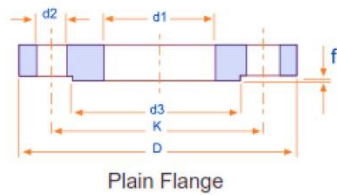
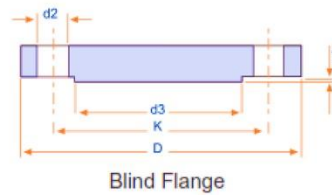


Steel Flanges



Plain Flange



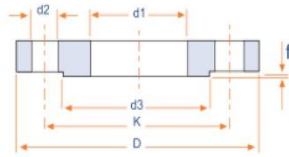
Blind Flange

DN 80-3000
 PN 6-10
 EN 1092-1(ISO 7005-1, DIN 2501)

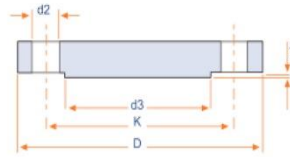
unit: mm

Pipe		PN 6						PN 10					
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face
DN	d1	D	K	no.	d2	d3	f	D	K	no.	d2	d3	f
80	89	190	150	4	18	128	2	200	160	4/8	18	138	2
100	114.3	210	170	4	18	148	2	220	180	8	18	162	2
125	140	240	200	8	18	178	2	250	210	8	18	188	2
150	168	265	225	8	18	202	2	285	240	8	22	218	2
200	219	320	280	8	18	258	2	340	295	8	22	268	2
250	273	375	335	12	18	312	2	395	350	12	22	320	2
300	324	440	395	12	22	365	2	445	400	12	22	370	2
350	355	490	445	12	22	415	2	505	460	16	22	430	2
400	406	540	495	16	22	465	2	565	515	16	26	482	2
450	457	595	550	20	22	520	2	615	565	20	26	530	2
500	508	645	600	20	22	570	2	670	620	20	26	585	2
550	559								675	20	30	630	2
600	610	755	705	20	26	670	2	780	725	20	30	685	2
650	660			24	26		3	835	780	24	30	740	3
700	711	860	810	24	26	775	3	895	840	24	30	800	3
750	762							965	900	24	33	850	3
800	813	975	920	24	30	880	3	1015	950	24	33	905	3
900	914	1075	1020	24	30	980	4	1115	1050	28	33	1005	4
1000	1016	1175	1120	28	30	1080	4	1230	1160	28	28	1110	4
1100	1118							1340	1270	32	36	1221	4
1200	1220	1405	1340	32	33	1295	4	1455	1380	32	39	1330	4
1400	1422	1630	1560	36	36	1510	4	1675	1590	36	42	1535	4
1600	1626	1830	1760	40	36	1710	5	1915	1820	40	48	1760	5
1800	1829	2045	1970	44	39	1920	5	2115	2020	44	48	1960	5
2000	2032	2265	2180	48	42	2125	5	2325	2230	48	48	2170	5
2200	2235	2475	2390	52	42	2335	5	2550	2440	52	56	2370	5
2400	2438	2685	2600	56	42	2545	5	2760	2650	56	56	2570	5
2600	2641	2905	2810	60	48	2750	5	2960	2850	60	56	2780	5
2800	2845	3115	3020	64	48	2960	5	3180	3070	64	56	3000	5
3000	3048	3315	3220	68	48	3160	5	3405	3290	68	62	3210	5

Steel Flanges



Plain Flange



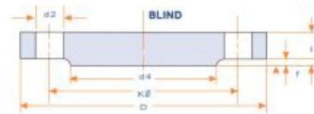
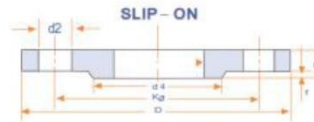
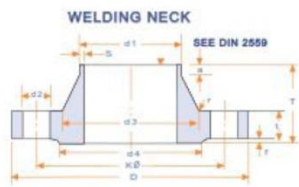
Blind Flange

DN 80-2200
 PN 16-25
 EN 1092-1(ISO 7005-1, DIN 2501)

unit: mm

Pipe		PN 16						PN 25					
Size	outside diameter of pipe	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face	Flange diameter	Pitch circle diameter	Holes	Diameter of bolt hole	Raised face diameter	Raised face
DN	d1	D	K	no.	d2	d3	f	D	K	no.	d2	d3	f
80	89	200	160	8	18	138	2	200	160	8	18	138	2
100	114.3	220	180	8	18	158	2	235	190	8	22	162	2
125	140	250	210	8	18	188	2	270	220	8	26	188	2
150	168	285	240	8	22	212	2	300	250	8	26	218	2
200	219	340	295	12	22	268	2	360	310	12	26	278	2
250	273	405	355	12	26	320	2	425	370	12	30	335	2
300	324	460	410	12	26	378	2	485	430	16	30	395	2
350	355	520	470	16	26	438	3	555	490	16	33	450	3
400	406	580	525	16	30	490	3	620	550	16	36	505	3
450	457	640	585	20	30	490	3	670	600	16	36	505	3
500	508	715	650	20	33	610	3	730	660	20	36	615	3
550	559	775	710	20	33	665	3	785	710	20	39	660	3
600	610	840	770	20	36	725	3	845	770	20	39	720	3
650	660	860	790	24	36	740	3	895	820	24	39	770	3
700	711	910	840	24	36	795	3	960	875	24	39	820	3
750	762							1020	935	24	42	880	3
800	813	1025	950	24	39	900	3	1085	990	24	42	930	3
900	914	1125	1050	28	39	1000	4	1185	1090	28	33	1030	4
1000	1016	1255	1170	28	42	1115	4	1320	1210	28	48	1140	4
1100	1118	1355	1270	32	42	1215	4	1420	1310	32	56	1240	4
1200	1220	1485	1390	32	48	1330	4	1530	1420	32	56	1350	4
1400	1422	1685	1590	36	48	1530	4	1755	1640	36	62	1560	4
1600	1626	1930	1820	40	56	1750	5	1975	1860	40	62	1780	5
1800	1829	2130	2020	44	56	1950	5	2195	2070	44	70	1985	5
2000	2032	2345	2230	48	62	2150	5	2425	2300	48	70	2210	5
2200	2235	2555	2440	52	62	2360	5						

