

WAFER TYPE BUTTERFLY VALVE Z 011-AS



A low weight wafer type valve (body: aluminium) which is optimally suited for applications in public swimming pools.

TECHNICAL DATA

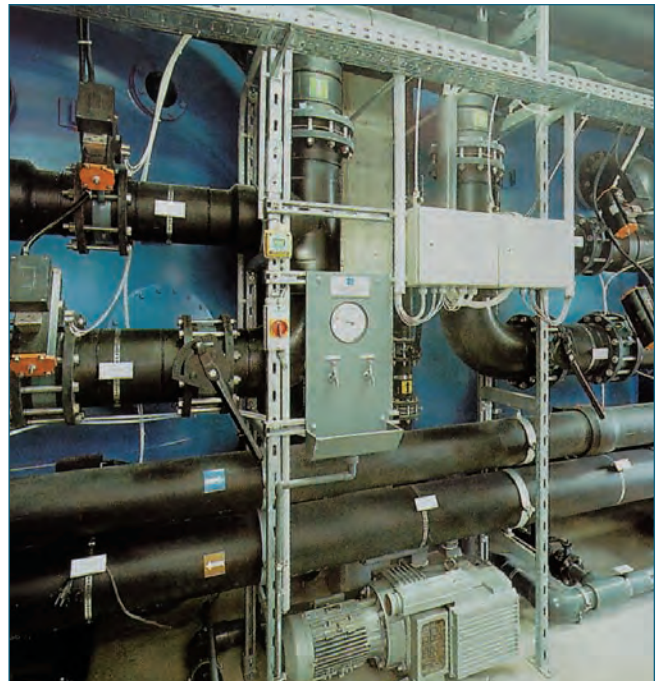
Nominal diameter:	DN 40 – DN 300 Larger Diameters: See Z011-A with Aluminium Body
Face-to-face:	EN 558 Series 20 (DIN 3202 T3 K1) ISO 5752 Series 20 API 609 Table 1 BS 5155 Series 4
Flange accommodation:	DIN 2501 PN 6/10/16 ANSI B 16.5, Class 150 MSS SP44 Class 150 AWWA C 207 AS 2129 Table D and E BS 10 Table D and E JIS B 2211-5 K JIS B 2212-10 K
Flange Surface Design:	DIN 2526, Form A-E, ANSI RF
Top flange:	EN ISO 5211 NF E 29-402
Marking:	DIN EN 19
Tightness check:	DIN 3230 T3 BO, BN (Leakage Rate 1) ISO 5208, Category 3 API 598 Table 5 ANSI B 16-104, Class VI
Temperature range:	-10 °C to + 100 °C (depending on pressure, medium and material)
Operating pressure:	max. 3 bar
Differential pressure:	max. Δp 3 bar

