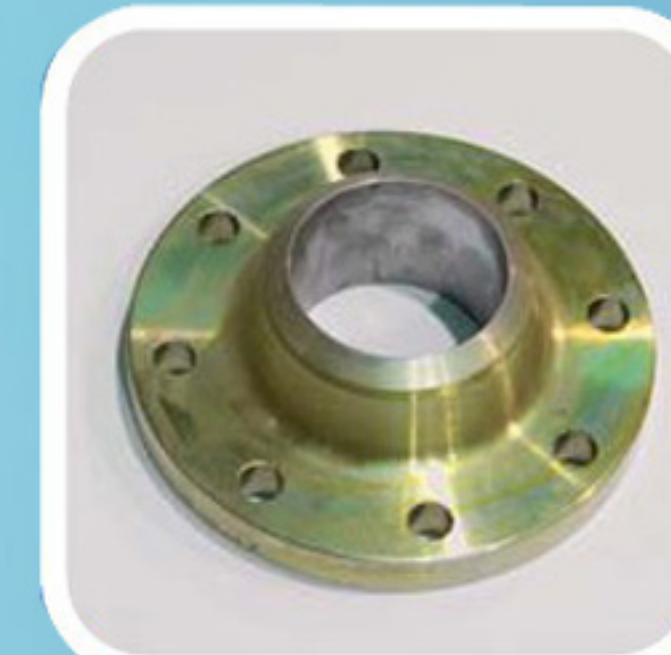
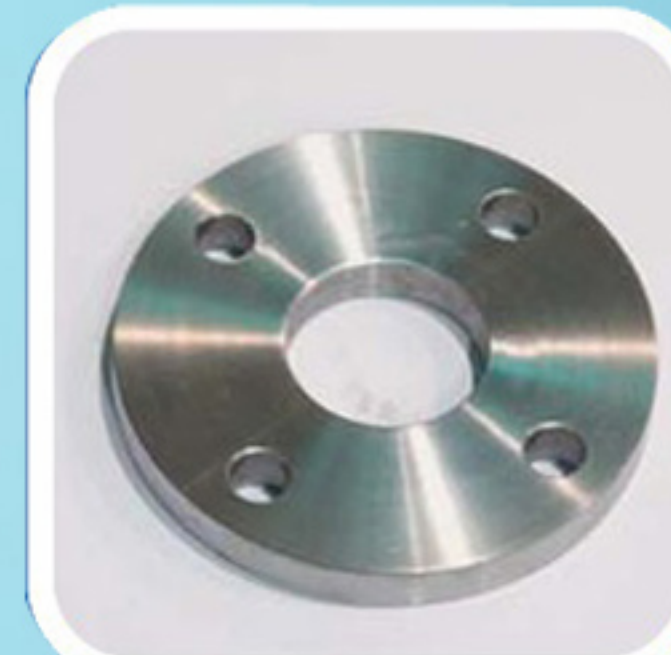


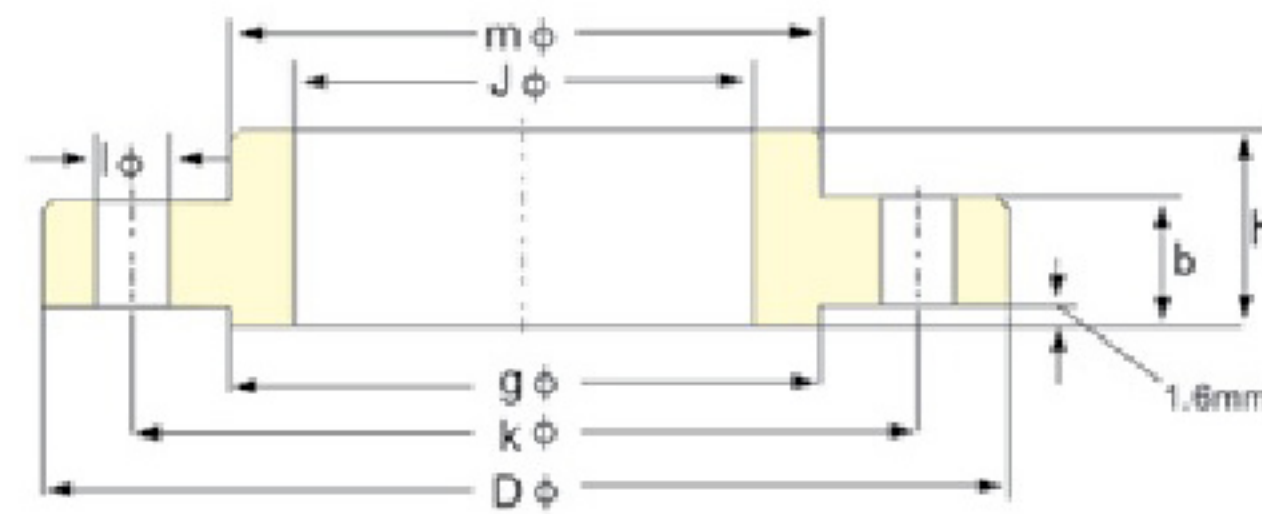
FLANGE



Product display >>>



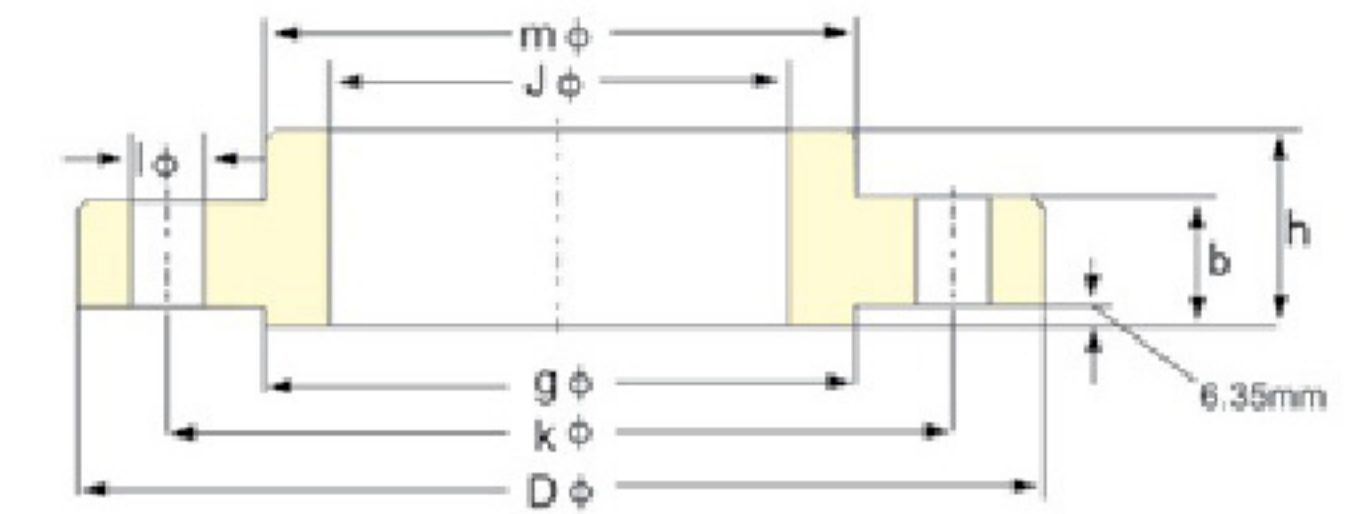
300 lb/sq.in.
Slip-on Flanges



ANSI B16.5

Pipe	Flange				Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	b mm			h mm	m mm	g mm	K mm	
1/2"	95	22.4	14.2	22.4	38.1	35.1	66.5	4	15.7	1/2	0.62
3/4"	117	27.7	15.7	25.4	47.8	42.9	82.6	4	19.1	5/8	1.15
1"	124	34.5	17.5	26.9	53.8	50.8	88.9	4	19.1	5/8	1.39
1.1/4"	133	43.2	19.1	26.9	63.5	63.5	98.6	4	19.1	5/8	1.67
1.1/2"	155	49.5	20.6	30.2	69.9	73.2	114.3	4	22.4	3/4	2.53
2"	165	62	22.4	33.3	84.1	91.9	127	8	19.1	5/8	2.8
2.1/2"	191	74.7	25.4	38.1	100.1	104.6	149.4	8	22.4	3/4	4.25
3"	210	90.7	28.4	42.9	117.3	127	168.1	8	22.4	3/4	5.81
3.1/2"	229	103.4	30.2	44.5	133.4	139.7	184.2	8	22.4	3/4	7.72
4"	254	116.1	31.8	47.8	146.1	157.2	200.2	8	22.4	3/4	10.13
5"	279	143.8	35.1	50.8	177.8	185.7	235	8	22.4	3/4	12.58
6"	318	170.7	36.6	52.3	206.2	215.9	269.7	12	22.4	3/4	16.04
8"	381	221.5	41.1	62	260.4	269.7	330.2	12	25.4	7/8	24.5
10"	445	276.4	47.8	66.5	320.5	323.9	387.4	16	28.4	1	34.16
12"	521	327.2	50.8	73.2	374.7	381	450.9	16	31.8	1 1/8	51.26
14"	584	359.2	53.8	76.2	425.5	412.8	514.4	20	31.8	1 1/8	72.12
16"	648	410.5	57.2	82.6	482.6	469.9	571.5	20	35.1	1 1/4	90.4
18"	711	461.8	60.5	88.9	533.4	533.4	628.7	24	35.1	1 1/4	109
20"	775	513.1	63.5	95.3	587.2	584.2	685.8	24	35.1	1 1/4	136
24"	914	616	69.9	106.4	701.5	692.2	812.8	24	41.1	1 1/2	204

