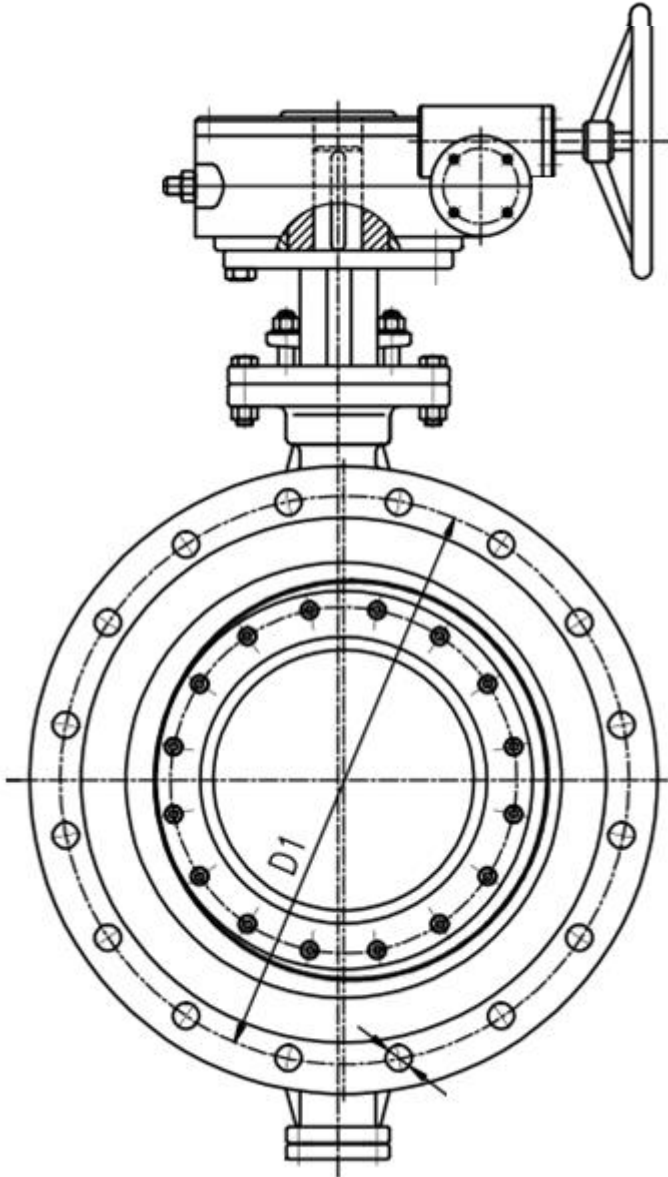


## BUTTERFLY VALVE TYPE M90 – FLANGED TYPE



### 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

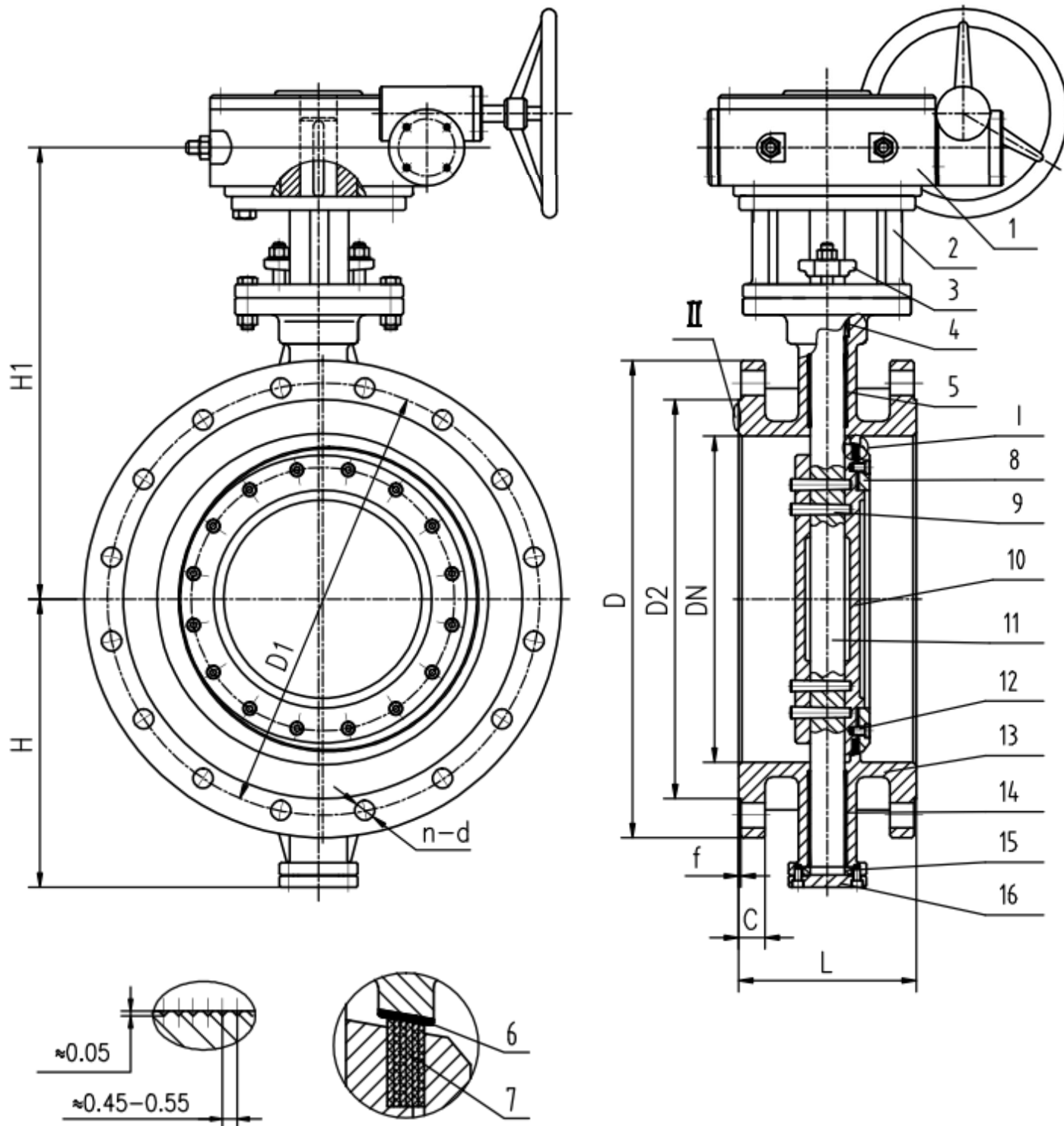
### Assembly

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

## BUTTERFLY VALVE

### TYPE M90 - FLANGED TYPE

DN 600 – 2400 PN 6; DN 600 – 2400 PN10  
DN 600 – 2000 PN16; DN 600 – 2000 PN25  
DN50 – DN600 PN40



#### Standards

1	Design standard	DIN3354
2	Flange connection dimension	EN1092-1
3	Structure length:	DIN3202
4	Pressure test:	DIN3230

## BUTTERFLY VALVE TYPE M90 - FLANGED TYPE DN 50 - 2400 PN 6

### Part list

No.	Part	Material
1	Gearbox	-
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

N	PN	L	D	D1	D2	n-d	C	f	H	H1
50	6	108	140	110	90	4-Ø14	16	3	95	205
65	6	112	160	130	110	4-Ø14	16	3	105	215
80	6	114	190	150	128	4-Ø18	16	3	120	230
100	6	127	210	170	144	4-Ø18	16	3	124	290
