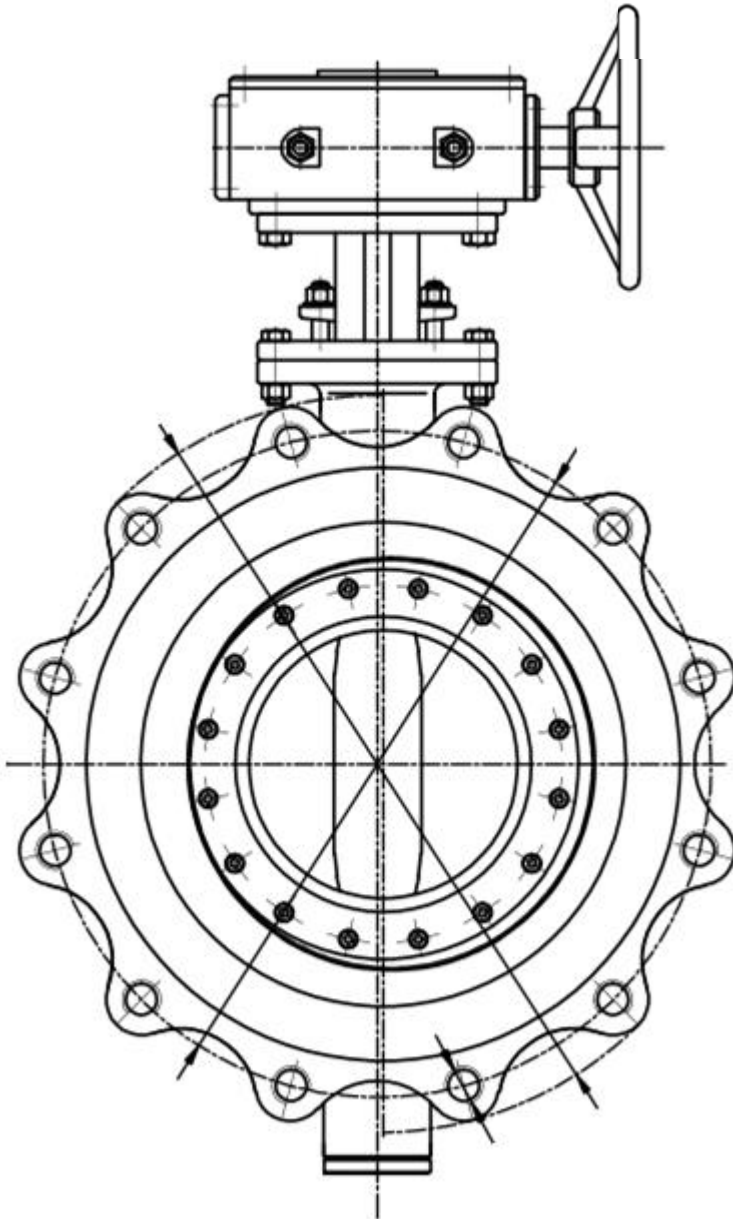


## BUTTERFLY VALVE TYPE M90 – LUG TYPE



### Main Features

- application for high parameters through metal/metal seat
- class 1 to DIN3230 tightness

### Construction

- triple-excentric construction
- metal/metal seated
- temperature range from -25°C to +400°C
- wafer type body

### Principle of lamellar packing

- lamellas made of SS are pressed each other against seat
- seat geometry ensures sit down of the disc into seat without friction

