

Verspec Valve Wenzhou Co.,Ltd. VB 72 Series high performance centered line Rubber lined butterfly valve. The body And disc are lined with synthetic rubber Or the body is lined with rubber, and the Disc is made of high grade alloy steels, So as to effectively avoid the corrosion Of the valve by medium. It has good Sealing performance. The VB 72 series Butterfly valve is widely used as an Verspec solution to control and shut-off Applications of water, air, petroleum etc.

### **Actuator Applicable**

- Pneumatic Actuator
- Electrical Actuator
- Hydraulic Actuator
- Worm Gear

#### ▲ **Applications**

- Chemical fiber, electric power, metallurgy
- Pharmacy, environmental protection

#### ▲ **Manufacturing range**

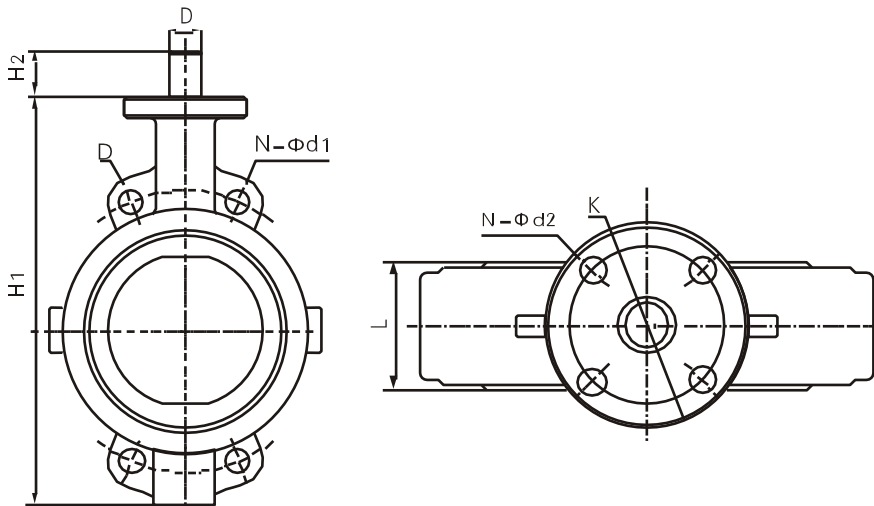
- Size range: DN2" – 24"
- Pressure rating: 150LB  
PN1.0–1.6Mpa
- Connection type: wafer type, flange type

#### ▲ **Parameters of control valves:**

- Trim features: lined cavity  
central line symmetrical structure
- Body type: straight-through type
- Bonnet type: standard integral type
- Flow characteristic: approximately equal percentage
- Shut-off class: ASME B16.104 IV
- Pipe connection type: wafer type, flange type
- Applicable temperature range: -5°C – 150°C
- Actuator type: pneumatic piston actuator  
Electric actuator



### High Performance Rubber Lined Butterfly Valve



### Rated CV Value and Travel Value

Valve Size		Rated CV value	Valve Size		Rated CV value
Lnch	Mm	90° opening	Lnch	Mm	90° opening
2	50	70	10	250	3740
2.5	60	175	12	300	5100
3	80	265	14	350	6860
4	100	480	16	400	8960
5	125	750	18	450	11340
6	150	1350	20	500	14000
8	200	2310	24	600	20160

