CE 0062 Lloyd's Register

ISO 9001
Certificate No : 60519

KB Butterfly Valve

High Technology Valve

- Zero Leakage
- No Particle
- Low Torque



KB Valve
HIGH TECHNOLOGY



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Company Philosophy

"We only pursue the world's best and are committed to deliver the world's best products with fortitude."

Above motto is the motive as well as vision
of our company since an establishment.
All the staffs are exerting every effort with keeping above value in mind and
striving to provide the world's best products in quality and
price in butterfly valve manufacturing fields.

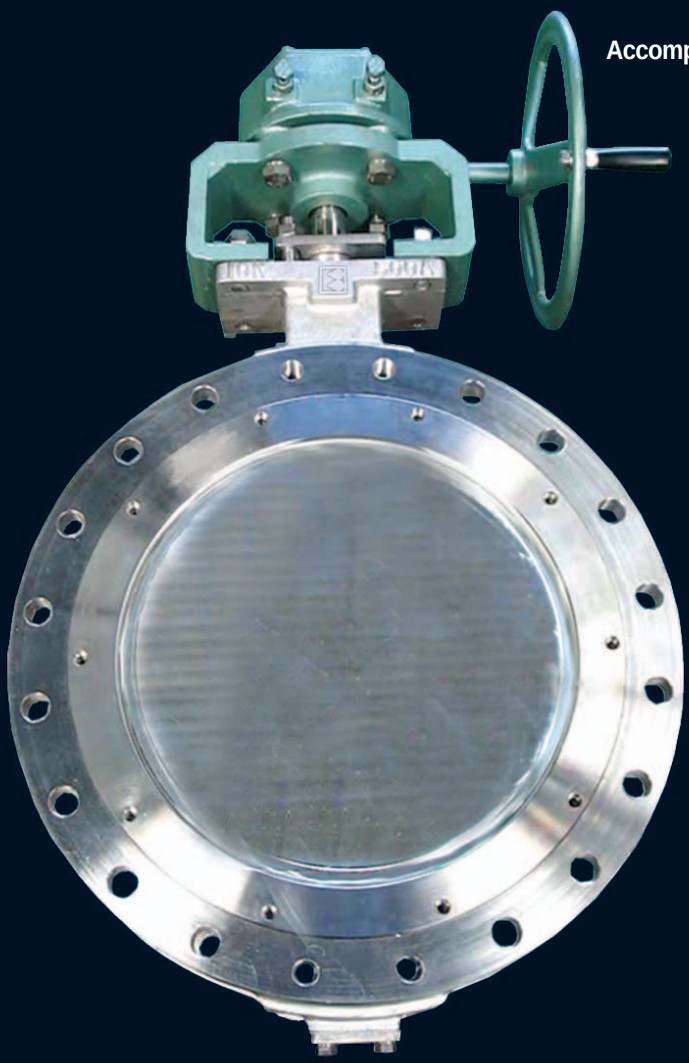
"World's Best Quality"

Accomplishing the goal of World's Best Quality is our *Challenge,*

Responsibility,

Object.

We only compete with ourselves.