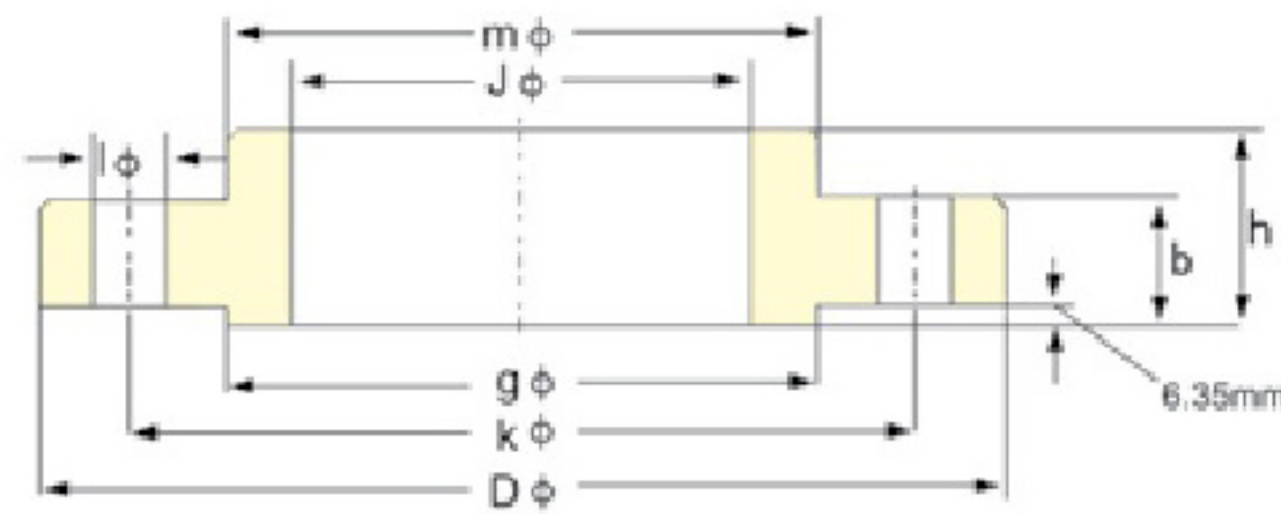
600 lb/sq.in.
Slip-on Flanges



ANSI B16.5

Pipe	Flange				Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	b mm			h mm	m mm	g mm	K mm	
1/2"	95	22.4	14.2	22.4	38.1	35.1	66.5	4	15.7	1/2	0.91
3/4"	117	27.7	15.7	25.4	47.8	42.9	82.6	4	19.1	5/8	1.4
1"	124	34.5	17.5	26.9	53.8	50.8	88.9	4	19.1	5/8	1.7
1.1/4"	133	43.2	20.6	28.4	63.5	63.5	98.6	4	19.1	5/8	2.27
1.1/2"	155	49.5	22.4	31.8	69.9	73.2	114.3	4	22.4	3/4	3.1
2"	165	62	25.4	36.6	84.1	91.9	127	8	19.1	5/8	3.63
2.1/2"	191	74.7	28.4	41.1	100.1	104.6	149.4	8	22.4	3/4	5.44
3"	210	90.7	31.8	46	117.3	127	168.1	8	22.4	3/4	7.26
3.1/2"	229	103.4	35.1	49.3	133.4	139.7	184.2	8	22.4	7/8	9.53
4"	273	116.1	38.1	53.8	152.4	157.2	215.9	8	25.4	7/8	14.97
5"	330	143.8	44.5	60.5	189	185.7	266.7	8	28.4	1	28.5
6"	356	170.7	47.8	66.5	222.3	215.9	292.1	12	28.4	1	36.32
8"	419	221.5	55.6	76.2	273.1	269.7	349.3	12	31.8	1 1/8	44
10"	508	276.4	63.5	85.9	342.9	323.9	431.8	16	35.1	1 1/4	76.2
12"	559	327.2	66.5	91.9	400.1	381	489	20	35.1	1 1/4	97.52
14"	603	359.2	69.9	93.7	431.8	412.8	527.1	20	38.1	1 3/8	102
16"	686	410.5	76.2	106.4	495.3	469.9	603.3	20	41.1	1 1/2	149.82
18"	743	461.8	82.6	117.3	546.1	533.4	654.1	20	44.5	1 5/8	180.1
20"	813	513.1	88.9	127	609.6	584.2	723.9	24	44.5	1 5/8	231.54
24"	940	616	101.6	139.7	717.6	692.2	838.2	24	50.8	1 7/8	330

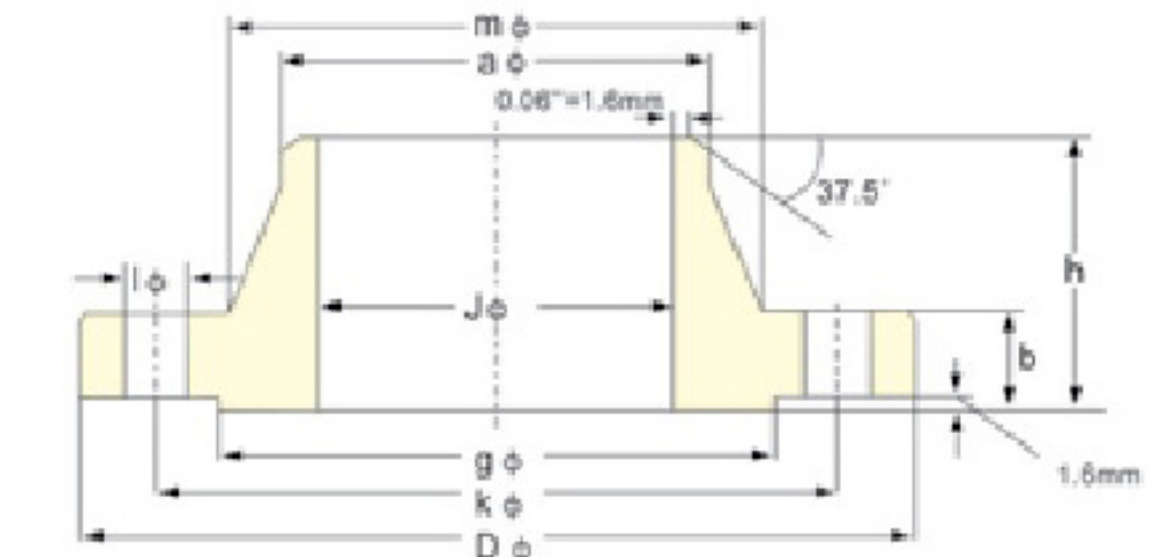
900 lb/sq.in.
Slip-on Flanges



ANSI B16.5

Pipe	Flange				Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	b mm			h mm	m mm	g mm	K mm	
1/2"	121	22.4	22.4	31.8	38.1	35.1	82.6	4	22.4	3/4	1.81
3/4"	130	27.7	25.4	35.1	44.5	42.9	88.9	4	22.4	3/4	2.4
1"	149	34.5	28.4	41.1	52.3	50.8	101.6	4	25.4	7/8	3.41
1.1/4"	159	43.2	28.4	41.1	63.5	63.5	111.3	4	25.4	7/8	4.1
1.1/2"	178	49.5	31.8	44.5	69.9	73.2	124	4	28.4	1	5.45
2"	216	62	38.1	57.2	104.6	91.9	165.1	8	25.4	7/8	9.98
2.1/2"	244	74.7	41.1	63.5	124	104.6	190.5	8	28.4	1	15.8
3"	241	90.7	38.1	53.8	127	127	190.5	8	25.4	7/8	11.8
4"	292	116.1	44.5	69.9	158.8	157.2	235	8	31.8	1 1/8	23.2
5"	349	143.8	50.8	79.2	190.5	185.7	279.4	8	35.1	1 1/4	37.65
6"	381	170.7	55.6	85.9	235	215.9	317.5	12	31.8	1 1/8	48.3
8"	470	221.5	63.5	101.6	298.5	269.7	393.7	12	38.1	1 3/8	75
10"	546	276.4	69.9	108	368.3	323.9	469.9	16	38.1	1 3/8	111.13
12"	610	327.2	79.2	117.3	419.1	381	533.4	20	38.1	1 3/8	146
14"	641	359.2	85.9	130	450.9	412.8	558.8	20	41.1	1 1/2	172.36
16"	705	410.5	88.9	133.4	508	469.9	616	20	44.5	1 5/8	192.95
18"	787	461.8	101.6	152.4	565.2	533.4	685.8	20	50.8	1 7/8	272.4
20"	857	513.1	108	158.8	622.3	584.2	749.3	20	53.8	2	331.42
24"	1041	616	139.7	203.2	749.3	692.2	901.7	20	66.5	2 1/2	632

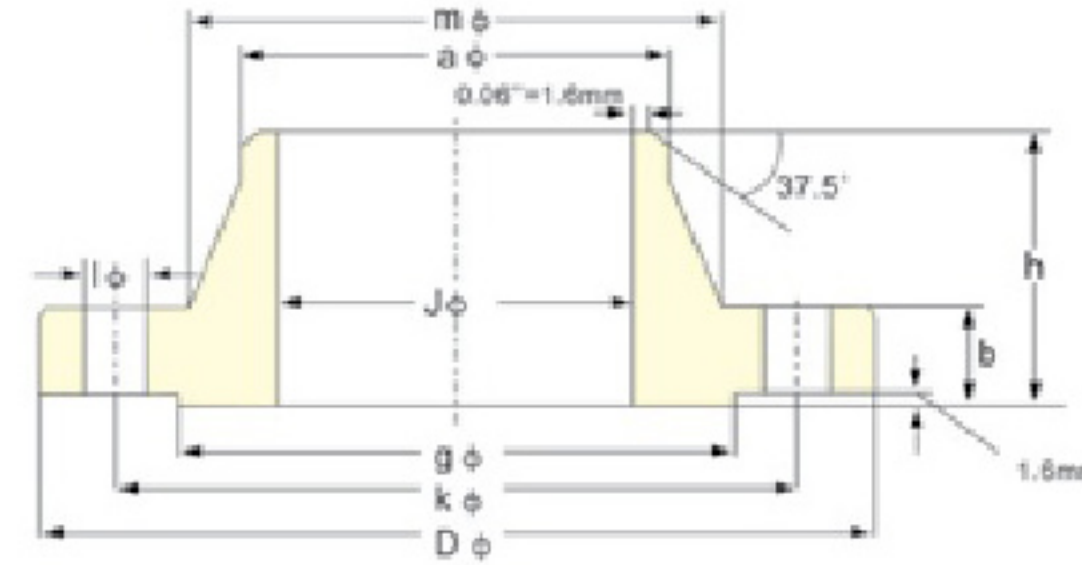
150 lb/sq.in.
Welding Neck Flanges



ANSI B 16.5

Pipe	Flange				Hub	Raised Face	Drilling Template				Weight (KG)	
	Nom. Size in	D mm	J mm	b mm			h mm	a mm	m mm	g mm		K mm
1/2"	89	15.7	11.2	47.8	21.3	30.2	35.1	60.5	4	15.7	1/2	0.51
3/4"	99	20.8	12.7	52.3	26.7	38.1	42.9	69.9	4	15.7	1/2	0.73
1"	108	26.7	14.2	55.6	33.5	49.3	50.8	79.2	4	15.7	1/2	1.07
1.1/4"	117	35.1	15.7	57.2	42.2	58.7	63.5	88.9	4	15.7	1/2	1.4
1.1/2"	127	40.9	17.5	62	48.3	65	73.2	98.6	4	15.7	1/2	1.81
2"	152	52.6	19.1	63.5	60.5	77.7	91.9	120.7	4	19.1	5/8	2.59
2.1/2"	178	62.7	22.4	69.9	73.2	90.4	104.6	139.7	4	19.1	5/8	4.28
3"	191	78	23.9	69.9	88.9	108	127	152.4	4	19.1	5/8	5.18
3.1/2"	216	90.2	23.9	71.4	101.6	122.2	139.7	177.8	8	19.1	5/8	5.45
4"	229	102.4	23.9	76.2	114.3	134.9	157.2	190.5	8	19.1	5/8	7.32
5"	254	128.3	23.9	88.9	141.2	163.6	185.7	215.9	8	22.4	3/4	8.91
6"	279	154.2	25.4	88.9	168.4	192	215.9	241.3	8	22.4	3/4	11.26
8"	343	202.7	28.4	101.6	219.2	246.1	269.7	298.5	8	22.4	3/4	17.68
10"	406	254.5	30.2	101.6	273.1	304.8	323.9	362	12	25.4	7/8	24.79
12"	483	304.8	31.8	114.3	323.9	365.3	381	431.8	12	25.4	7/8	38.98
14"	533	336.6	35.1	127	355.6	400.1	412.8	476.3	12	28.4	1	51.71
16"	597	387.4	36.6	127	406.4	457.2	469.9	539.8	16	28.4	1	64.41
18"	635	438.2	39.6	139.7	457.2	505	533.4	577.9	16	31.8	1 1/8	74.84
20"	699	489	42.9	144.5	508	558.8	584.2	635	20	31.8	1 1/8	89.36
24"	813	590.6	47.8	152.4	609.6	663.4	692.2	749.3	20	35.1	1 1/4	119.66

