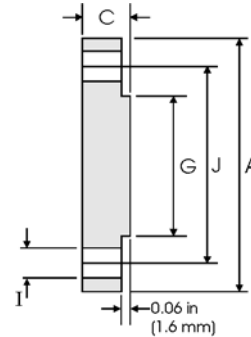
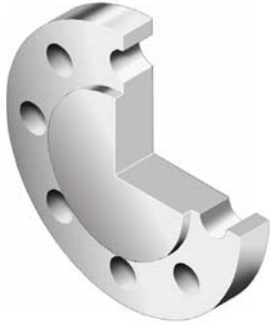


Blind Flanges - ANSI B16.5



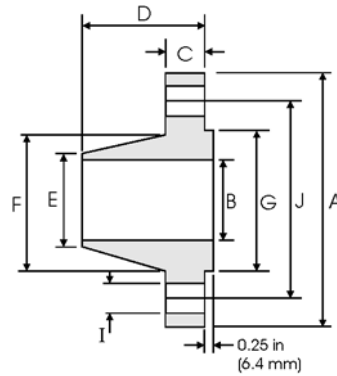
Class 150 lb

Nominal Pipe Size	Pipe	Flange Data			Raised Face	Drilling Data			Weight
		A	C	G	H	I	J		
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece	
in mm	in mm	in mm	in mm	in mm		in mm			
1/2	0.840	3.500	0.440	1.380	4	0.620	2.380	0.42	
	21.30	88.90	11.20	35.10		15.70	60.45		
3/4	1.050	3.880	0.500	1.690	4	0.620	2.750	0.61	
	26.70	98.60	12.70	42.90		15.70	69.85		
1	1.315	4.250	0.560	2.000	4	0.620	3.120	0.86	
	33.40	108.0	14.20	50.80		15.70	79.25		
1 1/4	1.660	4.620	0.620	2.500	4	0.620	3.500	1.17	
	42.20	117.3	15.70	63.50		15.70	88.90		
1 1/2	1.900	5.000	0.690	2.880	4	0.620	3.880	1.53	
	48.30	127.0	17.50	73.15		15.70	98.60		
2	2.375	6.000	0.750	3.620	4	0.750	4.750	2.42	
	60.30	152.4	19.10	91.90		19.10	120.7		
2 1/2	2.875	7.000	0.880	4.120	4	0.750	5.500	3.94	
	73.00	177.8	22.40	104.6		19.10	139.7		
3	3.500	7.500	0.940	5.000	4	0.750	6.000	4.93	
	88.90	190.5	23.90	127.0		19.10	152.4		
3 1/2	4.000	8.500	0.940	5.500	8	0.750	7.000	6.17	
	101.6	215.9	23.90	139.7		19.10	177.8		
4	4.500	9.000	0.940	6.190	8	0.750	7.500	7.00	
	114.3	228.6	23.90	157.2		19.10	190.5		
5	5.563	10.00	0.940	7.310	8	0.880	8.500	8.63	
	141.3	254.0	23.90	185.7		22.40	215.9		
6	6.625	11.00	1.000	8.500	8	0.880	9.500	11.3	
	168.3	279.4	25.40	215.9		22.40	241.3		
8	8.625	13.50	1.120	10.62	8	0.880	11.75	19.6	
	219.1	342.9	28.40	269.7		22.40	298.5		
10	10.75	16.00	1.190	12.75	12	1.000	14.25	28.8	
	273.0	406.4	30.20	323.9		25.40	362.0		
12	12.75	19.00	1.250	15.00	12	1.000	17.00	43.2	
	323.8	482.6	31.75	381.0		25.40	431.8		
14	14.00	21.00	1.380	16.25	12	1.120	18.75	58.1	
	355.6	533.4	35.10	412.8		28.40	476.3		
16	16.00	23.50	1.440	18.50	16	1.120	21.25	76.0	
	406.4	596.9	36.60	469.9		28.40	539.8		
18	18.00	25.00	1.560	21.00	16	1.250	22.75	93.7	
	457.2	635.0	39.60	533.4		31.75	577.9		
20	20.00	27.50	1.690	23.00	20	1.250	25.00	122	
	508.0	698.5	42.90	584.2		31.75	635.0		
24	24.00	32.00	1.880	27.25	20	1.380	29.50	185	
	609.6	812.8	47.80	692.2		35.10	749.3		



Notes

- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



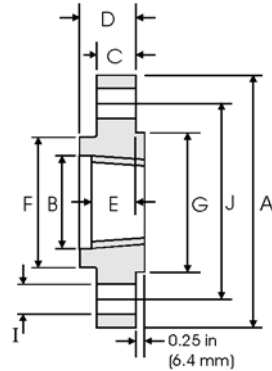
Class 2500 lb

Nominal Pipe Size	Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	5.250	To be specified by Purchaser	1.190	2.880	0.840	1.690	1.380	4	0.880	3.500	3.12	
	21.30	133.4		30.20	73.15	21.30	42.90	35.00		22.40	88.90		
3/4	1.050	5.500		1.250	3.120	1.050	2.000	1.690	4	0.880	3.750	3.70	
	26.70	139.7		31.75	79.25	26.70	50.80	42.90		22.40	95.30		
1	1.315	6.250		1.380	3.500	1.320	2.250	2.000	4	1.000	4.250	5.24	
	33.40	158.8		35.10	88.90	33.50	57.15	50.80		25.40	108.0		
1 1/4	1.660	7.250		1.500	3.750	1.660	2.880	2.500	4	1.120	5.120	7.74	
	42.20	184.2		38.10	95.30	42.20	73.15	63.50		28.40	130.0		
1 1/2	1.900	8.000		1.750	4.380	1.900	3.120	2.880	4	1.250	5.750	10.9	
	48.30	203.2		44.50	111.3	48.30	79.25	73.15		31.75	146.1		
2	2.375	9.250		2.000	5.000	2.380	3.750	3.620	8	1.120	6.750	16.2	
	60.30	235.0		50.80	127.0	60.45	95.30	91.90		28.40	171.5		
2 1/2	2.875	10.50	2.250	5.620	2.880	4.500	4.120	8	1.250	7.750	23.7		
	73.00	266.7	57.15	142.7	73.15	114.3	104.6		31.75	196.9			
3	3.500	12.00	2.620	6.620	3.500	5.250	5.000	8	1.380	9.000	36.2		
	88.90	304.8	66.55	168.1	88.90	133.4	127.0		35.10	228.6			
4	4.500	14.00	3.000	7.500	4.500	6.500	6.190	8	1.620	10.75	55.3		
	114.3	355.6	76.20	190.5	114.3	165.1	157.2		41.10	273.1			
5	5.563	16.50	3.620	9.000	5.560	8.000	7.310	8	1.880	12.75	92.5		
	141.3	419.1	91.90	228.6	141.2	203.2	185.7		47.80	323.9			
6	6.625	19.00	4.250	10.75	6.630	9.250	8.500	8	2.120	14.50	143		
	168.3	482.6	108.0	273.1	168.4	235.0	215.9		53.80	368.3			
8	8.625	21.75	5.000	12.50	8.630	12.00	10.62	12	2.120	17.25	215		
	219.1	552.5	127.0	317.5	219.2	304.8	269.7		53.80	438.2			
10	10.75	26.50	6.500	16.50	10.75	14.75	12.75	12	2.620	21.25	406		
	273.0	673.1	165.1	419.1	273.0	374.7	323.8		66.55	539.8			
12	12.75	30.00	7.250	18.25	12.75	17.38	15.00	12	2.880	24.38	572		
	323.8	762.0	184.2	463.6	323.8	441.5	381.0		73.15	619.3			

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



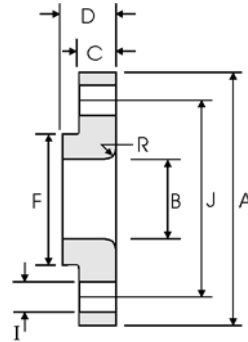
Class 2500 lb

Nominal Pipe Size	Pipe	Flange Data					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter in mm	Overall Diameter in mm	Counter-bore min in mm	Flange Thickness min in mm	Overall Length in mm	Threaded length min in mm	Hub Diameter in mm	Face Diameter in mm	Number of Holes	Bolt Hole Diameter in mm	Diameter of Circle of Holes in mm	kg/piece
1/2	0.840	5.250	0.930	1.190	1.560	1.120	1.690	1.380	4	0.880	3.500	2.95
	21.30	133.4	23.60	30.20	39.60	28.40	42.90	35.10				
3/4	1.050	5.500	1.140	1.250	1.690	1.250	2.000	1.690	4	0.880	3.750	3.44
	26.70	139.7	29.00	31.75	42.90	31.75	50.80	42.90				
1	1.315	6.250	1.410	1.380	1.880	1.380	2.250	2.000	4	1.000	4.250	4.82
	33.40	158.8	35.80	35.10	47.80	35.10	57.15	50.80				
1 1/4	1.660	7.250	1.750	1.500	2.060	1.500	2.880	2.500	4	1.120	5.120	7.14
	42.20	184.2	44.50	38.10	52.30	38.10	73.15	63.50				
1 1/2	1.900	8.000	1.990	1.750	2.380	1.750	3.120	2.880	4	1.250	5.750	10.0
	48.30	203.2	50.50	44.50	60.45	44.50	79.25	73.15				
2	2.375	9.250	2.500	2.000	2.750	2.000	3.750	3.620	8	1.120	6.750	14.8
	60.30	235.0	63.50	50.80	69.85	50.80	95.30	91.90				
2 1/2	2.875	10.50	3.000	2.250	3.120	2.250	4.500	4.120	8	1.250	7.750	21.5
	73.00	266.7	76.20	57.15	79.25	57.15	114.3	104.6				



Notes

- 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 locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



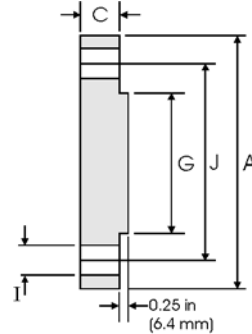
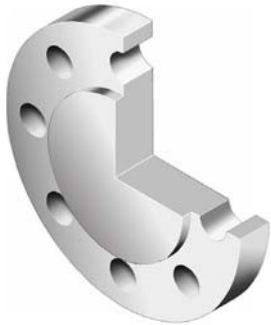
Class 2500 lb

Nominal Pipe Size	Pipe	Flange Data				Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	5.255	0.900	1.190	1.560	0.120	1.690	4	0.880	3.500	2.92
	21.30	133.4	22.90	30.20	39.60	3.000	42.90		22.40	88.90	
3/4	1.050	5.500	1.110	1.250	1.690	0.120	2.000	4	0.880	3.750	3.40
	26.70	139.7	28.20	31.75	42.90	3.000	50.80		22.40	95.30	
1	1.315	6.250	1.380	1.380	1.880	0.120	2.250	4	1.000	4.250	4.77
	33.40	158.8	35.10	35.10	47.80	3.000	57.15		25.40	108.0	
1 1/4	1.660	7.250	1.720	1.500	2.060	0.190	2.880	4	1.120	5.120	7.08
	42.20	184.2	43.70	38.10	52.30	4.800	73.15		28.40	130.0	
1 1/2	1.900	8.000	1.970	1.750	2.380	0.250	3.120	4	1.250	5.750	9.93
	48.30	203.2	50.00	44.50	60.45	6.400	79.25		31.75	146.1	
2	2.375	9.250	2.460	2.000	2.750	0.310	3.750	8	1.120	6.750	14.7
	60.30	235.0	62.50	50.80	69.85	7.900	95.30		28.40	171.5	
2 1/2	2.875	10.50	2.970	2.250	3.120	0.310	4.500	8	1.250	7.750	21.3
	73.00	266.7	75.40	57.15	79.25	7.900	114.3		31.75	196.9	
3	3.500	12.00	3.600	2.620	3.620	0.380	5.250	8	1.380	9.000	32.3
	88.90	304.8	91.40	66.55	91.90	9.700	133.4		35.10	228.6	
4	4.500	14.00	4.600	3.000	4.250	0.440	6.500	8	1.620	10.75	52.5
	114.3	355.6	116.8	76.20	108.0	11.20	165.1		41.10	273.1	
5	5.563	16.50	5.690	3.620	5.120	0.440	8.000	8	1.880	12.75	82.6
	141.3	419.1	114.5	91.90	130.0	11.20	203.2		47.80	323.9	
6	6.625	19.00	6.750	4.250	6.000	0.500	9.250	8	2.120	14.50	127
	168.3	482.6	171.5	108.0	152.4	12.70	235.0		53.80	368.3	
8	8.625	21.75	8.750	5.000	7.000	0.500	12.00	12	2.120	17.25	186
	219.1	552.5	222.3	127.0	177.8	12.70	304.8		53.80	438.2	
10	10.75	26.50	10.92	6.500	9.000	0.500	14.75	12	2.620	21.25	352
	273.0	673.1	277.4	165.1	228.6	12.70	374.7		66.55	539.8	
12	12.75	30.00	12.92	7.250	10.00	0.500	17.38	12	2.880	24.38	501
	323.8	762.0	328.2	184.2	254.0	12.70	441.5		73.15	619.3	

Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



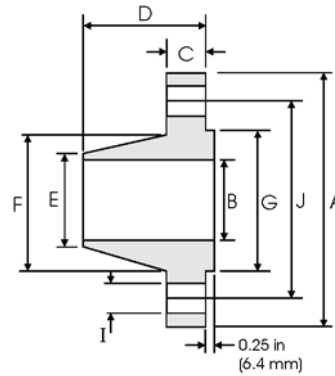
Class 2500 lb

Nominal Pipe Size	Pipe	Flange Data			Raised Face	Drilling Data			Weight
		A	C	G	H	I	J		
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece	
	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	5.250	1.190	1.380	4	0.880	3.500	2.99	
	21.30	133.4	30.20	35.10		22.40	88.90		
3/4	1.050	5.500	1.250	1.690	4	0.880	3.750	3.50	
	26.70	139.7	31.70	42.90		22.40	95.30		
1	1.315	6.250	1.380	2.000	4	1.000	4.250	4.96	
	33.40	158.8	35.10	50.80		25.40	108.0		
1 1/4	1.660	7.250	1.500	2.500	4	1.120	5.120	7.35	
	42.20	184.2	38.10	63.50		28.40	130.0		
1 1/2	1.900	8.000	1.750	2.880	4	1.250	5.750	10.4	
	48.30	203.2	44.50	73.15		31.75	146.1		
2	2.375	9.250	2.000	3.620	8	1.120	6.750	15.6	
	60.30	235.0	50.80	91.90		28.40	171.5		
2 1/2	2.875	10.50	2.250	4.120	8	1.250	7.750	22.6	
	73.00	266.7	57.15	104.6		31.75	196.9		
3	3.500	12.00	2.620	5.000	8	1.380	9.000	34.8	
	88.90	304.8	66.55	127.0		35.10	228.6		
4	4.500	14.00	3.000	6.190	8	1.620	10.75	53.9	
	114.3	355.6	76.20	157.2		41.10	273.1		
5	5.563	16.50	3.620	7.310	8	1.888	12.75	90.8	
	141.3	419.1	91.90	185.7		47.88	323.9		
6	6.625	19.00	4.250	8.500	8	2.120	14.50	141	
	168.3	482.6	108.0	215.9		53.80	368.3		
8	8.625	21.75	5.000	10.62	12	2.120	17.25	214	
	219.1	552.5	127.0	269.7		53.80	438.2		
10	10.75	26.50	6.500	12.75	12	2.620	21.25	411	
	273.0	673.1	165.1	323.9		66.55	539.8		
12	12.75	30.00	7.250	15.00	12	2.880	24.38	592	
	323.8	762.0	184.2	381.0		73.15	619.3		














Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



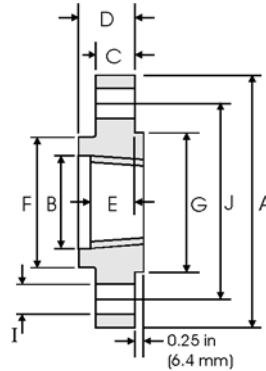
Class 1500 lb

Nominal Pipe Size	Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
													
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	4.750	To be specified by Purchaser	0.880	2.380	0.840	1.500	1.380	4	0.880	3.250	1.87	
	21.30	120.6		22.30	60.45	21.30	38.10	35.00		22.30	82.50		
3/4	1.050	5.120		1.000	2.750	1.050	1.750	1.690	4	0.880	3.500	2.56	
	26.70	130.0		25.40	69.85	26.70	44.00	42.90		22.30	88.90		
1	1.315	5.880		1.120	2.880	1.320	2.060	2.000	4	1.000	4.000	3.74	
	33.40	149.3		28.40	73.15	33.50	52.30	50.80		25.40	101.6		
1 1/4	1.660	6.250		1.120	2.880	1.660	2.500	2.500	4	1.000	4.380	4.33	
	42.20	158.7		28.40	73.15	42.20	63.50	63.50		25.40	111.2		
1 1/2	1.900	7.000		1.250	3.250	1.900	2.750	2.880	4	1.120	4.880	5.94	
	48.30	177.8		31.70	82.50	48.30	69.85	73.15		28.40	123.9		
2	2.375	8.500		1.500	4.000	2.380	4.120	3.620	8	1.000	6.500	10.8	
	60.30	215.9		38.10	101.6	60.45	104.6	91.90		25.40	165.1		
2 1/2	2.875	9.620		1.620	4.120	2.880	4.880	4.120	8	1.120	7.500	15.0	
	73.00	244.3		41.10	104.6	73.15	123.9	104.6		28.40	190.5		
3	3.500	10.50		1.880	4.620	3.500	5.250	5.000	8	1.250	8.000	19.9	
	88.90	266.7		47.70	177.3	88.90	133.3	127.0		31.70	203.2		
4	4.500	12.25		2.120	4.880	4.500	6.380	6.190	8	1.380	9.500	29.9	
	114.3	311.1		53.80	123.9	114.3	162.0	157.2		35.00	241.3		
5	5.563	14.75		2.880	6.120	5.560	7.750	7.310	8	1.620	11.50	55.4	
	141.3	374.6		73.15	155.4	141.2	196.8	185.7		41.10	292.1		
6	6.625	15.50		3.250	6.750	6.630	9.000	8.500	12	1.500	12.50	68.4	
	168.3	393.7		82.50	171.4	168.4	228.6	215.9		38.10	317.5		
8	8.625	19.00		3.620	8.380	8.630	11.50	10.62	12	1.750	15.50	117	
	219.1	482.6		91.90	212.8	219.2	292.1	269.7		44.40	393.7		
10	10.75	23.00	4.250	10.00	10.75	14.50	12.75	12	2.000	19.00	194		
	273.0	584.2	107.9	254.0	273.0	368.3	323.8		50.80	482.6			
12	12.75	26.50	4.880	11.12	12.75	17.75	15.00	16	2.120	22.50	288		
	323.8	673.1	123.9	282.4	323.8	450.8	381.0		53.80	571.5			
14	14.00	29.50	5.250	11.75	14.00	19.50	16.25	16	2.380	25.00	380		
	355.6	749.3	133.3	298.4	355.6	495.3	412.7		60.45	635.0			
16	16.00	32.50	5.750	12.25	16.00	21.75	18.50	16	2.620	27.75	485		
	406.4	825.5	146.0	311.1	406.4	552.4	469.9		66.55	704.8			
18	18.00	36.00	6.380	12.88	18.00	23.50	21.00	16	2.880	30.50	644		
	457.2	914.4	162.0	327.1	457.2	596.9	533.4		73.15	774.7			
20	20.00	38.75	7.000	14.00	20.00	25.25	23.00	16	3.120	32.75	775		
	508.0	984.2	177.8	355.6	508.0	641.3	584.2		79.25	831.8			
24	24.00	46.00	8.000	16.00	24.00	30.00	27.25	16	3.620	39.00	1232		
	609.6	1168.4	203.2	406.4	609.6	762.0	692.1		91.90	990.6			



Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



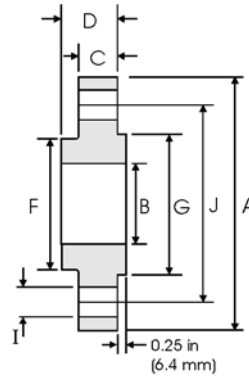
Class 1500 lb

Pipe		Flange Data					Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Counter-bore min	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	0.930	0.880	1.250	0.880	1.500	1.380	4	0.880	3.250	1.74
	21.30	120.6	23.60	22.30	31.70	22.30	38.10	35.00		22.30	82.50	
3/4	1.050	5.120	1.140	1.000	1.380	1.000	1.750	1.690	4	0.880	3.500	2.34
	26.70	130.0	29.00	25.40	35.00	25.40	44.40	42.90		22.30	88.90	
1	1.315	5.880	1.410	1.120	1.620	1.120	2.060	2.000	4	1.000	4.000	3.44
	33.40	149.3	35.80	28.40	41.10	28.40	52.30	50.80		25.40	101.6	
1 1/4	1.660	6.250	1.750	1.120	1.620	1.190	2.500	2.500	4	1.000	4.380	3.91
	42.20	158.7	44.40	28.40	41.10	30.20	63.50	63.50		25.40	111.2	
1 1/2	1.900	7.000	1.990	1.250	1.750	1.250	2.750	2.880	4	1.120	4.880	5.36
	48.30	177.8	50.50	31.70	44.50	31.70	69.85	73.15		28.40	123.9	
2	2.375	8.500	2.500	1.500	2.250	1.500	4.120	3.620	8	1.000	6.500	9.85
	60.30	215.9	63.50	38.10	57.15	38.10	104.6	91.90		25.40	165.1	
2 1/2	2.875	9.620	3.000	1.620	2.500	1.880	4.880	4.120	8	1.120	7.500	13.7
	73.00	244.3	76.20	41.10	63.50	47.70	123.9	104.6		28.40	190.5	



Notes

- 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 locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



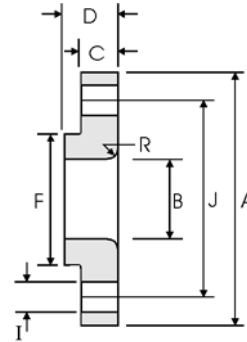
Class 1500 lb

Nominal Pipe Size	Pipe	Flange Data				Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840 21.30	4.750 120.6	0.880 22.40	0.880 22.40	1.250 31.70	1.500 38.10	1.380 35.10	4	0.880 22.40	3.250 82.50	1.74
3/4	1.050 26.70	5.120 130.0	1.090 27.70	1.000 25.40	1.380 35.00	1.750 44.40	1.690 42.90	4	0.880 22.40	3.500 88.90	2.34
1	1.315 33.40	5.880 149.3	1.360 34.50	1.120 28.40	1.620 41.10	2.060 52.30	2.000 50.80	4	1.000 25.40	4.000 101.6	3.44
1 1/4	1.660 42.20	6.250 158.7	1.700 43.20	1.120 28.40	1.620 41.10	2.500 63.50	2.500 63.50	4	1.000 25.40	4.380 111.2	3.91
1 1/2	1.900 48.30	7.000 177.8	1.950 49.50	1.250 31.70	1.750 44.50	2.750 69.85	2.880 73.15	4	1.120 28.40	4.880 123.9	5.36
2	2.375 60.30	8.500 215.9	2.440 62.00	1.500 38.10	2.250 57.15	4.120 104.6	3.620 91.90	8	1.000 25.40	6.500 165.1	9.85
2 1/2	2.875 73.00	9.620 244.3	2.940 74.70	1.620 41.10	2.500 63.50	4.880 123.9	4.120 104.6	8	1.120 28.40	7.500 190.5	13.7

Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



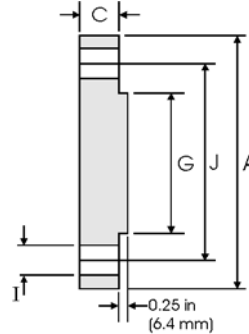
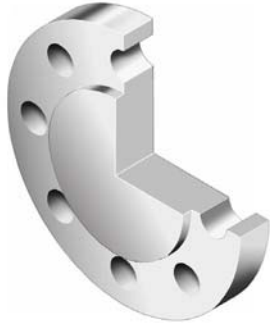
Class 1500 lb

Nominal Pipe Size	Pipe	Flange Data				Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	0.900	0.880	1.250	0.120	1.500	4	0.880	3.250	1.71
	21.30	120.6	22.90	22.30	31.70	3.000	38.10				
3/4	1.050	5.120	1.110	1.000	1.380	0.120	1.750	4	0.880	4.000	2.30
	26.70	130.0	28.20	25.40	35.00	3.000	44.40				
1	1.315	5.880	1.380	1.120	1.620	0.120	2.060	4	1.000	4.000	3.40
	33.40	149.3	35.10	28.40	41.10	3.000	52.30				
1 1/4	1.660	6.250	1.720	1.120	1.620	0.190	2.500	4	1.000	4.380	3.85
	42.20	158.7	43.70	28.40	41.10	4.800	63.50				
1 1/2	1.900	7.000	1.970	1.250	1.750	0.250	2.750	4	1.120	4.880	5.28
	48.30	177.8	50.00	31.70	44.40	6.400	69.85				
2	2.375	8.500	2.460	1.500	2.250	0.310	4.120	8	1.000	6.500	9.78
	60.30	215.9	62.50	38.10	57.15	7.900	104.6				
2 1/2	2.875	9.620	2.970	1.620	2.500	0.310	4.880	8	1.120	7.500	13.6
	73.00	244.3	75.40	41.10	63.50	7.900	123.9				
3	3.500	10.50	3.600	1.880	2.880	0.380	5.250	8	1.250	8.000	17.8
	88.90	266.7	91.40	47.70	73.15	9.700	133.3				
4	4.500	12.25	4.600	2.120	3.560	0.440	6.380	8	1.380	9.500	27.5
	114.3	311.1	116.8	53.80	90.40	11.20	162.0				
5	5.563	14.75	5.690	2.880	4.120	0.440	7.750	8	1.620	11.50	51.5
	141.3	374.6	114.5	73.15	104.6	11.20	196.8				
6	6.625	15.50	6.750	3.250	4.690	0.500	9.000	12	1.500	12.50	62.0
	168.3	399.7	171.5	82.50	119.1	12.70	228.6				
8	8.625	19.00	8.750	3.620	5.620	0.500	11.50	12	1.750	15.50	105
	219.1	482.6	222.3	91.90	142.7	12.70	292.1				
10	10.75	23.00	10.92	4.250	7.000	0.500	14.50	12	2.000	19.00	179
	273.0	584.2	277.4	107.9	177.8	12.70	368.3				
12	12.75	26.50	12.92	4.880	8.620	0.500	17.75	16	2.120	22.50	269
	323.8	673.1	328.2	123.9	218.9	12.70	450.8				
14	14.00	29.50	14.18	5.250	9.500	0.500	19.50	16	2.380	25.00	365
	355.6	749.3	360.2	133.3	241.3	12.70	495.3				
16	16.00	32.50	16.19	5.750	10.25	0.500	21.75	16	2.620	27.75	459
	406.4	825.5	411.2	146.0	260.3	12.70	552.4				
18	18.00	36.00	18.20	6.380	10.88	0.500	23.50	16	2.880	30.50	598
	457.2	914.4	462.3	162.0	276.3	12.70	596.9				
20	20.00	38.75	20.25	7.000	11.50	0.500	25.25	16	3.120	32.75	712
	508.0	984.2	514.4	177.8	292.1	12.70	641.3				
24	24.00	46.00	24.25	8.000	13.00	0.500	30.00	16	3.620	39.00	1090
	609.6	1168.4	616.0	203.2	330.2	12.70	762.0				

Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



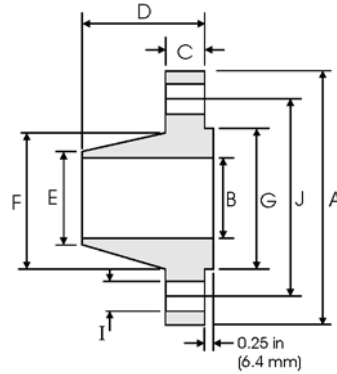
Class 1500 lb

Nominal Pipe Size	Pipe	Flange Data		Raised Face	Drilling Data			Weight
		A	C	G	H	I	J	
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece
	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	0.880	1.380	4	0.880	3.250	1.77
	21.30	120.6	22.30	35.10		22.30	82.50	
3/4	1.050	5.120	1.000	1.690	4	0.880	3.500	2.42
	26.70	130.0	25.40	42.90		22.30	88.90	
1	1.315	5.880	1.120	2.000	4	1.000	4.000	3.57
	33.40	149.3	28.40	50.80		25.40	101.6	
1 1/4	1.660	6.250	1.120	2.500	4	1.000	4.380	4.15
	42.20	158.7	28.40	63.50		25.40	111.2	
1 1/2	1.900	7.000	1.250	2.880	4	1.120	4.880	5.75
	48.30	177.8	31.70	73.15		28.40	123.9	
2	2.375	8.500	1.500	3.620	8	1.000	6.500	10.1
	60.30	215.9	38.10	91.90		25.40	165.1	
2 1/2	2.875	9.620	1.620	4.120	8	1.120	7.500	14.0
	73.00	244.3	41.10	104.6		28.40	190.5	
3	3.500	10.50	1.880	5.000	8	1.250	8.000	19.1
	88.90	266.7	47.70	127.0		31.70	203.2	
4	4.500	12.25	2.120	6.190	8	1.380	9.500	29.9
	114.3	311.1	53.80	157.2		35.00	241.3	
5	5.563	14.75	2.880	7.310	8	1.620	11.50	58.4
	141.3	374.6	73.15	185.7		41.10	292.1	
6	6.625	15.50	3.250	8.500	12	1.500	12.50	71.8
	168.3	393.7	82.50	215.9		38.10	317.5	
8	8.625	19.00	3.620	10.62	12	1.750	15.50	122
	219.1	482.6	91.90	269.7		44.40	393.7	
10	10.75	23.00	4.250	12.75	12	2.000	19.00	210
	273.0	584.2	107.9	323.9		50.80	482.6	
12	12.75	26.50	4.880	15.00	16	2.120	22.50	316
	323.8	673.1	123.9	381.0		53.8	571.5	
14	14.00	29.50	5.250	16.25	16	2.380	25.00	420
	355.6	749.3	133.3	412.8		60.45	635.0	
16	16.00	32.50	5.750	18.50	16	2.620	27.75	558
	406.4	825.5	146.0	469.9		66.55	704.8	
18	18.00	36.00	6.380	21.00	16	2.880	30.50	760
	457.2	914.4	162.0	533.4		73.15	774.7	
20	20.00	38.75	7.000	23.00	16	3.120	32.75	965
	508.0	984.2	177.8	584.2		79.25	831.8	
24	24.00	46.00	8.000	27.25	16	3.620	39.00	1558
	609.6	1168.4	203.2	692.2		91.90	990.6	

Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



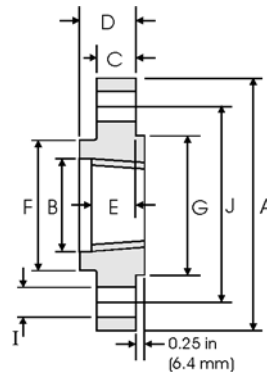
Class 90 lb

Nominal Pipe Size	Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	4.750	To be specified by Purchaser	0.880	2.380	0.840	1.500	1.380	4	0.880	3.250	1.87	
	21.30	120.6		22.30	60.45	21.30	38.10	35.00		22.30	82.50		
3/4	1.050	5.120		1.000	2.750	1.050	1.750	1.690	4	0.880	3.500	2.56	
	26.70	130.0		25.40	69.85	26.70	44.00	42.90		22.30	88.90		
1	1.315	5.880		1.120	2.880	1.320	2.060	2.000	4	1.000	4.000	3.74	
	33.40	149.3		28.40	73.15	33.50	52.30	50.80		25.40	101.6		
1 1/4	1.660	6.250		1.120	2.880	1.660	2.500	2.500	4	1.000	4.380	4.33	
	42.20	158.7		28.40	73.15	42.20	63.50	63.50		25.40	111.2		
1 1/2	1.900	7.000		1.250	3.250	1.900	2.750	2.880	4	1.120	4.880	5.94	
	48.30	177.8		31.70	82.50	48.30	69.85	73.15		28.40	123.9		
2	2.375	8.500		1.500	4.000	2.380	4.120	3.620	8	1.000	6.500	10.8	
	60.30	215.9		38.10	101.6	60.45	104.6	91.90		25.40	165.1		
2 1/2	2.875	9.620		1.620	4.120	2.880	4.880	4.120	8	1.120	7.500	15.0	
	73.00	244.3		41.10	104.6	73.15	123.9	104.6		28.40	190.5		
3	3.500	9.500		1.500	4.000	3.500	5.000	5.000	8	1.000	7.500	13.7	
	88.90	241.3		38.10	101.6	88.90	127.0	127.0		25.40	190.5		
4	4.500	11.50		1.750	4.500	4.500	6.250	6.190	8	1.250	9.250	22.5	
	114.3	292.1		44.40	114.3	114.3	158.7	157.2		31.70	234.9		
5	5.563	13.75		2.000	5.000	5.560	7.500	7.310	8	1.380	11.00	37.4	
	141.3	349.2		50.80	127.0	141.2	190.5	185.7		35.00	279.4		
6	6.625	15.00	2.190	5.500	6.630	9.250	8.500	12	1.250	12.50	47.7		
	168.3	381.0	55.60	139.7	168.4	234.9	215.9		31.70	317.5			
8	8.625	18.50	2.500	6.380	8.630	11.75	10.62	12	1.500	15.50	81.3		
	219.1	469.9	63.50	162.0	219.2	298.4	269.7		38.10	393.7			
10	10.75	21.50	2.750	7.250	10.75	14.50	12.75	16	1.500	18.50	119		
	273.0	546.1	69.85	184.1	273.0	368.3	323.8		38.10	469.9			
12	12.75	24.00	3.120	7.880	12.75	16.50	15.00	20	1.500	21.00	157		
	323.8	609.6	79.25	200.1	323.8	419.1	381.0		38.10	533.4			
14	14.00	25.25	3.380	8.380	14.00	17.75	16.25	20	1.620	22.00	180		
	355.6	641.3	85.80	212.8	355.6	450.8	412.7		41.10	558.8			
16	16.00	27.75	3.500	8.500	16.00	20.00	18.50	20	1.750	24.25	217		
	406.4	704.8	88.90	215.9	406.4	508.0	469.9		44.40	615.9			
18	18.00	31.00	4.000	9.000	18.00	22.25	21.00	20	2.000	27.00	292		
	457.2	787.4	101.6	228.6	457.2	565.1	533.4		50.80	685.8			
20	20.00	33.75	4.250	9.750	20.00	24.50	23.00	20	2.120	29.50	362		
	508.0	857.2	107.9	247.6	508.0	622.3	584.2		53.80	749.3			
24	24.00	41.00	5.500	11.50	24.00	29.50	27.25	20	2.620	35.50	665		
	609.6	1041.4	139.7	292.1	609.6	749.3	692.1		66.55	901.7			