Steel Flanges 10 BAR

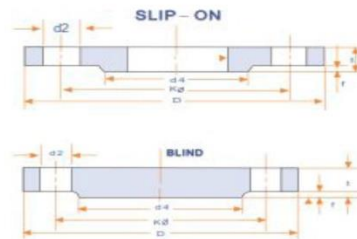
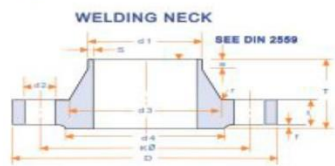


DIN 2576 SLIP - ON FLANGES
 DIN 2527 BLIND FLANGES
 DIN 2632 WELDING NECK FLANGES

Unit:mm

Nominal Bore	Bore		Common Dimension					Hub				Raised Face		Drilling		Approx.Weight(kg)		
	d1	D	Welding neck	Slip-on (No-Hub)	Blind	k _G	T	d3	s	r	q	d4	f	No. of Bolt	Dia. of Bolt	d2	DIN 2576	DIN 2632
10	14 17.2 *)	90	14	14	14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2)	14	0.163	0.580
15	20 21.3 *)	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2)	14	0.675	0.648
20	25 26.9 *)	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2)	14	0.947	0.952
25	30 33.7 *)	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2)	14	1.14	1.14
32	38 42.4 *)	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8)	18	1.66	1.69
40	44.5 48.3 *)	150	16	16	18	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8)	18	1.89	1.86
50	57 60.3 *)	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8)	18	2.51	2.53
65	76.1 *)	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8)	18	3.00	3.06
80	88.9 *)	200	20	20	20	160	50	105	3.2	8	10	138	3	4	M16 (5/8)	18	3.79	3.70
100	108 114.3 *)	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8)	18	4.20	4.62
125	133 139.7 *)	250	22	22	22	210	55	150 156	4.0	8	12	188	3	8	M16 (5/8)	18	5.71	6.30
150	159 168.3 *)	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4)	23	6.72	7.75
200	216 219.1 *)	340	24	24	24	295	62	232 235	5.9	10	16	268	3	8	M20 (3/4)	23	9.50	11.3
250	267 273 *)	395	26	26	26	350	68	285 292	6.3	12	16	320	3	12	M20 (3/4)	23	12.5	14.7
300	318 323.9 *)	445	26	26	28	400	68	335 344	7.1	12	16	370	4	12	M20 (3/4)	23	14.4	17.6
350	355.6 *) 368	505	26	28	30	460	68	385	7.1	12	16	430	4	16	M20 (3/4)	23	20.6	21.4
400	406.4 *) 419	565	26	32	32	515	72	440	7.1	12	16	482	4	16	M24 (7/8)	27	27.9	26.1
500	508 *) 521	670	28	38	34	620	75	542	7.1	12	16	585	4	20	M24 (7/8)	27	41.1	34.7
600	609.6 *) 622	780	28			725	80	642	7.1	12	18	685	5	20	M27 (1")	30		
700	711.2 *) 720	895	30			840	80	754	8.0	12	18	800	5	24	M27 (1")	30		
800	812.8 *) 820	1015	32			950	90	850	8.0	12	18	905	5	24	M30 (1 1/4)	33		
900	914.4 *) 920	1115	34			1050	95	950	10.0	12	20	1005	5	28	M30 (1 1/4)	33		
1000	1016 *) 1020	1230	34			1160	95	1052	10.0	16	20	1110	5	28	M33 (1 1/2)	36		

**Steel Flanges
16 BAR**

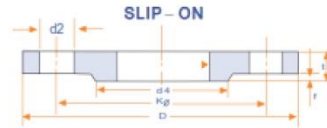
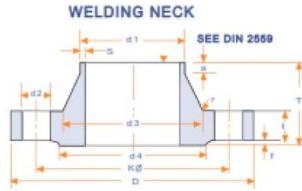


