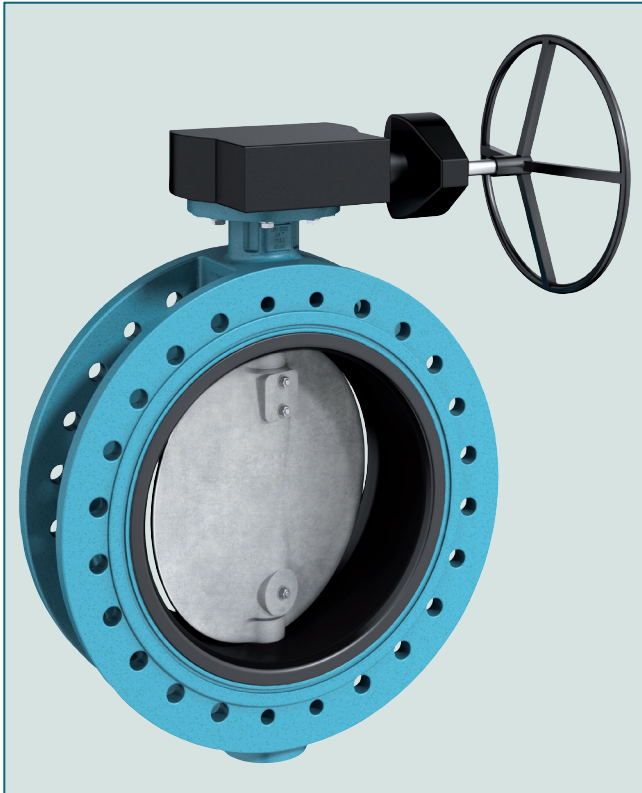


DOUBLE FLANGED BUTTERFLY VALVE F012-A



Soft seated double flanged butterfly valve designed for high pressure applications. The combination of vulcanized liner and thrugoing shaft allows pressure loads up to 25 bar.

TECHNICAL DATA

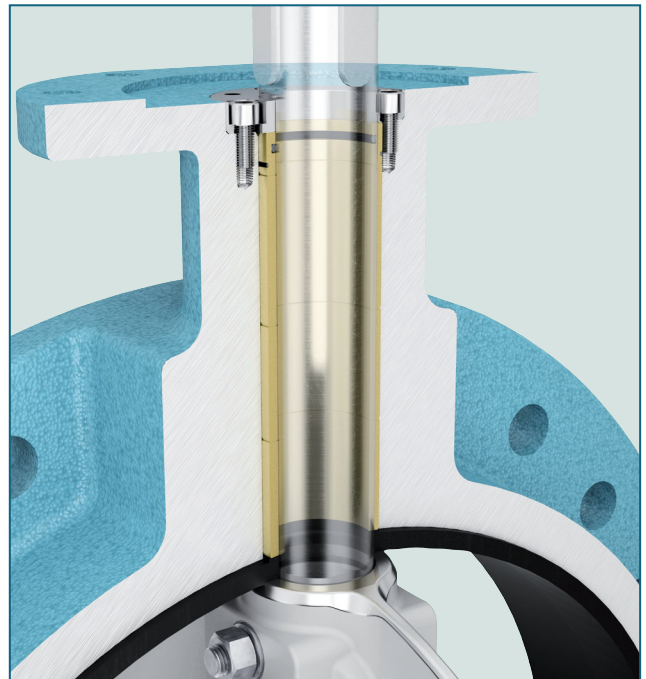
Nominal diameter:	DN 50 - DN 1400
Face-to-face:	EN 558 Series 13 ISO 5752 Series 13
Flange accommodation:	EN 1092 PN 6/10/16/25 ASME B16.5 / B16.47 ASME Class 150 (PS max=19 bar) ASME Class 300 (PS max=25 bar) AS/NZS 4087 PN 16 / PN21 / PN35 AS 2129 Tab.E / Tab.F JIS B 2220 10K Flange accommodation not in all Sizes available. Others on request
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, Kategorie 3
Temperature range:	-40°C to +200°C (depending on pressure, medium and material)
Operating pressure:	max. 25 bar
Differential pressure:	max. Δp 25 bar
Vakuum:	up to 1 mbar absolute

FEATURES

- Butterfly valve in double flanged design
- Can be installed in any desired position
- Triple shaft bearings
- Single flange mounting possible
- Maintenance-free
- Vulcanized liner and thrugoing shaft for high pressure applications
- Adjustable bearings up to DN600 \geq 16 bar