FEATURES

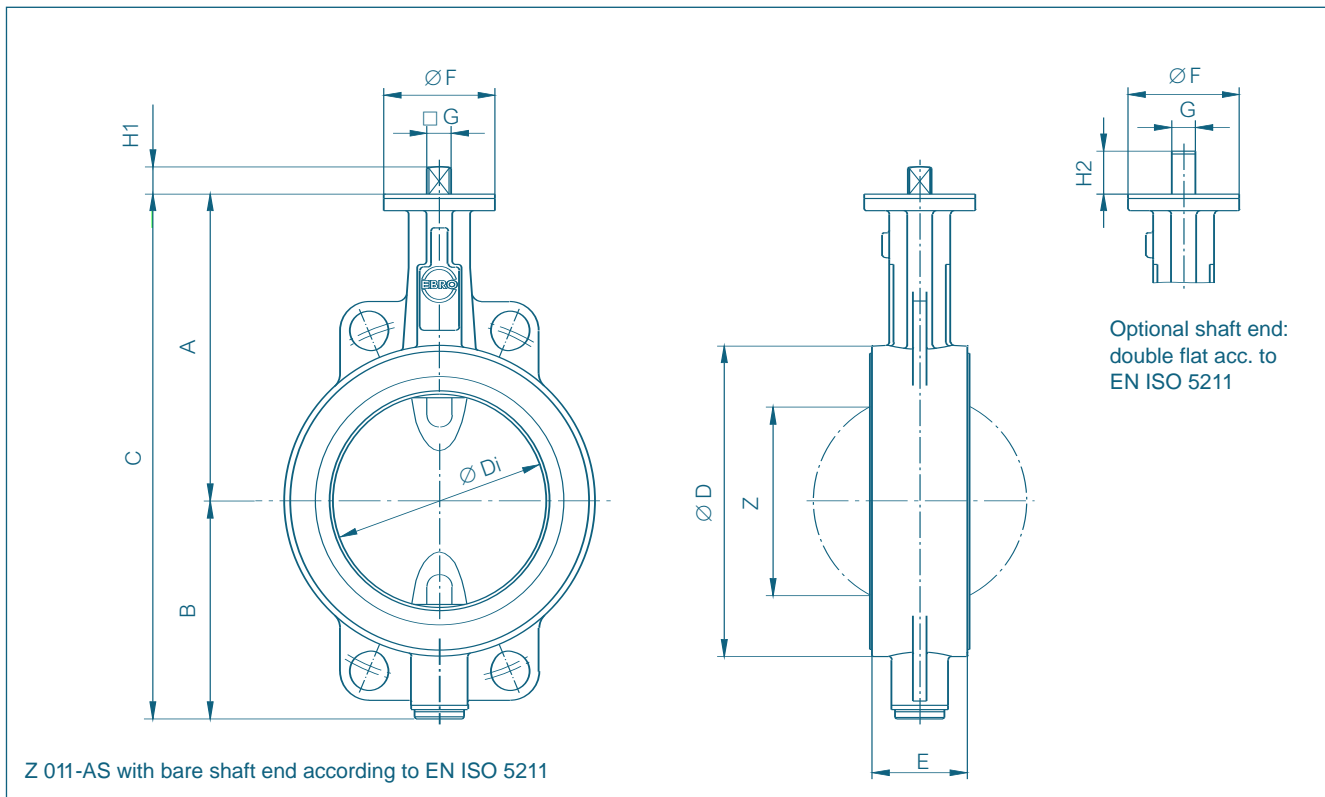
- Aluminium body (low weight - easily handled)
- Can be used as control valve or shut-off valve.
- Triple shaft bearing
- Interchangeable Seat
- Can be installed in any desired position.
- Maintenance-free
- Can be disassembled, material-specific recycling possible.

GENERAL APPLICATIONS

- Public swimming pools



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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	95	48,5	43	54	F04	11	12	19	25	0,8
65	2½	134	93	227	115	63,5	46	54	F04	11	12	19	45	1,0
80	3	157	104	261	131	78,5	46	65	F05	14	16	25	65	1,3
100	4	167	115	282	151	98,5	52	65	F05	14	16	25	85	1,6
125	5	180	127	307	182	123,5	56	65	F05	14	16	25	111	2,1
150	6	203	150	353	206	141,6	56	90	F07	17	19	30	130	3,3
200	8	228	176	404	260	199	60	90	F07	17	19	30	190	4,6
250	10	266	212	478	316	248	68	125	F10	22	24	39	240	9,6
300	12	291	237	528	360	281,1	78	125	F10	22	24	39	270	16,3

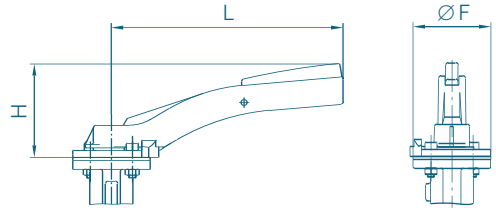
For larger diameters:., see Z 011-A (Aluminium version)

Subject to change without notice.