DIN 2543 SLIP - ON FLANGES
 DIN 2527 BLIND FLANGES
 DIN 2633 WELDING NECK FLANGES

Unit:mm

Nominal Bore	Bore		Common Dimension					Hub				Raised Face		Drilling		Approx. Weight(kg)		
	d1	D	Welding Neck	Slip-on (No. Hub)	Blind	k _s	T	d3	s	r	g	d4	f	No. of Bolt	Dia. of Bolt	d2	DIN 2543	DIN 2633
10	14 17.2 *)	90	14		14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.63	0.580
15	20 21.3 *)	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.72	0.648
20	25 26.9 *)	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.01	0.952
25	30 33.7 *)	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.23	1.14
32	38 42.4 *)	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.80	1.69
40	44.5 48.3 *)	150	16	16	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.09	1.88
50	57 60.3 *)	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.88	2.53
65	76.1 *)	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.66	3.06
80	88.9 *)	200	20	20	20	160	50	105	2.2	8	10	138	3	8	M16 (5/8")	18	4.77	3.70
100	108 114.3 *)	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	5.65	4.62
125	133 139.7 *)	250	22	22	22	210	55	150 159	4.0	8	12	188	3	8	M16 (5/8")	18	8.42	6.30
150	159 168.3 *)	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	10.4	7.75
200	216 219.1 *)	340	24	24	24	295	62	232 235	5.9	10	16	268	3	12	M20 (3/4")	23	16.1	11.0
250	267 273 *)	405	26	26	26	355	70	285 292	6.8	12	16	320	3	12	M24 (7/8")	27	24.9	15.6
300	318 323.9 *)	460	28	28	28	410	78	338 344	7.1	12	16	378	4	12	M24 (7/8")	27	35.1	22.0
350	355.6 368 *)	520	30	30	30	470	82	390	8.0	12	16	438	4	16	M24 (7/8")	27	47.8	28.7
400	406.4 419 *)	580	32	32	32	525	85	445	8.0	12	16	490	4	16	M27 (1")	30	63.5	36.3
500	508 521 *)	715	34	36	34	650	90	548	8.0	12	16	610	4	20	M30 (1 1/8")	33	102.0	59.3
600	609.6 622 *)	840	36	40		770	95	652	8.8	12	18	725	5	20	M33 (1 1/4")	36		
700	711.2 720 *)	910	36			840	100	755	8.8	12	18	795	5	24	M33 (1 1/4")	36		
800	812.8 820 *)	1025	38			950	105	855	10.0	12	20	900	5	24	M36 (1 3/8")	39		
900	914.4 920 *)	1125	40			1050	110	955	10.0	12	20	1000	5	28	M36 (1 3/8")	39		
1000	1016 1020 *)	1255	42			1170	120	1058	10.0	16	20	1115	5	28	M39 (1 1/2")	42		

**Steel Flanges
25 BAR**

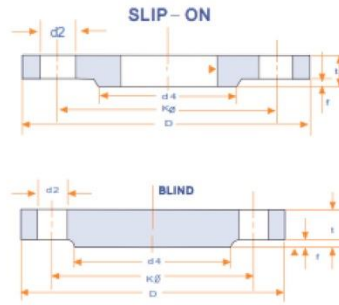
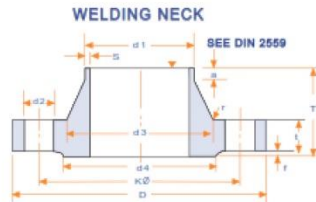


- DIN 2544 SLIP - ON FLANGES
- DIN 2527 BLIND FLANGES
- DIN 2634 WELDING NECK FLANGES

Unit:mm

Nominal Bore	Bore		Common Dimension					Hub			Raised Face		Drilling		Approx. Weight(kg)			
	d1	D	Welding Neck	Slip-on (No-hub)	Blind	k ^o	T	d3	s	r	g	d4	f	No. of Bolt	Dia. of Bolt	d2	DIN 2544	DIN 2634
10	14 17.2 *)	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.72	0.661
15	20 21.3 *)	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.81	0.746
20	25 26.9 *)	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.24	1.06
25	30 33.7 *)	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.38	1.29
32	38 42.4 *)	140	18	18	18	100	42	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	2.03	1.88
40	44.5 48.3 *)	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.35	2.34
50	57 60.3 *)	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	3.20	2.82
65	76.1 *)	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	4.29	3.74
80	88.9 *)	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	5.88	4.75
100	108 114.3 *)	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20 (3/4")	23	7.54	6.52
125	133 139.7 *)	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24 (7/8")	27	10.8	9.07
150	159 168.3 *)	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	14.5	11.8
200	216 219.1 *)	360	30	30	30	310	80	240 244	6.3	10	16	278	3	12	M24 (7/8")	27	22.3	17.0
250	267 273 *)	425	32	32	32	370	88	292 298	7.1	12	18	335	3	12	M27 (1")	30	33.5	24.4
300	318 323.9 *)	485	34	34	34	430	92	345 352	8.0	12	18	395	4	16	M27 (1")	30	46.3	31.2
350	355.6 *) 368	555	38	38	38	490	100	398	8.0	12	20	450	4	16	M30 (1 1/4")	33	68.0	45.0
400	406.4 *) 419	620	40	40	40	550	110	452	8.8	12	20	450	4	16	M33 (1 1/4")	36	89.7	58.7
500	508 521 *)	730	44	44	44	660	125	558	10.0	12	20	615	4	20	M33 (1 1/4")	36	138.0	86.1
600	609.6 *) 622	845	46			770	125	660	11.0	12	20	720	5	20	M36 (1 1/2")	39		101.0
700	721.2 *) 720	960	46			875	125	760	12.5	12	20	820	5	24	M39 (1 1/2")	42		134.0
800	812.8 *) 820	1085	50			990	135	865	14.2	12	22	930	5	24	M45 (1 3/4")	48		183.0
900	914.4 *) 930	1185	54			1090	145	968	16.0	12	24	1030	5	28	M45 (1 3/4")	48		232.0
1000	1016 *) 1020	1320	58			1210	155	1070	17.5	16	24	1140	5	28	M52 (2")	56		302.0