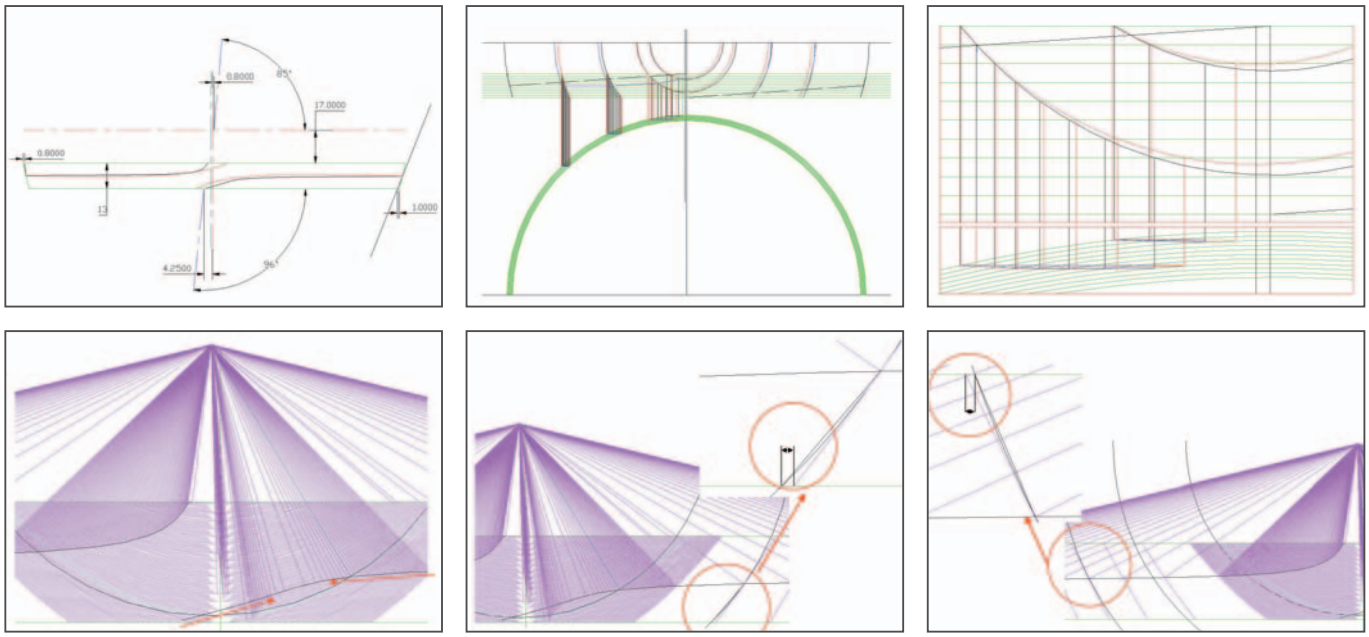


Research and Development

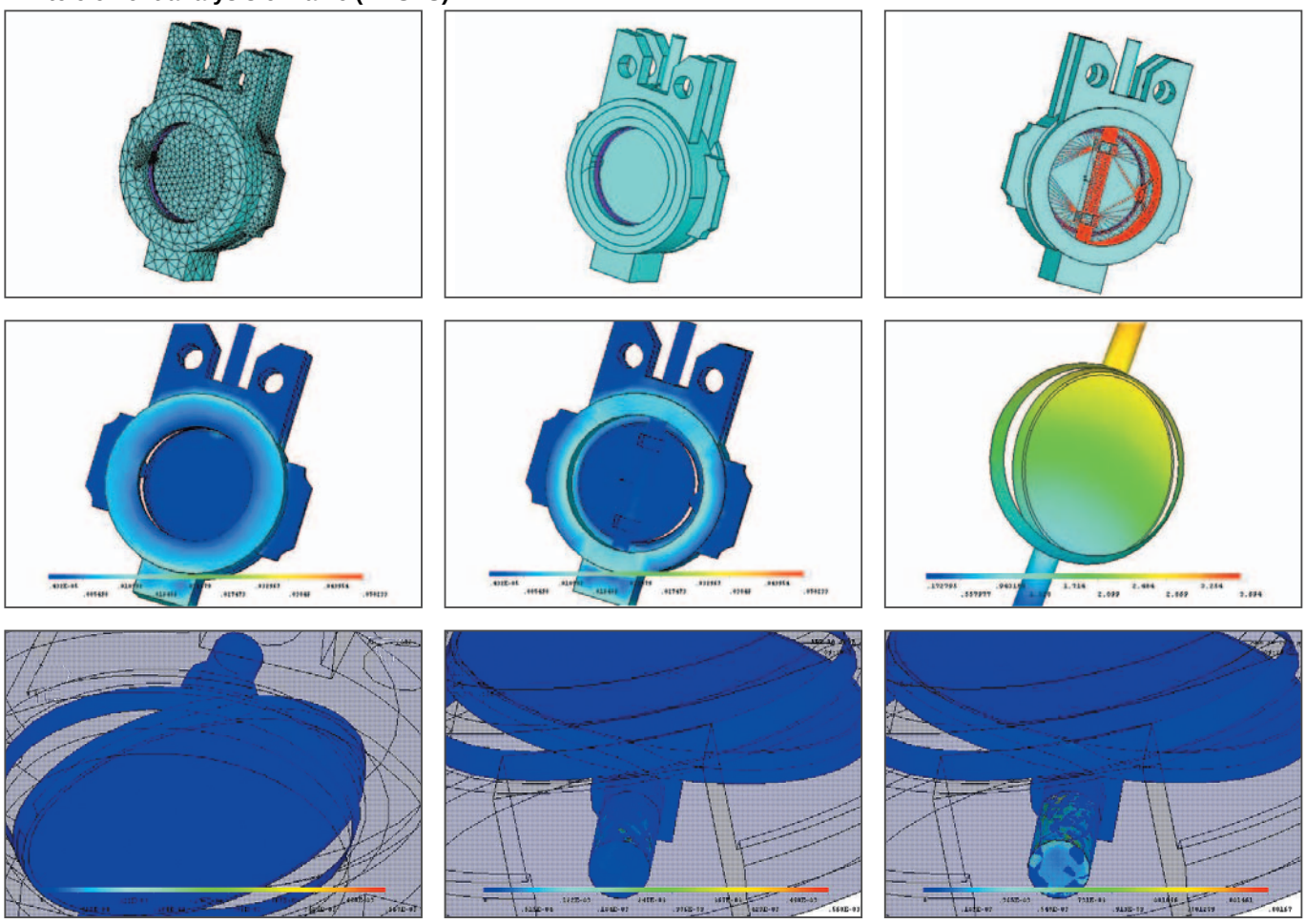
- 2RD : Our company has filed a patent application regarding novel 2RD sealing method in sealing the butterfly valves in the name of three inventors including research professors of Engineering Department in INJE University in Korea. The characteristics of this technology is derived from the Geometric theory. There is non-rubbing sealing zone between cone type of Seat and the area of Disc where meets the Seat.

- Others : Application for Butterfly Valve Patent (No. 0202655/ No. 0287815/ No. 0470755/ No. 0388308)
  Application for Life conservation Equipments Patent (No. 0241962)
  Application for SF6 Gas Shut Off Valve Patent (No. 0357843)

Interference analysis by using 3D model (ANSYS)



Finite element analysis of valve (ANSYS)



Applications

Energy System

Moisture and circulating water at geothermal, power plants, thermoelectric and hydroelectric power plants, pure water, cooling water at atomic, acidic water, etc.



Water Treatment Plants

Water supply, sewerage, purifiers, and other water treatment facilities, city water, well water, river water, waste water, etc.



DHC and AIR Conditioning

Cold water, warm water and clear water of water supply & drain line in local air cooling & heating system and in an air conditioning system or public buildings.



Shipbuilding

Fuel oil and lubricating oil in an engine room of cargo line, and other general shipboard uses.

Semiconductor Industry

Processing line of ultra pure water and ultra pure gas, semiconductor product line, LCD and PDP product line, and condenser product line.



Others

Chemical industry, food industry, steel works, etc.



