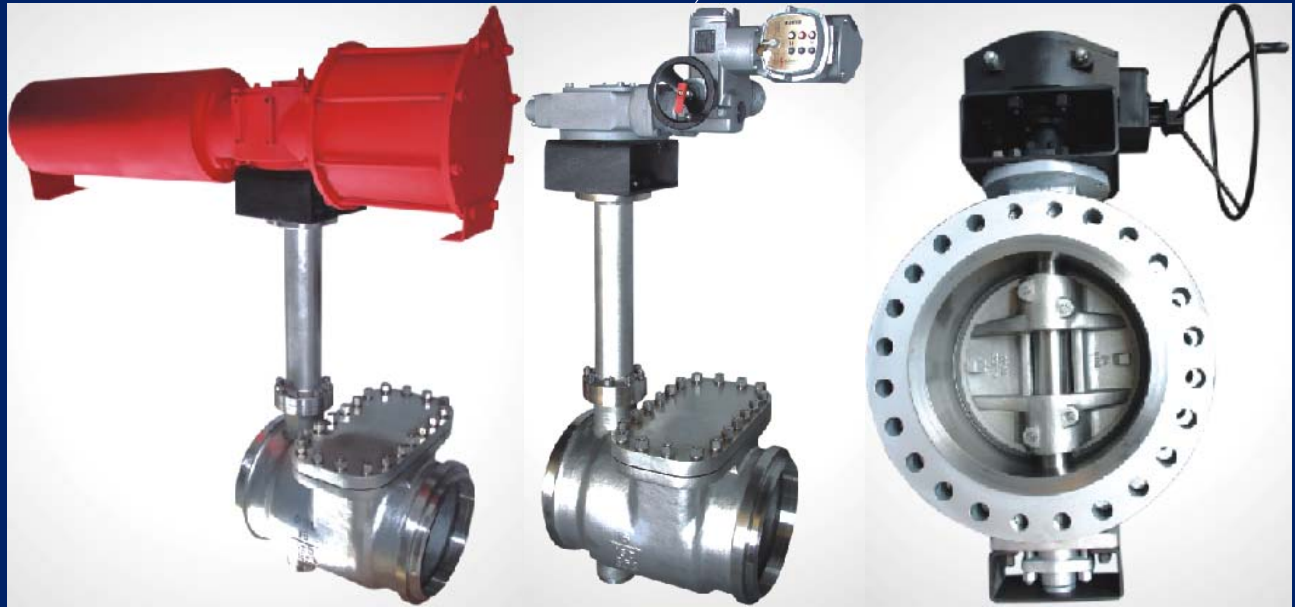




MANN FLOW CONTROLS , INC



Product Brochures

Butterfly Valves

www.mannflowcontrols.com





ABOUT US

- ◇ Mann Flow Controls, Inc. (MFC) is a manufacturer of high quality valves and flow control products based in Houston, Texas, USA.
- ◇ We manufacture ball valves, check valves, gate valves, globe valves, plug valves, cryogenic valves and specialty valves.
- ◇ Our valves meet American Petroleum Institute (API), American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), American Society for Non-Destructive Testing (ASNT), Manufacturers Standardization Society (MSS), British Standard Institute (BS), Conformité Européenne (CE), NACE International and other standards and specifications.
- ◇ MFC is dedicated to provide our customers with high quality valves that are designed, manufactured and tested to the exacting standards of various qualifying certification bodies.

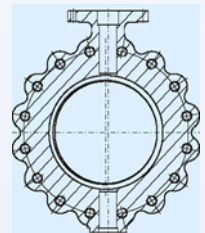
BUTTERFLY VALVES

Butterfly valves are used for isolating or regulating flow. They are a quarter turn valve similar to a ball valve except the closing mechanism is a disk instead of a ball. Butterfly valves are typically lower in cost to other valve types as they are lighter in weight meaning less support is required to have them in line. The disc of the valve is operated by either a lever, gear or actuator. When the valve is closed the disc blocks the flow- when open the disk turns to allow flow to pass through; however the disk will always be present within the flow resulting in a pressure drop regardless of valve position. Butterfly valves can also be open incrementally to throttle flow.

DESIGN FEATURES

Butterfly valves are used to open and close (seal type) or adjust the medium flow in pipes in the fields of foodstuff, drinks, chemical, industrial water treatment, high-rise constructions, water supply and drainage etc.. They are mainly structured as followings:

1. Simple structures, small sizes, light weight and low installation dimension. According to type of body connections, they are basically classified to wafer type (including lug wafer type), flanged and welded



2. Sealing materials may be soft or hard, placed on body or disc, to meet different working conditions, and to effect good seal and long life

A). Soft sealing structure (see fig. right), is applicable for single and double eccentric butterfly valves, pressure rating CL600. Centered sealing structure is applicable for pressure rating, CL250 Sealing ring (PTFE) is placed on the valve body to feature the following

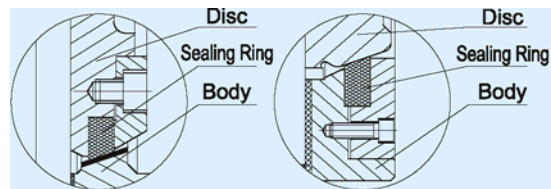
- i) To effect dependable sea with no need of accessorial sealing ring or metal bracing ring.
- ii) Bidirectional leak proof seal.
- iii) Little maintenance and long service life.

- ◇ MFC maintain a self-auditing Quality Assurance program which provides us with identifiable goals for continuous quality improvements.
- ◇ Our QA department have emphasized on material traceability, (working with our affiliated production facilities) we conduct PMI laboratory with Optical Emission Spectrometer technology + RT-MT-
- ◇ We believe that the integrity of materials provide for MFC valves are not just in a certificate but every valves produced must pass our rigid tests throughout the manufacturing process, including a final hydrostatic test prior to shipping.

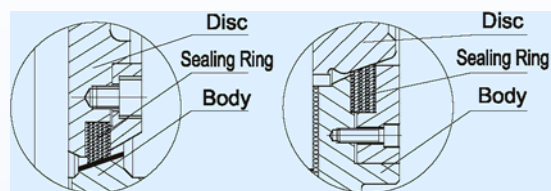
OBJECTIVE, FOCUS AND EDGE



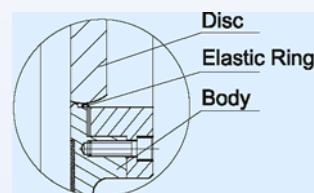
When it comes to valves, we that your most important purchase consideration is quality, reliability, total cost of ownership and delivery. The longer a valve performs as designed and without problems, the



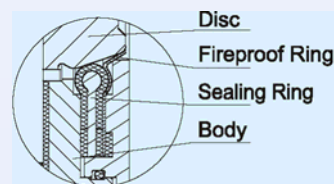
B) Multilayer Hard Seal Structure (See fig. right) Multilayer hard seal structure is applicable for single, double and triple eccentric butterfly valves, pressure rating, CL600. And, triple eccentric butterfly valve can maintain two-way leak-tightness. Multilayer sealing ring is composite of stainless steel and nonmetal material. The nonmetal material can be flexible graphite, PTFE or non-asbestos material etc. according to the actual working conditions.



C) Elastic ring hard seal structure (see fig. right) is of the structure of J-type metal sealing ring. It is applicable for single and double eccentric butterfly valves, pressure rating CL300. Provided with fireproof structure to adapt to conditions with great temperature changes, it is featured by outstanding seal, long service life and easy workmanship



3. Fireproof butterfly valves (see fig. Right) can stop the expansion of fire. Once the sealing seat of butterfly valve is on fire, the stainless Steel sealing ring will act to make butterfly valve immediately sealed.
4. When butterfly valve is fully opened, flow resistance is low. When partially opened, it may carry out sensitive flow control.
5. Low driving moment, easy and quick operation.