ACTUATORS Z 011-AS

HAND LEVER

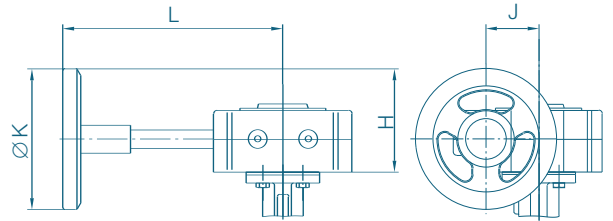
DN [mm]	Size [in]	Hand Lever	F	H	L	Weight [kg]
50-65	2-2½	Size I	54	70	155	0,1
80-125	3-5	Size II	65	80	195	0,15
150-200	6-8	Size III	90	100	276	0,5



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
250-300	10-12	Size IV	129	60	200	252	2,8

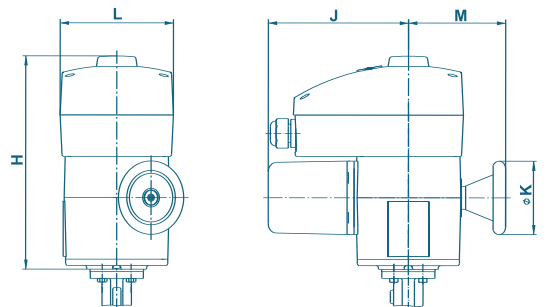
The dimensioning of actuators refers to an operating pressure of 3 bar.



ELECTRIC ACTUATOR

DN [mm]	Size [in]	Actuator Type	H	J	K	L	M	Weight [kg]
50-150	¾-6	E 65	233	172	80	139	119	7,0
200-300	8-12	E 110	251	245	125	139	134	14,0

The dimensioning of actuators refers to an operating pressure of 3 bar.



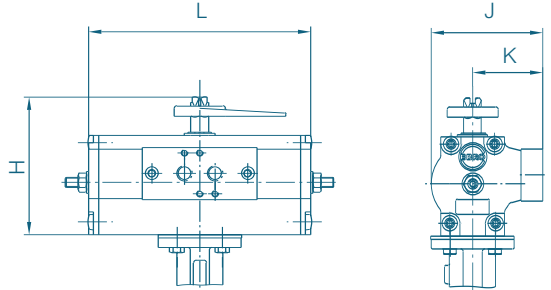
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ACTUATORS Z 011-AS

PNEUMATIC DOUBLE ACTING

DN [mm]	Size [in]	Actuator Type	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
150-200	6-8	EB6	123	103	62	208	2,6
250-300	10-12	EB8	136	115	68	250	4,3

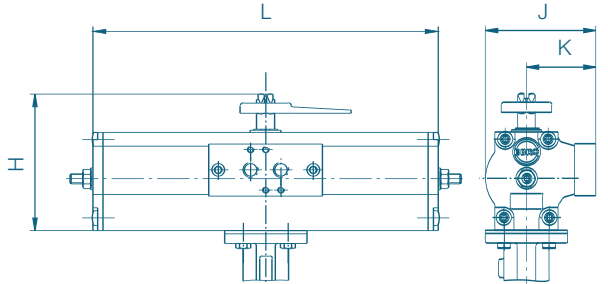
The dimensioning of actuators refers to an operating pressure of 3 bar and a control air pressure of 6 bar.



PNEUMATIC SPRING RETURN

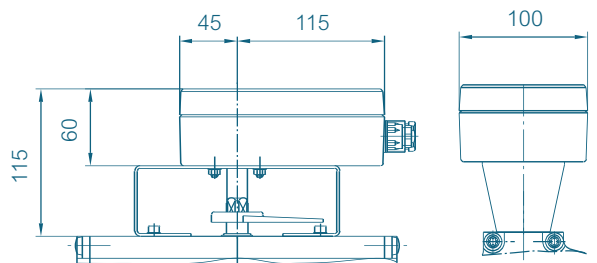
DN [mm]	Size [in]	EBF Actuator	H	J	K	L	Weight [kg]
50-80	2-3	EB5	108	88	55	273	3,0
100-150	4-6	EB6	123	103	62	326	5,0
200-300	8-12	EB10	155	135	79	526	14,3

The dimensioning of actuators refers to an operating pressure of 3 bar and a control air pressure of 6 bar.



