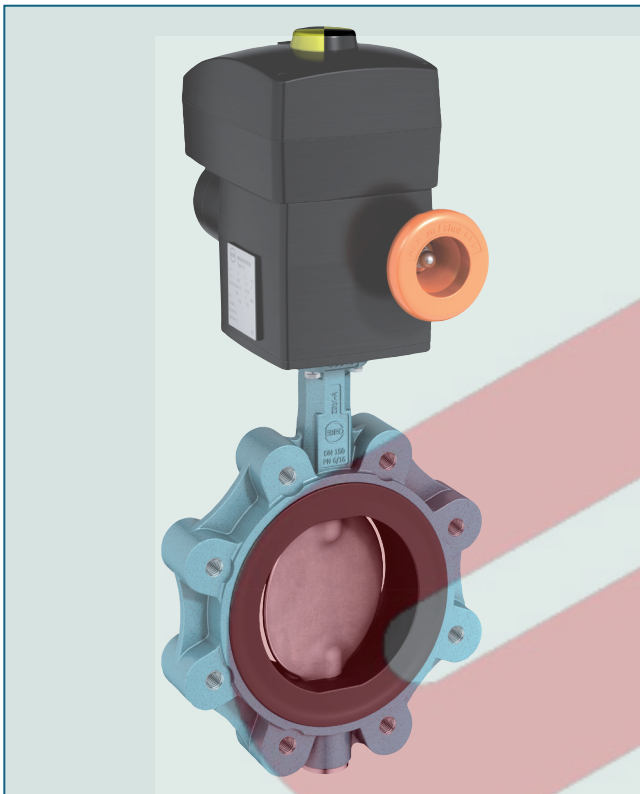


LUG TYPE BUTTERFLY VALVE Z 014-A



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

TECHNICAL DATA

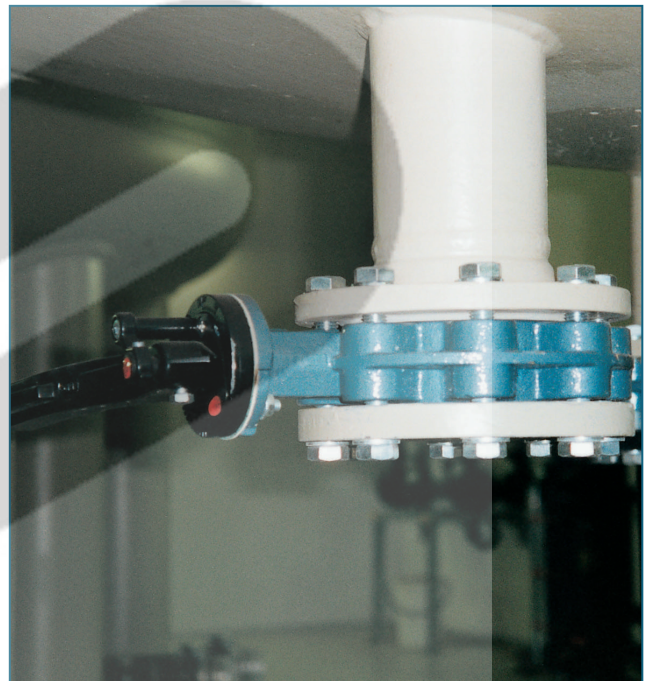
Nominal diameter:	DN 20 - DN 600 (DN 20 only PN10/16)
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 6/10/16 ASME Class 150 AS 4087 PN 16
Flange Surface Design:	EN 1092 Form A/B ASME RF, FF
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check:	EN 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

