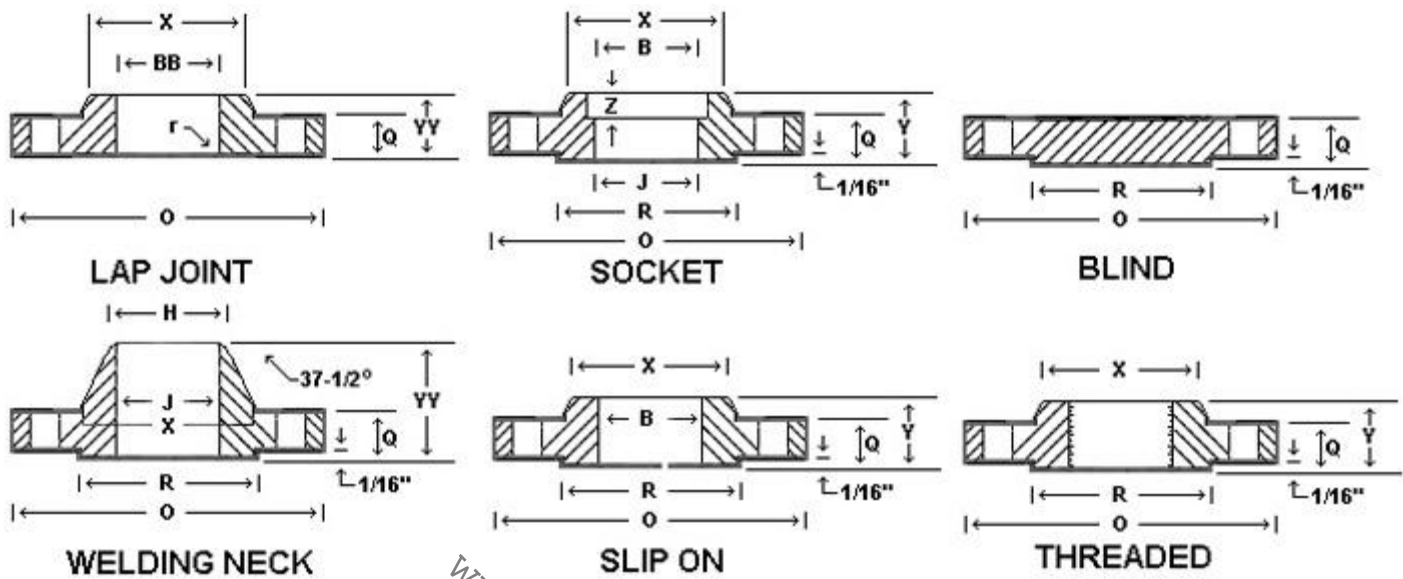


**DIMENSIONS OF CLASS 150 FLANGES AS PER ANSI B 16.5**

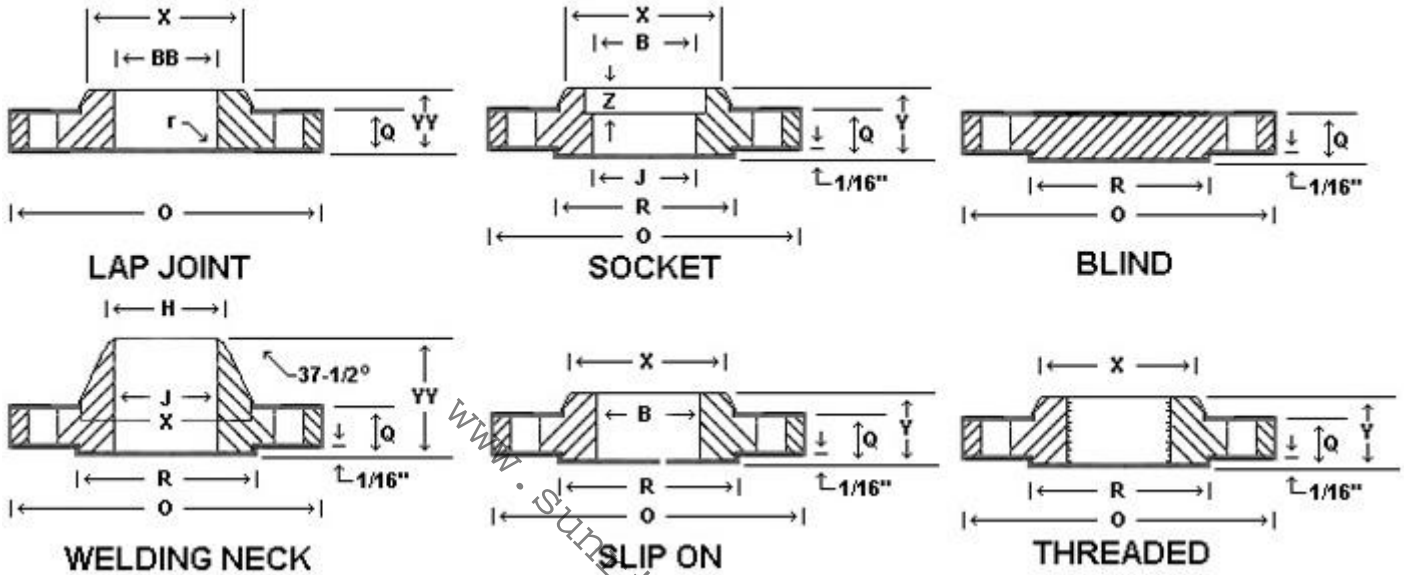


**Dimensions for Class 150 Flanges**

Pipe Size (inches)	O	Q	R	X	No. of Holes	Dia. of Bolt Holes	Bolt Circle Dia	YY	H	J	Y
1/2	88.9	11.2	35.1	30.2	4	15.7	60.5	47.8	21.3	15.7	15.7
3/4	98.6	12.7	42.9	38.1	4	15.7	69.9	52.3	26.7	20.8	15.7
1	108.0	14.2	50.8	49.3	4	15.7	79.2	55.6	33.5	26.7	17.5
1 1/4	117.3	15.7	63.5	58.7	4	15.7	88.9	57.2	42.2	35.1	20.6
1 1/2	127.0	17.3	73.2	65.0	4	15.7	98.6	62.0	48.3	40.9	22.4
2	152.4	19.1	91.9	77.7	4	19.1	120.7	63.5	60.5	52.6	25.4
2 1/2	177.8	22.4	104.6	90.4	4	19.1	139.7	69.9	73.2	62.7	28.4
3	190.5	23.9	127.0	108.0	4	19.1	152.4	69.9	88.9	78.0	30.2
