



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

ANSI, ASME B16.5 150lb/sq.in. Threaded Flange NPT											
Pipe		Flange Data				Hub Data	Raised Face	Drilling Data			Weight
Nominal Size		A	C	D	E	F	G	H	I	J	Kg/Piece
	Outside Dia	Overall Dia	Flange Thickness min	Overall Length	Threaded Length min	Hub Dia	Face Dia	Number of Holes	Bolt Hole Dia	Dia of Circle of Holes	
	In Mm	In Mm	In Mm	In Mm	In Mm	In Mm	In Mm		In Mm	In Mm	
½	0.84	3.50	0.440	0.620	0.620	1.190	1.38	4	0.62	2.38	0.39
	21.3	88.90	11.20	15.70	15.70	30.20	35.10		15.7	60.45	
¾	1.05	3.88	0.500	0.620	0.620	1.500	1.69	4	0.62	2.75	0.56
	26.7	98.60	12.70	15.70	15.70	38.10	42.9		15.7	69.85	
1	1.315	4.25	0.560	0.690	0.690	1.940	2	4	0.62	3.12	0.78
	33.4	108.00	14.20	17.50	17.50	49.30	50.8		15.7	79.25	
1 ¼	1.66	4.62	0.620	0.810	0.810	2.310	2.5	4	0.62	3.50	1.03
	42.2	117.30	15.70	20.60	20.60	58.70	63.5		15.7	88.90	
1 ½	1.9	5.00	0.690	0.880	0.880	2.560	2.88	4	0.62	3.88	1.32
	48.3	127.00	17.50	22.40	22.40	65.00	73.15		15.7	98.60	
2	2.375	6.00	0.750	1.000	1.000	3.060	3.62	4	0.75	4.75	2.06
	60.3	152.40	19.10	25.40	25.40	77.70	91.9		19.10	120.70	
2 ½	2.875	7.00	0.880	1.120	1.120	3.560	4.12	4	0.75	5.50	3.28
	73	177.80	22.40	28.40	28.40	90.40	104.6		19.10	139.70	
3	3.5	7.50	0.940	1.190	1.190	4.250	5	4	0.75	6.00	3.85
	88.9	190.50	23.90	30.20	30.20	108.00	127		19.10	152.40	
3 ½	4	8.50	0.940	1.250	1.250	4.810	5.5	8	0.75	7.00	4.81
	101.6	215.90	23.90	31.75	31.75	122.20	139.7		19.10	177.80	
4	4.5	9.00	0.940	1.310	1.310	5.310	6.19	8	0.75	7.50	5.30
	114.3	228.60	23.90	33.30	33.30	134.90	157.2		19.10	190.50	
5	5.563	10.00	0.940	1.440	1.440	6.440	7.31	8	0.88	8.50	6.07
	141.3	254.00	23.90	36.60	36.60	163.60	185.7		22.40	215.90	
6	6.625	11.00	1.000	1.560	1.560	7.560	8.5	8	0.88	9.50	7.45
	168.3	279.40	25.40	39.60	39.60	192.00	215.9		22.40	241.30	
8	8.625	13.50	1.120	1.750	1.750	9.690	10.62	8	0.88	11.75	12.10
	219.1	342.90	28.40	44.50	44.50	246.10	269.7		22.40	298.50	
10	10.75	16.00	1.190	1.940	1.940	12.00	12.75	12	1.00	14.25	16.50
	273	406.40	30.20	49.30	49.30	304.80	323.8		25.40	362.00	



