

Ball Sector Motor Valve 4037



ex-proofed DN 25 up to DN 100

- DN 25 up to DN 100
- Robust aluminium body of the actuator
- Excellent control characteristics
- Universal voltage supply
- Easily exchangeable seat ring
- Low maintenance
- Adjustable strokingtimes
- Protection class IP 66
- Manual emergency adjustment
- Efficient and easy to install
- Integrated heating system
- Spring return function on demand



ATEX versions

Type A	EX-Protection (gas)	II 2G Ex d [ia] IIC T6, T5	Zone 1 and 2
	EX-Protection (dust)	II 2D Ex tD [iaD] A21 IP66 T80, T95°C	Zone 21 and 22
Type B	EX-Protection (gas)	II 3G Ex nC II T6 / II 3(1)G Ex nC [ia] IIC T6	Zone 2
	EX-Protection (dust)	II 3D Ex tD A22 IP66 T80°C	Zone 22
Type C	Industrial applications without Ex certification	none	

Technical Information Valve

Design	flangeless wafertype	
Nominal sizes	DN 25 up to DN 100	
Body material	cast parts	1.4408 (CF8M)
	turned parts	1.4404 (316L)
Bearing material	high temperature plain bearing (Iglidur Z)	
Nominal pressure	DN 25 - DN 50	PN40 (for flanges PN 10 - PN 40), ANSI300, ANSI150
	DN 80 - DN 100	PN25 (for flanges PN 10 - PN 25), ANSI150
Fluid Temperature	-60°C up to +230°C according to the sealings	
Ambient Temperature	-40°C up to 50°C	
Characteristic	almost equal percentage	
Rangeability	100:1	

Valve seat combinations

Seat ring	Ball sector	Leakage	min. temp [°C]*
PTFE	stainless steel polished or hard chrom	5×10^{-7} from max. Kvs	-40 up to +170°C
PEEK	stainless steel polished or hard chrom	5×10^{-7} from max. Kvs	-40 up to +250°C
Stellit	stainless steel, hard chrome plated and lapped	Class IV-S1 acc. EN 1349 (IEC 534-4) 5×10^{-6} from max. Kvs	-40 up to +250°C
PTFE	stainless steel, hard chrome plated and lapped	Class VI acc. EN 1349 (IEC 534-4)	-40 up to +170°C
Stellit	stainless steel, hard chrome plated and lapped, seat holding ring hard chrome plated	5×10^{-7} from max. Kvs	-40 up to +250°C

* Please note the restrictions of the o-ring material!

Shaft seals (o-ring)

	min. temp [°C]	max. temp [°C]	comment
Viton (Standard)	-15	200	
EPDM	-30	140	suitable for steam
NBR (P700)	-40	100	
FFKM (Perlast/Kalrez)	-15	250	suitable for steam

special material on request

Working pressure

Nominal size	maximum differential pressure (delta p)									
	seat ring PTFE			seat ring PEEK				seat ring Stellit		
DN	up to 80°C bar	120°C bar	170°C bar	up to 80°C bar	120°C bar	170°C bar	220°C bar	up to 80°C bar	170°C bar	220°C bar
25-50	25	16	6	40	40	25	16	40	40	25
80-100	16	12	5	25	25	16	10	25	25	16

Wiring diagram (further more in the operating instructions)

Control

Options within every control actuator:

Jumper I: inverse the control and feedback signal

Voltage on A: Force the actuator to close

Voltage on B: Force the actuator to open

on/off - 3 point

Data of the actuator

Voltage supply	24 ... 230 V AC/DC
Protection class	IP 66
Input signal	4-20 mA or 0-10 V
Feedback signal	4-20 mA or 0-10 V
EX-Protection (gas) Type A	II 2G Ex d [ia] IIC T6, T5
EX-Protection (dust) Type A	II 2D Ex tD [iaD] A21 IP66 T80, T95
Ambient Temperature	T5: -40°C up to 40°C T6: -40°C up to 50°C
Motor	Brushless DC Motor
Maintenance	Maintenance free actuator
Diameter of cable	~Ø7,1 mm and ~Ø7,4mm - 1m cable (for on/off different)
Reverse function	Bridge between clamp 3 and 4
Holding Power	20 W (~16 W when heating)
Current consumption initialization	2 A

