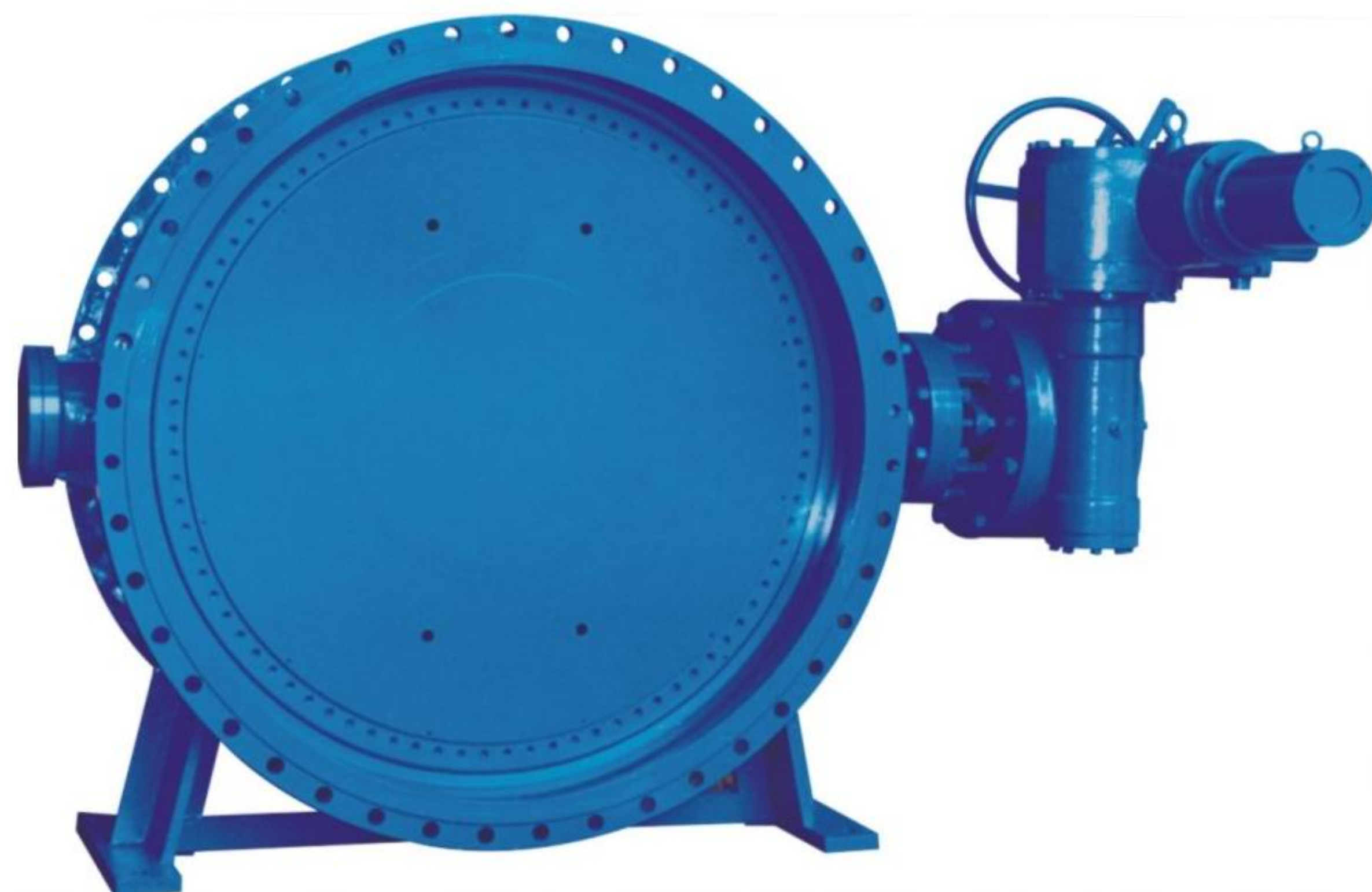


Construction and feature of triple offset metal seal butterfly valve



Principle Of Operation

Our Triple Offset Butterfly Valve provides a bi-directional bubble 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.

