

VÁLVULA BORBOLETA WAFER Z 611-A



Resilient seated wafer type butterfly valve for semi-corrosive media.

TECHNICAL DATA

Nominal diameter:	DN 50 - DN 300
Face-to-face:	EN 558 Series 20 (DIN 3202 T3 K1) ISO 5752 Series 20 API 609 Table 1 BS 5155 Series 4
Flange accommodation:	DIN EN 1092 PN 10/16 ANSI B 16.5, Class 150
Flange surface design:	DIN 2526 Form A-E DIN 2642 ASME B 16.5 RF, FF
Top flange:	EN ISO 5211
Marking:	DIN / EN 19
Tightness check:	DIN EN 12266. Leakage rate A ISO 5208, Category 3 API 598 Table 5 ASME B 16-104, Class VI
Standard of fitness for use:	EN 593 (DIN 3354)
Temperature range:	-20 °C to +160 °C (depending on pressure, medium and material)
Operating pressure:	max. 16 bar
Differential pressure:	max. Δp 10 bar
Vacuum:	0,2 bar absolute (depending on medium and temperature)

FEATURES

- One piece disc/shaft, centric bearing
- Split body with stainless steel screws
- Insulation height as per plant regulations
- Can be installed in any desired position
- Triple shaft bearing
- Disc's sealing surface mirror polished
- Materials complying with FDA standards available
- Can be disassembled, material-specific recycling possible

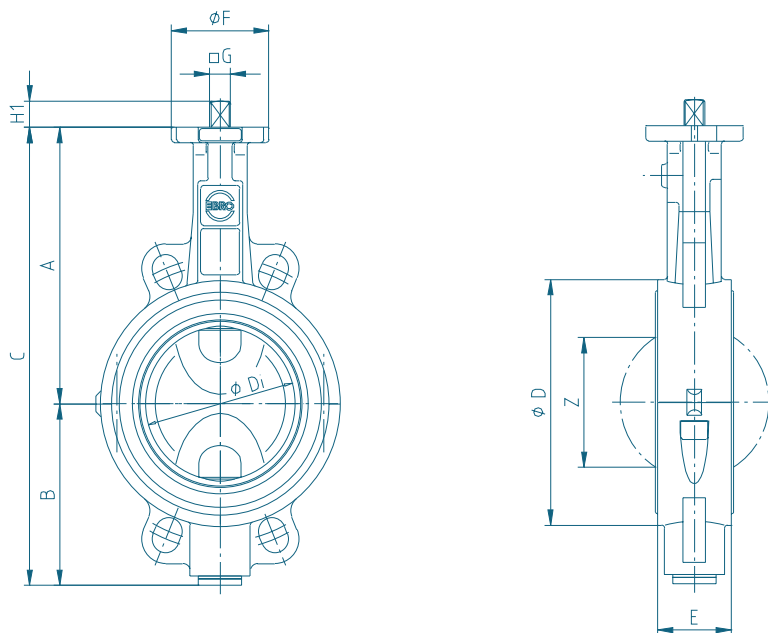
GENERAL APPLICATIONS

- Food and beverage industry
- Purifications plants
- Pharmaceutical industry
- Chemical and petrochemical industry
- Water and waste water industry
- Pneumatic materials handling technology
- Shipbuilding
- Power plants
- Civil engineering
- For paint and lacquers, a silicone-free version is available



The splitted body design allows quick and easy maintenance. Therefore this type is ideally suited for CIP applications.

WAFER TYPE BUTTERFLY VALVE Z 611-A



Z 611-A with bare shaft end according to EN ISO 5211

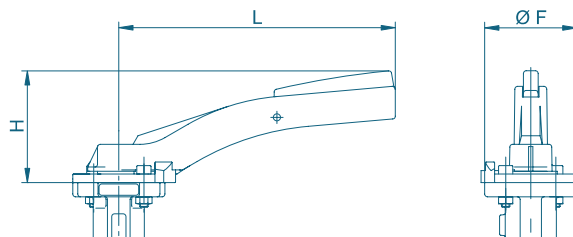
DN [mm]	Size [in]	Dimensions [mm]											Weight [kg]	
		A	B	C	D	Di	E	F	Flange	G	H1	H2		Z
50	2	126	84	210	112	49	43	54	F04	11	13,5	19	25	2,2
65	2½	134	93	227	120	64	46	54	F04	11	13,5	19	45	2,9
80	3	157	104	261	138	79	46	65	F05	14	17	25	64	4,0
100	4	167	115	282	160	99	52	65	F05	14	17	25	84	5,2
125	5	180	127	307	190	124	56	65	F05	14	17	25	110	6,9
150	6	203	150	353	215	149	56	88	F07	17	20	30	138	9,5
200	8	228	176	404	269	199	60	88	F07	17	20	30	189	13,2
250	10	266	212	478	324	249	68	125	F10	22	23,5	39	239	22,5
300	12	291	237	528	374	297	78	125	F10	22	23,5	39	286	31,5