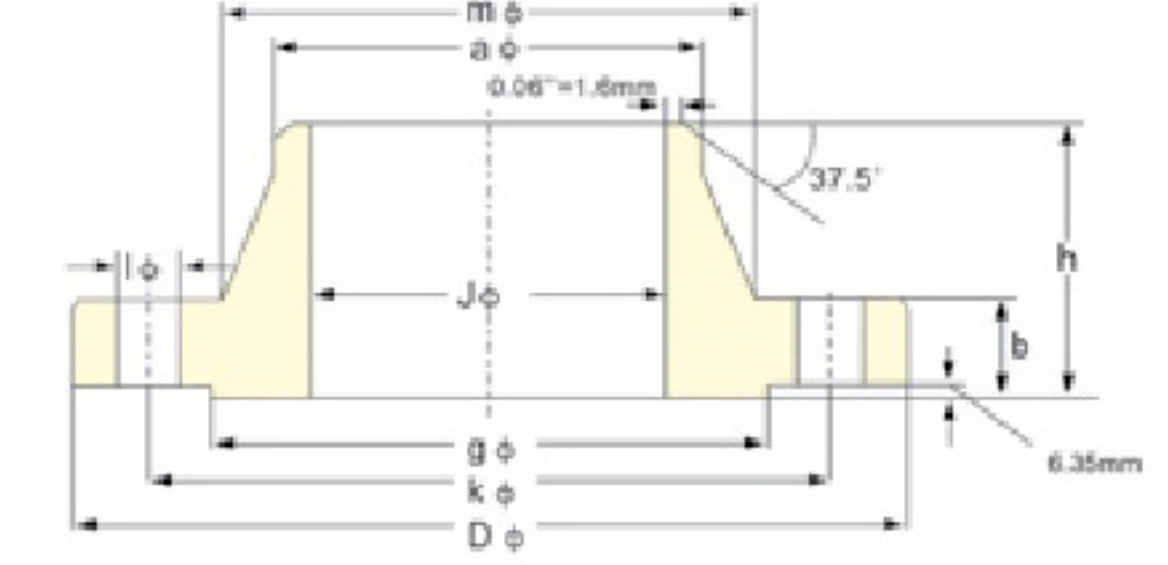
300 lb/sq.in.
Welding Neck Flanges



ANSI B 16.5

Pipe	Flange				Hub		Raised Face	Drilling Template					Weight (KG)
	Nom. Size in	D mm	J mm	b mm	h mm	a mm		m mm	g mm	K mm	Number	l mm	
1/2"	95	15.7	14.2	52.3	21.3	38.1	35.1	66.5	4	15.7	1/2	0.78	
3/4"	117	20.8	15.7	57.2	26.7	47.8	42.9	82.6	4	19.1	5/8	1.34	
1"	124	26.7	17.5	62	33.5	53.8	50.8	88.9	4	19.1	5/8	1.64	
1.1/4"	133	35.1	19.1	65	42.2	63.5	63.5	98.6	4	19.1	5/8	2.06	
1.1/2"	155	40.9	20.6	68.3	48.3	69.9	73.2	114.3	4	22.4	3/4	3.06	
2"	165	52.6	22.4	69.9	60.5	84.1	91.9	127	8	19.1	5/8	3.4	
2.1/2"	191	62.7	25.4	76.2	73.2	100.1	104.6	149.4	8	22.4	3/4	5.31	
3"	210	78	28.4	79.2	88.9	117.3	127	168.1	8	22.4	3/4	7.32	
3.1/2"	229	90.2	30.2	81	101.6	133.4	139.7	184.2	8	22.4	3/4	8.17	
4"	254	102.4	31.8	85.9	114.3	146.1	157.2	200.2	8	22.4	3/4	11.3	
5"	279	128.3	35.1	98.6	141.2	177.8	185.7	235	8	22.4	3/4	15.12	
6"	318	154.2	36.6	98.6	168.4	206.2	215.9	269.7	12	22.4	3/4	19.68	
8"	381	202.7	41.1	111.3	219.2	260.4	269.7	330.2	12	25.4	7/8	30.48	
10"	445	254.5	47.8	117.3	273.1	320.5	323.9	387.4	16	28.4	1	43.74	
12"	521	304.8	50.8	130	323.9	374.7	381	450.9	16	31.8	1 1/8	64.41	
14"	584	336.6	53.8	142.7	355.6	425.5	412.8	514.4	20	31.8	1 1/8	88.3	
16"	648	387.4	57.2	146.1	406.4	482.6	469.9	571.5	20	35.1	1 1/4	112.94	
18"	711	438.2	60.5	158.8	457.2	533.4	533.4	628.7	24	35.1	1 1/4	138.34	
20"	775	489	63.5	162.1	508	587.2	584.2	685.8	24	35.1	1 1/4	167.37	
24"	914	590.6	69.9	168.1	609.6	701.5	692.2	812.8	24	41.1	1 1/2	235.41	

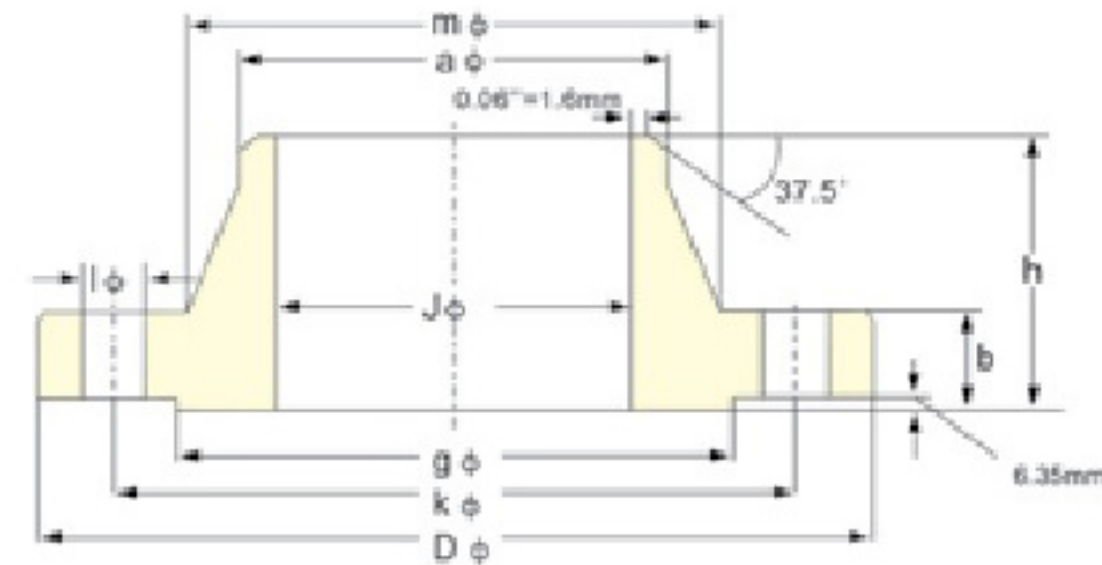
600 lb/sq.in.
Welding Neck Flanges



ANSI B 16.5

Pipe	Flange				Hub		Raised Face	Drilling Template					Weight (KG)
	Nom. Size in	D mm	J mm	b mm	h mm	a mm		m mm	g mm	K mm	Number	l mm	
1/2"	95		14.2	52.3	21.3	38.1	35.1	66.5	4	15.7	1/2	0.9	
3/4"	117		15.7	57.2	26.7	47.8	42.9	82.6	4	19.1	5/8	1.59	
1"	124		17.5	62	33.5	53.8	50.8	88.9	4	19.1	5/8	1.9	
1.1/4"	133		20.6	66.5	42.2	63.5	63.5	98.6	4	19.1	5/8	2.49	
1.1/2"	155		22.4	69.9	48.3	69.9	73.2	114.3	4	22.4	3/4	3.63	
2"	165		25.4	73.2	60.5	84.1	91.9	127	8	19.1	5/8	4.54	
2.1/2"	191		28.4	79.2	73.2	100.1	104.6	149.4	8	22.4	3/4	6.35	
3"	210		31.8	82.6	88.9	117.3	127	168.1	8	22.4	3/4	8.16	
3.1/2"	229		35.1	85.9	101.6	133.4	139.7	184.2	8	22.4	7/8	11.8	
4"	273		38.1	101.6	114.3	152.4	157.2	215.9	8	25.4	7/8	16.78	
5"	330		44.5	114.3	141.2	189	185.7	266.7	8	28.4	1	30.87	
6"	356		47.8	117.3	168.4	222.3	215.9	292.1	12	28.4	1	36.77	
8"	419		55.6	133.4	219.2	273.1	269.7	349.3	12	31.8	1 1/8	50.8	
10"	508		63.5	152.4	273.1	342.9	323.9	431.8	16	35.1	1 1/4	86.26	
12"	559		66.5	155.4	323.9	400.1	381	489	20	35.1	1 1/4	102.51	
14"	603		69.9	165.1	355.6	431.8	412.8	527.1	20	38.1	1 3/8	121.56	
16"	686		76.2	177.8	406.4	495.3	469.9	603.3	20	41.1	1 1/2	177.06	
18"	743		82.6	184.2	457.2	546.1	533.4	654.1	20	44.5	1 5/8	215.65	
20"	813		88.9	190.5	508	609.6	584.2	723.9	24	44.5	1 5/8	267.86	
24"	940		101.6	203.2	609.6	717.6	692.2	838.2	24	50.8	1 7/8	372	