The Triple Offset Geometry

OFFSET 1

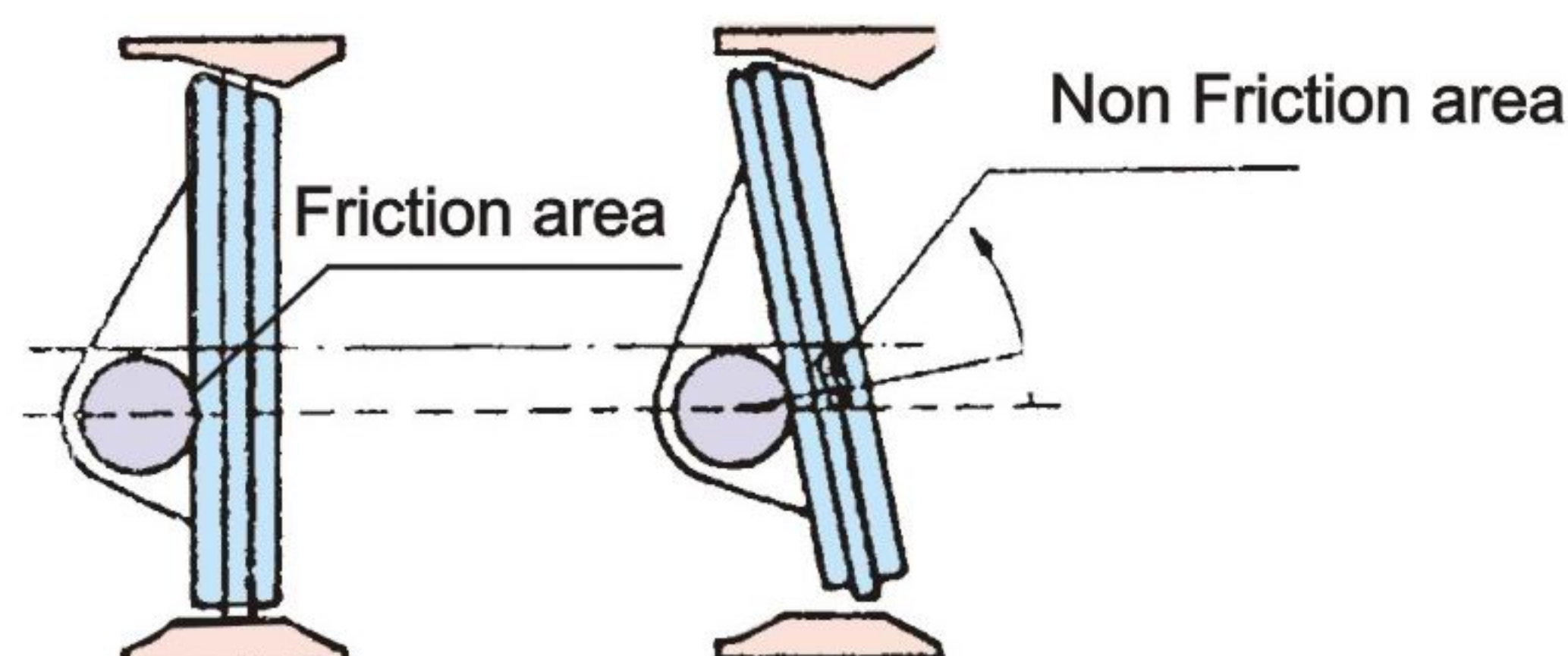
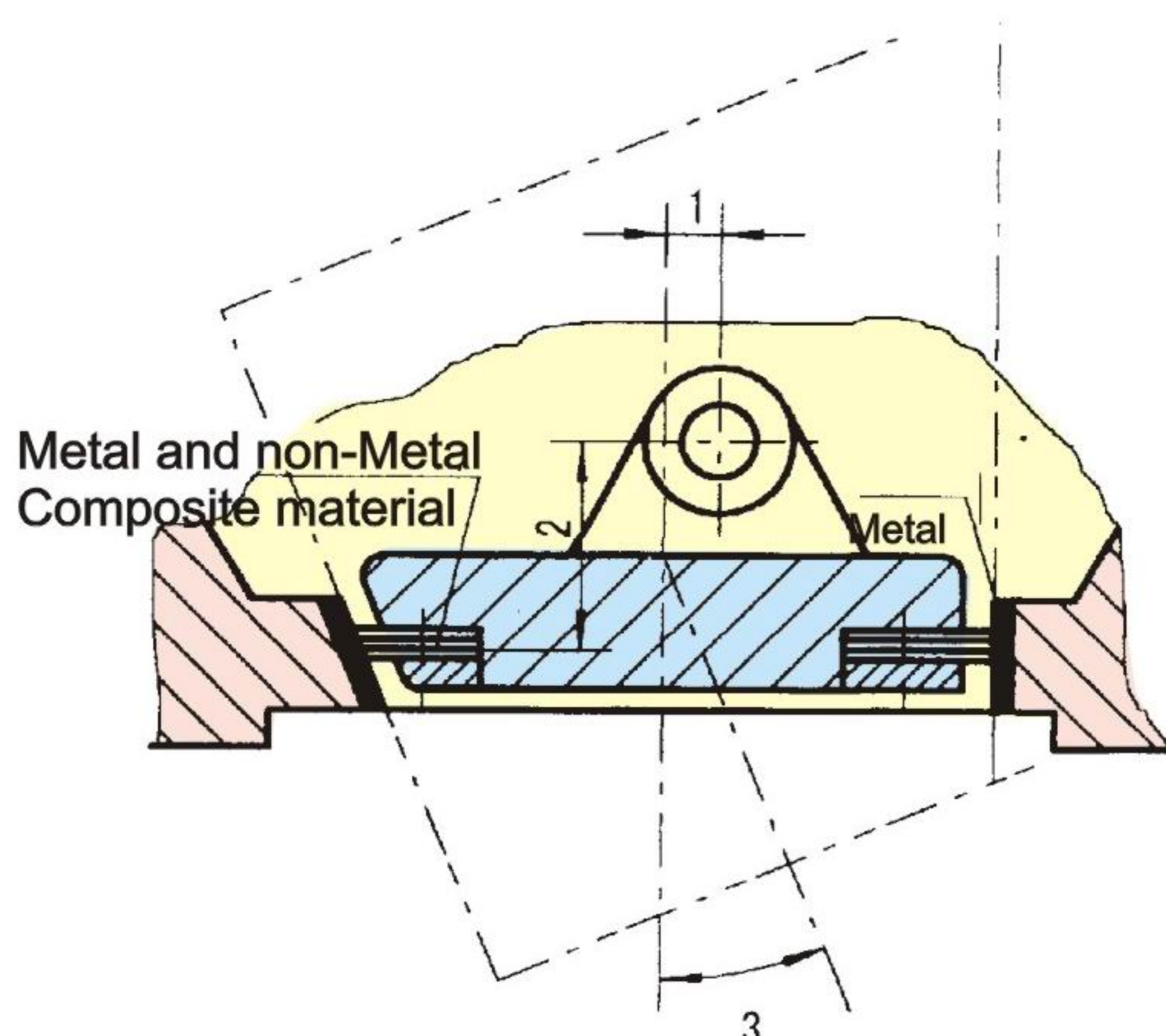
the shaft is offset behind the seat axis to allow complete sealing contact around the entire seat