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

12	12.75	19.00	1.250	2.190	2.190	14.380	15	12	1.00	17.00	26.20
	323.8	482.60	31.75	55.60	55.60	365.30	381		25.40	431.80	
14	14	21.00	1.380	2.250	2.250	15.750	16.25	12	1.12	18.75	34.60
	355.6	533.40	35.10	57.15	57.15	400.10	412.7		28.40	476.30	
16	16	23.50	1.440	2.500	2.500	18.00	18.5	16	1.12	21.25	44.80
	406.4	596.90	36.60	63.50	63.50	457.20	469.9		28.40	539.80	
18	18	25.00	1.560	2.690	2.690	19.880	21	16	1.25	22.75	48.90
	457.2	635.00	39.60	68.30	68.30	505.00	533.4		31.75	577.90	
20	20	27.50	1.690	2.880	2.880	22.00	23	20	1.25	25.00	61.90
	508	698.50	42.90	73.15	73.15	558.80	584.2		31.75	635.00	
24	24	32.00	1.880	3.250	3.250	26.120	27.25	20	1.38	29.50	86.90
	609.6	812.80	47.80	82.60	82.60	663.40	692.1		35.10	749.30	

NOTE:

1. The thread conforms to ASME B1.20.1 NTP threads as described in Section 10. (The only exceptions are small male and female plain face threaded flanges which use NPSL recount threads.)
2. Class 150 threaded flanges are made without a counterbore. Threads are chamfered to the major diameter (approx.) at an angle of 45° (approx.) at the back of the flange.
3. Weights are based on manufacturer's data and are approximate.
4. For tolerances +0.5mm.

ANSI, ASME B16.5 300lb/sq.in. Threaded Flange NPT

Pipe		Flange Data					Hub Data	Raised Face	Drilling Data			Weight
Nominal Size	Outside Dia	A	B	C	D	E	F	G	H	I	J	Kg/ Piece
		Overall Dia	Counter Bore	Flange Thickness min	Overall Length	Threaded Length min	Hub Dia	Face Dia	Number of Holes	Bolt Hole Dia	Dia of Circle of Holes	
		In Mm	In Mm	In Mm	In Mm	In Mm	In Mm	In Mm		In Mm	In Mm	
½	0.84	3.75	0.93	0.56	0.88	0.62	1.5	1.38	4	0.62	2.62	0.64
	21.3	95.3	23.6	14.2	22.3	15.7	38.1	35		15.7	66.55	
¾	1.05	4.62	1.14	0.62	1	0.62	1.88	1.69	4	0.75	3.25	1.12
	26.7	117.3	29	15.7	25.4	15.7	42.7	42.9		19	82.5	
1	1.315	4.88	1.41	0.69	1.06	0.69	2.12	2	4	0.75	3.5	1.36
	33.4	124	35.8	17.5	26.9	17.5	53.8	50.8		19	88.9	



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

1 ¼	1.66	5.25	1.75	0.75	1.06	0.81	2.5	2.5	4	0.75	3.88	1.68
	42.2	133.4	44.4	19	26.9	20.6	63.5	63.5		19	98.5	
1 ½	1.9	6.12	1.99	0.81	1.19	0.88	2.75	2.88	4	0.88	4.5	2.49
	48.3	155.4	50.5	20.6	30.2	22.3	69.85	73.15		22.3	114.3	
2	2.375	6.5	2.5	0.88	1.31	1.12	3.31	3.62	8	0.75	5	2.87
	60.3	165.1	63.5	22.3	33.2	28.4	84	91.9		19	127	
2 ½	2.875	7.5	3	1	1.5	1.25	3.94	4.12	8	0.88	5.88	4.32
	73	190.5	76.2	25.4	38.1	31.7	100	104.6		22.3	149.3	
3	3.5	8.25	3.63	1.12	1.69	1.25	4.62	5	8	0.88	6.62	5.85
	88.9	209.6	92.2	28.4	42.9	31.7	117.3	127		22.3	168.1	
3 ½	4	9	4.13	1.19	1.75	1.44	5.25	5.5	8	0.88	7.25	7.34
	101.6	228.6	104.9	30.2	44.4	36.5	133.3	139.7		22.3	184.1	
4	4.5	10	4.63	1.25	1.88	1.44	5.75	6.19	8	0.88	7.88	9.61
	114.3	254	117.6	31.7	47.7	36.5	146	157.2		22.3	200.1	
5	5.563	11	5.69	1.38	2	1.69	7	7.31	8	0.88	9.25	12.3
	141.3	279.4	144.5	35	50.8	42.9	177.8	185.7		22.3	234.9	
6	6.625	12.5	6.75	1.44	2.06	1.81	8.12	8.5	12	0.88	10.62	15.6
	168.3	317.5	171.4	36.5	52.3	45.9	206.2	215.9		22.3	269.7	
8	8.625	15	8.75	1.62	2.44	2	10.25	10.62	12	1	13	24.2
	219.1	381	222.3	41.1	61.9	50.8	260.3	269.7		25.4	330.2	
10	10.75	17.5	10.88	1.88	2.62	2.19	12.62	12.75	16	1.12	15.25	34.1
	273	444.5	276.3	47.7	66.55	55.6	320.5	323.8		28.4	387.3	
12	12.75	20.5	12.94	2	2.88	2.38	14.75	15	16	1.25	17.75	49.8
	323.8	520.7	328.7	50.8	73.15	60.45	374.6	381		31.7	450.8	
14	14	23	14.19	2.12	3	2.5	16.75	16.25	20	1.25	20.25	69.9
	355.6	584.2	360.4	53.8	76.2	63.5	425.4	412.7		31.7	514.3	