3 1/2	215.9	23.9	139.7	122.2	8	19.1	177.8	71.4	101.6	90.2	31.8
4	228.6	23.9	157.2	134.9	8	19.1	190.5	76.2	114.3	102.4	33.3
5	254.0	23.9	185.7	163.6	8	22.4	215.9	88.9	141.2	128.3	36.6
6	279.4	25.4	215.9	192.0	8	22.4	241.3	88.9	168.4	154.2	39.6
8	342.9	28.4	269.7	246.1	8	22.4	298.5	101.6	219.2	202.7	44.5
10	406.4	30.2	323.9	304.8	12	25.4	362.0	101.6	273.1	254.5	49.3
12	482.6	31.8	381.0	365.3	12	25.4	431.8	114.3	323.9	304.8	55.6
14	533.4	35.1	412.8	400.1	12	28.4	476.3	127.0	355.6	To Be Specified by the	57.2
16	596.9	36.6	469.9	457.2	16	28.4	539.8	127.0	406.4		63.5
18	635.0	39.6	533.4	505.0	16	31.8	577.9	139.7	457.2		68.3

20	698.5	42.9	584.2	558.8	20	31.8	635.0	144.5	508.0	Purchaser	73.2
24	812.8	47.8	692.2	663.4	20	35.1	749.3	152.4	609.6		82.6