OFFSET2

the shaft's centerline is offset from the pipe and valve which provides interference opening and closing of the valve

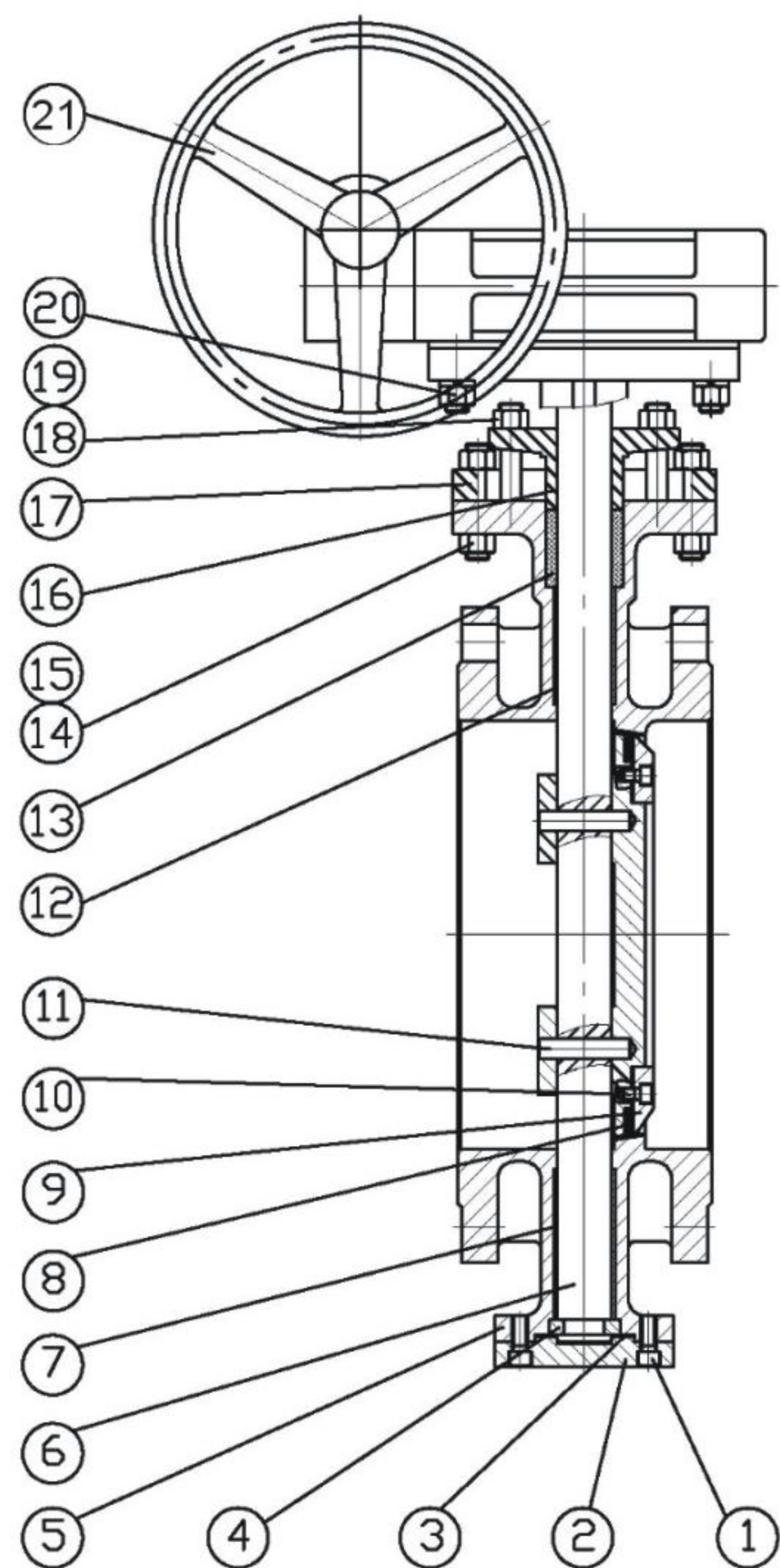
OFFSET3

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



Feature

1. Elastic property of the composite metal sealing ring perform zero leakage.
2. Torque seal to ensure persistent bidirectional zero leakage.
3. The triple offset metal-seated butterfly valve adopts one duo-eccentric structure plus one special oblique-conical elliptic sealing structure, the frictional torque force decreases substantially, a long service life is guaranteed, easy opening or closing is realized.