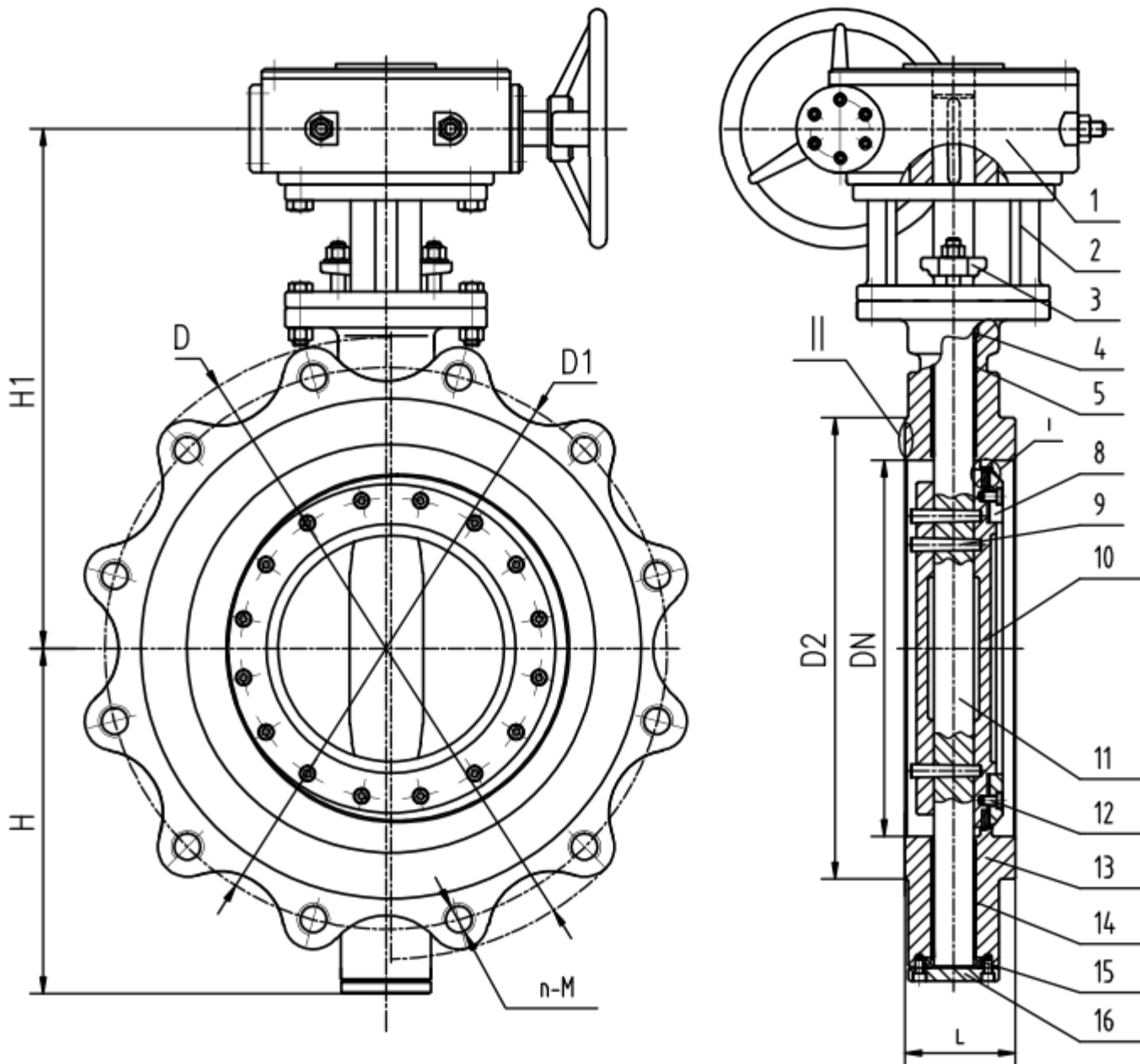
### Assembly

- with horizontal stem position
- face-to-face to DIN3202 K3

## BUTTERFLY VALVE TYPE M90 – LUG TYPE

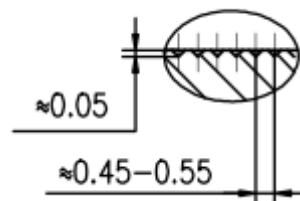
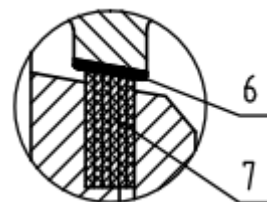
DN 50 – 3000 PN 6 ; DN 50 – 3000 PN10

DN 50 – 2000 PN16; DN 50 – 2000 PN25



### Standards

1	Design standard	DIN3354
2	Flange connection dimension	GB/T12224
3	Structure length	DIN3202
4	Pressure test	DIN 3230



## BUTTERFLY VALVE TYPE M90 – LUG TYPE DN 50 – 3000 PN 6

### Part list

No.	Part	Material
1	The round equip	-
2	Yoke	WCB/SS304
3	Press cover	WCB/SS316
4	Packing	Graphite
5	Top set	304
6	The valve body airtight cover	13Cr
7	Seal ring	316+Graphite
8	Gland	C.S.
9	Pin	410
10	Disc	WCB/LCB/LC2/LC1/LCC/SS304/SS316/904L/TITAN/HASTELLOY/MONEL
11	Stem	410
12	Stud	1045
13	Body	WCB/LCB/LC2/LC1/LCC/SS304/SS316/904L/TITAN/HASTELLOY/MONEL
14	Descend set	304
15	Folio wreath	C.S.
16	Below bonnet	304