Rotary time settings / rated current

rotary swith setting	rotation time	DN25-DN50		DN25 (with spring return)					
		actuator torque	rated current		rotation time	actuator torque	rated current		
			24V	230V			24V	230V	
0	3/7,5 sec/90°	15 Nm	4,7 A	0,5 A	3/7,5 sec/90°	15 Nm	4,7 A	0,5 A	
1	15 sec/90°		1,45 A	0,3 A	15 sec/90°		1,45 A	0,3 A	
2	30 sec/90°		0,52 A	0,15 A	30 sec/90°		0,52 A	0,15 A	
3	60 sec/90°		0,4 A	0,1 A	60 sec/90°		0,4 A	0,1 A	
4	120 sec/90°		0,4 A	0,1 A	120 sec/90°		0,4 A	0,1 A	
5	7,5 sec/90°	30 Nm	4,7 A	0,5 A	7,5 sec/90°		15 Nm	4,7 A	0,5 A
6	15 sec/90°		1,45 A	0,3 A	15 sec/90°			1,45 A	0,3 A
7	30 sec/90°		0,52 A	0,15 A	30 sec/90°			0,52 A	0,15 A
8	60 sec/90°		0,4 A	0,1 A	60 sec/90°			0,4 A	0,1 A
9	120 sec/90°		0,4 A	0,1 A	120 sec/90°			0,4 A	0,1 A

spring return about 3 or 10 sec./90°

rotary swith setting	rotation time	DN40/50/80 (with spring return)		DN80-DN100				
		actuator torque	rated current		rotation time	actuator torque	rated current	
			24V	230V			24V	230V
0	40 sec/90°	30 Nm (50Nm DN80)	2,0 A	0,4 A	40 sec/90°	50 Nm	1,0 A	0,3 A
1	60 sec/90°		1,8 A	0,3 A	60 sec/90°		0,7 A	0,2 A
2	90 sec/90°		1,4 A	0,15 A	90 sec/90°		0,5 A	0,15 A
3	120 sec/90°		1,4 A	0,1 A	120 sec/90°		0,4 A	0,1 A
4	150 sec/90°		1,4 A	0,1 A	150 sec/90°		0,4 A	0,1 A
5	40 sec/90°		75 Nm	2,0 A	0,4 A	40 sec/90°	1,0 A	0,3 A
6	60 sec/90°			1,8 A	0,3 A	60 sec/90°	0,7 A	0,2 A
7	90 sec/90°			1,4 A	0,15 A	90 sec/90°	0,5 A	0,15 A
8	120 sec/90°			1,4 A	0,1 A	120 sec/90°	0,4 A	0,1 A
9	150 sec/90°			1,4 A	0,1 A	150 sec/90°	0,4 A	0,1 A