Standards

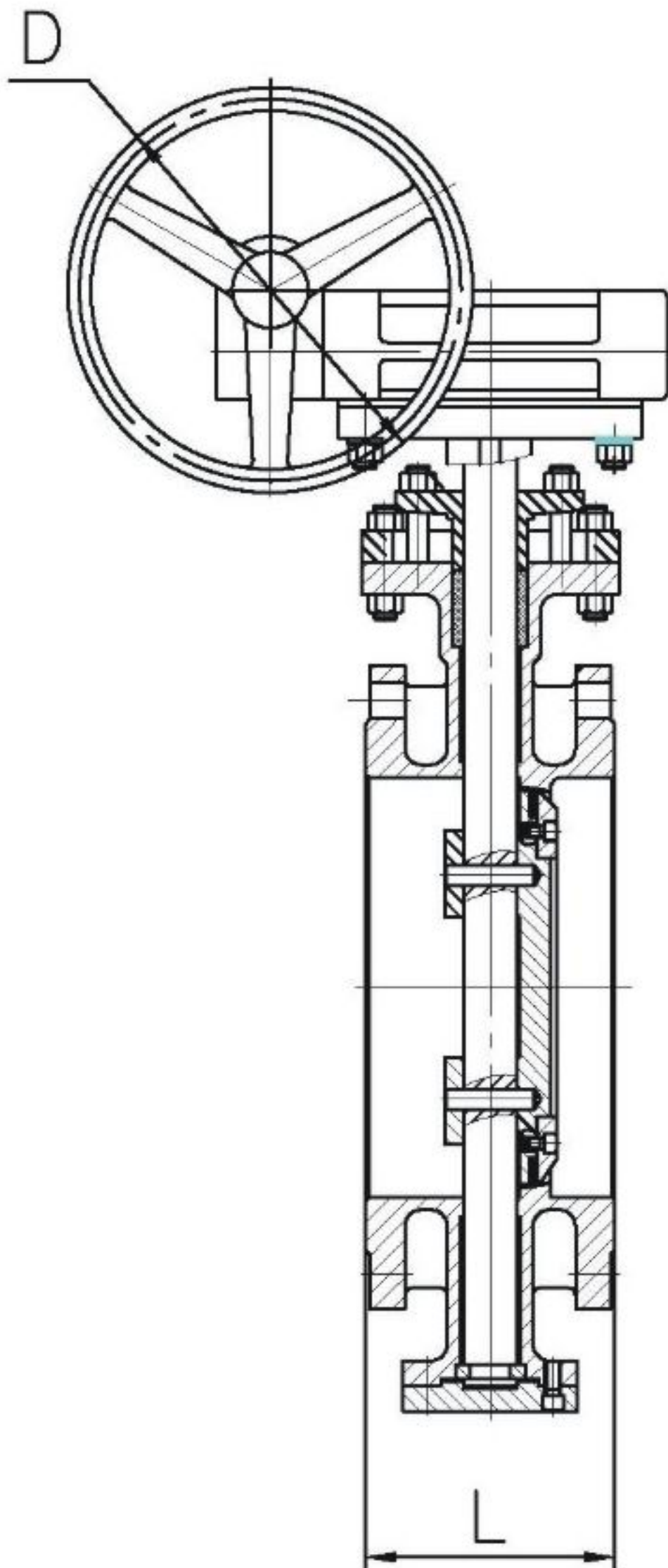
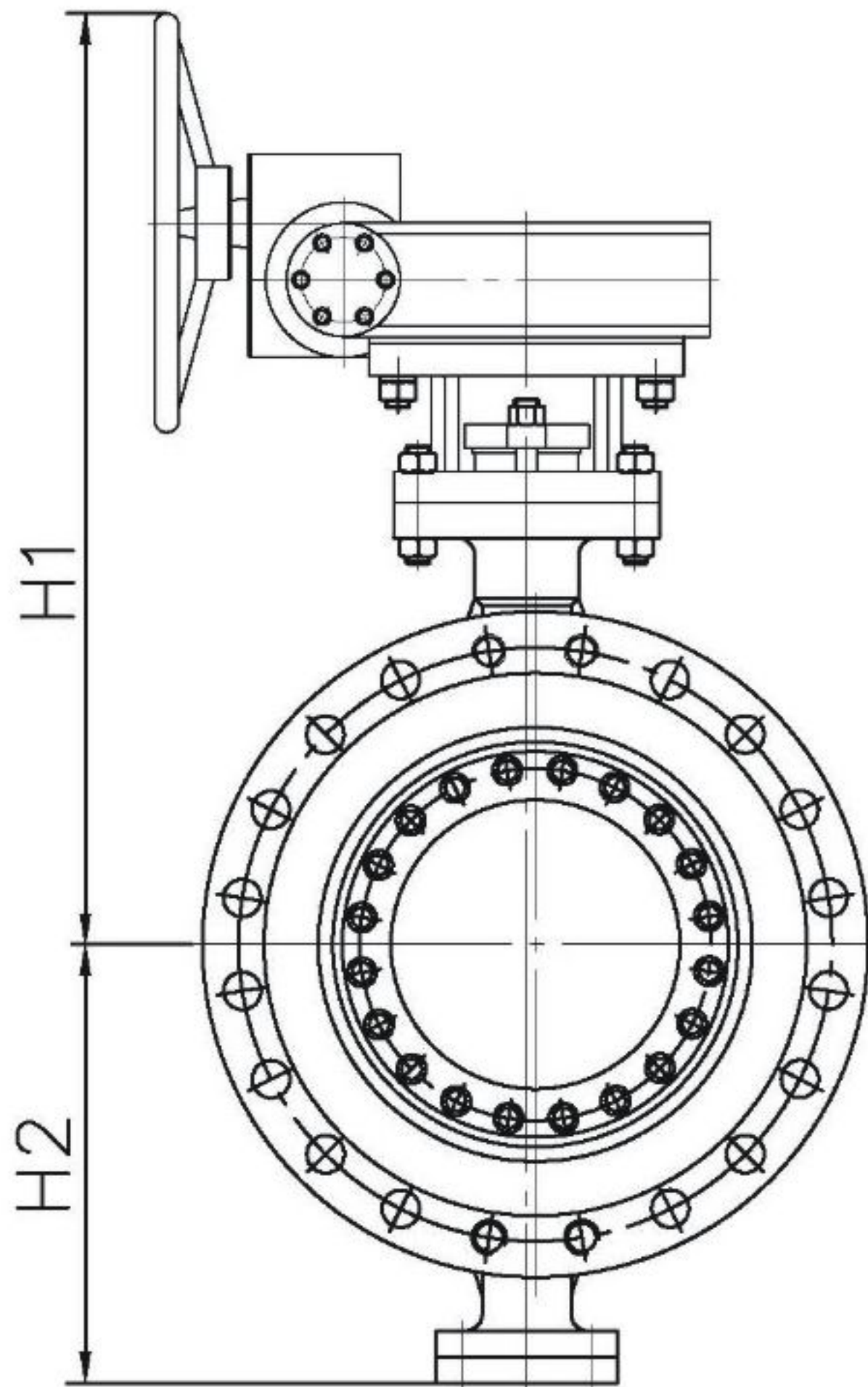
Standards Designing Specifications: API 609,ANSI B16.34
Inspection and test: API 598
Flanges Type & Dimensions: ASME B16.5,ASME B16.47
FACE TO FACE Dimensions: API 609

