

TRIPLE ECCENTRIC BUTTERFLY VALVE

Triple Eccentric Butterfly Valve provides a tight shut-off. This geometry ensures that the disc seal contacts the body seat only at the final shut-off position without rubbing or galling, providing a torque generated resilient seal with sufficient “wedging” to ensure a uniform seal contact.



Triple Eccentric Butterfly Valve offers an excellent performance for water / waste water and industrial applications.

- In-line replaceable and re-adjustable seat
- Manual gear, electric actuator available

Material

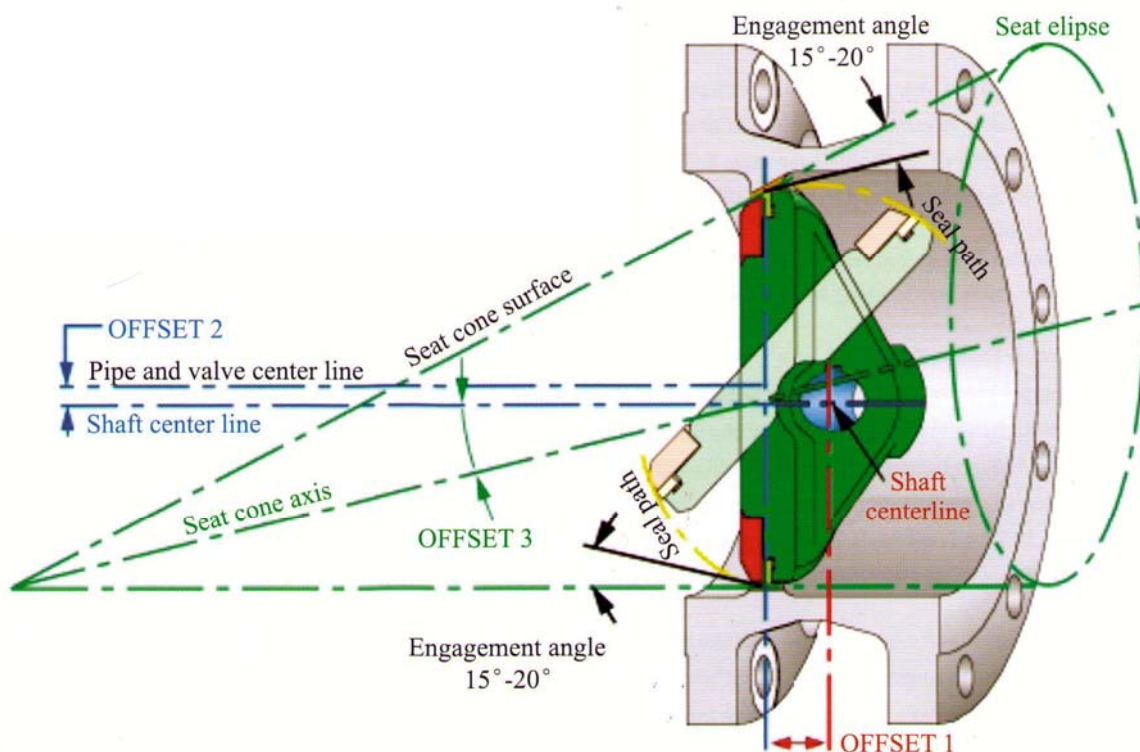
Part Name	Material								
Body	Cast Iron	Ductile Iron	Carbon Steel	Cast steel	Stainless Steel				
Disc	Cast Iron	Ductile Iron	Carbon Steel	Cast steel	Stainless Steel				
Shaft	Stainless Steel Carbon Steel Coated With Electroplate								
Seat	Stainless Steel	Natural Rubber	Nitrile Rubber	Neoprene	EPDM	Silicone Rubber	PTFE	Bronze	
O-Ring	Stainless Steel	Neoprene	Nitrile Rubber						

Specification

Size DN(mm)	Standard Pressure PN(MPa)	Body Hydro Test Pressure (MPa)	Sealing Test Pressure (MPa)	Working Temperature (°C)	Medium
50-2000	0.6	0.9	0.66	≤425	Raw Water
	1.0	1.5	1.1		
	1.6	2.4	1.76		
	2.5	3.75	2.75		
50-500	4.0	6.0	4.4		

- 1) Unidirectional pressure tightness, high pressure on shaftside.
- 2) For larger sizes high pressure rating contact factory.

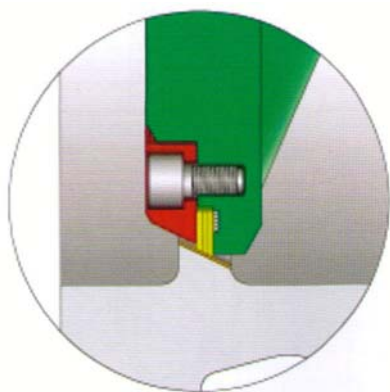
Triple eccentric design



OFFSET 1: The shaft is offset behind the seat axis to allow complete sealing contact around the entire seat.