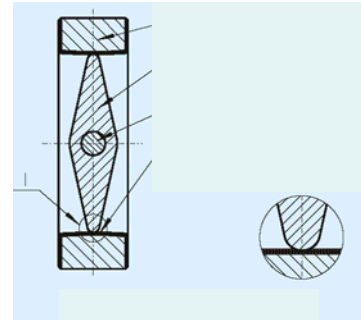


SEALING FEATURES

Our butterfly valves are structured to centered seal, single eccentric seal, double eccentric seal, triple eccentric seal and variable eccentric seal. The sealing principles of these structures are stated as followings:

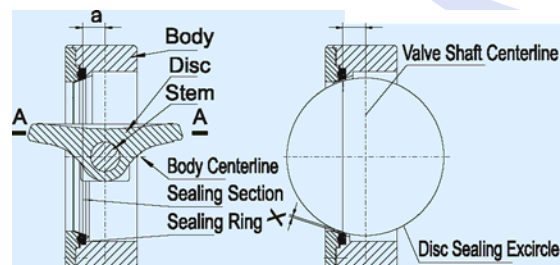
1. Sealing Principle of Centered Seal Butterfly Valve

With the disc seal center of butterfly valve and rotation center of stem overlapped, sealing load will be produced between the sealing faces of seat and disc under certain magnitude of interference, thus to ensure effective seal of valve. Lined with rubber on body, this structure is applicable for medium and small-bore butterfly valves. Due to the deformation under extrusion, during the process of opening and closing, disc is always under extrusion. So, the upper and lower valve shafts are seriously extruded, which can be bad to the service life of valve. And, the open-close moment of valve is relatively high. The defect is that disc and seat are always under extrusion, scratch, high resistance and serious abrasion. To overcome extrusion and scratch and to ensure good seal, seat basically uses rubber or PTFE, or other elastic materials. However, temperature can be a problem. This is why butterfly valves are, conventionally, not resistant to high temperature .



2. Sealing Principle of Single Eccentric Seal Butterfly Valve

The rotation center of disc (namely center of valve shaft) and the sealing section of disc form up an 'a' eccentric, making disc sealing face gradually disengaged from seat sealing face during the process of open and close. Once the disc turns to $15^{\circ} \sim 25^{\circ}$, the disc sealing face will be completely disengaged from the seat sealing face. Once fully opened, a gap 'X' will be formed up between the two sealing faces, making the relative mechanical wear and extrusion between the two sealing faces greatly lowered during the process of open and close, thus to ensure the seal of butterfly valve. However, as the scratch between disc and seat doesn't disappear during the whole process of open and close, they are almost similar to concentric butterfly valves in the area of application, this is why they have not been popularly used.



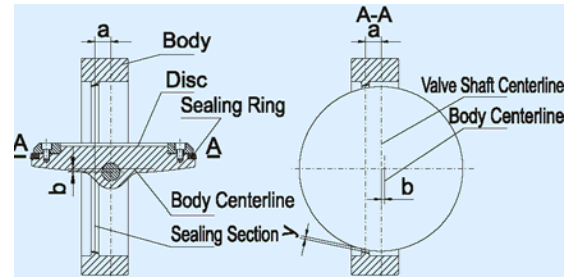
Sealing Structure of Single Eccentric Seal Butterfly Valve

SEALING FEATURES

3. Sealing Principle of Double Eccentric Seal Butterfly Valve

The rotation center of disc (namely the center of valve shaft) and the centerline of body form up a 'b' eccentric on the base of single eccentric butterfly valve, making the sealing face of disc disengaged from seat sealing face more quickly than single eccentric seal butterfly valves during the process of open and close. Once disc turns to $8^{\circ} \sim 12^{\circ}$, the disc sealing face will be completely disengaged from the seat sealing face. Once fully opened, a gap 'Y' will be formed up between the two sealing faces. This type of butterfly valves are designed to have greatly lowered the mechanical wear and extrusion deformation between the two sealing faces, making the sealing performance of butterfly valve much better.

The characteristic of this structure is to make stem axis not only deviated from the center of disc, but also the center of the body. The effect of double eccentric is that, when valve has been opened, disc can be quickly disengaged from seat, thus to greatly eliminate the unnecessary excessive extrusion and scratch between the disc and seat, reduce opening resistance, lower the abrasion and improve the service life of seat. As scratch has been greatly lowered, metal seat can be used for double eccentric butterfly valve, so that seal is positioned sealing construction, i.e. the sealing faces disc and seat is lineal contact, disc extruding seat to produce elastic deformation, thus to effect the sealing performance. This has high requirement on close position, especially for those with metal seat, and is given poor pressure endurance. This is why butterfly valves are, conventionally, not resistant to high temperature and leakage.



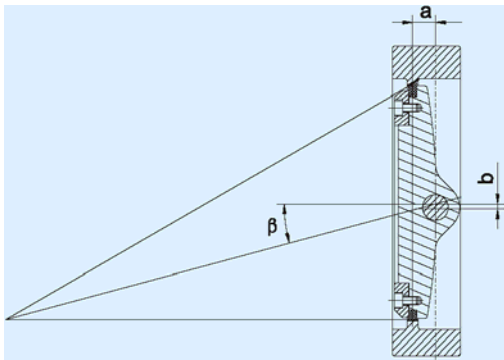
Sealing Structure of Double Eccentric Seal Butterfly Valve

4. Sealing Principle of Triple Eccentric Seal Butterfly Valve

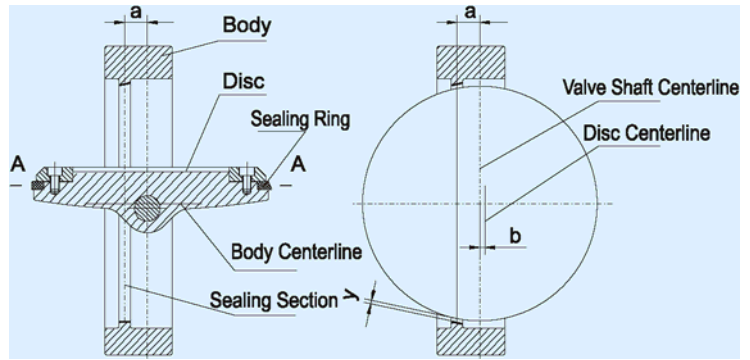
A β eccentric is formed up between the centerline of seat and the centerline of body on the base of double eccentric butterfly valve, making disc sealing face immediately disengaged from seat sealing face upon the opening of butterfly valve, and in close contact with the seat sealing face upon closing. When fully opened, a gap 'Y', which is the same as that in double eccentric seal butterfly valve, is formed up between the two sealing faces. The design of this type of valves has thoroughly eliminated the mechanical wear and scratch between the two sealing faces, making the sealing performance and service life of butterfly valves greatly improved. When valve is closed, with sealing ring under the extrusion of body sealing face and disc, two upward elastic deformations are produced. The sealing face is fallen under outward tension at long shaft and inward compressive stress at short shaft. The long and short shafts produce elastic deformation of different directions, thus to maximizing the sealing force between the sealing faces of valve.

This distinctive eccentric combination not only uses cam effect, but also eliminates friction completely, thus to ensure no friction between seat and sealing ring on disc during the 90° stroke of valve, a perfect solution to clear away the possibilities of abrasion and leakage.