### Dimension Data

DN(mm)	L	H1	H2	PN1.0MPa		PN1.0MPa		D	k	N-φd2
				D	N-φd1	D	N-φd1			
50	43	218	27	125	4-φ18	125	4-φ18	14	57	4-φ7
65	46	235	27	145	4-φ18	145	4-φ18	14	57	4-φ7
80	46	251	27	160	4-φ18	160	8-φ18	14	57	4-φ7
100	52	284	27	180	8-φ18	180	8-φ18	16	70	4-φ11
125	56	313	27	210	8-φ18	210	8-φ18	20	70	4-φ11
150	56	339	27	240	8-φ23	240	8-φ23	20	70	4-φ11
200	60	403	35	295	8-φ23	295	12-φ23	22	88	4-φ14
250	68	466	35	350	12-φ23	355	12-φ27	22	88	4-φ14
300	78	435	35	400	12-φ23	410	12-φ27	28	108	4-φ14
350	78	605	35	460	16-φ23	470	16-φ27	32	108	4-φ14
400	102	680	42	515	16-φ27	525	16-φ30	32	160	4-φ21
450	114	730	42	565	20-φ27	585	20-φ30	32	160	4-φ21
500	127	792	42	620	20-φ27	650	20-φ33	36	160	4-φ21
600	154	850	42	725	20-φ30	770	24-φ36	36	215	4-φ21



**VerSpec  
Valve**



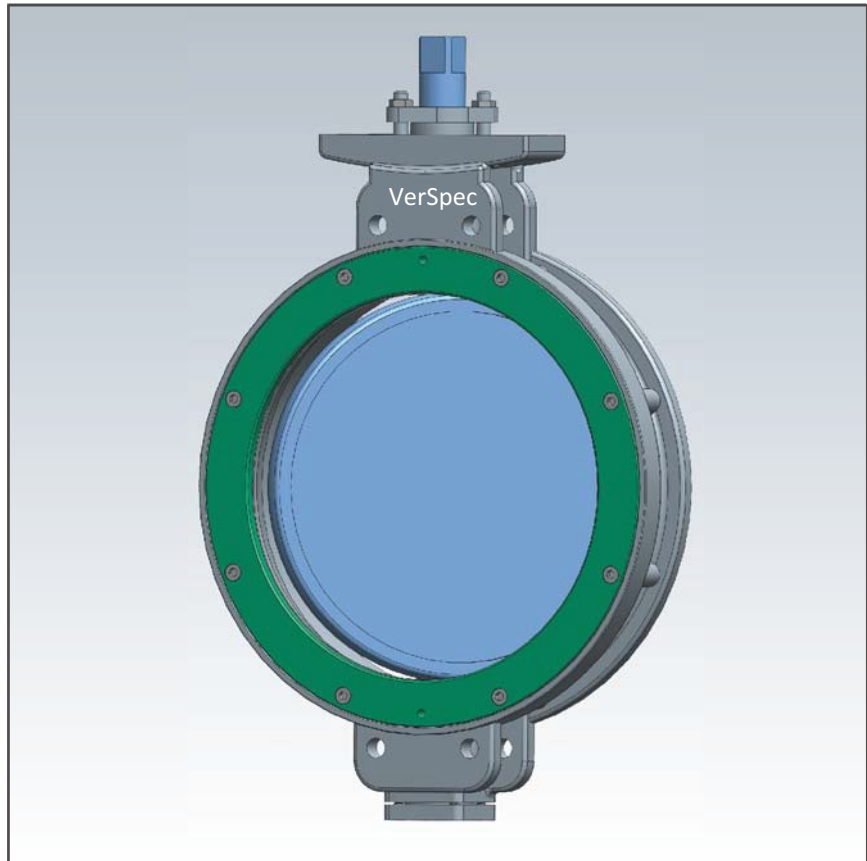
## VBU 72 Series High Performance Double Offsets Butterfly Valve

VerSpec Valve Wenzhou Co.,Ltd. VB 70 Series High Performance Butterfly Valve with Double Offsets Design. Stem offset from body. Centerline, and disc sealing design is arc type sealing, advantage of this design can make disc rapid off seat when valve opened and closed, it can reduce friction between sealing face. Center Self-positioning sealing seat design combine with unique seat compensate seal design. These design not only makes sealing compensated efficient, and also reduce operating torque & friction when valve opening and closing.