OFFSET 2: The shaft centerline is offset from the pipe and valve which provides interference free opening and closing of the valve.

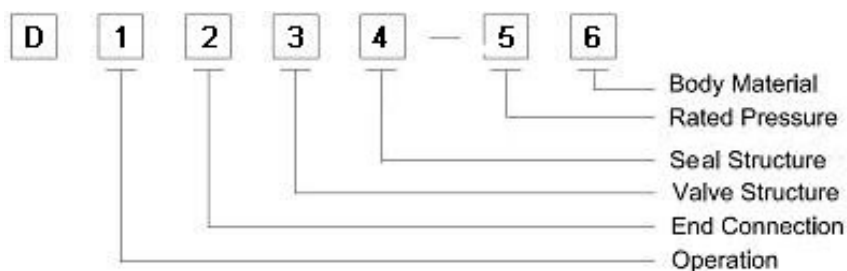
OFFSET 3: The seat cone axis is offset from the shaft centerline to eliminate friction during closing and opening and to achieve uniform compressive sealing around the entire seat.



The laminated disc seal

Seating forces are generated by the torque during closing uniformly around the entire circumference. The resilient seal flexes and energizes, assuming the shape of the seat. The compression forces equally distributed around the perimeter provide a tight shut off. The resiliency of the seal allows the valve body and disc to contract or expand, without the risk of jamming due to temperature fluctuations. It is self-adjusting.