Applicable Code

Code	Description
ANSI B16.5	Steel pipeline flanges
ANSI B16.34	Steel valves
MSS SP-6	Standard finishes for pipe flanges
MSS SP-25	Standard marking system for valves
MSS SP-44	Steel pipeline flanges
MSS SP-55	Quality standard for steel castings
MSS SP-61	Pressure testing of steel valves
MSS SP-67narrow(C1-D1)	Butterfly valves
API 598	Valve inspections and testing
API 609	Butterfly valves-Wafered and lugged type(face-to-face on valve)
ISO 7005	Metallic flanges
ISO 5208	Industrial valves-pressure testing of valves
ISO 5209	General purpose industrial valves-marking
ISO 5211/1	Part-turn valve actuator attachment-top flange dimensions
ISO 5752 Tab.5(20series)	Face-to-face and centre-to-face dimensions
DIN 3202-K1	Face-to-face dimensions
DIN 50049-2.2	Certificates on material tests(standard)
DIN 50049-3.1B	Certificates on material tests(on request)
BS 5155 short	Butterfly valves for general purposes
AWWA C504	Rubber Seated Butterfly Valves
JIS B2002	Face-to-face dimensions
JIS B2003	Valve Test

Inspection and testing in according to ISO 5205, MSS SP61, AWWA C504, JIS B2003, API 598, and BS 5155.

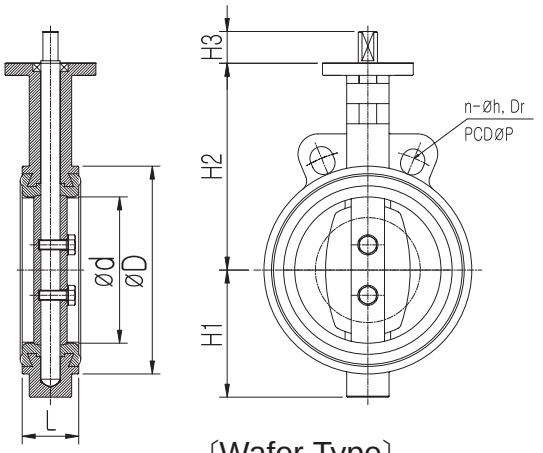
The body test is performed at 1.5 times the nominal pressure while the Seat Test at 1.1 times the nominal pressure, using for both emulsified water at room temperature. While testing, no leakage shall be noticed from the stems, as for the Body Test, not from upstream to downstream, as for the Seat Test. For the Pneumatic Test with disc closed the butterfly is covered with water and soap on that side where the visual control of the seal is performed, in order to show up a possible leak. Our valves are tested 100% before being delivered.



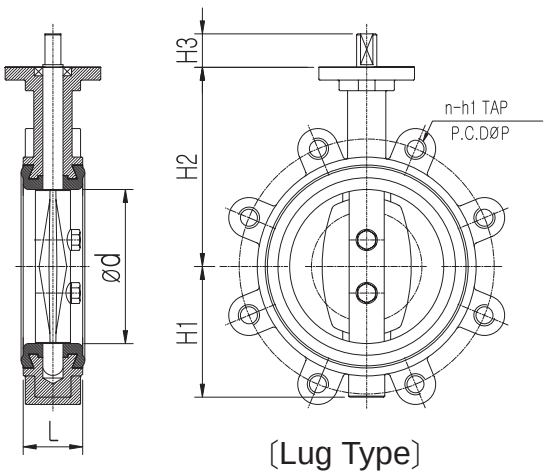
Standard Materials

Part	Material	Material Mark	
		ASTM	JIS
BODY	Cast iron	A126 CL.B	FC
	Ductile cast iron	A536 Gr.65-45-12	FCD 450
	Bronze cast	B584	BC6
	Aluminum bronze	B148	ALBC
	Cast carbon steel	A216 WCB	SCPH2
	Stainless steel	A351 CF8	SCS 13
		A351 CF8M	SCS 14
		A351 CF3M	SCS 16
		A351 CN3MN	
		A351 CD4MCu	
DISC	Aluminum bronze	B148	ALBC
	Ductile cast iron	A536 Gr.65-45-12	FCD 450
	Stainless steel	A351 CF8	SCS 13
		A351 CF8M	SCS 14
		A351 CF3M	SCS 16
		A351 CN3MN	
		A351 Gr.CF3MN	
		A890 Gr. 1A(CD4MCu)	
SHAFT	Inconel 625		
	Monel K500		
	Stainless steel	A276 304	SUS 304
		A276 316	SUS 316
		A479 410	
		A564 630	
SEAT	NBR		
	EPDM		
	PTFE		
	Reinforced PTFE		
	Inconel 625		
	Stellite 6		
	Stainless steel	A240 304	SUS 304
		A240 316	SUS 316
		A240 317	
SHAFT SEAL	NBR		
	EPDM		
	PTFE		
	Graphite		

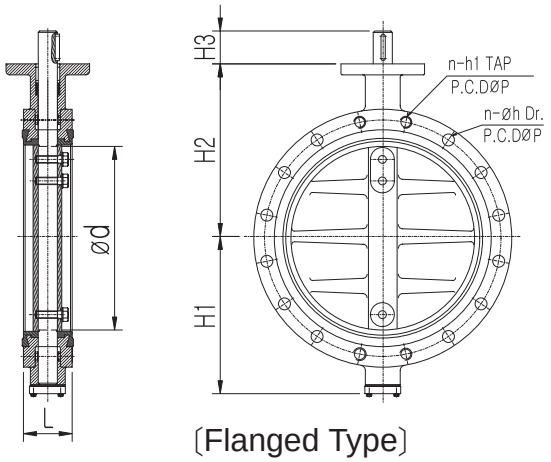
Concentric (Rubber Lined)



