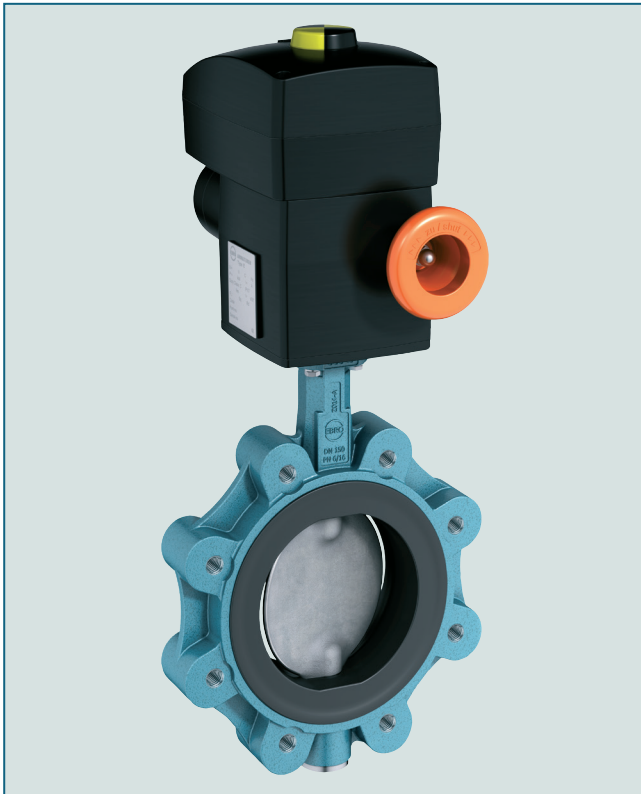


LUG TYPE BUTTERFLY VALVE Z 014-A



Lug type butterfly valve with threaded holes. This type enables the one-sided lugging of pipes.

TECHNICAL DATA

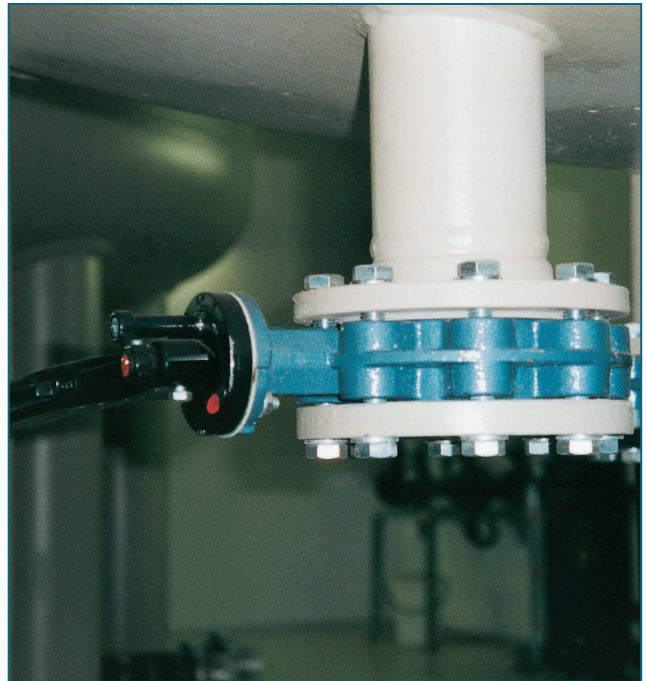
Nominal diameter:	DN 20 - DN 600 (DN 20 only PN10/16)
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 6/10/16 ASME Class 150 AS 4087 PN 16
Flange Surface Design:	EN 1092 Form A/B ASME RF, FF
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check:	EN 12266 (Leakage rate A) ISO 5208, Category 3
Temperature range:	-40°C to +200°C (depending on pressure, medium and material)
Operating pressure:	max. 16 bar

