WAFER / LUGGED TYPE BUTTERFLY VALVE
Model : B04.0201/03

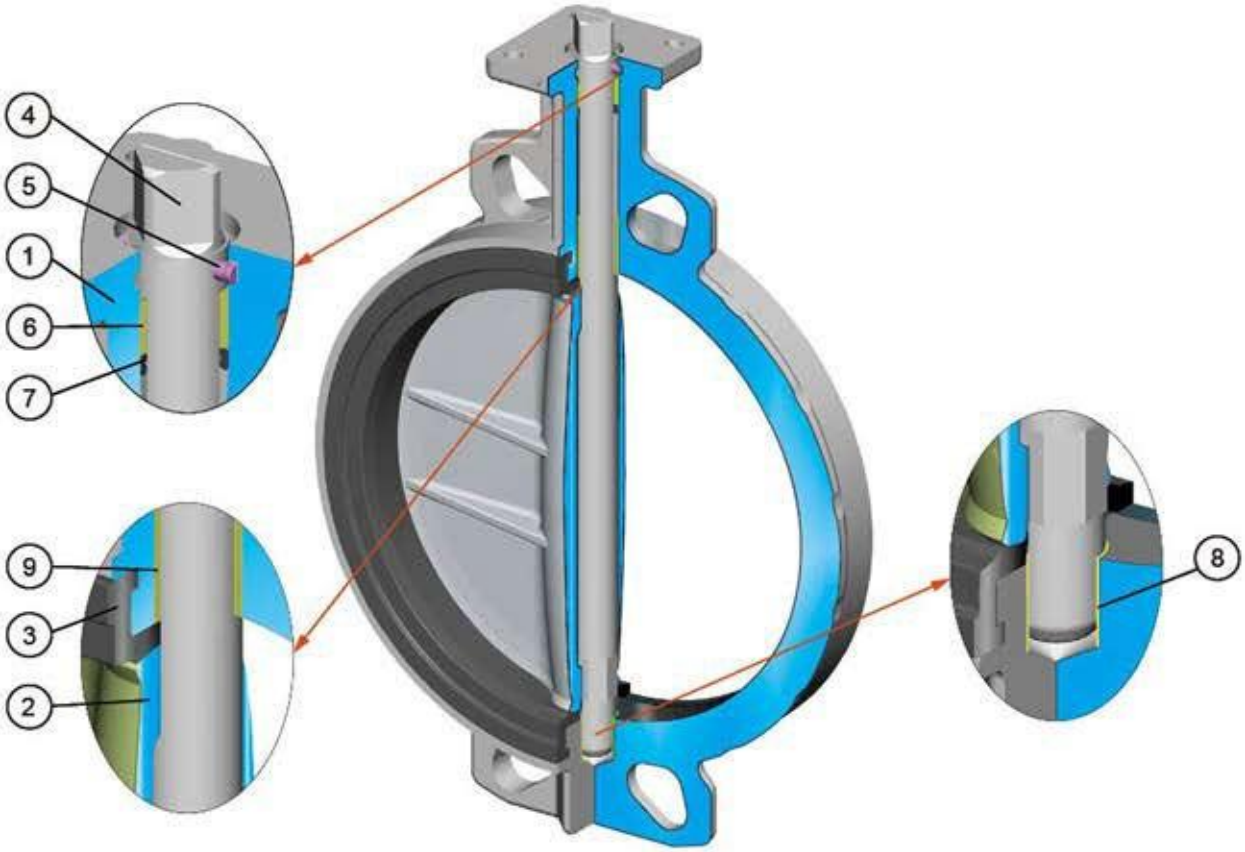
APPLICABLE STANDARDS

- Body Style: Wafer type, Lug type, Flange type
- Body Shell Thickness: AWWA C504, ASME B 16.34
- Mounting: ISO 5211
- Design & Pressure: ISO 5208, AWWA C504 , ASME B16.34,
- Face to Face: API 609, ISO 5752
- Inspection and Testing: ISO 5208
- Standard Marketing System: MSS-SP-25

APPLICATIONS

- HVAC
- Ship Building
- Petrochemical
- Fire Control
- Seawater
- Flue Gas
- Desulphurization