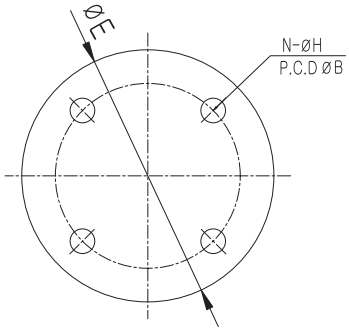
〔Wafer Type〕



〔Lug Type〕



〔Flanged Type〕



〔Top Flange〕

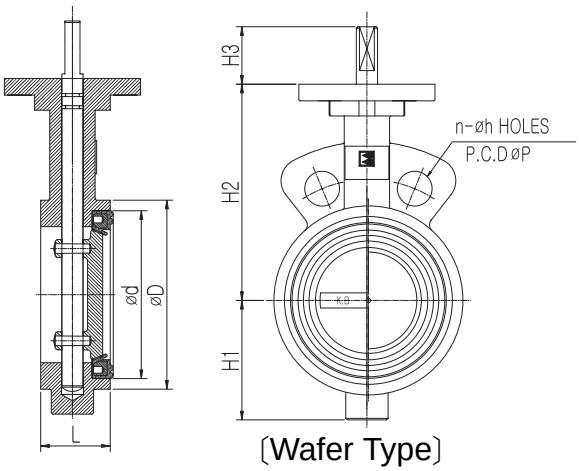
Dimensions

UNIT: mm

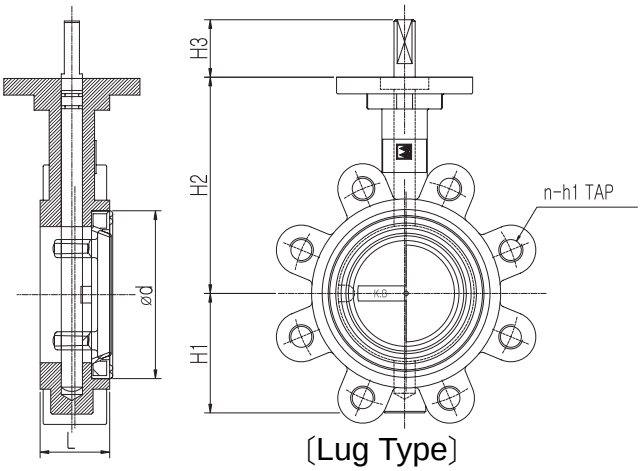
SIZE		L	ød	øD	H1	H2	H3	TOP FLANGE ISO 5211			JIS 10K			ANSI 150LB		
mm	inch							ØE/ØB	N-ØH	TYPE	n-øh	h1	øP	n-øh	h1	øP
50	2"	43	47	95	65	131.5	33	90/70	4-10	F7	4-19	M16	120	4-19	5/8"	120.6
65	2.5"	46	62	112	71.5	140	33	90/70	4-10	F7	4-19	M16	140	4-19	5/8"	139.7
80	3"	46	77	123	79.5	158.5	33	90/70	4-10	F7	8-19	M16	150	4-19	5/8"	152.4
100	4"	52	95	152	95	173	33	90/70	4-10	F7	8-19	M16	175	8-19	5/8"	190.5
125	5"	56	120	180	110.5	190	33	90/70	4-10	F7	8-23	M20	210	8-22	3/4"	215.9
150	6"	56	145	206	126	205	33	90/70	4-10	F7	8-23	M20	240	8-22	3/4"	241.3
200	8"	60	195	266	155	243.5	49	125/102	4-12	F10	12-23	M20	290	8-22	3/4"	298.4
250	10"	68	245	311	210	272	49	125/102	4-12	F10	12-25	M22	355	12-25	7/8"	361.9
300	12"	78	295	361	250	301.5	49	125/102	4-12	F10	16-25	M22	400	12-25	7/8"	431.8
350	14"	78	337	410	275	340	70	125/102	4-12	F10	16-25	M22	445	12-28	1"	476.2
400	16"	102	390	474	309.5	362	70	175/140	4-18	F14	16-27	M24	510	16-28	1"	539.7
450	18"	114	439	531.5	347.5	377.5	70	175/140	4-18	F14	20-27	M24	565	16-32	1 1/8"	577.8
500	20"	127	485.5	580.5	375	405	120	210/165	4-22	F16	20-27	M24	620	20-32	1 1/8"	635
550	22"	142	538	641	421	458	120	210/165	4-22	F16	20-33	M30	680	20-35	1 1/4"	692.1
600	24"	154	580	680	432.5	462.5	120	210/165	4-22	F16	24-33	M30	730	20-35	1 1/4"	794.5
650	26"	170	639	739	475	530	120	225/165	4-22	F16	24-33	M30	780	24-35	1 1/4"	806.5
700	28"	185	681	765	500	560	158	300/254	8-18	F25	24-33	M30	840	28-35	1 1/4"	863.5
750	30"	190	716	810	555	605	158	300/254	8-18	F25	24-33	M30	900	28-35	1 1/4"	914.5
800	32"	190	760	875	585	625	158	300/254	8-18	F25	28-33	M30	950	28-42	1 1/2"	978
850	34"	200	830	952	600	665	192	300/254	8-18	F25	28-33	M30	1000	32-42	1 1/2"	1029
900	36"	200	886	1004	631	698	192	300/254	8-18	F25	28-33	M30	1050	32-42	1 1/2"	1086
1000	40"	216	980	1085	709	765	226	300/254	8-18	F25	28-39	M36	1160	36-42	1 1/2"	1200
1100	44"	241	1088	1134	742	805	226	350/298	8-23	F30	28-39	M36	1270	40-42	1 1/2"	1314.5
1200	48"	254	1184	1198	784	845	243	350/298	8-23	F30	32-39	M36	1380	44-42	1 1/2"	1422.4

※Dimension table could be flexible for product improvement reasons.