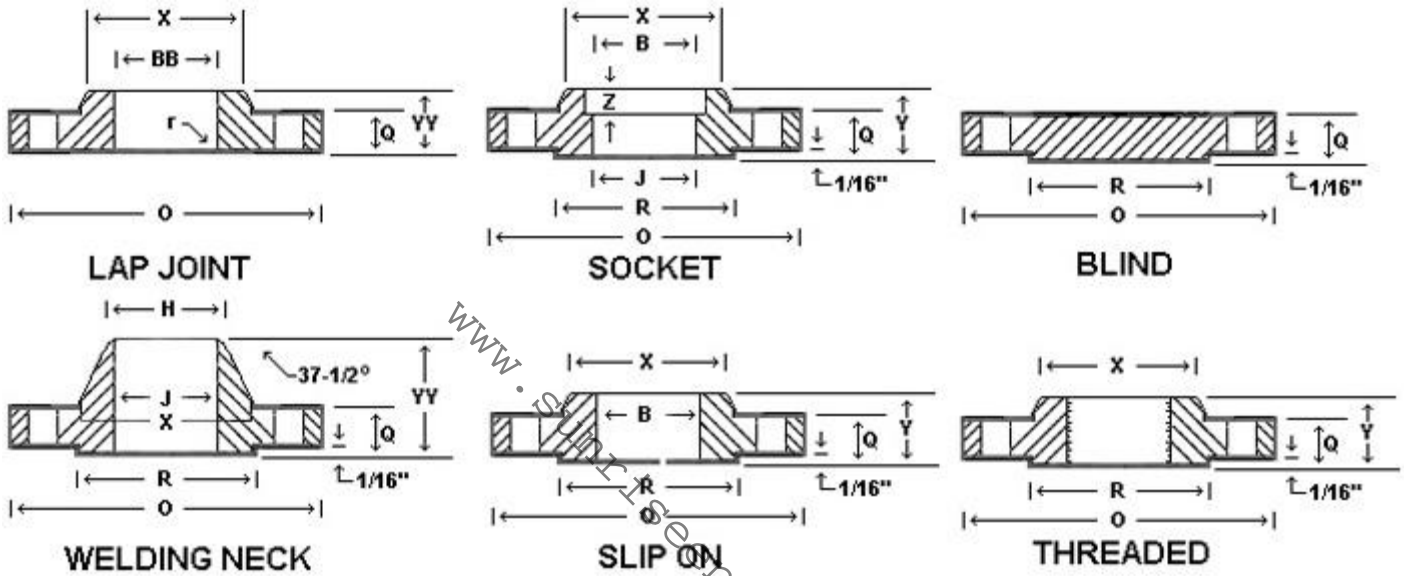
**DIMENSIONS OF CLASS 300 FLANGES AS PER ANSI B 16.5**



Nom. Pipe Size (inches)	O	Q*	R	X	No. of Holes	Dia of Bolt Holes	Bolt Circle Dia	YY*	H	J	Y*	B	R	YV
1/2	95.3	14.2	35	38.1	4	15.7	66.5	52.3	21.3	15.7	22.4	22.4	3.0	22.4
3/4	117.3	15.7	43	47.8	4	19.1	82.6	57.2	26.7	20.8	25.4	27.7	3.0	25.4
1	124.0	17.5	51	53.8	4	19.1	88.9	62.0	33.5	26.7	26.9	34.5	3.0	26.9
1 1/4	133.4	19.1	64	63.5	4	19.1	98.6	65.0	42.2	35.1	26.9	43.2	4.8	26.9
1 1/2	155.4	20.6	73	69.9	4	22.4	114.3	68.3	48.3	40.9	30.2	49.5	6.4	30.2
2	165.1	22.4	92	84.1	8	19.1	127.0	69.9	60.5	52.6	33.3	62.0	7.9	33.3
2 1/2	190.5	25.4	105	100.1	8	22.4	149.4	76.2	73.2	62.7	38.1	74.7	7.9	38.1
3	209.6	28.4	127	117.3	8	22.4	168.1	79.2	88.9	78.0	42.9	90.7	9.7	42.9
3 1/2	228.6	30.2	140	133.4	8	22.4	184.2	81.0	101.6	90.2	44.5	103.4	9.7	44.5
4	254.0	31.8	157	146.1	8	22.4	200.2	85.9	114.3	102.4	47.8	116.1	11.2	47.8
5	279.4	35.1	186	177.8	8	22.4	235.0	98.6	141.2	128.3	50.8	143.8	11.2	50.8
6	317.5	36.6	216	206.2	12	22.4	269.7	98.6	168.4	154.2	52.3	170.7	12.7	52.3
8	381.0	41.1	270	260.4	12	25.4	330.2	111.3	219.2	202.7	62.0	221.5	12.7	62.0
10	444.5	47.8	324	320.5	16	28.4	387.4	117.3	273.1	254.5	66.5	276.4	12.7	95.3
12	520.7	50.8	381	374.7	16	31.8	450.9	130.0	323.9	304.8	73.2	327.2	12.7	101.6
14	584.2	53.8	413	425.5	20	31.8	514.4	142.7	355.6	To Be	76.2	359.2	12.7	111.3