PARTS AND MATERIALS

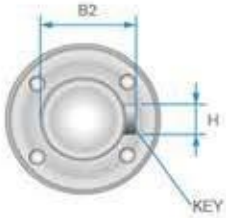


No.	NAME	MATERIAL	SPECIFICATION		REMARK
			JIS	ASTM	
1	BODY	CAST IRON	FC 200	A126 Cl. B	
		DUCTILE IRON	FCD 450	A536-65-45-12	
		STAINLESS STEEL	SCS 13A	A351 Gr.CF8	
			SCS 14A	A351 Gr.CF8M	
2	DISC	DUCTILE IRON	FCD 450	A536-65-45-12	Nylon 11 coated
		STAINLESS STEEL	SCS 13A	A351 Gr. CF8	
		ALU-BRONZE	SCS 14A	A351 Gr. CF8M	
			ALBC 2	B148 C95400	
3	SEAT	NBR (NITRILE)			-10℃ ~80℃ (14 ℉ ~176 ℉)
		EPDM			-20℃ ~120℃ (-4 ℉ ~248 ℉)
		EPT			-20℃ ~140℃ (-4 ℉ ~284 ℉)
		NEOPRENE(CR)			0℃ ~80℃ (32 ℉ ~176 ℉)
		SILICON			-20℃ ~180℃ (-4 ℉ ~356 ℉)
		HYPALON(CSM)			-20℃ ~135℃ (-4 ℉ ~275 ℉)
		VITON			-18℃ ~204℃ (-0.4 ℉ ~400 ℉)
4	STEM	STAINLESS STEEL	SUS 410	A182 Gr. F6A	
			SUS 304	A182 Gr. F304	
			SUS 316	A182 Gr. F316	
5	PIN	STAINLESS STEEL	SUS 304	A182 Gr. F304	
6	BUSH	DELRIN			
7	O-RING	NBR(NITRILE)			
8	BUSH	BRONZE	BC6	B62	For cast iron and ductile iron body
9	BUSH	RPTFE+STAINLESS STEEL	RPTFE+SUS 304	RPTFE+A240 Gr. 304	

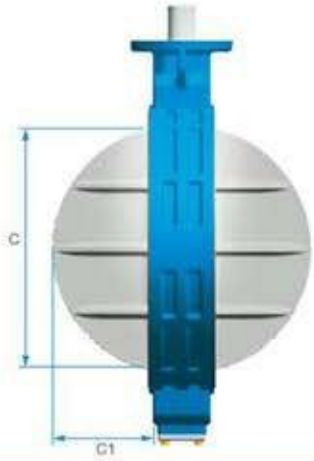
*Each materials can provide on different process of customer's requirements.

