Partnership. With Guarantee.

Gate valve with electric actuator
Series A1EM





Design type	Sandwich gate valve, single-acting sealing, rising stem, Manually adjustable packing
Actuation	Electric geared motor with additional emergency handwheel with torque switch and internal motor protection
Connection	Flanges DN50...DN500 according to EN1092-2 PN10
Materials	see material table
Medium temperature	Housing Grey cast iron EN-GJL-250 or rather Ductile iron EN-GJS-500-7 -10...120°C, Housing Stainless steel 1.4408 -30...120°C, also additionally dependent on the packing and sealing material - see table, higher temperatures on request
Ambient temperature	-10...80°C
Operating pressure	up to Nominal pressure according to table ATTENTION: The spool valve can be pressurized against the flow direction with 30% of the maximum operating pressure. A slight leakage may occur in the closed position.
Flow direction	Is marked by an arrow. For dry media we recommend a flow opposite to the arrow direction. ATTENTION: The spool valve can be pressurized against the flow direction with 30% of the maximum operating pressure. A slight leakage may occur in the closed position.
Mounting type	Installation in rigid piping system
Mounting position	vertical upwards, other mounting position on request

Electrical data:

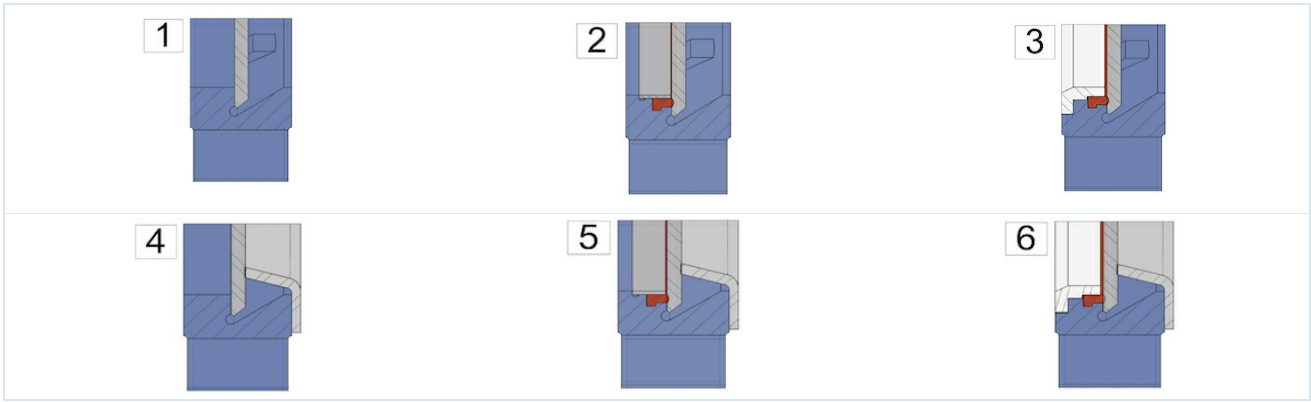
Voltage type	Three-phase current
Voltage	400V/3/50Hz
Permissible voltage fluctuation	± 10%
Electrical Connection	via cable gland
Operating mode	Intermittent duty S2 - 15 minutes, Class A and B according to ISO 22153
Degree of protection	IP68 according to EN 60529 with properly installed cable entry (protection against dust ingress and immersion in water)
Special versions	Nominal sizes up to 1200mm, Sliding washers Slide plate PTFE, Flushing bores, other nominal pressures on request

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Material table:

Type	A1EM2H2-5-...-B	A1EM2I2-5-...
Housing	Grey cast iron EN-GJL-250 or rather Ductile iron EN-GJS-500-7 epoxy coated RAL5015, Coating 80µm	Stainless steel 1.4408
Slide plate	Stainless steel AISI 304	Stainless steel 1.4401
Connection plates/Protective plates	Steel coated	Steel coated
Package (Standard)	PTFE-synthetic/EPDM	PTFE-synthetic/EPDM
Seat seal (Standard)	EPDM	EPDM
Sliding washers Slide plate	RCH-1000(Polyethylene)	RCH-1000(Polyethylene)

Seat variants single-sided sealing:



1...metallic sealing	2...soft-sealing with retaining ring (Standard)	3...soft-sealing with reinforced fixing ring or rather Wiper for slide plate
4...metallic sealing with abrasion protection	5...soft-sealing with retaining ring and abrasion protection	6...soft-sealing with reinforced fixing ring or rather Wiper for slide plate and abrasion protection

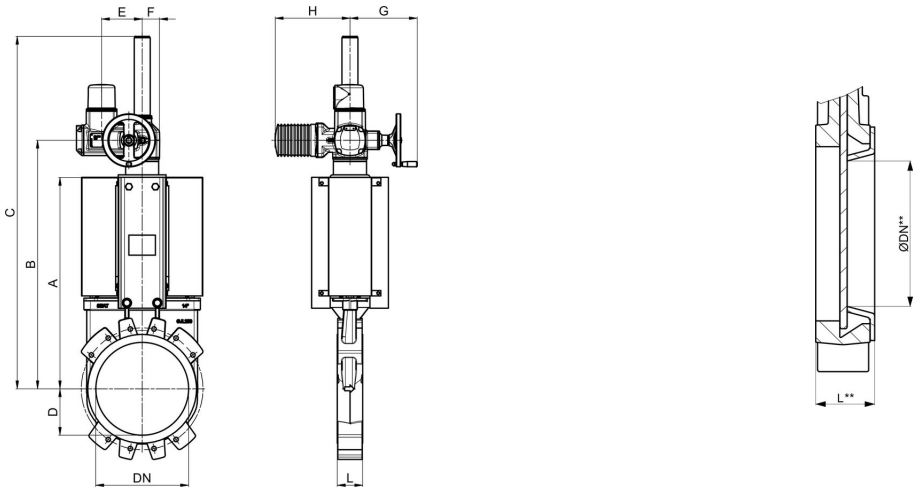
Possible packages:

Package	Medium temperature [°C]	Application examples
PTFE-synthetic/EPDM	-15 ...+90	neutral liquids, Liquids with 5% solids content, Granules, Slurries
PTFE-synthetic/FKM	-15 ...+180	Liquids, Liquids with 5% solid content, Granules, Slurries
PTFE	-30 ...+200	for almost all liquids

Possible seat seals:

Seal	Medium temperature [°C]	Leakage [in % of the flow rate]	Application examples
EPDM	-5...+90	0	neutral liquids, Liquids with 5% solids content, Granules, Slurries
metallic	-20...+650	1,5	dry media and liquids with 5% solid content, Granules, Slurries
PTFE	-20 ...+180	0,5	Alkalis and acids
FKM	0...+180	0	Acids, Fuels and oil-containing liquids
NBR	-20...+90	0	Oils and oil-containing liquids
Silicone	-25...+200	0	Food and pharmaceutical products

Dimensions:

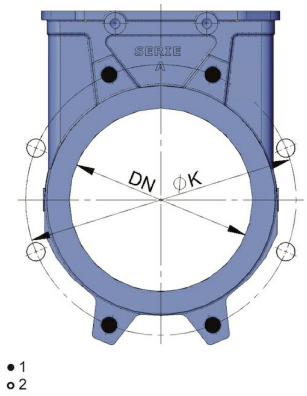


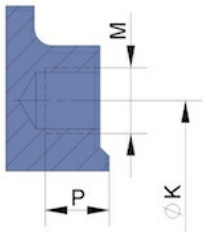
incl. Abrasion protection

Nominal size DN[mm]	ØDN**	max. operating pressure [bar]	L	L**	A	B	C	D	E	F	G	H	Actuator	approx. Actuation time [s]	Kv value [m³/h]	Kv value [m³/h]***	Weight [kg]
50	25	10	40	46	241	400	595	63	238	62	249	265	SA07.2	17	206	28	24
65	39	10	40	46	268	426	622	70	238	62	249	265	SA07.2	22	305	72	25
80	52	10	50	56	294	452	647	92	238	62	249	265	SA07.2	27	485	137	26
100	72	10	50	56	334	492	687	105	238	62	249	265	SA07.2	34	895	279	27
125	97	10	50	56	367	525	720	120	238	62	249	265	SA07.2	42	1550	548	30
150	119	10	60	66	419	577	772	130	238	62	249	265	SA07.2	50	2095	851	32
200	167	7	60	66	525	685	990	160	238	62	249	265	SA07.2	54	3834	1888	42
250	217	5	70	77	626	785	1090	198	238	62	249	265	SA07.2	67	5375	3400	55
300	259	3	70	77	726	885	1190	234	248	65	254	283	SA07.6	80	8083	4845	72
350	302	3	96	105	797	940	1305	256	248	65	254	283	SA07.6	78	10700	6808	99
400	352	5	100	109	903	1045	1460	292	286	91	389	389	SA10.2	89	14200	9746	136
450	400	4	106	115	989	1175	1755	308	286	91	389	389	SA10.2	100	18405	12442	166
500	449	3,5	110	119	1101	1290	1870	340	286	91	389	389	SA10.2	112	23215	15979	245