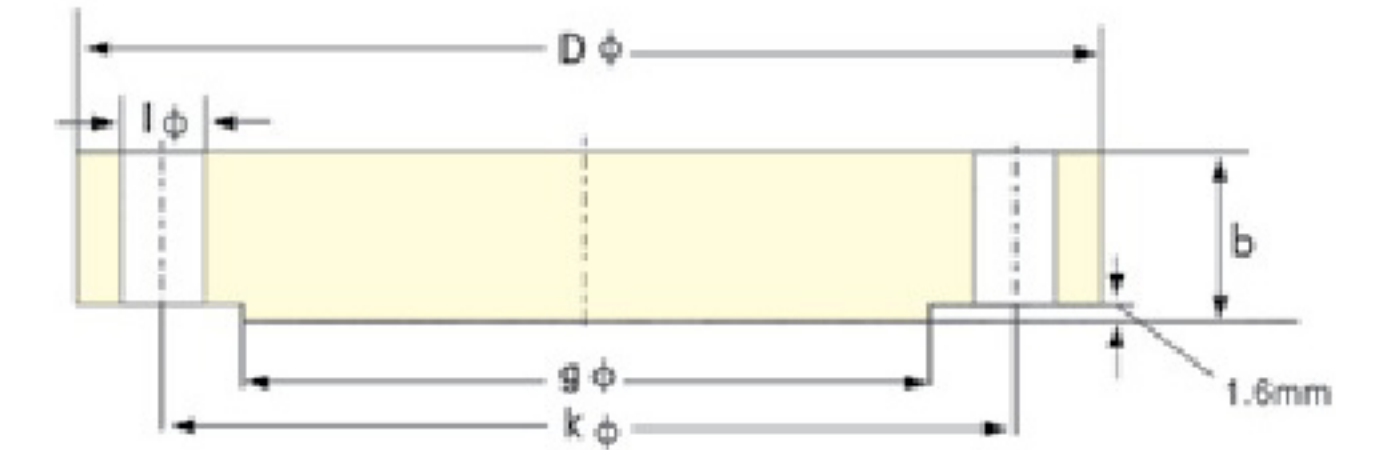
900 lb/sq.in.
Welding Neck Flanges



ANSI B 16.5

Pipe	Flange				Hub		Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	b mm	h mm	a mm		m mm	g mm	K mm	Number	
1/2"	121		22.4	60.5	21.3	38.1	35.1	82.6	4	22.4	3/4	2.1
3/4"	130		25.4	69.9	26.7	44.5	42.9	88.9	4	22.4	3/4	2.72
1"	149		28.4	73.2	33.5	52.3	50.8	101.6	4	25.4	7/8	3.86
1.1/4"	159		28.4	73.2	42.2	63.5	63.5	111.3	4	25.4	7/8	4.54
1.1/2"	178		31.8	82.6	48.3	69.9	73.2	124	4	28.4	1	5.9
2"	216		38.1	101.6	60.5	104.6	91.9	165.1	8	25.4	7/8	10.89
2.1/2"	244		41.1	104.6	73.2	124	104.6	190.5	8	28.4	1	16.33
3"	241		38.1	101.6	88.9	127	127	190.5	8	25.4	7/8	15
4"	292		44.5	114.3	114.3	158.8	157.2	235	8	31.8	1 1/8	23.13
5"	349		50.8	127	141.2	190.5	185.7	279.4	8	35.1	1 1/4	38.5
6"	381		55.6	139.7	168.4	235	215.9	317.5	12	31.8	1 1/8	49.89
8"	470		63.5	162.1	219.2	298.5	269.7	393.7	12	38.1	1 3/8	79.45
10"	546		69.9	184.2	273.1	368.3	323.9	469.9	16	38.1	1 3/8	118.04
12"	610		79.2	200.2	323.9	419.1	381	533.4	20	38.1	1 3/8	157
14"	641		85.9	212.9	355.6	450.9	412.8	558.8	20	41.1	1 1/2	181.6
16"	705		88.9	215.9	406.4	508	469.9	616	20	44.5	1 5/8	224.73
18"	787		101.6	228.6	457.2	565.2	533.4	685.8	20	50.8	1 7/8	308.72
20"	857		108	247.7	508	622.3	584.2	749.3	20	53.8	2	376.82
24"	1041		139.7	292.1	609.6	749.3	692.2	901.7	20	66.5	2 1/2	685

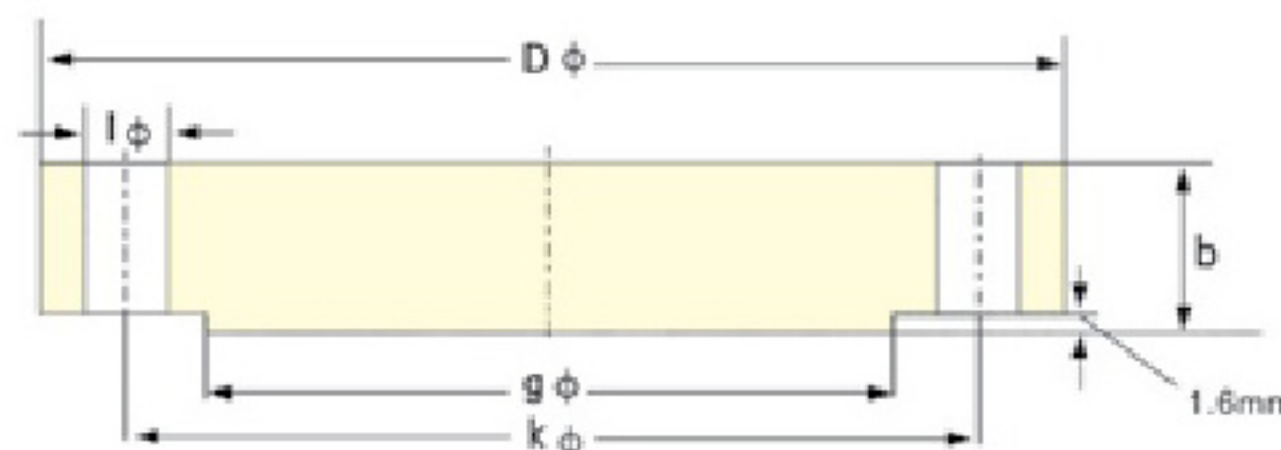
150 lb/sq.in.
Blind Flanges



ANSI B16.5

Pipe	Flange		Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm		b mm	g mm	K mm	Number	
1/2"	89	11.2	35.1	60.5	4	15.7	1/2	0.47
3/4"	99	12.7	42.9	69.9	4	15.7	1/2	0.63
1"	108	14.2	50.8	79.2	4	15.7	1/2	0.94
1.1/4"	117	15.7	63.5	88.9	4	15.7	1/2	1.23
1.1/2"	127	17.5	73.2	98.6	4	15.7	1/2	1.62
2"	152	19.1	91.9	120.7	4	19.1	5/8	2.64
2.1/2"	178	22.4	104.6	139.7	4	19.1	5/8	4.06
3"	191	23.9	127	152.4	4	19.1	5/8	4.9
3.1/2"	216	23.9	139.7	177.8	8	19.1	5/8	5.9
4"	229	23.9	157.2	190.5	8	19.1	5/8	7.41
5"	254	23.9	185.7	215.9	8	22.4	3/4	8.76
6"	279	25.4	215.9	241.3	8	22.4	3/4	11.31
8"	343	28.4	269.7	298.5	8	22.4	3/4	19.92
10"	406	30.2	323.9	362	12	25.4	7/8	29.39
12"	483	31.8	381	431.8	12	25.4	7/8	43.7
14"	533	35.1	412.8	476.3	12	28.4	1	59.42
16"	597	36.6	469.9	539.8	16	28.4	1	77.11
18"	635	39.6	533.4	577.9	16	31.8	1 1/8	94.8
20"	699	42.9	584.2	635	20	31.8	1 1/8	123.38
24"	813	47.8	692.2	749.3	20	35.1	1 1/4	188.24

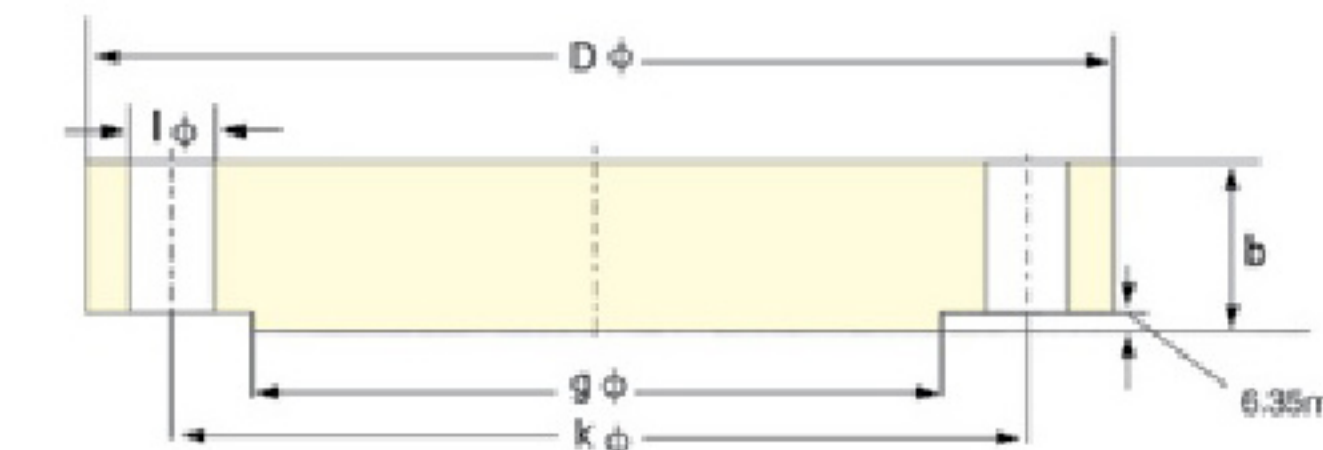
300 lb/sq.in.
Blind Flanges



ANSI B16.5

Pipe Nom. Size in	Flange		Raised Face g mm	Drilling Template				Weight (KG)
	D mm	b mm		K mm	Number	I mm	Diam of Bolt (inch)	
1/2"	95	14.2	35.1	66.5	4	15.7	1/2	0.62
3/4"	117	15.7	42.9	82.6	4	19.1	5/8	1.16
1"	124	17.5	50.8	88.9	4	19.1	5/8	1.42
1.1/4"	133	19.1	63.5	98.6	4	19.1	5/8	1.79
1.1/2"	155	20.6	73.2	114.3	4	22.4	3/4	2.68
2"	165	22.4	91.9	127	8	19.1	5/8	3.09
2.1/2"	191	25.4	104.6	149.4	8	22.4	3/4	4.75
3"	210	28.4	127	168.1	8	22.4	3/4	6.79
3.1/2"	229	30.2	139.7	184.2	8	22.4	3/4	9.53
4"	254	31.8	157.2	200.2	8	22.4	3/4	12
5"	279	35.1	185.7	235	8	22.4	3/4	15.96
6"	318	36.6	215.9	269.7	12	22.4	3/4	21.2
8"	381	41.1	269.7	330.2	12	25.4	7/8	34.6
10"	445	47.8	323.9	387.4	16	28.4	1	55.34
12"	521	50.8	381	450.9	16	31.8	1 1/8	78.9
14"	584	53.8	412.8	514.4	20	31.8	1 1/8	107.05
16"	648	57.2	469.9	571.5	20	35.1	1 1/4	139.25
18"	711	60.5	533.4	628.7	24	35.1	1 1/4	176.9
20"	775	63.5	584.2	685.8	24	35.1	1 1/4	223.17
24"	914	69.9	692.2	812.8	24	41.1	1 1/2	342

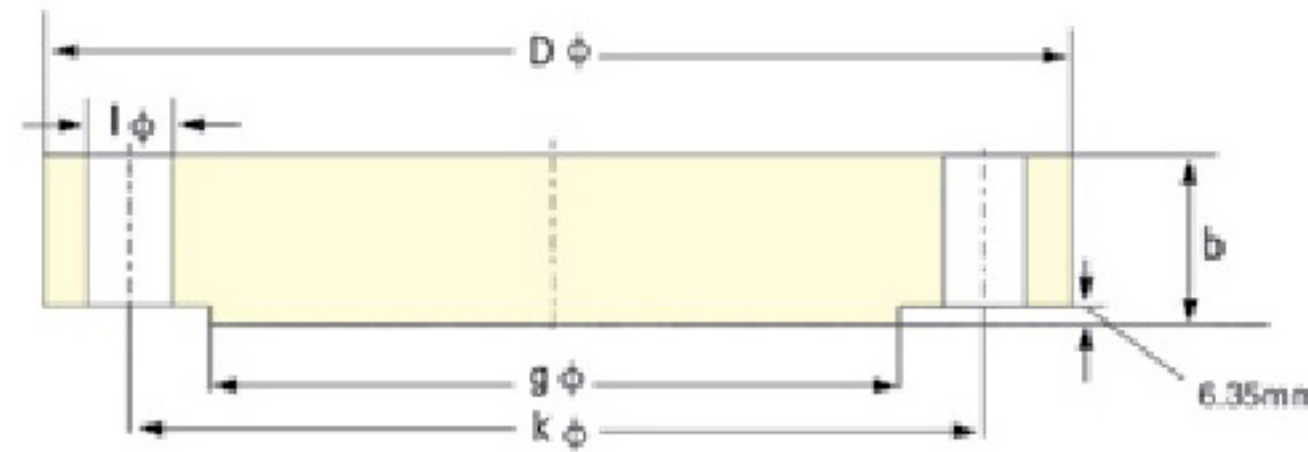
600 lb/sq.in.
Blind Flanges



ANSI B16.5

Pipe Nom. Size in	Flange		Raised Face g mm	Drilling Template				Weight (KG)
	D mm	b mm		K mm	Number	I mm	Diam of Bolt (inch)	
1/2"	95	14.2	35.1	66.5	4	15.7	1/2	0.91
3/4"	117	15.7	42.9	82.6	4	19.1	5/8	1.40
1"	124	17.5	50.8	88.9	4	19.1	5/8	1.81
1.1/4"	133	20.6	63.5	98.6	4	19.1	5/8	2.40
1.1/2"	155	22.4	73.2	114.3	4	22.4	3/4	3.40
2"	165	25.4	91.9	127	8	19.1	5/8	4.40
2.1/2"	191	28.4	104.6	149.4	8	22.4	3/4	6.80
3"	210	31.8	127	168.1	8	22.4	3/4	8.90
3.1/2"	229	35.1	139.7	184.2	8	22.4	7/8	13.17
4"	273	38.1	157.2	215.9	8	25.4	7/8	18.60
5"	330	44.5	185.7	266.7	8	28.4	1	30.84
6"	356	47.8	215.9	292.1	12	28.4	1	38.00
8"	419	55.6	269.7	349.3	12	31.8	1 1/8	62.20
10"	508	63.5	323.9	431.8	16	35.1	1 1/4	102.00
12"	559	66.5	381	489	20	35.1	1 1/4	132.00
14"	603	69.9	412.8	527.1	20	38.1	1 3/8	158.00
16"	686	76.2	469.9	603.3	20	41.1	1 1/2	224.73
18"	743	82.6	533.4	654.1	20	44.5	1 5/8	285.00
20"	813	88.9	584.2	723.9	24	44.5	1 5/8	365.00
24"	940	101.6	692.2	838.2	24	50.8	1 7/8	533.45

