HIGH-PERFORMANCE BUTTERFLY VALVE WAFER / LUG

MERCOID
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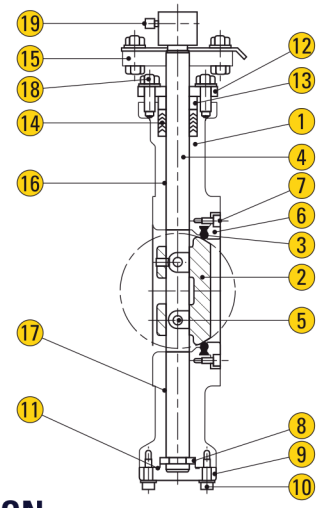
Wafer type

Lug type



SPECIFICATION

Face To Face Dimension	BS EN 558-1 and API 609
Standard Compliance	Conform to BS EN 593 and API 609
End Connection	Wafer type to suit DIN, BS, ANSI and JIS flanges
Pressure Rating	16 Bar for DN50 to DN600 10 Bar for DN700 to DN1200 (optional 16 Bar)
Temperature (Seat)	-10°C to 80°C NBR, 15°C to 120°C EPDM -10°C to 150°C Viton, 45°C to 180°C PTFE
Top Flange Dimensions	ISO 5211
Actuation	Lever operated for DN50 to DN200 (Gear operated on request) Gear operated for DN250 & above
Optional	Pneumatic or electric actuated

APPLICATION

Suitable for water, steam, oil, gases and non-abrasive media
(Refer to corrosion resistance table for valve materials selection).

MATERIAL

	Parts	Material
1	Body	Ductile Iron, Cast Steel, Stainless Steel, AL-Bronze, Duplex
2	Disc	Cast Steel, Stainless Steel, AL-Bronze
3	Seat	SS. Steel, Teflon, Rubber
4	Stem	SS. Steel (304, 316, 316L, 630, 17-4PH, Monel)
5	Disc Pin	Stainless Steel
6	Retainer	Stainless Steel, Ductile Iron, Mild Steel
7	Retainer Bolt	Stainless Steel
8	Thrust Plate	Bronze, Stainless Steel
9	Bottom Cover	Stainless Steel, AL-Bronze
10	Bottom Bolt	Stainless Steel
11	Bottom Gasket	Teflon, Graphite
12	Packing Gland	SS. Steel
13	Gland Ring	Brass, Stainless Steel
14	Packing	Teflon, Graphite, Rubber
15	Top Flange	SS. Steel
16 / 17	Stem Bearing	Metaloplast, Stainless Steel
18	Bolt & Nut	Stainless Steel
19	Lever	Steel, Ductile Iron

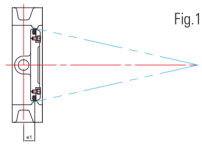


Fig.1

SINGLE OFFSET (Fig.1)
The centre of rotation is moved back from the centreline of the valve disc. The seat and seal are designed conically and on centre. This design relies on a frictional, interference seal and so isapplicable only to soft seated valves.

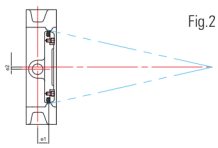


Fig.2

DOUBLE OFFSET (Fig.2)
The centre of rotation is moved from the centerline of the valve body. The seat and seal design remains conical and on centre. This design again relies on a frictional, interference seal, but the length of rotation over which this friction occurs is reduced, allowing a larger range of processresistant seat materials to be used. However these materials must be relatively soft or highly elastic to prevent "jamming".

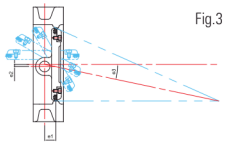
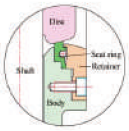


Fig.3

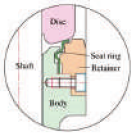
TRIPLE OFFSET (Fig.3)
The centreline of the cone is rotated away from the valve centreline resulting in an ellipsoidal profile and providing the third offset. With this geometry, seat seal interference is completely eliminated ensuring long sealing life. The result is a torque seated, process pressure aided FRICTIONLESS seal. The geometry allows the body seat to be used as the closed limit stop, aiding operator adjustment. The Triple Offset design is ideally suited to metal seated valves providing bubble-tight performance on high temperature, high pressure and firesafe applications.

DESIGN FEATURES



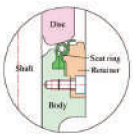
Soft Seated (-45°C ~ +180°C)
The RTFE seat ring is well-suited for extremely corrosive hemical solutions and high-temperature fluids of up to +210°C

Applications
Pharmaceuticals, water, jet fuel, Saturated steam, chlorine, ammonia, natural, gas vacuum, oxygen, nitrogen, air-conditioning chilled, exhaust gas, town gas, hot water.
Abrasives, suspended solids, scaling mediums



Metal Seated (up to 450°C)
The metal seat ring allows control of extremely high-temperature fluids, thereby replacing conventional gate valves, and ball valves.

Applications
High temperature, low temperature, abrasives, fly ash, slurries, steam, air, combustion gas, exhaust gas, netroten gas, sulfurous-acid gas.