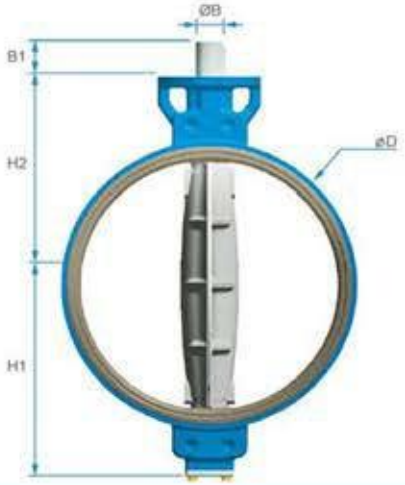
WAFER TYPE DIMENSIONS

DN 40~DN 600



DN 650~DN1000





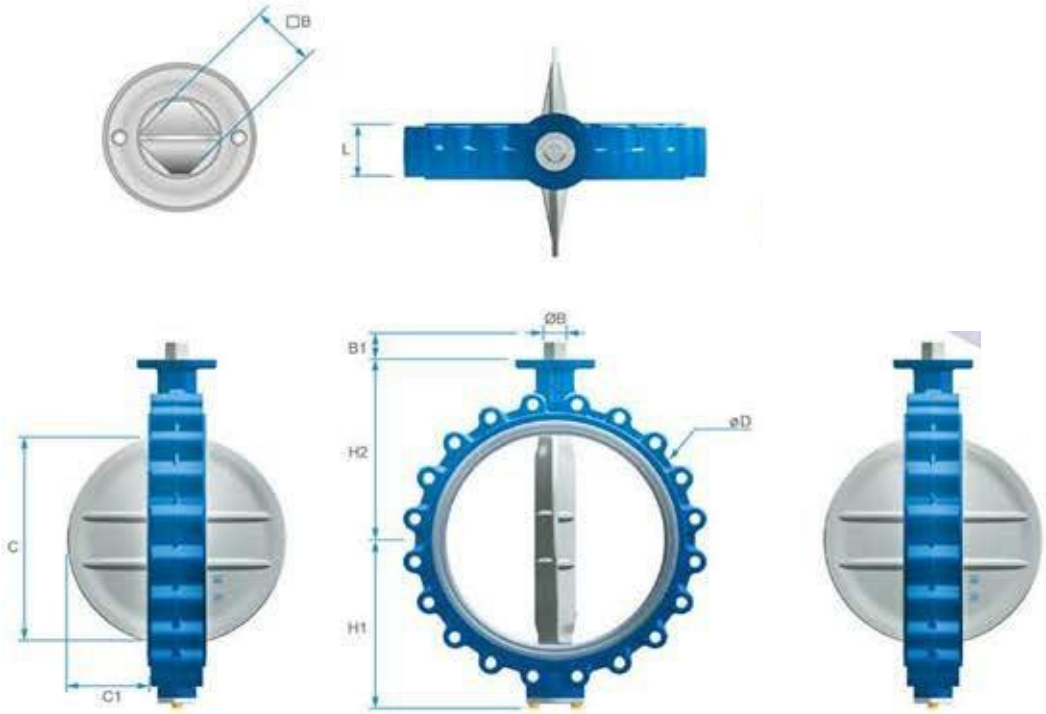
Unit : mm

Size		Face to Face	Dimensions					Mounting flange (ISO 5211)		Shaft end					Weight
mm	Inch	L	H1	H2	φD	C	C1	VALVE Type	VALVE PCD	φB	B1	B2	Key (H*W)	□B	kg
40	1.5	33	60	120	81	34	7	F07	70	14	19	-	-	11	2
50	2	43	65	143	96	39	8	F07	70	14	19	-	-	11	3
65	2.5	46	71	155	110	55	13	F07	70	14	19	-	-	11	3.8
80	3	46	77	162	124	69	19	F07	70	14	19	-	-	11	4
100	4	52	107	181	148	91	27	F07	70	14	19	-	-	11	5.3
125	5	56	122	197	180	115	36	F07	70	18	19	-	-	14	7.3
150	6	56	150	210	206	140	47	F07	70	18	19	-	-	14	8.2
200	8	60	165	240	259	186	68	F10	102	22	24	-	-	17	13.5
250	10	68	201	286	320	239	90	F10	102	25	24	-	-	19	21.2
300	12	78	234	309	370	288	111	F10	102	28	24	-	-	22	32.5
350	14	78	303	329	412	325	128	F12/*F14	125/140	35	29	-	-	27	48
400	16	102	335	361	475	375	143	F12/*F14	125/140	35	29	-	-	27	60
450	18	114	363	393	530	423	162	F14/*F16	140/165	48	38	-	-	36	80
500	20	127	397	427	585	473	182	F14/*F16	140/165	48	38	-	-	36	125
550	22	154	426	475	635	507	186	F14/*F16	140/165	50	38	-	-	36	130
600	24	154	459	492	687	560	214	F16	165	60	48	-	-	46	200
650	26	165	489	515	718	606	230	F16	165	65	90	69.5	18*12	-	194
700	28	165	511	563	796	655	255	F16	165	75	90	79.2	20*12	-	249
750	30	190	544	585	856	692	264	F25	254	75	110	79.2	20*12	-	316
800	32	190	592	630	870	736	285	F25	254	80	110	87.5	24*16	-	365
900	36	203	632	660	1003	841	331	F25	254	85	110	92.5	24*16	-	424
1000	40	216	698	749	1090	941	373	F30	298	100	155	105.3	28*16	-	648

*Other dimensions please consult with Value Valves.

Pipe limit size > C

LUG TYPE DIMENSIONS



Unit : mm

Size		Face to Face	Dimensions					Mounting flange (ISO 5211)		Shaft end			Weight
mm	Inch	L	H1	H2	φD	C	C1	VALVE Type	VALVE PCD	φB	B1	□B	kg
40	1.5	33	60	120	81	34	7	F07	70	14	19	11	2.2
50	2	43	65	143	96	39	8	F07	70	14	19	11	3.4
65	2.5	46	71	155	110	55	13	F07	70	14	19	11	4
80	3	46	77	162	124	69	19	F07	70	14	19	11	4.5
100	4	52	89	181	148	91	27	F07	70	14	19	11	7.6
125	5	56	112	197	180	115	36	F07	70	18	19	14	9.5
150	6	56	123	210	206	140	47	F07	70	18	19	14	10.4
200	8	60	150	240	259	186	68	F10	102	22	24	17	17.5
250	10	68	179	286	320	239	90	F10	102	25	24	19	26.5
300	12	78	216	309	370	288	111	F10	102	28	24	22	43.5
350	14	78	303	329	412	325	128	F12/F14	125/*140	35	29	27	58
400	16	102	335	361	475	375	143	F12/F14	125/*140	35	29	27	81
450	18	114	363	393	530	423	162	F14/F16	140/*165	48	38	36	110
500	20	127	397	427	585	473	182	F14/F16	140/*165	48	38	36	155
600	24	154	459	492	687	560	214	F16	165	60	48	46	318

*Other dimensions please consult with Value Valves.