SWITCH BOX SERIES MSK/NSK

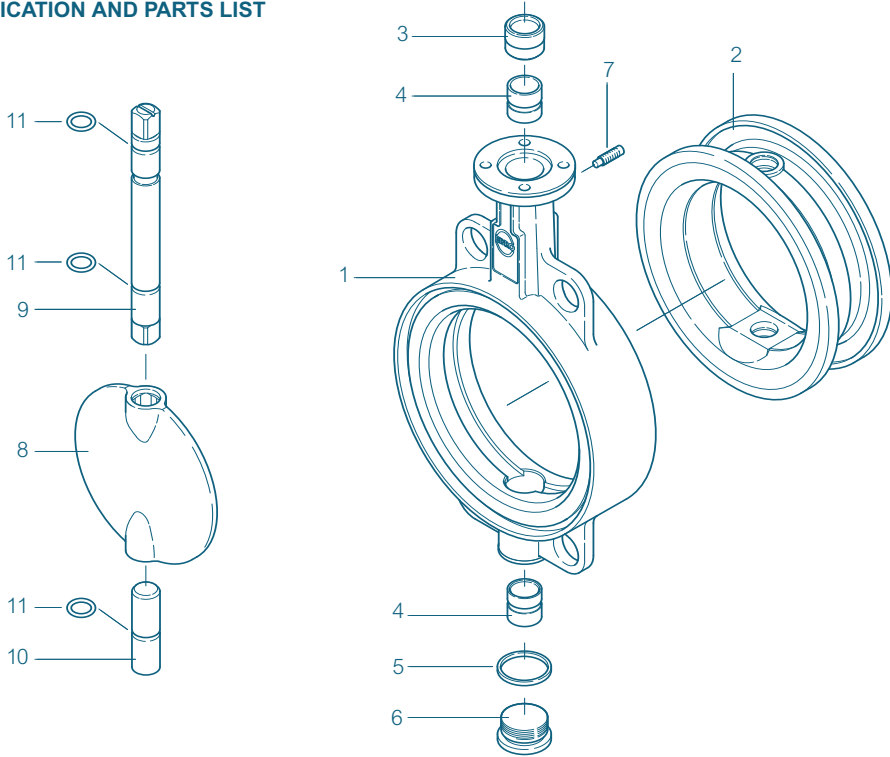
MSK: Switch Box with integrated micro limit switches.
NSK: Switch Box with integrated proximity switches.



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WAFER TYPE BUTTERFLY VALVE Z 011-AS

MATERIAL SPECIFICATION AND PARTS LIST



Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM
1	Body				8	Disc			
	Aluminiumalloy	GD-AISI9Cu3	3.2163.05	B 380.1		Stainless Steel	G-X6CrNiMo 18-10	1.4408	CF8M
2	Seat						G-X2CrNiMoN26-7-4	1.4469	F 51
	CSM	Chlorsulphonated polyethylene			9/10	Shaft			
	FPM	Fluorocarbon caoutchouc				Stainless Steel	X14CrMoS17	1.4104	430F
3/4	Bearing bush						X5CrNiMo17-12-2	1.4401	316
	Brass	MS 58	2.0401	B 45	11	O-ring			
5	Seal DIN 7603					NBR	Acrylonitrile butadiene rubber		
	Copper	Cu		Copper		FPM	Fluorocarbon caoutchouc		
6	Plug screw DIN 908								
	Stainless Steel	G-X6CrNiMo18-10	1.4408	CF8M					
7	Set screw DIN 915								
	Steel	45 H galvanized							
	Stainless Steel	X5CrNiMo17-12-2	1.4401	B8M					
									Other materials upon request.

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K_V-VALUES

- The K_V-value (m³per 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!

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	30	90	190	320	510	650	970	1200
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

For further values, please contact our engineers.