SEALING FEATURES



Close State Diagram of Triple Eccentric Seal Butterfly

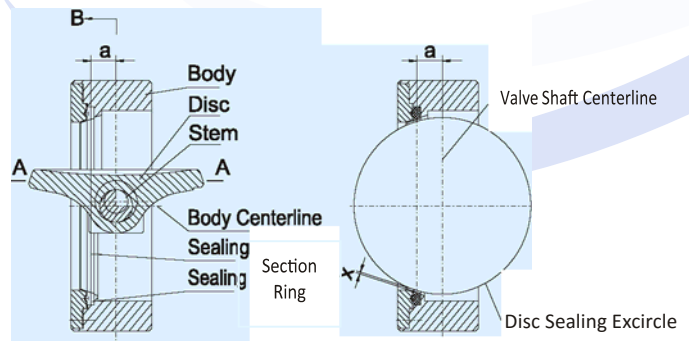
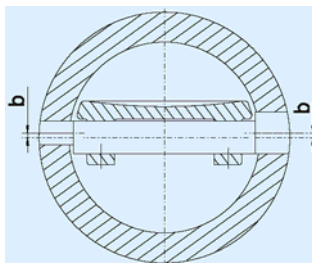


Open State Diagram of Triple Eccentric Seal Butterfly Valve

Sealing Principle of Triple Eccentric Seal Butterfly Valve

5. Sealing Principle of Variable Eccentric Seal Butterfly Valve

The distinctive feature of variable eccentric butterfly valve is that, the stem shaft where disc is mounted is a three-segment eccentric shaft. The two ends of the three-segment stem shaft are concentric, while the centerline of the middle segment is deviated from the axial lines of the two ends by a center-to-center distance. Disc is just mounted on the middle segment. This eccentric structure forms up a double eccentric shape when disc is completely opened, and a single eccentric shape when disc is turned to be closed. Under the force of eccentric shaft, when tending to be closed, disc will move somewhat toward the sealing conical surface of the seat, and then engaged to perform dependable sealing. When seat sealing face is abraded after a period of service, adjust the driving mechanism to make the close position of disc forward for some degrees, in this way to set up a new sealing state.



Sealing Structure of Variable Eccentric Seal Butterfly Valve

LUG STYLE BUTTERFLY VALVES

1. Structural Features

Lug style butterfly valves are designed to maintain a seal against bi-directional pressure differential to prevent backflow in systems designed for unidirectional flow

This is accomplished with a tightly fitting seal, i.e., gasket, o-ring, precision machined, and a flat valve face on the upstream and downstream sides of the valve

A lug-style butterfly valve used in dead end service generally has a reduced pressure rating. For example, a lug-style butterfly valve mounted between two flanges has a 150 psi pressure rating.



2. Temperature Range

EPDM -20°C...+120°C

BUNA -10°C...+ 90°C

FPM/FKM -10°C...+170°C

3. Maximum Working Pressure

Max. working pressure 16,0 bar

Hydraulic body test 24,0 bar

Hydraulic seat test 17,8 bar

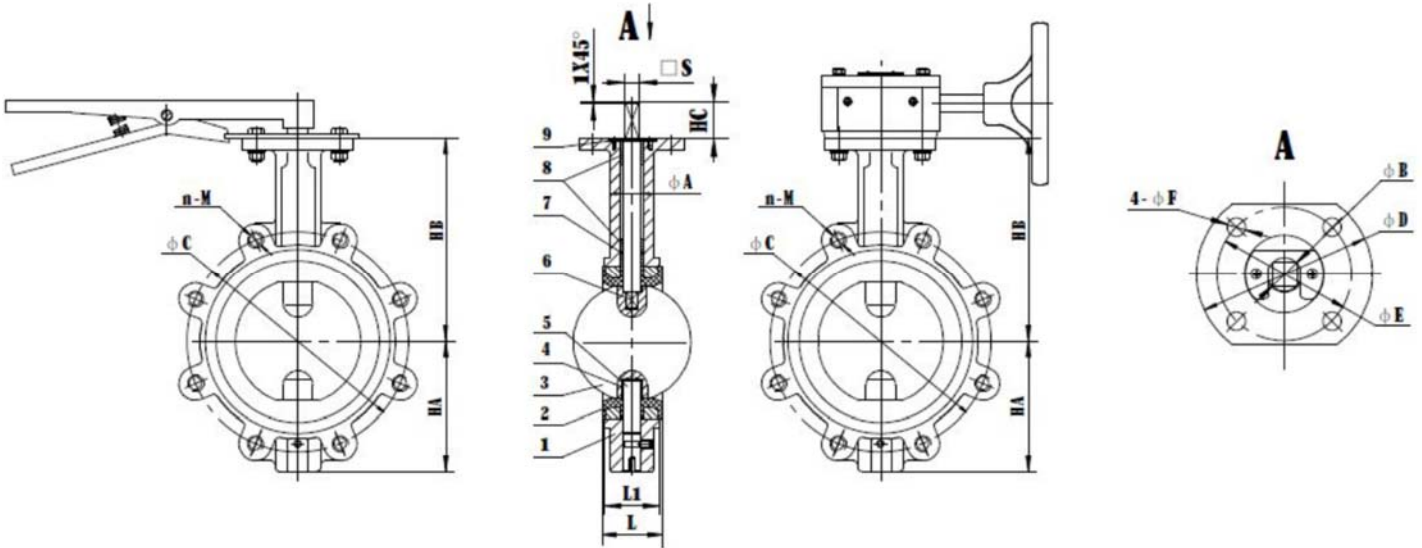
AISI 316 stem execution 10,0 bar

2. Bill of Materials

NO.	DESCRIPTION	MATERIAL
1	Body	GG25,GGG40,GGG50,WCB,CF8,CF8M
2	Disc	GGG40,CF8,CF8M,CF3M,AL-B
3	Stem	SS416/420,CF8,CF8M
4	Seat	EPDM,NBR,VITON,PTFE
5	O-Ring	EPDM/NBR
6	Bushing	PTFE
7	Circlip	Steel
8	Retainer	Steel