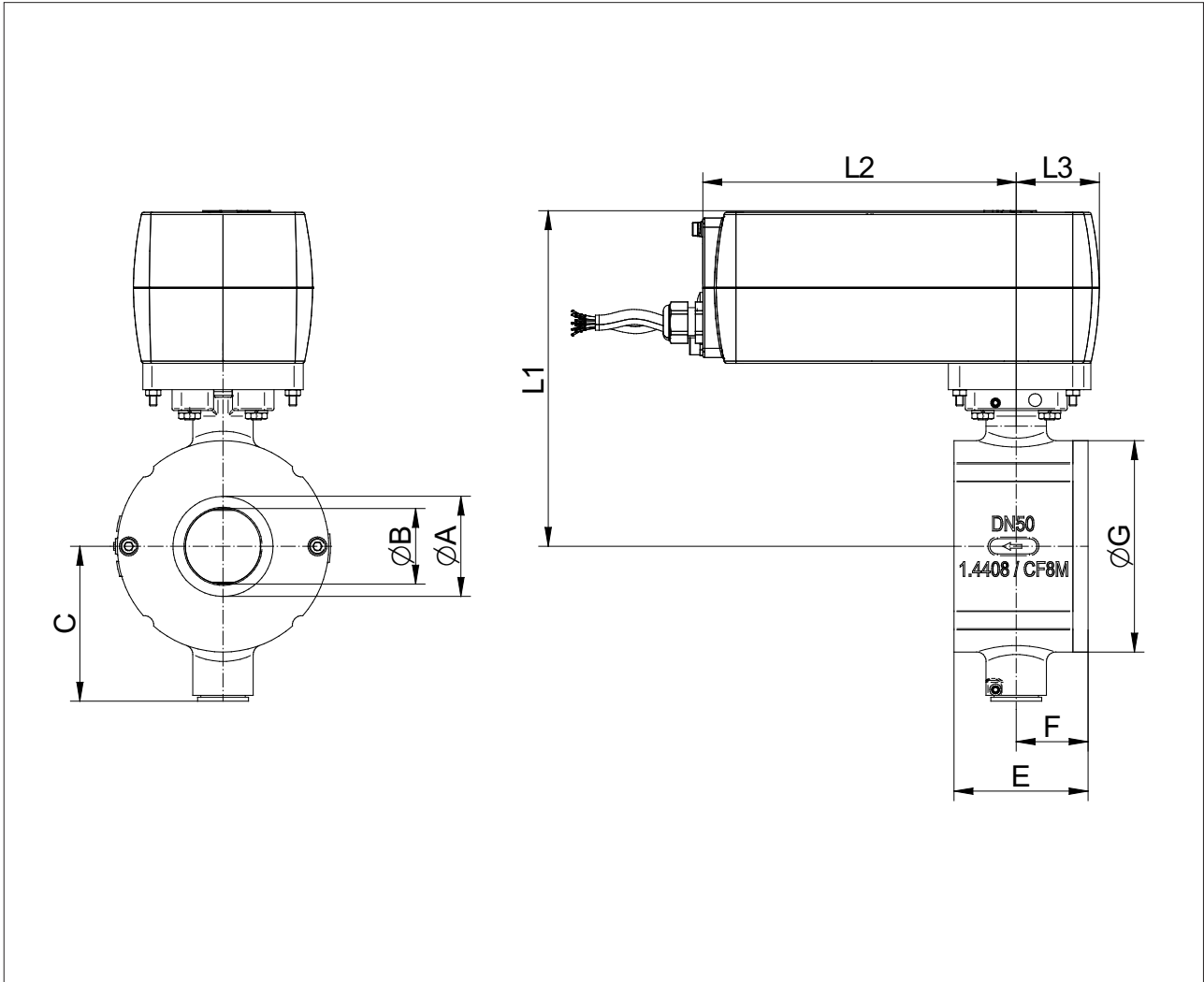
spring return about 20 sec./90°

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ex-proofed



Dimensions with actuator



DN	A	B	C	E	F	G	L1	L1*	L2	L2*	L3	L3*
25	25	20 / 15 (1)	73	50	26	73	169	169	166	166	44	44
40	41	32 / 25 (1)	79	58	31	94	175	211	166	229	44	59
50	53	40	82	71	38	112	178	214	166	229	44	59
80	80	65	106	95	55	142	239	214	229	229	59	59
100	100	80	117	112	65	174	250	-	229	-	59	-

(1: reduced Kvs-value to 50%)

* with spring return function

Nominal sizes, Kvs-values and nominal pressures

DN	Kvs	hole mm	rotation angle nominal	max. press. nominal DIN	max. press. nominal ANSI
25-50%	12,5	15	65°	PN40	ANSI 300
25	21	19	90°	PN40	ANSI 300
40-50%	34	25	60°	PN40	ANSI 300
40	64	32	90°	PN40	ANSI 300
50	94	40	90°	PN40	ANSI 300
80	255	64	90°	PN25	ANSI 150

Dimension in mm

Text and pictures are not binding. We reserve the right, to alter the equipment.