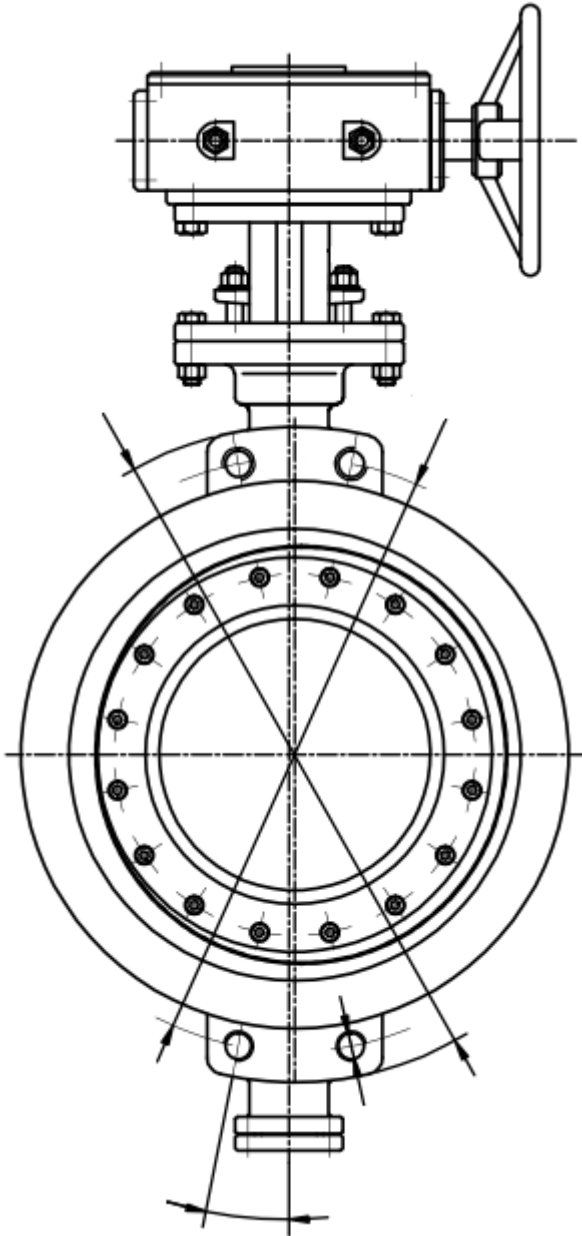


BUTTERFLY VALVE TYPE M90 - WAFER TYPE



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

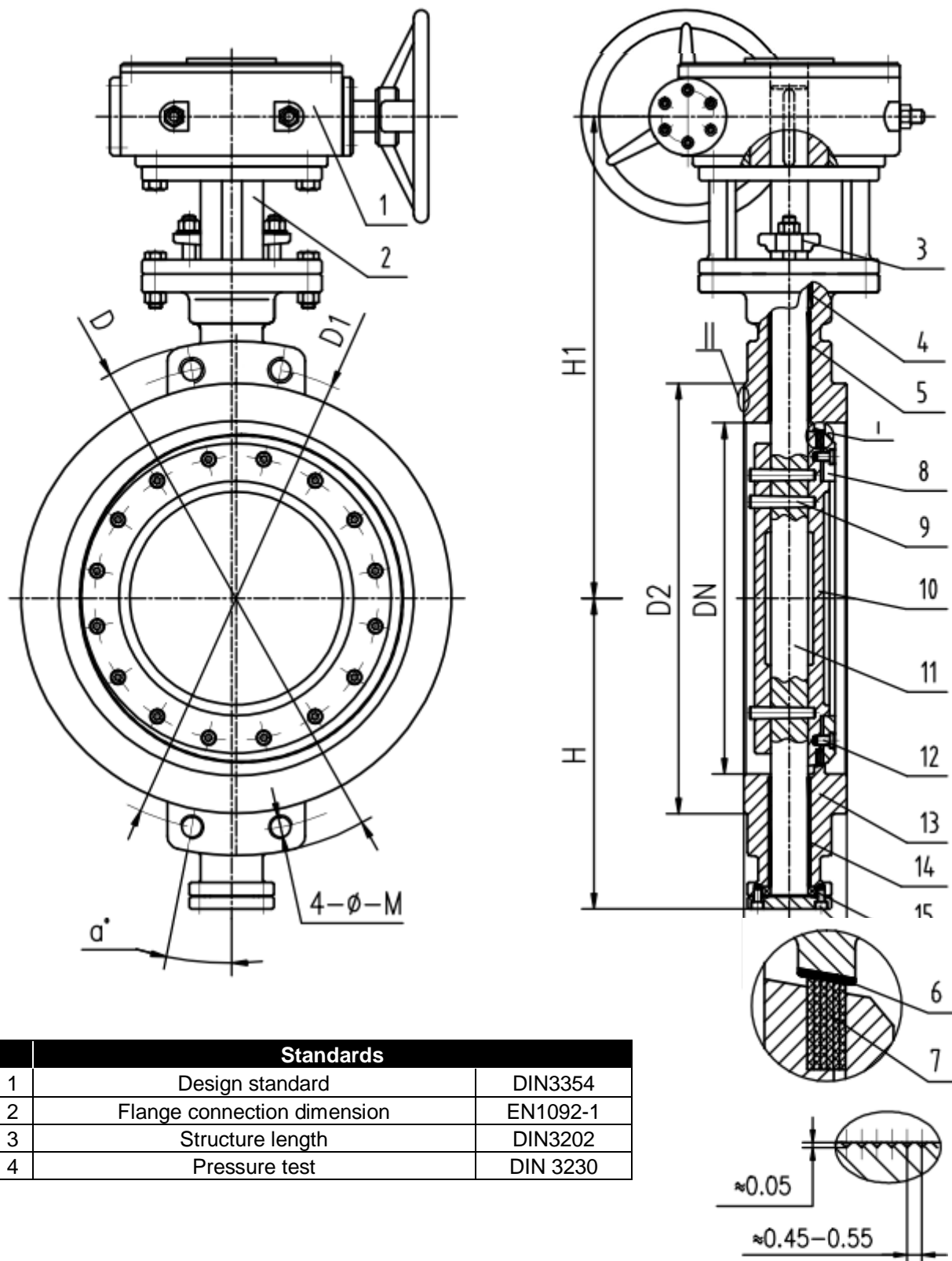
- with horizontal stem position
- face-to-face to DIN3202 K3

BUTTERFLY VALVE

TYPE M90 – WAFER TYPE

DN 50 – 3000 PN 6 ; DN 50 – 3000 PN10

DN 50 – 2000 PN16; DN 50 – 2000 PN25



Standards

	Standards	
1	Design standard	DIN3354
2	Flange connection dimension	EN1092-1
3	Structure length	DIN3202
4	Pressure test	DIN 3230

BUTTERFLY VALVE TYPE M90 – WAFER 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-Ø-M	a°	H	H1
50	6	43	140	110	94	4-Ø14	45°	95	205
65	6	46	160	130	114	4-Ø14	45°	105	215
80	6	49	190	150	130	4-Ø18	45°	120	230
100	6	56	210	170	150	4-Ø18	45°	124	290
125	6	64	240	200	178	4-Ø18	22,5°	135	347
150	6	70	265	225	202	4-Ø18	22,5°	182	370
200	6	71	320	280	258	4-Ø18	22,5°	218	425
250	6	76	375	335	313	4-Ø18	15°	258	450
