	Stainless steel 1.4408	
Nominal size	DN 15 up to DN 80 1/2" up to 3"	
Connections:		
Pipe threads acc. ISO 228-1	DN 15 - 80 / 1/2" - 3"	
NPT thread	DN 15 - 80 / 1/2" - 3"	
Welding ends	DN 15 - 80 / 1/2" - 3"	
Clamp connections	DN 15 - 80 / 1/2" - 3"	
Nominal pressure	PN 40	
Media temperature	-30°C up to 200°C, opt. -50°C up to 220°C	
Ambient temperature	Standard:	-10°C up to +60°C
	Low temperature version:	-40°C up to +60°C
Viscosity	max. 600 mm ² /s (600 cSt)	
Vacuum	max. 0,001 bar,abs.	
Operating pressure packing underneath	max. 12 bar	
Operating pressure for Tri-Clamp connection	max. 16 bar	
Packing leakage	tested according to TA-Luft as defined in DIN EN ISO 15848-1 and VDI 2440	

Technical Information of the Actuator

Driving force	2,0 kN / 5,0 kN			
Power connections	24 V AC/DC 100 - 240 V 50/60Hz			
Ambient temperature	Standard:	-10°C up to +60°C		
	Low temperature version:	-40°C up to +60°C		
Storage Temperature	Standard:	-30°C up to +80°C (+60°C with Fail-Safe protection)		
	Low temperature version:	-40°C up to +80°C (+60°C with Fail-Safe protection)		
Mounting position	choice horizontal or vertical actuator only			
Protection class (EN 60529)	IP 67			
Max. power consumption at 24V AC/DC-operation:	40 Watt			
Nominal power consumption during mains operation	Mains voltage 230V:	P=40W	S=67,8VA	I=295mA
	Mains voltage 115V:	P=40W	S=58,8VA	I=511mA
				cosφ=0.59 cosφ=0.68
Dead band	±0,2% at min. 6mm stroke			
Repeat accuracy	±0,1% at min. 6mm stroke			
Stroking speed	2,0 kN-version:	0,75 s/mm up to 250 s/mm (standard 1,5 s/mm)		
	5,0 kN-version:	2 s/mm up to 250 s/mm (standard 4 s/mm)		
Stroking speed of the Fail-Safe protection	2,0 kN-version:	0,75 s/mm up to 4 s/mm		
	5,0 kN-version:	2 s/mm up to 4 s/mm		
Set point range	adjustable 0(4) - 20 mA, 0(2) - 10 V optional binary input signal (24V DC)			
Feed back	adjustable 0(4) - 20 mA, 0(2) - 10 V			
cycles (Fail-Safe)	500000			
life-time (Fail-Safe)	10 years			
duty cycle	100%			
Self Monitoring	monitoring of the driving power, set point, actuator temperature, temperature of the electronic etc.			
Diagnostic function	storage of motor and total service life, temperature- and way classes			
Valve adaptation	automatic stroke adjustment to suit valve limits			
additional inputs	binary input			
additional outputs	2 alarm outputs			
Electrical connection	Power supply M20x1.5 (optional NPT 1/2") Signal/position feedback 2x M16x1.5			

Admissible Differential Pressures

driving force	seating seal Nominal size	pmax [bar]					
		PTFE		PEEK-7 (T<160°C)		PEEK-8 (T>160°C)	
		Control	On/Off	Control	On/Off	Control	On/Off
2kN	DN15	17	40	17	40	17	40
	DN20	17	40	17	40	17	40
	DN25	17	33	17	26	17	36
	DN32	17	23,5	13,5	13,5	17	21,5
	DN40	16	16	8	8	14	14
	DN50*	10	10	3,5	3,5	8,5	8,5
	DN65*	5	5	-	-	4,5	4,5
5kN	DN80*	3,5	3,5	-	-	2,5	2,5
	DN15	17	40	17	40	17	40
	DN20	17	40	17	40	17	40
	DN25	17	38,5	17	33	17	33
	DN32	17	35	17	35	17	35
	DN40	17	23	17	23	17	23
	DN50*	15	15	15	15	17	25
2kN pressure balanced version	DN65*	12	12	10	10	14	14
	DN80*	11	11	6,5	6,5	10	10
	DN15	-	-	-	-	-	-
	DN20	-	-	-	-	-	-
	DN25	-	-	-	-	-	-
	DN32	17	40	17	40	17	40
	DN40	17	40	17	40	17	40
DN50	17	40	17	40	17	40	
DN65	17	25	17	25	17	25	
DN80*	17	25	17	25	17	25	

*reinforced design

Kvs-values (stroke)

Characteristic	linear								equal percentage							
	15	20	25	32	40	50	65	80	15	20	25	32	40	50	65	80
DN	3,8	8,8	14	20	27	39	42	54	3	6	10	16	25	31	33	43
100 %	(9,2)	(15,2)	(18,2)	(21,2)	(21,2)	(21,2)	(20)	(20)	(9,2)	(11,2)	(18,2)	(21,2)	(21,2)	(21,2)	(20)	(20,7)
63%	-	-	-	-	-	24	26	-	-	-	-	-	-	17	19	-
						(21,2)	(21,2)							(21,2)	(20)	
40 %	1,5	3,5	5,8	8	11	-	-	-	1,2	2,4	4	6	10	-	-	-
	(9,2)	(7,2)	(10,2)	(11,2)	(11,2)				(9,2)	(7,2)	(11,2)	(13,2)	(14,2)			
25 %	0,93*	2,2	3,6	-	-	-	-	-	0,8*	1,5	2,6	-	-	-	-	-
	(9,2)	(7,2)	(10,2)						(9,2)	(7,2)	(11,2)					
15%	-	-	-	-	-	-	-	-	0,46*	-	-	-	-	-	-	-
									(9,2)							
10%	0,4*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	(9,2)															
7,5%	-	-	-	-	-	-	-	-	0,23*	-	-	-	-	-	-	-
									(9,2)							
On-Off	3,8	9	17	28	35	51	62	74	-	-	-	-	-	-	-	-
	(9,2)	(15,2)	(18,2)	(21,2)	(21,2)	(21,2)	(20)	(20)								