DN	PN	L	D	D1	D2	n-M	H	H1
50	6	43	140	110	90	4-M12	95	205
65	6	46	160	130	110	4-M12	105	215
80	6	49	190	150	128	4-M16	120	230
100	6	56	210	170	148	4-M16	124	290
125	6	64	240	200	178	8-M16	135	347
150	6	70	265	225	202	8-M16	182	370
200	6	71	320	280	258	8-M16	218	425
250	6	76	375	335	312	12-M16	258	450
300	6	83	440	395	365	12-M20	308	512
350	6	92	490	445	415	12-M20	300	542
400	6	102	540	495	465	16-M20	298	592
450	6	114	595	550	520	16-M20	355	612
500	6	127	645	600	570	20-M20	390	971
600	6	154	755	705	670	20-M24	445	726
700	6	165	860	810	775	24-M24	490	803
800	6	190	975	920	880	24-M27	552	920
900	6	203	1075	1020	980	24-M27	599	965
1000	6	216	1175	1120	1080	28-M27	656	1020
1200	6	254	1405	1340	1295	32-M30	779	1176
1400	6	279	1630	1560	1510	36-M33	860	1271
1600	6	318	1830	1760	1710	40-M33	990	1238
1800	6	356	2045	1970	1920	44-M36	1102	1366
2000	6	406	2265	2180	2125	48-M39	1218	1510
2200	6	590	2475	2390	2335	52-M39	1318	1610
2400	6	650	2685	2600	2545	56-M39	1418	1725
2600	6	700	2905	2810	2750	60-M45	1580	1890
2800	6	760	3115	3020	2960	64-M45	1635	2012
3000	6	810	3315	3220	3160	68-M45	1745	2118



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**BUTTERFLY VALVE**  
**TYPE M90 – LUG TYPE**  
DN 50 – 3000 PN10

DN	PN	L	D	D1	D2	n-M	H	H1
50	10	43	165	125	102	4-M16	108	218
65	10	46	185	145	122	4-M16	118	228
80	10	49	200	160	138	8-M16	126	236
100	10	56	220	180	158	8-M16	124	290
125	10	64	250	210	188	8-M16	135	347
150	10	70	285	240	212	8-M20	182	370
200	10	71	340	295	268	8-M20	218	425
250	10	76	395	350	320	12-M20	258	450
300	10	83	445	400	370	12-M20	308	512
350	10	92	505	460	430	16-M20	271	524
400	10	102	565	515	482	16-M24	298	596
450	10	114	615	565	532	20-M24	365	646
500	10	127	670	620	585	20-M24	353	651
600	10	154	780	725	685	20-M27	447	758
700	10	165	895	840	800	24-M27	516	880
800	10	190	1015	950	905	24-M30	578	940
900	10	203	1115	1050	1005	28-M30	628	1016
1000	10	216	1230	1160	1110	28-M33	695	1076
1200	10	254	1455	1380	1330	32-M36	805	1201
1400	10	279	1675	1590	1535	36-M39	890	1422
1600	10	318	1915	1820	1760	40-M45	1024	1483
1800	10	356	2115	2020	1960	44-M45	1138	1600
2000	10	406	2325	2230	2170	48-M45	1252	1752
2200	10	590	2550	2440	2370	52-M52	1316	1845
2400	10	650	2760	2650	2570	56-M52	1438	1935
2600	10	700	2960	2850	2780	60-M52	1543	2012
2800	10	760	3180	3070	3000	64-M52	1686	2185
3000	10	810	3405	3290	3210	68-M56	1812	2245



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## BUTTERFLY VALVE TYPE M90 – LUG TYPE