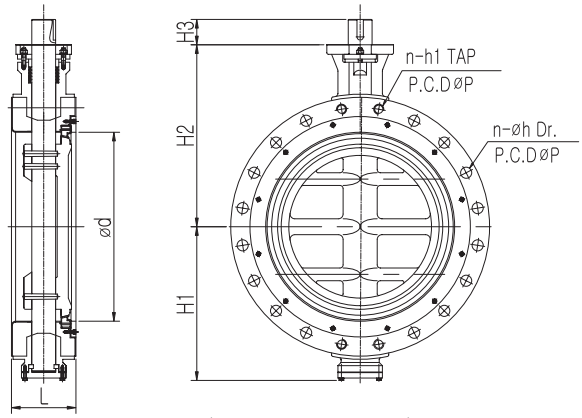
Eccentric (Cargo type 20kg/cmf)



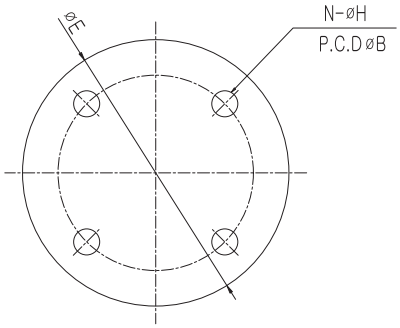
〔Wafer Type〕



〔Lug Type〕



〔Flanged Type〕



〔Top Flange〕

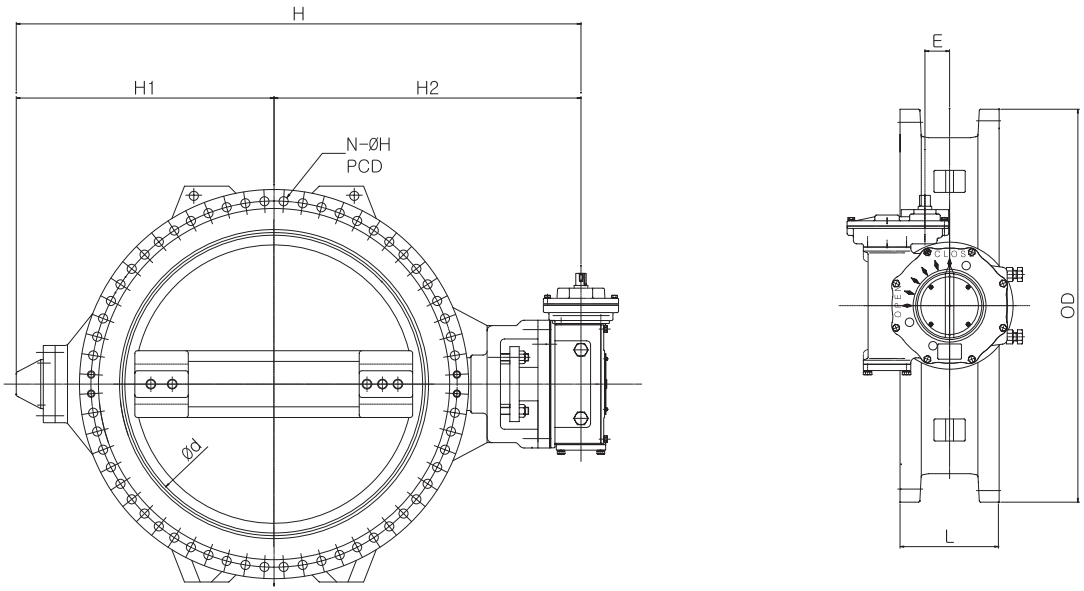
Dimensions

UNIT: mm

SIZE		L	ød	øD	H1	H2	H3	TOP FLANGE ISO 5211			JIS 16K			ANSI 300LB		
mm	inch							øE/øB	N-øH	TYPE	n-øh	h1	øP	n-øh	h1	øP
50	2"	43	85	95	62	120	35	90/70	4-10	F7	8-19	M16	120	8-19	5/8"	127
65	2.5"	46	101	118	76.5	130	35	90/70	4-10	F7	8-19	M16	140	8-22	3/4"	149.2
80	3"	46	111	125	79	143	35	90/70	4-10	F7	8-23	M20	160	8-22	3/4"	168.3
100	4"	52	136	150	89.5	157.5	35	90/70	4-10	F7	8-23	M20	185	8-22	3/4"	200
125	5"	56	167	181	110	178	35	90/70	4-10	F7	8-25	M22	225	8-22	3/4"	234.9
150	6"	56	192	206	120	185	35	90/70	4-10	F7	12-25	M22	260	12-22	3/4"	269.9
200	8"	60	246	260	154	218	50	125/102	4-12	F10	12-25	M22	305	12-26	7/8"	330.2
250	10"	68	307	323	186	260	64	125/102	4-12	F10	12-27	M24	380	16-29	1"	387.3
300	12"	78	348	364	208	283	64	125/102	4-12	F10	16-27	M24	430	16-32	1 1/8"	450.8
350	14"	78	389	432	263	343	64	175/140	4-12	F10	16-33	M30	476	16-32	1 1/8"	514.3
400	16"	102	427	468	287	362	100	175/140	4-18	F14	16-33	M30	539.5	16-35	1 1/4"	571.5
450	18"	114	471	517	311	402	100	175/140	4-18	F14	20-33	M30	578	16-35	1 1/4"	628.6
500	20"	127	516	564	408	475	100	210/165	4-22	F16	20-33	M30	660	24-35	1 1/4"	685.8
550	22"	154	576	628	453	516	125	210/165	4-22	F16	20-39	M36	720	24-42	1 1/2"	742.9
600	24"	154	634	694	517	589	125	210/165	4-22	F16	24-39	M36	770	24-42	1 1/2"	812.8
650	26"	165	687	782	590	683	160	225/165	4-22	F16	24-39	M36	820	28-45	1 5/8"	876.3
700	28"	165	731	823	624	715	160	300/254	8-18	F25	24-42	M39	875	28-45	1 5/8"	939.8
750	30"	190	794	891	683	787	190	300/254	8-18	F25	24-42	M39	935	-	-	-
800	32"	190	837	923	714	815	190	300/254	8-18	F25	24-48	M45	990	-	-	-
850	34"	203	881	951	746	852	190	300/254	8-18	F25	24-48	M45	1040	-	-	-
900	36"	203	930	988	762	896	215	300/254	8-18	F25	28-48	M45	1090	-	-	-
1000	40"	216	1071	1125	806	914	215	300/254	8-18	F25	28-56	M52	1210	-	-	-
1100	44"	241	1165	1305	861	993	240	350/298	8-23	F30	32-56	M52	1310	-	-	-
1200	48"	254	1252	1369	911	1026	240	350/298	8-23	F30	32-56	M52	1420	-	-	-

※Dimension table could be flexible for product improvement reasons.