16	647.7	57.2	470	482.6	20	35.1	571.5	146.1	406.4	<b>To Specified by Purchaser</b>	82.6	410.5	12.7	120.7
18	711.2	60.5	533	533.4	24	35.1	628.7	158.8	457.2		88.9	461.8	12.7	130.0
20	774.7	63.5	584	587.2	24	35.1	685.8	162.1	508.0		95.3	513.1	12.7	139.7
24	914.4	69.9	692	701.5	24	41.1	812.8	168.1	609.6		106.4	616.0	12.7	152.4

**DIMENSIONS OF CLASS 600 FLANGES AS PER ANSI B 16.5**



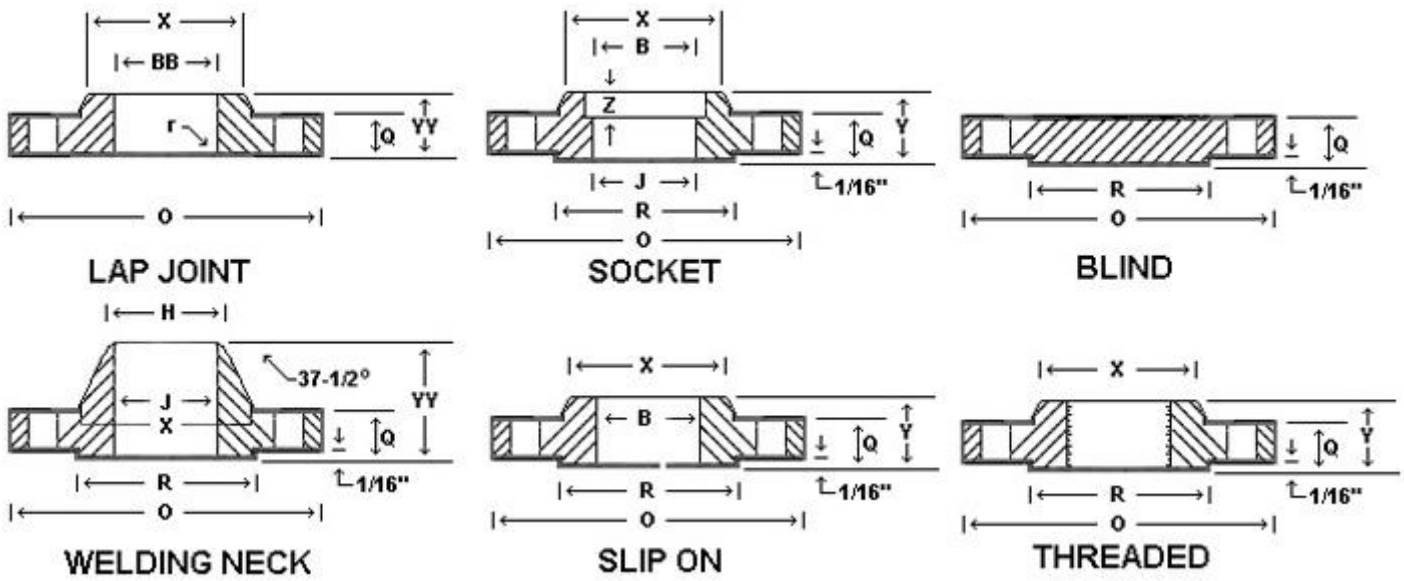
Nom. Pipe Size (inches)	O	Q*	R	X	No. OF HOLES	Bolt Holes	Bolt CIRCLE Dia	YY*	H	J	Y*	B	r	YV
1/2	95.3	14.2	35.1	38.1	4	15.7	66.5	52.3	21.3	<b>TO BE SPECIFIED BY THE PURCHASER</b>	22.4	22.4	3.0	22.4
3/4	117.3	15.7	42.9	47.8	4	19.1	82.6	57.2	26.7		25.4	27.7	3.0	25.4
1	124.0	17.5	50.8	53.8	4	19.1	88.9	62.0	33.5		26.9	34.5	3.0	26.9
1 1/4	133.4	20.6	63.5	63.5	4	19.1	98.6	66.5	42.2		28.4	43.2	4.8	28.4
1 1/2	155.4	22.4	73.2	69.9	4	22.4	114.3	69.9	48.3		31.8	49.5	6.4	31.8
2	165.1	25.4	91.9	84.1	8	19.1	127.0	73.2	60.5		36.6	62.0	7.9	36.6
2 1/2	190.5	28.4	104.6	100.1	8	22.4	149.4	79.2	73.2		41.1	74.7	7.9	41.1
3	209.6	31.8	127.0	117.3	8	22.4	168.1	82.6	88.9		46.0	90.7	9.7	46.0
3 1/2	228.6	35.1	139.7	133.4	8	25.4	184.2	85.9	101.6		49.3	103.4	9.7	49.3
4	254.0	35.1	157.2	146.1	8	25.4	200.2	88.9	114.3		50.8	116.1	11.2	50.8
5	279.4	38.1	185.7	177.8	8	25.4	235.0	101.6	141.2	53.8	143.8	11.2	53.8	
6	317.5	41.1	215.9	206.2	12	25.4	269.7	103.1	168.4	57.2	170.7	12.7	57.2	
8	381.0	47.8	269.7	260.4	12	28.4	330.2	117.3	219.2	68.3	221.5	12.7	68.3	
10	444.5	53.8	323.9	320.5	16	31.8	387.4	124.0	273.1	73.2	276.4	12.7	101.6	

