

# WAFER TYPE BUTTERFLY VALVE Z 011-B



A universally applicable wafer type valve with vulcanised liner according to EN 593.

## TECHNICAL DATA

Nominal diameter:	DN 50 - DN 600
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 6/10/16 ASME Class 150
Flange Surface Design:	EN 1092 Form A/B ASME RF, FF
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check:	EN 12266 (Leakage rate A) ISO 5208, Category 3
Temperature range:	-10°C to +120°C (depending on pressure, medium and material)
Operating pressure:	max. 16 bar
Vacuum:	0,1 bar absolute

## FEATURES

- Vulcanised liner
- Triple shaft bearing prevent shaft deflection
- The valve body and disc are accurately machined which results in low operating torque and long service life
- Four flange mounting holes ensure correct valve location when installing
- Can be installed in any desired position
- Maintenance-free
- Single flange mounting wafer type: DN 50 - 250: 3 bar  
DN 300 - 600: 2 bar

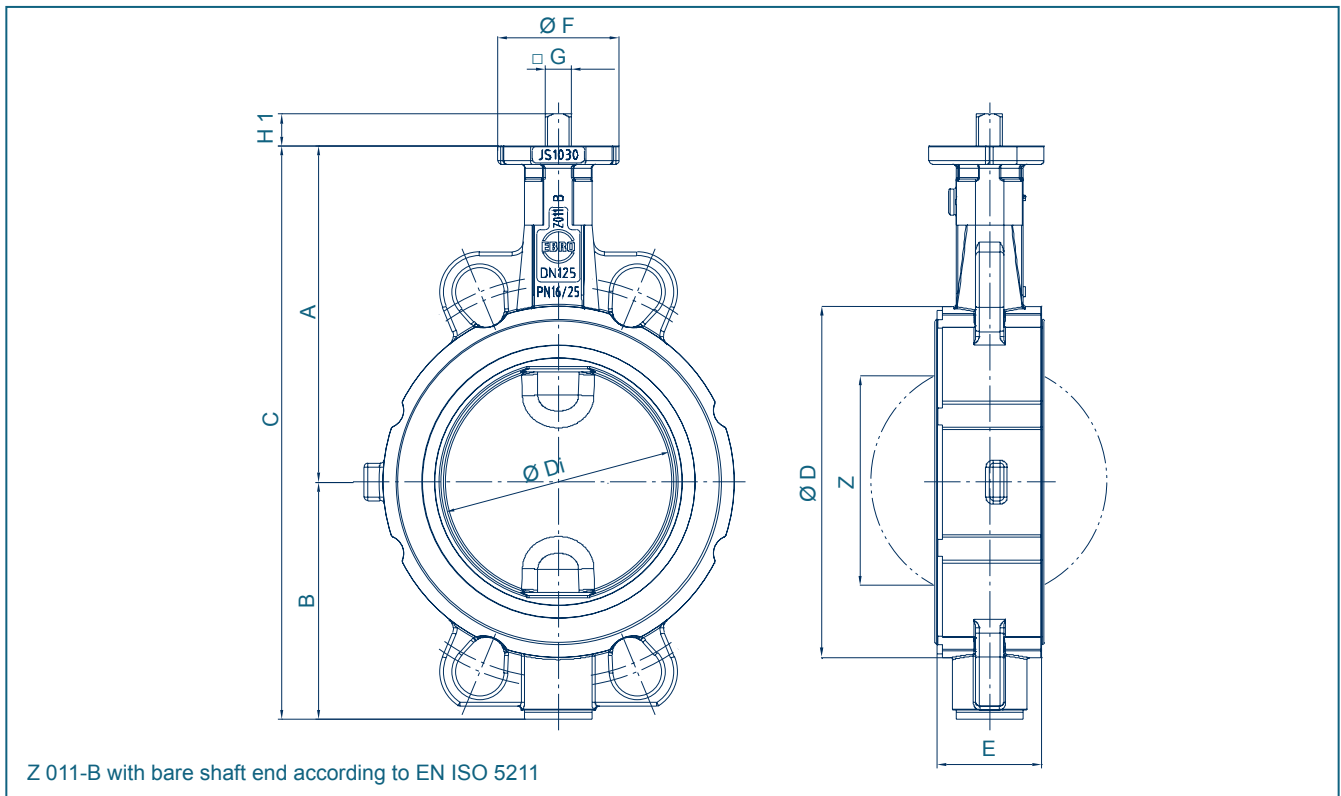
## GENERAL APPLICATIONS:

- Chemical and petrochemical industries
- Water and waste water technology
- Pneumatic materials handling technology
- Shipbuilding
- Power generation industry
- Food industry
- Civil engineering



Lug type version Z014-B

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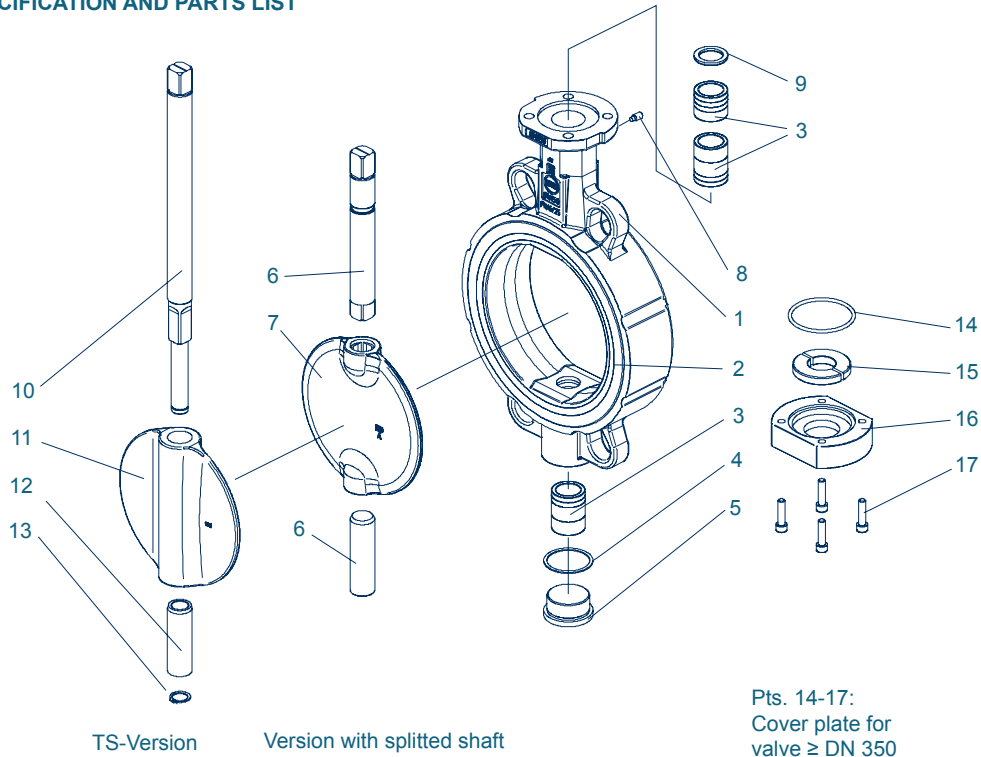


DN [mm]	Size [in]	Dimensions [mm]											Weight [kg] (EN-JS 1030)	
		A	B	C	D	Di	E	F	Flange	G	H1	Z	2 Piece shaft	TS- shaft
50	2	126	84	210	95	49	43	54	F04	11	14	25	2,5	-
65	2½	135	93	227	115	64	46	54	F04	11	14	45	3,0	-
80	3	157	104	261	138	79	46	65	F05	14	17	65	4,0	4,5
100	4	168	115	282	158	99	52	65	F05	14	17	85	5,0	5,6
125	5	180	127	307	188	124	56	65	F05	14	17	111	7,0	7,6
150	6	203	151	354	212	148	56	88	F07	17	20	139	9,5	11,0
200	8	229	177	405	268	199	60	88	F07	17	20	190	13,5	15,3
250	10	266	212	478	320	248	68	125	F10	22	24	240	22,5	25,5
300	12	291	240	531	370	296	78	125	F10	22	24	287	30,5	34,0
350	14	332	270	602	415	338	78	150	F12	27	29	330	43,5	49,1
400	16	363	314	677	473	390	102	150	F12	27	29	378	62	67,8
450	18	397	335	732	530	426	114	175	F16	36	38	417	98	102,5
500	20	437	371	808	574	489	127	175/210	F14/F16	36	38	474	110	116,5
600	24	498	435	933	675	582	154	210/300	F16/F25	46	48	563	185	212,0