Water Works



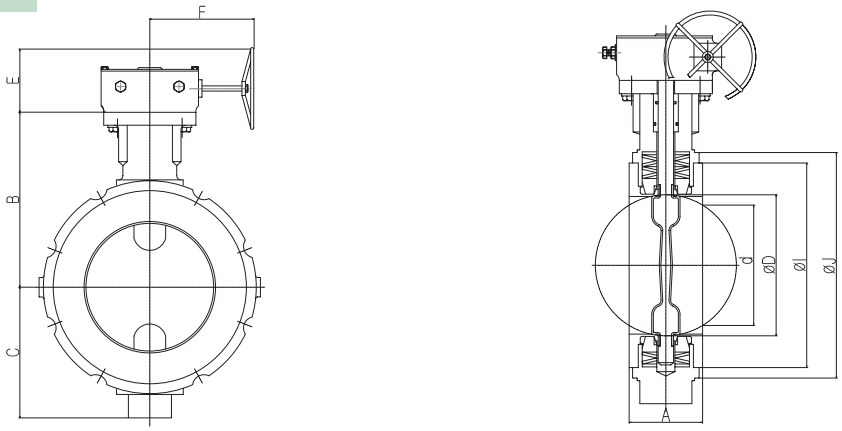
Dimensions

SIZE		ød	L	H	H1	H2	FLANGE(150LB)			E	WEIGHT (APPROX.) (kg)
inch	mm						OD	PCD	N-ØH		
4"	100	95	52	427	160	260	229	190.5	8-19	66	52
6"	150	145	56	492	190	295	279	241.5	8-22	66	61
8"	200	195	60	526	210	315	343	298.5	8-22	80	68
10"	250	245	68	619	250	360	406	362	12-25	80	99
12"	300	295	78	692	275	410	483	432	12-25	120	110
14"	350	337	78	789	320	460	533	476	12-29	120	134
16"	400	390	102	844	345	490	597	539.5	16-29	120	170
18"	450	439	114	942	400	540	635	578	16-32	120	230
20"	500	485.5	127	1035	425	610	698	635	20-32	120	266
22"	550	538	154	1090	465	625	749	692	20-35	120	298
24"	600	580	154	1165	500	665	813	749.5	20-35	203	410
28"	700	681	165	1240	535	705	927	863.5	28-35	203	510
30"	750	716	190	1325	570	750	984.5	914.5	28-35	203	758
32"	800	760	190	1370	600	770	1060.5	978	28-41	203	980
36"	900	886	203	1512	680	825	1168	1086	32-41	203	1180
40"	1000	980	216	1710	750	955	1289	1200	36-41	203	1395
44"	1100	1088	240	1800	795	995	1403	1314	40-41	203	1588
48"	1200	1184	254	1945	860	1060	1511	1422	44-41	203	1890
52	1300	1300	280	2060	920	1135	1625	1537	44-48	270	2385
54	1350	1350	280	2140	935	1200	1683	1594	44-48	270	2800
56	1400	1400	280	2217	955	1260	1746	1651	48-48	270	3250
60	1500	1500	280	2360	1040	1305	1854	1759	52-48	270	3705
64	1600	1600	360	2500	1120	1375	-	-	-	270	4675
66	1650	1650	360	2630	1175	1450	2032	1930	52-48	270	5200
72	1800	1800	360	2740	1225	1500	2197	2095.5	60-48	550	5960
80	2000	2000	360	2890	1280	1590	2325	2230	60-48	550	7780
84	2100	2100	360	2950	1325	1615	2534	2426	64-57	550	8750
96	2400	2400	460	4155	1975	2170	2876.5	2756	68-70	550	14650
112	2800	2800	460	4650	2145	2495	NOTE			700	25800
120	3000	3000	460	5600	2695	2985				700	32000
140	3500	3500	520	6600	3145	3440	For 2800A and large It is available upon request			700	39800
160	4000	4000	600	7450	3590	3800				700	47680

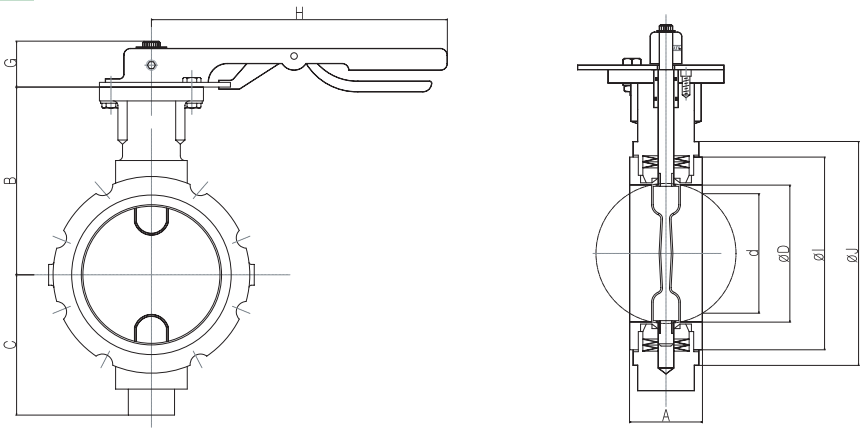
※Dimension table could be flexible for product improvement reasons.