12	520.7	57.2	381.0	374.7	16	35.1	450.9	136.7	323.9			79.2	327.2	12.7	108.0
14	584.2	60.5	412.8	425.5	20	35.1	514.4	149.4	355.6			84.1	359.2	12.7	117.3
16	647.7	63.5	469.9	482.6	20	38.1	571.5	152.4	406.4			93.7	410.5	12.7	127.0
18	711.2	66.5	533.4	533.4	24	38.1	628.7	165.1	457.2			98.6	461.8	12.7	136.7
20	774.7	69.9	584.2	587.2	24	41.1	685.8	168.1	508.0			101.6	513.1	12.7	146.1
24	914.4	76.2	692.2	701.5	24	47.8	812.8	174.8	609.6			114.3	616.0	12.7	158.8

#### DIMENSIONS OF CLASS 900 FLANGES AS PER ANSI B 16.5

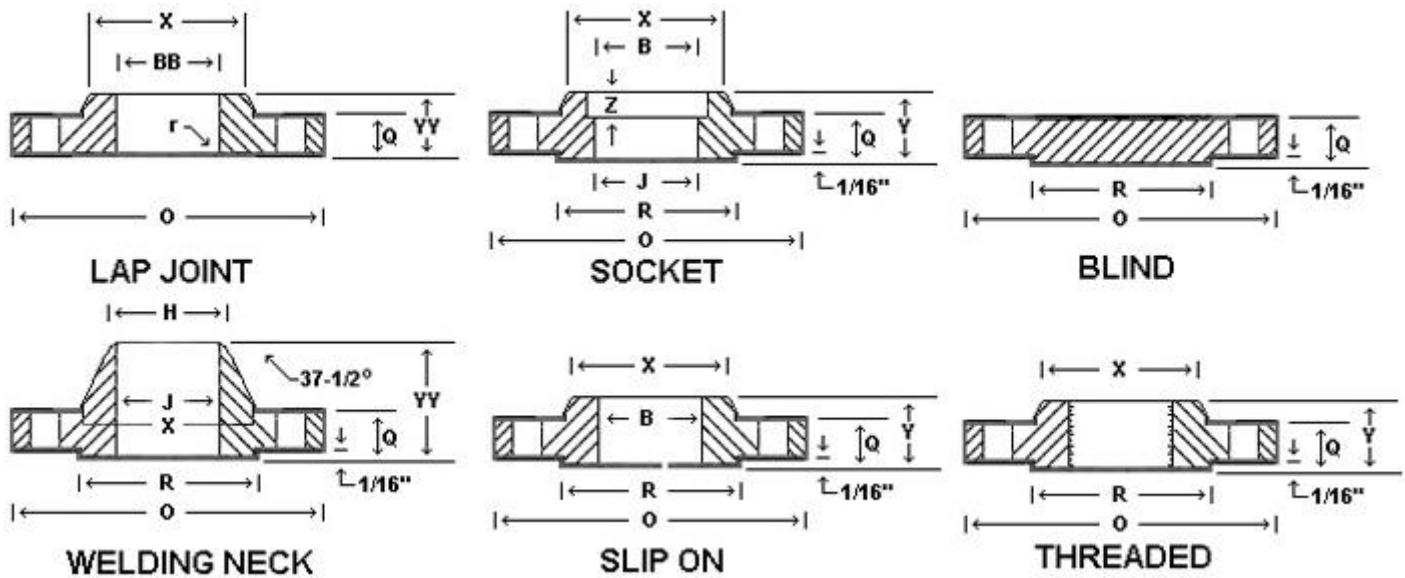
Nom. Pipe Size (inches)	O	Q*	R	X	No. of Holes	Dia of Bolt Holes	Bolt Circle Dia	YY*	H	J	Y*	B	r	YV
1/2	120.7	22.4	35.1	38.1	4	22.4	82.6	60.5	21.3	To Be Specified by the purchaser	31.8	22.4	3.0	31.8
3/4	130.0	25.4	42.9	44.5	4	22.4	88.9	69.9	26.7		35.1	27.7	3.0	35.1
1	149.4	28.4	50.8	52.3	4	25.4	101.6	73.2	33.5		41.1	34.5	3.0	41.1
1 1/4	158.8	28.4	63.5	63.5	4	25.4	111.3	73.2	42.2		41.1	43.2	4.8	41.1
1 1/2	177.8	31.8	73.2	69.9	4	28.4	124.0	82.6	48.3		44.5	49.5	6.4	44.5