300	6	83	440	395	372	4-M20	15°	308	512
350	6	92	490	445	420	4-M20	15°	300	542
400	6	102	540	495	483	4-M20	11,25°	298	592
450	6	114	595	550	528	4-M20	11,25°	355	612
500	6	127	645	600	585	4-M20	9°	390	971
600	6	154	755	705	672	4-M24	9°	445	726
700	6	165	860	810	780	4-M24	7,5°	490	803
800	6	190	975	920	890	4-M27	7,5°	552	920
900	6	203	1075	1020	984	4-M27	7,5°	599	965
1000	6	216	1175	1120	1085	4-M27	6,43°	656	1020
1200	6	254	1405	1340	1295	4-M30	5,625°	779	1176
1400	6	279	1630	1560	1510	4-M33	5°	860	1271
1600	6	318	1830	1760	1710	4-M33	4,5°	990	1238
1800	6	356	2045	1970	1920	4-M36	4,09°	1102	1366
2000	6	406	2265	2180	2125	4-M39	3,75°	1218	1510
2200	6	590	2475	2390	2335	4-M39	3,46°	1318	1610
2400	6	650	2685	2600	2545	4-M39	3,21°	1418	1725
2600	6	700	2905	2810	2750	4-M45	3°	1580	1890
2800	6	760	3115	3020	2960	4-M45	2,81°	1635	2012
3000	6	810	3315	3220	3160	4-M45	2,65°	1745	2118



