

# WAFER TYPE BUTTERFLY VALVE Z 011-GMX



Wafer type butterfly valve with special lining and disc for abrasive 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 NF E 29-305.1
Flange accommodation:	DIN 2501 PN 10 ANSI B 16.5, Class 150
Flange Surface Design:	DIN 2526, Form A-E, ANSI RF
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 + 90 °C (depending on pressure, medium and material)
Operating pressure:	max. 6 bar
Differential pressure:	max 6 bar

## FEATURES

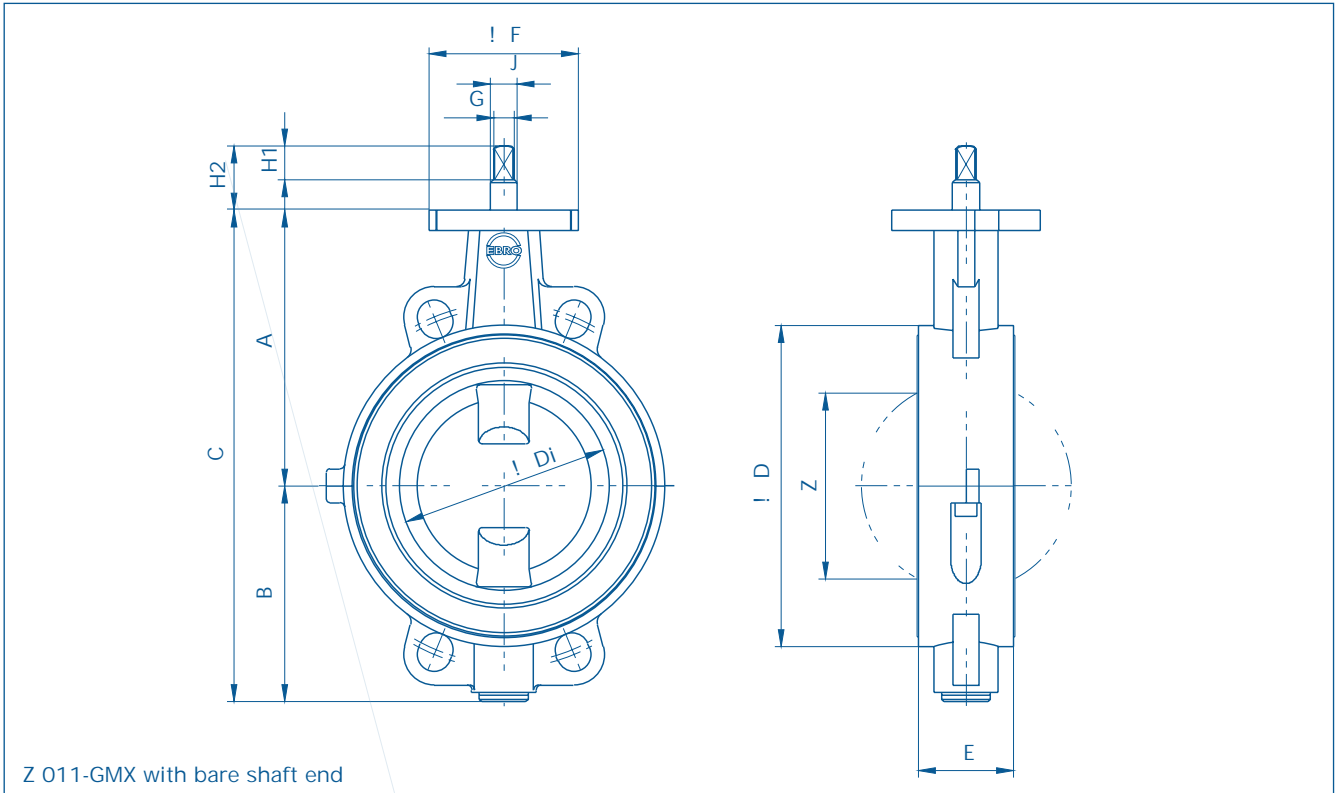
- Shut-off and controlling of strong abrasive media, e.g. sand, cement, flue ash
- High abrasion strength of valve disc and seal
- Two-part body
- Triple shaft bearings prevent shaft deflection and guarantee optimum guidance even after many years of operational service.
- Absolutely tight sealing with flow in either direction
- Can be installed in any desired position.
- Maintenance-free
- Can be disassembled, material-specific recycling possible.