Subject to change without notice

ACTUATORS Z 611-A

HAND LEVER

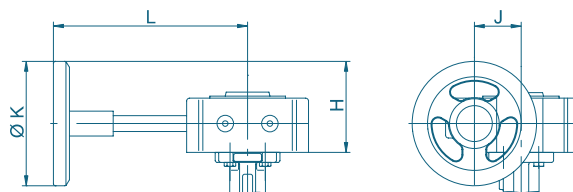
DN [mm]	Size [in]	Hand lever	F	H	L	Weight [kg]
50-65	2-2½	Size I	54	70	155	0,1
80-100	3-4	Size II	65	80	195	0,15
125	5	Size III	90	100	276	0,5



WORM GEAR

DN [mm]	Size [in]	Gear	H	J	K	L	Weight [kg]
50-65	2-2½	Size I	89	39	125	152	1,9
80-125	3-5	Size II	89	39	125	159	1,4
150-200	6-8	Size III	129	47	200	202	2,3
250	10	Size IV	129	60	200	252	2,8
300	12	Size V	158	76	250	280	6,3

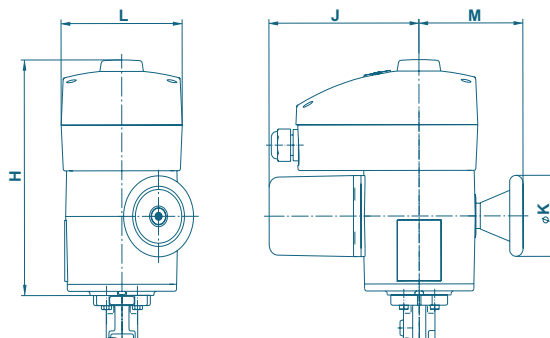
The dimensioning of actuators refers to an operating pressure of 10 bar.



ELECTRIC ACTUATOR

DN [mm]	Size [in]	Actuator	H	J	K	L	M	Weight [kg]
50-150	2-6	E 65	233	172	80	139	119	7,0
200-250	8-10	E 110	251	245	125	139	134	14,0
300	12	E 160	239	279	198	139	157	25,0

The dimensioning of actuators refers to an operating pressure of 10 bar.



Actuators for larger sizes:: See documentation of the producer

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ACTUATORS Z 611-A

PNEUMATIC DOUBLE ACTING

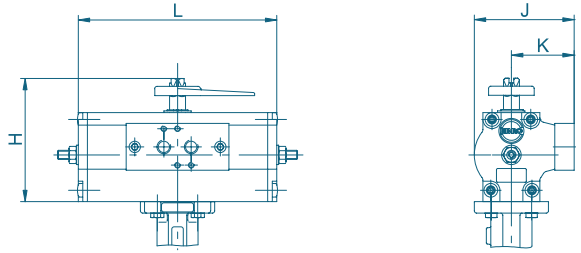
DN [mm]	Size [in]	Actuator	H	J	K	L	Weight [kg]
50-65	2-2½	EB4	96	74	49	145	1,1
80-125	3-5	EB5	108	88	55	174	1,7
150	6	EB6	123	103	62	208	2,6
200	8	EB8	136	115	68	250	4,3
250-300	10-12	EB10	155	135	79	312	6,8

The dimensioning of actuators refers to the following data:

Control Pressure: 6 bar

Operating Pressure: 10 bar

Actuator selection for deviating conditions upon request.



PNEUMATIC SINGLE ACTING

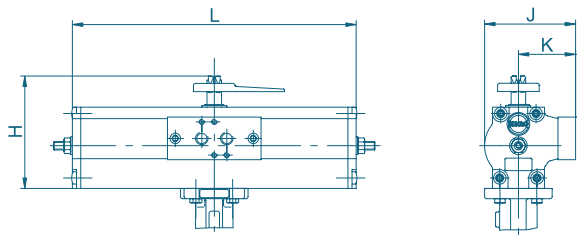
DN [mm]	Size [in]	EBF Actuator	H	J	K	L	Weight [kg]
50-65	2-2½	EB5	108	88	55	273	3,0
80-125	3-5	EB6	123	103	62	326	5,0
150	6	EB8	136	115	68	389	7,7
200	8	EB10	155	135	79	526	14,3
250	10	EB12	182	159	94	658	25,4
300	12	EB265	232	152	76	634	27,0

The dimensioning of actuators refers to the following data:

Control Pressure: 6 bar

Operating Pressure: 10 bar

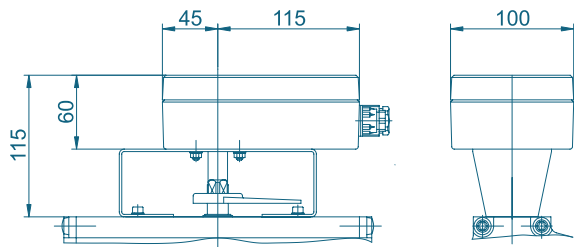
Actuator selection for deviating conditions upon request.



SWITCH BOX SERIES MSK/NSK

MSK: Switch box with integrated micro limit switches.