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



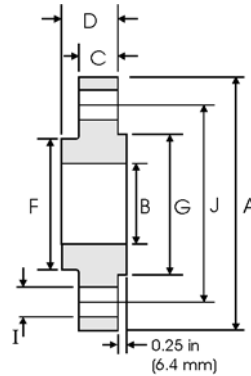
Class 900 lb

Nominal Pipe Size	Pipe	Flange Data					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Diameter Overall	Counter-bore min	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	0.930	0.880	1.250	0.880	1.500	1.380	4	0.880	3.250	1.74
	21.30	120.6	23.60	22.30	31.70	22.30	38.10	35.10				
3/4	1.050	5.120	1.140	1.000	1.380	1.000	1.750	1.690	4	0.880	3.500	2.34
	26.70	130.0	29.00	25.40	35.00	25.40	44.40	42.90				
1	1.315	5.880	1.410	1.120	1.620	1.120	2.060	2.000	4	1.000	4.000	3.44
	33.40	149.3	35.80	28.40	41.10	28.40	52.30	50.80				
1 1/4	1.660	6.250	1.750	1.120	1.620	1.190	2.500	2.500	4	1.000	4.380	3.91
	42.20	158.7	44.40	28.40	41.10	30.20	63.50	63.50				
1 1/2	1.900	7.000	1.990	1.250	1.750	1.250	2.750	2.880	4	1.120	4.880	5.36
	48.30	177.8	50.50	31.70	44.50	31.70	69.85	73.15				
2	2.375	8.500	2.500	1.500	2.250	1.500	4.120	3.620	8	1.000	6.500	9.85
	60.30	215.9	63.50	38.10	57.15	38.10	104.6	91.90				
2 1/2	2.875	9.620	3.000	1.620	2.500	1.880	4.880	4.120	8	1.120	7.500	13.7
	73.00	244.3	76.20	41.10	63.50	47.70	123.9	104.6				
3	3.500	9.500	3.630	1.500	2.120	1.620	5.000	5.000	8	1.000	7.500	11.6
	88.90	241.3	92.20	38.10	53.80	41.10	127.0	127.0				
4	4.500	11.50	4.630	1.750	2.750	1.880	6.250	6.190	8	1.250	9.250	19.7
	114.3	292.1	117.6	44.40	69.85	47.80	158.7	157.2				
5	5.563	13.75	5.690	2.000	3.120	2.120	7.500	7.310	8	1.380	11.00	31.9
	141.3	349.2	144.5	50.80	79.25	53.80	190.5	185.7				
6	6.625	15.00	6.750	2.190	3.380	2.250	9.250	8.500	12	1.250	12.50	41.1
	168.3	381.0	171.4	55.60	85.80	57.15	234.9	215.9				
8	8.625	18.50	8.750	2.500	4.000	2.500	11.75	10.62	12	1.500	15.50	70.7
	219.1	469.9	222.2	63.50	101.6	63.50	298.4	269.7				
10	10.75	21.50	10.88	2.750	4.250	2.810	14.50	12.75	16	1.500	18.50	101
	273.0	546.1	276.3	69.85	107.9	71.40	368.3	323.9				
12	12.75	24.00	12.94	3.120	4.620	3.000	16.50	15.00	20	1.500	21.00	133
	323.8	609.6	328.7	79.40	117.3	76.20	419.1	381.0				
14	14.00	25.25	14.19	3.380	5.120	3.250	17.75	16.25	20	1.620	22.00	153
	355.6	641.3	360.4	85.70	130.0	82.50	450.8	412.7				
16	16.00	27.75	16.19	3.500	5.250	3.380	20.00	18.50	20	1.750	24.25	185
	406.4	704.8	411.2	88.90	133.3	85.90	508.0	469.9				
18	18.00	31.00	18.19	4.000	6.000	3.500	22.25	21.00	20	2.000	27.00	258
	457.2	787.4	462.0	101.6	152.4	88.90	565.1	533.4				
20	20.00	33.75	20.19	4.250	6.250	3.620	24.50	23.00	20	2.120	29.50	317
	508.0	857.2	512.8	107.9	158.7	91.90	622.3	584.2				
24	24.00	41.00	24.19	5.500	8.000	4.000	29.50	27.25	20	2.620	35.50	606
	609.6	1041.4	614.4	139.7	203.2	101.6	749.3	692.2				



Notes

- 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 NPSP locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



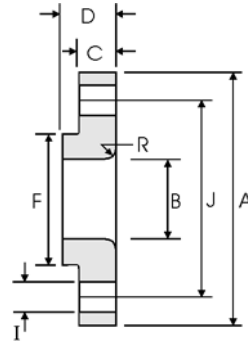
Class 900 lb

Pipe		Flange Data				Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	0.880	0.880	1.250	1.500	1.380	4	0.880	3.250	1.74
	21.30	120.6	22.40	22.40	31.70	38.10	35.10		22.40	82.50	
3/4	1.050	5.120	1.090	1.000	1.380	1.750	1.690	4	0.880	3.500	2.34
	26.70	130.0	27.70	25.40	35.00	44.40	42.90		22.40	88.90	
1	1.315	5.880	1.360	1.120	1.620	2.060	2.000	4	1.000	4.000	3.44
	33.40	149.3	34.50	28.40	41.10	52.30	50.80		25.40	101.6	
1 1/4	1.660	6.250	1.700	1.120	1.620	2.500	2.500	4	1.000	4.380	3.91
	42.20	158.7	43.20	28.40	41.10	63.50	63.50		25.40	111.2	
1 1/2	1.900	7.000	1.950	1.250	1.750	2.750	2.880	4	1.120	4.880	5.36
	48.30	177.8	49.50	31.70	44.50	69.85	73.15		28.40	123.9	
2	2.375	8.500	2.440	1.500	2.250	4.120	3.620	8	1.000	6.500	9.85
	60.30	215.9	62.00	38.10	57.15	104.6	91.90		25.40	165.1	
2 1/2	2.875	9.620	2.940	1.620	2.500	4.880	4.120	8	1.120	7.500	13.7
	73.00	244.3	74.70	41.10	63.50	123.9	104.6		28.40	190.5	
3	3.500	9.500	3.570	1.500	2.120	5.000	5.000	8	1.000	7.500	11.6
	88.90	241.3	90.70	38.10	53.80	127.0	127.0		25.40	190.5	
4	4.500	11.50	4.570	1.750	2.750	6.250	6.190	8	1.250	9.250	19.7
	114.3	292.1	116.1	44.40	69.85	158.7	157.2		31.70	234.9	
5	5.563	13.75	5.660	2.000	3.120	7.500	7.310	8	1.380	11.00	31.9
	141.3	349.2	143.8	50.80	79.25	190.5	185.7		35.00	279.4	
6	6.625	15.00	6.720	2.190	3.380	9.250	8.500	12	1.250	12.50	41.1
	168.3	381.0	170.7	55.60	85.80	234.9	215.9		31.70	317.5	
8	8.625	18.50	8.720	2.500	4.000	11.75	10.62	12	1.500	15.50	70.7
	219.1	469.9	221.5	63.50	101.6	298.4	269.7		38.10	393.7	
10	10.75	21.50	10.88	2.750	4.250	14.50	12.75	16	1.500	18.50	101
	273.0	546.1	276.3	69.85	107.9	368.3	323.9		38.10	469.9	
12	12.75	24.00	12.88	3.120	4.620	16.50	15.00	20	1.500	21.00	133
	323.8	609.6	327.1	79.25	117.3	419.1	381.0		38.10	533.4	
14	14.00	25.25	14.14	3.380	5.120	17.75	16.25	20	1.620	22.00	153
	355.6	641.3	359.1	85.80	130.0	450.8	412.8		41.10	558.8	
16	16.00	27.75	16.16	3.500	5.250	20.00	18.50	20	1.750	24.25	185
	406.4	704.8	410.5	88.90	133.3	508.0	469.9		44.40	615.9	
18	18.00	31.00	18.18	4.000	6.000	22.25	21.00	20	2.000	27.00	258
	457.2	787.4	461.8	101.6	152.4	565.1	533.4		50.80	685.8	
20	20.00	33.75	20.20	4.250	6.250	24.50	23.00	20	2.120	29.50	317
	508.0	857.2	513.1	107.9	158.7	622.3	584.2		53.80	749.3	
24	24.00	41.00	24.25	5.500	8.000	29.50	27.25	20	2.620	35.50	606
	609.6	1041.4	616.0	139.7	203.2	749.3	692.2		66.55	901.7	



Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



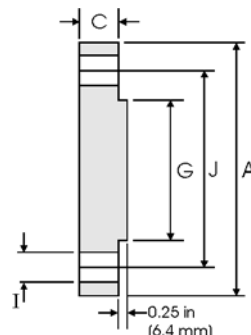
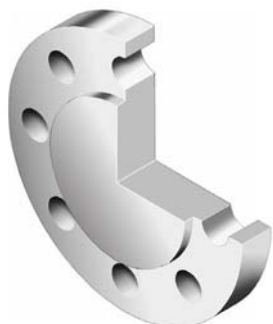
Class 900 lb

Nominal Pipe Size	Pipe	Flange Data					Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	4.750	0.900	0.880	1.250	0.120	1.500	4	0.880	3.250	1.71	
	21.30	120.6	22.90	22.30	31.70	3.000	38.10					
3/4	1.050	5.120	1.110	1.000	1.380	0.120	1.750	4	0.880	3.500	2.30	
	26.70	130.0	28.20	25.40	35.00	3.000	44.40					
1	1.315	5.880	1.380	1.120	1.620	0.120	2.060	4	1.000	4.000	3.40	
	33.40	149.3	35.10	28.40	41.10	3.000	52.30					
1 1/4	1.660	6.250	1.720	1.120	1.620	0.190	2.500	4	1.000	4.380	3.85	
	42.20	158.7	43.70	28.40	41.10	4.800	63.50					
1 1/2	1.900	7.000	1.970	1.250	1.750	0.250	2.750	4	1.120	4.880	5.28	
	48.30	177.8	50.00	31.70	44.40	6.400	69.85					
2	2.375	8.500	2.460	1.500	2.250	0.310	4.120	8	1.000	6.500	9.78	
	60.30	215.9	62.50	38.10	57.15	7.900	104.6					
2 1/2	2.875	9.620	2.970	1.620	2.500	0.310	4.880	8	1.120	7.500	13.6	
	73.00	244.3	75.40	41.10	63.50	7.900	123.9					
3	3.500	9.500	3.600	1.500	2.120	0.380	5.000	8	1.000	7.500	11.3	
	88.90	241.3	91.40	38.10	53.80	9.700	127.0					
4	4.500	11.50	4.600	1.750	2.750	0.440	6.250	8	1.250	9.250	19.2	
	114.3	292.1	116.8	44.40	69.85	11.20	158.7					
5	5.563	13.75	5.690	2.000	3.120	0.440	7.500	8	1.380	11.00	31.20	
	141.3	349.2	114.5	50.80	79.25	11.20	190.5					
6	6.625	15.00	6.750	2.190	3.380	0.500	9.250	12	1.250	12.50	40.50	
	168.3	381.0	171.5	55.60	85.80	12.70	234.9					
8	8.625	18.50	8.750	2.500	4.500	0.500	11.75	12	1.500	15.50	71.5	
	219.1	469.9	222.3	63.50	114.3	12.70	298.4					
10	10.75	21.50	10.92	2.750	5.000	0.500	14.50	16	1.500	18.50	104	
	273.0	546.1	277.4	69.85	127.0	12.70	368.3					
12	12.75	24.00	12.92	3.120	5.620	0.500	16.50	20	1.500	21.00	139	
	323.8	609.6	328.2	79.25	142.7	12.70	419.1					
14	14.00	25.25	14.18	3.380	6.120	0.500	17.75	20	1.620	22.00	161	
	355.6	641.3	360.2	85.80	155.4	12.70	450.8					
16	16.00	27.75	16.19	3.500	6.500	0.500	20.00	20	1.750	24.25	194	
	406.4	704.8	411.2	88.90	165.1	12.70	508.0					
18	18.00	31.00	18.20	4.000	7.500	0.500	22.25	20	2.000	27.00	267	
	457.2	787.4	462.3	101.6	190.5	12.70	565.1					
20	20.00	33.75	20.25	4.250	8.250	0.500	24.50	20	2.120	29.50	334	
	508.0	857.2	514.4	107.9	209.5	12.70	622.3					
24	24.00	41.00	24.25	5.050	10.50	0.500	29.50	20	2.620	35.50	618	
	609.6	1041.4	616.0	139.7	266.7	12.70	749.3					



Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



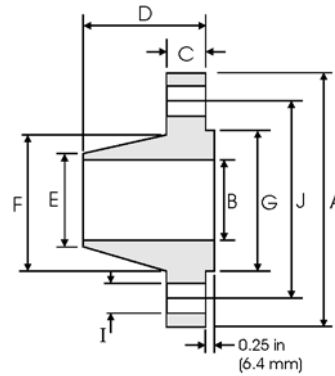
Class 900 lb

Nominal Pipe Size	Pipe	Flange Data			Raised Face	Drilling Data			Weight
		A	C	G	H	I	J		
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece	
	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	4.750	0.880	1.380	4	0.880	3.250	1.77	
	21.30	120.6	22.30	35.10		22.30	82.50		
3/4	1.050	5.120	1.000	1.690	4	0.880	3.500	2.42	
	26.70	130.0	25.40	42.90		22.30	88.90		
1	1.315	5.880	1.120	2.000	4	1.000	4.000	3.57	
	33.40	149.3	28.40	50.80		25.40	101.6		
1 1/4	1.660	6.250	1.120	2.500	4	1.000	4.380	4.15	
	42.20	158.7	28.40	63.50		25.40	111.2		
1 1/2	1.900	7.000	1.250	2.880	4	1.120	4.880	5.75	
	48.30	177.8	31.70	73.15		28.40	123.9		
2	2.375	8.500	1.500	3.620	8	1.000	6.500	10.1	
	60.30	215.9	38.10	91.90		25.40	165.1		
2 1/2	2.875	9.620	1.620	4.120	8	1.120	7.500	14.0	
	73.00	244.3	41.10	104.6		28.40	190.5		
3	3.500	9.500	1.500	5.000	8	1.000	7.500	13.1	
	88.90	241.3	38.10	127.0		25.40	190.5		
4	4.500	11.50	1.750	6.190	8	1.250	9.250	26.9	
	114.3	292.1	44.50	157.2		31.70	234.9		
5	5.563	13.75	2.000	7.310	8	1.380	11.00	36.5	
	141.3	349.2	50.80	185.7		35.00	279.4		
6	6.625	15.00	2.190	8.500	12	1.250	12.50	47.40	
	168.3	381.0	55.60	215.9		31.70	317.0		
8	8.625	18.50	2.500	10.62	12	1.500	15.50	82.5	
	219.1	469.9	63.50	269.7		38.10	393.7		
10	10.75	21.50	2.750	12.75	16	1.500	18.50	122	
	273.0	546.1	69.85	323.9		38.10	469.9		
12	12.75	24.00	3.120	15.00	20	1.500	21.00	173	
	323.8	609.6	79.25	381.0		38.10	533.4		
14	14.00	25.25	3.380	16.25	20	1.620	22.00	206	
	355.6	641.3	85.80	412.8		41.10	558.8		
16	16.00	27.75	3.500	18.50	20	1.750	24.25	259	
	406.4	704.8	88.90	469.9		44.40	615.9		
18	18.00	31.00	4.000	21.00	20	2.000	27.00	367	
	457.2	787.4	101.6	533.4		50.80	685.8		
20	20.00	33.75	4.250	23.00	20	2.120	29.50	463	
	508.0	857.2	107.9	584.2		53.80	749.3		
24	24.00	41.00	5.500	27.25	20	2.620	35.50	876	
	609.6	1041.4	139.7	692.2		66.55	901.7		

Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



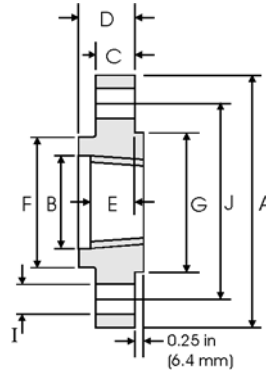
Class 600 lb

Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	To be specified by Purchaser	0.560	2.060	0.840	1.500	1.380	4	0.620	2.620	0.87
	21.30	95.30		14.20	52.30	21.30	38.10	35.00		15.70	66.55	
3/4	1.050	4.620		0.620	2.250	1.050	1.880	1.690	4	0.750	3.250	1.45
	26.70	117.3		15.70	57.15	26.70	47.80	42.90		19.10	82.60	
1	1.315	4.880		0.690	2.440	1.320	2.120	2.000	4	0.750	3.500	1.76
	33.40	124.0		17.50	62.00	33.50	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250		0.810	2.620	1.660	2.500	2.500	4	0.750	3.880	2.49
	42.20	133.4		20.60	66.55	42.20	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120		0.880	2.750	1.900	2.750	2.880	4	0.880	4.500	3.49
	48.30	155.4		22.40	69.85	48.30	69.85	73.15		22.40	114.3	
2	2.375	6.500		1.000	2.880	2.380	3.310	3.620	8	0.750	5.000	4.36
	60.30	165.1		25.40	73.15	60.45	84.10	91.90		19.10	127.0	
2 1/2	2.875	7.500		1.120	3.120	2.880	3.940	4.120	8	0.880	5.880	6.43
	73.00	190.5		28.40	79.25	73.15	100.1	104.6		22.40	149.4	
3	3.500	8.250		1.250	3.250	3.500	4.620	5.000	8	0.880	6.620	8.53
	88.90	209.6		31.75	82.60	88.90	117.3	127.0		22.40	168.1	
3 1/2	4.000	9.000		1.380	3.380	4.000	5.250	5.500	8	1.000	7.250	10.7
	101.6	228.6		35.10	85.90	101.6	133.4	139.7		25.40	184.2	
4	4.500	10.75		1.500	4.000	4.500	6.000	6.190	8	1.000	8.500	17.4
	114.3	273.1		38.10	101.6	114.3	152.4	157.2		25.40	215.9	
5	5.563	13.00		1.750	4.500	5.560	7.440	7.310	8	1.120	10.50	29.2
	141.3	330.2		44.50	114.3	141.2	189.0	185.7		28.40	266.7	
6	6.625	14.00		1.880	4.620	6.630	8.750	8.500	12	1.120	11.50	34.9
	168.3	355.6		47.80	117.3	168.4	222.3	215.9		28.40	292.1	
8	8.625	16.50	2.190	5.250	8.630	10.75	10.62	12	1.250	13.75	53.9	
	219.1	419.1	55.60	133.4	219.2	273.1	269.7		31.75	349.3		
10	10.75	20.00	2.500	6.000	10.75	13.50	12.75	16	1.380	17.00	86.5	
	273.0	508.0	63.50	152.4	273.0	342.9	323.8		35.10	431.8		
12	12.75	22.00	2.620	6.120	12.75	15.75	15.00	20	1.380	19.25	103	
	323.8	558.8	66.55	155.4	323.8	400.1	381.0		35.10	489.0		
14	14.00	23.75	2.750	6.500	14.00	17.00	16.25	20	1.500	20.75	122	
	355.6	603.3	69.85	165.1	355.6	431.8	412.7		38.10	527.1		
16	16.00	27.00	3.000	7.000	16.00	19.50	18.50	20	1.620	23.75	170	
	406.4	685.8	76.20	177.8	406.4	495.3	469.9		41.10	603.3		
18	18.00	29.25	3.250	7.250	18.00	21.50	21.00	20	1.750	25.75	204	
	457.2	743.0	82.60	184.2	457.2	546.1	533.4		44.50	654.1		
20	20.00	32.00	3.500	7.500	20.00	24.00	23.00	24	1.750	28.50	254	
	508.0	812.8	88.90	190.5	508.0	609.6	584.2		44.50	723.9		
24	24.00	37.00	4.000	8.000	24.00	28.25	27.25	24	2.000	33.00	358	
	609.6	939.8	101.6	203.2	609.6	717.6	692.1		50.80	838.2		

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



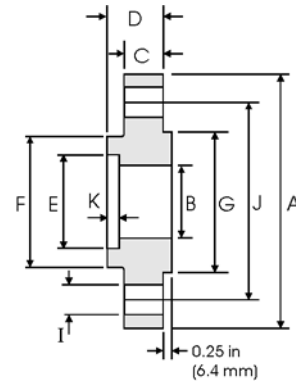
Class 600 lb

Pipe		Flange Data					Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Counter-bore min	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in	in	in	in	in	in	in	in		in	in	
1/2	0.840	3.750	0.930	0.560	0.880	0.620	1.500	1.380	4	0.620	2.620	0.74
	21.30	95.20	23.60	14.20	22.40	15.70	38.10	35.10		15.70	66.55	
3/4	1.050	4.620	1.140	0.620	1.000	0.620	1.880	1.690	4	0.750	3.250	1.27
	26.70	117.3	29.00	15.70	25.40	15.70	47.80	42.90		19.10	82.60	
1	1.315	4.880	1.410	0.690	1.060	0.690	2.120	2.000	4	0.750	3.500	1.52
	33.40	124.0	35.80	17.50	26.90	17.50	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250	1.750	0.810	1.120	0.810	2.500	2.500	4	0.750	3.880	2.03
	42.20	133.4	44.50	20.60	28.40	20.60	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120	1.990	0.880	1.250	0.880	2.750	2.880	4	0.880	4.500	2.96
	48.30	155.4	50.50	22.40	31.75	22.40	69.85	73.15		22.40	114.3	
2	2.375	6.500	2.500	1.000	1.440	1.120	3.310	3.620	8	0.750	5.000	3.62
	60.30	165.1	63.50	25.40	36.60	28.40	84.10	91.90		19.10	127.0	
2 1/2	2.875	7.500	3.000	1.120	1.620	1.250	3.940	4.120	8	0.880	5.880	5.28
	73.00	190.5	76.20	28.40	41.10	31.75	100.1	104.6		22.40	149.4	
3	3.500	8.250	3.630	1.250	1.810	1.380	4.620	5.000	8	0.880	6.620	7.00
	88.90	209.6	92.20	31.75	46.00	35.10	117.3	127.0		22.40	168.1	
3 1/2	4.000	9.000	4.130	1.380	1.940	1.560	5.250	5.500	8	1.000	7.250	8.84
	101.6	228.6	104.9	35.10	49.30	39.60	133.4	139.7		25.40	184.2	
4	4.500	10.75	4.630	1.500	2.120	1.620	6.000	6.190	8	1.000	8.500	14.5
	114.3	273.1	117.6	38.10	53.80	41.10	152.4	157.2		25.40	215.9	
5	5.563	13.00	5.690	1.750	2.380	1.880	7.440	7.310	8	1.120	10.50	24.4
	141.3	330.2	144.5	44.50	60.45	47.80	189.0	185.7		28.40	266.7	
6	6.625	14.00	6.750	1.880	2.620	2.000	8.750	8.500	12	1.120	11.50	28.7
	168.3	355.6	171.5	47.80	66.55	50.80	222.3	215.9		28.40	292.1	
8	8.625	16.50	8.750	2.190	3.000	2.250	10.75	10.62	12	1.250	13.75	43.4
	219.1	419.1	222.3	55.60	76.20	57.15	273.1	269.7		31.75	349.3	
10	10.75	20.00	10.88	2.500	3.380	2.560	13.50	12.75	16	1.380	17.00	70.3
	273.0	508.0	276.4	63.50	85.90	65.00	342.9	323.9		35.10	431.8	
12	12.75	22.00	12.94	2.620	3.620	2.750	15.75	15.00	20	1.380	19.25	84.2
	323.8	558.8	328.7	66.55	91.90	69.85	400.1	381.0		35.10	489.0	
14	14.00	23.75	14.19	2.750	3.690	2.880	17.00	16.25	20	1.500	20.75	98.7
	355.6	603.3	360.4	69.85	93.70	73.15	431.8	412.8		38.10	527.1	
16	16.00	27.00	16.19	3.000	4.190	3.060	19.50	18.50	20	1.620	23.75	142
	406.4	685.8	411.2	76.20	106.4	77.70	495.3	469.9		41.10	603.3	
18	18.00	29.25	18.19	3.250	4.620	3.120	21.50	21.00	20	1.750	25.75	173
	457.2	743.0	462.0	82.60	117.3	79.25	546.1	533.4		44.50	654.1	
20	20.00	32.00	20.19	3.500	5.000	3.250	24.00	23.00	24	1.750	28.50	220
	508.0	812.8	512.8	88.90	127.0	82.60	609.6	584.2		44.50	723.9	
24	24.00	37.00	24.19	4.000	5.500	3.620	28.25	27.25	24	2.000	33.00	312
	609.6	939.8	614.4	101.6	139.7	91.90	717.6	692.2		50.80	838.2	

Notes

- 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 locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Socket Welding Flanges - ANSI B16.5



Class 600 lb

Pipe		Flange						Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	K	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	No. of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	To be specified by the Purchaser	0.560	0.880	0.880	0.380	1.500	1.380	4	0.620	2.620	0.76
	21.30	95.20		14.20	22.30	22.40	9.600	38.10	35.10		15.70	66.55	
3/4	1.050	4.620		0.620	1.000	1.090	0.440	1.880	1.690	4	0.750	3.250	1.29
	26.70	117.3		15.70	25.40	27.70	11.10	47.70	42.90		19.10	82.50	
1	1.315	4.880		0.690	1.060	1.360	0.500	2.120	2.000	4	0.750	3.500	1.55
	33.40	123.9		17.50	26.90	34.50	12.70	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250		0.810	1.120	1.700	0.560	2.500	2.500	4	0.750	3.880	2.06
	42.20	133.3		20.60	28.40	43.20	14.20	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120		0.880	1.250	1.950	0.620	2.750	2.880	4	0.880	4.500	3.00
	48.30	155.4		22.30	31.75	49.50	15.70	69.85	73.15		22.30	114.3	
2	2.375	6.500		1.000	1.440	2.440	0.690	3.310	3.620	8	0.750	5.000	3.67
	60.30	165.1		25.40	36.60	62.00	17.50	84.00	91.90		19.10	127.0	
2 1/2	2.875	7.500	1.120	1.620	2.940	0.750	3.940	4.120	8	0.880	5.880	5.35	
	73.00	190.5	28.40	41.10	74.70	19.00	100.0	104.6		22.30	149.3		
3	3.500	8.250	1.250	1.810	3.570	0.810	4.620	5.000	8	0.880	6.620	7.06	
	88.90	209.5	31.75	46.00	90.70	20.60	117.3	127.0		22.30	168.1		

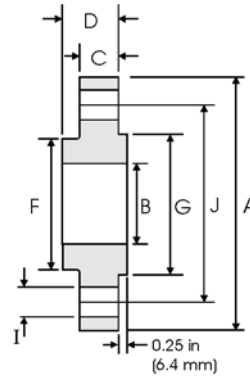
Class 1500 lb

Pipe		Flange						Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	K	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	No. of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	4.750	To be specified by the Purchaser	0.880	1.250	0.880	0.380	1.500	1.380	4	0.880	3.250	1.80
	21.30	120.6		22.30	31.70	22.40	9.600	38.10	35.10		22.30	82.50	
3/4	1.050	5.120		1.000	1.380	1.090	0.440	1.750	1.690	4	0.880	3.500	2.41
	26.70	130.0		25.40	35.00	27.70	11.10	44.40	42.90		22.30	88.90	
1	1.315	5.880		1.120	1.620	1.360	0.500	2.060	2.000	4	1.000	4.000	3.55
	33.40	149.3		28.40	41.10	34.50	12.70	52.30	50.80		25.40	101.6	
1 1/4	1.660	6.250		1.120	1.620	1.700	0.560	2.500	2.500	4	1.000	4.380	4.02
	42.20	158.7		28.40	41.10	43.20	14.20	63.50	63.50		25.40	111.2	
1 1/2	1.900	7.000		1.250	1.750	1.950	0.620	2.750	2.880	4	1.120	4.880	5.45
	48.30	177.8		31.75	44.50	49.50	15.70	69.85	73.15		28.40	123.9	
2	2.375	8.500		1.500	2.250	2.440	0.690	3.310	3.620	8	1.000	6.500	10.2
	60.30	215.9		38.10	57.15	62.00	17.50	84.00	91.90		25.40	165.1	
2 1/2	2.875	9.620	1.620	2.500	2.940	0.750	3.940	4.120	8	1.120	7.500	13.9	
	73.00	244.3	41.10	63.50	74.70	19.00	100.0	104.6		28.40	190.5		

Notes

- Class 400 socket weld flanges may be provided in NPS 1/2 to 2 1/2 using Class 600 dimensions
- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



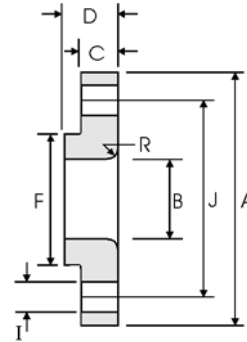
Class 600 lb

Nominal Pipe Size	Pipe	Flange Data				Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840 21.30	3.750 95.30	0.880 22.40	0.560 14.20	0.880 22.40	1.500 38.10	1.380 35.10	4	0.620 15.70	2.620 66.55	0.74
3/4	1.050 26.70	4.620 117.3	1.090 27.70	0.620 15.70	1.000 25.40	1.880 47.80	1.690 42.90	4	0.750 19.10	3.250 82.60	1.27
1	1.315 33.40	4.880 124.0	1.360 34.50	0.690 17.50	1.060 26.90	2.120 53.80	2.000 50.80	4	0.750 19.10	3.500 88.90	1.52
1 1/4	1.660 42.20	5.250 133.4	1.700 43.20	0.810 20.60	1.120 28.40	2.500 63.50	2.500 63.50	4	0.750 19.10	3.880 98.60	2.03
1 1/2	1.900 48.30	6.120 155.4	1.950 49.50	0.880 22.40	1.250 31.75	2.750 69.85	2.880 73.15	4	0.880 22.40	4.500 114.3	2.96
2	2.375 60.30	6.500 165.1	2.440 62.00	1.000 25.40	1.440 36.60	3.310 84.10	3.620 91.90	8	0.750 19.10	5.000 127.0	3.62
2 1/2	2.875 73.00	7.500 190.5	2.940 74.70	1.120 28.40	1.620 41.10	3.940 100.1	4.120 104.6	8	0.880 22.40	5.880 149.4	5.28
3	3.500 88.90	8.250 209.6	3.570 90.70	1.250 31.75	1.810 46.00	4.620 117.3	5.000 127.0	8	0.880 22.40	6.620 168.1	7.00
3 1/2	4.000 101.6	9.000 228.6	4.070 103.4	1.380 35.10	1.940 49.30	5.250 133.4	5.500 139.7	8	1.000 25.40	7.250 184.2	8.84
4	4.500 114.3	10.75 273.1	4.570 116.1	1.500 38.10	2.120 53.80	6.000 152.4	6.190 157.2	8	1.000 25.40	8.500 215.9	14.5
5	5.563 141.3	13.00 330.2	5.660 143.8	1.750 44.50	2.380 60.45	7.440 189.0	7.310 185.7	8	1.120 28.40	10.50 266.7	24.4
6	6.625 168.3	14.00 355.6	6.720 170.7	1.880 47.80	2.620 66.55	8.750 222.3	8.500 215.9	12	1.120 28.40	11.50 292.1	28.7
8	8.625 219.1	16.50 419.1	8.720 221.5	2.190 55.60	3.000 76.20	10.75 273.1	10.62 269.7	12	1.250 31.75	13.75 349.3	43.4
10	10.75 273.0	20.00 508.0	10.88 276.3	2.500 63.50	3.380 85.90	13.50 342.9	12.75 323.9	16	1.380 35.10	17.00 431.8	70.3
12	12.75 323.8	22.00 558.8	12.88 327.1	2.620 66.55	3.620 91.90	15.75 400.1	15.00 381.0	20	1.380 35.10	19.25 489.0	84.2
14	14.00 355.6	23.75 603.3	14.14 359.1	2.750 69.85	3.690 93.70	17.00 431.8	16.25 412.8	20	1.500 38.10	20.75 527.1	98.7
16	16.00 406.4	27.00 685.8	16.16 410.5	3.000 76.20	4.190 106.4	19.50 495.3	18.50 469.9	20	1.620 41.10	23.75 603.3	142
18	18.00 457.2	29.25 743.0	18.18 461.8	3.250 82.60	4.620 117.3	21.50 546.1	21.00 533.4	20	1.750 44.50	25.75 654.1	173
20	20.00 508.0	32.00 812.8	20.20 513.1	3.500 88.90	5.000 127.0	24.00 609.6	23.00 584.2	24	1.750 44.50	28.50 723.9	220
24	24.00 609.6	37.00 939.8	24.25 616.0	4.000 101.6	5.500 139.7	28.25 717.6	27.25 692.2	24	2.000 50.80	33.00 838.2	312

Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



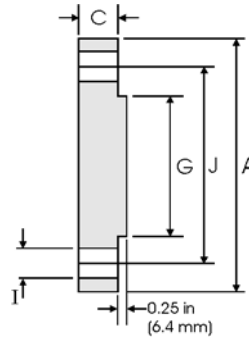
Class 600 lb

Nominal Pipe Size	Pipe	Flange Data				Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	0.900	0.560	0.880	0.120	1.500	4	0.620	2.620	0.72
	21.30	95.30	22.90	14.20	22.40	3.000	38.10		15.70	66.55	
3/4	1.050	4.620	1.110	0.620	1.000	0.120	1.880	4	0.750	3.250	1.25
	26.70	117.3	28.20	15.70	25.40	3.000	47.80		19.10	82.60	
1	1.315	4.880	1.380	0.690	1.060	0.120	2.120	4	0.750	3.500	1.50
	33.40	124.0	35.10	17.50	26.90	3.000	53.80		19.10	88.90	
1 1/4	1.660	5.250	1.720	0.810	1.120	0.190	2.500	4	0.750	3.880	2.00
	42.20	133.4	43.70	20.60	28.40	4.800	63.50		19.10	98.60	
1 1/2	1.900	6.120	1.970	0.880	1.250	0.250	2.750	4	0.880	4.500	2.92
	48.30	155.4	50.00	22.40	31.75	6.400	69.85		22.40	114.3	
2	2.375	6.500	2.460	1.000	1.440	0.310	3.310	8	0.750	5.000	3.55
	60.30	165.1	62.50	25.40	36.60	7.900	84.10		19.10	127.0	
2 1/2	2.875	7.500	2.970	1.120	1.620	0.310	3.940	8	0.880	5.880	5.23
	73.00	190.5	75.40	28.40	41.10	7.900	100.1		22.40	149.4	
3	3.500	8.250	3.600	1.125	1.810	0.380	4.620	8	0.880	6.620	6.95
	88.90	209.6	91.40	31.75	46.00	9.700	117.3		22.40	168.1	
3 1/2	4.000	9.000	4.100	1.380	1.940	0.380	5.250	8	1.000	7.250	8.78
	101.6	228.6	104.1	35.10	49.30	9.700	133.4		25.40	184.2	
4	4.500	10.75	4.600	1.500	2.120	0.440	6.000	8	1.000	8.500	14.4
	114.3	273.1	116.8	38.10	53.80	11.20	152.4		25.40	215.9	
5	5.563	13.00	5.690	1.750	2.380	0.440	7.440	8	1.120	10.50	24.3
	141.3	330.2	114.5	44.50	60.45	11.20	189.0		28.40	266.7	
6	6.625	14.00	6.750	1.880	2.620	0.500	8.750	12	1.120	11.50	28.5
	168.3	355.6	171.5	47.80	66.55	12.70	222.3		28.40	292.1	
8	8.625	16.50	8.750	2.190	3.000	0.500	10.75	12	1.250	13.75	43.1
	219.1	419.1	222.3	55.60	76.20	12.70	273.1		31.75	349.3	
10	10.75	20.00	10.92	2.500	4.380	0.500	13.50	16	1.380	17.00	70.5
	273.0	508.0	277.4	63.50	111.3	12.70	342.9		35.10	431.8	
12	12.75	22.00	12.92	2.620	4.620	0.500	15.75	20	1.380	19.25	86.1
	323.8	558.8	328.2	66.55	117.3	12.70	400.1		35.10	489.0	
14	14.00	23.75	14.18	2.750	5.000	0.500	17.00	20	1.500	20.75	100
	355.6	603.3	360.2	69.85	127.0	12.70	431.8		38.10	527.1	
16	16.00	27.00	16.19	3.000	5.500	0.500	19.50	20	1.620	23.75	145
	406.4	685.8	411.2	76.20	139.7	12.70	495.3		41.10	603.3	
18	18.00	29.25	18.20	3.250	6.000	0.500	21.50	20	1.750	25.75	177
	457.2	743.0	462.3	82.60	152.4	12.70	546.1		44.50	654.1	
20	20.00	32.00	20.25	3.500	6.500	0.500	24.00	24	1.750	28.50	225
	508.0	812.8	514.4	88.90	165.1	12.70	609.6		44.50	723.9	
24	24.00	37.00	24.25	4.000	7.250	0.500	28.25	24	2.000	33.00	318
	609.6	939.8	616.0	101.6	184.2	12.70	717.6		50.80	838.2	

Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



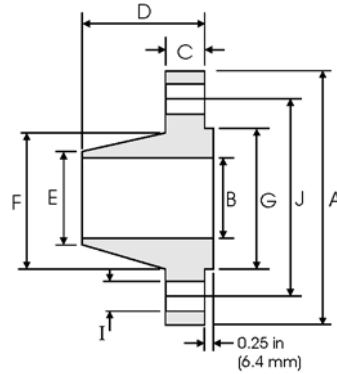
Class 600 lb

Pipe		Flange Data		Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	C	G	H	I	J	
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece
	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	0.560	1.380	4	0.620	2.620	0.76
	21.30	95.20	14.20	35.10		15.70	66.55	
3/4	1.050	4.620	0.620	1.690	4	0.750	3.250	1.28
	26.70	117.3	15.70	42.90		19.10	82.60	
1	1.315	4.880	0.690	2.000	4	0.750	3.500	1.60
	33.40	123.9	17.50	50.80		19.10	88.90	
1 1/4	1.660	5.250	0.810	2.500	4	0.750	3.880	2.23
	42.20	133.3	20.60	63.50		19.10	98.60	
1 1/2	1.900	6.120	0.880	2.880	4	0.880	4.500	3.25
	48.30	155.4	22.30	73.15		22.40	114.3	
2	2.375	6.500	1.000	3.620	8	0.750	5.000	4.15
	60.30	165.1	25.40	91.90		19.10	127.0	
2 1/2	2.875	7.500	1.120	4.120	8	0.880	5.880	6.13
	73.00	190.5	28.40	104.6		22.40	149.4	
3	3.500	8.250	1.250	5.000	8	0.880	6.620	8.44
	88.90	209.5	31.70	127.0		22.40	168.1	
3 1/2	4.000	9.000	1.380	5.500	8	1.000	7.250	11.0
	101.6	228.6	35.00	139.7		25.40	184.2	
4	4.500	10.75	1.500	6.190	8	1.000	8.500	17.3
	114.3	273.1	38.10	157.2		25.40	215.9	
5	5.563	13.00	1.750	7.310	8	1.120	10.50	29.4
	141.3	330.2	44.50	185.7		28.40	266.7	
6	6.625	14.00	1.880	8.500	12	1.120	11.50	36.1
	168.3	355.6	47.80	215.9		28.40	292.1	
8	8.625	16.50	2.190	10.62	12	1.250	13.75	58.9
	219.1	419.1	55.60	269.7		31.75	349.3	
10	10.75	20.00	2.500	12.75	16	1.380	17.00	97.5
	273.0	508.0	63.50	323.9		35.10	431.8	
12	12.75	22.00	2.620	15.00	20	1.380	19.25	124
	323.8	558.8	66.55	381.0		35.10	489.0	
14	14.00	23.75	2.750	16.25	20	1.500	20.75	151
	355.6	603.3	69.85	412.8		38.10	527.1	
16	16.00	27.00	3.000	18.50	20	1.620	23.75	214
	406.4	685.8	76.20	469.9		41.10	603.3	
18	18.00	29.25	3.250	21.00	20	1.750	25.75	272
	457.2	743.0	82.60	533.4		44.50	654.1	
20	20.00	32.00	3.500	23.00	24	1.750	28.50	349
	508.0	812.8	88.90	584.2		44.50	723.9	
24	24.00	37.00	4.000	27.25	24	2.000	33.00	533
	609.6	939.8	101.6	692.2		50.80	838.2	

Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



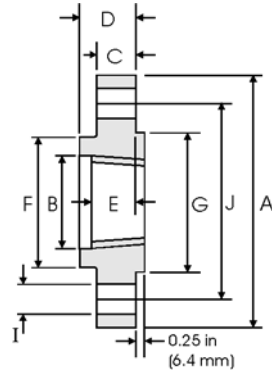
Class 400 lb

Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in	in	in	in	in	in	in	in		in	in	
1/2	0.840	3.750	To be specified by Purchaser	0.560	2.060	0.840	1.500	1.380	4	0.620	2.620	0.87
	21.30	95.30		14.20	52.30	21.30	38.10	35.00		15.70	66.55	
3/4	1.050	4.620		0.620	2.250	1.050	1.880	1.690	4	0.750	3.250	1.45
	26.70	117.3		15.70	57.15	26.70	47.80	42.90		19.10	82.60	
1	1.315	4.880		0.690	2.440	1.320	2.120	2.000	4	0.750	3.500	1.76
	33.40	124.0		17.50	62.00	33.50	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250		0.810	2.620	1.660	2.500	2.500	4	0.750	3.880	2.49
	42.20	133.4		20.60	66.55	42.20	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120		0.880	2.750	1.900	2.750	2.880	4	0.880	4.500	3.49
	48.30	155.4		22.40	69.85	48.30	69.85	73.15		22.40	114.3	
2	2.375	6.500		1.000	2.880	2.380	3.310	3.620	8	0.750	5.000	4.36
	60.30	165.1		25.40	73.15	60.45	84.10	91.90		19.10	127.0	
2 1/2	2.875	7.500		1.120	3.120	2.880	3.940	4.120	8	0.880	5.880	6.43
	73.00	190.5		28.40	79.25	73.15	100.1	104.6		22.40	149.4	
3	3.500	8.250		1.250	3.250	3.500	4.620	5.000	8	0.880	6.620	8.53
	88.90	209.6		31.75	82.60	88.90	117.3	127.0		22.40	168.1	
3 1/2	4.000	9.000		1.380	3.380	4.000	5.250	5.500	8	1.000	7.250	10.7
	101.6	228.6		35.10	85.90	101.6	133.4	139.7		25.40	184.2	
4	4.500	10.00		1.380	3.500	4.500	5.750	6.190	8	1.000	7.880	12.8
	114.3	254.0		35.10	88.90	114.3	146.1	157.2		25.40	200.2	
5	5.563	11.00	1.500	4.000	5.560	7.000	7.310	8	1.000	9.250	16.9	
	141.3	279.4	38.10	101.6	141.2	177.8	185.7		25.40	235.0		
6	6.625	12.50	1.620	4.060	6.630	8.120	8.500	12	1.000	10.62	22.0	
	168.3	317.5	41.10	103.1	168.4	206.2	215.9		25.40	269.7		
8	8.625	15.00	1.880	4.620	8.630	10.25	10.62	12	1.120	13.00	34.7	
	219.1	381.0	47.80	117.3	219.2	260.4	269.7		28.40	330.2		
10	10.75	17.50	2.120	4.880	10.75	12.62	12.75	16	1.250	15.25	48.5	
	273.0	444.5	53.80	124.0	273.0	320.5	323.8		31.75	387.4		
12	12.75	20.50	2.250	5.380	12.75	14.75	15.00	16	1.380	17.75	69.6	
	323.8	520.7	57.15	136.7	323.8	374.7	381.0		35.10	450.9		
14	14.00	23.00	2.380	5.880	14.00	16.75	16.25	20	1.380	20.25	95.5	
	355.6	584.2	60.45	149.4	355.6	425.5	412.7		35.10	514.4		
16	16.00	25.50	2.500	6.000	16.00	19.00	18.50	20	1.500	22.50	118	
	406.4	647.7	63.50	152.4	406.4	482.6	469.9		38.10	571.5		
18	18.00	28.00	2.620	6.500	18.00	21.00	21.00	24	1.500	24.75	145	
	457.2	711.2	66.55	165.1	457.2	533.4	533.4		38.10	628.7		
20	20.00	30.50	2.750	6.620	20.00	23.12	23.00	24	1.620	27.00	173	
	508.0	774.7	69.85	168.1	508.0	587.2	584.2		41.10	685.8		
24	24.00	36.00	3.000	6.880	24.00	27.62	27.25	24	1.880	32.00	249	
	609.6	914.4	76.20	174.8	609.6	701.5	692.1		47.80	812.8		

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



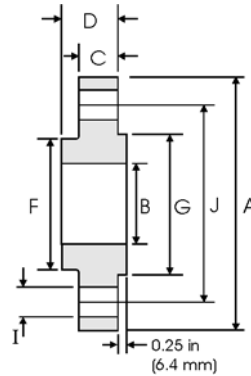
Class 400 lb

Nominal Pipe Size	Pipe	Flange Data					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Counter-bore min	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	0.930	0.560	0.880	0.620	1.500	1.380	4	0.620	2.620	0.74
	21.30	95.30	23.60	14.20	22.40	15.70	38.10	35.10		15.70	66.55	
3/4	1.050	4.620	1.140	0.620	1.000	0.620	1.880	1.690	4	0.750	3.250	1.27
	26.70	117.3	29.00	15.70	25.40	15.70	47.80	42.90		19.10	82.60	
1	1.315	4.880	1.410	0.690	1.060	0.690	2.120	2.000	4	0.750	3.500	1.52
	33.40	124.0	35.80	17.50	26.90	17.50	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250	1.750	0.810	1.120	0.810	2.500	2.500	4	0.750	3.880	2.03
	42.20	133.4	44.50	20.60	28.40	20.60	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120	1.990	0.880	1.250	0.880	2.750	2.880	4	0.880	4.500	2.96
	48.30	155.4	50.50	22.40	31.75	22.40	69.85	73.15		22.40	114.3	
2	2.375	6.500	2.500	1.000	1.440	1.120	3.310	3.620	8	0.750	5.000	3.62
	60.30	165.1	63.50	25.40	36.60	28.40	84.10	91.90		19.10	127.0	
2 1/2	2.875	7.500	3.000	1.120	1.620	1.250	3.940	4.120	8	0.880	5.880	5.28
	73.00	190.5	76.20	28.40	41.10	31.75	100.1	104.6		22.40	149.4	
3	3.500	8.250	3.630	1.250	1.810	1.380	4.620	5.000	8	0.880	6.620	7.00
	88.90	209.6	92.20	31.75	46.00	35.10	117.3	127.0		22.40	168.1	
3 1/2	4.000	9.000	4.130	1.380	1.940	1.560	5.250	5.500	8	1.000	7.250	8.84
	101.6	228.6	104.9	35.10	49.30	39.60	133.4	139.7		25.40	184.2	
4	4.500	10.00	4.630	1.380	2.000	1.440	5.750	6.190	8	1.000	7.880	11.1
	114.3	254.0	117.6	35.10	50.80	36.60	146.1	157.2		25.40	200.2	
5	5.563	11.00	5.690	1.500	2.120	1.690	7.000	7.310	8	1.000	9.250	13.9
	141.3	279.4	144.5	38.10	53.80	42.90	177.8	185.7		25.40	235.0	
6	6.625	12.50	6.750	1.620	2.250	1.810	8.120	8.500	12	1.000	10.62	18.3
	168.3	317.5	171.5	41.10	57.15	46.00	206.2	215.9		25.40	269.7	
8	8.625	15.00	8.750	1.880	2.690	2.000	10.25	10.62	12	1.120	13.00	28.6
	219.1	381.0	222.3	47.80	68.30	50.80	260.4	269.7		28.40	330.2	
10	10.75	17.50	10.88	2.120	2.880	2.190	12.62	12.75	16	1.250	15.25	39.2
	273.0	444.5	276.4	53.80	73.15	55.60	320.5	323.9		31.75	387.4	
12	12.75	20.50	12.94	2.250	3.120	2.380	14.75	15.00	16	1.380	17.75	57.0
	323.8	520.7	328.7	57.15	79.25	60.45	374.7	381.0		35.10	450.9	
14	14.00	23.00	14.19	2.380	3.310	2.500	16.75	16.25	20	1.380	20.25	79.1
	355.6	584.2	360.4	60.45	84.10	63.50	425.5	412.8		35.10	514.4	
16	16.00	25.50	16.19	2.500	3.690	2.690	19.00	18.50	20	1.500	22.50	101
	406.4	647.7	411.2	63.50	93.70	68.30	482.6	469.9		38.10	571.5	
18	18.00	28.00	18.19	2.620	3.880	2.750	21.00	21.00	24	1.500	24.75	123
	457.2	711.2	462.0	66.55	98.60	69.85	533.4	533.4		38.10	628.7	
20	20.00	30.50	20.19	2.750	4.000	2.880	23.12	23.00	24	1.620	27.00	146
	508.0	774.7	512.8	69.85	101.6	73.15	587.2	584.2		41.10	685.8	
24	24.00	36.00	24.19	3.000	4.500	3.250	27.62	27.25	24	1.880	32.00	219
	609.6	914.4	614.4	76.20	114.3	82.60	701.5	692.2		47.80	812.8	



Notes

- 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 locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



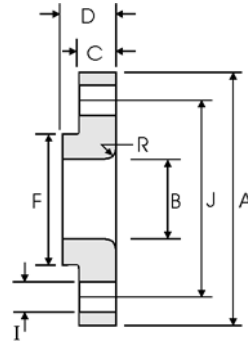
Class 400 lb

Pipe		Flange Data				Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	0.880	0.560	0.880	1.500	1.380	4	0.620	2.620	0.74
	21.30	95.30	22.40	14.20	22.40	38.10	35.10		15.70	66.55	
3/4	1.050	4.620	1.090	0.620	1.000	1.880	1.690	4	0.750	3.250	1.27
	26.70	117.3	27.70	15.70	25.40	47.70	42.90		19.10	82.50	
1	1.315	4.880	1.360	0.690	1.060	2.120	2.000	4	0.750	3.500	1.52
	33.40	124.0	34.50	17.50	26.90	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250	1.700	0.810	1.120	2.500	2.500	4	0.750	3.880	2.03
	42.20	133.4	43.20	20.60	28.40	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120	1.950	0.880	1.250	2.750	2.880	4	0.880	4.500	2.96
	48.30	155.4	49.50	22.40	31.75	69.85	73.15		22.40	114.3	
2	2.375	6.500	2.440	1.000	1.440	3.310	3.620	8	0.750	5.000	3.62
	60.30	165.1	62.00	25.40	36.60	84.00	91.90		19.10	127.0	
2 1/2	2.875	7.500	2.940	1.120	1.620	3.940	4.120	8	0.880	5.880	5.28
	73.00	190.5	74.70	28.40	41.10	100.0	104.6		22.40	149.4	
3	3.500	8.250	3.570	1.250	1.810	4.620	5.000	8	0.880	6.620	7.00
	88.90	209.6	90.70	31.75	46.00	117.3	127.0		22.40	168.1	
3 1/2	4.000	9.000	4.070	1.380	1.940	5.250	5.500	8	1.000	7.250	8.84
	101.6	228.6	103.4	35.10	49.30	133.3	139.7		25.40	184.2	
4	4.500	10.00	4.570	1.380	2.000	5.750	6.190	8	1.000	7.880	11.1
	114.3	254.0	116.1	35.10	50.80	146.0	157.2		25.40	200.1	
5	5.563	11.00	5.660	1.500	2.120	7.000	7.310	8	1.000	9.250	13.9
	141.3	279.4	143.8	38.10	53.80	177.8	185.7		25.40	234.9	
6	6.625	12.50	6.720	1.620	2.250	8.120	8.500	12	1.000	10.62	18.3
	168.3	317.5	170.7	41.10	57.15	206.2	215.9		25.40	269.7	
8	8.625	15.00	8.720	1.880	2.690	10.25	10.62	12	1.120	13.00	28.6
	219.1	381.0	221.5	47.80	68.30	260.3	269.7		28.40	330.2	
10	10.75	17.50	10.88	2.120	2.880	12.62	12.75	16	1.250	15.25	39.2
	273.0	444.5	276.3	53.80	73.15	320.5	323.9		31.75	387.3	
12	12.75	20.50	12.88	2.250	3.120	14.75	15.00	16	1.380	17.75	57.0
	323.8	520.7	327.1	57.15	79.25	374.6	381.0		35.10	450.8	
14	14.00	23.00	14.14	2.380	3.310	16.75	16.25	20	1.380	20.25	79.1
	355.6	584.2	359.1	60.05	84.10	425.4	412.8		35.10	514.4	
16	16.00	25.50	16.16	2.500	3.690	19.00	18.50	20	1.500	22.50	101
	406.4	647.7	410.5	63.50	93.70	482.6	469.9		38.10	571.5	
18	18.00	28.00	18.18	2.620	3.880	21.00	21.00	24	1.500	24.75	123
	457.2	711.2	461.8	66.55	98.60	533.4	533.4		38.10	628.7	
20	20.00	30.50	20.20	2.750	4.000	23.12	23.00	24	1.620	27.00	146
	508.0	774.7	513.1	69.85	101.6	587.2	584.2		41.10	685.8	
24	24.00	36.00	24.25	3.000	4.500	27.62	27.25	24	1.880	32.00	219
	609.6	914.4	616.0	76.20	114.3	701.5	692.2		47.80	812.8	



Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



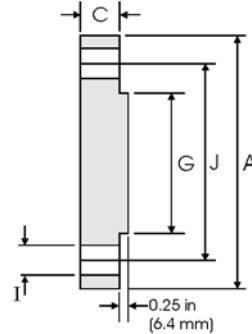
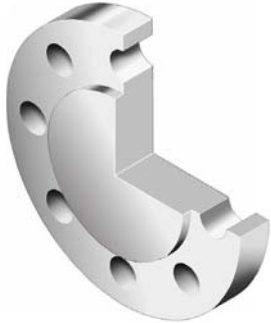
Class 400 lb

Nominal Pipe Size	Pipe	Flange Data					Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	3.750	0.900	0.560	0.880	0.120	1.500	4	0.620	2.620	0.72	
	21.30	95.30	22.90	14.20	22.40	3.000	38.10		15.70	66.55		
3/4	1.050	4.620	1.110	0.620	1.000	0.120	1.880	4	0.750	3.250	1.25	
	26.70	117.3	28.20	15.70	25.40	3.000	47.80		19.10	82.60		
1	1.315	4.880	1.380	0.690	1.060	0.120	2.120	4	0.750	3.500	1.50	
	33.40	124.0	35.10	17.50	26.90	3.000	53.80		19.10	88.90		
1 1/4	1.660	5.250	1.720	0.810	1.120	0.190	2.500	4	0.750	3.880	2.00	
	42.20	133.4	43.70	20.60	28.40	4.800	63.50		19.10	98.60		
1 1/2	1.900	6.120	1.970	0.880	1.250	0.250	2.750	4	0.880	4.500	2.92	
	48.30	155.4	50.00	22.40	31.75	6.400	69.85		22.40	114.3		
2	2.375	6.500	2.460	1.000	1.440	0.310	3.310	8	0.750	5.000	3.55	
	60.30	165.1	62.50	25.40	36.60	7.900	84.10		19.10	127.0		
2 1/2	2.875	7.500	2.970	1.120	1.620	0.310	3.940	8	0.880	5.880	5.23	
	73.00	190.5	75.40	28.40	41.10	7.900	100.1		22.40	149.4		
3	3.500	8.250	3.600	1.125	1.810	0.380	4.620	8	0.880	6.620	6.95	
	88.90	209.6	91.40	31.75	46.00	9.700	117.3		22.40	168.1		
3 1/2	4.000	9.000	4.100	1.380	1.940	0.380	5.250	8	1.000	7.250	8.78	
	101.6	228.6	104.1	35.10	49.30	9.700	133.4		25.40	184.2		
4	4.500	10.00	4.600	1.380	2.000	0.440	5.750	8	1.000	7.880	10.9	
	114.3	254.0	116.8	35.10	50.80	11.20	146.1		25.40	200.2		
5	5.563	11.00	5.690	1.500	2.120	0.440	7.000	8	1.000	9.250	13.7	
	141.3	279.4	114.5	38.10	53.80	11.20	177.8		25.40	235.0		
6	6.625	12.50	6.750	1.620	2.250	0.500	8.120	12	1.000	10.62	18.0	
	168.3	317.5	171.5	41.10	57.15	12.70	206.2		25.40	269.7		
8	8.625	15.00	8.750	1.880	2.690	0.500	10.25	12	1.120	13.00	28.3	
	219.1	381.0	222.3	47.80	68.30	12.70	260.4		28.40	330.2		
10	10.75	17.50	10.92	2.120	4.000	0.500	12.62	16	1.250	15.25	38.8	
	273.0	444.5	277.4	53.80	101.6	12.70	320.5		31.75	387.4		
12	12.75	20.50	12.92	2.250	4.250	0.500	14.75	16	1.380	17.75	56.6	
	323.8	520.7	328.2	57.15	108.0	12.70	374.7		35.10	450.9		
14	14.00	23.00	14.18	2.380	4.620	0.500	16.75	20	1.380	20.25	78.6	
	355.6	584.2	360.2	60.45	117.3	12.70	425.5		35.10	514.4		
16	16.00	25.50	16.19	2.500	5.000	0.500	19.00	20	1.500	22.50	100	
	406.4	647.7	411.2	63.50	127.0	12.70	482.6		38.10	571.5		
18	18.00	28.00	18.20	2.620	5.380	0.500	21.00	24	1.500	24.75	122	
	457.2	711.2	462.3	66.55	136.7	12.70	533.4		38.10	628.7		
20	20.00	30.50	20.25	2.750	5.750	0.500	23.12	24	1.620	27.00	145	
	508.0	774.7	514.4	69.85	146.1	12.70	587.2		41.10	685.8		
24	24.00	36.00	24.25	3.000	6.250	0.500	27.62	24	1.880	32.00	217	
	609.6	914.4	616.0	76.20	158.8	12.70	701.5		47.80	812.8		



Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



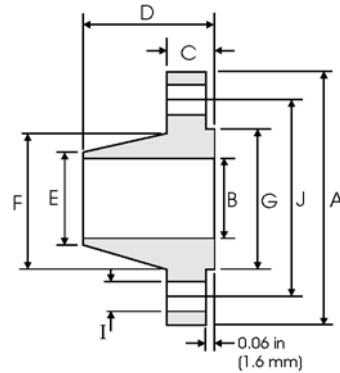
Class 400 lb

Nominal Pipe Size	Pipe	Flange Data			Raised Face	Drilling Data			Weight
		A	C	G	H	I	J		
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece	
	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	3.750	0.560	1.380	4	0.620	2.620	0.76	
	21.30	95.20	14.20	35.10		15.70	66.55		
3/4	1.050	4.620	0.620	1.690	4	0.750	3.250	1.28	
	26.70	117.3	15.70	42.90		19.10	82.60		
1	1.315	4.880	0.690	2.000	4	0.750	3.500	1.60	
	33.40	123.9	17.50	50.80		19.10	88.90		
1 1/4	1.660	5.250	0.810	2.500	4	0.750	3.880	2.23	
	42.20	133.3	20.60	63.50		19.10	98.60		
1 1/2	1.900	6.120	0.880	2.880	4	0.880	4.500	3.25	
	48.30	155.4	22.30	73.15		22.40	114.3		
2	2.375	6.500	1.000	3.620	8	0.750	5.000	4.15	
	60.30	165.1	25.40	91.90		19.10	127.0		
2 1/2	2.875	7.500	1.120	4.120	8	0.880	5.880	6.13	
	73.00	190.5	28.40	104.6		22.40	149.4		
3	3.500	8.250	1.250	5.000	8	0.880	6.620	8.44	
	88.90	209.5	31.70	127.0		22.40	168.1		
3 1/2	4.000	9.000	1.380	5.500	8	1.000	7.250	11.0	
	101.6	228.6	35.00	139.7		25.40	184.2		
4	4.500	10.00	1.380	6.190	8	1.000	7.880	13.7	
	114.3	254.0	35.10	157.2		25.40	200.2		
5	5.563	11.00	1.500	7.310	8	1.000	9.250	18.5	
	141.3	279.4	38.10	185.7		25.40	235.0		
6	6.625	12.50	1.620	8.500	12	1.000	10.62	25.5	
	168.3	317.5	41.10	215.9		25.40	269.7		
8	8.625	15.00	1.880	10.62	12	1.120	13.00	42.6	
	219.1	381.0	47.80	269.7		28.40	330.2		
10	10.75	17.50	2.120	12.75	16	1.250	15.25	64.5	
	273.0	444.5	53.80	323.9		31.75	387.4		
12	12.75	20.50	2.250	15.00	16	1.380	17.75	94.30	
	323.8	520.7	57.15	381.0		35.10	450.9		
14	14.00	23.00	2.380	16.25	20	1.380	20.25	124	
	355.6	584.2	60.45	412.8		35.10	514.4		
16	16.00	25.50	2.500	18.50	20	1.500	22.50	162	
	406.4	647.7	63.50	469.9		38.10	571.5		
18	18.00	28.00	2.620	21.00	24	1.500	24.75	205	
	457.2	711.2	66.55	533.4		38.10	628.7		
20	20.00	30.50	2.750	23.00	24	1.620	27.00	254	
	508.0	774.7	69.85	584.2		41.10	685.8		
24	24.00	36.00	3.000	27.25	24	1.880	32.00	386	
	609.6	914.4	76.20	692.2		47.80	812.8		



Notes

- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



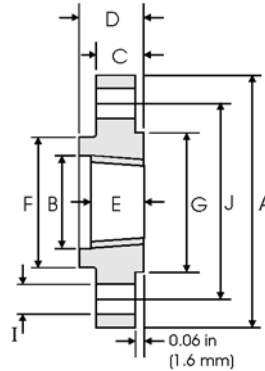
Class 300 lb

Nominal Pipe Size	Pipe		Flange Data				Hub Data		Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	3.750	0.620	0.560	2.060	0.840	1.500	1.380	4	0.620	2.620	0.75	
	21.30	95.20	15.70	14.20	52.30	21.30	38.10	35.00		15.70	66.55		
3/4	1.050	4.620	0.820	0.620	2.250	1.050	1.880	1.690	4	0.750	3.250	1.26	
	26.70	117.3	20.80	15.70	57.15	26.70	47.70	42.90		19.00	82.50		
1	1.315	4.880	1.050	0.690	2.440	1.320	2.120	2.000	4	0.750	3.500	1.52	
	33.40	123.9	26.70	17.50	62.00	33.50	53.80	50.80		19.00	88.90		
1 1/4	1.660	5.250	1.380	0.750	2.560	1.660	2.500	2.500	4	0.750	3.880	2.03	
	42.20	133.3	35.10	19.00	65.00	42.20	63.50	63.50		19.00	98.50		
1 1/2	1.900	6.120	1.610	0.810	2.690	1.900	2.750	2.880	4	0.880	4.500	2.89	
	48.30	155.4	40.90	20.60	68.30	48.30	69.85	73.15		22.30	114.3		
2	2.375	6.500	2.070	0.880	2.750	2.380	3.310	3.620	8	0.750	5.000	3.40	
	60.30	165.1	52.60	22.30	69.85	60.45	84.00	91.90		19.00	127.0		
2 1/2	2.875	7.500	2.470	1.000	3.000	2.880	3.940	4.120	8	0.880	5.880	5.17	
	73.00	190.5	62.70	25.40	76.20	73.15	100.0	104.6		22.30	149.3		
3	3.500	8.250	3.070	1.120	3.120	3.500	4.620	5.000	8	0.880	6.620	6.93	
	88.90	209.5	78.00	28.40	79.25	88.90	117.3	127.0		22.30	168.1		
3 1/2	4.000	9.000	3.550	1.190	3.190	4.000	5.250	5.500	8	0.880	7.250	8.67	
	101.6	228.6	90.20	30.20	81.00	101.6	133.3	139.7		22.30	184.1		
4	4.500	10.00	4.030	1.250	3.380	4.500	5.750	6.190	8	0.880	7.880	11.2	
	114.3	254.0	102.4	31.70	85.80	114.3	146.0	157.2		22.30	200.1		
5	5.563	11.00	5.050	1.380	3.880	5.560	7.000	7.310	8	0.880	9.250	15.1	
	141.3	279.4	128.3	35.00	98.50	141.2	177.8	185.7		22.30	234.9		
6	6.625	12.50	6.070	1.440	3.880	6.630	8.120	8.500	12	0.880	10.62	19.1	
	168.3	317.5	154.2	36.50	98.50	168.4	206.2	215.9		22.30	269.7		
8	8.625	15.00	7.980	1.620	4.380	8.630	10.25	10.62	12	1.000	13.00	29.9	
	219.1	381.0	202.7	41.10	111.2	219.2	260.3	269.7		25.40	330.2		
10	10.75	17.50	10.02	1.880	4.620	10.75	12.62	12.75	16	1.120	15.25	42.7	
	273.0	444.5	254.5	47.70	117.3	273.0	320.5	323.8		28.40	387.3		
12	12.75	20.50	12.00	2.000	5.120	12.75	14.75	15.00	16	1.250	17.75	61.8	
	323.8	520.7	304.8	50.80	130.0	323.8	374.6	381.0		31.70	450.8		
14	14.00	23.00	To be specified by Purchaser	2.120	5.620	14.00	16.75	16.25	20	1.250	20.25	85.8	
	355.6	584.2		53.80	142.7	355.6	425.4	412.7		31.70	514.3		
16	16.00	25.50		2.250	5.750	16.00	19.00	18.50	20	1.380	22.50	106	
	406.4	647.7		57.15	146.0	406.4	482.6	469.9		35.00	571.5		
18	18.00	28.00		2.380	6.250	18.00	21.00	21.00	24	1.380	24.75	131	
	457.2	711.2		60.45	158.7	457.2	533.4	533.4		35.00	628.6		
20	20.00	30.50		2.500	6.380	20.00	23.12	23.00	24	1.380	27.00	158	
	508.0	774.7		63.50	162.0	508.0	587.2	584.2		35.00	685.8		
24	24.00	36.00		2.750	6.620	24.00	27.62	27.25	24	1.620	32.00	230	
	609.6	914.4		69.85	168.1	609.6	701.5	692.1		41.10	812.8		