Fire Seated (-45°C ~ +210°C)
• PTFE-metal-seat system
- Bidirectional sealing and fire safe design.

• Bidirectional
- The primary PTFE : seat ring will be replenished with a secondary metal back-up ring. This metal seat provides a mechanical load to energies the PTFE-seat. In combination with the line pressure a bidirectional sealing against the design pressure is obtained.

• Fire safe design
- After a fire, when the PTFE-seat ring has burned away, the secondary metal seat gives bidirectional sealing. This sealing systems meets the fire test requirement

Applications
Fire-safe installations, abrasives, slurries, steam

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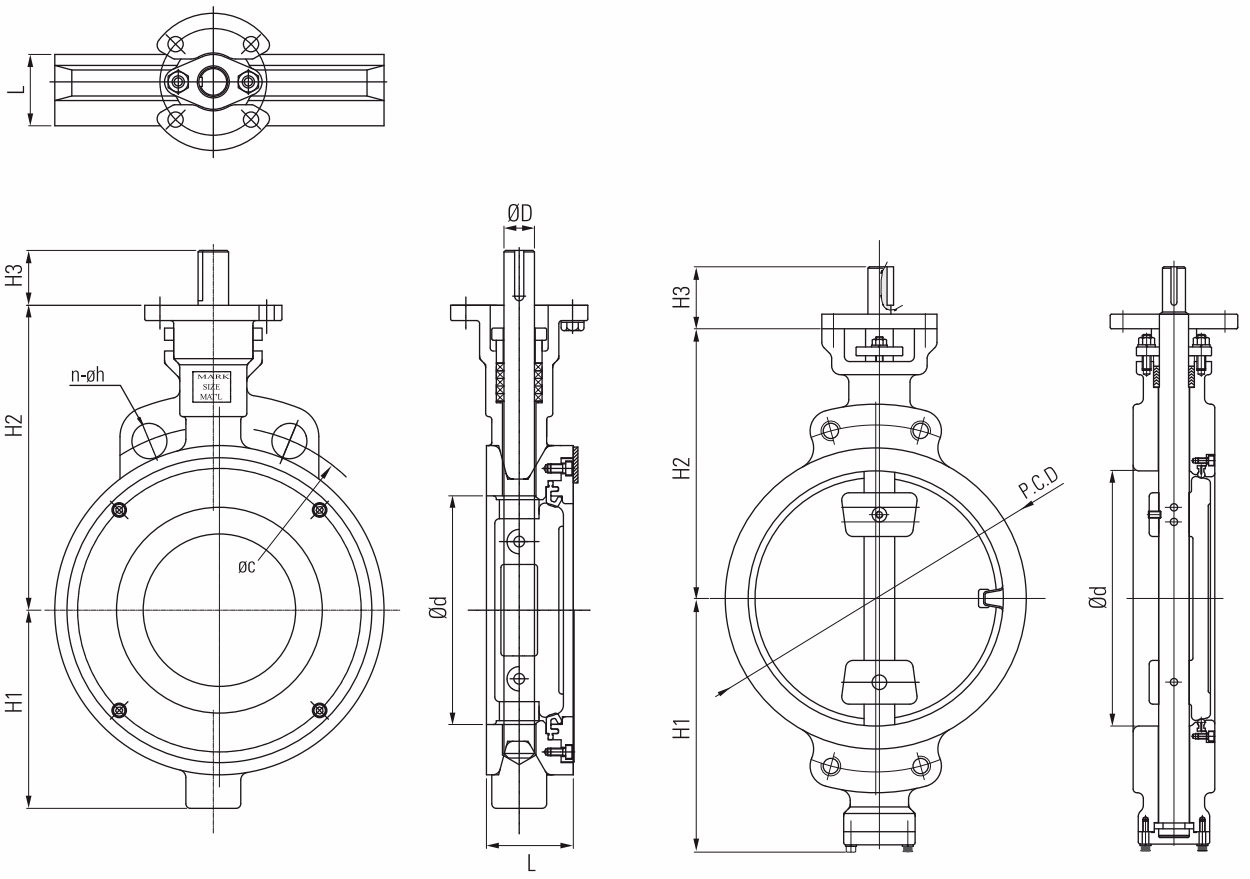
HIGH-PERFORMANCE BUTTERFLY VALVE WAFER TYPE



