

# DOUBLE FLANGED BUTTERFLY VALVE F 012-K1



Double flanged butterfly valve with short construction length to be used in heavy duty applications.

## TECHNICAL DATA

Nominal diameter:	DN 150 - DN 2200 bigger sizes upon request
Face-to-face:	EN 558 Series 20 (DIN 3202 T3 K1) ISO 5752 Series 20 API 609 Table 1 NF E 29-305.1
Flange accommodation:	DIN 2501 PN 6/10/16 ANSI B 16.5, Class 150 MSS SP44 Class 150 AWWA C 207 AS 2129 Table D and E BS 10 Table D and E JIS B 2211-5 K JIS B 2212-10 K
Flange Surface Design:	DIN 2526, Form A-E, ANSI RF
Top flange:	EN ISO 5211 NF E 29-402
Marking:	DIN EN 19
Tightness check:	EN 12266 (Leakage rate A) ISO 5208, Category 3 API 598 Table 5 ANSI B 16-104, Class VI
Temperature range:	-20°C to +160°C (depending on pressure, medium and material)
Operating pressure:	max. 16 bar
Differential pressure :	max. $\Delta p$ 16 bar
Vacuum:	0,2 bar absolute (depending on medium and tempera- ture)

## FEATURES

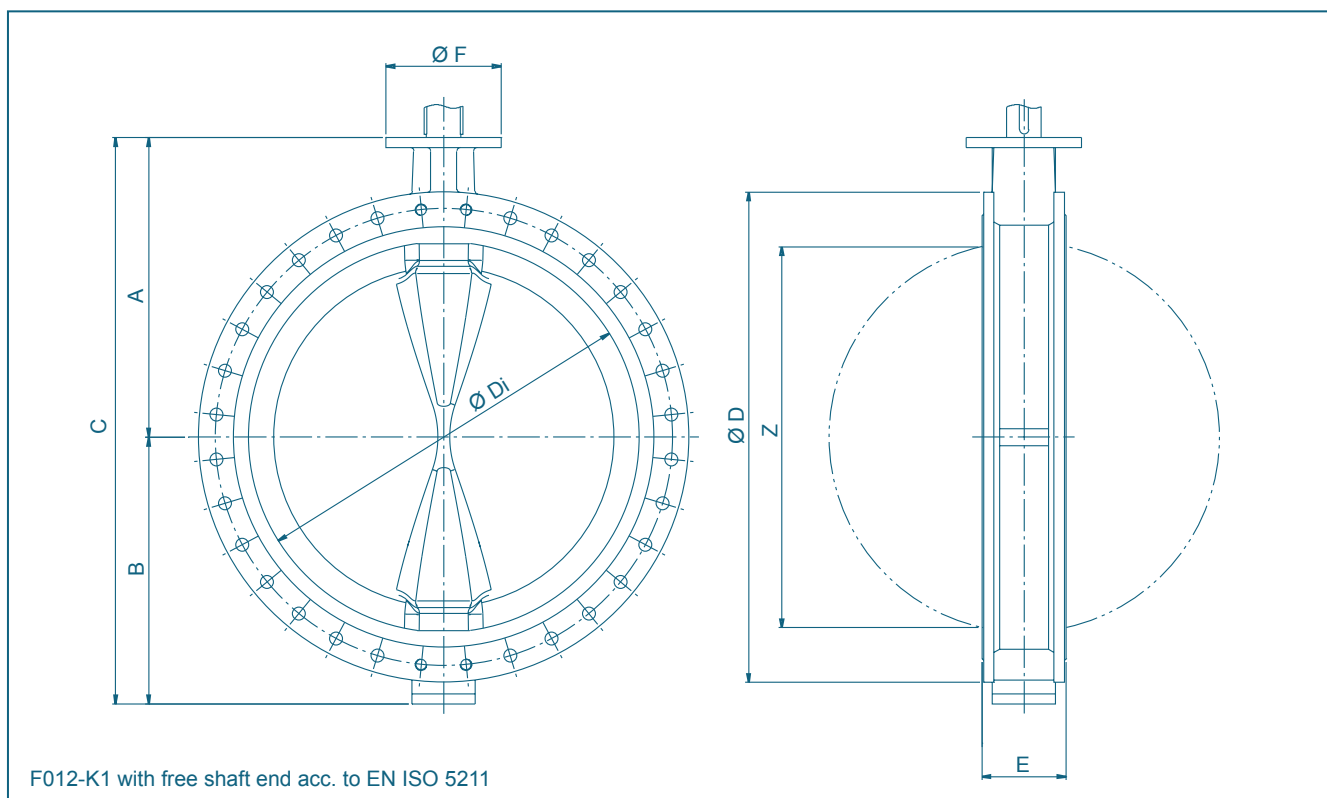
- Absolutely tight sealing with flow in either direction
- The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- Triple shaft bearings prevents shaft deflection and guarantees optimum guidance even after many years of operating service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