Ordering Guide



1. Operation

Operator	Bare Shaft	Hand Wheel	Pneumatic Actuator	Electric Actuator
Code	0	H	P	E

2. End Connection

Connection	Double Flange	Wafer
Code	F	W

3. Valve Structure

Structure	Center Line	Double Eccentric	Triple Eccentric
Code	C	D	T

4. Seal Structure

Structure	Soft Sealing	Metal sealing
Code	S	M

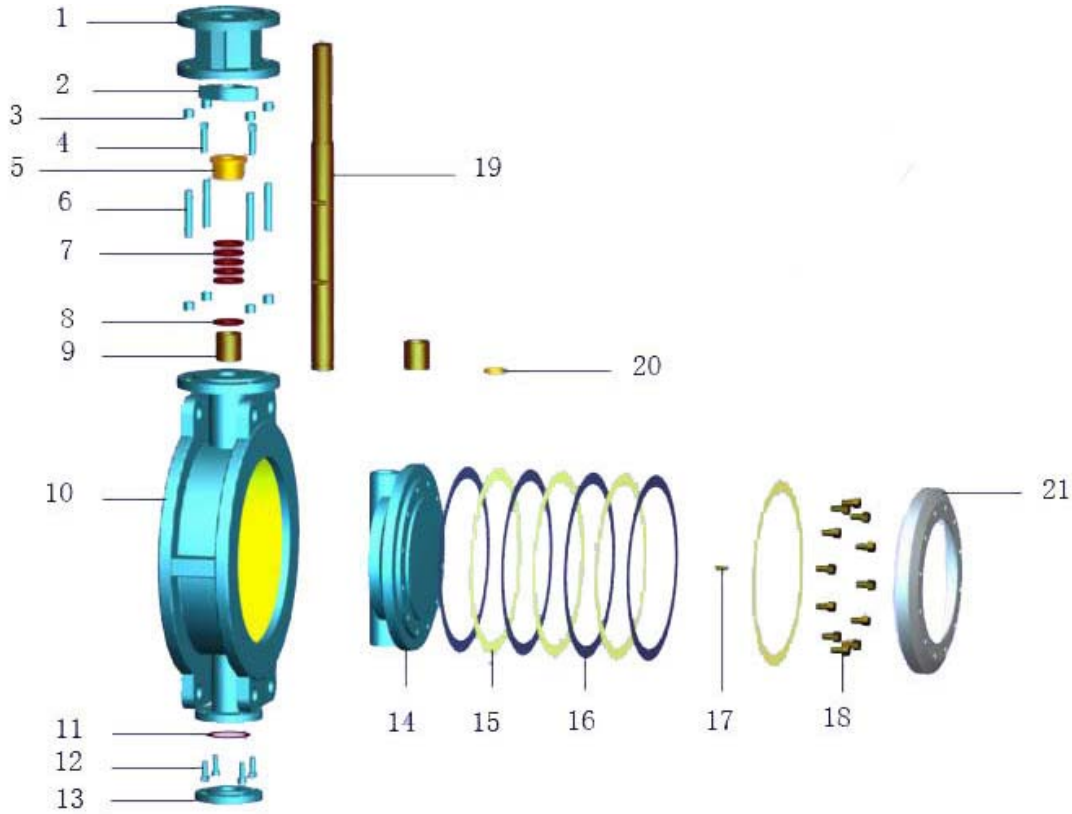
5. Rated Pressure

Pressure	PN 0.6MPa	PN 1.0MPa	PN 1.6MPa
Code	6	10	16

6. Body Material

Body Material	Cast Iron	Ductile Iron	WCB	Stainless Steel	Bronze
Code	C	D	W	S	B

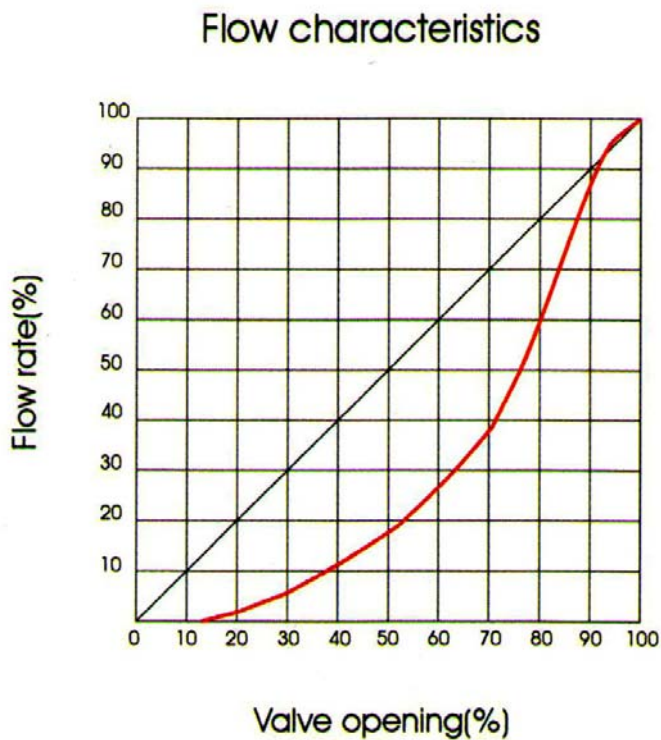
Parts List



ITEM	PARTS NAME	ITEM	PARTS NAME
1	Adapter	12	Screw
2	Plate	13	Lower flange
3	Body nut	14	Disc
4	Gland screw	15	Metallic sealing ring
5	Bushing	16	Sealing ring
6	Body screw	17	Pin
7	Packing	18	Disc screw
8	Ring	19	Stem
9	Bearing	20	Ring
10	Body	21	Disc chuck ring
11	Gasket		

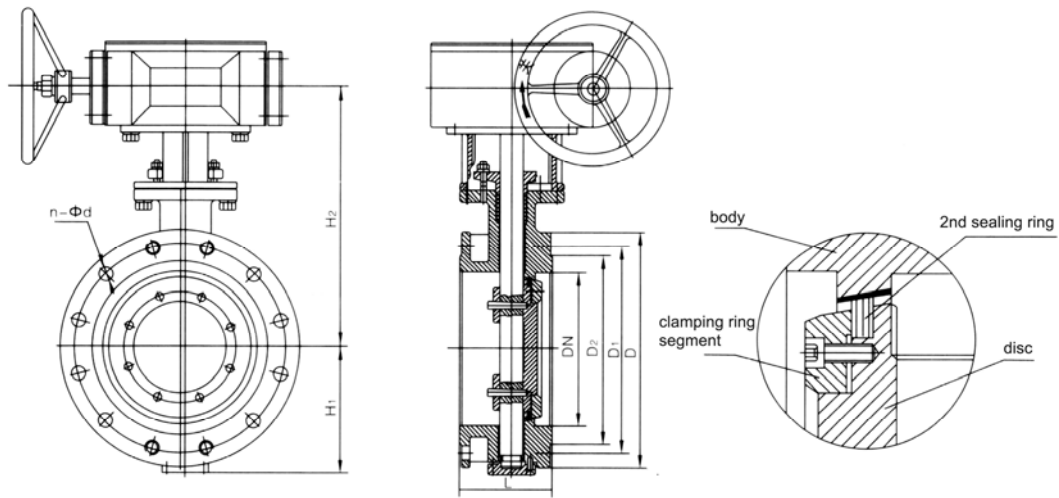
Structure Features

The taper bevel shearing triple offset metal seal butterfly valve makes the center line of the seat from a polarization in angle with the central line of the valve bush, based on the double eccentric butterfly valve, which makes the sealing section of the disc immediately brake away from the sealing section of the valve seat at the moment of opening, and contact the sealing section of the valve seat at the moment of closing, during the course of opening and closing, when completely opened, a gap will be formed in the two sealing sections. This kind of design can completely remove the mechanical wear and scratch between two sealing sections, and greatly improve the sealing performance and life-span of the butterfly valve.