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BUTTERFLY VALVE TYPE M90 – WAFER TYPE DN 50 – 3000 PN10

DN	PN	L	D	D1	D2	4-Ø-M	a°	H	H1
50	10	43	165	125	92	4-Ø18	45°	108	218
65	10	46	185	145	114	4-Ø18	45°	118	228
80	10	49	200	160	130	4-Ø18	22,5°	126	236
100	10	56	220	180	150	4-Ø18	22,5°	124	290
125	10	64	250	210	178	4-Ø18	22,5°	135	347
150	10	70	285	240	202	4-Ø22	22,5°	182	370
200	10	71	340	295	258	4-Ø22	22,5°	218	425
250	10	76	395	350	313	4-Ø22	15°	258	450
300	10	83	445	400	372	4-M20	15°	308	512
350	10	92	505	460	420	4-M20	11,25°	271	524
400	10	102	565	515	483	4-M24	11,25°	298	596
450	10	114	615	565	528	4-M24	9°	365	646
500	10	127	670	620	585	4-M24	9°	353	651
600	10	154	780	725	672	4-M27	9°	447	758
700	10	165	895	840	780	4-M27	7,5°	516	880
800	10	190	1015	950	890	4-M30	7,5°	578	940
900	10	203	1115	1050	984	4-M30	6,43°	628	1016
1000	10	216	1230	1160	1085	4-M33	6,43°	695	1076
1200	10	254	1455	1380	1295	4-M36	5,625°	805	1201
1400	10	279	1675	1590	1535	4-M39	5°	890	1422
1600	10	318	1915	1820	1760	4-M45	4,5°	1024	1483
1800	10	356	2115	2020	1960	4-M45	4,09°	1138	1600
2000	10	406	2325	2230	2170	4-M45	3,75°	1252	1752
2200	10	590	2550	2440	2370	4-M52	3,46°	1316	1845
2400	10	650	2760	2650	2570	4-M52	3,2°	1438	1935
2600	10	700	2960	2850	2780	4-M52	3°	1543	2012
2800	10	760	3180	3070	3000	4-M52	2,81°	1686	2185
3000	10	810	3405	3290	3210	4-M56	2,65°	1812	2245



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BUTTERFLY VALVE TYPE M90 - WAFER TYPE

DN 50 – 2000 PN16

DN 50 – 2000 PN25

DN	PN	L	D	D1	D2	4-Ø-M	a°	H	H1
50	16	43	165	125	92	4-Ø18	45°	108	218
65	16	46	185	145	114	4-Ø18	45°	118	228
80	16	49	200	160	130	4-Ø18	22,5°	126	236
100	16	56	220	180	150	4-Ø18	22,5°	124	290
125	16	64	250	210	178	4-Ø18	22,5°	135	347
150	16	70	285	240	202	4-Ø22	22,5°	182	370
200	16	71	340	295	258	4-Ø22	15°	220	425
250	16	76	405	355	313	4-Ø26	15°	260	450
300	16	83	460	410	372	4-M24	15°	310	512
350	16	92	520	470	420	4-M24	11,25°	315	557
400	16	102	580	525	483	4-M27	11,25°	355	636
450	16	114	640	586	528	4-M27	9°	385	666
500	16	127	715	650	585	4-M30	9°	425	706
600	16	154	840	770	672	4-M33	9°	482	793
700	16	165	910	840	780	4-M33	7,5°	533	860
800	16	190	1025	950	890	4-M36	7,5°	596	920
900	16	203	1125	1050	984	4-M36	6,43°	647	1016
1000	16	216	1255	1170	1085	4-M39	6,43°	718	1084
1200	16	254	1485	1390	1295	4-M45	5,625°	812	1196
1400	16	279	1685	1590	1530	4-M45	5°	910	1230
1600	16	318	1930	1820	1750	4-M52	4,5°	1030	1345
1800	16	356	2130	2020	1950	4-M52	4,09°	1135	1448
2000	16	406	2345	2230	2150	4-M56	3,75°	1240	1575