Options

2 additional stroke limit switches	free adjustable volt free contacts (open/close)
Fail safe protection	Mounted in own body at actuator Safety position freely selectable
Communication software	with communication link, for parametrization and diagnosis of the actuator
Bluetoothmodul BT-1	Wireless connection to DeviceConfig configuration software (upgrade option)

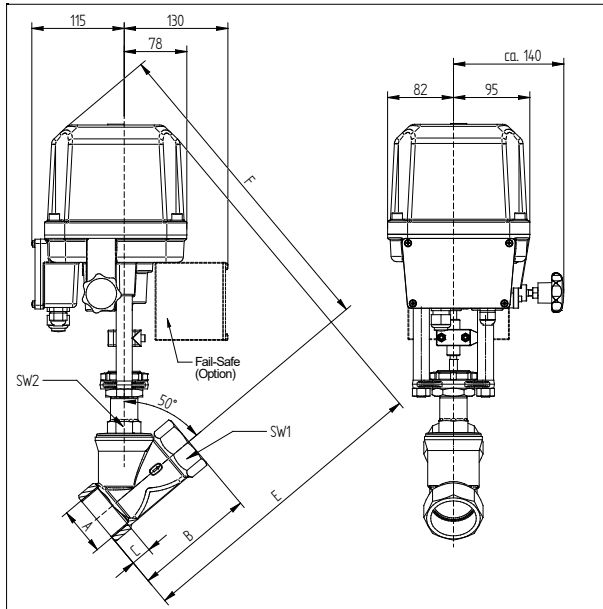
Actuator with Fail-Safe protection (Option)

- Safety function at power failure
- Power supply via high performance capacitors
- Safety position open, closed or in every other position selectable
- Automatic monitoring of the charge condition of the capacitors

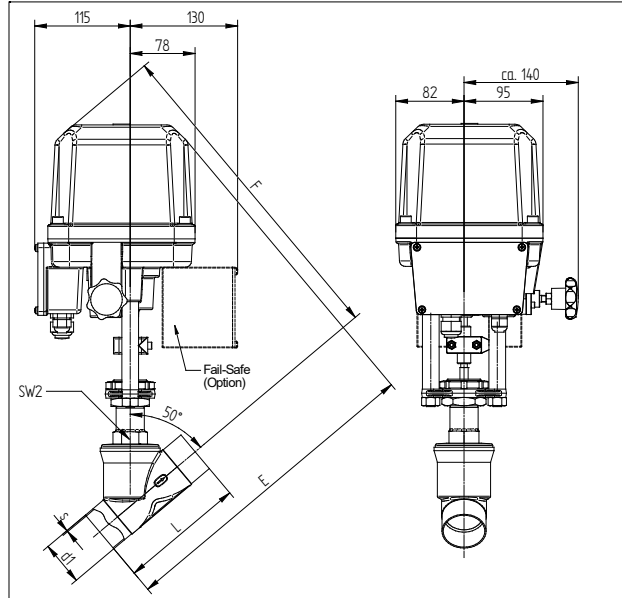


Dimensions and Weights

Body with threaded connection G/NPT



Body with welded ends DIN/ISO



DN	G / NPT		C		L DIN/ISO	ISO		DIN		SW1	SW2
	A	B	G	NPT		d1	s	d1	s		
15	1/2"	65	15	14,5	80	21,3	2	18	1,5	25	30
20	3/4"	76	16,3	15	90	26,9	2,3	22	1,5	31	30
25	1"	90	19,1	18	100	33,7	2,6	28	1,5	39	30
32	1 1/4"	110	21,4	18,5	110	42,4	2,6	34	1,5	48	30
40	1 1/2"	120	21,4	18,5	120	48,3	2,6	41	1,5	55	30
50*	2"	150	25,7	19	150	60,3	2,9	53	1,5	68	36
65*	2 1/2"	180	30,2	25,5	180	76,1	2,9	70	2	85	41
80*	3"	214	33,5	27,4	220	88,9	3,2	-	-	100	41

DN	E		F		weight with 2 kN-actuator kg		weight with 5 kN-actuator kg	
	2kN	5kN	2kN	5kN	without Fail-Safe	with Fail-Safe	without Fail-Safe	with Fail-Safe
15	325	344	356	380	8,9	10,6	9,8	11,5
20	331	352	360	385	9,2	10,9	10,1	11,8
25	339	359	365	389	9,4	11,1	10,3	12
32	356	376	380	404	9,9	11,6	10,8	12,5
40	362	382	381	404	9,8	11,5	10,7	12,4
50*	375	395	383	408	10,8	12,5	11,7	13,4
65*	395	414	396	420	12,6	14,3	13,5	15,2
80*	445	464	394	417	14,7	16,4	15,6	17,3

dimensions in mm

*: reinforced version