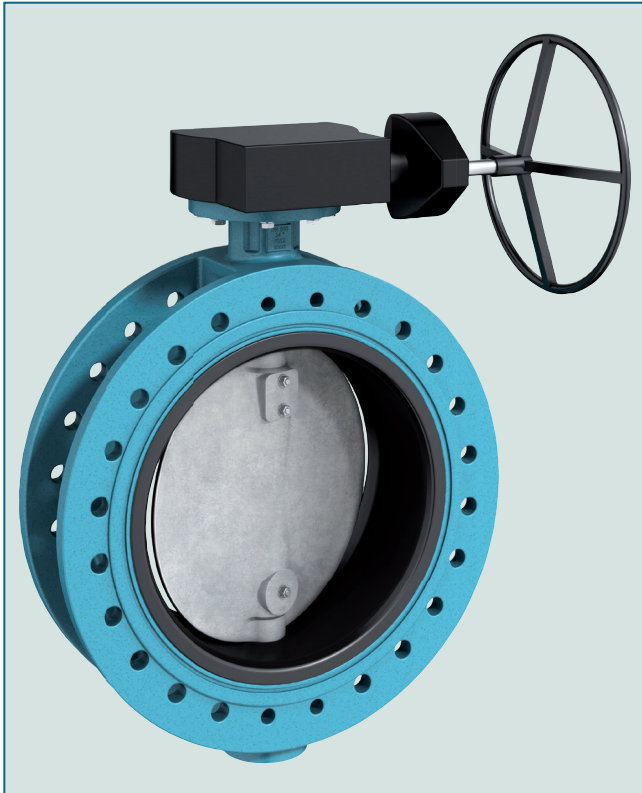


# DOUBLE FLANGED BUTTERFLY VALVE F012-A



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

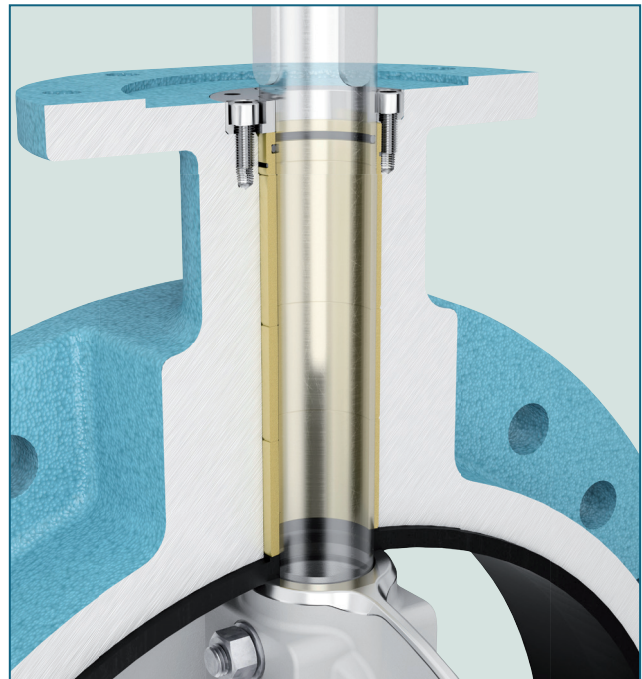
Nominal diameter:	DN 50 - DN 1400
Face-to-face:	EN 558 Series 13 ISO 5752 Series 13
Flange accommodation:	EN 1092 PN 6/10/16/25 ASME B16.5 / B16.47 ASME Class 150 (PS max=19 bar) ASME Class 300 (PS max=25 bar) AS/NZS 4087 PN 16 / PN21 / PN35 AS 2129 Tab.E / Tab.F JIS B 2220 10K Flange accommodation not 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. $\Delta p$ 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