DN	PN	L	D	D1	D2	4-Ø-M	a°	H	H1
50	25	43	165	125	94	4-Ø18	45°	108	218
65	25	46	185	145	114	4-Ø18	22,5°	118	228
80	25	49	200	160	130	4-Ø18	22,5°	126	236
100	25	56	235	190	150	4-Ø22	22,5°	122,5	285
125	25	64	270	220	178	4-Ø26	22,5°	140	342
150	25	70	300	250	202	4-Ø26	22,5°	155	357
200	25	71	360	310	258	4-Ø26	15°	185	430
250	25	76	425	370	313	4-Ø30	15°	273	461
300	25	83	485	430	372	4-M27	11,25°	308	530
350	25	92	555	490	420	4-M30	11,25°	318	560
400	25	102	620	550	483	4-M33	11,25°	355	636
450	25	114	670	600	528	4-M33	9°	385	666
500	25	127	730	660	585	4-M33	9°	425	725
600	25	154	845	770	672	4-M36	9°	482	825
700	25	165	960	875	780	4-M39	7,5°	530	770
800	25	190	1085	990	890	4-M45	7,5°	590	840
900	25	203	1185	1090	984	4-M45	6,43°	635	890
1000	25	216	1320	1210	1085	4-M52	6,43°	710	975
1200	25	254	1530	1420	1295	4-M52	5,625°	830	1140
1400	25	279	1755	1640	1560	4-M56	5°	950	1280
1600	25	318	1975	1860	1780	4-M56	4,5°	1085	1400
1800	25	356	2195	2070	1985	4-M64	4,09°	1170	1480
2000	25	406	2425	2300	2210	4-M64	3,75°	1270	1600



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BUTTERFLY VALVE
TYPE M90 – WAFER TYPE
DN 50 – 600 PN 40

DN	PN	L	D	D1	D2	4-M-Ø	a°	H	H1
50	40	43	165	125	102	4-Ø18	45°	108	218
65	40	46	185	145	122	4-Ø18	22,5°	118	228
80	40	49	200	160	138	4-Ø18	22,5°	126	236
100	40	56	235	190	162	4-Ø22	22,5°	122,5	285
125	40	64	270	220	188	4-Ø26	22,5°	140	342
150	40	70	300	250	218	4-Ø26	22,5°	155	357
200	40	89	375	320	285	4-M27	15°	185	430
250	40	114	450	385	345	4-M30	15°	308	530
300	40	114	515	450	410	4-M30	11,25°	318	560
350	40	127	580	510	465	4-M33	11,25°	298	596
400	40	140	660	585	535	4-M36	11,25°	365	646
450	40	152	685	610	560	4-M36	9°	353	651
500	40	152	755	670	615	4-M39	9°	447	758
600	40	178	890	795	735	4-M45	9°	516	880



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BUTTERFLY VALVE

TYPE M90 – WAFER TYPE

DN 50 – 3000 PN 6 ; DN 50 – 3000 PN10

DN 50 – 2000 PN16; DN 50 – 2000 PN25

Estimate weights (kg)

DN	PN6	PN10	PN16	PN25	PN40
50	11	11	11	14	n/a
80	13	13	13	18	-
100	15	15	15	20	-
125	26	26	26	28	-
150	32	32	32	42	-
200	53	53	53	58	-
250	73	73	73	80	-
300	105	105	105	125	-
350	123	123	123	146	-
400	185	185	185	200	-
450	215	215	215	240	-
500	243	243	243	290	-
600	432	432	432	450	-
700	466	466	466	590	-
800	516	516	516	720	-
900	825	825	825	850	-
1000	1085	1085	1085	1103	-
1200	1300	1300	1300	1650	-
1400	2000	2000	2000	2080	-
1500	2400	2400	2400	2300	-
1600	2700	2700	2700	2800	-
1800	3400	3400	3400	4200	-
2000	-	-	-	-	-
2200	-	-	-	-	-
2400	-	-	-	-	-
2600	-	-	-	-	-
2800	-	-	-	-	-
3000	-	-	-	-	-