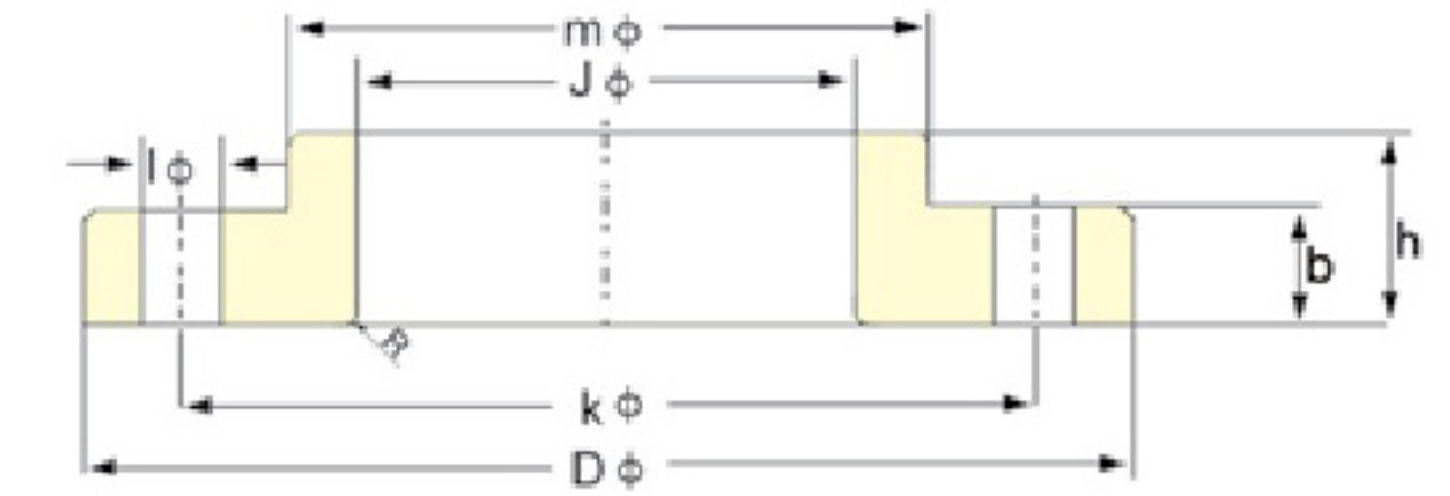
900 lb/sq.in.
Blind Flanges



ANSI B16.5

Pipe Nom. Size in	Flange		Raised Face g mm	Drilling Template				Weight (KG)
	D mm	b mm		K mm	Number	l mm	Diam of Bolt (inch)	
1/2"	121	22.4	35.1	82.6	4	22.4	3/4	1.9
3/4"	130	25.4	42.9	88.9	4	22.4	3/4	2.7
1"	149	28.4	50.8	101.6	4	25.4	7/8	4.09
1.1/4"	159	28.4	63.5	111.3	4	25.4	7/8	4.54
1.1/2"	178	31.8	73.2	124	4	28.4	1	5.9
2"	216	38.1	91.9	165.1	8	25.4	7/8	11.34
2.1/2"	244	41.1	104.6	190.5	8	28.4	1	16
3"	241	38.1	127	190.5	8	25.4	7/8	13.17
4"	292	44.5	157.2	235	8	31.8	1 1/8	24.5
5"	349	50.8	185.7	279.4	8	35.1	1 1/4	39.46
6"	381	55.6	215.9	317.5	12	31.8	1 1/8	51.5
8"	470	63.5	269.7	393.7	12	38.1	1 3/8	89
10"	546	69.9	323.9	469.9	16	38.1	1 3/8	131.54
12"	610	79.2	381	533.4	20	38.1	1 3/8	187
14"	641	85.9	412.8	558.8	20	41.1	1 1/2	224.07
16"	705	88.9	469.9	616	20	44.5	1 5/8	272.4
18"	787	101.6	533.4	685.8	20	50.8	1 7/8	385.9
20"	857	108	584.2	749.3	20	53.8	2	488
24"	1041	139.7	692.2	901.7	20	66.5	2 1/2	905

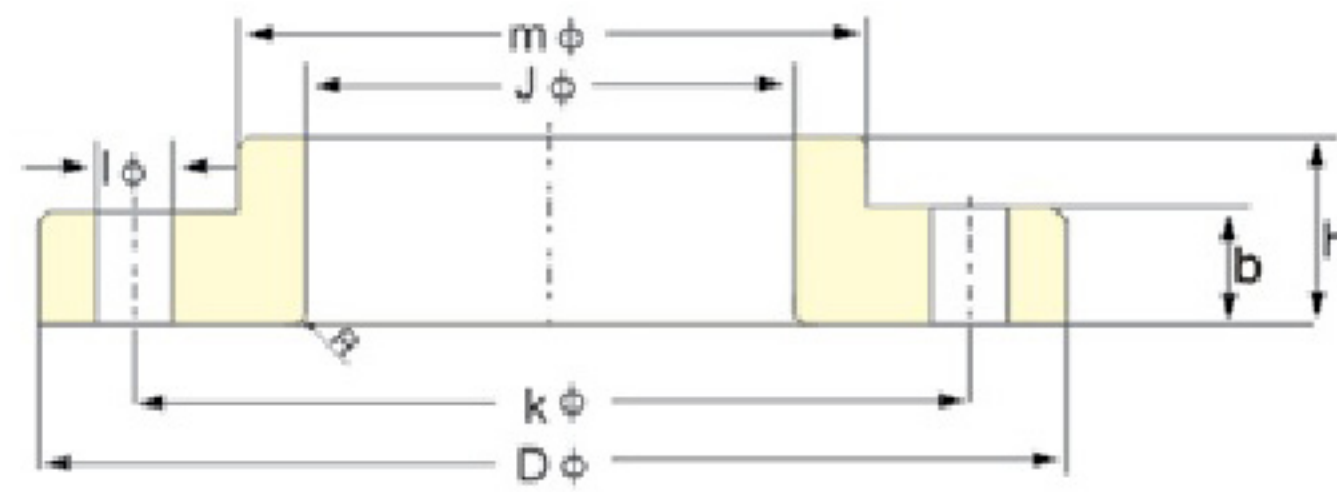
150 lb/sq.in.
Lap Joint Flanges



ANSI B16.5

Pipe Nom. Size in	Flange				Hub m mm	Radius R	DRILLING Template				Weight (KG)
	D mm	J mm	b mm	h mm			K mm	Number	l mm	Diam of Bolt (inch)	
1/2"	89	22.9	11.2	15.7	30.2	3	60.5	4	15.7	1/2	0.51
3/4"	99	28.2	12.7	15.7	38.1	3	69.9	4	15.7	1/2	0.64
1"	108	35.1	14.2	17.5	49.3	3	79.2	4	15.7	1/2	0.93
1.1/4"	117	43.7	15.7	20.6	58.7	4.8	88.9	4	15.7	1/2	1.16
1.1/2"	127	50	17.5	22.4	65	6.4	98.6	4	15.7	1/2	1.51
2"	152	62.5	19.1	25.4	77.7	7.9	120.7	4	19.1	5/8	2.38
2.1/2"	178	75.4	22.4	28.4	90.4	7.9	139.7	4	19.1	5/8	3.60
3"	191	91.4	23.9	30.2	108	9.7	152.4	4	19.1	5/8	4.04
3.1/2"	216	104.1	23.9	31.8	122.2	9.7	177.8	8	19.1	5/8	4.99
4"	229	116.8	23.9	33.3	134.9	11.2	190.5	8	19.1	5/8	5.96
5"	254	144.5	23.9	36.6	163.6	11.2	215.9	8	22.4	3/4	6.44
6"	279	171.5	25.4	39.6	192	12.7	241.3	8	22.4	3/4	7.59
8"	343	222.3	28.4	44.5	246.1	12.7	298.5	8	22.4	3/4	12.66
10"	406	277.4	30.2	49.3	304.8	12.7	362	12	25.4	7/8	16.78
12"	483	328.2	31.8	55.6	365.3	12.7	431.8	12	25.4	7/8	28.30
14"	533	360.2	35.1	79.2	400.1	12.7	476.3	12	28.4	1	41.50
16"	597	411.2	36.6	87.4	457.2	12.7	539.8	16	28.4	1	52.98
18"	635	462.3	39.6	96.8	505	12.7	577.9	16	31.8	1 1/8	59.00
20"	699	514.4	42.9	103.1	558.8	12.7	635	20	31.8	1 1/8	72.12
24"	813	616	47.8	111.3	663.4	12.7	749.3	20	35.1	1 1/4	99.02