## GENERAL APPLICATIONS

- Bulk handling technology
- Weight technology
- Pneumatic conveying systems



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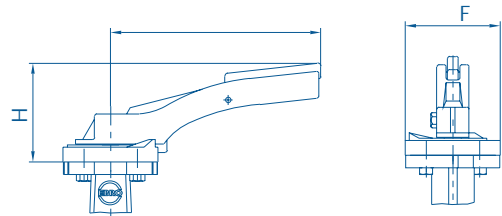
DN [mm]	Size [in]	Dimensions [mm]													Weight [kg]
		A	B	C	D	Di	E	F	Flange	G	H1	H2	J	Z	
50	2	126	84	210	105	49	43	90	F07	12	20	38	16	24	1,6
65	2 1/2	134	93	227	125	64,3	46	90	F07	12	20	38	16	45	1,9
80	3	140	104	244	140	78,2	46	90	F07	12	20	38	16	64	2,2
100	4	150	115	265	160	98,6	52	90	F07	12	20	38	16	84	2,8
125	5	163	127	290	190	123,6	56	90	F07	12	20	38	16	111	3,5
150	6	193	150	343	217	148,5	56	90	F07	16	20	38	20	138	4,6
200	8	218	176	394	272	198,2	60	90	F07	16	20	38	20	190	6,8
250	10	266	212	478	327	250	68	125	F10	24	20	38	30	240	12,3
300	12	293	237	530	377	297	78	125	F10	24	20	38	30	289	17,0

Subject to change without notice.

# ACTUATORS Z 011-GMX

## HAND LEVER

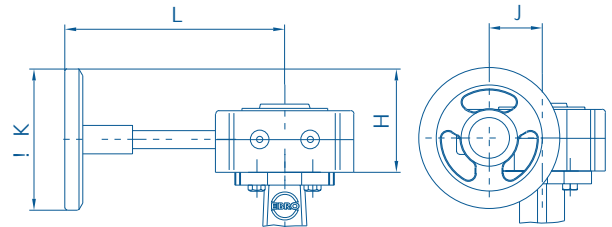
DN [mm]	Size [in]	Hand Lever	F	H	L	Weight [kg]
50-125	2-5	Size II	90	95	195	0,7
150-200	6-8	Size III	90	105	276	0,7



## WORM GEAR

DN [mm]	Size [in]	Gear	H	J	K	L	Weight [kg]
50-125	2-5	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 6 bar.

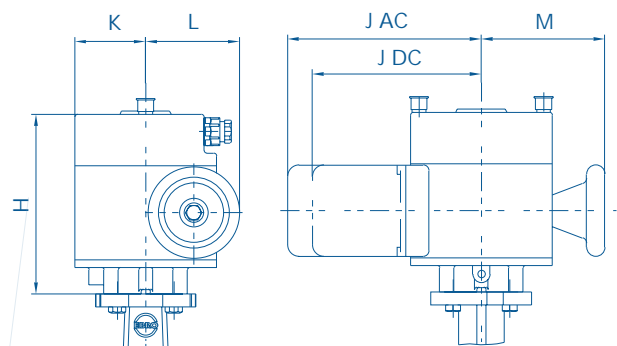


## ELECTRIC ACTUATOR

DN [mm]	Size [in]	Actuator Type	H	J/DC	J/AC	K	L	M	Weight [kg]
50-125	2-5	E 60	158	171	171	62	82	110	5,0
150-250	6-10	E 100	183	206	246	74	121	131	11,5
300	12	E 150	200	238	278	105	189	155	21,0