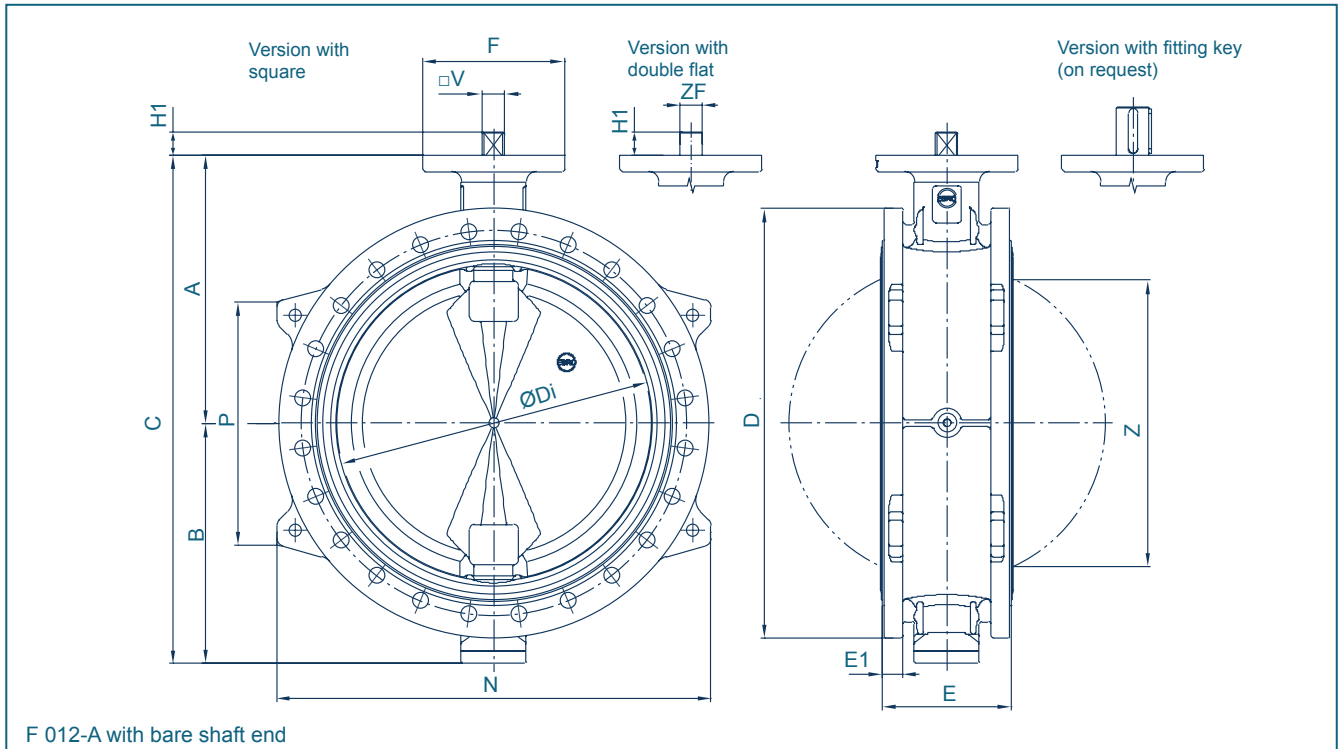
GENERAL APPLICATIONS

- Offshore
- Water and waste water technology
- Power plants
- Desalination technology
- Trunk mains
- Pipeline applications
- Pumping stations



Adjustable bearings ensure tightness even with max. pressure loads. This feature allows refixing during operation.

