

# BS 4504 Circular Flanges - General

## Flange facing dimensions (BS 4504)

DN	A mm						Face Dimensions									
	PN 2.5	PN 6	PN 10	PN 16	PN 25	PN 40	B	C	D	E	a	b	c	d	α	e
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
10	35	35	40	40	40	40	34	35	24	23	2	4	3	2	-	5
15	40	40	45	45	45	45	39	40	29	28	2	4	3	2	-	5
20	50	50	58	58	58	58	50	51	36	35	2	4	3	2	41°16'	5
25	60	60	68	68	68	68	57	58	43	42	2	4	3	2	41°16'	5
32	70	70	78	78	78	78	65	66	51	50	2	4	3	2	41°16'	5
40	80	80	88	88	88	88	75	76	61	60	3	4	3	2	41°16'	5
50	90	90	102	102	102	102	87	88	73	72	3	4	3	2	41°16'	5
65	110	110	122	122	122	122	109	110	95	94	3	4	3	2	41°16'	5
80	128	128	138	138	138	138	120	121	106	105	3	4	3	2	41°16'	5
100	148	148	158	158	162	162	149	150	129	128	3	4.5	3.5	2.5	32°15'	6
125	178	178	188	188	188	188	175	176	155	154	3	4.5	3.5	2.5	32°15'	6
150	202	202	212	212	218	218	203	204	183	182	3	4.5	3.5	2.5	32°15'	6
200	258	258	268	268	278	285	259	260	239	238	3	4.5	3.5	2.5	32°15'	6
250	312	312	320	320	335	345	312	313	292	291	3	4.5	3.5	2.5	32°15'	6
300	365	365	370	378	395	410	363	364	343	342	4	4.5	3.5	2.5	32°15'	6
350	415	415	430	438	450	465	421	422	395	394	4	5	4	3	27°24'	7
400	465	465	482	490	505	535	473	474	447	446	4	5	4	3	27°24'	7
450	520	520	532	550	555	560	523	524	497	496	4	5	4	3	27°24'	7
500	570	570	585	610	615	615	575	576	549	548	4	5	4	3	27°24'	7
600	670	670	685	725	720	735	675	676	649	648	5	5	4	3	27°24'	7
700	775	775	800	795	820	-	777	778	751	750	5	5	4	3	27°24'	7
800	880	880	905	900	930	-	882	883	856	855	5	5	4	3	27°24'	7
900	980	980	1005	1000	1030	-	987	988	961	960	5	5	4	3	27°24'	7
1000	1080	1080	1110	1115	1140	-	1092	1094	1062	1060	5	6	5	4	28°39'	8
1200	1280	1295	1330	1330	1350	-	1292	1294	1262	1260	5	6	5	4	28°39'	8
1400	1480	1510	1535	1530	1560	-	1492	1494	1462	1460	5	6	5	4	28°39'	8
1600	1690	1710	1760	1750	1780	-	1692	1694	1662	1660	5	6	5	4	28°39'	8
1800	1890	1920	1960	1950	1985	-	1982	1894	1862	1860	5	6	5	4	28°39'	8
2000	2090	2125	2170	2150	2210	-	2092	2094	2062	2060	5	6	5	4	28°39'	8

## Manufacture

- Materials. Flange codes 111 112 and 113 are manufactured from a forging or steel casting. Stainless steel forgings conforming to ASTM A 182, have an additional requirement for grade F304L and F316L that carbon content (by ladle analysis) shall be 0.030% max. Forgings to BS 1503 and comparable ASTM standard grades specified in BS 4504 are as listed in the following table.

### BS and ASTM forging grades in BS 4504

BS 1503 Grade	ASTM A 182 Grade
304S11	F304L
304S31	F304
304S51	F304H
347S31	F347
347S51	F347H
321S31	F321
321S51	F321H
316S11	F316L
316S31	F316
316S51	F316H
310S31	F310