Advantage

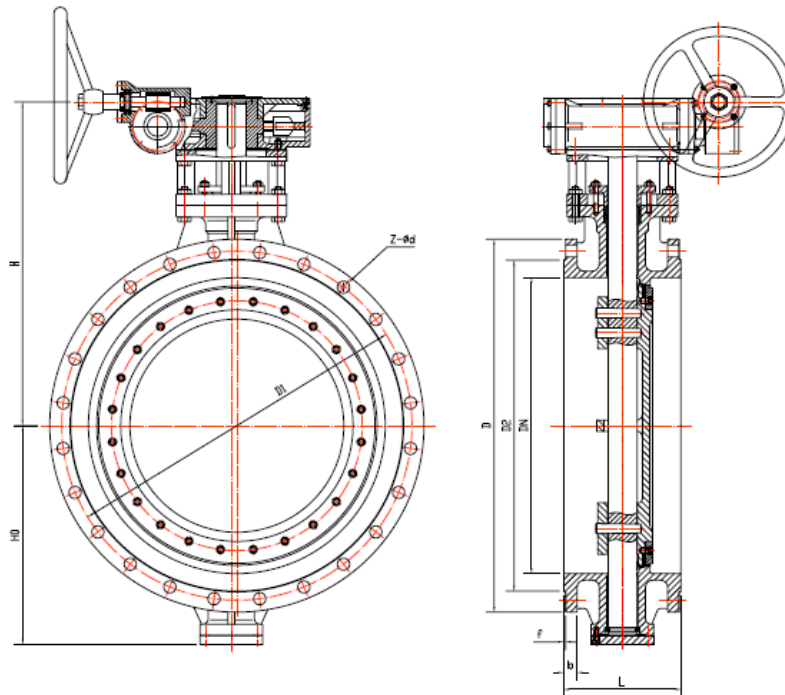
- Triple offset and ellipsoidal sealing geometry
- Developed geometry results in zero seat / seal friction
Low torques
Extended service life
Continued seal through thermal cycling torque seating
- Excellent flow and throttling characteristics covering services from cryogenic to high temperature
- Excellent control of fugitive emission by virtue of rotary stem movement and advanced packing materials



Dimension (Flanged ends conform to: ISO7005 PN16)

Diameter DN (mm)	L (mm)	H2 (mm)	H1 (mm)
100	127	285	107
125	140	300	123
150	140	320	140
200	152	370	180
250	165	420	200
300	178	500	250
350	190	530	270
400	216	570	300
450	222	600	320
500	229	680	360
600	267	750	420
700	292	810	480
800	348	905	540
900	330	960	590
1000	410	1010	640
1200	470	1175	750
1400	530	1310	860
1500	762	1390	1055
1600	600	1460	980
1800	670	1560	1090
2000	760	1670	1190
2200	590	1800	1440
2400	650	1930	1550
2600	700	2280	1660
2800	760	2460	1780
3000	810	2600	1940

* The information herein is subject to change without notice.



Dimension (Flanged ends conform to: ISO7005 PN10)

Diameter DN (mm)	D (mm)	D1 (mm)	D2 (mm)	b (mm)	f (mm)	Z-d (mm)	L (mm)	H0 (mm)	H2 (mm)
100	220	180	156	22	2	8-Φ18	127	100	250
125	250	210	184	22	2	8-Φ18	140	113	270
150	285	240	211	24	2	8-Φ22	140	150	320
200	340	295	266	24	2	8-Φ22	152	200	340
250	395	350	319	26	2	12-Φ22	165	231	410
300	445	400	370	26	2	12-Φ22	178	261	450
350	505	460	429	26	2	16-Φ22	190	298	490
400	565	515	480	26	2	16-Φ26	216	331	518
450	615	565	530	28	2	20-Φ26	222	369	562
500	670	620	582	28	2	20-Φ26	229	404	642
600	780	725	682	34	2	20-Φ30	267	473	710
700	895	840	794	34	5	24-Φ30	292	538	815
800	1015	950	901	36	5	24-Φ33	318	615	965
900	1115	1050	1001	38	5	28-Φ33	330	700	1015
1000	1230	1160	1112	38	5	28-Φ36	300	720	1140
1200	1455	1380	1328	44	5	32-Φ39	350	850	1350
1400	1675	1590	1530	48	5	36-Φ42	390	965	1470
1500	1785	1700	1645	50	5	36-Φ42	381	1055	1390
1600	1915	1820	1750	52	5	40-Φ48	440	1092	1630

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