DOUBLE FLANGED BUTTERFLY VALVE F012-A



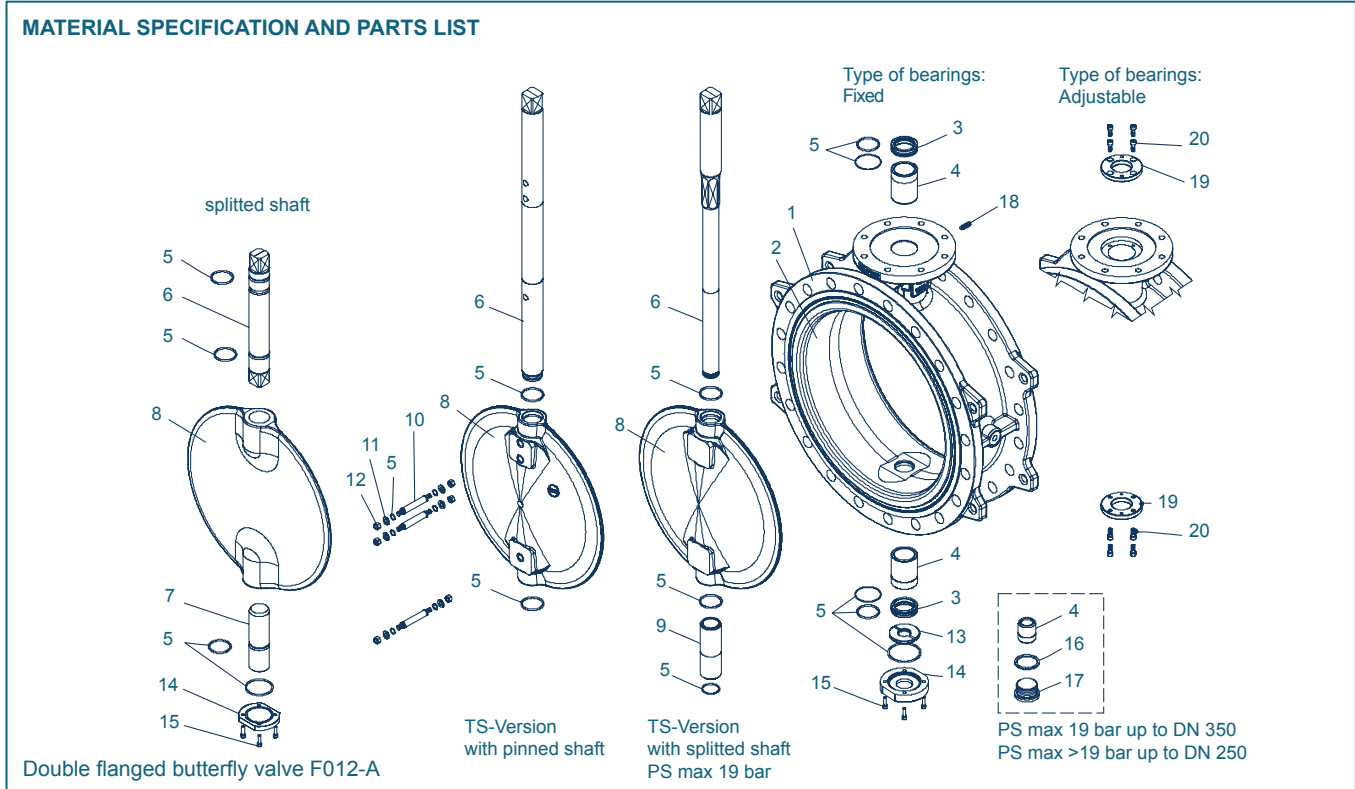
DN [mm]	Size [inch]	Dimensions [mm]														Bearings		Weight [kg] (EN-JS1030)
		A	B	C	ØDi	ØD	E1	E	ØF	Flange	ZF/V	H1	N	P	Z	fixed	adjustable	
50	2	126	84	210	48	165	18	108	54	F04	11	12	-	-	-	x	-	6
65	2 1/2	134,5	93,5	228	63	185	18	112	54	F04	11	12	-	-	-	x	-	10
80	3	157	104	261	78	200	20	114	65	F05	14	16	-	-	-	x	-	12
100*	4	168	127	295	98	254	22	127	65	F05	14	16	-	-	-	x	-	18
100	4	168	114	282	98	228	20	127	65	F05	14	16	-	-	-	x	-	18
125*	5	180	140	320	123	280	26	140	90	F07	14	16	-	-	-	x	-	24
150*	6	203	150	353	148	285	22	140	90	F07	17	19	-	-	56	x	-	26
150	6	203	153	356	148	305	29	140	90	F07	17	19	-	-	56	x	-	30
200	8	229	177	406	198	345	24	152	90	F07	17	19	-	-	131	x	-	30
200*	8	260	215	475	198	381	30	152	125	F10	17	20	-	-	131	x	-	56
250	10	266	213	479	248	406	26	165	125	F10	22	24	-	-	189	x	-	40
250*	10	305	250	555	248	445	28	165	150	F12	22	24	-	-	189	x	-	79
250*	10	266	215	481	248	430	27	165	125	F10	22	24	-	-	189	x	-	57
250*	10	305	250	555	248	430	21	165	150	F12	22	24	-	-	189	x	-	75
300	12	291	237	528	296	483	28	178	125	F10	22	24	-	-	240	x	-	73
300*	12	350	285	635	296	521	33	178	150	F12	22	24	-	-	240	x	-	110
300*	12	335	285	620	296	515	36	178	150	F12	22	24	520	150	240	x	-	108
350	14	332	278	610	337	533	33	190	150	F12	**	**	540	300	282	x	-	103
350*	14	390	322	712	338	584	32	190	175	F14	27	29	590	300	282	x	-	150
400	16	363	322	685	390	597	32	216	175	F12/F14	**	**	610	310	328	x	-	150
400	16	363	322	685	390	580	32	216	150	F12	**	**	-	-	328	x	-	140
400*	16	435	360	795	390	660	42	216	210	F16	27	29	665	200	328	x	-	215
400*	16	430	360	790	390	648	37	216	175	F14	27	29	-	-	328	x	-	210
450*	18	397	368	765	426	640	33	222	175	F14	36	38	680	310	367	x	-	179