2	215.9	38.1	91.9	104.6	8	25.4	165.1	101.6	60.5		57.2	62.0	7.9	57.2
2 1/2	244.3	41.1	104.6	124.0	8	28.4	190.5	104.6	73.2		63.5	74.7	7.9	63.5
3	241.3	38.1	127.0	127.0	8	25.4	190.5	101.6	88.9		53.8	90.7	9.7	53.8
4	292.1	44.5	157.2	158.8	8	31.8	235.0	114.3	114.3		69.9	116.1	11.2	69.9
5	349.3	50.8	185.7	190.5	8	35.1	279.4	127.0	141.2		79.2	143.8	11.2	79.2
6	381.0	55.6	215.9	235.0	12	31.8	317.5	139.7	168.4	85.9	170.7	12.7	85.9	
8	469.9	63.5	269.7	298.5	12	38.1	393.7	162.1	219.2	101.6	221.5	12.7	114.3	
10	546.1	69.9	323.9	368.3	16	38.1	469.9	184.2	273.1	108.0	276.4	12.7	127.0	
12	609.6	79.2	381.0	419.1	20	38.1	533.4	200.2	323.9	117.3	327.2	12.7	142.7	
14	641.4	85.9	412.8	450.9	20	41.1	558.8	212.9	355.6	130.0	359.2	12.7	155.4	
16	704.9	88.9	469.9	508.0	20	44.5	616.0	215.9	406.4	133.4	410.5	12.7	165.1	
18	787.4	101.6	533.4	565.2	20	50.8	685.8	228.6	457.2	152.4	461.8	12.7	190.5	
20	857.3	108.0	584.2	622.3	20	53.8	749.3	247.7	508.0	158.8	513.1	12.7	209.6	
24	1041.4	139.7	692.2	749.3	20	66.5	901.7	292.1	609.6	203.2	616.0	12.7	266.7	