Steel Flanges 40 BAR

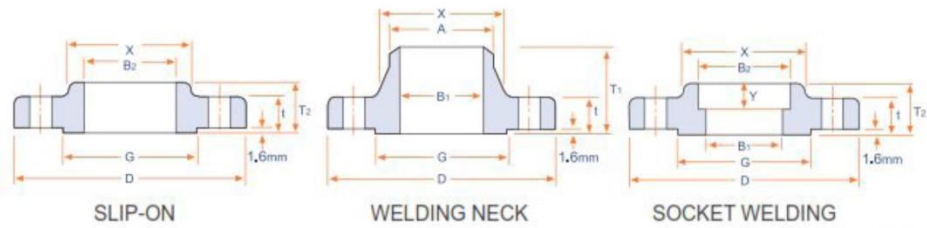


DIN 2545 SLIP - ON FLANGES
DIN 2527 BLIND FLANGES
DIN 2635 WELDING NECK FLANGES

Unit:mm

Nominal Bore	Bore		Common Dimension					Hub			Raised Face		Drilling		Approx. Weight (kg)				
	d1	D	Welding neck	Slip-on (No-hub)	Blind	kg	T	d3	s	r	g	d4	f	No. of Bolt	Dia. of Bolt	d2	DIN 2545	DIN 2635	
10	14 17.2 *)	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12	(1/2")	14	0.72	0.661
15	20 21.3 *)	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12	(1/2")	14	0.81	0.746
20	25 26.9 *)	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12	(1/2")	14	1.24	1.06
25	30 33.7 *)	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12	(1/2")	14	1.38	1.29
32	38 42.4 *)	140	18	18	18	100	42	52 56	2.6	6	6	78	2	4	M16	(5/8")	18	2.03	1.88
40	44.5 48.3 *)	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16	(5/8")	18	3.35	2.33
50	57 60.3 *)	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16	(5/8")	18	3.20	2.82
65	76.1 *)	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16	(5/8")	18	4.29	3.74
80	88.9 *)	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16	(5/8")	18	5.88	4.75
100	108 114.3 *)	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20	(3/4")	23	7.54	6.52
125	133 139.7 *)	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24	(7/8")	27	10.8	9.07
150	159 168.3 *)	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24	(7/8")	27	14.5	11.80
(175)	(191) 193.7 *)	350	32	32	32	295	82	215 218	5.6	10	15	260	3	12	M27	(1")	30	22.1	18.2
200	216 219.1 *)	375	34	34	34	320	88	240 244	6.3	10	16	285	3	12	M27	(1")	30	27.2	21.5
250	267 273 *)	450	38	38	38	385	105	298 306	7.1	12	18	345	3	12	M30	(1 1/8")	33	43.8	34.9
300	318 *) 323.9 *)	515	42	42	42	450	115	352 362	8.0	12	18	410	4	16	M30		33	63.3	49.7
350	355.6 *) 368 *)	580	46	46	46	510	125	408	8.8	12	20	465	4	16	M33	(1 3/8")	36	89.5	68.1
400	406.4 *) 419 *)	660	50	50	50	585	135	462	11.0	12	20	535	4	16	M36	(1 3/4")	39	127.0	96.5
500	508 *) 521 *)	755	52	52	52	670	140	562	14.2	12	20	615	4	20	M39	(1 1/2")	42	172.0	117.0

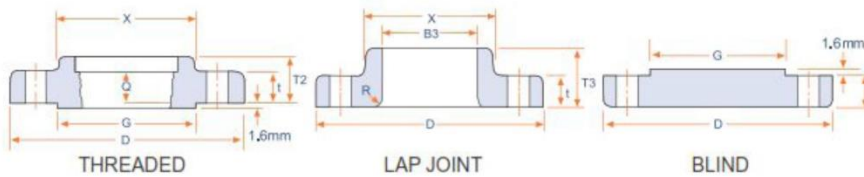
ANSI B16.5 FORGED FLANGES (CLASS 150)