Subject to change without notice

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## MATERIAL SPECIFICATION AND PARTS LIST



Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM		
1	<b>Body</b>	Grey Cast Iron	EN-GJS-400-15	EN-JS 1030	A 536	10	<b>TS-Shaft</b>	Stainless Steel	X14CrMoS17	1.4104	A314-430F
2	<b>Vulcanised liner</b>	EPDM	Ethylene propylene diene monomer rubber			11	<b>TS-Disc</b>	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	A351-CF8M
3	<b>Bearing bush</b>	Heat treated steel	42CrMo4	1.7225	A434	12	<b>Sleeve</b>	Stainless Steel	X5CrNi18-10	1.4301	A240-304
4	<b>Seal</b>	Copper	Cu	Copper		13	<b>Retaining ring</b>	Stainless Steel	X39CrMo17-1	1.4122	
5	<b>Plug screw DIN 908</b>	Stainless Steel	G-X5CrNiMo 19-11-2	1.4408	A351-CF8M	14	<b>O-Ring</b>	NBR	Nitrile butadiene rubber		
6	<b>Shaft</b>	Stainless Steel	X14CrMoS17	1.4104	A314-430F	15	<b>Shaft retainer</b>	Brass	CuZn39Pb3	2.0401	B455
7	<b>Disc</b>	Stainless Steel	G-X5CrNiMo 19-11-2	1.4408	A351-CF8M	16	<b>Cover plate</b>	Grey Cast Iron	EN-GLS-250	EN-JL 1040	A48-40B
8	<b>Plug screw DIN 915</b>	Steel	45 H galvanized			17	<b>Screw</b>	Steel	45 H galvanized		
9	<b>Wiper ring</b>	PTFE	Polytetrafluorethylene	PTFE	PTFE						
											Other materials upon request

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## TORQUE

- The values listed in the table are initial breakaway torques, taken with liquids and lubricant media.

- Please regard these as approximate values, as the objective value depends on different factors like pressure, medium, rubber, quality, temperature ... etc.

- Our engineers look forward to help you with exact values for your application.

- Powdery (non-lubricant) media  
Md x 1,3

- Dry gases/high viscous media  
Md x 1,2

DN [mm]	Size [in]	Adapted Disc Size Pressure Rating			
		3 bar disc	6 bar disc	10 bar disc	16 bar disc
50	2	5	7	7	9
65	2½	7	9	15	18
80	3	14	18	24	28
100	4	9	18	25	30
125	5	15	22	45	59
150	6	36	45	80	100
200	8	59	76	140	200
250	10	150	180	200	300
300	12	200	240	280	360
350	14	350	540	640	1200
400	16	650	900	1300	1700
450	18	720	1000	1400	2000
500	20	1100	1400	2255	3000
600	24	1200	2100	3000	4000

All values in Nm

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

- The K<sub>V</sub>-values [m³ per 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<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,  
V<sub>max</sub> 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	1,3	5,5	13	23	35	48	62	76
65	2½	3,8	8,2	22	44	73	108	148	192
80	3	11	14	37	77	132	200	277	363
100	4	17	22	93	180	277	366	429	448
125	5	26	34	305	521	769	1027	1273	1484
150	6	38	49	187	385	640	918	1184	1406
200	8	67	87	315	640	1093	1645	2268	2934
250	10	105	136	501	947	1574	2366	3305	4374
300	12	152	197	670	1526	2655	3905	5124	6159
350	14	206	267	997	2076	3456	4965	6429	7676
400	16	269	349	1141	2567	4419	6439	8357	9920
450	18	341	442	1356	3140	5520	8187	10827	13130
500	20	421	546	1986	4312	7465	11123	14962	18659
600	24	606	786	2778	5822	9976	14889	20208	25583

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