DIMENSIONS

Unit : mm

Size		Ød	L		H1	H2	H3	ØD	Top Flan GE Type	JIS 10K			ANSI 150LB			BS 4504 PN10			Weight (approx) (Kg)
inch	mm		#150	#300						ØC	n	h	ØC	n	h	ØC	n	h	
2"	50	50	43	43	60	180	35	16	F 07	120	4	19	120.5	4	19	125	4	19	4.5
2.5"	65	65	46	46	70	180	35	16	F 07	140	4	19	139.5	4	19	145	4	19	5.5
3"	80	80	48	48	75	185	35	19	F 07	150	8	19	152.5	4	19	160	8	19	9.0
4"	100	100	54	54	100	200	35	19	F 07	175	8	19	190.5	8	19	180	8	19	10.0
5"	125	125	57	57	110	215	35	20	F 07	210	8	23	216.0	8	22	210	8	19	13.0
6"	150	150	57	59	130	235	35	20	F 07	240	8	23	241.5	8	22	240	8	23	17.0
8"	200	200	64	73	150	255	50	25	F 10	290	12	23	298.5	8	22	295	8	23	26.0
10"	250	250	71	83	245	300	50	32	F 10	355	12	25	362.0	12	25	350	12	23	40.0
12"	300	300	81	92	285	320	50	32	F 10	400	16	M22	432.0	12	25	400	12	23	68.0
14"	350	350	92	117	342	440	80	42	F 14	445	16	M22	476.0	12	29	460	16	M20	93.0
16"	400	400	102	133	380	460	80	42	F 14	510	16	M24	539.5	16	29	515	16	M24	121.0
18"	450	450	114	149	402	492	120	50	F 16	565	20	M24	578.0	16	32	565	20	M24	144.0
20"	500	500	127	159	432	552	120	50	F 16	620	20	M24	635.0	20	32	620	20	M24	160.0
22"	550	550	154	159	465	572	120	65	F 16	680	20	M30	692.2	20	32	-	-	-	228.0
24"	600	600	154	181	510	610	120	65	F 16	730	24	M30	749.5	20	35	725	20	M27	284.0

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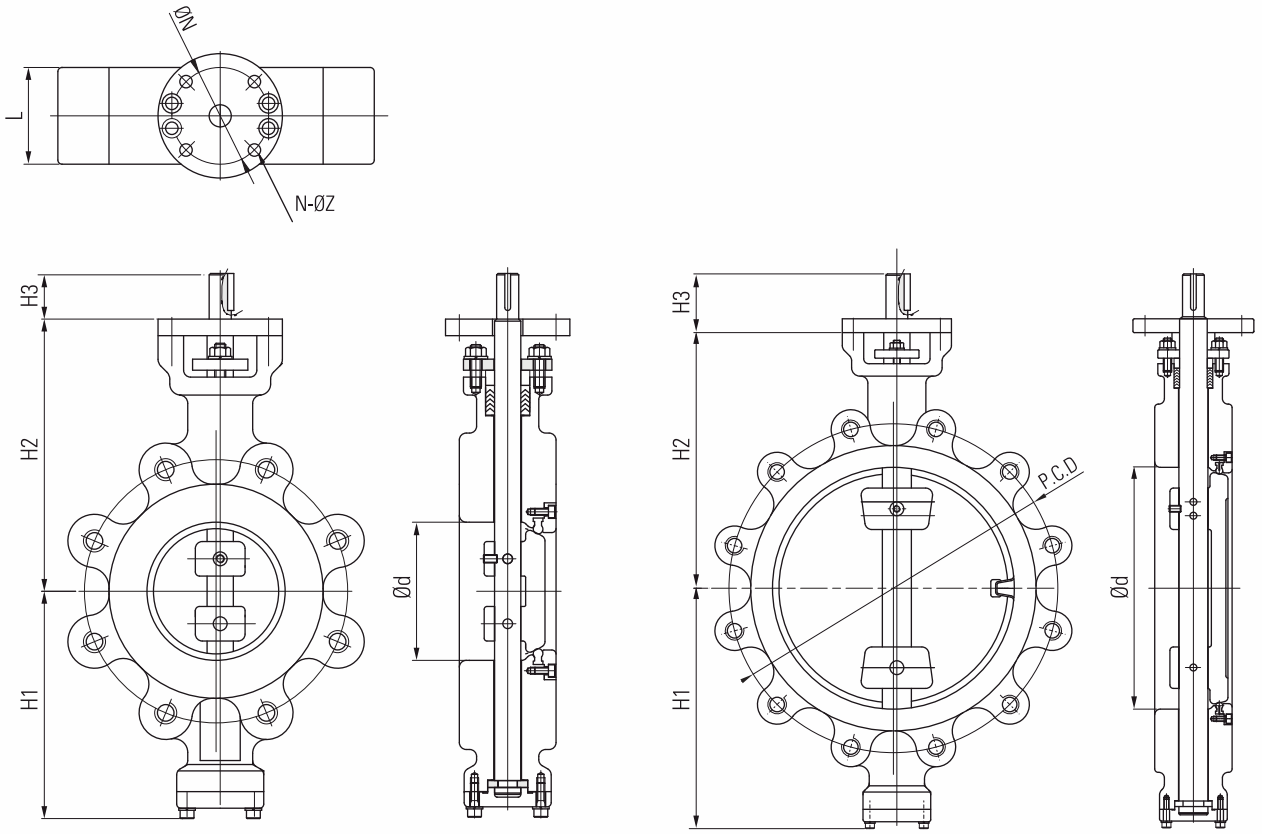

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4"	100	100	54	54	160	232	45	19	F 07	175	8	19	190.5	8	19	180	8	M16	10.0
5"	125	125	57	57	185	245	45	20	F 07	210	8	23	216.0	8	22	210	8	M16	13.0
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