### **Actuator Applicable**

Pneumatic Actuator  
Electrical Actuator  
Hydraulic Actuator  
Worm Gear



### **Production Range**

Design Standard: API 609, JIS  
Size Range: 2"-48"  
Pressure Range: 150LB-300LB  
Connection: Wafer or Flange  
Max. Temp: 200°C

### **Application**

Chemical Industry, Petroleum  
Chemical Fiber, Electricity, Mining  
Environmental Protection  
Pharmacy

### **Technical Specification**

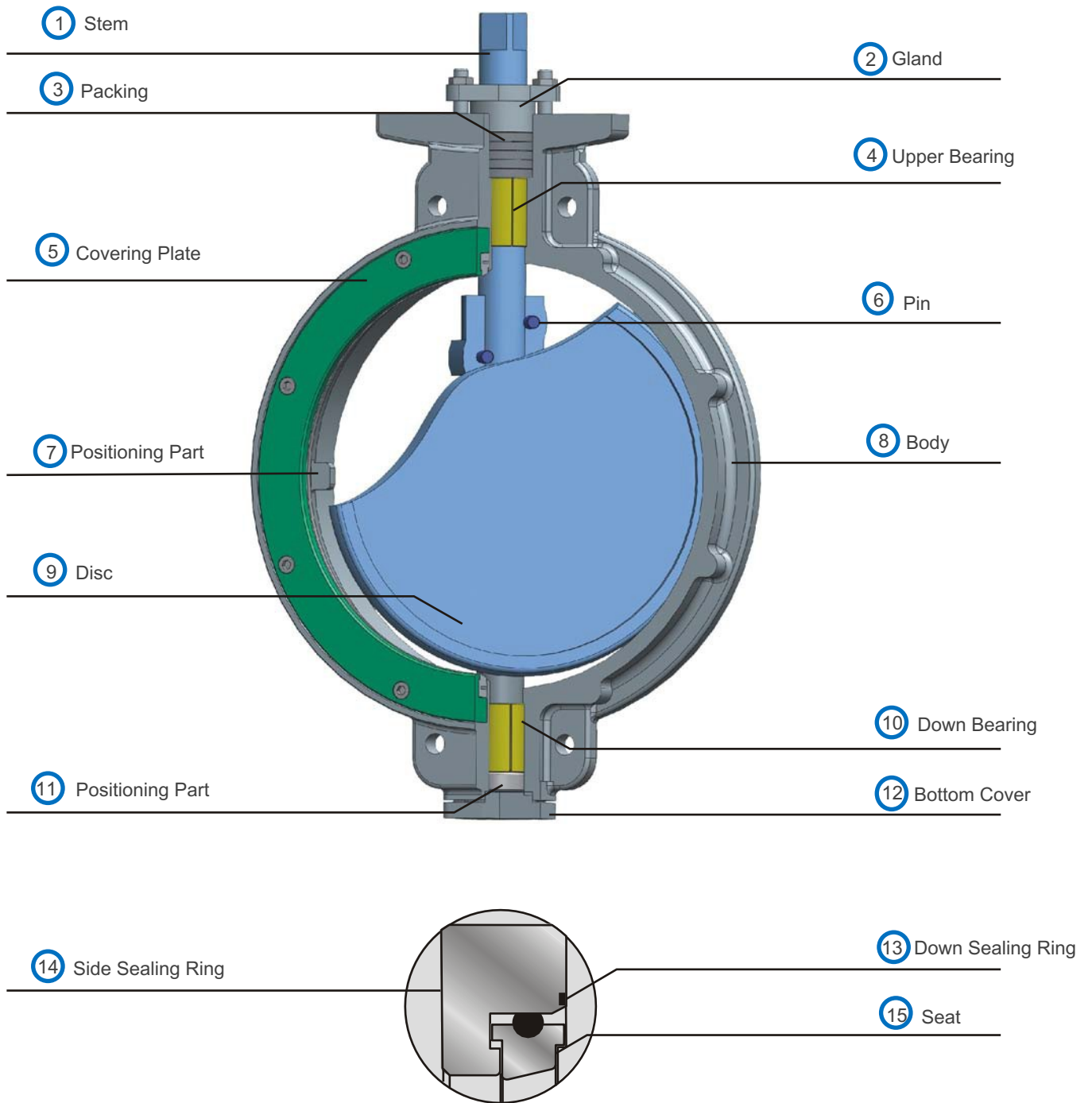
Trim Features: Double Offsets, Compensate Seal Seat  
Disc arc type seal face  
Body type: Through Type  
Bonnet type: Integral  
Flow Characteristics: similar to equal percent  
Leakage Level: ASME B 16.104 VI(Soft Seat)  
ASME B16.104 IV(Metal Seat)