DN 50 – 2000 PN16

DN 50 – 2000 PN25

DN	PN	L	D	D1	D2	n-M	H	H1
50	16	43	165	125	102	4-M16	108	218
65	16	46	185	145	122	4-M16	118	228
80	16	49	200	160	138	8-M16	126	236
100	16	56	220	180	158	8-M16	124	290
125	16	64	250	210	188	8-M16	135	347
150	16	70	285	240	212	8-M20	182	370
200	16	71	340	295	268	12-M20	220	425
250	16	76	405	355	320	12-M24	260	450
300	16	83	460	410	378	12-M24	310	512
350	16	92	520	470	438	16-M24	315	557
400	16	102	580	525	490	16-M27	355	636
450	16	114	640	586	550	20-M27	385	666
500	16	127	715	650	610	20-M30	425	706
600	16	154	840	770	725	20-M33	482	793
700	16	165	910	840	795	24-M33	524	890
800	16	190	1025	950	900	24-M36	581	945
900	16	203	1125	1050	1000	28-M36	631	1021
1000	16	216	1255	1170	1115	28-M39	699	1086
1200	16	254	1485	1390	1330	32-M45	802	1112
1400	16	279	1685	1590	1530	36-M45	910	1230
1600	16	318	1930	1820	1750	40-M52	1030	1345
1800	16	356	2130	2020	1950	44-M52	1135	1448
2000	16	406	2345	2230	2150	48-M56	1240	1575

DN	PN	L	D	D1	D2	n-M	H	H1
50	25	43	165	125	102	4-M16	108	218
65	25	46	185	145	122	8-M16	118	228
80	25	49	200	160	138	8-M16	126	236
100	25	56	235	190	162	8-M20	122,5	285
125	25	64	270	220	188	8-M24	140	342
150	25	70	300	250	218	8-M24	155	357
200	25	71	360	310	278	12-M24	185	430
250	25	76	425	370	335	12-M27	273	461
300	25	83	485	430	395	16-M27	308	530
350	25	92	555	490	450	16-M30	318	560
400	25	102	620	550	505	16-M33	355	636
450	25	114	670	600	555	20-M33	385	666
500	25	127	730	660	615	20-M33	425	725
600	25	154	845	770	720	20-M36	482	825
700	25	165	960	875	820	24-M39	530	770
800	25	190	1085	990	930	24-M45	590	840
900	25	203	1185	1090	1030	28-M45	635	890
1000	25	216	1320	1210	1140	28-M52	710	975
1200	25	254	1530	1420	1350	32-M52	830	1140
1400	25	279	1755	1640	1560	36-M56	950	1280
1600	25	318	1975	1860	1780	40-M56	1085	1400
1800	25	356	2195	2070	1985	44-M64	1170	1480
2000	25	406	2425	2300	2210	48-M64	1270	1600



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**BUTTERFLY VALVE**  
**TYPE M90 – LUG TYPE**  
DN 50 – 600 PN40

DN	PN	L	D	D1	D2	n-M	H	H1
50	40	43	165	125	102	4-M16	108	218
65	40	46	185	145	122	8-M16	118	228
80	40	49	200	160	138	8-M16	126	236
100	40	56	235	190	162	8-M20	122,5	285
125	40	64	270	220	188	8-M24	140	342
150	40	70	300	250	218	8-M24	155	357
200	40	89	375	320	285	12-M27	185	430
250	40	114	450	385	345	12-M30	308	530
300	40	114	515	450	410	16-M30	318	560
350	40	127	580	510	465	16-M33	298	596
400	40	140	660	585	535	16-M36	365	646
450	40	152	685	610	560	20-M36	353	651
500	40	152	755	670	615	20-M39	447	758
600	40	178	890	795	735	20-M45	516	880



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**BUTTERFLY VALVE  
TYPE M90 – LUG TYPE  
DN 50 – 3000 PN10**

**Estimate weights (kg)**

DN	PN6	PN10	PN16	PN25	PN40
50	11	11	11	11	-
80	13	13	13	13	-
100	15	15	15	15	-
125	26	26	26	26	-
150	32	32	32	32	-
200	53	53	53	53	-
250	73	73	73	80	-
300	105	105	105	130	-
350	123	123	123	150	-
400	185	185	185	210	-
450	215	215	215	250	-
500	243	243	243	288	-
600	432	432	432	460	-
700	466	466	466	594	-
800	516	516	516	750	-
900	825	825	825	850	-
1000	1085	1085	1085	1200	-
1200	1300	1300	1300	1738	-
1400	2000	2000	2000	2500	-
1500	2400	2400	2400	2800	-
1600	2700	2700	2700	3000	-
1800	3400	3400	3400	6500	-
2000	-	-	-	-	-
2200	-	-	-	-	-
2400	-	-	-	-	-
2600	-	-	-	-	-
2800	-	-	-	-	-
3000	-	-	-	-	-