unit: mm

Nominal Pipe Size	Outside Diam.	O.D. of Raised Face	Diam. at Base of Hub	Thickness	BORE			LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	G	X	t	B ₁	B ₂	B ₃	T ₁	T ₂	T ₃	A	R	Q
1/2	89	35.1	30.2	11.2	15.7	22.4	22.9	47.8	15.7	15.7	21.3	3.0	15.7
3/4		42.9	38.1	12.7	20.8	27.7	28.2	52.3	15.7	15.7	26.7	3.0	15.7
1	108	50.8	49.3	14.2	52.6	34.5	35.1	55.6	17.5	17.5	33.5	3.0	17.5
1 1/4	117	63.5	58.7	15.7	35.1	43.2	43.7	57.2	20.6	20.6	42.2	4.8	20.6
1 1/2	127	73.2	65.0	17.5	40.9	49.5	50.0	62.0	22.4	22.4	48.3	6.4	22.4
2	152	91.9	77.7	19.1	52.6	62.0	62.5	63.5	25.4	25.4	60.5	7.9	25.4
2 1/2	178	104.6	90.4	22.4	62.7	74.7	75.4	69.9	28.4	28.4	73.2	7.9	23.4
3	194	127.0	108.0	23.9	78.0	90.7	91.4	69.9	30.2	30.2	88.9	9.7	30.2
3 1/2	216	139.7	122.2	23.9	90.2	103.4	104.2	71.4	31.8	31.8	101.6	9.7	31.8
4	229	157.2	134.9	23.9	102.4	116.1	116.8	76.2	33.3	33.3	114.3	11.2	33.3
5	254	185.7	163.6	23.9	128.3	143.8	144.5	88.9	36.6	36.6	141.2	11.2	36.6
6	279	215.9	192.0	25.4	154.2	170.7	171.5	88.9	39.6	39.6	168.4	12.7	39.6
8	343	269.7	246.1	28.4	202.7	221.5	222.3	101.6	44.5	44.5	219.2	12.7	44.5
10	406	323.9	304.8	30.2	254.5	276.4	277.4	101.6	49.3	49.3	273.1	12.7	49.3
12	483	381.0	365.3	31.8	304.8	327.2	328.2	114.3	55.6	55.6	323.9	12.7	55.6
14	533	412.8	400.1	35.1	336.6	359.2	360.2	127.0	57.2	79.2	355.6	12.7	57.2
16	597	469.9	457.2	36.6	387.4	410.5	411.2	127.0	63.5	87.4	406.4	12.7	63.5
18	635	533.4	505.0	39.6	438.2	461.8	462.3	139.4	68.3	96.8	457.2	12.7	68.3
20	699	584.2	558.8	42.9	489.0	513.1	514.4	144.5	73.2	103.1	508.0	12.7	73.2
24	813	692.2	663.4	47.8	590.6	616.0	616.0	152.4	82.6	111.3	609.6	12.7	82.6

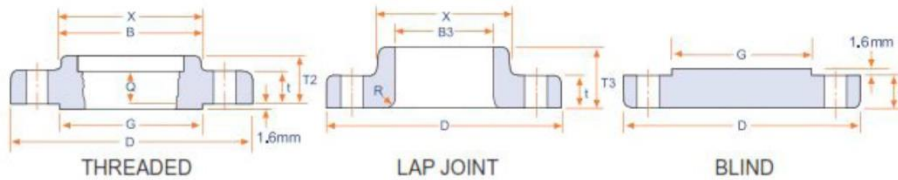
ANSI B16.5 FORGED FLANGES (CLASS 150)



unit: mm

Nominal Pipe Size	Depth of Socket	DRILLING				BOLTING			APPROXIMATE WEIGHT									
		Bolt Circle Diam	Number of Holes	Diam. of Holes	Diam. of Bolt (Inch)	Machine Bolt Length		Stud Bolt Length	Welding Neck		Slip-on and Threaded		Lap Joint		Blind		Socket Welding	
						Raised Face	Ring Joint		Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	-	0.51	1.10	0.47	1.00	0.51	1.00	0.47	1.00	0.47	1.00
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	-	0.73	1.60	0.58	1.30	0.64	1.40	0.63	1.40	0.59	1.30
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.07	2.40	0.86	1.90	0.93	1.80	0.94	2.10	0.87	1.90
1 1/4	14.2	88.9	4	15.7	1/2	57.2	69.9	82.6	1.40	3.10	1.08	2.40	1.16	2.00	1.23	2.70	1.11	2.40
1 1/2	15.7	98.6	4	15.7	1/2	63.5	69.9	82.6	1.81	4.00	1.41	3.10	1.51	3.30	1.62	3.60	1.45	3.20
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.59	5.70	2.26	5.00	2.38	5.20	2.64	5.80	2.33	5.00
2 1/2	19.1	139.7	4	19.1	5/8	76.2	88.9	101.6	4.28	9.40	3.43	7.60	3.60	7.90	4.06	9.00	3.55	7.80
3	20.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.18	1.40	3.87	8.50	4.04	8.90	4.90	10.80	4.02	8.90
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	5.45	12.00	4.99	11.00	4.99	11.00	5.90	13.00	4.99	11.00
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.32	16.10	5.75	12.70	5.96	13.00	7.41	16.30	5.99	13.20
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	8.91	19.60	6.22	13.70	6.44	14.00	8.76	19.30	6.68	14.70
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.26	24.80	7.38	16.30	7.59	16.00	11.31	24.90	7.99	17.60
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	17.68	39.00	12.36	27.30	12.66	27.90	19.92	43.90	13.29	29.30
10	33.3	362.0	12	25.4	7/8	101.6	114.3	120.7	24.79	54.70	17.10	37.70	16.78	37.00	29.39	64.80	19.50	43.00
12	39.6	481.8	12	25.4	7/8	101.6	120.7	133.4	38.98	85.90	27.68	61.00	28.30	62.40	43.70	96.30	29.03	64.00
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	54.71	114.00	35.20	77.60	41.50	91.50	59.42	140.00	38.56	85.00
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.41	142.00	42.18	93.00	52.98	116.80	77.11	170.00	44.49	98.00
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.84	165.00	49.71	109.60	59.00	130.00	94.80	209.00	54.43	120.00
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.36	197.00	65.50	140.00	72.12	159.00	123.38	272.00	70.30	155.00
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	199.66	263.80	90.50	199.50	99.02	218.30	188.24	415.00	95.25	210.00

