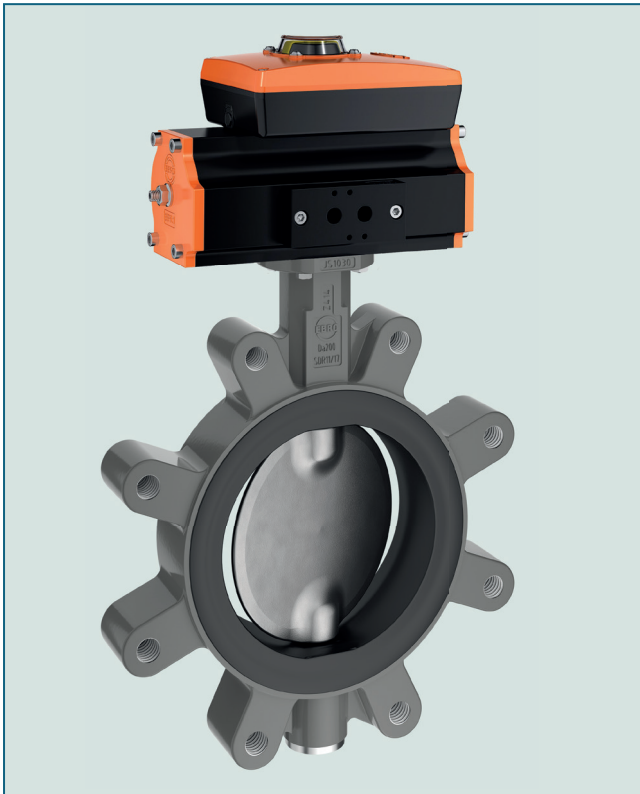


LUG TYPE BUTTERFLY VALVE Z 414-A



Resilient seated, centrally mounted lug type valve with inside diameter for PE/PP piping systems.

TECHNICAL DATA

Nominal diameter:	DA 50 - DA 630 DN 40 - DN 600 SDR11, SDR17 & SDR17.6
Face-to-face:	EN 558 Series 20 ISO 5752 Series 20 API 609 Table 1
Flange accommodation:	EN 1092 PN 10 others on request
Top flange:	EN ISO 5211
Marking:	EN 19
Tightness check:	EN 12266 (leakage rate A) ISO 5208, category 3
Working standard:	EN 593
Temperature range:	-10°C to +160°C (depending on pressure, medium and material)
Operating pressure:	max. 10 bar higher pressures on request

FEATURES

- Proven solution for the plastic piping industry
- Tailor-made components according to standard
- Clear identification, definite allocation and simple Assembly
- Adapted to PE/PP pressure pipes and fittings (SDR11/SDR17/SDR17.6)
- Unscrewing of standard welding neck collars and the the resulting weakening of the pressure stage is eliminated
- Use of spacers not required
- Increased plant safety
- Any mounting position
- Multiple shaft bearings
- Replaceable liner
- Maintenance-free
- Demountable, recyclable by material