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

16	16	25.5	16.19	2.25	3.25	2.69	19	18.5	20	1.38	22.5	88.1
	406.4	647.7	411.2	57.15	82.5	68.3	482.6	469.9		35	571.5	
18	18	28	18.19	2.38	3.5	2.75	21	21	24	1.38	24.75	109
	457.2	711.2	462	60.45	88.9	69.85	533.4	533.4		35	628.6	
20	20	30.5	20.19	2.5	3.75	2.88	23.12	23	24	1.38	27	134
	508	774.7	512.8	63.5	95.2	73.15	587.2	584.2		35	685.8	
24	24	36	24.19	2.75	4.19	3.25	27.62	27.25	24	1.62	32	201
	609.6	914.4	614.4	69.85	106.4	82.5	701.5	692.1		41.1	812.8	

NOTE:

1. Class 300 flanges except Lap Joint will be furnished with 0.06 (1.6mm) raised face, which is included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
2. For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.
3. Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
4. The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (C).
5. Depth of Socket (D) is covered by ANSI B 16.5 only in sizes through 3 inch, over 3 inch is at the manufacturer's option.

ANSI, ASME B16.5 600lb/sq.in. Threaded Flange NPT															
Pipe		Flange Data					Hub Data	Raised Face	Drilling Data			Weight			
Nominal Size	Outside Dia	A	B	C	D	E	F	G	H	I	J	Kg/ Piece			
		Overall Dia	Counter Bore	Flange Thickness min	Overall Length	Threaded Length min	Hub Dia	Face Dia					Number of Holes	Bolt Hole Dia	Dia of Circle of Holes
		In Mm	In Mm	In Mm	In Mm	In Mm	In Mm	In Mm							
½	0.84	3.75	0.93	0.56	0.88	0.62	1.5	1.38	4	0.62	2.62	0.74			
	21.3	95.3	23.6	14.2	22.4	15.7	38.1	35		15.7	66.55				
¾	1.05	4.62	1.14	0.62	1	0.62	1.88	1.69	4	0.75	3.25	1.27			
	26.7	117.3	29	15.7	25.4	15.7	47.8	42.9		19.1	82.6				