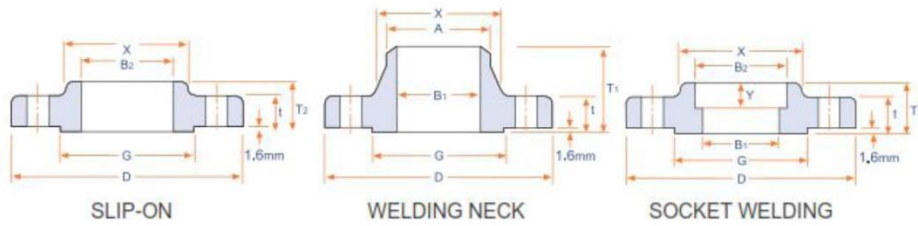
ANSI B16.5 FORGED FLANGES (CLASS 300)



unit: mm

Nominal Pipe Size	Depth of Socket	DRILLING				BOLTING			APPROXIMATE WEIGHT									
		Bolt Circle Diam.	Number of Holes	Diam. of Holes	Diam. of Bolt (inch)	Machine Bolt Length			Welding Neck		Slip-on and Threaded		Lap Joint		Blind		Socket Welding	
						Raised Face	Raised Face	Ring Joint	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb
1/2	9.7	66.5	4	15.7	1/2	57.2	63.5	76.2	0.78	1.70	0.62	1.40	0.61	1.30	0.62	1.40	0.62	1.40
3/4	11.2	82.6	4	19.1	5/8	63.5	76.2	88.9	1.34	3.00	1.15	2.50	1.15	2.50	1.16	2.50	1.19	2.60
1	12.7	88.9	4	19.1	5/8	63.5	76.2	88.9	1.64	3.60	1.39	3.10	1.38	3.00	1.42	3.00	1.44	3.20
1 1/4	14.2	98.6	4	19.1	5/8	69.9	82.6	95.3	2.06	4.50	1.67	3.70	1.66	3.70	1.79	3.90	1.73	3.80
1 1/2	15.7	114.3	4	22.4	3/4	76.2	88.9	101.6	3.06	6.70	2.53	5.60	2.52	5.60	2.68	5.90	2.62	5.80
2	17.5	127.0	8	19.1	5/8	76.2	88.9	101.6	3.40	7.50	2.80	6.20	2.79	6.20	3.09	6.80	2.94	6.50
2 1/2	19.1	149.4	8	22.4	3/4	82.6	101.6	114.3	5.31	11.70	4.25	9.40	4.22	9.30	4.75	10.50	4.49	9.90
3	20.6	168.1	8	22.4	3/4	88.9	108.0	120.7	7.32	16.10	5.81	12.80	5.78	12.70	6.79	14.90	6.20	13.70
3 1/2	22.4	184.2	8	22.4	3/4	95.3	108.0	127.0	8.17	18.00	7.72	17.00	7.72	17.00	9.53	21.00		
4	23.9	200.2	8	22.4	3/4	95.3	114.3	127.0	11.30	24.90	10.13	22.30	10.07	22.20	12.00	26.50		
5	23.9	235.0	8	22.4	3/4	108.0	120.7	133.4	15.12	33.30	12.58	27.70	12.52	27.60	15.96	35.20		
6	26.9	296.7	12	22.4	3/4	108.0	120.7	139.7	19.68	43.40	16.04	35.40	15.95	35.20	21.20	46.70		
8	31.8	330.2	12	25.4	7/8	120.7	139.7	152.4	30.48	67.20	24.50	54.00	24.37	53.70	34.60	76.30		
10	33.3	387.4	16	28.4	1	139.7	158.8	171.5	43.74	96.40	34.16	75.30	39.92	88.00	55.34	122.00		
12	39.6	450.9	16	31.8	1 1/8	146.1	171.5	184.2	64.41	142.00	51.26	113.00	58.70	129.40	78.90	174.00		
14	41.4	514.4	20	31.8	1 1/8	158.8	177.8	190.5	88.30	194.70	72.12	159.00	83.46	184.00	107.05	236.00		
16	44.5	571.5	20	35.1	1 1/4	165.1	190.5	203.2	112.94	249.00	90.40	199.30	106.14	234.00	139.25	307.00		
18	49.3	628.7	24	35.1	1 1/4	171.5	196.9	209.6	138.34	305.00	109.00	240.30	133.95	295.30	176.90	396.00		
20	54.1	685.8	24	35.1	1 1/4	184.2	203.2	222.3	167.37	369.00	136.00	300.00	157.65	347.60	223.17	492.00		
24	63.5	812.8	24	41.1	1 1/2	203.2	228.6	254.0	235.41	519.00	204.00	449.70	240.40	530.00	342.00	754.00		