450*	18	465	385	850	426	711	37	222	210	F16	36	38	720	300	367	x	-	250
500	20	437	404	841	489	715	38	229	210	F14/F16	**	**	740	350	436	x	-	204
500*	20	500	415	915	489	775	44	229	300	F25	**	**	790	370	436	x	-	310
600	24	498	469	967	581	840	42	267	300	F16/F25	**	**	870	420	521	-	x	330
600	24	498	469	967	581	790	45	267	300	F14/F16/F25	**	**	-	-	521	x	-	467
600*	24	580	500	1080	581	914	44	267	300	F25	**	**	930	440	521	-	x	457
700	28	581	526	1107	674	935	46	292	350	F25/F30	**	**	940	510	612	-	x	480
700*	28	635	560	1195	674	995	50	292	350	F30	**	**	1010	350	612	-	x	600
800	32	630	591	1221	781	1060	52	318	350	F25/F30	**	**	1080	450	717	-	x	598
800	32	660	590	1250	781	1060	50	318	350	F25/F30	**	**	1070	600	717	-	x	666
800*	32	660	595	1255	781	1085	55	318	415	F35	**	**	1100	450	717	-	x	760
900*	36	800	685	1485	881	1185	61	330	415	F30/F35	**	**	1210	600	821	-	x	941
900	36	800	685	1485	881	1185	52	330	350	F25/F30	**	**	1190	620	821	x	-	932
900	36	696	645	1341	881	1122	52	330	300	F25	**	**	-	-	821	x	-	650
1000*	40	771	680	1451	980	1290	51	410	475	F30/F35/F40	**	**	1300	680	895	-	x	1100
1000	40	771	675	1446	980	1255	56	410	415	F25/F30/F35	**	**	1270	680	895	-	x	1092
1000	40	850	725	1575	980	1275	59	410	475	F35/F40	**	**	1310	600	895	x	-	1245
1000*	40	850	725	1575	980	1275	62	410	475	F35/F40	**	**	1310	600	895	-	x	1239
1000*	40	850	725	1575	980	1360	67	410	475	F35/F40	**	**	1370	600	895	-	x	1426
1200	48	935	810	1745	1176	1511	54	470	475	F35/F40	**	**	1520	800	1083	-	x	1722
1200*	48	1004	862	1866	1176	1575	63	470	560	F40/F48	**	**	1590	800	1085	-	x	1785
1200	48	905	810	1715	1176	1455	60	470	350	F25/F30	**	**	1475	600	1083	x	-	1440
1400*	56	1120	958	2078	1372	1795	86	530	560	F48	**	**	1830	800	1271	-	x	3060