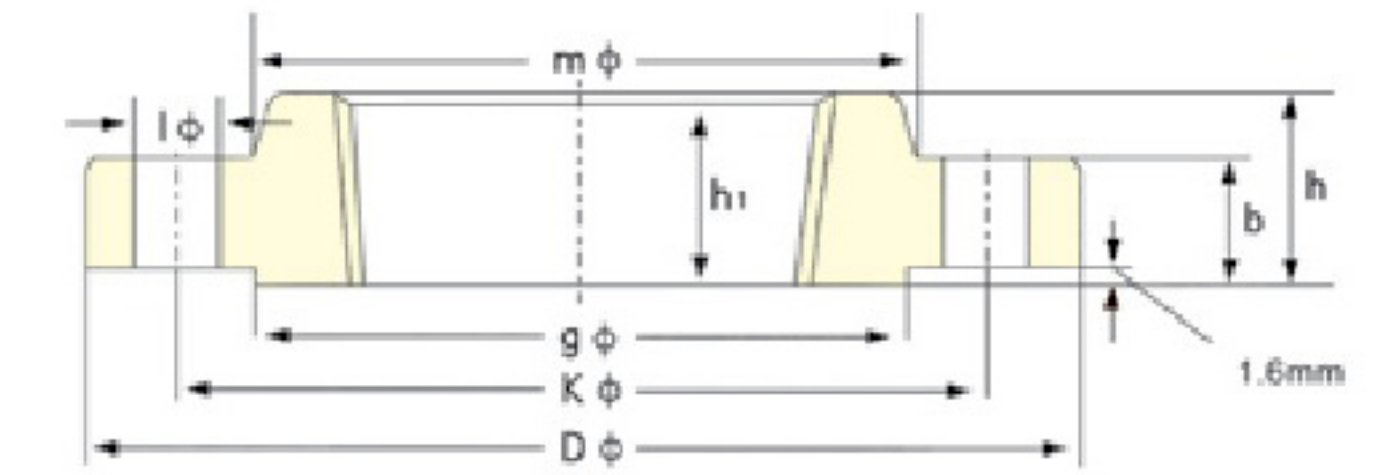
300 lb/sq.in.
Lap Joint Flanges



ANSI B16.5

Pipe Nom. Size in	Flange				Hub m mm	Radius R	DRILLING Template				Weight (KG)
	D mm	J mm	b mm	h mm			K mm	Number	I mm	Diam of Bolt (inch)	
1/2"	95	22.9	14.2	22.4	38.1	3	66.5	4	15.7	1/2	0.61
3/4"	117	28.2	15.7	25.4	47.8	3	82.6	4	19.1	5/8	1.15
1"	124	35.1	17.5	26.9	53.8	3	88.9	4	19.1	5/8	1.38
1.1/4"	133	43.7	19.1	26.9	63.5	5	98.6	4	19.1	5/8	1.66
1.1/2"	155	50	20.6	30.2	69.9	6	114.3	4	22.4	3/4	2.52
2"	165	62.5	22.4	33.3	84.1	8	127	8	19.1	5/8	2.79
2.1/2"	191	75.4	25.4	38.1	100.1	8	149.4	8	22.4	3/4	4.22
3"	210	91.4	28.4	42.9	117.3	10	168.1	8	22.4	3/4	5.78
3.1/2"	229	104.1	30.2	44.5	133.4	10	184.2	8	22.4	3/4	7.72
4"	254	116.8	31.8	47.8	146.1	11	200.2	8	22.4	3/4	10.07
5"	279	144.5	35.1	50.8	177.8	11	235	8	22.4	3/4	12.52
6"	318	171.5	36.6	52.3	206.2	13	269.7	12	22.4	3/4	15.95
8"	381	222.3	41.1	62	260.4	13	330.2	12	25.4	7/8	24.37
10"	445	277.4	47.8	95.3	320.5	13	387.4	16	28.4	1	39.92
12"	521	328.2	50.8	101.6	374.7	13	450.9	16	31.8	1 1/8	58.70
14"	584	360.2	53.8	111.3	425.5	13	514.4	20	31.8	1 1/8	83.46
16"	648	411.2	57.2	120.7	482.6	13	571.5	20	35.1	1 1/4	106.14
18"	711	462.3	60.5	130	533.4	13	628.7	24	35.1	1 1/4	133.95
20"	775	514.4	63.5	139.7	587.2	13	685.8	24	35.1	1 1/4	157.65
24"	914	616	69.9	152.4	701.5	13	812.8	24	41.1	1 1/2	240.40

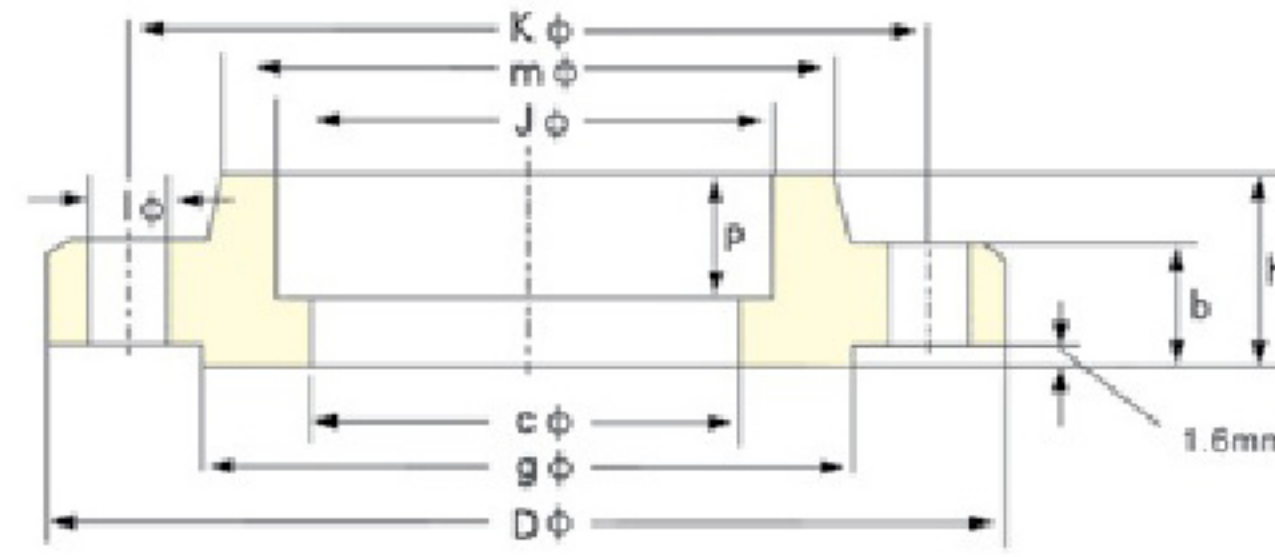
150 lb/sq.in.
Threaded Flanges



ANSI B 16.5

Pipe Nom. Size in	Flange		b mm	Raised Face h/h1 mm	Hub m mm	g mm	Drilling Template				Weight (KG)
	D mm	J mm					K mm	Number	I mm	Diam of Bolt (inch)	
1/2"	89	No Counter Bore Required on 150 lb Threaded Flanges - Keine E-Indrehung bei gewinde Flanschen 150 lb	11.2	15.7	30.2	35.1	60.5	4	15.7	1/2	0.47
3/4"	99		12.7	15.7	38.1	42.9	69.9	4	15.7	1/2	0.59
1"	108		14.2	17.5	49.3	50.8	79.2	4	15.7	1/2	0.87
1.1/4"	117		15.7	20.6	58.7	63.5	88.9	4	15.7	1/2	1.11
1.1/2"	127		17.5	22.4	65	73.2	98.6	4	15.7	1/2	1.45
2"	152		19.1	25.4	77.7	91.9	120.7	4	19.1	5/8	2.33
2.1/2"	178		22.4	28.4	90.4	104.6	139.7	4	19.1	5/8	3.55
3"	191		23.9	30.2	108	127	152.4	4	19.1	5/8	4.02
3.1/2"	216		23.9	31.8	122.2	139.7	177.8	8	19.1	5/8	4.99
4"	229		23.9	33.3	134.9	157.2	190.5	8	19.1	5/8	5.99
5"	254		23.9	36.6	163.6	185.7	215.9	8	22.4	3/4	6.68
6"	279		25.4	39.6	192	215.9	241.3	8	22.4	3/4	7.99
8"	343		28.4	44.5	246.1	269.7	298.5	8	22.4	3/4	13.29
10"	406		30.2	49.3	304.8	323.9	362	12	25.4	7/8	19.5
12"	483		31.8	55.6	365.3	381	431.8	12	25.4	7/8	29.03
14"	533		35.1	57.2	400.1	412.8	476.3	12	28.4	1	38.56
16"	597		36.6	63.5	457.2	469.9	539.8	16	28.4	1	44.49
18"	635		39.6	68.3	505	533.4	577.9	16	31.8	1 1/8	54.43
20"	699		42.9	73.2	558.8	584.2	635	20	31.8	1 1/8	70.31
24"	813		47.8	82.6	663.4	692.2	749.3	20	35.1	1 1/4	95.25

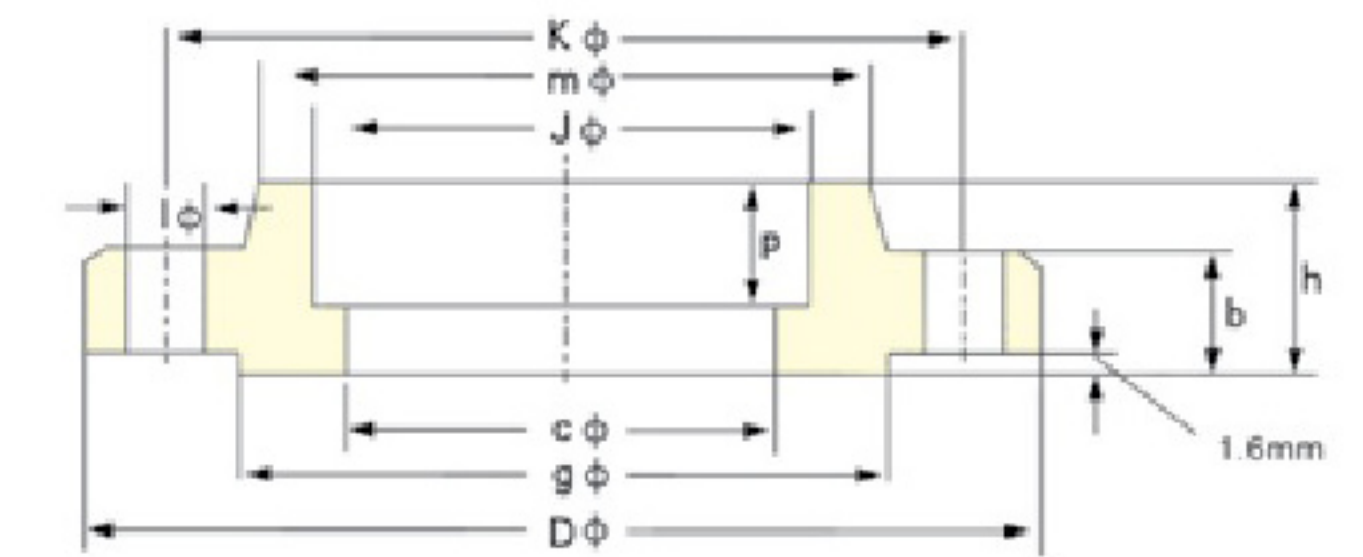
150 lb/sq.in.
Socket Welding Flanges



ANSI B16.5

Pipe	Flange						Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	C mm	p mm	b mm			h mm	m mm	g mm	K mm	
1/2"	89	22.4	15.7	9.7	11.2	15.7	30.2	35.1	60.5	4	15.7	1/2	0.47
3/4"	99	27.7	20.8	11.2	12.7	15.7	38.1	42.9	69.9	4	15.7	1/2	0.59
1"	108	34.5	26.7	12.7	14.2	17.5	49.3	50.8	79.2	4	15.7	1/2	0.87
1.1/4"	117	43.2	35.1	14.2	15.7	20.6	58.7	63.5	88.9	4	15.7	1/2	1.11
1.1/2"	127	49.5	40.9	15.7	17.5	22.4	65	73.2	98.6	4	15.7	1/2	1.45
2"	152	62	52.6	17.5	19.1	25.4	77.7	91.9	120.7	4	19.1	5/8	2.33
2.1/2"	178	74.7	62.7	19.1	22.4	28.4	90.4	104.6	139.7	4	19.1	5/8	3.55
3"	191	90.7	78	20.6	23.9	30.2	108	127	152.4	4	19.1	5/8	4.02
3.1/2"	216	103.4	90.2	22.4	23.9	31.8	122.2	139.7	177.8	8	19.1	5/8	4.99
4"	229	116.1	102.4	23.9	23.9	33.3	134.9	157.2	190.5	8	19.1	5/8	5.99
5"	254	143.8	128.3	23.9	23.9	36.6	163.6	185.7	215.9	8	22.4	3/4	6.68
6"	279	170.7	154.2	26.9	25.4	39.6	192	215.9	241.3	8	22.4	3/4	7.99
8"	343	221.5	202.7	31.8	28.4	44.5	246.1	269.7	298.5	8	22.4	3/4	13.29
10"	406	276.4	254.5	33.3	30.2	49.3	304.8	323.9	362	12	25.4	7/8	19.5
12"	483	327.2	304.8	39.6	31.8	55.6	365.3	381	431.8	12	25.4	7/8	29.03
14"	533	359.2	336.6	41.4	35.1	57.2	400.1	412.8	476.3	12	28.4	1	38.56
16"	597	410.5	387.4	44.5	36.6	63.5	457.2	469.9	539.8	16	28.4	1	44.49
18"	635	461.8	438.2	49.3	39.6	68.3	505	533.4	577.9	16	31.8	1 1/8	54.43
20"	699	513.1	489	54.1	42.9	73.2	558.8	584.2	635	20	31.8	1 1/8	70.31
24"	813	616	590.6	63.5	47.8	82.6	663.4	692.2	749.3	20	35.1	1 1/4	95.25