ANSI B16.5 FORGED FLANGES (CLASS 300)



unit: mm

Nominal Pipe Size	Outside Diam.	Diam at Base of Hub	O.D. of Raised Face	Thickness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Counter Bore Min. Threaded Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
					B ₁	B ₂	B ₃	B	T ₁	T ₂	T ₃			
D	X	G	t	B ₁	B ₂	B ₃	B	T ₁	T ₂	T ₃	A	R	Q	
1/2	95	38.1	35.1	14.2	15.7	22.4	22.9	23.6	52.3	22.4	22.4	21.3	3.0	15.7
3/4	117	47.8	42.9	15.7	20.8	27.7	28.2	29.0	57.2	25.4	25.4	26.7	3.0	15.7
1	124	58.8	50.8	17.5	26.7	34.5	35.1	35.8	62.0	26.9	26.9	33.5	3.0	17.5
1 1/4	138	63.5	63.5	19.1	35.1	43.2	43.7	44.5	65.0	26.9	26.9	42.2	4.8	20.6
1 1/2	155	69.9	73.2	20.6	40.9	49.5	50.0	50.5	68.3	30.2	30.2	48.3	6.4	22.4
2	165	84.1	91.9	22.4	52.6	62.0	62.5	63.5	69.9	33.3	33.3	60.5	7.9	28.4
2 1/2	191	100.1	104.6	25.4	62.7	74.7	75.4	76.2	76.2	38.1	38.1	73.2	7.9	31.8
3	210	117.3	127.0	28.4	78.0	90.7	91.4	92.2	79.2	42.9	42.9	88.9	9.7	31.8
3 1/2	229	133.4	139.7	30.2	90.2	103.4	104.1	104.9	81.0	44.5	44.5	101.6	9.7	36.6
4	254	146.1	157.2	31.8	102.4	116.1	116.8	117.6	85.9	47.8	47.8	114.3	11.2	36.6
5	279	177.8	185.7	35.1	128.3	143.8	144.5	144.5	98.6	50.8	50.8	141.2	11.2	42.9
6	318	206.2	215.9	36.6	154.2	170.7	171.5	171.5	98.6	52.3	52.3	168.4	12.7	46.0
8	381	260.4	269.7	41.1	202.7	221.5	222.3	222.3	111.3	62.0	62.0	219.2	12.7	50.8
10	445	320.5	323.9	47.8	254.5	276.4	277.4	276.4	117.3	66.5	95.3	273.1	12.7	55.6
12	521	374.7	381.0	50.8	304.8	327.2	328.2	328.7	130.0	73.2	101.6	323.9	12.7	60.5
14	584	425.5	412.8	53.8	336.6	359.2	360.2	360.4	142.7	76.2	111.3	355.6	12.7	63.5
16	648	482.6	469.9	57.2	387.4	410.5	411.2	411.2	146.1	82.6	120.7	406.4	12.7	68.3
18	711	533.4	583.4	60.5	438.2	461.8	462.3	462.0	158.8	88.9	130.0	457.2	12.7	69.9
20	775	587.2	584.2	63.5	489.0	513.1	514.4	512.8	162.1	95.3	139.7	508.0	12.7	73.2
24	914	701.5	692.2	69.9	590.6	616.0	616.0	614.4	168.1	106.4	152.4	609.6	12.7	82.6

Dimensional Tolerances EN 1092-1:2001 (ISO 7005-1)

ANSI B16.5

EN 1092-1:2001(ISO 7005-1) unit: mm

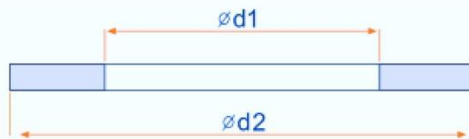
Plain flange and Blind flange		
outside diameter (D)	≤ DN 150	± 2.0
	> DN 150 ≤ DN 500	± 3.0
	> DN 500 ≤ DN 1200	± 5.0
	> DN 1200 ≤ DN 1800	± 7.0
Facing diameter	≤ DN 250	2 -1.5
	≥ DN 300	3 -1.5
Facing height	For all size 1 minimum	
Diameter of bolt circle(k)	bolt size M10 to M24	± 1
	bolt size M27 to M33	± 1.25
	bolt size M36 to M52	± 1.5
	bolt size M56 to M95	± 2
Diameter of bolt hole	< 20	0.5 0
	> 20	1 0
Flange thickness(t)	± (2+0.05 t)	
center to center of adjacent bolt hole	bolt size ≤ M24	± 1
	bolt size M27 to M24	± 1.5
	bolt size > M45	± 2

ANSI B16.5 unit: inch

Welding Neck and Blank		
outside diameter	When O.D is 24" or Less	±1/16" (1.6mm)
	When O.D is over 24	±1/8" (3.2mm)
Inside diameter	10" and smaller	+1/32" (0.8mm)
	12" thru 18"	+1/16" (1.6mm)
	20" and Larger	+1/8" (3.2mm)
Diameter of contact face	1/16" Reised face	±1/32" (0.8mm)
	1/4" Reised face Tongue & Groove Male , Female	±1/64" (0.4mm)
Diameter of Haub at bass	when Hub base is 24" or smaller	+1/16" (1.6mm)
	when Hub base is over 24"	+1/8" (3.2mm)
Diameter of Hub at point of welding	5" and smaller	+3/32" (3.4mm) -1/32" (0.8mm)
	6" and larger	+5/32" (4.0mm) -1/32" (0.8mm)
Drilling	Bolt circle	+1/16" (1.6mm)
	Bolt hole spacing	+1/32" (0.8mm)
	Eccentricity of Bolt circle with respect to facing	2 1/2" & smaller 1/32" (0.8mm) max 3" & Larger 1/16" (1.6mm) max
	Eccentricity of Bolt circle with respect to Bore	1/32" (0.8mm) max
Thickness	18" and smaller	+1/8" (3.2mm) 0
	20" and larger	+3/16" (4.8mm) 0
Length thru hub	10" and smaller	+1/16" (1.6mm)
	12" and larger	+1/8" (3.2mm)