Parts and material list

Parts Number	Parts name	Material		
		WCB	CF8	CF8M
1	Cover	ASTM A105	ASTM A182 F304	ASTM A182 F316
2	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
3	Gasket	Graphite	Graphite	Graphite
4	Split Ring	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
5	Body	ASTM A216 WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
6	Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F304
7	Bushing	Copper alloy	Copper alloy	copper alloy
8	Sealing ring	SS304+Grephite	SS304+Grephite	SS316+Grephite
9	Gland Retainer	ASTM A105	ASTM A182 F304	ASTM A182 F316
10	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 F8
11	Pin	ASTM A276 420	ASTM A276 304	ASTM A276 316
12	Bushing	PTFE+Bronze	Luberited Bronze	Luberited Bronze
13	Stem packing	Graphite	Graphite	Graphite
14	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
15	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8
16	Gland Flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
17	Yoke	ASTM A216 WCB	ASTM A351 CF8	ASTM A315 CF8M
18	Blot	ASTM A193B7	ASTM A193 B8	ASTM A193 B8
19	Nut	ASTM A193 2H	ASTM A194 8	ASTM A194 8
20	Washer	Carbon steel	Carbon	Carbon
21	Gear	Carbon	Carbon	Carbon

Noted: The chart above only lists out some common composition of steel butterfly valve parts. We may provide other different parts material composition according to the customer’ s request or the actual valve working condition