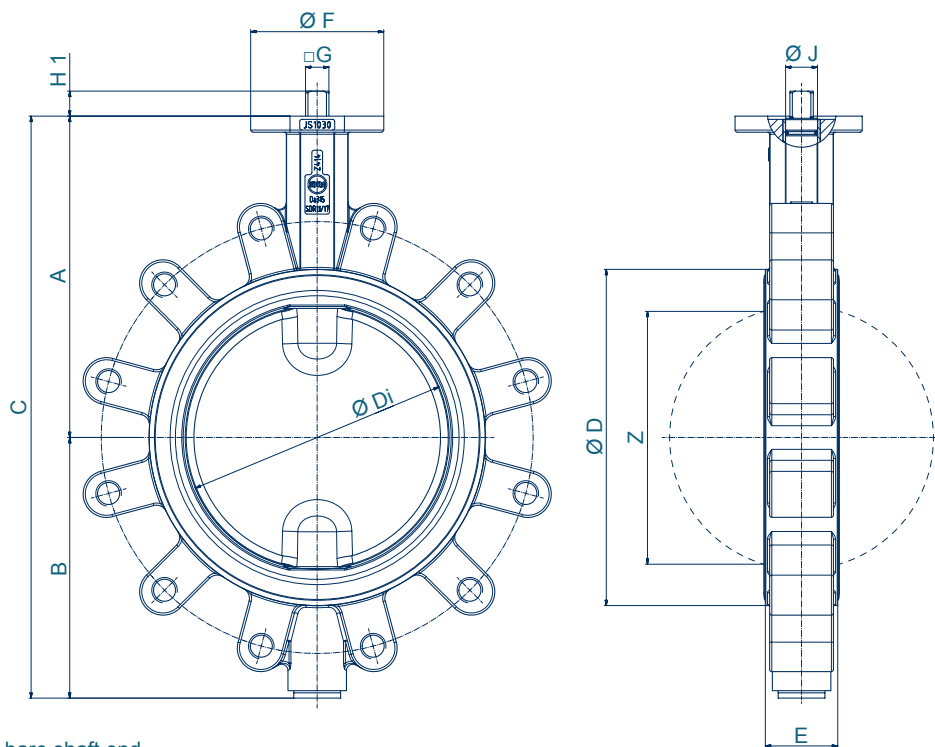
GENERAL APPLICATIONS

- Water Management
- Agriculture & Food Industry
- Energy & Environment
- Mobility & Aviation
- Drainage systems



Type plate for clear identification of the Z 414-A.