FEATURES

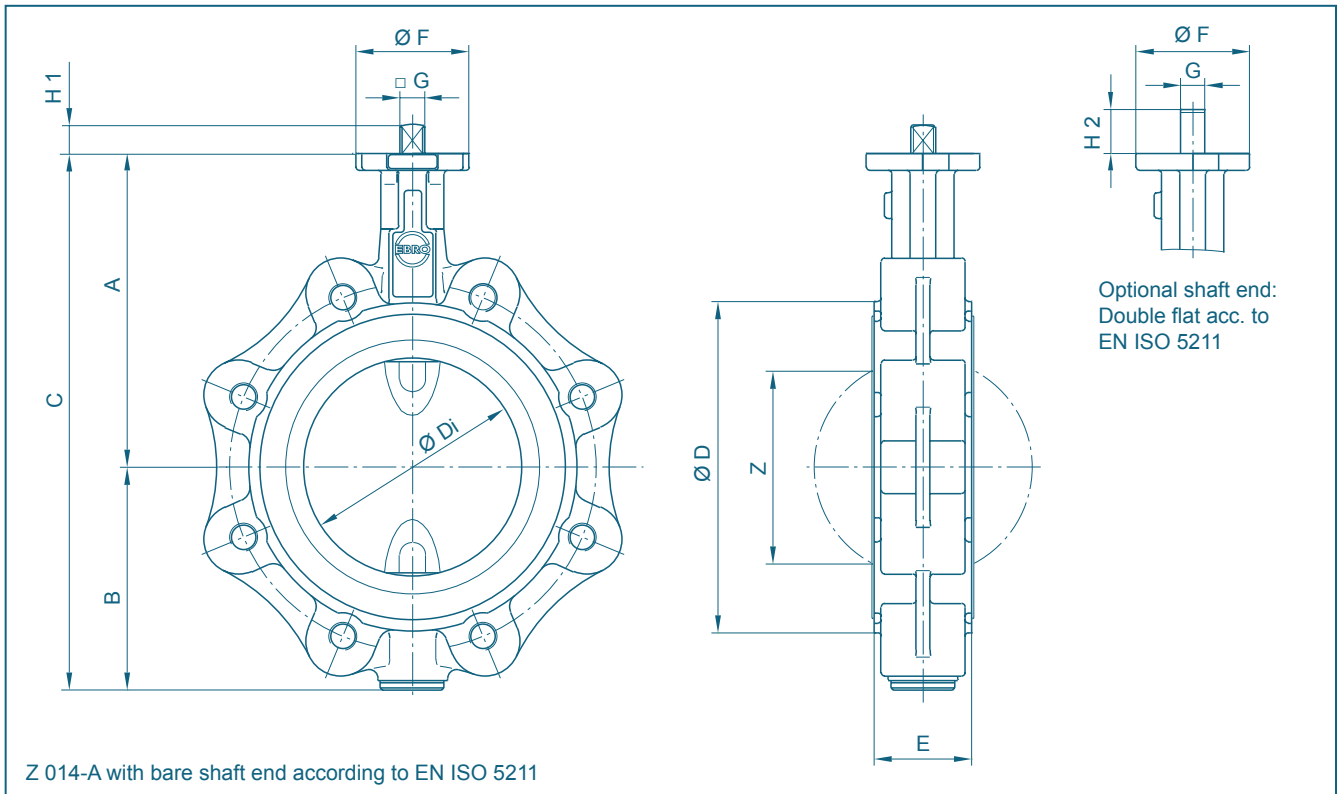
- Absolutely tight sealing with flow in either direction
- The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- Triple shaft bearings prevent shaft deflection and guarantee optimum guidance even after many years of operating service
- Can be disassembled, material-specific recycling possible
- Single flange mounting is possible
- Can be installed in any desired position
- Maintenance-free
- For paint and laquers, a silicone-free version is available