**VerSpec  
Valve**



## VBU 72 Series High Performance Double Offsets Butterfly Valve Explosion Drawing





**VB70 Type Material List**

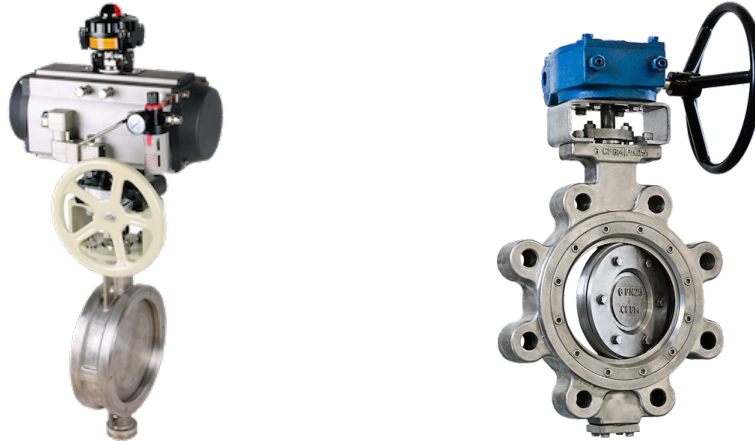
<b>Item</b>	<b>Part Name</b>	<b>Materials</b>
1	Stem	17-4PH Stainless Steel ASTM A564Gr630 Optional: 316ss, Inconel718/625, Monel
2	Gland	
3	Packing	PTFE Optional: Graphite-high density/low density
4	Upper Bearing	316SS Backed Ptfе, hastelloy C Backed Ptfе
5	Covering Plate	Optional: 316ss,ALLOY20
6	Pin	
7	Positioning Part	
8	Body	Carbon Steel A216 Gr WCB Or A105 Optional: ASTM A351 CF8M Or A182 F316
9	Disc	Carbon Steel A216 Gr WCB Or A105+SurfacIng SS Optional: 316ss, ASTM A351 CF8M Or A182 F316 Monel,Alloy20,Aluminum Bronze,Hastelloy C
10	Down Bearing	
11	Positioning Part	17-4PH Stainless Steel ASTM A564Gr630 Optional: A182 F316/F304
12	Bottom Cover	Carbon Steel A216 Gr WCB Or A105 Optional: ASTM A351 CF8M Or A182 F316
13	Down Sealing Ring	
14	Side Sealing Ring	NBR Or VITON Optional: 316SS
15	Seat	R,TFE,F Optional: R TFE C



**VerSpec  
Valve**



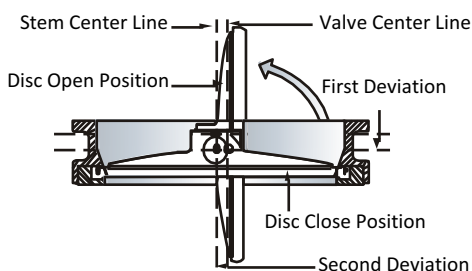
## VBU 72 Series High Performance Double Offsets Butterfly Valve