LUG TYPE BUTTERFLY VALVE Z 414-A



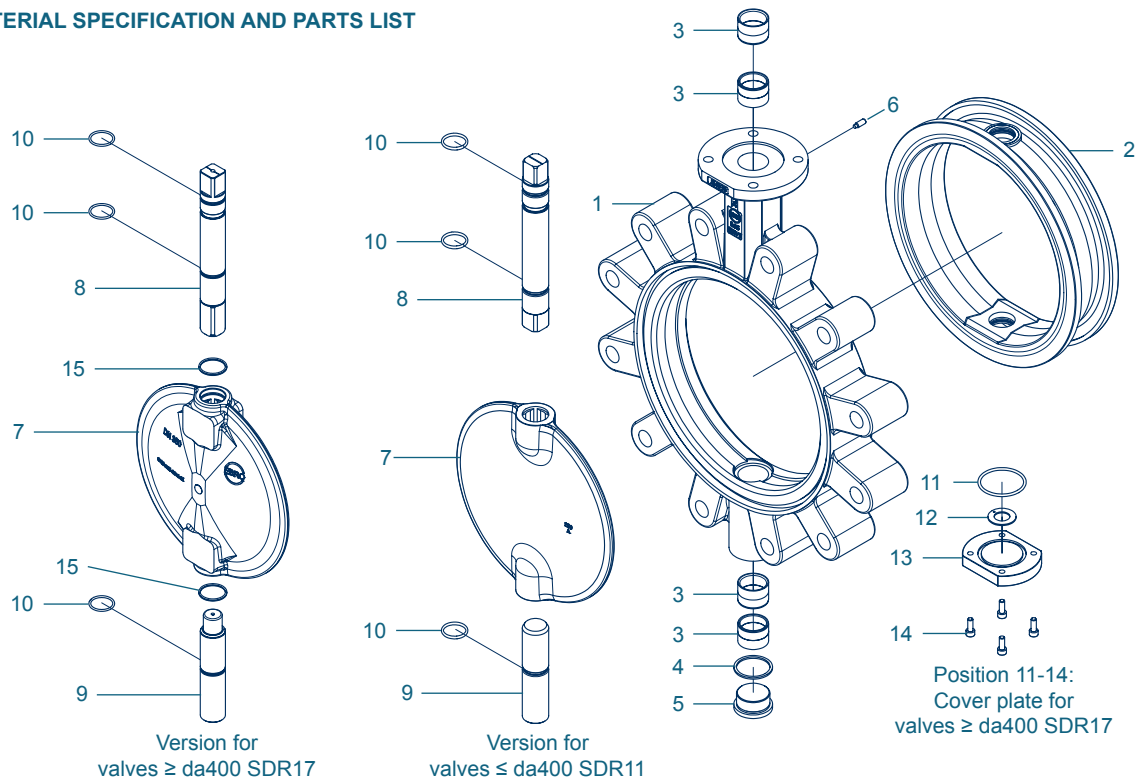
Z 414-A with bare shaft end

da Outer Ø	DN (mm)	Dimensions [mm]												Weight (kg) EN-JS1030
			A	B	C	ØD	ØDi	E	ØF	Flange	□G	H1	Z	
50	40	SDR 11/17/17,6	113	66	179	80	38	33	54	F04	11	13,5	22	4
63	50	SDR 11/17/17,6	126	84	210	95	48,5	43	54	F04	11	13,5	25	4,8
75	65	SDR 11/17/17,6	134	93	227	115	63,5	46	54	F04	11	13,5	45	5,5
90	80	SDR 11/17/17,6	157	104	261	138	78,5	46	65	F05	14	17	65	8,6
110	100	SDR 11/17/17,6	167	115	282	158	98,5	52	65	F05	14	17	85	9,8
125	100	SDR 11/17/17,6	167	115	282	158	98,5	52	65	F05	14	17	85	9,8
140	125	SDR 11	173,5	121,5	295	168	111						97,5	
		SDR 17/17,6	180	127	307	188	123	56	65	F05	14	17	111	10,1
160	150	SDR 11/17/17,6	180	128	308	185	123	56	65	F05	14	17	111	10,1
180	150	SDR 11/17/17,6	203	150	353	212	148	56	90	F07	17	20	139	13,1
200	200	SDR 11/17/17,6	209,5	159	368,5	226,5	161,5	60	90	F07	17	20	151	15,10
225	200	SDR 11	220	169	389	250	182						173	15,5
		SDR 17/17,6	228	176	404	268	198	60	90	F07	17	20	190	18,8
250	250	SDR 11/17/17,6	243	205	448	263	198	60	90	F07	17	20	190	22,3
280	250	SDR 11	256	218,5	474,5	309	224,5		90	F07	17	20	215	27,2
		SDR 17/17,6	266	212	478	320	248	68	125	F10	22	24	240	29,5
315	300	SDR 11/17/17,6	302	245	547	316	248	68	125	F10	22	24	240	34,2
355	350	SDR 11	319,5	264,5	584	359	286						276	44,2
		SDR 17/17,6	326	269,5	595,5	368	296	78	125	F10	22	24	287	50,7
400	400	SDR 11	363	306	669	368	296		125	F10	22	24	287	61,7
		SDR 17/17,6	363	313	676	409	337,5	78	150	F12	27	29	329,5	64,2
450	500	SDR 11	420	371	791	448	365,5						351,5	110,2
		SDR 17/17,6	420	371	791	468	390	102	150	F12	27	29	377,5	104,4
500	500	SDR 11	420	371	791	468	390	102	150	F12	27	29	377,5	104,4
		SDR 17/17,6	420	372,5	792,5	524	426	114	175	F14	36	38	412	122,8
560	600	SDR 11	475	424	899	524	426	114	175	F14	36	38	412	176,3
		SDR 17/17,6	475	424	899	570	489	127	210	F16	36	38	473,5	161,4
630	600	SDR 11	475	424	899	570	489	127	210	F16	36	38	473,5	161,4
		SDR 17/17,6	475	425	900	632	538	154	300	F25	46	48	517	214,7

Subject to change without notice

LUG TYPE BUTTERFLY VALVE Z 414-A

MATERIAL SPECIFICATION AND PARTS LIST



Pt.	Description	Material	Material-No.	ASTM	Pt.	Description	Material	Material-No.	ASTM
1	Body				8/9	Shaft			
	Nodular Cast Iron	GGG-40	0.7040	60-40-18		Stainless Steel	X14CrMoS17	1.4104	430 F
2	Seat*						X5/(X2)CrNiMo17-12-2	1.4404/1.4401	316
	NBR	Nitrile butadiene rubber			10	O-Ring			
	EPDM	Ethylene propylene diene monomer rubber				NBR	Nitrile butadiene rubber		
	FKM	Fluor-Fluorocarbon rubber				FPM	Fluorocarbon rubber		
3	Bearing bush				11	O-Ring da 400 - da 630			
	Brass	MS 58	2.0401	B 45		NBR	Acrylnitril-Butadien-Kautschuk		
	Polyamide				12	Shaft retainer da 400 - da 630			
4	Seal DIN 7603					Brass	MS 58	2.0401	B 45
	Stainless Steel	X5CrNiMo17-12-2	1.4401	316	13	Cover plate da 400 - da 630			
	PTFE					Gray Cast Iron	GG-25	0.6025	40 B
	Copper	Cu		Copper	14	Screw da 400 - da 630			
5	Plug screw DIN 908					Steel	45 H galvanized		
	Stainless Steel	G-X6CrNiMo18-10		CF8M		Stainless Steel	A2-70		B 8
6	Set screw DIN 915						A4-70		B8M
	Steel	45 H galvanized			15	O-Ring			
	Stainless Steel	A4-70		B8M		NBR	Nitrile butadiene rubber		
7	Disc					FPM	Fluorocarbon rubber		
	Stainless Steel	G-X6CrNiMo18-10	1.4408	CF8M					
	Coating	Halar, Rilsan,							
	Surface quality	mirror finished							
						Other materials upon request			