LUG STYLE BUTTERFLY VALVES

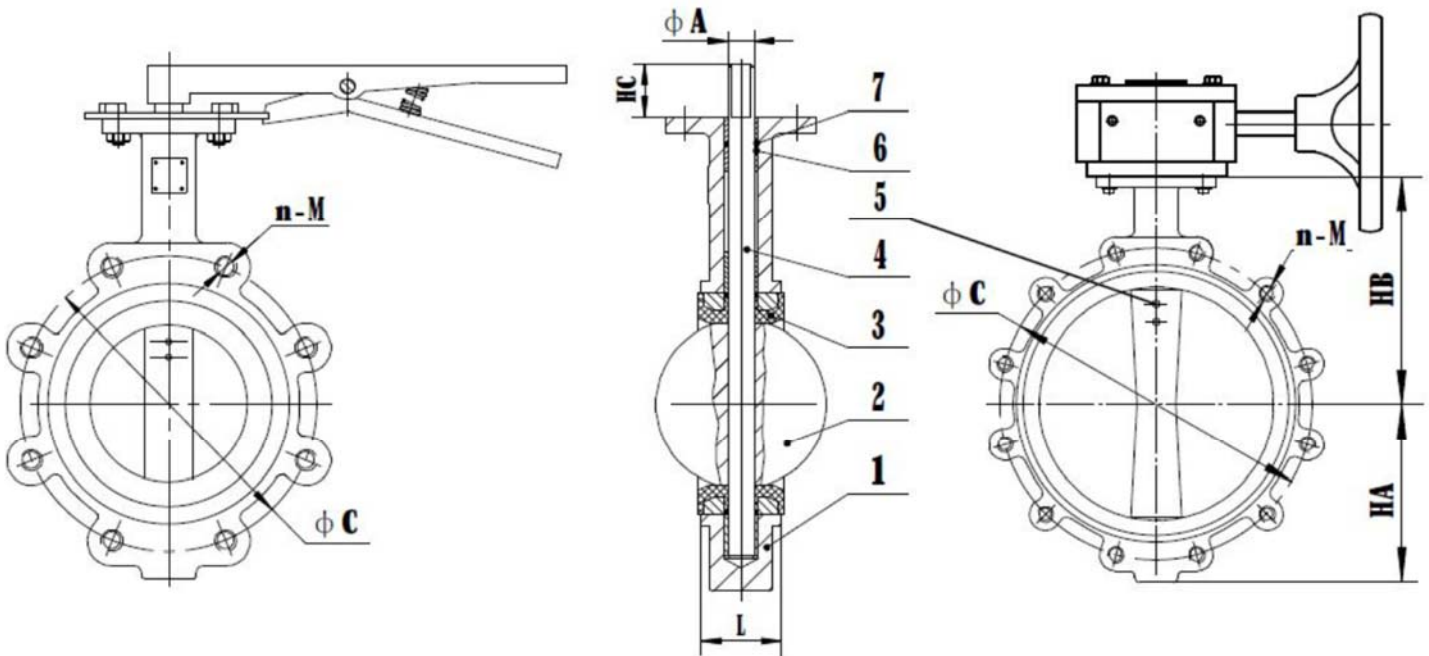
Drawings and Dimension Details



SIZE		HA	DB	HC	L	LI	Ø A	Ø B	[] S	Ø C	n - M	Ø D	Ø E	Ø F
DN	INCH													
40	1.5"	59	125	30	35	32	12.7	12	9	98.5	4 - 1/2" - 13	65	50	7.5
50	2"	66	130	30	45	42	12.7	12	9	120.5	4 - 5/8" - 11	65	50	7.5
65	2.5"	82	141	30	48	45	12.7	12	9	139.5	4 - 5/8" - 11	65	50	7.5
80	3"	90	148	30	49	45	12.7	12	9	152.5	4 - 5/8" - 11	65	50	7.5
100	4"	108	170	30	55	51	15.9	14	11	190.5	8 - 5/8" - 11	90	70	10.4
125	5"	123	187	30	58	55	19	18	14	216.0	8 - 3/4" - 10	90	70	10.4
150	6"	138	202	30	59	55	19	18	14	241.5	8 - 3/4" - 10	90	70	10.4
200	8"	170	238	36	64	59	22.2	22	17	298.5	8 - 3/4" - 10	125	102	12.3
250	10"	200	272	36	70	66	28.6	28	22	362.0	12 - 7/8" - 9	125	102	12.3
300	12"	236	305	36	80	76	31.7	28	22	432.0	12 - 7/8" - 9	125	102	12.3

LUG STYLE BUTTERFLY VALVES - ANSI CL150

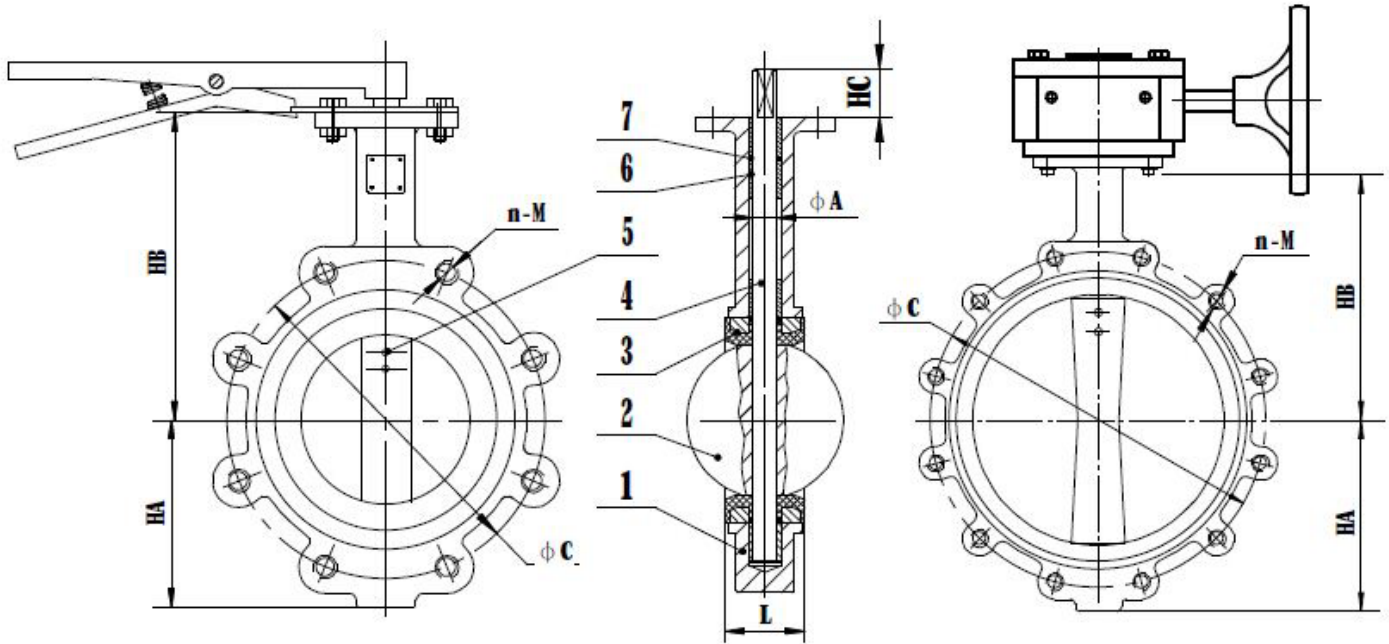
Drawings and Dimension Details



SIZE		HA	HB	HC	L	ϕA	ϕC	n - M
DN	Inch							
50	2"	66	130	30	45	12.70	120.5	4 - 5/8" - 11
65	2.5"	76	140	30	48	12.70	139.5	4 - 5/8" - 11
80	3"	95	150	30	49	12.70	152.5	4 - 5/8" - 11
100	4"	108	170	30	55	15.80	190.5	8 - 5/8" - 11
125	5"	122	185	30	58	19.05	216.0	8 - 3/4" - 10
150	6"	135	205	30	59	19.05	241.5	8 - 3/4" - 10
200	8"	168	235	36	64	22.20	298.5	8 - 3/4" - 10
250	10"	203	270	36	70	28.60	362.0	12 - 7/8" - 9
300	12"	237	305	36	80	31.80	432.0	12 - 7/8" - 9
350	14"	262	330	36	80	31.80	476.0	12 - 1" - 8
400	16"	299	360	51	90	33.30	539.5	16 - 1" - 8
450	18"	325	395	51	109	38.00	578.0	16 - 1 1/8" - 7
500	20"	360	440	64	135	41.15	635.0	20 - 1 1/8" - 7
600	24"	420	500	71	156	50.65	749.5	20 - 1 1/4" - 7
700	28"	520	624	71	169	63.35	863.6	28 - 1 1/4" - 7
750	30"	621	648	71	175	63.35	914.5	28 - 1 1/4" - 7
800	32"	590	672	71	195	63.35	977.9	28 - 1 1/2" - 6
900	36"	611	768	77	211	75.00	1085.8	32 - 1 1/2" - 6

LUG STYLE BUTTERFLY VALVES - PN16

Drawings and Dimension Details



SIZE		HA	HB	HC	L	Ø A	Ø C	n - M
DN	INCH							
50	2"	76	162	30	45	12.70	125	4 - M16
65	2.5"	89	175	30	48	12.70	145	4 - M16
80	3"	95	181	30	49	12.70	160	4 - M16
100	4"	114	200	30	55	15.80	180	8 - M16
125	5"	127	213	30	58	19.05	210	8 - M16
150	6"	140	225	30	59	19.05	240	8 - M20
200	8"	173	260	36	64	22.20	295	8 - M20
250	10"	203	292	36	70	28.60	350	12 - M21
300	12"	237	337	36	80	31.80	400	12 - M21
350	14"	275	360	45	80	31.80	460	16 - M20
400	16"	304	400	51	90	31.80	515	15 - M24
450	18"	360	420	51	109	38.00	555	21 - M24
500	20"	365	480	64	135	41.10	620	20 - M24
600	24"	440	560	71	156	50.65	725	21 - M27
700	28"	510	605	71	169	55.00	840	24 - M27