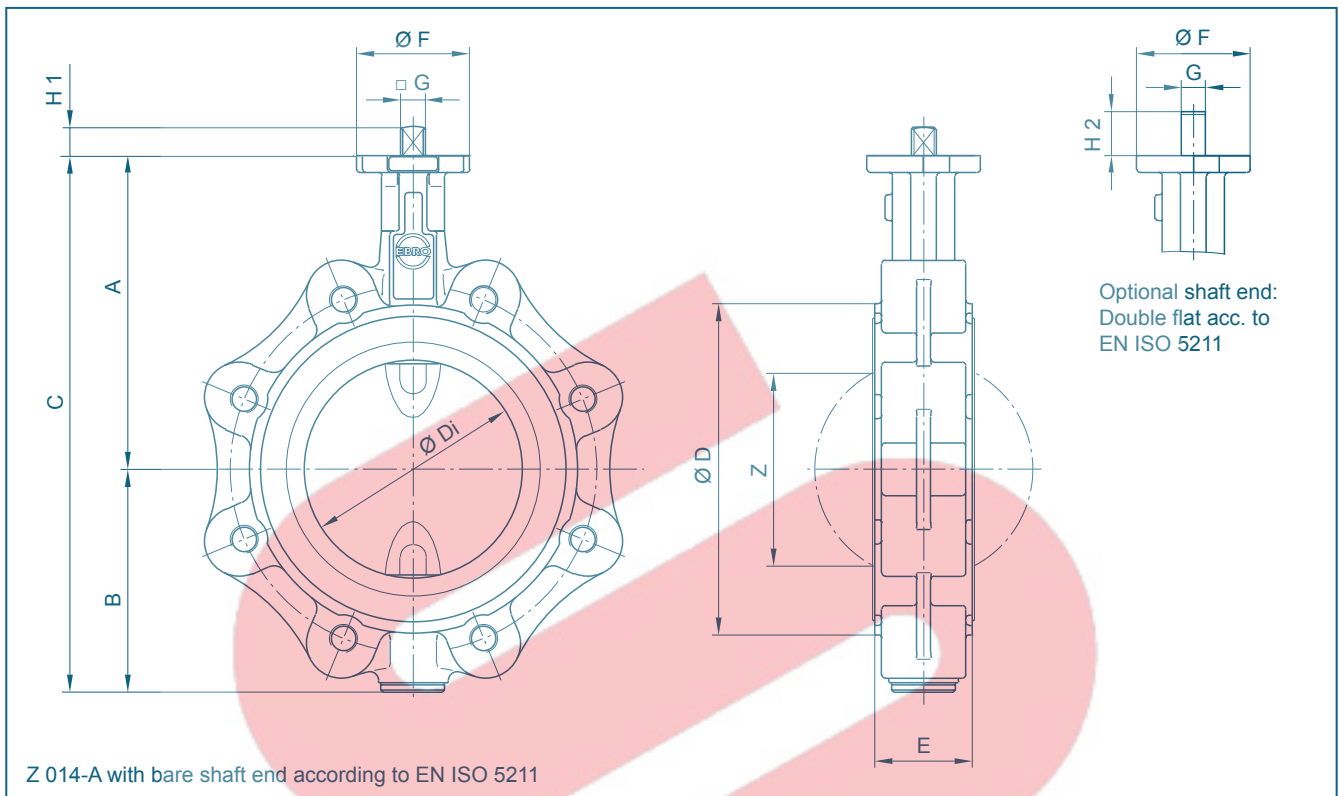
- Absolutely tight sealing with flow in either direction
- The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- Triple shaft bearings prevent shaft deflection and guarantee optimum guidance even after many years of operating service
- 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



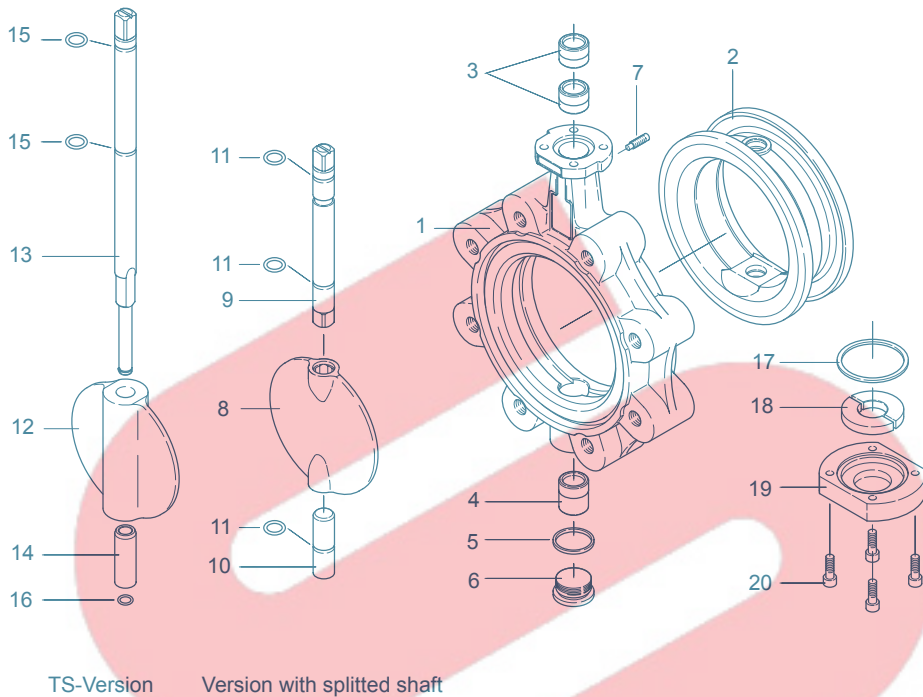
DN [mm]	Size [in]	Dimensions [mm]												Weight[kg] (GG-25)	
		A	B	C	D	Di	E	F	Flange	G	H1	H2	Z	Splitted shaft	TS- shaft
20	¾	104	45	149	63	31,5	33	54	F04	11	12	19	-	2,1	-
25	1	104	45	149	63	31,5	33	54	F04	11	12	19	-	2,1	-
32	1¼	104	50	154	68	31,5	33	54	F04	11	12	19	-	2,1	-
40	1½	113	66	179	80	38	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



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

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