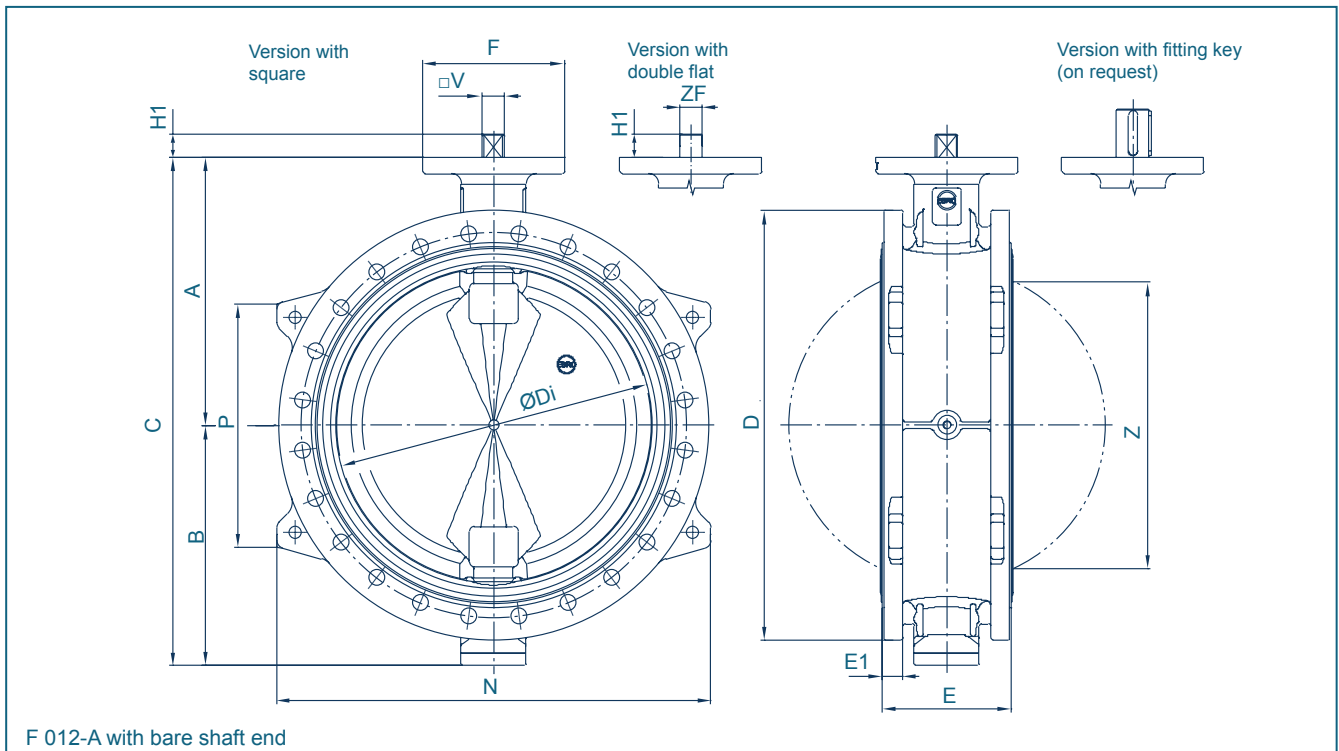
## GENERAL APPLICATIONS

- 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



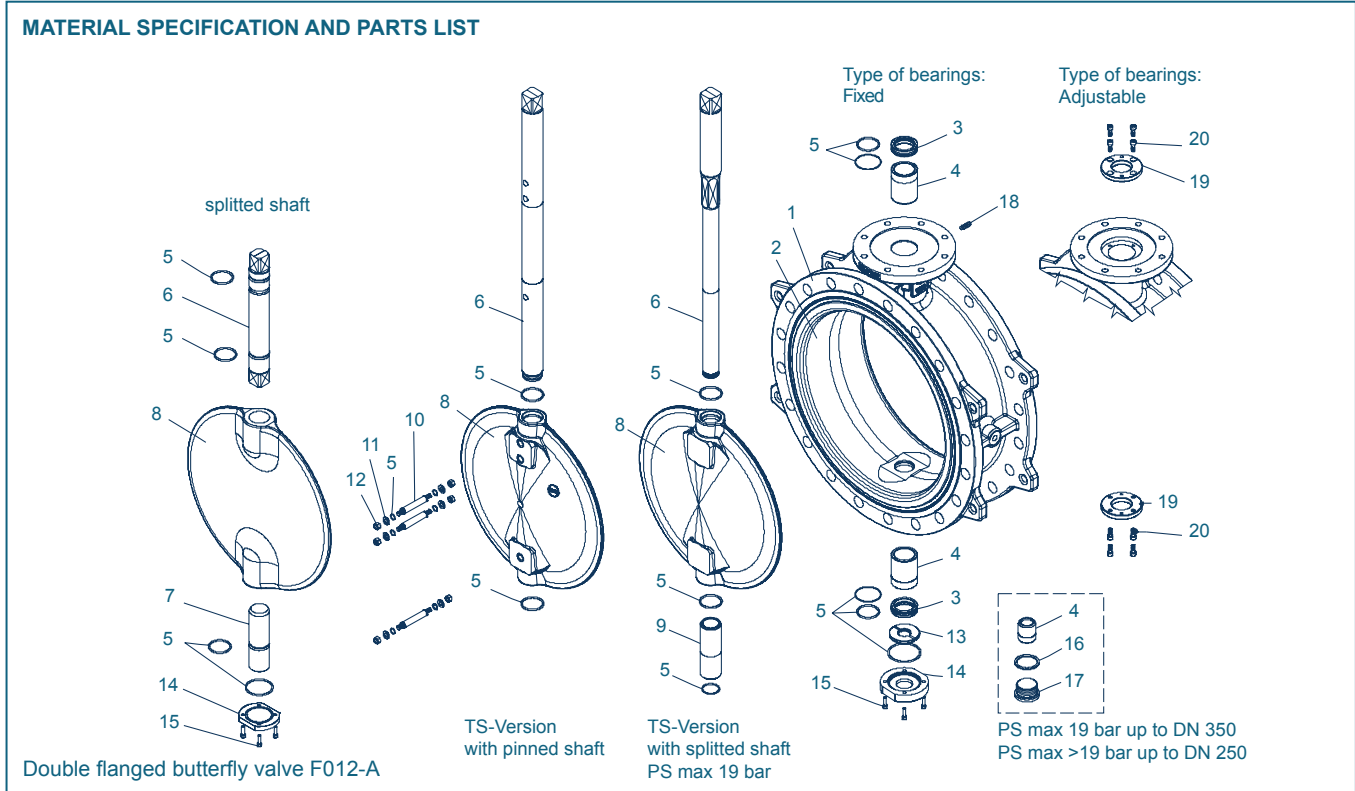
DN [mm]	Size [inch]	Dimensions [mm]														Bearings		Weight [kg] (EN-JS1030)
		A	B	C	ØDi	ØD	E1	E	ØF	Flange	ZF/V	H1	N	P	Z	fixed	adjustable	
50	2	126	84	210	48	165	18	108	54	F04	11	12	-	-	-	x	-	6
65	2 1/2	134,5	93,5	228	63	185	18	112	54	F04	11	12	-	-	-	x	-	10
80	3	157	104	261	78	200	20	114	65	F05	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	F05	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.
<b>1</b>	<b>Body</b>			<b>11</b>	<b>Washer</b>		
	Nodular Cast Iron	EN-GJS-400-15	EN-JS1030		Stainless Steel	A4	
	Carbon Steel	GP240GH	1.0619	<b>12</b>	<b>Hex nut</b>		
<b>2</b>	<b>Seat/vulcanization</b>				Stainless Steel	A4	
	NBR	Nitrile butadiene rubber		<b>13</b>	<b>Shaft retention</b>		
	EPDM	Ethylene propylene diene monomer rubber			Brass	CuZn39Pb3	CW614N
<b>3/4</b>	<b>Bearing bush</b>				Stainless Steel	16MnCr5*	1.7131*
	Brass	CuZn39Pb3	CW614N	<b>14</b>	<b>Cover plate</b>		
<b>5</b>	<b>O-Ring</b>				Sectional steel	S235JR	
	NBR	Nitrile butadiene rubber			Nodular Cast Iron	EN-GJS-400-15	EN-JS1030
	EPDM	Ethylene propylene diene monomer rubber		<b>15</b>	<b>Screw</b>		
<b>6/7</b>	<b>Shaft</b>				Steel	45 H galvanized	
	X14CrMoS17		1.4104		Stainless Steel	A4-70	
	X39CrMo17-1		1.4122	<b>16</b>	<b>Seal DIN 915</b>		
	X5/(X2)CrNiMo17-12-2		1.4401/1.4404		Cooper	Cu	
	X2CrNiMoN22-5-3		1.4462	<b>17</b>	<b>Plug screw DIN 908</b>		
	CC333G		1.4469		Machining steel	11SMnPb30	1.0718 nickel-plated