#### DIMENSIONS OF CLASS 1500 FLANGES AS PER ANSI B 16.5



Nom. Pipe Size(inches)	O	Q*	R	X	No. of Holes	Dia of Bolt Holes	Bolt Circle Dia.	YY*	H	J	Y*
1/2	120.7	22.4	35.1	38.1	4	22.4	82.6	60.5	21.3	To Be Specified by purchaser	31.8
3/4	130.0	25.4	42.9	44.5	4	22.4	88.9	69.9	26.7		35.1
1	149.4	28.4	50.8	52.3	4	25.4	101.6	73.2	33.5		41.1
1 1/4	158.8	28.4	63.5	63.5	4	25.4	111.3	73.2	42.2		41.1
1 1/2	177.8	31.8	73.2	69.9	4	28.4	124.0	82.6	48.3		44.5
2	215.9	38.1	91.9	104.6	8	25.4	165.1	101.6	60.5		57.2
2 1/2	244.3	41.1	104.6	124.0	8	28.4	190.5	104.6	73.2		63.5
3	266.7	47.8	127.0	133.4	8	31.8	203.2	117.3	88.9		73.2
4	311.2	53.8	157.2	162.1	8	35.1	241.3	124.0	114.3		90.4
5	374.7	73.2	185.7	196.9	8	41.1	292.1	155.4	141.2		104.6
6	393.7	82.6	215.9	228.6	12	38.1	317.5	171.5	168.4		119.1
8	482.6	91.9	269.7	292.1	12	44.5	393.7	212.9	219.2		142.7
10	584.2	108.0	323.9	368.3	12	50.8	482.6	254.0	273.1		158.8
12	673.1	124.0	381.0	450.9	16	53.8	571.5	282.4	323.9		180.8
14	749.3	133.4	412.8	495.3	16	60.5	635.0	298.5	355.6		
16	825.5	146.1	469.9	552.5	16	66.5	704.9	311.2	406.4		
18	914.4	162.1	533.4	596.9	16	73.2	774.7	304.8	457.2		
20	984.3	177.8	584.2	641.4	16	79.2	831.9	355.6	508.0		
24	1168.4	203.2	692.2	762.0	16	91.9	990.6	406.4	609.6		

DIMENSIONS OF CLASS 2500 FLANGES AS PER ANSI B 16.5



Nom. Pipe Size(inches)	O	Q*	R	X	No. of Holes	Dia of Bolt Holes	Bolt circle Dia	YY*	H	J	Y*
1/2	133.4	30.2	35.1	42.9	4	22.4	88.9	73.2	21.3	To Be Specified by purchaser	39.6
3/4	139.7	31.8	42.9	50.8	4	22.4	95.3	79.2	26.7		42.9
1	158.8	35.1	50.8	57.2	4	25.4	108.0	88.9	33.5		47.8
1 1/4	184.2	38.1	63.5	73.2	4	28.4	130.0	95.3	42.2		52.3
1 1/2	203.2	44.5	73.2	79.2	4	31.8	146.1	111.3	48.3		60.5
2	235.0	50.8	91.9	95.3	8	28.4	171.5	127.0	60.5		69.9
2 1/2	266.7	57.2	104.6	114.3	8	31.8	196.9	142.7	73.2		79.2
3	304.8	66.5	127.0	133.4	8	35.1	228.6	168.1	88.9		91.9
4	355.6	76.2	157.2	165.1	8	41.1	273.1	190.5	114.3		108.0
5	419.1	91.9	185.7	203.2	8	47.8	323.9	228.6	141.2		130.0
6	482.6	108.0	215.9	235.0	8	53.8	368.3	273.1	168.4		152.4
8	552.5	127.0	269.7	304.8	12	53.8	438.2	317.5	219.2		177.8
10	673.1	165.1	323.9	374.7	12	66.5	539.8	419.1	273.1	228.6	
12	762.0	184.2	381.0	441.5	12	73.2	619.3	463.6	323.9	254.0	

B.S. 10 Table 'D'

Nominal pipe size (in mm)	Diameter of flange	Diameter of Bolt circle (PCD)	Number of Bolts	Diameter of Bolts	Thickness of Flange
mm	mm	mm	mm	mm	Mm
15	95	67	4	13	5

20	102	73	4	13	5
25	114	83	4	13	5
32	121	87	4	12	6
40	133	98	4	13	6
50	152	114	4	16	8
65	165	127	4	16	8
80	184	145	4	16	10
100	216	178	4	16	10
125	254	210	8	16	13
150	279	235	8	16	13
200	337	292	8	16	13
250	406	356	8	19	16
300	457	406	12	19	16
350	527	470	12	22	19
400	578	521	12	22	19
450	641	584	12	22	22
500	705	641	16	22	25
600	826	756	16	25	29

B.S. 10 Table 'E'

Nominal pipe size (in mm)	Diameter of flange	Diameter of Bolt circle (PCD)	Number of Bolts	Diameter of Bolts	Thickness of Flange
mm	mm	Mm	mm	mm	mm
15	95	67	4	13	10
20	102	73	4	13	10
25	121	87	4	16	10
32	133	98	4	16	13
40	140	105	4	16	13
50	165	127	4	16	16
65	184	145	8	16	16
80	203	165	8	16	16
100	229	191	8	16	19
125	279	235	8	19	22
150	305	260	12	19	22
200	368	324	12	19	25
250	432	381	12	22	25
300	489	438	16	22	29
350	552	495	16	25	32
400	610	552	20	25	32
450	673	610	20	29	35
500	737	673	24	29	38
600	851	781	24	32	38