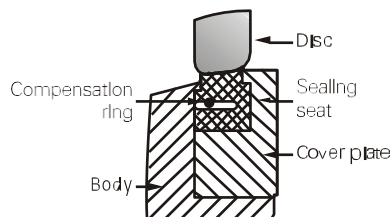
### Brief

The Double-offsets design of the VB70 Series Butterfly valve reduces the abrasion of the seat and ensures the double-way tightness function within the whole pressure range. Taking the seat as the starting point, the offset disc produces a function similar to that of the turbine and the disc can be pulled to leave the seat without the need of using too high operating force. The function of the disc similar to that of the turbine at the starting position reduces the abrasion of the seat and reduce the deformation of seat. When the valve opened, the disc will instantly leave the seat and when valve close, the function similar to that of the turbine turns the rotary movement of the valve into linear motion, so as to effectively push the disc to contact the seat. The built-in compensation spring can effectively compensate for the abrasion of the sealing seat and enable the sealing seat to be elastic during the opening and closing, greatly reduce friction and enhance sensitivity and make the whole valve have excellent shut-off and control functions.

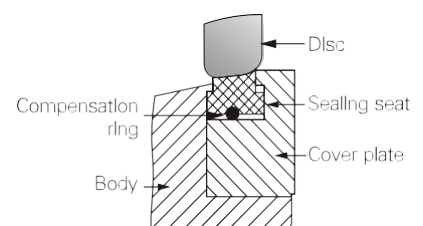
Pic-1



Pic-2



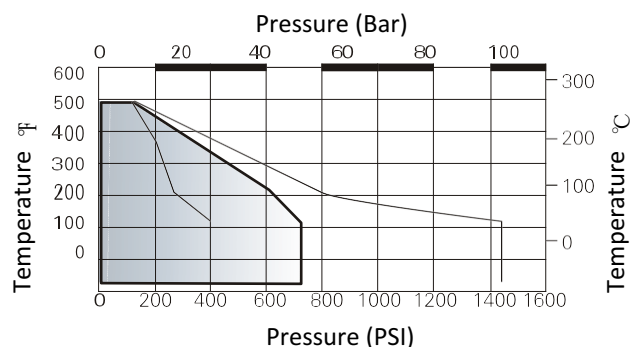
Pic-3



The VB70 series provides various types of seat design

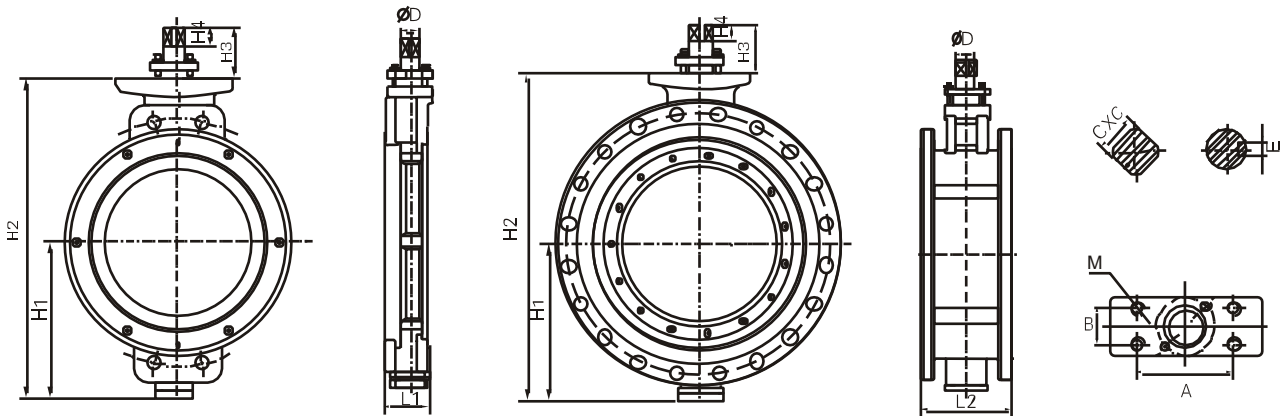
- 1- The seat adopts the internally opened U type groove Structure. Self sealing is realized through medium pressure. The built-in compensation spring makes the Sealing structure realize real dynamic sealing through the Medium pressure in the system. Seat leakage: under CVX  $10^{-6}\%$ .
- 2- The seat adopts externally opened O ring groove structure. When the disc is not completely closed, the seat has certain radial flexibility so that the seat abrasion is reduced and the torque is lowered. When the disc is closed, the pre-tightening force of the sealing face of the disc is offered to ensure sealing. Seat leakage: under CVX  $10^{-6}\%$ .