	X5CrNiCuNb 16-4*		1.4452*		Stainless Steel	G-X5CrNiMo19-11-2	1.4408
<b>8</b>	<b>Disc</b>			<b>18</b>	<b>Threaded pin DIN 915</b>		
	Nodular Cast Iron	EN-GJS-400-15	EN-JS1030		Steel	45 H galvanized	
	Stainless Steel	G-X5CrNiMo19-11-2	1.4408		Stainless Steel	X5CrNiMo17-12-2	1.4401
		G-X2CrNiMoN26-7-4*	1.4469*	<b>19</b>	<b>Clamping ring</b>		
	Aluminium Bronze	CuAl10Fe5Ni5-C	CC333G		Sectional steel	S235JR	
	Coating	Halar, Rilsan, Nonstick		<b>20</b>	<b>Cylinder screw</b>		
	Surface quality	electropolished, mirror finished			Stainless Steel	A4	
<b>9</b>	<b>Sleeve</b>						
	Stainless Steel	X5CrNi18-10	1.4301				
<b>10</b>	<b>Taper pin</b>						
	Stainless Steel	X5CrNi18-10	1.4301				
		G-X5CrNiMo19-11-2*	1.4408*				

\*Materials for valves ≥19 bar

Subject to change without notice

# 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	22900	30000
1000	40	4800	6760	11500	24400	30500	35300	44000
1200	48	7800	12000	21000	44000	53800	62300	78000
1400	56	-	-	-	-	77100	90900	116000

\*Maximum torques (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 a Δp of 1 bar

- 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°
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
700	28	1100	1770	3590	6610	10900	16400	23200	31400
800	32	1670	2680	5450	10000	16500	24900	35200	47600
900	36	1960	3150	6390	11800	19300	29200	41300	55900
1000	40	2430	3890	7910	14600	23900	36100	51100	69100
1200	48	3500	5620	11400	21000	34500	52100	73800	99800
1400	56	5150	8260	16780	30900	50700	76500	108000	147000

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