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 BUTTERFLY VALVE Z 014-A



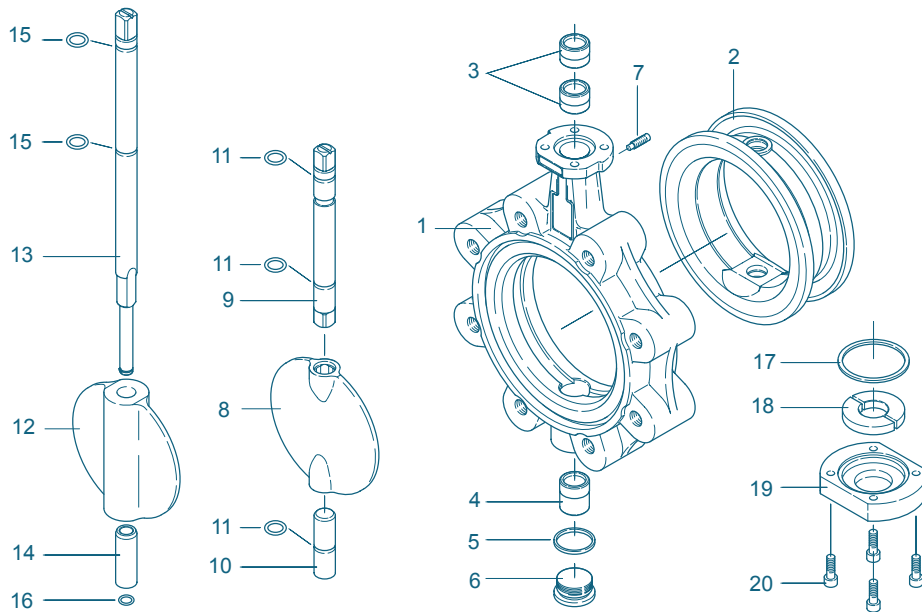
DN [mm]	Size [in]	Dimensions [mm]												Weight[kg] (GG-25)	
		A	B	C	D	Di	E	F	Flange	G	H1	H2	Z	Splitted shaft	TS- shaft
20	¾	104	45	149	63	31,5	33	54	F04	11	12	19	-	2,1	-
25	1	104	45	149	63	31,5	33	54	F04	11	12	19	-	2,1	-
32	1¼	104	50	154	68	31,5	33	54	F04	11	12	19	-	2,1	-
40	1½	113	66	179	80	38	33	54	F04	11	12	19	22	4,0	-
50	2	126	84	210	95	48,5	43	54	F04	11	12	19	25	4,8	-
65	2½	134	93	227	115	63,5	46	54	F04	11	12	19	45	5,5	-
80	3	157	104	261	138	78,5	46	65	F05	14	16	25	65	8,6	9,1
100	4	167	115	282	158	98,5	52	65	F05	14	16	25	85	9,8	10,4
125	5	180	127	307	188	123,5	56	65	F05	14	16	25	111	10,1	10,7
150	6	203	150	353	210	148	56	90	F07	17	19	30	139	13,1	14,6
200	8	228	176	404	268	199	60	90	F07	17	19	30	190	18,8	20,6
250	10	266	212	478	320	248	68	125	F10	22	24	39	240	29,5	32,5
300	12	291	237	528	370	296	78	125	F10	22	24	39	287	37,0	40,5
350	14	332	269	601	408	338	78	150	F12	*	*	-	330	54,8	60,4
400	16	363	314	677	470	388	102	150	F12	*	*	-	378	81,5	87,3
450	18	397	335	732	530	430,5	114	210	F16	*	*	-	417	101,4	105,9
500	20	437	371	808	574	494,5	127	210	F14/F16	*	*	-	474	136,3	142,8
600	24	498	469	967	675	590	154	300	F16/F25	*	*	-	563	240,5	267,5