AC = Alternating current  
DC = Three phase current

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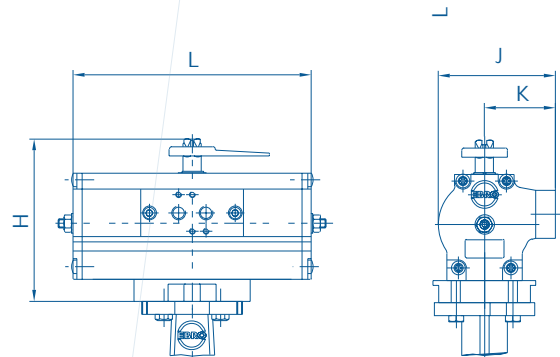
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## PNEUMATIC DOUBLE ACTING

DN [mm]	Size [in]	Actuator Type	H	J	K	L	Weight [kg]
50-65	2-2½	EB5	108	88	55	174	1,7
80-125	3-5	EB6	123	103	62	208	2,6
150	6	EB8	136	115	68	250	4,3
200-250	8-10	EB10	155	135	79	312	6,8
300	12	EB12					

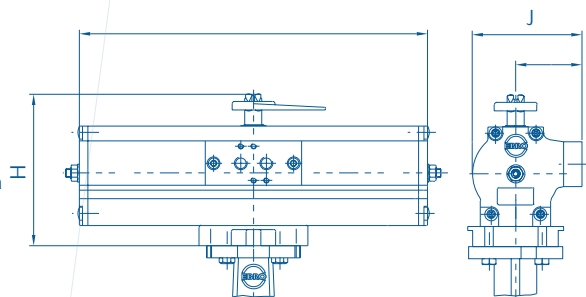
The dimensioning of actuators refers to an operating pressure of 6 bar and a control air pressure of 6 bar.



## PNEUMATIC SPRING RETURN

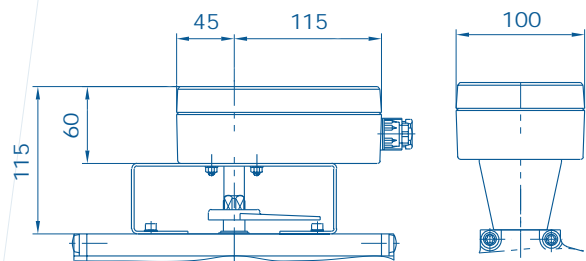
DN [mm]	Size [in]	EBF Actuator	H	J	K	L	Weight [kg]
50-80	2-3	EB5	108	88	55	273	3,0
100-125	4-5	EB6	123	103	62	326	5,0
150	6	EB8	136	115	68	389	7,7
200	8	EB10	155	135	79	526	14,3
250	10	EB12	182	159	94	656	25,4
300	12	EB265	232	152	76	634	27,0