### Pressure & Temp. Rating of PTFE Seat





High Performance Butterfly Valve

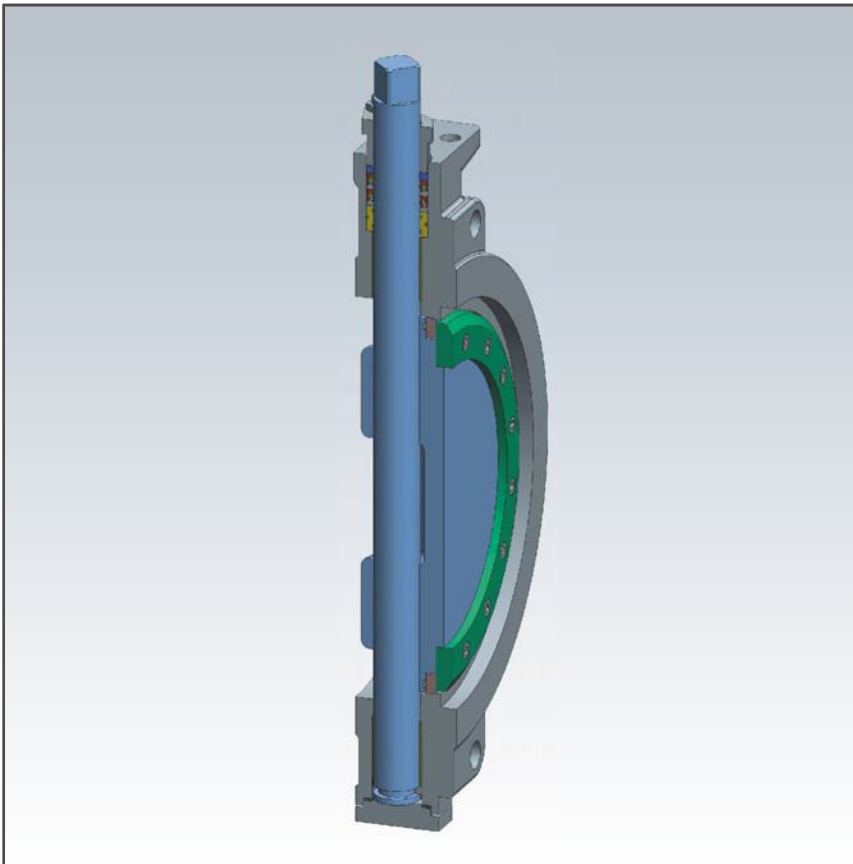


Dimension Data

Size	PN10/16/150LB		H1	H2	H3	H4	A	B	M	φ D	C x C	E
	L1	L2										
3" DN80	48	114	122	270	70	20	90	40	M10	20	17 x 17	--
4" DN100	54	127	132	292	70	20	90	40	M10	20	17 x 17	--
5" DN125	57	140	144	314	70	20	90	40	M10	20	17 x 17	--
6" DN150	57	152	164	350	70	20	90	40	M10	20	17 x 17	--
8" DN200	64	152	202	422	80	25	110	40	M12	28	22 x 22	--
10" DN250	71	165	245	525	85	30	130	50	M14	32	26 x 26	--
12" DN300	81	178	272	562	85	30	130	50	M14	36	28 x 28	--
14" DN350	92	190	313	643	95	35	142	55	M20	42	34 x 34	--
16" DN400	102	216	343	703	95	35	142	55	M20	48	40 x 40	--
18" DN450	114	222	364	744	100	40	170	80	M24	50	38 x 38	--
20" DN500	127	229	394	814	100	40	170	80	M24	50	38 x 38	--