* According to mounted actuator

Subject to change without notice

LUG TYPE BUTTERFLY VALVE Z 014-A

MATERIAL SPECIFICATION AND PARTS LIST



TS-Version

Version with splitted shaft

Pts. 17-20:
Cover plate for
valve \geq DN 350

Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM
1	Body				9/10	Shafts			
	Nodular Cast Iron	GGG-40	0.7040	60-40-18		Stainless Steel	X14CrMoS17	1.4104	430 F
		GGG-40.3	0.7043				X5/(X2)CrNiMo17-12-2	1.4401/1.4404	316
							Hastelloy	2.4883	Hastelloy
2	Seat				11	O-ring			
	NBR	Nitrile butadiene rubber				NBR	Nitrile butadiene rubber		
	EPDM	Ethylene propylene diene monomer rubber				FPM	Fluorocarbon rubber		
	CSM	Chlorosulfonated polyethylene rubber			12	TS-disc			
	FPM	Fluorocarbon rubber				Nodular Cast Iron	GGG-40	0.7040	60-40-18
	VSI	Silicon rubber				Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M
	SBR-green	Styrene butadiene rubber				Aluminium Bronze	G-CuAl10Ni	2.0975	C 95800
3/4	Bearing bush					Coating	Halar, Rilsan		
	Brass	MS 58	2.0401	B 45		Surface quality	electropolished, mirror finished		
	Polyamide	PA 66			13	TS-shaft			
	PTFE	Polytetrafluorethylene				Stainless Steel	X14CrMoS17	1.4104	430 F
5	Seal DIN 7603						X39CrMo17-1	1.4122	
	Copper	Cu		Copper			X5CrNiMo17-12-2	1.4401	316
6	Plug screw DIN 908				14	Sleeve			
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	CF8M		Stainless Steel	X5CrNi18-10	1.4301	304
7	Set screw DIN 915				15	O-ring			
	Steel	45 H galvanized				NBR	Nitrile butadiene rubber		
	Stainless Steel	A4-70		B8M		FPM	Fluorocarbon rubber		
8	Disc				16	Retaining ring			
	Steel	ST 52.3	1.0570	572-50		Stainless Steel	X39CrMo17-1	1.4122	
	Stainless Steel	X5CrNi18-10	1.4301	304	17	O-ring			
		G-X5CrNiMo19-11-2	1.4408	CF8M		NBR	Acrylonitrile butadiene rubber		
		X2CrNiMo17-12-2	1.4404	316 L	18	Shaft retainer			
		X6CrNiMoTi17-12-2	1.4571	316 Ti		Coating	MS 58	2.0401	B 45
		G-X2CrNiMoN26-7-4	1.4469	F 51	19	Cover plate			
		Hastelloy	2.4883	Hastelloy		Grey Cast Iron	GG-25	0.6025	40 B
	Aluminium Bronze	G-CuAl10Ni	2.0975	C 95800	20	Screw			
	Coating	Halar, Rilsan, NBR, EPDM				Steel	45 H galvanized		B 8
	Surface quality	electropolished, mirror finished				Stainless Steel	A2-70		B8M
							A4-70		
	Other materials upon request								

Subject to change without notice

LUG TYPE BUTTERFLY VALVE Z 014-A

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
20	¾	5	5	5	-
25	1	5	5	5	-
32	1¼	5	5	5	-
40	1½	8	8	8	8
50	2	9	9	9	9
65	2½	18	18	18	18
80	3	8	10	18	24
100	4	9	18	28	37
125	5	15	22	45	59
150	6	36	45	78	125
200	8	59	76	140	200
250	10	150	180	200	240
300	12	200	240	280	360
350	14	350	540	610	700
400	16	420	620	750	850
450	18	720	746	860	1500
500	20	900	1100	2255	3690
600	24	1050	2100	3000	5830

All values in Nm

K_V-VALUES

- The K_V-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_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,
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°
20	¾	-	3,46	5,95	7,97	9,7	11,2	12,8	14,5
25	1	-	3,53	7,33	11,5	15,8	20,0	24,0	27,3
32	1¼	-	2,56	7,97	15,5	24,2	33,0	40,8	46,6
40	1½	0,94	4,96	11,9	20,7	30,4	40,2	49,0	55,8
50	2	3,84	10,1	20,7	34,4	49,7	65,2	79,5	91,2
65	2½	9,5	16,6	39,1	72,6	113	157	199	235
80	3	15,6	20,6	51,4	102	165	234	304	368
100	4	24,9	39,8	96,5	183	288	398	503	589
125	5	51,8	67,2	135	256	428	652	926	1250
150	6	76,5	97,3	197	375	629	957	1360	1830
200	8	137	187	373	697	1160	1760	2510	3400
250	10	227	271	563	1090	1850	2830	4010	5390
300	12	287	409	820	1550	2610	4050	5880	8120
350	14	399	488	1070	2110	3590	5480	7760	10400
400	16	557	703	1360	2600	4470	7060	10400	14600
450	18	716	907	1810	3440	5830	8980	13000	17800
500	20	875	1110	2250	4280	7180	10900	15500	20900
600	24	1230	1550	3150	6010	10090	15400	21800	29400

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