125	6	140	240	200	174	8-Ø18	18	3	135	347
150	6	140	265	225	199	8-Ø18	18	3	182	370
200	6	152	320	280	254	8-Ø18	20	3	218	425
250	6	165	375	335	309	12-Ø18	22	4	258	450
300	6	178	440	395	363	12-Ø22	22	4	308	512
350	6	190	490	445	413	12-Ø22	22	4	300	542
400	6	216	540	495	463	16-Ø22	22	4	298	592
450	6	222	595	550	518	16-Ø22	22	4	355	612
500	6	229	645	600	568	20-Ø22	24	4	390	971
600	6	267	755	705	667	20-Ø26	24	5	445	726
700	6	292	860	810	772	24-Ø26	24	5	490,5	803
800	6	318	975	920	878	24-Ø30	24	5	552	920
900	6	330	1075	1020	978	24-Ø30	26	5	599	965
1000	6	410	1175	1120	1078	28-Ø30	26	5	656	1020
1200	6	470	1405	1340	1295	32-Ø33	28	5	779	1176
1400	6	530	1630	1560	1510	36-Ø36	32	5	860	1271
1600	6	600	1830	1760	1710	40-Ø36	34	5	990	1238
1800	6	670	2045	1970	1918	44-Ø39	36	5	1102	1366
2000	6	760	2265	2180	2125	48-Ø42	38	5	1218	1510
2200	6	590	2475	2390	2335	52-Ø42	42	5	1318	1610
2400	6	650	2685	2600	2545	56-Ø42	44	5	1450	1770