▶ Class150&Class300 triple offset flanged butterfly valve

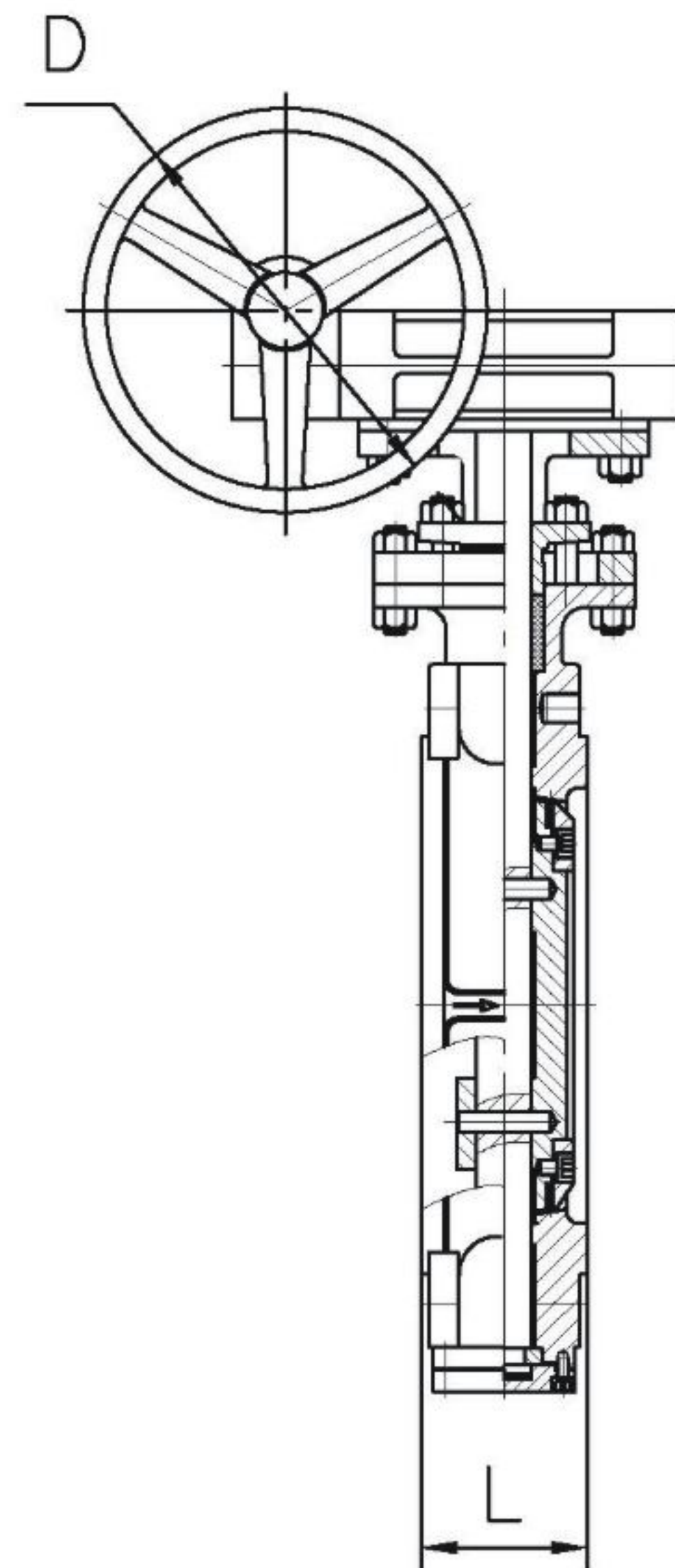
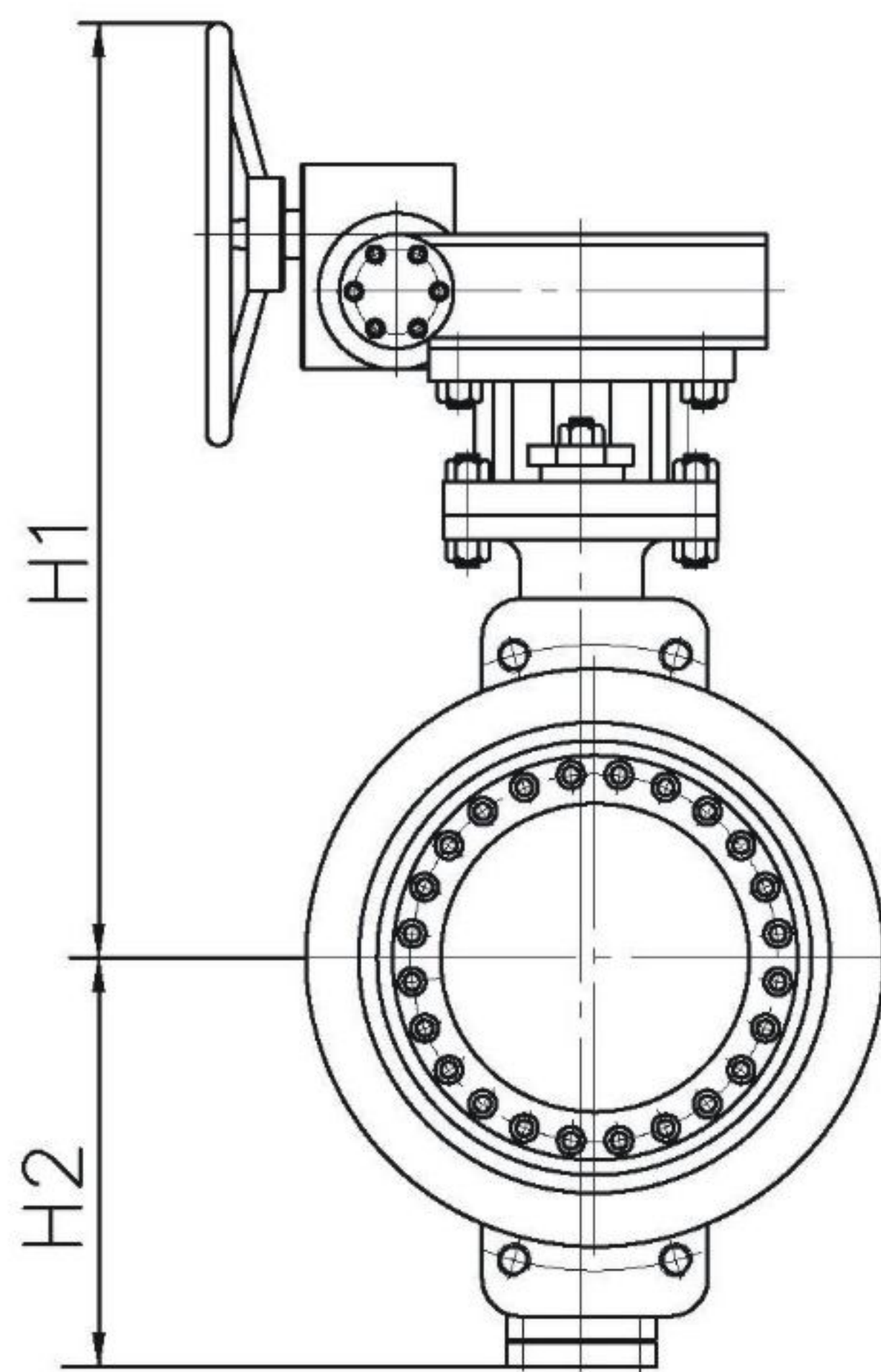