24" DN600	154	267	449	934	120	50	184	98	M27	65	54 x 54	--
28" DN700	165	292	490	1000	120	50	184	98	M27	75	54 x 54	--
32" DN800	190	318	545	1125	160	60	268	105	M27	85	--	22
36" DN900	203	330	603	1255	160	60	268	140	M30	90	--	25
40" DN1000	216	410	675	1395	160	60	268	140	M30	100	--	28
48" DN1200	254	470	870	1450	160	70	268	140	M30	100	--	28

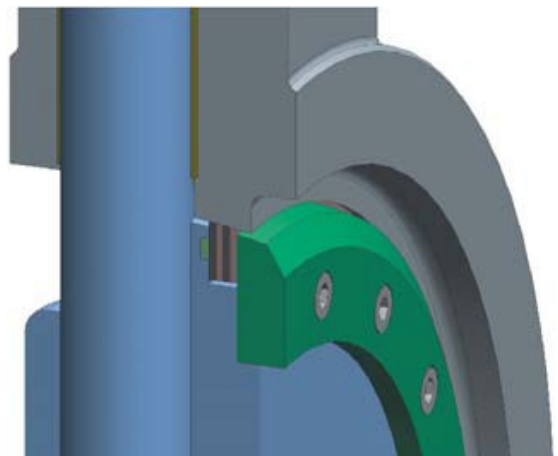
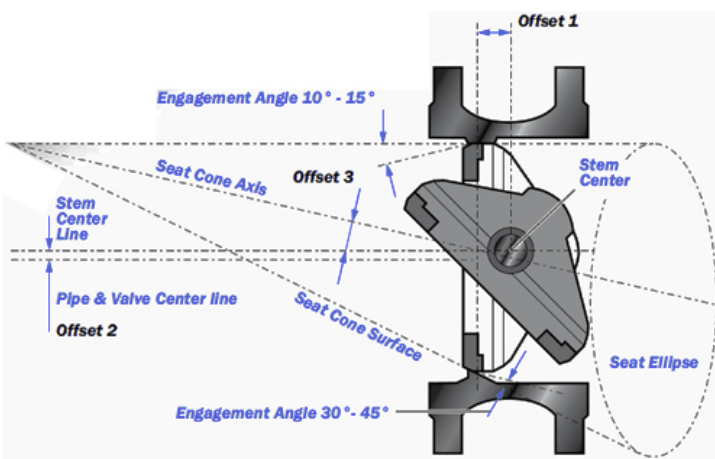
Rating CV Value and Travel Data

Nominal Diameter			Rating CV Value	Nominal Diameter			Rating CV Value
Inch	mm	90° Opening		Inch	mm	90° Opening	
3	80	178		18	450	1131	
4	100	430		20	500	14870	
5	125	458		24	600	21450	
6	150	1010		28	700	30515	
8	200	2710		32	800	41603	
10	250	3440		36	900	54193	
12	300	4950		40	1000	56920	
14	350	6485		48	1200	77390	
16	400	8525		--	--	--	