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## BUTTERFLY VALVE TYPE M90 – FLANGED TYPE DN 50 – 2400 PN10

DN	PN	L	D	D1	D2	n-d	C	f	H	H1
50	10	108	165	125	102	4-Ø18	18	3	108	218
65	10	112	185	145	122	4-Ø18	18	3	118	228
80	10	114	200	160	138	8-Ø18	20	3	126	236
100	10	127	220	180	158	8-Ø18	20	3	124	290
125	10	140	250	210	184	8-Ø18	22	3	135	347
150	10	140	285	240	211	8-Ø22	22	3	182	370
200	10	152	340	295	266	8-Ø22	24	3	218	425
250	10	165	395	350	319	12-Ø22	26	4	258	450
300	10	178	445	400	370	12-Ø22	26	4	308	512
350	10	190	505	460	429	16-Ø22	26	4	271	524
400	10	216	565	515	480	16-Ø26	26	4	298	596
450	10	222	615	565	530	20-Ø26	28	4	365	646
500	10	229	670	620	582	20-Ø26	28	4	353	651
600	10	267	780	725	682	20-Ø30	28	5	447	758
700	10	292	895	840	794	24-Ø30	30	5	516	880
800	10	318	1015	950	901	24-Ø33	32	5	578	940
900	10	330	1115	1050	1001	28-Ø33	34	5	628	1016
1000	10	410	1230	1160	1112	28-Ø36	34	5	695	1076
1200	10	470	1455	1380	1328	32-Ø39	38	5	805	1201
1400	10	530	1675	1590	1530	36-Ø42	42	5	890	1422
1600	10	600	1915	1820	1750	40-Ø48	46	5	1024	1483
1800	10	670	2115	2020	1950	44-Ø48	50	5	1138	1600
2000	10	760	2325	2230	2150	48-Ø48	54	5	1252	1752
2200	10	590	2550	2440	2370	52-Ø56	58	5	1352	1835
2400	10	650	2760	2650	2570	56-Ø56	62	5	1460	1910



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## BUTTERFLY VALVE TYPE M90 – FLANGED TYPE

DN 50 – 2000 PN16

DN 50 – 2000 PN25

DN	PN	L	D	D1	D2	n-d	C	f	H	H1
50	16	108	165	125	99	4-Ø18	18	3	108	218
65	16	112	185	145	118	4-Ø18	18	3	118	228
80	16	114	200	160	132	8-Ø18	20	3	126	236
100	16	127	220	180	156	8-Ø18	20	3	124	290
125	16	140	250	210	184	8-Ø18	22	3	135	347
150	16	140	285	240	211	8-Ø22	22	3	182	370
200	16	152	340	295	266	12-Ø22	24	3	220	425
250	16	165	405	355	319	12-Ø26	26	4	260	450
300	16	178	460	410	370	12-Ø26	28	4	310	512
350	16	190	520	470	429	16-Ø26	30	4	315	557
400	16	216	580	525	480	16-Ø30	32	4	355	636
450	16	222	640	585	548	20-Ø30	34	4	385	666
500	16	229	715	650	609	20-Ø33	36	4	425	706
600	16	267	840	770	720	20-Ø36	38	5	482	793
700	16	292	910	840	794	24-Ø36	38	5	524	890
800	16	318	1025	950	901	24-Ø39	38	5	581	945
900	16	330	1125	1050	1001	28-Ø39	40	5	631	1021
1000	16	410	1255	1170	1112	28-Ø42	42	5	699	1086
1200	16	470	1485	1390	1328	32-Ø48	48	5	802	1112
1400	16	530	1685	1590	1530	36-Ø48	52	5	910	1230
1600	16	600	1930	1820	1750	40-Ø55	58	5	1030	1345
1800	16	670	2130	2020	1950	44-Ø55	62	5	1135	1448
2000	16	760	2345	2230	2150	48-Ø62	66	5	1240	1575