NSK: Switch box with integrated proximity switches.

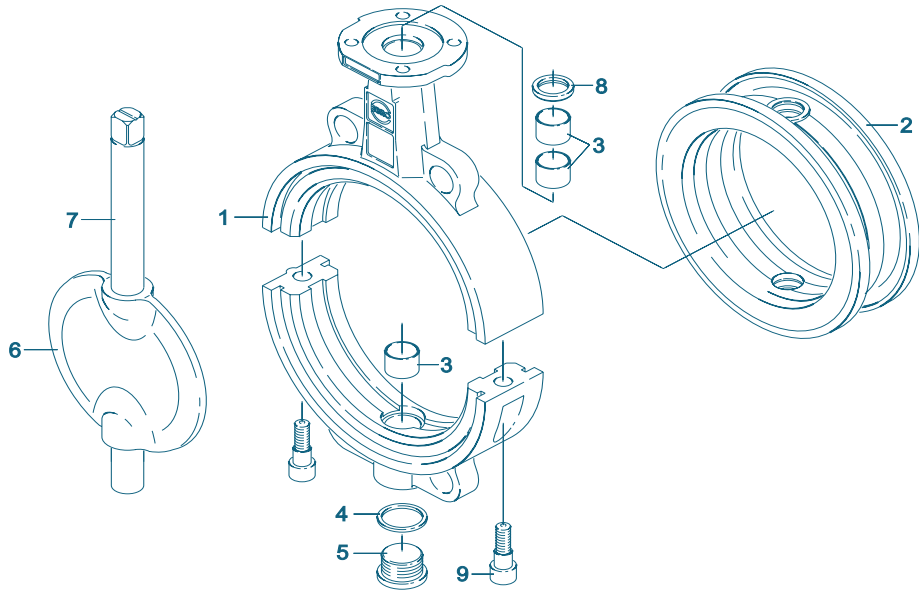


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WAFER TYPE BUTTERFLY VALVE Z 611-A

MATERIAL SPECIFICATION AND PARTS LIST



Pos.	Description	Material	Material-No.	ASTM	Pos.	Description	Material	Material-No.	ASTM
1	Body				Shaft/disc one piece				
	Nodular cast iron	GGG-40	0.7040	60-40-18	6	Disc			
2	Seat					Stainless steel	G-X5CrNiMo19-11-2	1.4408	CF8M
	NBR	Acrylonitrile butadiene rubber					G-X2CrNiMoN26-7-4	1.4469	A995
	EPDM	Ethylene propylene caoutchouc				Coating	Halar		
	CSM	Chlorsulphonated polyethylene				Surface quality	electropolished mirrow finished		
	FPM	Flourocarbon caoutchouc			7	Shaft			
	VSI	Silicon rubber				Stainless steel	G-X5CrNiMo19-11-2	1.4408	CF8M
	AU	Polyurethane elastomer					X2CrNiMoN22-5-3	1.4462	F51
3	Bearing bush						X5CrNiMo17-12-2	1.4401	316
	Brass	MS 58	2.0401	B45	8	Wiper ring			
4	Seal DIN 7603					PTFE	Polytetrafluorethylene	PTFE	PTFE
	Copper	Cu		Copper	9	Screw			
5	Plug screw DIN 908					Stainless steel	A4-70	1.4401	B8M
	Stainless steel	G-X5CrNiMo19-11-2	1.4408	CF8M	Other materials upon request.				

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TORQUE

- The torque values specified (Md) are based on liquid and lubricant media.
- Powdery (non-lubricant) media
Md x 1,3
- Dry gases/high viscous media
Md x 1,2
- The values specified are based on the initial breakaway torque.
- Dynamic torque specification available upon request.

Regarding the dimensioning of actuators, please contact our engineers.

DN [mm]	50	65	80	100	125	150	200	250	300
Size [in]	2	2½	3	4	5	6	8	10	12
Md [Nm]	7	15	18	28	45	110	140	200	280

K_v-VALUES

- The K_v-value [m³/hour] is the flow of water at a temperature of 5 °C to 30 °C [41°F to 86°F] at Δp of 1 bar.
- The K_v-values specified are based on tests carried out by the Delfter Hydraulics Laboratories, the Netherlands.
- Permissible velocity of flow
V_{max} 4,5 m/s for liquids and
V_{max} 70 m/s for gases.
- The throttle function is linear at an angle 30° to 70°.
- Avoid cavitation!

For further values, please contact our engineers.

DN [mm]	Size [in]	Opening angle α°							
		20°	30°	40°	50°	60°	70°	80°	90°
50	2	1,2	8	13	22	38	50	65	85
65	2½	2	9	22	42	77	115	170	215
80	3	8	24	50	95	150	240	330	420
100	4	13	28	65	130	180	340	550	800
125	5	26	65	130	230	350	530	870	1010
150	6	35	90	200	360	640	900	1350	2100
200	8	43	180	350	580	1000	1600	3000	4000
250	10	125	360	660	1100	1800	3100	5300	6400
300	12	200	550	1000	1600	2600	5000	7500	8500