WAFER STYLE BUTTERFLY VALVES

1. Structural Features

Wafer type butterfly valve with long neck and 4 centering holes

Face-to-face length acc. EN558 - BS5155 - ISO5752 - API609

With top flange acc. ISO 5211

Mounting between flanges acc DIN PN 6/10/16 and ANSI 150

Exchangeable seat vulcanized on hard centre with 2 lay-in O-rings

Epoxy coating thickness min. 200 micron

Application: warm and cold water, clean, waste and salt water, oil, granulates, compressed air, natural gas, etc



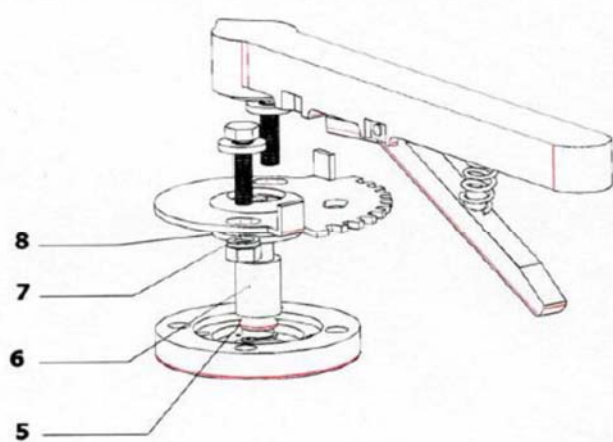
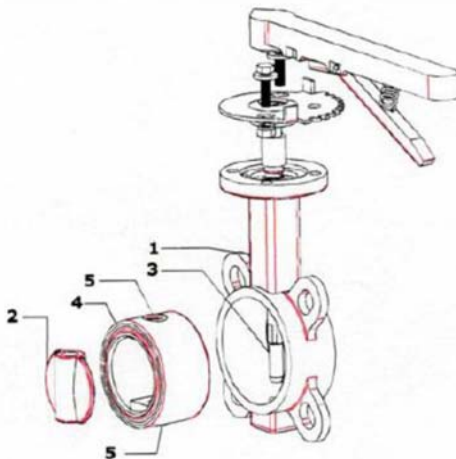
2. Temperature Range

EPDM	-20°C...+120°C
BUNA	-10°C...+ 90°C
FPM/FKM	-10°C...+170°C

3. Maximum Working Pressure

Max. working pressure	16,0 bar
Hydraulic body test	24,0 bar
Hydraulic seat test	17,8 bar
AISI 316 stem execution	10,0 bar

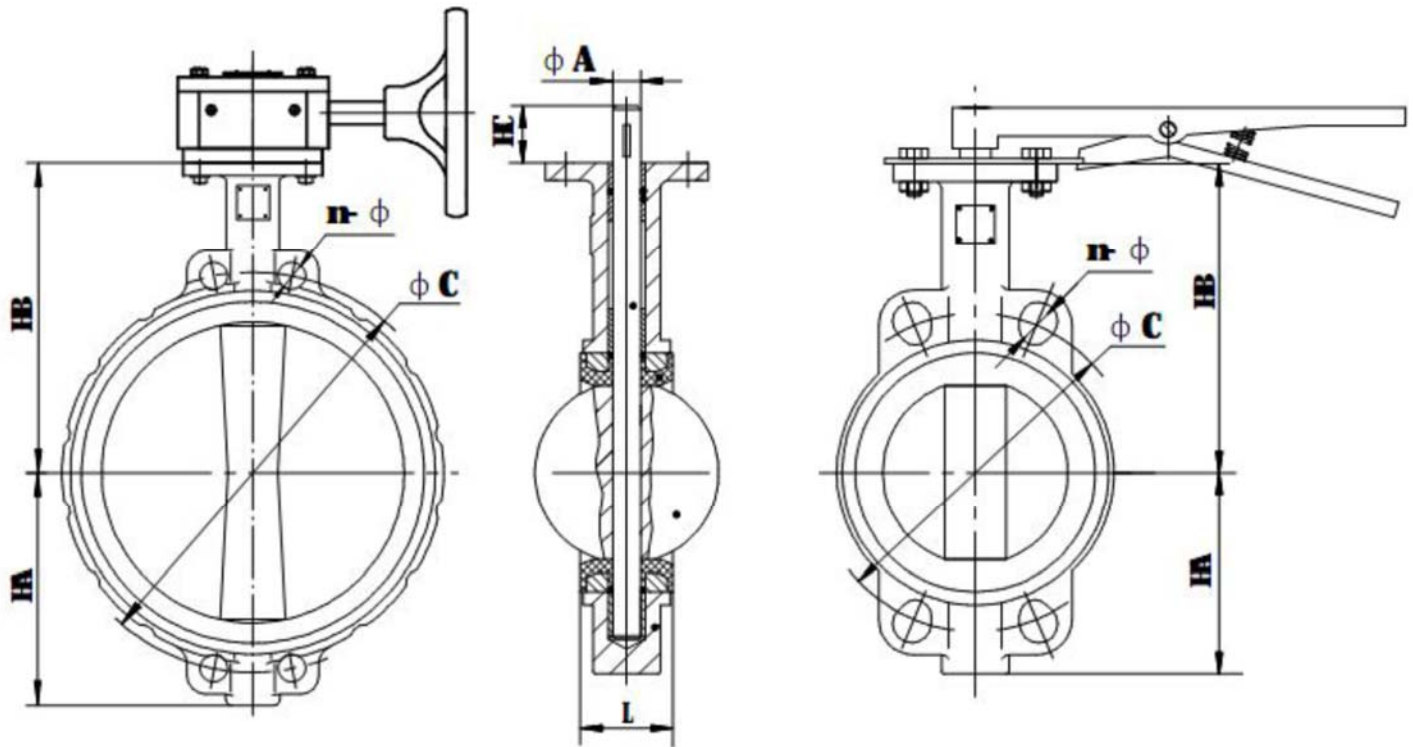
2. Bill of Materials



NO.	DESCRIPTION	MATERIAL
1	Body	GG25, GGG40, GGG50, WCB, CF8, CF8M
2	Disc	GGG40, CF8, CF8M, CF3M, AL-B
3	Stem	SS416/420, CF8, CF8M
4	Seat	EPDM, NBR, VITON, PTFE
5	O-Ring	EPDM/NBR
6	Bushing	PTFE
7	Circlip	Steel
8	Retainer	Steel