Class	Size		Dimensions(mm)				Weight (kg)
	NPS	DN	L	H1	H2	D	
150	2	50	108	305	115	160	21
	2½	65	112	315	125	160	24
	3	80	114	330	135	160	27
	4	100	127	360	140	160	28
	5	125	140	450	170	280	30
	6	150	140	475	175	280	50
	8	200	152	525	240	280	75
	10	250	165	570	270	280	105
	12	300	178	630	315	320	155
	14	350	190	675	345	350	190
	16	400	216	720	395	350	230
	18	450	222	805	405	350	300
	20	500	229	895	430	400	380
	24	600	267	950	500	400	490
	26	650	267	960	515	400	580
	28	700	292	1030	520	400	660
	30	750	308	1080	545	450	740
	32	800	318	1135	620	450	820
	36	900	330	1175	620	450	1100
300	40	1000	410	1270	720	500	1430
	44	1100	450	1335	768	500	2200
	2	50	150	315	115	500	32
	2½	65	170	325	125	160	39
	3	80	180	340	135	160	42
	4	100	190	435	140	160	45
	5	125	200	475	170	280	48
	6	150	210	510	220	280	80
	8	200	230	520	240	280	120
	10	250	250	625	270	280	168
	12	300	270	670	320	350	248
	14	350	290	765	370	350	304
	16	400	310	840	410	350	368
	18	450	330	910	420	400	480
	20	500	350	980	460	400	608
	24	600	390	1080	540	400	784
	26	650	390	1130	585	450	928
	28	700	430	1175	640	450	1056
	30	750	430	1265	700	500	1184
	32	800	470	1300	765	500	1312
	36	900	510	1380	820	500	1760
	40	1000	550	1460	890	500	2288

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details f them according to the actual valve working condition.



▶ Class 150&Class300 triple offset Wafer butterfly valve



Class	Size		Dimensions(mm)				Weight (kg)
	NPS	DN	L	H1	H2	D	
150	2	50	43	305	105	160	14
	2½	65	46	315	115	160	15
	3	80	48	330	125	160	17
	4	100	54	360	150	160	20
	5	125	57	450	160	280	27
	6	150	57	475	185	280	31
	8	200	64	525	245	280	45
	10	250	71	540	275	280	86
	12	300	81	660	315	320	105
	14	350	92	670	330	350	135
	16	400	102	730	365	350	150
	18	450	114	810	390	350	218
	20	500	127	885	430	400	289
	24	600	154	940	470	400	407
	26	650	165	955	490	400	445
	28	700	165	1050	505	400	470
	30	750	190	1050	525	450	590
	32	800	190	1185	580	450	680
	36	900	203	1205	625	450	900
	40	1000	216	1260	685	500	1000
	48	1200	254	1395	790	500	1550
300	2	50	43	315	115	160	19
	2½	65	46	325	125	160	22
	3	80	48	340	140	160	35
	4	100	54	440	150	280	30
	5	125	57	480	180	280	41
	6	150	59	515	220	280	47
	8	200	73	530	250	280	68
	10	250	83	640	300	350	130
	12	300	92	685	335	350	158
	14	350	117	780	375	350	216
	16	400	133	830	380	400	225
	18	450	149	915	420	400	327
	20	500	159	985	475	400	434
	24	600	181	1085	540	450	610
	26	650	-	-	-	-	-
	28	700	-	-	-	-	-
	30	750	-	-	-	-	-
	32	800	-	-	-	-	-
	36	900	-	-	-	-	-

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.