DN	PN	L	D	D1	D2	n-d	C	f	H	H1
50	25	108	165	125	99	4-Ø18	20	3	108	218
65	25	112	185	145	118	8-Ø18	22	3	118	228
80	25	114	200	160	132	8-Ø18	24	3	126	236
100	25	127	235	190	156	8-Ø22	24	3	122,5	285
125	25	140	270	220	184	8-Ø26	26	3	140	342
150	25	140	300	250	211	8-Ø26	28	3	155	357
200	25	152	360	310	274	12-Ø26	30	3	185	430
250	25	165	425	370	330	12-Ø30	32	4	273	461
300	25	178	485	430	389	16-Ø30	34	4	308	530
350	25	190	555	490	448	16-Ø33	38	4	318	560
400	25	216	620	550	503	16-Ø36	40	4	355	636
450	25	222	670	600	548	20-Ø36	42	4	385	666
500	25	229	730	660	609	20-Ø36	46	4	425	725
600	25	267	845	770	720	20-Ø39	46	5	482	825
700	25	292	960	875	820	24-Ø42	46	5	530	770
800	25	318	1085	990	928	24-Ø48	50	5	590	840
900	25	330	1185	1090	1028	28-Ø48	54	5	635	890
1000	25	410	1320	1210	1140	28-Ø56	58	5	710	975
1200	25	470	1530	1420	1350	32-Ø56	70	5	830	1140
1400	25	530	1755	1640	1560	36-Ø62	76	5	950	1280
1600	25	600	1975	1860	1780	40-Ø62	84	5	1085	1400
1800	25	670	2195	2070	1985	44-Ø70	90	5	1170	1480
2000	25	760	2425	2300	2210	48-Ø70	96	5	1270	1600



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## BUTTERFLY VALVE TYPE M90 - FLANGED TYPE DN 50 – 600 PN40

DN	PN	L	D	D1	D2	D3	n-d	f	f1	C	H	H1
50	40	108	165	125	102	88	4-Ø18	2	4	20	108	218
65	40	112	185	145	122	110	8-Ø18	2	4	22	118	228
80	40	114	200	160	138	121	8-Ø18	2	4	24	126	236
100	40	127	235	190	162	150	8-Ø22	2	4,5	24	122,5	285
125	40	140	270	220	188	176	8-Ø26	2	4,5	26	140	342
150	40	140	300	250	218	204	8-Ø26	2	4,5	28	155	357
200	40	152	375	320	285	260	12-Ø30	2	4,5	34	185	430
250	40	250	450	385	345	313	12-Ø33	2	4,5	38	308	530
300	40	270	515	450	410	364	16-Ø33	2	4,5	42	318	560
350	40	290	580	510	465	422	16-Ø36	2	5	46	298	596
400	40	310	660	585	535	474	16-Ø39	2	5	50	365	646
450	40	330	685	610	560	524	20-Ø39	2	5	57	353	651
500	40	350	755	670	615	576	20-Ø42	2	5	57	447	758
600	40	390	890	795	735	676	20-Ø48	2	5	72	516	880



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## BUTTERFLY VALVE

### TYPE M90 - FLANGED TYPE

DN 600 – 2400 PN 6; DN 600 – 2400 PN10

DN 600 – 2000 PN16; DN 600 – 2000 PN25

DN50 – DN600 PN40

### Estimate weights (kg)

DN	PN6	PN10	PN16	PN25	PN40
50	12	14	15	19	-
80	15	18	19	25	-
100	18	20	27	35	-
125	20	28	37	50	-
150	35	42	45	58	-
200	50	58	66	80	135
250	70	80	90	107	180
300	110	125	140	160	280
350	135	146	165	220	330
400	160	200	220	267	450
450	190	240	260	300	530
500	250	290	320	375	650
600	320	450	490	540	1100
700	424	590	630	690	1300
800	610	720	780	850	1560
900	720	850	900	980	1800
1000	1000	1103	1450	1520	3000
1200	1490	1650	2200	-	4300
1400	1900	2080	2800	-	5600
1500	2100	2300	3500	-	
1600	2600	2800	4200	-	-
1800	3600	4200	7300	-	-
2000	4000	5000	8200	-	-
2200	4800	5900	9000	-	-
2400	5600	6500	9600	-	-