WAFER STYLE BUTTERFLY VALVES

Drawings and Dimension Details



SIZE			STANDARD									
			PN10		PN16		ANSI 16.1		JIS 5K		JIS 10K	
DN	INCH	L	ϕC	n- ϕ	ϕC	n- ϕ	ϕC	n- ϕ	ϕC	n- ϕ	ϕC	n- ϕ
40	1.5"	33	110	4_18	110	4_18	98.5	4_16	95	4_15	105	4_19
50	2"	43	125	4_18	125	4_18	121	4_16	105	4_15	120	4_19
65	2.5"	46	145	4_18	145	4_18	140	4_19	130	4_15	140	4_19
80	3"	46	160	4_18	160	4_18	153	4_19	145	4_19	150	8_19
100	4"	52	180	8_18	180	8_18	191	8_19	165	8_19	175	8_19
125	5"	56	210	8_18	210	8_18	216	8_22	200	8_19	210	8_23
150	6"	56	240	8_23	240	8_23	242	8_22	230	8_19	240	8_23
200	8"	60	295	8_23	295	12_23	299	8_22	280	8_23	290	12_23
250	10"	68	350	12_23	355	12_27	362	12_25	345	12_23	355	12_25
300	12"	78	400	12_23	410	12_27	432	12_25	390	12_23	400	16_25
350	14"	78	460	16_23	470	16_27	476	12_29	435	12_25	445	16_25
400	16"	86	515	16_27	525	16_30	540	16_29	495	16_25	510	16_27
450	18"	105	565	20_27	585	20_30	578	16_32			525	20_27
500	20"	130	620	20_27	650	20_33	635	20_32			620	20_27
600	24"	152	725	20_30	770	20_36	750	20_35			730	24_33

DOUBLE FLANGE STYLE BUTTERFLY VALVES

1. Structural Features

It is not uncommon to see a flanged butterfly valve in high performance applications

- Have threaded inserts at both sides of the valve body
- Allows Flange Butterfly Valve to be installed in a system using two sets of bolts and no nuts
- Installed between two flanges using a separate set of bolts flange
- This setup permits either side of the piping system to be disconnected without disturbing the other side

Size Range 50mm – 1200mm

Design in accordance to AS4795 /ISO5752

Pressure Rating PN16 (PN10 700mm-1200mm)

Pressure testing ISO5208

Flange Drilling AS4087 PN16 (Table D)

Coating Fusion Bonded Epoxy

Temperature range -10°C to +90°C (EPDM seat)

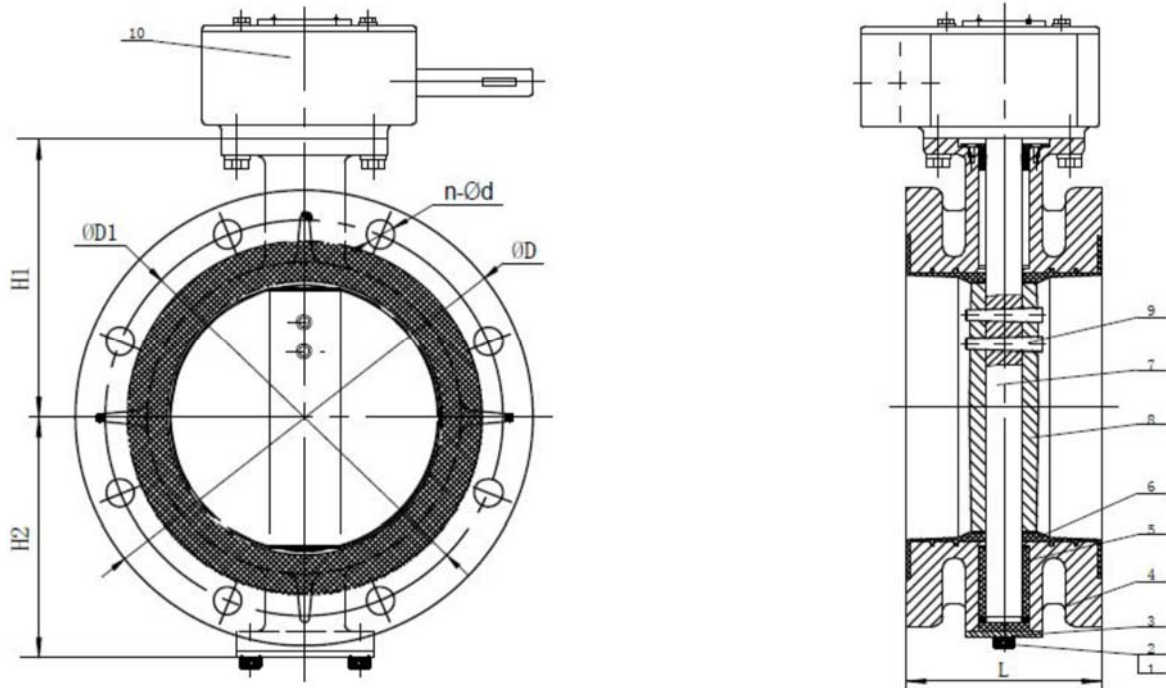


2. Bill of Materials

NO.	DESCRIPTION	MATERIAL
1	Body	GG25,GGG40,GGG50,WCB,CF8,CF8M
2	Disc	GGG40,CF8,CF8M,CF3M,AL-B
3	Stem	SS416/420,CF8,CF8M
4	Seat	EPDM.NBR
5	O-Ring	EPDM/NBR
6	Bushing	PTFE
7	Circlip	Steel
8	Retainer	Steel

DOUBLE FLANGE STYLE BUTTERFLY VALVES

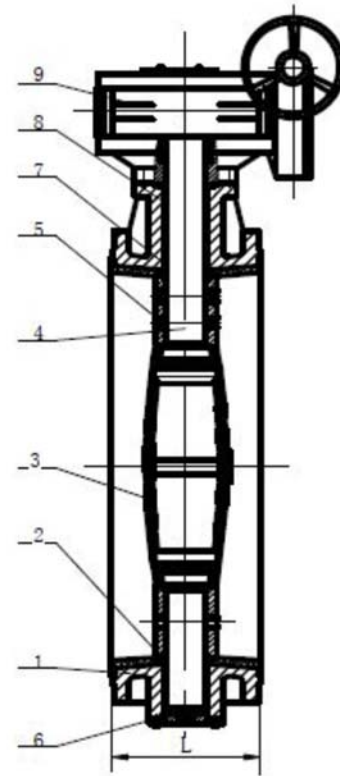
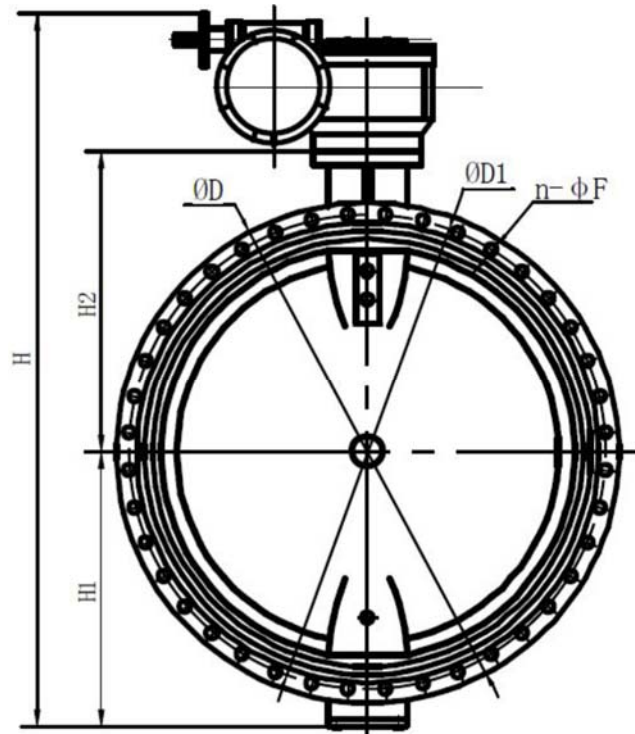
Drawings and Dimension Details