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



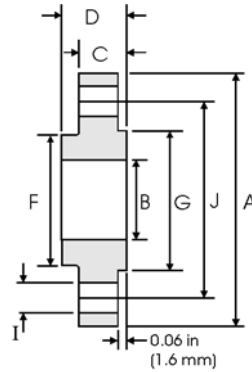
Class 300 lb

Nominal Pipe Size	Pipe	Flange Data					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Counter-bore min	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.750	0.930	0.560	0.880	0.620	1.500	1.380	4	0.620	2.620	0.64
	21.30	95.20	23.60	14.20	22.30	15.70	38.10	35.00		15.70	66.55	
3/4	1.050	4.620	1.140	0.620	1.000	0.620	1.880	1.690	4	0.750	3.250	1.12
	26.70	117.3	29.00	15.70	25.40	15.70	47.70	42.90		19.00	82.50	
1	1.315	4.880	1.410	0.690	1.060	0.690	2.120	2.000	4	0.750	3.500	1.36
	33.40	123.9	35.80	17.50	26.90	17.50	53.80	50.80		19.00	88.90	
1 1/4	1.660	5.250	1.750	0.750	1.060	0.810	2.500	2.500	4	0.750	3.880	1.68
	42.20	133.3	44.40	19.00	26.90	20.60	63.50	63.50		19.00	98.50	
1 1/2	1.900	6.120	1.980	0.810	1.190	0.880	2.750	2.880	4	0.880	4.500	2.49
	48.30	155.4	50.50	20.60	30.20	22.30	69.85	73.15		22.30	114.3	
2	2.375	6.500	2.500	0.880	1.310	1.120	3.310	3.620	8	0.750	5.000	2.87
	60.30	165.1	63.50	22.30	33.20	28.40	84.00	91.90		19.00	127.0	
2 1/2	2.875	7.500	3.000	1.000	1.500	1.250	3.940	4.120	8	0.880	5.880	4.32
	73.00	190.5	76.20	25.40	38.10	31.70	100.0	104.6		22.30	149.3	
3	3.500	8.250	3.630	1.120	1.690	1.250	4.620	5.000	8	0.880	6.620	5.85
	88.90	209.5	92.20	28.40	42.90	31.70	117.3	127.0		22.30	168.1	
3 1/2	4.000	9.000	4.130	1.190	1.750	1.440	5.250	5.500	8	0.880	7.250	7.34
	101.6	228.6	104.9	30.20	44.40	36.50	133.3	139.7		22.30	184.1	
4	4.500	10.00	4.630	1.250	1.880	1.440	5.750	6.190	8	0.880	7.880	9.61
	114.3	254.0	117.6	31.70	47.70	36.50	146.0	157.2		22.30	200.1	
5	5.563	11.00	5.690	1.380	2.000	1.690	7.000	7.310	8	0.880	9.250	12.3
	141.3	279.4	144.5	35.00	50.80	42.90	177.8	185.7		22.30	234.9	
6	6.625	12.50	6.750	1.440	2.060	1.810	8.120	8.500	12	0.880	10.62	15.6
	168.3	317.5	171.4	36.50	52.30	45.90	206.2	215.9		22.30	269.7	
8	8.625	15.00	8.750	1.620	2.440	2.000	10.25	10.62	12	1.000	13.00	24.2
	219.1	381.0	222.2	41.10	61.90	50.80	260.3	269.7		25.40	330.2	
10	10.75	17.50	10.88	1.880	2.620	2.190	12.62	12.75	16	1.120	15.25	34.1
	273.0	444.5	276.3	47.70	66.55	55.60	320.5	323.9		28.40	387.3	
12	12.75	20.50	12.94	2.000	2.880	2.380	14.75	15.00	16	1.250	17.75	49.8
	323.8	520.7	328.7	50.80	73.15	60.45	374.6	381.0		31.70	450.8	
14	14.00	23.00	14.19	2.120	3.000	2.500	16.75	16.25	20	1.250	20.25	69.9
	355.6	584.2	360.4	53.80	76.20	63.50	425.4	412.7		31.70	514.3	
16	16.00	25.50	16.19	2.250	3.250	2.690	19.00	18.50	20	1.380	22.50	88.1
	406.4	647.7	411.2	57.15	82.50	68.30	482.6	469.9		35.00	571.5	
18	18.00	28.00	18.19	2.380	3.500	2.750	21.00	21.00	24	1.380	24.75	109
	457.2	711.2	462.0	60.45	88.90	69.85	533.4	533.4		35.00	628.6	
20	20.00	30.50	20.19	2.500	3.750	2.880	23.12	23.00	24	1.380	27.00	134
	508.0	774.7	512.8	63.50	95.2	73.15	587.2	584.2		35.00	685.8	
24	24.00	36.00	24.19	2.750	4.190	3.250	27.62	27.25	24	1.620	32.00	201
	609.6	914.4	614.4	69.85	106.4	82.50	701.5	692.2		41.10	812.8	

Notes

- 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 locknut threads.)
- Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45° (approx).
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



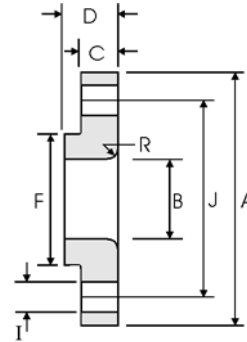
Class 300 lb

Nominal Pipe Size	Pipe	Flange Data				Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840 21.30	3.750 95.20	0.880 22.40	0.560 14.20	0.880 22.40	1.500 38.10	1.380 35.10	4	0.620 15.70	2.620 66.55	0.64
3/4	1.050 26.70	4.620 117.3	1.090 27.70	0.620 15.70	1.000 25.40	1.880 47.70	1.690 42.90	4	0.750 19.10	3.250 82.50	1.12
1	1.315 33.40	4.880 123.9	1.360 34.50	0.690 17.50	1.060 26.90	2.120 53.80	2.000 50.80	4	0.750 19.10	3.500 88.90	1.36
1 1/4	1.660 42.20	5.250 133.3	1.700 43.20	0.750 19.00	1.060 26.90	2.500 63.50	2.500 63.50	4	0.750 19.10	3.880 98.60	1.68
1 1/2	1.900 48.30	6.120 155.4	1.950 49.50	0.810 20.60	1.190 30.20	2.750 69.85	2.880 73.15	4	0.880 22.40	4.500 114.3	2.49
2	2.375 60.30	6.500 165.1	2.440 62.00	0.880 22.30	1.310 33.20	3.310 84.00	3.620 91.90	8	0.750 19.10	5.000 127.0	2.87
2 1/2	2.875 73.00	7.500 190.5	2.940 74.70	1.000 25.40	1.500 38.10	3.940 100.0	4.120 104.6	8	0.880 22.40	5.880 149.4	4.32
3	3.500 88.90	8.250 209.5	3.570 90.70	1.120 28.40	1.690 42.90	4.620 117.3	5.000 127.0	8	0.880 22.40	6.620 168.1	5.85
3 1/2	4.000 101.6	9.000 228.6	4.070 103.4	1.190 30.20	1.750 44.40	5.250 133.3	5.500 139.7	8	0.880 22.40	7.250 184.2	7.34
4	4.500 114.3	10.00 254.0	4.570 116.1	1.250 31.70	1.880 47.70	5.750 146.0	6.190 157.2	8	0.880 22.40	7.880 200.1	9.61
5	5.563 141.3	11.00 279.4	5.660 143.8	1.380 35.00	2.000 50.80	7.000 177.8	7.310 185.7	8	0.880 22.40	9.250 234.9	12.3
6	6.625 168.3	12.50 317.5	6.720 170.7	1.440 36.50	2.060 52.30	8.120 206.2	8.500 215.9	12	0.880 22.40	10.62 269.7	15.6
8	8.625 219.1	15.00 381.0	8.720 221.5	1.620 41.10	2.440 61.90	10.25 260.3	10.62 269.7	12	1.000 25.40	13.00 330.2	24.2
10	10.75 273.0	17.50 444.5	10.88 276.3	1.880 47.70	2.620 66.55	12.62 320.5	12.75 323.9	16	1.120 28.40	15.25 387.3	34.1
12	12.75 323.8	20.50 520.7	12.88 327.1	2.000 50.80	2.880 73.15	14.75 374.6	15.00 381.0	16	1.250 31.70	17.75 450.8	49.8
14	14.00 355.6	23.00 584.2	14.14 359.1	2.120 53.80	3.000 76.20	16.75 425.4	16.25 412.8	20	1.250 31.70	20.25 514.4	69.9
16	16.00 406.4	25.50 647.7	16.16 410.5	2.250 57.15	3.250 82.50	19.00 482.6	18.50 469.9	20	1.380 35.00	22.50 571.5	88.1
18	18.00 457.2	28.00 711.2	18.18 461.8	2.380 60.45	3.500 88.90	21.00 533.4	21.00 533.4	24	1.380 35.00	24.75 628.7	109
20	20.00 508.0	30.50 774.7	20.20 513.1	2.500 63.50	3.750 95.20	23.12 587.2	23.00 584.2	24	1.380 35.00	27.00 685.8	134
24	24.00 609.6	36.00 914.4	24.25 616.0	2.750 69.85	4.190 106.4	27.62 701.5	27.25 692.2	24	1.620 41.00	32.00 812.8	201

Notes

- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



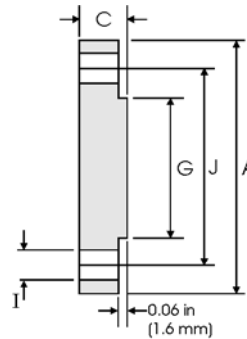
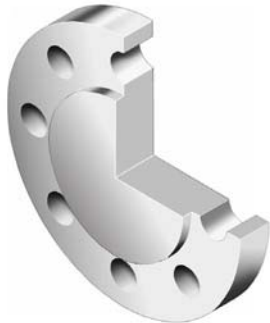
Class 300 lb

Nominal Pipe Size	Pipe	Flange Data					Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J		
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece	
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm		
1/2	0.840	3.750	0.900	0.560	0.880	0.120	1.500	4	0.620	2.620	0.62	
	21.30	95.20	22.90	14.20	22.30	3.000	38.10		15.70	66.55		
3/4	1.050	4.620	1.110	0.620	1.000	0.120	1.880	4	0.750	3.250	1.10	
	26.70	117.3	28.20	15.70	25.40	3.000	47.70		19.00	82.50		
1	1.315	4.880	1.380	0.690	1.060	0.120	2.120	4	0.750	3.500	1.33	
	33.40	123.9	35.10	17.50	26.90	3.000	53.80		19.0	88.90		
1 1/4	1.660	5.250	1.720	0.750	1.060	0.190	2.500	4	0.750	3.880	1.65	
	42.20	133.3	43.70	19.00	26.90	4.800	63.50		19.00	98.50		
1 1/2	1.900	6.120	1.970	0.810	1.190	0.250	2.750	4	0.880	4.500	2.44	
	48.30	155.4	50.00	20.60	30.20	6.400	69.85		22.30	114.3		
2	2.375	6.500	2.460	0.880	1.310	0.310	3.310	8	0.750	5.000	2.83	
	60.30	165.1	62.50	22.30	33.20	7.900	84.00		19.10	127.0		
2 1/2	2.875	7.500	2.970	1.000	1.500	0.310	3.940	8	0.880	5.880	4.25	
	73.00	190.5	75.40	25.40	38.10	7.900	100.0		22.30	149.3		
3	3.500	8.250	3.600	1.120	1.690	0.380	4.620	8	0.880	6.620	5.78	
	88.90	209.5	91.40	28.40	42.90	9.700	117.3		22.30	168.1		
3 1/2	4.000	9.000	4.100	1.190	1.750	0.380	5.250	8	0.880	7.250	7.27	
	101.6	228.6	104.1	30.20	44.40	9.700	133.3		22.30	184.1		
4	4.500	10.00	4.600	1.250	1.880	0.440	5.750	8	0.880	7.880	9.55	
	114.3	254.0	116.8	31.70	47.70	11.20	146.0		22.30	200.1		
5	5.563	11.00	5.690	1.380	2.000	0.440	7.000	8	0.880	9.250	12.2	
	141.3	279.4	114.5	35.00	50.80	11.20	177.8		22.30	234.9		
6	6.625	12.50	6.750	1.440	2.060	0.500	8.120	12	0.880	10.62	15.5	
	168.3	317.5	171.5	36.50	52.30	12.70	206.2		22.30	269.7		
8	8.625	15.00	8.750	1.620	2.440	0.500	10.25	12	1.000	13.00	24.1	
	219.1	381.0	222.3	41.10	61.90	12.70	260.3		25.40	330.2		
10	10.75	17.50	10.92	1.880	3.750	0.500	12.62	16	1.120	15.25	34.4	
	273.0	444.5	277.4	47.70	95.20	12.70	320.5		28.40	387.3		
12	12.75	20.50	12.92	2.000	4.000	0.500	14.75	16	1.250	17.75	50.4	
	323.8	520.7	328.2	50.80	101.6	12.70	374.6		31.70	450.8		
14	14.00	23.00	14.18	2.120	4.380	0.500	16.75	20	1.250	20.25	70.9	
	355.6	584.2	360.2	53.80	111.2	12.70	425.4		31.70	514.3		
16	16.00	25.50	16.19	2.250	4.750	0.500	19.00	20	1.380	22.50	89.5	
	406.4	647.7	411.2	57.15	120.6	12.70	482.6		35.00	571.5		
18	18.00	28.00	18.20	2.380	5.120	0.500	21.00	24	1.380	24.75	111	
	457.2	711.2	462.3	60.45	130.0	12.70	533.4		35.00	628.6		
20	20.00	30.50	20.25	2.500	5.500	0.500	23.12	24	1.380	27.00	137	
	508.0	774.7	514.4	63.50	139.7	12.70	587.2		35.0	685.8		
24	24.00	36.00	24.25	2.750	6.000	0.500	27.62	24	1.620	32.00	204	
	609.6	914.4	616.0	69.8	152.4	12.70	701.5		41.10	812.8		

Notes

- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Blind Flanges - ANSI B16.5



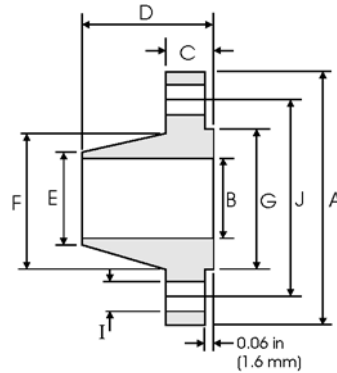
Class 300 lb

Nominal Pipe Size	Pipe	Flange Data			Raised Face	Drilling Data		Weight
		A	C	G	H	I	J	
	Outside Diameter	Overall Diameter	Flange Thickness min	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/piece
in mm	in mm	in mm	in mm	in mm		in mm		
1/2	0.840	3.750	0.560	1.380	4	0.620	2.620	0.64
	21.30	95.20	14.20	35.10		15.70	66.55	
3/4	1.050	4.620	0.620	1.690	4	0.750	3.250	1.11
	26.70	117.3	15.70	42.90		19.00	82.50	
1	1.315	4.880	0.690	2.000	4	0.750	3.500	1.39
	33.40	123.9	17.50	50.80		19.00	88.90	
1 1/4	1.660	5.250	0.750	2.500	4	0.750	3.880	1.79
	42.20	133.3	19.00	63.50		19.00	98.50	
1 1/2	1.900	6.120	0.810	2.880	4	0.880	4.500	2.66
	48.30	155.4	20.60	73.15		22.3	114.3	
2	2.375	6.500	0.880	3.620	8	0.750	5.000	3.18
	60.30	165.1	22.30	91.90		19.10	127.0	
2 1/2	2.875	7.500	1.000	4.120	8	0.880	5.880	4.85
	73.00	190.5	25.40	104.6		22.30	1.493	
3	3.500	8.250	1.120	5.000	8	0.880	6.620	6.81
	88.90	209.5	28.40	127.0		22.30	168.1	
3 1/2	4.000	9.000	1.190	5.500	8	0.880	7.250	8.71
	101.6	228.6	30.20	139.7		22.30	184.1	
4	4.500	10.00	1.250	6.190	8	0.880	7.800	11.5
	114.3	254.0	31.70	157.2		22.30	200.1	
5	5.563	11.00	1.380	7.310	8	0.880	9.250	15.6
	141.3	279.4	35.00	185.7		22.30	234.9	
6	6.625	12.50	1.440	8.500	12	0.880	10.62	20.9
	168.3	317.5	36.50	215.9		22.30	269.7	
8	8.625	15.00	1.620	10.62	12	1.000	13.00	34.3
	219.1	381.0	41.10	269.7		25.40	330.2	
10	10.75	17.50	1.880	12.75	16	1.120	15.25	53.3
	273.0	444.5	47.70	323.9		28.40	387.3	
12	12.75	20.50	2.000	15.00	16	1.250	17.75	78.8
	323.8	520.7	50.80	381.0		31.70	450.8	
14	14.00	23.00	2.120	16.25	20	1.250	20.25	105
	355.6	584.2	53.80	412.8		31.70	514.3	
16	16.00	25.50	2.250	18.50	20	1.380	22.50	137
	406.4	647.7	57.15	469.9		35.00	571.5	
18	18.00	28.00	2.380	21.00	24	1.380	24.75	175
	457.2	711.2	60.45	533.4		35.00	628.6	
20	20.00	30.50	2.500	23.00	24	1.380	27.00	221
	508.0	774.7	63.50	584.2		35.00	685.8	
24	24.00	36.00	2.750	27.25	24	1.620	32.00	339
	609.6	914.4	69.85	692.2		41.10	812.8	

Notes

- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Weld Neck Flanges - ANSI B16.5