*Operating pressure ≥19 bar

**In accordance to the actuator

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DOUBLE FLANGED BUTTERFLY VALVE F012-A



Pos.	Description	Material	Material-No.	Pos.	Description	Material	Material-No.	
1 Body	Nodular Cast Iron	EN-GJS-400-15	EN-JS1030	10 Taper pin	Stainless Steel	X5CrNi18-10	1.4301	
	Carbon Steel	GP240GH	1.0619		Stainless Steel	G-X5CrNiMo19-11-2*	1.4408*	
2 Seat/vulcanization	NBR	Nitrile butadiene rubber		11 Washer	Stainless Steel	A4		
	EPDM	Ethylene propylene diene monomer rubber			12 Hex nut	Stainless Steel	A4	
3/4 Bearing bush	Brass	CuZn39Pb3	CW614N	13 Shaft retention		Brass	CuZn39Pb3	CW614N
					Stainless Steel	16MnCr5*	1.7131*	
5 O-Ring	NBR	Nitrile butadiene rubber		14 Cover plate	Sectional steel	S235JR		
	EPDM	Ethylene propylene diene monomer rubber			Nodular Cast Iron	EN-GJS-400-15	EN-JS1030	
6/7 Shaft		X14CrMoS17	1.4104	15 Screw	Steel	45 H galvanized		
		X2CrNiMo17-12-2	1.4122		Stainless Steel	A4-70		
		X5CrNiMo17-12-2	1.4401		16 Seal DIN 915	Cooper	Cu	
		X2CrNiMo17-12-2	1.4404			17 Plug screw DIN 908	Machining steel	11SMnPb30
		G-X5CrNiMo19-11-2	1.4408		Stainless Steel		G-X5CrNiMo19-11-2	1.4408
		G-X2CrNiMoN26-7-4	1.4462		18 Threaded pin DIN 915	Steel	45 H galvanized	
	CuAl10Fe5Ni5-C	1.4469	Stainless Steel	X5CrNiMo17-12-2		1.4401		
	X5CrNiCuNb 16-4*	1.4452*		19 Clamping ring	Sectional steel	S235JR		
8 Disc	Nodular Cast Iron	EN-GJS-400-15	EN-JS1030		20 Cylinder screw	Stainless Steel	A4	
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408	Other materials upon request				
		G-X2CrNiMoN26-7-4*	1.4469*	Subject to change without notice				
	Aluminium Bronze	CuAl10Fe5Ni5-C	CC333G					
9 Sleeve	Coating	Halar, Rilsan, Nonstick						
	Surface quality	electropolished, mirror finished						
	Stainless Steel	X5CrNi18-10	1.4301					

*Materials for valves ≥ 19 bar

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DOUBLE FLANGED BUTTERFLY VALVE F012-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]	Operating pressure						
		3 bar disc	6 bar disc	10 bar disc	16 bar disc	19 bar disc	21 bar disc	25 bar disc
50	2	5	7	7	9	-	-	30
65	2½	7	9	13	18	-	-	40
80	3	8	10	18	24	-	-	58
100	4	9	18	28	37	53	66	90
125	5	15	22	45	59	-	-	150
150	6	36	45	78	125	156	182	230
200	8	59	76	140	200	242	278	350
250	10	150	180	200	240	355	440	600
300	12	200	240	280	360	570	710	950
350	14	350	540	610	700	910	1080	1400
400	16	420	620	750	850	1320	1610	2050
450	18	720	746	860	1500	2000	2410	3200
500	20	900	1100	2255	3690	4170	4630	5500
600	24	1050	1800	3000	5830	6550	7130	8000
700	28	1600	2240	3450	8100	9860	11100	13000
800	32	2200	3900	6600	11200	14250	16450	20000
900	36	2800	4900	7100	14500	19150	229000	30000
1000	40	4800	6760	11500	24400	30500	35300	44000
1200	48	7800	12000	21000	44000	53800	62300	78000
1400	48	-	-	-	-	77100	90900	116000

*Maximum torques (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 a Δp of 1 bar

- Permissible velocity of flow
- Vmax 4,5 m/s for liquids
- Vmax 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	1,2	8	13	22	38	50	65	85
65	2½	2	9	22	42	77	115	170	215
80	3	8	24	50	95	150	240	330	420
100	4	13	25	61	120	210	320	460	630
125	5	26	65	130	230	350	530	870	1010
150	6	50	95	170	305	510	810	1230	1780
200	8	65	150	320	590	980	1515	2220	3115
250	10	175	290	560	1020	1700	2630	3830	5350
300	12	205	410	835	1520	2510	3820	5510	7590
350	14	320	590	1120	2000	3310	5140	7570	10700
400	16	460	865	1730	3120	5110	7760	11160	15360
450	18	570	1070	2140	3860	6330	9620	13830	19035
500	20	710	1335	2600	4810	7880	11980	17215	23700
600	24	760	1420	2900	5120	8380	12740	18315	25215
700	28	770	1430	4000	7560	12380	18820	27050	37240
800	32	915	1800	4360	9480	16790	26250	37815	51440
900	36	1160	2100	5560	12080	21400	33450	48200	65560
1000	40	1450	2370	6920	15030	26630	41640	59900	81605
1200	48	2120	3470	10130	22000	38990	60950	87815	119460
1400	66	2930	4790	14000	30400	53840	84190	121290	165000

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