SIZE	ØD	PN10		PN16		H1	H2	L	Weight (Kgs)	
		ØD1	n-Ød	ØD1	n-Ød					
DN50	2"	165	125	4-Ø18	125	4-Ø18	110	80	108	13
DN65	2.5"	185	145	4-Ø18	145	4-Ø18	134	80	112	14
DN80	3"	200	160	4-Ø18	160	8-Ø18	131	95	114	15
DN100	4"	220	180	8-Ø18	180	8-Ø18	150	114	127	19
DN125	5"	250	210	8-Ø18	210	8-Ø18	170	113	140	22
DN150	6"	285	240	8-Ø23	240	8-Ø23	180	139	140	27
DN200	8"	340	295	8-Ø23	295	12-Ø23	210	175	152	45
DN250	10"	405	350	12-Ø23	355	12-Ø27	245	203	165	58
DN300	12"	460	400	12-Ø23	410	12-Ø27	276	242	178	85
DN350	14"	520	460	12-Ø23	470	12-Ø27	328	256	190	122

DOUBLE FLANGE STYLE BUTTERFLY VALVES

Drawings and Dimension Details



SIZE		ΦD	PN10		PN16		H1	H2	L	Weight (Kgs)
			ΦD1	n-Φd	ΦD1	n-Φd				
DN400	16"	580	515	16-Φ27	525	16-Φ30	296	376	216	195
DN450	18"	640	565	20-Φ27	585	20-Φ30	315	406	222	245
DN500	20"	715	620	20-Φ27	650	20-Φ33	352	448	229	290
DN600	24"	840	725	20-Φ30	770	20-Φ36	441	518	267	425
DN700	28"	910	840	24-Φ30	840	24-Φ36	473	560	292	650
DN800	32"	1025	950	24-Φ33	950	24-Φ39	527	620	318	665
DN900	36"	1125	1050	28-Φ33	1050	28-Φ39	581	685	330	800
DN1000	40"	1255	1160	28-Φ36	1170	28-Φ42	653	735	410	1200
DN1200	48"	1485	1380	32-Φ39	1390	32-Φ48	796	917	479	1400

DOUBLE ECCENTRIC STYLE BUTTERFLY VALVES

1. Structural Features

Double Eccentric Butterfly Valve – also known as a High Performance Butterfly Valves or Double Offset Butterfly Valve

· Different type of materials are used for the seat and disc.

Double eccentric butterfly valve to EN 593 w. SS seat and IP68 gearbox w/handwheel and neutral liquids to max. 70°C

Standards:

- Designed according to DIN/EN, Designed according to EN 593
- Face to face according to EN 558 Table 1/2 Basic Series 13/14
- Standard flange drilling to EN1092-2 (ISO 7005-2),

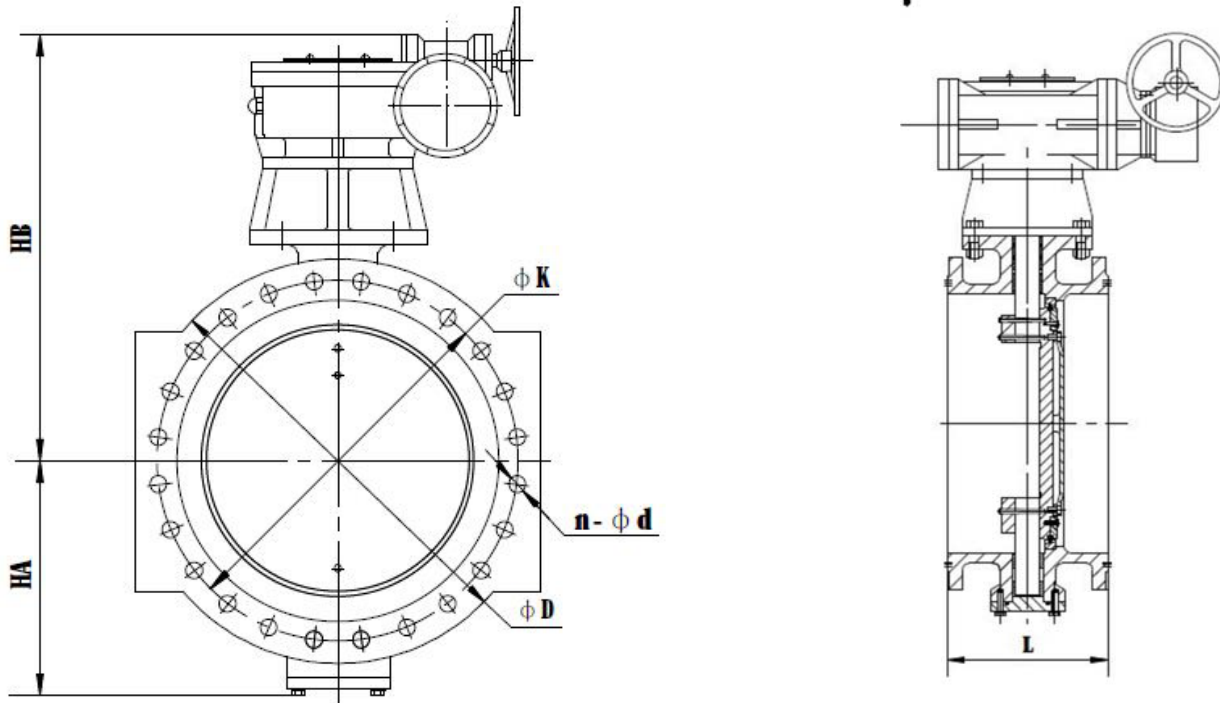


2. Bill of Materials

NO.	DESCRIPTION	MATERIAL
1	Body	EN-GJS-400-15, GGG40
2	Disc	EN-GJS-400-15, GGG40
3	Body seat surface	CrNi-Plasma
4	Seat	EPDM.NBR.VITON
5	O-ring	EPDM/NBR
6	Shaft	X20Cr13, SS416
7	Bearing Bush	CC480K, CuSn 10

DOUBLE ECCENTRIC STYLE BUTTERFLY VALVES

Drawings and Dimension Details



SIZE	HA	HB	L		DIN PN10			DIN PN16		
			LONG	SHORT	DIN PN10	K	n-Φd	D	K	n-Φd
DN300	245	345	270	178	445	400	12-Φ23	460	410	12-Φ27
DN350	295	360	290	190	505	460	16-Φ23	520	470	16-Φ27
DN400	330	620	310	216	565	515	16-Φ27	580	525	16-Φ30
DN450	360	650	330	222	615	656	20-Φ27	640	585	20-Φ30
DN500	375	690	350	229	670	620	20-Φ27	715	650	20-Φ33
DN600	425	770	390	267	780	725	20-Φ30	840	770	20-Φ36
DN700	520	860	430	292	895	480	24-Φ30	910	840	24-Φ36
DN800	580	920	470	318	1015	950	24-Φ33	1025	950	24-Φ39
DN900	640	1085	510	330	1115	1050	28-Φ33	1125	1050	28-Φ39
DN1000	710	1210	550	410	1230	1160	28-Φ36	1255	1170	28-Φ42
DN1200	855	1142	630		1455	1380	32-Φ41	1355	1390	32-Φ50
DN1400	975	1252	710		1675	1590	36-Φ44	1485	1590	36-Φ50
DN1600	1100	1392	790		1915	1820	40-Φ50	1685	1820	40-Φ57
DN1800	1280	1572	870		2115	2020	44-Φ50	1930	2020	44-Φ57
DN2000	1390	1750	950		2325	2320	48-Φ50	2130	2230	48-Φ62