* others on request

Subject to change without notice

LUG TYPE BUTTERFLY VALVE Z 414-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

		Adapted Disc Size Pressure Rating					
da Outer Ø	DN [mm]	SDR 11			SDR 17 / 17,6		
		3 bar Disc	6 bar Disc	10 bar Disc	3 bar Disc	6 bar Disc	10 bar Disc
50	40	8	8	8	8	8	8
63	50	9	9	9	9	9	9
75	65	18	18	18	18	18	18
90	80	8	10	18	8	10	18
110	100	9	18	28	9	18	28
125	100	9	18	28	9	18	28
140	125	12	20	38	15	22	45
160	150	15	22	45	15	22	45
180	150	36	45	78	36	45	78
200	200	48	62	110	48	62	110
225	200	60	76	140	60	76	140
250	250	59	76	140	59	76	140
280	250	110	140	180	150	180	200
315	300	150	180	200	150	180	200
355	350	200	240	280	200	240	280
400	400	200	240	280	350	540	610
450	500	380	580	700	420	620	750
500	500	420	620	750	720	746	860
560	600	720	746	860	900	1100	2255
630	600	900	1100	2255	1000	1600	2700

All values in Nm

K_V-VALUES

- The K_V-value [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.

			Opening angle α°															
da [mm]	DN [mm]	Size [in]	SDR11 - 10 bar								SDR17 - 10 bar							
			20°	30°	40°	50°	60°	70°	80°	90°	20°	30°	40°	50°	60°	70°	80°	90°
50	40	1½	1	4,9	11,8	20,5	30,2	40	48,7	55,4	1	5,3	12,8	22,1	32,5	43	52,5	63
63	50	2	3,8	9,9	20,4	34	49,2	64,5	78,7	90,3	4	10,7	22	36,7	53	69,6	84,8	97,3
75	65	2½	8,6	15,2	35,8	66,5	103	143	182	215	9,3	16,3	38,5	71,5	111	154	196	232
90	80	3	14,5	19,3	48	95,5	154	219	284	344	15,7	20,7	51,7	102	165	235	306	370
110	100	4	22	35,1	85	161	254	350	444	519	23,6	37,8	91,5	173	273	378	477	558
125	100	4	51,8	67,3	135	256	428	653	928	1250	55,8	72,6	145	171	462	704	1000	1350
140	125	5	17,1	56,2	128	231	375	609	807	856	24,5	79,6	159	252	430	677	1030	1230
160	150	6	35,4	92,9	177	291	472	724	1020	1180	52,2	119	217	359	544	816	1030	1090
180	150	6	74,2	94,5	191	385	610	928	1320	1770	79,9	101	205	391	657	1000	1420	1910
200	200	8	43,5	160	261	465	784	1240	1870	2170	97,6	199	351	571	937	1370	1820	1950
225	200	8	58	200	376	584	1020	1600	2400	2890	66,2	205	364	624	1030	1680	2660	3320
250	250	10	69,6	266	452	750	1220	1960	2890	3480	142	379	595	969	1490	2150	2820	2970
280	250	10	93,4	326	560	936	1590	2470	3890	4670	105	319	576	1010	1730	2740	4290	5240
315	300	12	153	432	765	1210	2040	3090	4390	5100	208	544	870	1440	2170	3210	4140	4350
355	350	14	147	538	959	1520	2580	4000	6170	7360	224	690	1120	1860	2990	4600	6430	7480
400	400	16	334	831	1330	2090	3200	4670	6220	6680	222	870	1450	2330	3890	6050	9320	11100
450	500	20	419	1000	1560	2760	4000	6370	8260	8700	366	942	1590	2660	4400	7070	10400	12200
500	500	20	323	1100	1940	2970	4860	7280	9710	10800	560	1280	2100	3350	5360	8590	11100	11700
560	600	24	427	1390	2400	3740	5870	8580	10500	10700	-	-	-	-	-	-	-	-
630	600	24	704	1610	2730	4400	6920	10700	14300	15200	-	-	-	-	-	-	-	-

Subject to change without notice