Pipe limit size > C

CV FLOW COFFICIENT

Size		Disc Angle (Open Degree)								
mm	inch	10°	20°	30°	40°	50°	60°	70°	80°	90°
40	1.5	0.8	2.8	8.1	16.6	25.7	42.1	69.0	94.8	132.2
50	2	1.3	4.4	11.9	25.7	44.5	70.2	117.0	154.4	225.8
65	2.5	2.3	8.8	21.3	41.0	71.4	111.2	218.8	280.8	368.6
80	3	2.9	11.5	30.4	56.2	97.1	147.4	250.4	395.5	497.3
100	4	4.4	17.1	45.6	84.2	139.2	258.6	422.4	709.0	845.9
125	5	7.6	28.1	72.5	138.1	253.9	461.0	700.8	1214.5	1454.3
150	6	11.7	48.0	111.2	204.8	381.4	634.1	1021.4	1474.2	2175.0
200	8	22.2	74.9	193.1	358.0	670.4	1164.2	1833.4	2702.7	3655.1
250	10	32.8	118.2	286.7	527.7	978.1	1710.5	2636.0	3809.5	5565.7
300	12	39.8	150.9	365.0	719.6	1330.3	2486.3	3800.2	5839.5	8257.9
350	14	55.0	190.7	456.3	930.2	1752.7	3010.4	4656.6	6726.3	9733.2
400	16	72.5	270.3	594.4	1260.1	2308.4	3955.8	6300.5	9475.8	13405.9
450	18	87.8	299.5	726.6	1413.4	2708.6	4592.3	7407.3	11084.6	15926.0
500	20	120.5	404.8	1005.0	1979.6	3610.6	6257.2	9960.2	15337.5	21935.2
550	22	146.3	489.1	1215.6	2395.0	4368.8	7571.1	12051.0	18557.4	26541.5
600	24	162.6	578.0	1349.0	2795.1	5225.2	8846.4	13975.7	21163.0	29503.9
650	26	190.7	677.4	1583.0	3280.7	6132.0	10381.4	16401.1	24836.8	34626.2
700	28	223.5	771.0	1958.6	3772.1	7008.3	12471.0	20407.1	29477.0	43080.6
750	30	237.5	819.0	2079.1	4001.4	7434.2	13229.2	21648.5	31270.6	45702.5
800	32	300.7	1138.4	2693.3	5303.6	9635.0	16523.9	26934.6	36987.2	53814.2
900	36	384.9	1466.0	3451.5	6858.5	12647.7	21275.3	34814.5	50184.8	71421.5
950	38	538.2	2024.1	4703.4	8400.6	14238.9	23166.0	38013.3	57704.4	72715.5
1000	40	596.7	2245.2	5213.5	9308.5	15788.0	25668.6	42120.0	63939.3	80582.6
1050	42	657.5	2475.7	5748.2	10262.1	17406.1	28300.0	46437.3	70493.7	88842.8
1100	44	721.9	2716.7	6308.6	11263.6	19103.8	31058.8	50965.2	77366.3	97505.5
1200	48	858.8	3232.7	7507.9	13404.7	22734.3	36962.6	60652.8	92073.2	116039.4

When require Cv = 1.17Kv

TORQUE CHART (Nm)

Size		Differential pressure (kg/cm²)						
		Lubricating(Non-corrosive)				Dry(Non-Lubricating)		
mm	inch	3	6	10	16	3	6	10
40	1.5	15	17	19	23	19	21	23
50	2	15	17	19	23	19	21	23
65	2.5	18	20	22	26	22	24	27
80	3	28	31	34	41	34	38	42
100	4	37	41	45	54	45	50	56
125	5	61	68	76	91	76	84	93
150	6	116	127	140	154	126	138	152
200	8	171	190	211	253	211	234	260
250	10	275	306	340	408	340	378	420
300	12	381	423	470	564	470	522	580
350	14	545	605	672		672	747	830
400	16	728	809	899		899	999	1110
450	18	912	1013	1126		1126	1251	1390
500	20	1135	1261	1401		1401	1557	1730
550	22	1373	1525	1695		1695	1884	2093
600	24	1325	1472	1636		1636	1818	2020
650	26	1555	1727	1920		1920	2133	2370
700	28	2339	2599	2888		2888	3209	3566
750	30	2608	2898	3220		3220	3578	3975
800	32	3008	3342	3713		3713	4125	4583
900	36	3828	4253	4726		4726	5251	5834
950	38	4415	4920	6616		5450	6050	7100
1000	40	5090	5680	7620		6280	7010	9410
1050	42	5611	6262	8401		6924	7728	10374
1100	44	6158	6872	9262		7599	8481	11385
1200	48	7328	8178	11022		9043	10093	13548

To use torque chart, note the following:
1. Seating / unseating torque valves above included friction bearing torque for stated Δp.
2. Do not apply a safety factor to above torque valves when determining actuator out put torque requirement.