PFA Linded Valve

Gear Type



Lever Type



Dimensions

UNIT: mm

SIZE		A	B	C	ØD	d	E	F	G	H	ØI	ØJ
mm	inch											
50	2"	43	100	62.5	52	32	155	212	30	265	87	95
65	2.5"	46	122	70	64	48	155	212	30	265	98	106
80	3"	48	133	77	77	64	155	212	30	265	125	133
100	4"	52	153	93	103	91	155	212	30	265	152	158
125	5"	56	152	113	127	116	155	212	30	280	178	188
150	6"	56	174	123	147	135	155	212	30	280	206	216
200	8"	60	211	170	198	191	170	180	–	–	265	273
250	10"	67	230	202	247	239	200	240	–	–	320	330
300	12"	78	308	228	299	290	280	320	–	–	367	378

※Dimension table could be flexible for product improvement reasons.



High Performance Butterfly Valve



High Clean Butterfly Valve (soft seat)

- Double eccentric
- Non-rubbing
- Zero leakage (or under $3x10^{-7}$ atm.cc/sec)
- No particle (or not found ≤ 5ea (0.3ß㎛/cfm)
- Surface Roughness (RY)
  (AP grade 25㎛, BA grade 3.0㎛, EP grade 0.7㎛)

Applications

- LCD product line in SamSung Electronics Co., Ltd.
- Line of semiconductor production in LG Semicon Co.,Ltd.
- Chemical Tanker Shipbuilders in Japan
- R3 Project and Silver Seawater Project in LG Micron Co., Ltd.
- HHI Factory of Marine Engine
- Methane Gas line of Landfill
- Oxygen supply line in POSCO

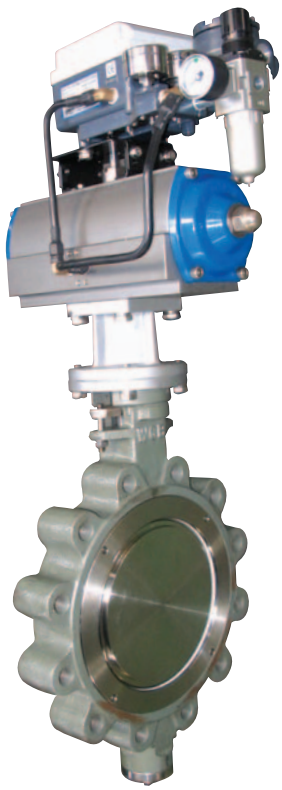


General High Performance Butterfly Valve

- Double eccentric
- Non-rubbing
- Zero leakage

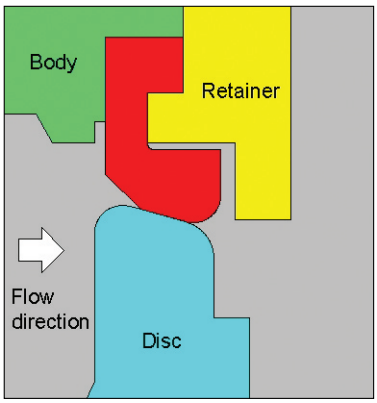


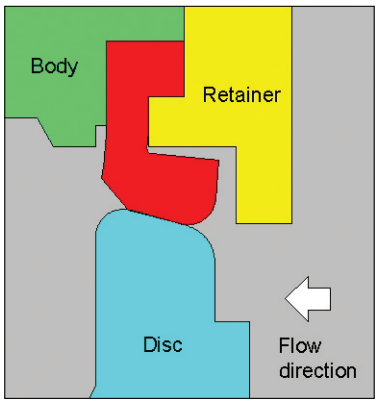


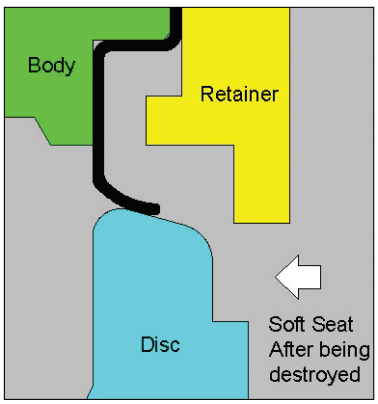


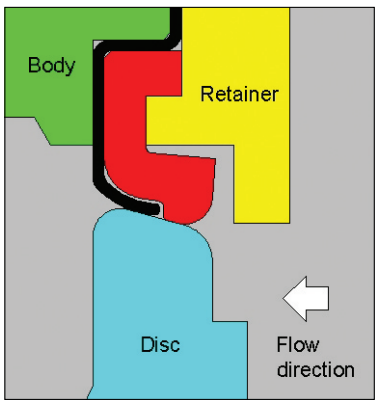
Structural characteristics of the 2RD sealing

■ **Soft seat / GTD**
Elasticity of the seat and fluid pressure assures perfect “bubble - tight” sealing.



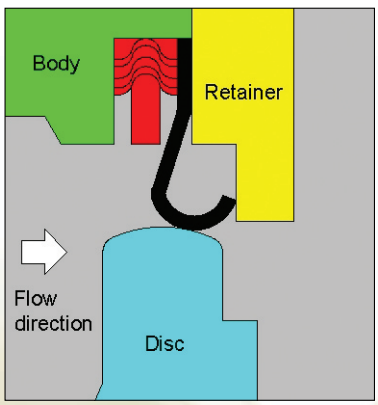


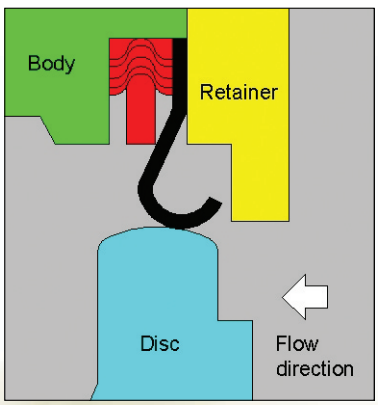




■ **Fire safe seat / FSD**
When the PTFE seat has burned away after a fire, the supplementary metal sealing seat activates automatically and prevent from excessive flow.