U TYPE FLANGE STYLE BUTTERFLY VALVES

1. Structural Features

Standard

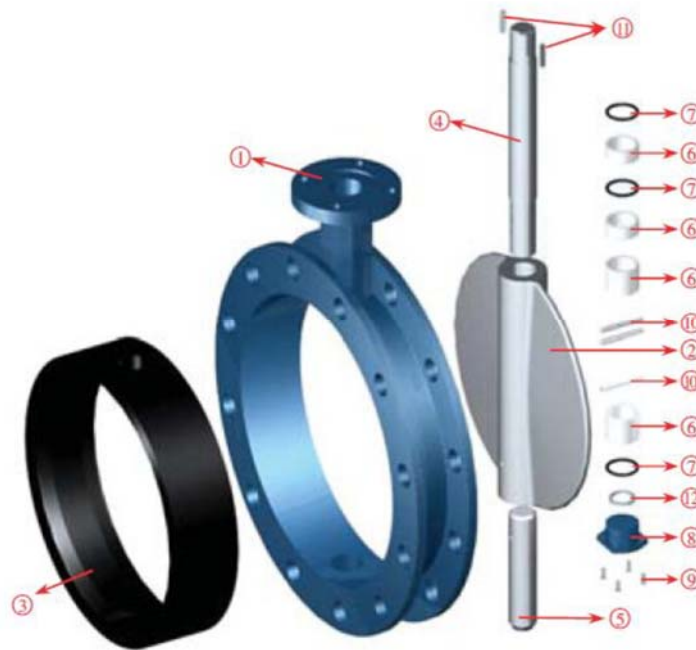
DIN PN10/16; BS4504 PN10/16

U type flanged body style fit between FF or RF flanges

Suitable Medium: water, sewage, sea water, air,



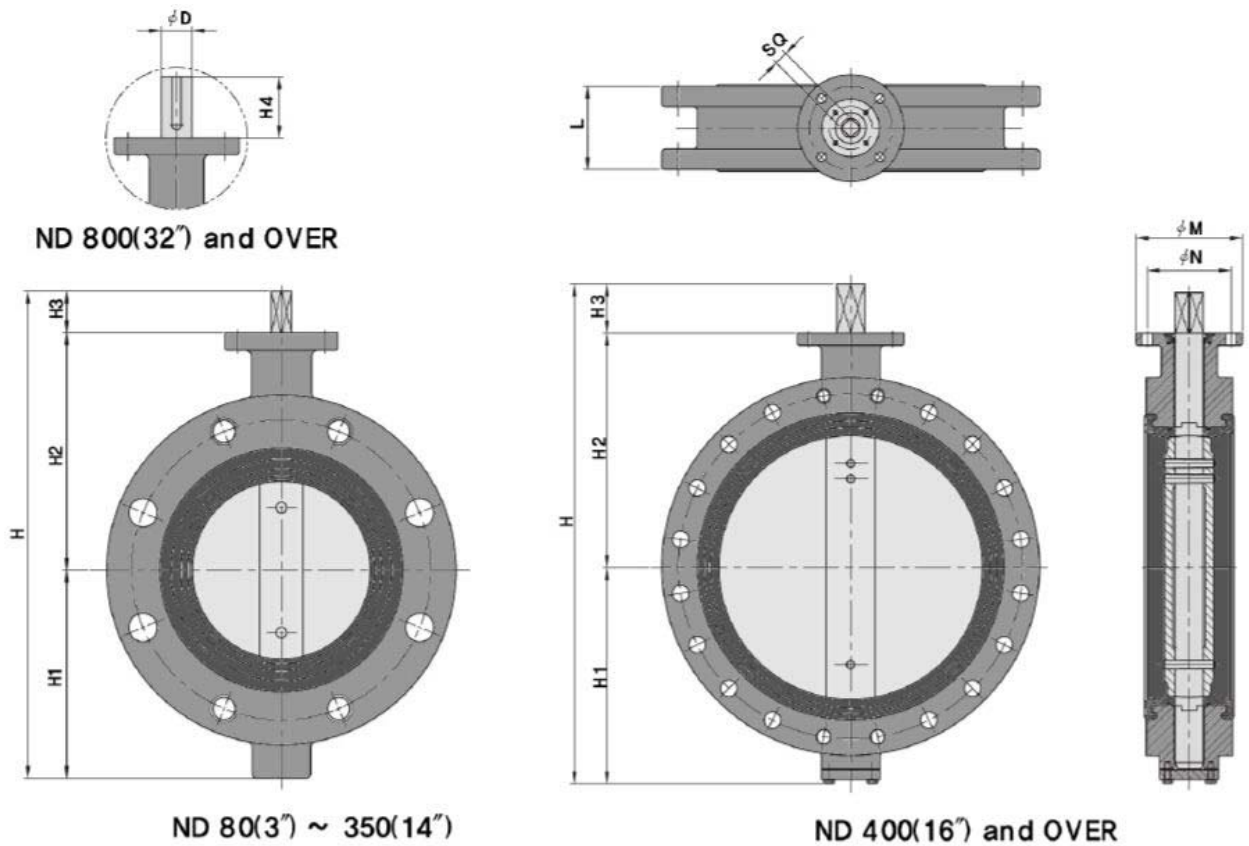
2. Bill of Materials



NO.	DESCRIPTION	MATERIAL
1	Body	GG25,GGG40,GGG50
2	Disc	GGG40,CF8,CF8M,CF3M,AL-B
3	Seat	EPDM.NBR.VITON.PTFE
4	Upper Shaft	SS416.....
5	Lower Shaft	SS416.....
6	Bearing	PTFE
7	O-ring	NBR
8	Bottom Cover	CAST IRON
9	Bolt	SS
10	Pin	SS
11	Key	SS
12	Bearing	PTFE

U TYPE FLANGE STYLE BUTTERFLY VALVES

Drawings and Dimension Details



unit : mm

SIZE		L	H	H1	H2	H4	STEM				TOP FLANGE			WEIGHT (APPROX) (kg)	
inch	mm						ØD	KEY SIZE	SQUARE		TYPE	ØN	ØM		N-ØZ
				SQ	H3										
2"	50	40	249	88	128	-	-	-	9	33	F07	70	90	4-9	6
2.5"	65	40	271	98	140	-	-	-	9	33	F07	70	90	4-9	7
3"	80	60	288	105	150	-	-	-	9	33	F07	70	90	4-9	9
4"	100	60	318	120	165	-	-	-	12	33	F07	70	90	4-9	12
5"	125	100	351	140	178	-	-	-	12	33	F07	70	90	4-9	17
6"	150	100	388	165	190	-	-	-	12	33	F07	70	90	4-9	22
8"	200	100	470	190	230	-	-	-	17	50	F10	102	125	4-12	34
10"	250	110	535	215	270	-	-	-	17	50	F10	102	125	4-12	50
12"	300	110	611	251	310	-	-	-	22	50	F10	102	125	4-12	73
14"	350	120	655	270	335	-	-	-	27	50	F10	102	125	4-12	99
16"	400	130	755	325	370	-	-	-	27	60	F14	140	175	4-18	113
18"	450	150	797	347	390	-	-	-	27	60	F14	140	175	4-18	148
20"	500	160	883	383	420	-	-	-	36	80	F16	165	210	4-22	165
22"	550	170	967	425	462	-	-	-	36	80	F16	165	210	4-22	234
24"	600	170	1028	453	495	-	-	-	50	80	F16	165	210	4-22	270
26"	650	170	1095	490	525	-	-	-	50	80	F16	165	210	4-22	309
28"	700	180	1150	515	555	-	-	-	50	80	F16	165	210	4-22	350
30"	750	190	1230	550	590	-	-	-	50	90	F16	165	210	4-22	395
32"	800	200	1352	592	640	120	80	22 × 14	-	-	F25	254	300	8-18	485
34"	850	210	1382	612	650	120	80	22 × 14	-	-	F25	254	300	8-18	540
36"	900	230	1488	658	700	130	80	22 × 14	-	-	F25	254	300	8-18	660



CONTACT US

We are committed to providing you with the highest level of customer support,, including responding to your questions in a timely manner. How well we do this depends on a clear, current understanding of your needs and preferences.

We encourage you to send your questions and requests, share your valuable opinions and experiences by contacting us at

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