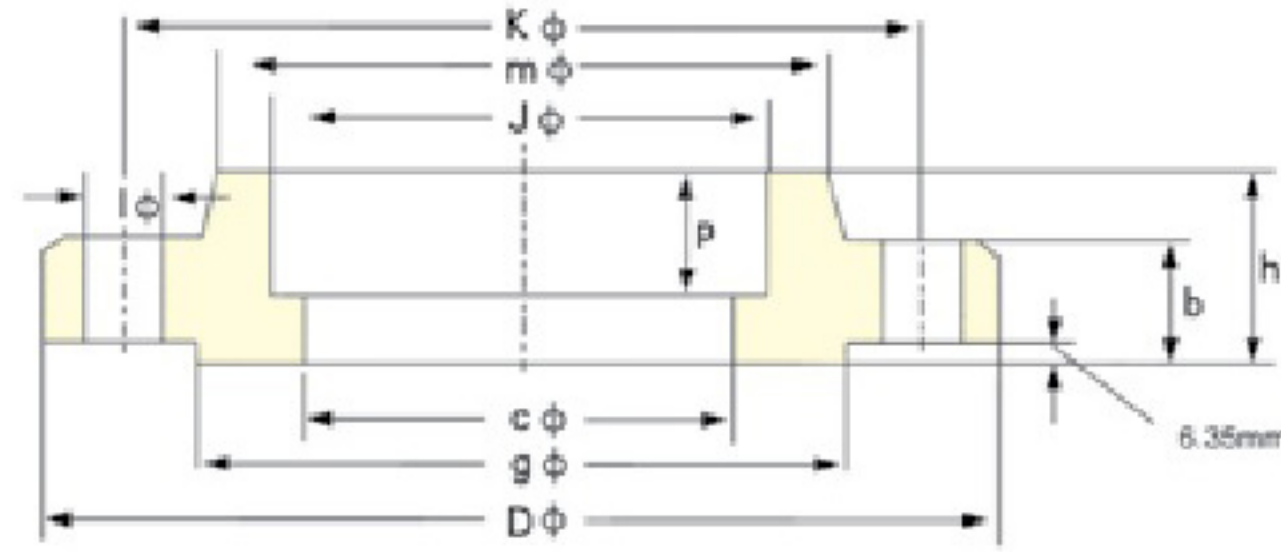
300 lb/sq.in.
Socket Welding Flanges



ANSI B16.5

Pipe	Flange						Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	C mm	p mm	b mm			h mm	m mm	g mm	K mm	
1/2"	95	22.4	15.7	9.7	14.2	22.4	38.1	35.1	66.5	4	15.7	1/2	0.62
3/4"	117	27.7	20.8	11.2	15.7	25.4	47.8	42.9	82.6	4	19.1	5/8	1.19
1"	124	34.5	26.7	12.7	17.5	26.9	53.8	50.8	88.9	4	19.1	5/8	1.44
1.1/4"	133	43.2	35.1	14.2	19.1	26.9	63.5	63.5	98.6	4	19.1	5/8	1.73
1.1/2"	155	49.5	40.9	15.7	20.6	30.2	69.9	73.2	114.3	4	22.4	3/4	2.62
2"	165	62	52.6	17.5	22.4	33.3	84.1	91.9	127	8	19.1	5/8	2.94
2.1/2"	191	74.7	62.7	19.1	25.4	38.1	100.1	104.6	149.4	8	22.4	3/4	4.49
3"	210	90.7	78	20.6	28.4	42.9	117.3	127	168.1	8	22.4	3/4	6.2
3.1/2"	229	103.4	90.2	22.4	30.2	44.5	133.4	139.7	184.2	8	22.4	3/4	-
4"	254	116.1	102.4	23.9	31.8	47.8	146.1	157.2	200.2	8	22.4	3/4	-
5"	279	143.8	128.3	23.9	35.1	50.8	177.8	185.7	235	8	22.4	3/4	-
6"	318	170.7	154.2	26.9	36.6	52.3	206.2	215.9	269.7	12	22.4	3/4	-
8"	381	221.5	202.7	31.8	41.1	62	260.4	269.7	330.2	12	25.4	7/8	-
10"	445	276.4	254.5	33.3	47.8	66.5	320.5	323.9	387.4	16	28.4	1	-
12"	521	327.2	304.8	39.6	50.8	73.2	374.7	381	450.9	16	31.8	1 1/8	-
14"	584	359.2	336.6	41.4	53.8	76.2	425.5	412.8	514.4	20	31.8	1 1/8	-
16"	648	410.5	387.4	44.5	57.2	82.6	482.6	469.9	571.5	20	35.1	1 1/4	-
18"	711	461.8	438.2	49.3	60.5	88.9	533.4	533.4	628.7	24	35.1	1 1/4	-
20"	775	513.1	489	54.1	63.5	95.3	587.2	584.2	685.8	24	35.1	1 1/4	-
24"	914	616	590.6	63.5	69.9	106.4	701.5	692.2	812.8	24	41.1	1 1/2	-

600 lb/sq.in.
Socket Welding Flanges



ANSI B16.5

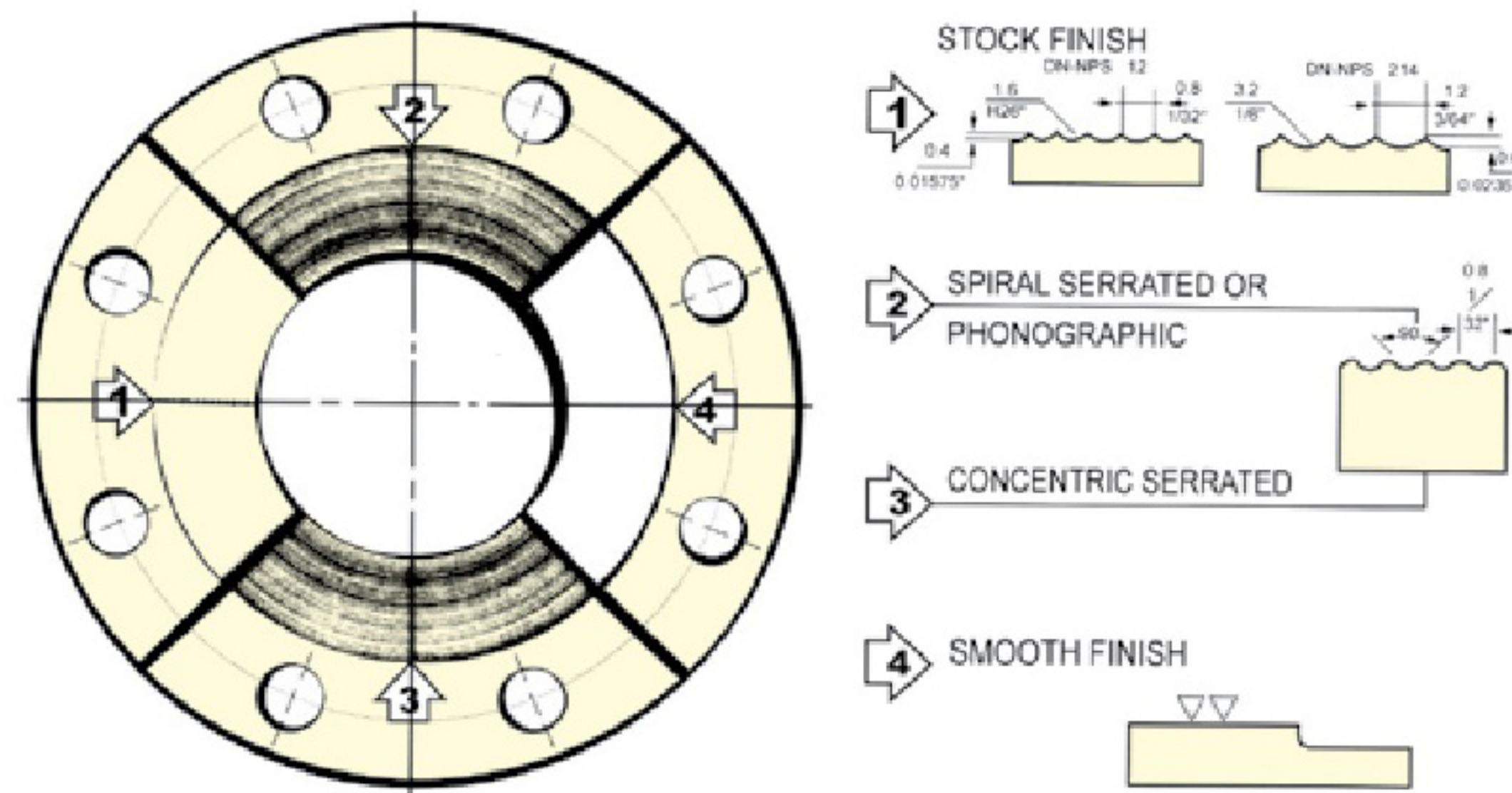
Pipe	Flange						Hub	Raised Face	Drilling Template				Weight (KG)
	Nom. Size in	D mm	J mm	C mm	p mm	b mm			h mm	m mm	g mm	K mm	
1/2"	95	22.4		9.7	14.2	22.4	38.1	35.1	66.5	4	15.7	1/2	0.91
3/4"	117	27.7		11.2	15.7	25.4	47.8	42.9	82.6	4	19.1	5/8	1.36
1"	124	34.5		12.7	17.5	26.9	53.8	50.8	88.9	4	19.1	5/8	1.81
1.1/4"	133	43.2		14.2	20.6	28.4	63.5	63.5	98.6	4	19.1	5/8	2.6
1.1/2"	155	49.5		15.7	22.4	31.8	69.9	73.2	114.3	4	22.4	3/4	3.18
2"	165	62		17.5	25.4	36.6	84.1	91.9	127	8	19.1	5/8	3.9
2.1/2"	191	74.7		19.1	28.4	41.1	100.1	104.6	149.4	8	22.4	3/4	5.9
3"	210	90.7		20.6	31.8	46	117.3	127	168.1	8	22.4	3/4	7.4
3.1/2"	229	103.4		22.4	35.1	49.3	133.4	139.7	184.2	8	22.4	7/8	-
4"	273	116.1		23.9	38.1	53.8	152.4	157.2	215.9	8	25.4	7/8	-
5"	330	143.8		23.9	44.5	60.5	189	185.7	266.7	8	28.4	1	-
6"	356	170.7		26.9	47.8	66.5	222.3	215.9	292.1	12	28.4	1	-
8"	419	221.5		31.8	55.6	76.2	273.1	269.7	349.3	12	31.8	1 1/8	-
10"	508	276.4		33.3	63.5	85.9	342.9	323.9	431.8	16	35.1	1 1/4	-
12"	559	327.2		39.6	66.5	91.9	400.1	381	489	20	35.1	1 1/4	-
14"	603	359.2		41.4	69.9	93.7	431.8	412.8	527.1	20	38.1	1 3/8	-
16"	686	410.5		44.5	76.2	106.4	495.3	469.9	603.3	20	41.1	1 1/2	-
18"	743	461.8		49.3	82.6	117.3	546.1	533.4	654.1	20	44.5	1 5/8	-
20"	813	513.1		54.1	88.9	127	609.6	584.2	723.9	24	44.5	1 5/8	-
24"	940	616		63.5	101.6	139.7	717.6	692.2	838.2	24	50.8	1 7/8	-