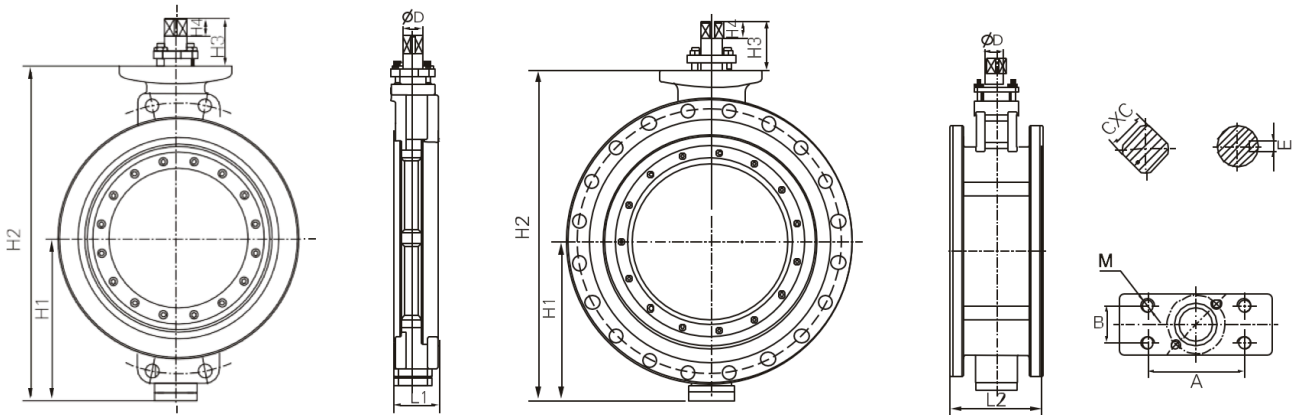


**Triple Offsets Design Introduction**

- The use of the metal hard seal under no disturbance can provide longer service life.
- The first eccentricity is that the stem deviates from the edge of the disc to ensure the sealing face will not be broken by the stem.
- The second eccentricity is that the center of the stem deviates to one side of the body center. When the disc leaves the seat, the disc turns to realize the function similar to that of the cam. When the disc enters the closing status, the disc movement is turned by the function similar to that of the cam into linear motion. During the whole movement process, the disc edge always makes no contact with the seat.
- The third eccentricity is formed by the seal parts and two tapered seats in which the rotary central shaft and valve center form the conical angle. The deviation of the two cones (forming the conical angle relative to the valve center) enables the disc to leave the seat more easily. This kind of "overlapped cone" design enables the disc to leave the seat instantly when the valve is opened. The seat is only contacted when the valve is closed, and mutual disturbance between the disc and seal is eliminated.





**Triple Offsets Butterfly Valve Dimension Data**

**Body size**

Valve size(DN)	PN10/16/150LB		H1	H2	H3	H4	A	B	M	φ D	C x C	E
	L1	L2										
3" DN80	48	114	122	270	70	20	90	40	M10	20	17 x 17	--
4" DN100	54	127	132	292	70	20	90	40	M10	20	17 x 17	--
5" DN125	57	140	144	314	70	20	90	40	M10	20	17 x 17	--
6" DN150	57	152	164	350	70	20	90	40	M10	20	17 x 17	--
8" DN200	64	152	202	422	80	25	110	40	M12	28	22 x 22	--
10" DN250	71	165	245	525	85	30	130	50	M14	32	26 x 26	--
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20" DN500	127	229	394	814	100	40	170	80	M24	50	38 x 38	--
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32" DN800	190	318	545	1125	160	60	268	105	M27	85	--	22
36" DN900	203	330	603	1255	160	60	268	140	M30	90	--	25
40" DN1000	216	410	675	1395	160	60	268	140	M30	100	--	28
48" DN1200	254	470	870	1450	160	70	268	140	M30	100	--	28

**High Pressure Body Dimensions**

Valve size (DN)	300LB		600LB		
	L1	L2	L1	L2	
4"	DN100	54	127	64	190
6"	DN150	59	140	76	210
8"	DN200	73	152	89	230
10"	DN250	83	165	114	250
12"	DN300	92	178	114	270
14"	DN350	117	190	127	290
16"	DN400	133	216	140	310
18"	DN450	146	222	152	330
20"	DN500	159	229	152	350
24"	DN600	181	267	178	390