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



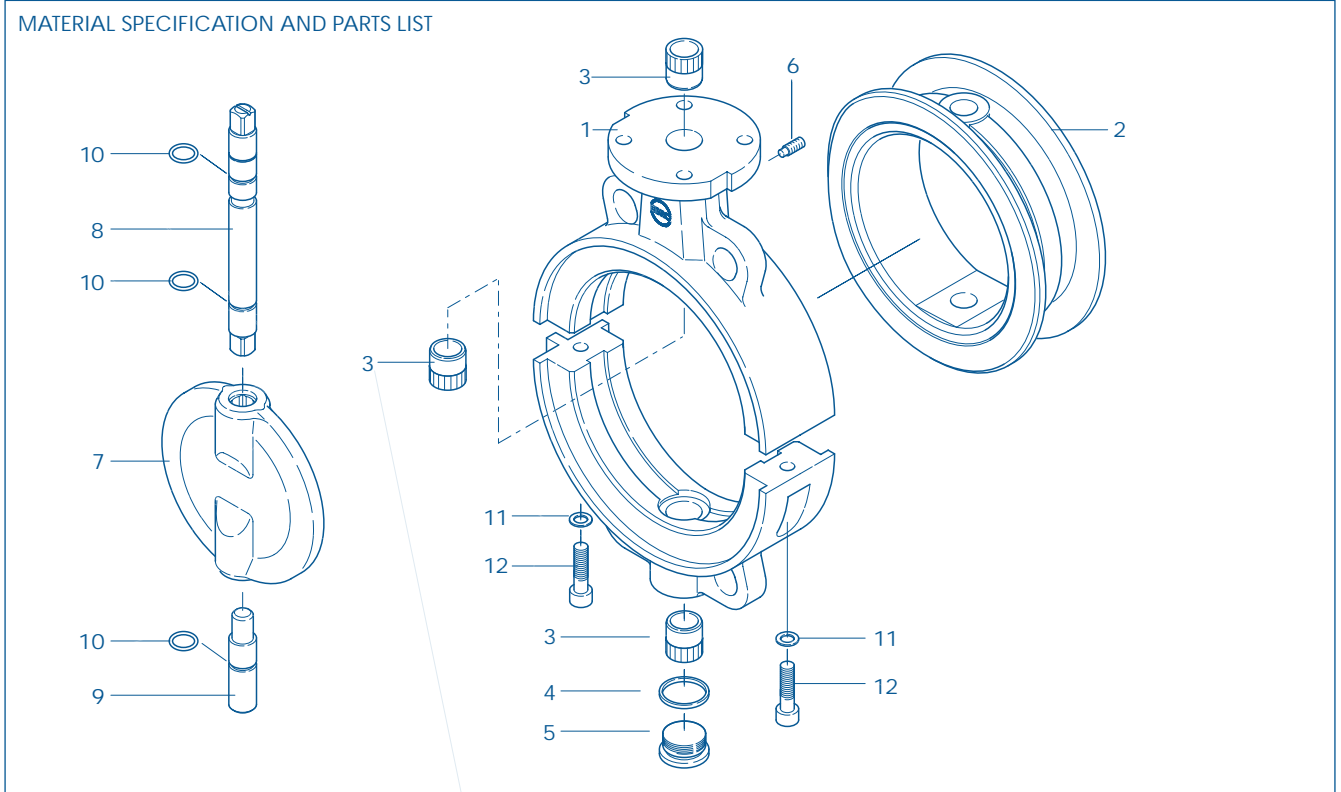
## SWITCH BOX SERIES MSK/NSK

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



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Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM		
1	Body	Aluminium alloy	G-AlSi10Mg	3.2381	361.1	7	Disc	Stainless Steel	G-X6CrNiMo18-10	1.4401	CF8M
2	Manschette	GMX	Polyurethan				Coating	GMX Polyurethan			
3	Bearing sleeve	Brass	MS 58	2.0401	B 45	8/9	Shaft	Stainless Steel	X14CrMoS17	1.4104	430F
4	Seal DIN 7603	Copper	Cu		Copper	10	O-ring	NBR	Acrylonitrile butadiene rubber		
5	Plug screw DIN 908	Stainless Steel	G-X6CrNiMo18-10		CF8M	11	Washer	Stainless Steel	X5CrNiMo17-12-2	1.4401	316
6	Set screw DIN 915	Steel	45 H galvanized	1.4408		12	Screw	Stainless Steel	A2-70		B8
		Stainless Steel	A4-70		B8M			Stainless Steel	A4-70		B8M
								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.

DN [mm]	Size [in]	Operating pressure 6 [bar]
50	2	16
65	2 1/2	21
80	3	25
100	4	43
125	5	73
150	6	145
200	8	260
250	10	367
300	12	667

All values in Nm

Regarding the dimensioning of actuators, please contact our engineers.

## K<sub>V</sub>-VALUES

- The K<sub>V</sub>-value (m<sup>3</sup> per hour) is the flow of water at a temperature of 5°C to 30°C ( 41°F to 86°F) at p of 1 bar.
- The K<sub>V</sub>-values specified are based on tests carried out by the Delfter Hydraulics Laboratories, the Netherlands.
- Permissible velocity of flow  
V<sub>max</sub> 4,5 m/s for liquids and  
V<sub>max</sub> 70 m/s for gases.
- The throttle function is linear at an angle 30<sub>i</sub> to 70<sub>i</sub>.
- Avoid cavitation!

DN [mm]	Size [in]	Opening angle i							
		20 <sub>i</sub>	30 <sub>i</sub>	40 <sub>i</sub>	50 <sub>i</sub>	60 <sub>i</sub>	70 <sub>i</sub>	80 <sub>i</sub>	90 <sub>i</sub>
50	2	1,2	8	13	22	38	50	65	85
65	2 1/2	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

For further values, please contact our engineers.