B.S. 10 Table 'F'

Nominal pipe size (in mm)	Diameter of flange	Diameter of Bolt circle (PCD)	Number of Bolts	Diameter of Bolts	Thickness of Flange
mm	mm	Mm	mm	mm	mm
15	95	67	4	13	6
20	102	73	4	13	6
25	114	83	4	13	7
32	121	87	4	13	8
40	133	98	4	13	9
50	152	114	4	16	10
65	165	127	4	16	10
80	184	145	4	16	11
100	216	178	4	16	13
125	254	210	8	16	14
150	279	235	8	19	17
200	337	292	8	19	19
250	406	356	8	19	22
300	457	406	12	22	25
350	527	470	12	22	25
400	578	521	12	22	25
450	641	584	12	22	29
500	705	641	16	22	32
600	826	756	16	25	38

B.S. 10 Table 'H'

Nominal pipe size (in mm)	Diameter of flange	Diameter of Bolt circle (PCD)	Number of Bolts	Diameter of Bolts	Thickness of Flange
mm	mm	Mm	mm	mm	mm
15	114	83	4	16	13
20	114	83	4	16	13
25	121	87	4	16	14
32	133	98	4	16	17
40	140	105	4	16	17
50	165	127	4	16	19
65	184	145	8	16	19
80	203	165	8	16	22
100	229	191	8	16	25
125	279	235	8	19	29
150	305	260	12	19	29
200	368	324	12	19	32
250	432	381	12	22	35
300	489	438	16	22	38
350	552	495	16	25	41
400	610	552	20	25	44
450	673	610	20	29	48



500	737	673	24	29	51
600	851	781	24	32	57

ND-10

Nominal pipe size (in mm)	Flange Diameter mm	Flange Thickness	Raised Face		Number of holes	Diameter of holes mm
			Diameter mm	Height mm		
15	95	14	45	2	4	14
20	105	16	58	2	4	14
25	115	16	68	2	4	14
32	140	18	78	2	4	16
40	150	18	88	3	4	18
50	165	20	102	3	4	18
65	185	20	122	3	4	18
80	200	22	138	3	4	18
100	220	22	158	3	8	18
125	250	24	188	3	8	18
150	285	24	212	3	8	23
200	340	26	268	3	8	23
250	395	28	320	3	12	23
300	445	28	370	4	12	23

ND-16

Nominal pipe size (in mm)	Flange Diameter mm	Flange Thickness	Raised Face		Number of holes	Diameter of holes mm
			Diameter mm	Height mm		
15	95	14	45	2	4	14
20	105	15	58	2	4	14
25	115	16	68	2	4	14
32	140	16	78	2	4	18
40	150	16	88	3	4	18
50	165	18	102	3	4	18
65	185	18	122	3	4	18
80	200	20	138	3	8	18
100	220	20	158	3	8	18
125	250	22	188	3	8	18
150	285	22	212	3	8	23
200	340	24	268	3	8	23
250	405	26	320	3	12	27
300	460	28	378	4	12	27

ND-40

Nominal pipe size (in mm)	Flange Diameter mm	Flange Thickness	Raised Face		Number of holes	Diameter of holes mm
			Diameter mm	Height mm		
15	95	16	45	2	4	14
20	105	18	58	2	4	14
25	115	18	68	2	4	14
32	140	18	78	2	4	18
40	150	18	88	3	4	18
50	165	20	102	3	4	18
65	185	22	122	3	8	18
80	200	24	138	3	8	18
100	235	24	162	3	8	23
125	270	26	188	3	8	27
150	300	28	218	3	8	27
200	375	34	285	3	12	30
250	450	38	345	3	12	33
300	515	42	410	4	16	33

IS-1538

Nominal pipe size (in mm)	Flange Diameter mm	PCD	Holes		Thickness
			Number	Diameter	
mm	mm	mm	mm	mm	mm
80	200	150	4	19	21
100	220	180	8	19	22
125	250	210	8	19	22.5
150	285	250	8	23	23
200	340	295	8	23	24.5
250	395	350	12	23	26
300	445	400	12	23	27.5