DN600...DN1200 on request
***Kv value incl. Abrasion protection

Flange information:





1...Blind tapped hole thread, 2...Through bore

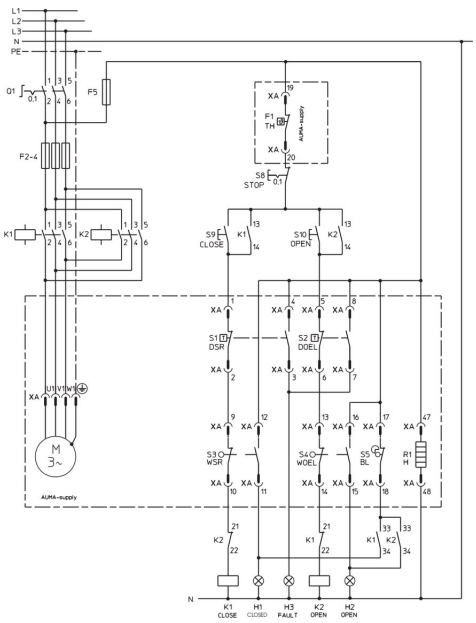
Nominal size DN[mm]	Quantity Blind tapped hole thread	Quantity Through bores	ØK	M	Depth Blind tapped hole thread P
50	4	-	125	M16	8
65	4	-	145	M16	8
80	4	4	160	M16	9
100	4	4	180	M16	9
125	4	4	210	M16	9
150	4	4	240	M20	10
200	4	4	295	M20	10
250	6	6	350	M20	12
300	6	6	400	M20	12
350	10	6	460	M20	21
400	10	6	515	M24	21
450	14	6	565	M24	22
500	14	6	620	M24	22
DN600 ...DN1200 on request					

Motor data - 3-phase motor, 400V/3/50Hz

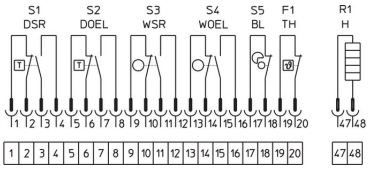
max. Torque [Nm]	Power [W]	Speed [1/min]	Rated current [A]	Starting current [A]	Weight [kg]	Type
30	100	1400	1	2,5	20	SA07.2
60	200	1400	1,7	4,8	21	SA07.6
120	400	1400	2,6	8,9	25	SA10.2

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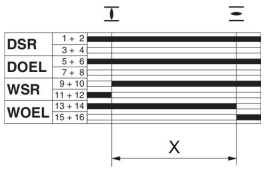
Electrical connection example - position-dependent opening and closing



Standard version



Actuation of the limit switches



= closed

= open

X = Operation

= Contact closed

= Contact open

DSR and DOEL serve as overload protection during the entire operation. They switch only when the set torque is exceeded.

The electrical wiring diagram is for the standard version and direction of rotation for closing clockwise. The circuit diagram shows the non-rotating actuator in intermediate position.

Legend		
M...Electric motor	F1...thermal cut-out in the motor	F2...F5Fuses
S1...Torque limitation CLOSE, clockwise	Q1....Main switch	H1...Indicator lamp for closed position
S2...Torque limitation OPENING, counterclockwise	S8...Stop pushbutton	H2...Indicator lamp for open position
S3...Limit switch CLOSE, clockwise	S9...CLOSE pushbutton	H3...Fault indicator lamp
S4...Limit switch OPENING, counterclockwise	S10...OPEN pushbutton	R1...Heater
S5...Flasher relay	K1, K2...Reversing contactors	

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