## GENERAL APPLICATIONS

- Offshore
- Water and waste water technology
- Shipbuilding
- Power plants



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DN [mm]	Size [in]	Dimensions [mm]									Weight [kg] GGG 40	
		A	B	C	D	Di	E	F	Flange	Z	Splitted shaft	TS- shaft
150	6	203	150	353	305	148	56	90	F07	139	22	23
200	8	228	176	404	350	199	60	90	F07	190	32	34
250	10	266	212	478	430	248	68	125	F10	240	47	50
300	12	291	237	528	480	296	78	125	F10	287	69	72
350	14	332	269	601	540	338	92	150	F12	330	80	86
400	16	363	314	677	605	388	102	150	F12	378	120	128
450	18	397	335	732	675	430	114	210	F16	417	144	150
500	20	437	405	842	710	494,5	127	210	F14/F16	474	163	170
600	24	498	469	967	830	590	154	300	F16/F25	563	233	260
700	28	581	507	1088	905	680	165	300	F16/F25	660	292	345
750	30	590	550	1140	1000	728	190	298	F25	703	-	470
800	32	630	556	1186	1020	780	190	300	F25	757	446	466
850	34	641	590	1201	1005	1031	254	298	F25	807	-	600
900	36	696	617	1313	1120	880	203	300	F25	860	568	610
1000	40	771	675	1446	1020	980	216	350	F30	956	624	722
1050	42	817	725	1542	1346	1031	254	350	F30	998	-	1020
1100	44	840	755	1595	1405	1078	254	350	F30	1046	-	1180
1200	48	905	810	1715	1480	1170	254	350	F35	1154	-	980
1300	52	970	910	1880	1630	1275	280	415	F35	1244	-	1607
1350	54	1000	905	1905	1685	1340	280	415	F35	1310	-	1760
1400	56	1025	965	1990	1685	1375	280	415	F35	1346	-	1806
1500	60	1115	1060	2175	1855	1472	280	475	F40	1444	-	2210
1600	64	1115	1090	2205	1830	1570	280	475	F40	1545	-	2310
1650	66	1225	1150	2375	2035	1646	280	475	F40	1622	-	2560
1800	72	1320	1195	2515	2130	1769	280	475	F40	1747	-	3140
2000	78	1400	1310	2710	2265	1962	525	525	F48	1890	-	4126
2200	86	1550	1430	2980	2555	2170	646	1030	F48	-	-	-

Subject to change without notice



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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

Regarding the dimensioning of actuators, please contact our engineers.

DN [mm]	Size [in]	Operating pressure			
		3 [bar]	6 [bar]	10 [bar]	16 [bar]
150	6	36	45	110	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
700	28	1560	2240	3450	8100
800	32	2070	3800	6600	11200
900	36	2700	4900	7100	14500
1000	40	4600	6780	11500	24400
1200	48	7800	12000	21000	44000

Bigger sizes upon request

All values in Nm

## 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 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°
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
350	14	350	780	1400	2400	4000	8000	10800	11500
400	16	490	1050	1800	3100	5500	11000	12000	14500
450	18	510	1080	2040	3350	6100	11500	14600	20500
500	20	520	1100	2200	3500	6200	12000	15100	21000
600	24	750	1400	2800	5100	8800	14000	22000	29300
700	28	770	1755	3260	5980	10600	17100	25300	36000
800	32	1200	2260	4550	8230	12900	20300	29300	44600
900	36	1540	2280	6030	10500	17600	29200	42150	59000
1000	40	2200	3970	8300	14480	24000	37100	60300	81500
1200	48	5050	7900	13800	19700	33500	53300	73050	102650

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