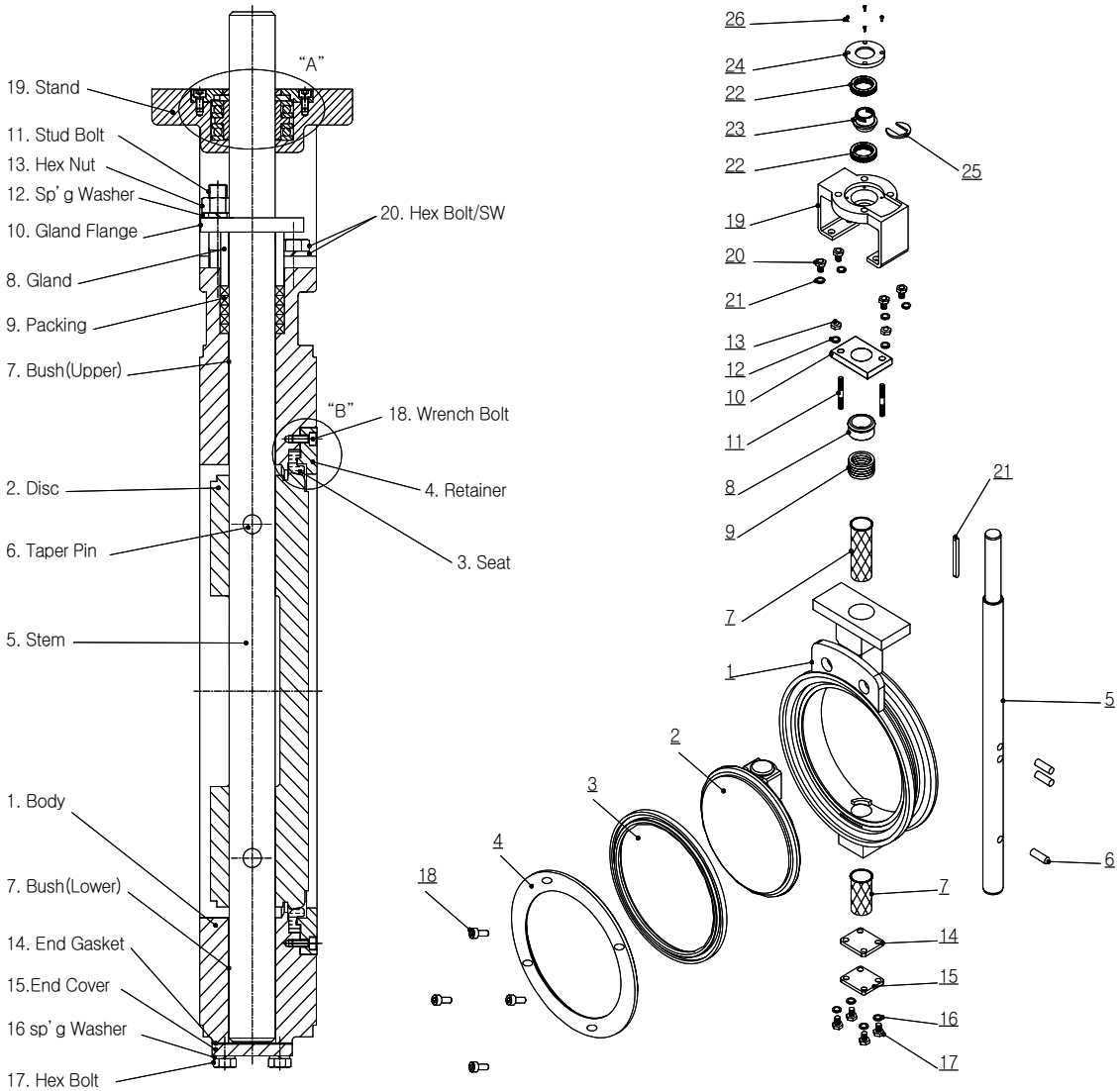
■ **Metal seat / MTD**
This version offers very high sealing capability with an unusually low leakage rate.

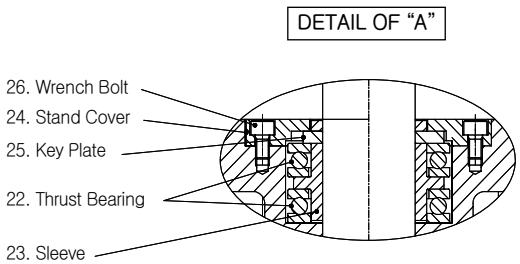


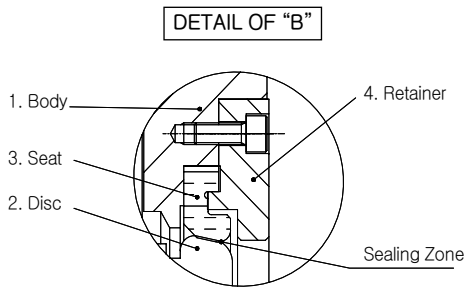




Valve Construction







Utility Model Registration Application-10702

- Exclusion of touch between Disc and other abrasive
- Installing of Disc Lock Unit on outside of Body for Disc load
- Protecting TRIM from any particles

Patent Cooperation Treaty / KR021 / 00452

- Applied 2RD Sealing Method
- Non-rubbing between Disc and Seat
- Protection from any particles
- No Leakage, Low Torque