**Sealing for Flanges with
 Plain Contact Surface
 DN 50-DN 2400
 PN 6-PN 40**

واشر لاستیکی منجید دار
 مناسب برای فشار کاری ۶ تا ۴۰ بار

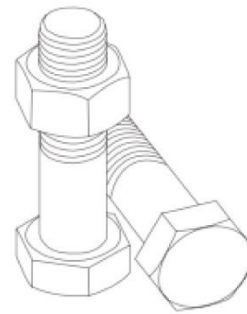
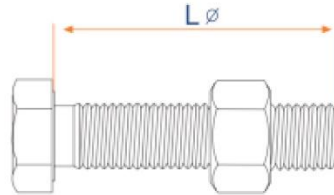


EN1514-1 (DIN 2690)

unit: mm

Nominal Width	$\varnothing d1$	$\varnothing d2$				
		Nominal Pressure(PN)				
		6	10	16	25	40
50	61	95	105	105	105	105
65	77	115	127	127	127	127
80	90	132	142	142	142	142
100	115	152	162	162	168	168
125	141	182	192	192	195	195
150	169	207	218	218	225	225
175	195	237	248	248	255	267
200	220	262	273	273	285	292
250	274	318	328	330	342	353
300	325	373	378	385	402	418
350	368	423	438	445	458	475
400	420	473	490	497	515	547
450	470	528	540	557	565	572
500	520	578	595	618	625	628
600	620	680	695	735	730	745
700	720	785	810	805	830	850
800	820	890	915	910	940	970
900	920	990	1015	1010	1040	1080
1000	1020	1090	1120	1125	1150	1190
1200	1220	1305	1340	1340	1360	1395
1400	1420	1520	1545	1540	1575	1615
1600	1620	1720	1770	1760	1795	1830
1800	1820	1930	1970	1960	2000	
2000	2020	2135	2180	2165	2230	
2200	2220	2345	2380	2375		
2400	2420	2555	2590	2585		

Hexagon Head Screws and Nut
DIN-EN 24018
DIN-EN 24016
DIN 933-934



No.	DN		PN6		PN10		PN16		PN25		PN40	
	mm	Inch	Qty.	SIZE	Qty.	SIZE	Qty.	SIZE	Qty.	SIZE	Qty.	SIZE
1	50	2"	4	M12×70	4	M16×80	4	M16×80	4	M16×80	4	M16×80
2	65	2 1/2"	4	M12×70	8	M16×80	8	M16×80	8	M16×80	8	M16×80
3	80	3"	4	M16×80	8	M16×80	8	M16×80	8	M16×80	8	M16×80
4	100	4"	4	M16×80	8	M16×80	8	M16×80	8	M20×90	8	M20×90
5	125	5"	8	M16×80	8	M16×80	8	M16×80	8	M24×90	8	M24×110
6	150	6"	8	M16×80	8	M20×90	8	M20×90	8	M24×110	8	M24×110
7	200	8"	8	M16×80	8	M20×90	12	M20×90	12	M24×110	12	M27×120
8	250	10"	12	M16×80	12	M20×90	12	M24×110	12	M27×120	12	M30×140
9	300	12"	12	M20×90	12	M20×90	12	M24×110	16	M27×120	16	M30×140
10	350	14"	12	M20×90	16	M20×90	16	M24×110	16	M30×140	16	M33×140
11	400	16"	16	M20×90	16	M24×110	16	M27×120	16	M33×140	16	M36×160
12	450	18"	16	M20×90	20	M24×110	20	M27×120	20	M33×140	20	M36×160
13	500	20"	20	M20×90	20	M24×110	20	M30×140	20	M33×140	20	M39×160
14	600	24"	20	M24×110	20	M27×120	20	M33×140	20	M36×160	20	M45×190
15	700	28"	24	M24×110	24	M27×120	24	M36×160	24	M39×160	24	M45×190
16	800	32"	24	M27×120	24	M30×140	24	M36×160	24	M45×190	24	M52×230
17	900	36"	24	M27×120	28	M30×140	28	M39×160	28	M45×190	28	M52×230
18	1000	40"	28	M27×120	28	M33×140	28	M39×160	28	M52×230	28	M52×230
19	1100	44"	32	M30×140	32	M33×140	32	M39×160	32	M52×230		
20	1200	48"	32	M30×140	32	M36×160	32	M45×190	32	M52×230	32	M52×270
21	1400	56"	36	M33×140	36	M39×160	36	M45×190	36	M56×270	36	M56×270
22	1600	64"	40	M33×140	40	M45×190	40	M52×230	40	M56×270	40	M64×300
23	1800	72"	44	M36×160	44	M45×190	44	M52×230	44	M64×300		
24	2000	80"	48	M39×160	48	M45×190	48	M56×270	48	M64×300		