MATERIAL SPECIFICATIONS

ASTM	Grade	Classification	CHEMICAL COMPOSITION								MECHANICAL PROPERTIES					
			C %	Ma %	P Max %	S Max %	Si %	Ni %	Cr %	Mo %	T.S Min. psi (kg/mm ²)	Y.S Min. psi (kg/mm ²)	EL Min. %	Red Min. %	HB	
A-105*	-	Carbon Steel	MAX 0.35	0.6-1.05	0.04	0.05	MAX 0.35	MAX 0.4	MAX 0.3	MAX 0.12	70 (49.2)	36 (25.3)	22	30	MAX 187	
A-181	60	Carbon Steel	MAX 0.35	MAX 0.9	0.04	0.05	MAX 0.35	-	-	-	60(42.2)	30 (21.1)	22	35	-	
A-181	70	Carbon Steel	MAX 0.35	MAX 0.9	0.05	0.05	MAX 0.35	-	-	-	70 (49.2)	35(25.3)	18	24	-	
A-182	F1	1/2 Mo	MAX 0.28	0.6-0.9	0.05	0.045	0.15-0.35	-	-	0.44-0.65	70 (49.2)	40(28.1)	20	30	143-192	
A-182	F5	5Gr-1/Mo	MAX 0.15	0.3-0.6	0.045	0.03	MAX 0.5	MAX 0.5	4/6	0.44-0.65	70 (49.2)	40(28.1)	20	35	143-217	
A-182	F5a	5Gr-1/Mo	MAX 0.25	MAX 0.6	0.03	0.03	MAX0.5	MAX 0.5	4/6	0.44-0.65	90(63.3)	65(45.7)	22	50	187-248	
A-182	F304	18Gr-8Ni	MAX 0.08	MAX 2	0.04	0.03	MAX 1	8/11	18-20	-	75 (52.7)	30 (21.1)	30	50	-	
A-182	F304L	18Gr-8Ni low	MAX 0.035	MAX 2	0.04	0.03	MAX 1	8/13	18-20	-	70 (49.2)	25 (17.6)	30	50	-	
A-182	F316	18Gr-8Ni Mo	MAX 0.08	MAX 2	0.04	0.03	MAX 1	10/14	16-18	2/3	75 (52.7)	30 (21.7)	30	50	-	
A-182	F316L	18Gr-8Ni Mo-Low	MAX 0.035	MAX 2	0.04	0.03	MAX 1	10/15	16-18	2/3	65 (45.7)	25 (17.6)	30	50	-	
A-182	F321	18Gr-8Ni Ti	MAX 0.08	MAX 2	0.03	0.03	MAX 1	9/12	Min 17	-	75 (52.7)	30 (21.1)	30	50	-	
A-182	F347	18Gr-8Ni Nb	MAX 0.08	MAX 2	0.03	0.03	MAX 1	9/13	17-20	-	75 (52.7)	30 (21.1)	30	50	-	
A-350*	LF1	Carbon Steel	MAX 0.3	0.75-1.05	0.035	0.04	0.15-0.3	MAX 0.4	MAX 0.3	MAX 0.12	60-85 (42.2-59.7)	30 (21.1)	25	38	-	
A-350*	LF2	Carbon Steel	MAX 0.3	MAX 1.35	0.035	0.04	0.15-0.3	MAX 0.4	MAX 0.3	MAX 0.12	70 -95 (49.2-66.8)	36 (25.3)	22	30	-	
A-350*	LF3	3 1/2 Ni	MAX 0.2	MAX 0.9	0.035	0.04	0.2-0.35	3.25-3.75	MAX 0.3	MAX 0.12	70 -95 (49.2-66.8)	37.5 (26.4)	22	35	-	
Standard	Thick-ness	-	C %	Ma %	P Max %	S Max %	Si %	Ni %	Cr %	MO %	AL %	V %	CU %	MN %	N %	
S355J2G3	≤30	-	≤0.22	≤ 1,60	0.035	0.035	≤ 0,55	-	-	-	-	-	-	-	-	
S355J2G3	>30	-	≤0.2	≤ 1,60	0.035	0.035	≤ 0,55	-	-	-	-	-	-	-	-	
C22.8	-	-	0,18-0,23	0,30 - 0,90	0.025	0.015	≤ 0,40	≤ 0,30	≤ 0,30	-	0,015-0,05	-	-	-	-	
P250GH	-	-	0.18-0.23	-	0.025	0.015	0.2-0.4	0.3	0.3	0.08	-	0.02	0.3	0.4-0.9	-	
S235JRG2	≤ 16	-	≤ 0,17	-	0.035	0.035	≤ 0,55	-	≤ 0,30	≤ 0,08	≥ 0,02	-	≤ 0.55	≤ 1,40	0.012	
	≤ 40	-	≤ 0,20	-	0.035	0.035	≤ 0,55	-	≤ 0,30	≤ 0,08	≥ 0,02	-	≤ 0.55	≤ 1,40	0.012	
	>40	-	≤ 0,22	-	0.035	0.035	≤ 0,55	-	≤ 0,30	≤ 0,08	≥ 0,02	-	≤ 0.55	≤ 1,40	0.012	

STANDARD FINISH

STANDARD FINISHES for Face of Flange (ANSI B16.5)



STOCK FINISH: The most widely used of any gasket finish, because, practically, is suitable for all ordinary service conditions. This is a continuous spiral groove. Flanges sizes 12" (304.8mm) and smaller, are produced with a 1/16" round-nosed tool at a feed of 1/32" per revolution. For sizes 14" (355.6mm) and larger, the finish is made with 1/8" round-nosed tool at a feed of 3/64" per revolution.

SPIRAL SERRATED OR PHONOGRAPHIC: This finish is produced by using a 90° round-nosed tool.

CONCENTRIC SERRATED: This finish is produced by using a 90° round-nosed tool.

SMOOTH FINISH: The cutting tool employed shall have an approximate 0.06" radius.

The resultant surface finish shall have a 125 μ inch to 250 μ inch (ANSI B 16.5 para 6.4;4.1)

1. RAISED FACE, AND LARGE MALE AND FEMALE

Either a serrated-concentric or serrated-spiral finish having from 34 to 64 grooves per inch is used.

The cutting tool employed has an approximate 0.06 in. radius. The resultant surface finish shall have a 125 μ inch (3.2 μ m) to 500 μ inch (12.5 μ m) approximate roughness.

2. TONGUE AND GROOVE, AND SMALL MALE AND FEMALE

The gasket contact surface does not exceed 125 μ in. (3.2 μ m) roughness.

3. RING JOINT

The inside wall surface of gasket groove does not exceed 63 μ in. (1.6 μ m) roughness

4. BLIND

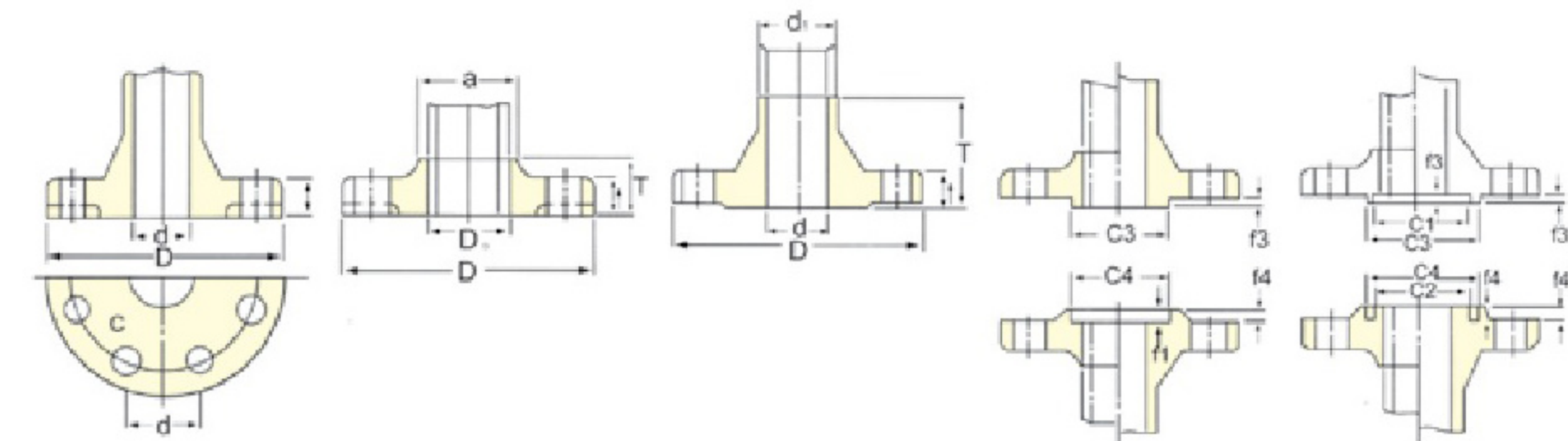
Blind flanges need not be faced in the center. If, when this center part is raised, its diameter is at least 1 in. smaller than the inside diameter of fittings of the corresponding pressure class. When the center part is depressed, its diameter is not greater than the inside diameter of the corresponding pressure class fittings. Machining of the depressed center is not required.

TOLERANCE

ANSI B16.5 FORGED FLANGES

SOLID FLANGE SLIP-ON FLANGE WELDING NECK FLANGE TYPE OF GASKET SURFACE

MALE & FEMALE TYPE TONGUE & GROOVE TYPE



THREAD SOCKET-WELDING SLIP-ON LAP JOINT AND BLIND

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	Thread	Within Limits on boring gauge	
	Socket-Welding Slip-on and Lap joint	10" & Smaller +1/32" (0.8mm)-0" 12" & Larger +1/16" (1.6mm)-0"	
Outside Diameter of Hub	5" and Smaller	+3/32" (2.4mm) -1/32" (0.8mm)	
	6" and Larger	+5/32" (4.0mm) -1/32" (0.8mm)	
Diameter of Contact Face	1/16" Raised Face	± 1/32" (0.8mm)	
	1/4" Raised Face Tongue & Groove Male/Female	± 1/64" (0.4mm)	
Diameter of Counterbore	Same as for Inside Diameter		
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.	
Eccentricity of Facing with Respect to Bore	1/32" (0.8mm) Max.		
Thickness	16" 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)	

WELDING NECK

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)	
Diameter of Contact Face	1/16" Raised Face	± 1/32" (0.8mm)	
	1/4" Raised Face Tongue & Groove Male/Female	± 1/64" (0.4mm)	
Diameter of Hub at Base	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" (2.4mm) -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	1/32" (0.8mm) Max.	
Eccentricity of Bolt Circle with Respect to Bore	1/32" (0.8mm) Max.		
Thickness	16" 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)	

Note: *This tolerance is not covered in ANSI B16.5, but maker's option.