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

1	1.315	4.88	1.41	0.69	1.12	0.69	2.12	2	4	0.75	3.5	1.52
	33.4	124	35.8	17.5	28.4	17.5	53.8	50.8		19.1	88.9	
1 ¼	1.66	5.25	1.75	0.81	1.12	0.81	2.5	2.5	4	0.75	3.88	2.03
	42.2	133.4	44.4	20.6	28.4	20.6	63.5	63.5		19.1	98.6	
1 ½	1.9	6.12	1.99	0.88	1.25	0.88	2.75	2.88	4	0.88	4.5	2.96
	48.3	155.4	50.5	22.4	31.75	22.4	69.85	73.15		22.4	114.3	
2	2.375	6.5	2.5	1	1.44	1.12	3.31	3.62	8	0.75	5	3.62
	60.3	165.1	63.5	25.4	36.6	28.4	84.1	91.9		19.1	127	
2 ½	2.875	7.5	3	1.12	1.62	1.25	3.94	4.12	8	0.88	5.88	5.28
	73	190.5	76.2	28.4	41.1	31.75	100.1	104.6		22.4	149.4	
3	3.5	8.25	3.63	1.25	1.81	1.38	4.62	5	8	0.88	6.62	7
	88.9	209.6	92.2	31.75	46	35.1	117.3	127		22.4	168.1	
3 ½	4	9	4.13	1.38	1.94	1.56	5.25	5.5	8	1	7.25	8.84
	101.6	228.6	104.9	35.1	49.3	39.6	133.4	139.7		25.4	184.2	
4	4.5	10.75	4.63	1.5	2.12	1.62	6	6.19	8	1	8.5	14.5
	114.3	273.1	117.6	38.1	53.8	41.1	152.4	157.2		25.4	215.9	
5	5.563	13	5.69	1.75	2.38	1.88	7.44	7.31	8	1.12	10.5	24.4
	141.3	330.2	144.5	44.5	60.45	47.8	189	185.7		28.4	266.7	
6	6.625	14	6.75	1.88	2.62	2	8.75	8.5	12	1.12	11.5	28.7
	168.3	355.6	171.4	47.8	66.55	50.8	222.3	215.9		28.4	292.1	
8	8.625	16.5	8.75	2.19	3	2.25	10.75	10.62	12	1.25	13.75	43.4
	219.1	419.1	222.3	55.6	76.2	57.15	273.1	269.7		31.75	349.3	
10	10.75	20	10.88	2.5	3.38	2.56	13.5	12.75	16	1.38	17	70.3
	273	508	276.3	63.5	85.9	65	342.9	323.8		35.1	431.8	
12	12.75	22	12.94	2.62	3.62	2.75	15.75	15	20	1.38	19.25	84.2
	323.8	558.8	328.7	66.55	91.9	69.85	400.1	381		35.1	489	
14	14	23.75	14.19	2.75	3.69	2.88	17	16.25	20	1.5	20.75	98.7



TSM Technology Co., Ltd.
 5th Keji Road, Gaoxin District, Xi'an City, China
 Tel: 0086 29 87547434
 Fax: 0086 29 87547434

	355.6	603.3	360.4	69.85	93.7	73.15	431.8	412.7		38.1	527.1	
16	16	27	16.19	3	4.19	3.06	19.5	18.5	20	1.62	23.75	142
	406.4	685.8	411.2	76.2	106.4	77.7	495.3	469.9		41.1	603.3	
18	18	29.25	18.19	3.25	4.62	3.12	21.5	21	20	1.75	25.75	173
	457.2	743	462	82.6	117.3	79.25	546.1	533.4		44.5	654.1	
20	20	32	20.19	3.5	5	3.25	24	23	24	1.75	28.5	220
	508	812.8	512.8	88.9	127	82.6	609.6	584.2		44.5	723.9	
24	24	37	24.19	4	5.5	3.62	28.25	27.25	24	2	33	312
	609.6	939.8	614.4	101.6	139.7	91.9	717.6	692.1		50.8	838.2	

NOTE:

1. Class 600 flanges except Lap Joint will be furnished with 0.06 (1.6mm) raised face, which is included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
2. For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.
3. Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
4. The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (C).
5. Depth of Socket (D) is covered by ANSI B 16.5 only in sizes through 3 inch, over 3 inch is at the manufacturer's option.