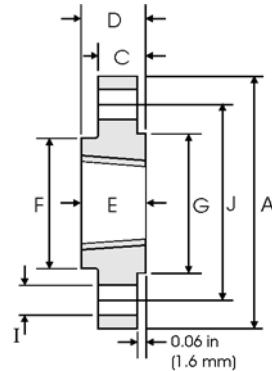
Class 150 lb

Nominal Pipe Size	Pipe	Flange Data				Hub Data		Raised Face	Drilling Data			Weight
		A	B	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at Weld Bevel	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.500	0.620	0.440	1.880	0.840	1.190	1.380	4	0.620	2.380	0.48
	21.30	88.90	15.70	11.20	47.80	21.30	30.20	35.00		15.70	60.45	
3/4	1.050	3.880	0.820	0.500	2.060	1.050	1.500	1.690	4	0.620	2.750	0.71
	26.70	98.60	20.80	12.70	52.30	26.70	38.10	42.90		15.70	69.85	
1	1.315	4.250	1.050	0.560	2.190	1.320	1.940	2.000	4	0.620	3.120	1.01
	33.40	108.0	26.70	14.20	55.60	33.50	49.30	50.80		15.70	79.25	
1 1/4	1.660	4.620	1.380	0.620	2.250	1.660	2.310	2.500	4	0.620	3.500	1.33
	42.20	117.3	35.10	15.70	57.15	42.20	58.70	63.50		15.70	88.90	
1 1/2	1.900	5.000	1.610	0.690	2.440	1.900	2.560	2.880	4	0.620	3.880	1.72
	48.30	127.0	40.90	17.50	62.00	48.30	65.00	73.15		15.70	98.60	
2	2.375	6.000	2.070	0.750	2.500	2.380	3.060	3.620	4	0.750	4.750	2.58
	60.30	152.4	52.60	19.10	63.50	60.45	77.70	91.90		19.10	120.7	
2 1/2	2.875	7.000	2.470	0.880	2.750	2.880	3.560	4.120	4	0.750	5.500	4.11
	73.00	177.8	62.70	22.40	69.85	73.15	90.40	104.6		19.10	139.7	
3	3.500	7.500	3.070	0.940	2.750	3.500	4.250	5.000	4	0.750	6.000	4.92
	88.90	190.5	78.00	23.90	69.85	88.90	108.0	127.0		19.10	152.4	
3 1/2	4.000	8.500	3.550	0.940	2.810	4.000	4.810	5.500	8	0.750	7.000	6.08
	101.6	215.9	90.20	23.90	71.40	101.6	122.2	139.7		19.10	177.8	
4	4.500	9.000	4.030	0.940	3.000	4.500	5.310	6.190	8	0.750	7.500	6.84
	114.3	228.6	102.4	23.90	76.20	114.3	134.9	157.2		19.10	190.5	
5	5.563	10.00	5.050	0.940	3.500	5.560	6.440	7.310	8	0.880	8.500	8.56
	141.3	254.0	128.3	23.90	88.90	141.2	163.6	185.7		22.40	215.9	
6	6.625	11.00	6.070	1.000	3.500	6.630	7.560	8.500	8	0.880	9.500	10.6
	168.3	279.4	154.2	25.40	88.90	168.4	192.0	215.9		22.40	241.3	
8	8.625	13.50	7.980	1.120	4.000	8.630	9.690	10.62	8	0.880	11.75	17.6
	219.1	342.9	202.7	28.40	101.6	219.2	246.1	269.7		22.40	298.5	
10	10.75	16.00	10.02	1.190	4.000	10.75	12.00	12.75	12	1.000	14.25	24.0
	273.0	406.4	254.5	30.20	101.6	273.0	304.8	323.8		25.40	362.0	
12	12.75	19.00	12.00	1.250	4.500	12.75	14.38	15.00	12	1.000	17.00	36.5
	323.8	482.6	304.8	31.75	114.3	323.8	365.3	381.0		25.40	431.8	
14	14.00	21.00	To be specified by Purchaser	1.380	5.000	14.00	15.75	16.25	12	1.120	18.75	48.4
	355.6	533.4		35.10	127.0	355.6	400.1	412.7		28.40	476.3	
16	16.00	23.50		1.440	5.000	16.00	18.00	18.50	16	1.120	21.25	60.6
	406.4	596.9		36.60	127.0	406.4	475.2	469.9		28.40	539.8	
18	18.00	25.00		1.560	5.500	18.00	19.88	21.00	16	1.250	22.75	68.3
	457.2	635.0		39.60	139.7	457.2	505.0	533.4		31.75	577.9	
20	20.00	27.50	1.690	5.690	20.00	22.00	23.00	20	1.250	25.00	84.5	
	508.0	698.5	42.90	144.5	508.0	558.8	584.2		31.75	635.0		
24	24.00	32.00	1.880	6.000	24.00	26.12	27.25	20	1.380	29.50	115	
	609.6	812.8	47.80	152.4	609.6	663.4	692.1		35.10	749.3		

Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6. For weld end bevel see page 8-5.
- For tolerances see page 8-4.

Threaded Flanges - ANSI B16.5



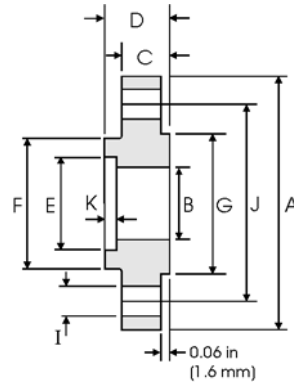
Class 150 lb

Nominal Pipe Size	Pipe	Flange Data				Hub	Raised Face	Drilling Data			Weight
		A	C	D	E	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Flange Thickness min	Overall Length	Threaded length min	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in	in	in	in	in	in	in		in	in	
1/2	0.840	3.500	0.440	0.620	0.620	1.190	1.380	4	0.620	2.380	0.39
	21.30	88.90	11.20	15.70	15.70	30.20	35.10		15.70	60.45	
3/4	1.050	3.880	0.500	0.620	0.620	1.500	1.690	4	0.620	2.750	0.56
	26.70	98.60	12.70	15.70	15.70	38.10	42.90		15.70	69.85	
1	1.315	4.250	0.560	0.690	0.690	1.940	2.000	4	0.620	3.120	0.78
	33.40	108.0	14.20	17.50	17.50	49.30	50.80		15.70	79.25	
1 1/4	1.660	4.620	0.620	0.810	0.810	2.310	2.500	4	0.620	3.500	1.03
	42.20	117.3	15.70	20.60	20.60	58.70	63.50		15.70	88.90	
1 1/2	1.900	5.000	0.690	0.880	0.880	2.560	2.880	4	0.620	3.880	1.32
	48.30	127.0	17.50	22.40	22.40	65.00	73.15		15.70	98.60	
2	2.375	6.000	0.750	1.000	1.000	3.060	3.620	4	0.750	4.750	2.06
	60.30	152.4	19.10	25.40	25.40	77.70	91.90		19.10	120.7	
2 1/2	2.875	7.000	0.880	1.120	1.120	3.560	4.120	4	0.750	5.500	3.28
	73.00	177.8	22.40	28.40	28.40	90.40	104.6		19.10	139.7	
3	3.500	7.500	0.940	1.190	1.190	4.250	5.000	4	0.750	6.000	3.85
	88.90	190.5	23.90	30.20	30.20	108.0	127.0		19.10	152.4	
3 1/2	4.000	8.500	0.940	1.250	1.250	4.810	5.500	8	0.750	7.000	4.81
	101.6	215.9	23.90	31.75	31.75	122.2	139.7		19.10	177.8	
4	4.500	9.000	0.940	1.310	1.310	5.310	6.190	8	0.750	7.500	5.30
	114.3	228.6	23.90	33.30	33.30	134.9	157.2		19.10	190.5	
5	5.563	10.00	0.940	1.440	1.440	6.440	7.310	8	0.880	8.500	6.07
	141.3	254.0	23.90	36.60	36.60	163.6	185.7		22.40	215.9	
6	6.625	11.00	1.000	1.560	1.560	7.560	8.500	8	0.880	9.500	7.45
	168.3	279.4	25.40	39.60	39.60	192.0	215.9		22.40	241.3	
8	8.625	13.50	1.120	1.750	1.750	9.690	10.62	8	0.880	11.75	12.1
	219.1	342.9	28.40	44.50	44.50	246.1	269.7		22.40	298.5	
10	10.75	16.00	1.190	1.940	1.940	12.00	12.75	12	1.000	14.25	16.5
	273.0	406.4	30.20	49.30	49.30	304.8	323.9		25.40	362.0	
12	12.75	19.00	1.250	2.190	2.190	14.38	15.00	12	1.000	17.00	26.2
	323.8	482.6	31.75	55.60	55.60	365.3	381.0		25.40	431.8	
14	14.00	21.00	1.380	2.250	2.250	15.75	16.25	12	1.120	18.75	34.6
	355.6	533.4	35.10	57.15	57.15	400.1	412.7		28.40	476.3	
16	16.00	23.50	1.440	2.500	2.500	18.00	18.50	16	1.120	21.25	44.8
	406.4	596.9	36.60	63.50	63.50	457.2	469.9		28.40	539.8	
18	18.00	25.00	1.560	2.690	2.690	19.88	21.00	16	1.250	22.75	48.9
	457.2	635.0	39.60	68.30	68.30	505.0	533.4		31.75	577.9	
20	20.00	27.50	1.690	2.880	2.880	22.00	23.00	20	1.250	25.00	61.9
	508.0	698.5	42.90	73.15	73.15	558.8	584.2		31.75	635.0	
24	24.00	32.00	1.880	3.250	3.250	26.12	27.25	20	1.380	29.50	86.9
	609.6	812.8	47.80	82.60	82.60	663.4	692.2		35.10	749.3	

Notes

- 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.)
- 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.
- Weights are based on manufacturer's data and are approximate.
- For tolerances see page 8-4.

Socket Welding Flanges - ANSI B16.5



Class 150 lb

Nominal Pipe Size	Pipe		Flange					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	K	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	No. of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in	in	in	in	in	in	in	in	in		in	in	
1/2	0.840	3.500	0.620	0.440	0.620	0.880	0.380	1.190	1.380	4	0.620	2.380	0.42
	21.30	88.90	15.70	11.20	15.70	22.40	9.600	30.20	35.10		15.70	60.45	
3/4	1.050	3.880	0.820	0.500	0.620	1.090	0.440	1.500	1.690	4	0.620	2.750	0.59
	26.70	98.60	20.80	12.70	15.70	27.70	11.10	38.10	42.90		15.70	69.85	
1	1.315	4.250	1.050	0.560	0.690	1.360	0.500	1.940	2.000	4	0.620	3.120	0.81
	33.40	108.0	26.70	14.20	17.50	34.50	12.70	49.30	50.80		15.70	79.25	
1 1/4	1.660	4.620	1.380	0.620	0.810	1.700	0.560	2.310	2.500	4	0.620	3.500	1.07
	42.20	117.3	35.10	15.70	20.60	43.20	14.20	58.70	63.50		15.70	88.90	
1 1/2	1.900	5.000	1.610	0.690	0.880	1.950	0.620	2.560	2.880	4	0.620	3.880	1.36
	48.30	127.0	40.90	17.50	22.30	49.50	15.70	65.00	73.15		15.70	98.60	
2	2.375	6.000	2.070	0.750	1.000	2.440	0.690	3.060	3.620	4	0.750	4.750	2.10
	60.30	152.4	52.60	19.10	25.40	62.00	17.50	77.70	91.90		19.10	120.7	
2 1/2	2.875	7.000	2.470	0.880	1.120	2.940	0.750	3.560	4.120	4	0.750	5.500	3.33
	73.00	177.8	62.70	22.40	28.40	74.70	19.00	90.40	104.6		19.10	139.7	
3	3.500	7.500	3.070	0.940	1.190	3.570	0.810	4.250	5.000	4	0.750	6.000	3.90
	88.90	190.5	78.00	23.90	30.20	90.70	20.60	108.0	127.0		19.10	152.4	

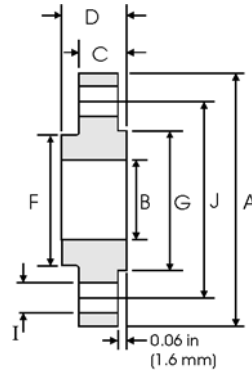
Class 300 lb

Nominal Pipe Size	Pipe		Flange					Hub	Raised Face	Drilling Data			Weight
		A	B	C	D	E	K	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	No. of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in	in	in	in	in	in	in	in	in		in	in	
1/2	0.840	3.750	0.620	0.560	0.880	0.880	0.380	1.500	1.380	4	0.620	2.620	0.66
	21.30	95.20	15.70	14.20	22.30	22.40	9.600	38.10	35.10		15.70	66.55	
3/4	1.050	4.620	0.820	0.620	1.000	1.090	0.440	1.880	1.690	4	0.750	3.250	1.15
	26.70	117.3	20.80	15.70	25.40	27.70	11.10	47.70	42.90		19.10	82.50	
1	1.315	4.880	1.050	0.690	1.060	1.360	0.500	2.120	2.000	4	0.750	3.500	1.40
	33.40	123.9	26.70	17.50	26.90	34.50	12.70	53.80	50.80		19.10	88.90	
1 1/4	1.660	5.250	1.380	0.750	1.060	1.700	0.560	2.500	2.500	4	0.750	3.880	1.75
	42.20	133.3	35.10	19.00	26.90	43.20	14.20	63.50	63.50		19.10	98.60	
1 1/2	1.900	6.120	1.610	0.810	1.190	1.950	0.620	2.750	2.880	4	0.880	4.500	2.55
	48.30	155.4	40.90	20.60	30.20	49.50	15.70	69.85	73.15		22.30	114.3	
2	2.375	6.500	2.070	0.880	1.310	2.440	0.690	3.310	3.620	8	0.750	5.000	2.93
	60.30	165.1	52.60	22.30	33.20	62.00	17.50	84.00	91.90		19.10	127.0	
2 1/2	2.875	7.500	2.470	1.000	1.500	2.940	0.750	3.940	4.120	8	0.880	5.880	4.40
	73.00	190.5	62.70	25.40	38.10	74.70	19.00	100.0	104.6		22.30	149.3	
3	3.500	8.250	3.070	1.120	1.690	3.570	0.810	4.620	5.000	8	0.880	6.620	5.92
	88.90	209.5	78.00	28.40	42.90	90.70	20.60	117.3	127.0		22.30	168.1	



Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- For ring joint facings see page 8-6. For tolerances see page 8-4.

Slip On Flanges - ANSI B16.5



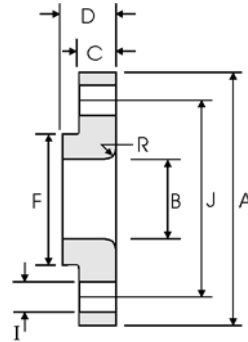
Class 150 lb

Pipe		Flange Data				Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size		A	B	C	D	F	G	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840 21.30	3.500 88.90	0.880 22.40	0.440 11.20	0.620 15.70	1.190 30.20	1.380 35.10	4	0.620 15.70	2.380 60.45	0.39
3/4	1.050 26.70	3.880 98.60	1.090 27.70	0.500 12.70	0.620 15.70	1.500 38.10	1.690 42.90	4	0.620 15.70	2.750 69.85	0.56
1	1.315 33.40	4.250 108.0	1.360 34.50	0.560 14.20	0.690 17.50	1.940 49.30	2.000 50.80	4	0.620 15.70	3.120 79.25	0.78
1 1/4	1.660 42.20	4.620 117.3	1.700 43.20	0.620 15.70	0.810 20.60	2.310 58.70	2.500 63.50	4	0.620 15.70	3.500 88.90	1.03
1 1/2	1.900 48.30	5.000 127.0	1.950 49.50	0.690 17.50	0.880 22.40	2.560 65.00	2.880 73.15	4	0.620 15.70	3.880 98.60	1.32
2	2.375 60.30	6.000 152.4	2.440 62.00	0.750 19.10	1.000 25.40	3.060 77.70	3.620 91.90	4	0.750 19.10	4.750 120.7	2.06
2 1/2	2.875 73.00	7.000 177.8	2.940 74.70	0.880 22.40	1.120 28.40	3.560 90.40	4.120 104.6	4	0.750 19.10	5.500 139.7	3.28
3	3.500 88.90	7.500 190.5	3.570 90.70	0.940 23.90	1.190 30.20	4.250 108.0	5.000 127.0	4	0.750 19.10	6.000 152.4	3.85
3 1/2	4.000 101.6	8.500 215.9	4.070 103.4	0.940 23.90	1.250 31.75	4.810 122.2	5.500 139.7	8	0.750 19.10	7.000 177.8	4.81
4	4.500 114.3	9.000 228.6	4.570 116.1	0.940 23.90	1.310 33.30	5.310 134.9	6.190 157.2	8	0.750 19.10	7.500 190.5	5.30
5	5.563 141.3	10.00 254.0	5.660 143.8	0.940 23.90	1.440 36.60	6.440 163.6	7.310 185.7	8	0.880 22.40	8.500 215.9	6.07
6	6.625 168.3	11.00 279.4	6.720 170.7	1.000 25.40	1.560 39.60	7.560 192.0	8.500 215.9	8	0.880 22.40	9.500 241.3	7.45
8	8.625 219.1	13.50 342.9	8.720 221.5	1.120 28.40	1.750 44.50	9.690 246.1	10.62 269.7	8	0.880 22.40	11.75 298.5	12.1
10	10.75 273.0	16.00 406.4	10.88 276.3	1.190 30.20	1.940 49.30	12.00 304.8	12.75 323.9	12	1.000 25.40	14.25 362.0	16.5
12	12.75 323.8	19.00 482.6	12.88 327.1	1.250 31.75	2.190 55.60	14.38 365.3	15.00 381.0	12	1.000 25.40	17.00 431.8	26.2
14	14.00 355.6	21.00 533.4	14.14 359.1	1.380 35.10	2.250 57.15	15.75 400.1	16.25 412.8	12	1.120 28.40	18.75 476.3	34.6
16	16.00 406.4	23.50 596.9	16.16 410.5	1.440 36.60	2.500 63.50	18.00 457.2	18.50 469.9	16	1.120 28.40	21.25 539.8	44.8
18	18.00 457.2	25.00 635.0	18.18 461.8	1.560 39.60	2.690 68.30	19.88 505.0	21.00 533.4	16	1.250 31.75	22.75 577.9	48.9
20	20.00 508.0	27.50 698.5	20.20 513.1	1.690 42.90	2.880 73.15	22.00 558.8	23.00 584.2	20	1.250 31.75	25.00 635.0	61.9
24	24.00 609.6	32.00 812.8	24.25 616.0	1.880 47.80	3.250 82.60	26.12 663.4	27.25 692.2	20	1.380 35.10	29.50 749.3	86.9

Notes

- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).
- For ring joint facings see page 8-6.
- For tolerances see page 8-4.

Lap Joint Flanges - ANSI B16.5



Class 150 lb

Nominal Pipe Size	Pipe	Flange Data				Lap	Hub	Drilling Data			Weight
		A	B	C	D	R	F	H	I	J	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Lap Radius	Hub Diameter	Number of Holes	Bolt Hole Diameter	Diameter of Circle of Holes	kg/ piece
	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	
1/2	0.840	3.500	0.900	0.440	0.620	0.120	1.190	4	0.620	2.380	0.38
	21.30	88.90	22.90	11.20	15.70	3.000	30.20		15.70	60.45	
3/4	1.050	3.880	1.110	0.500	0.620	0.120	1.500	4	0.620	2.750	0.55
	26.70	98.60	28.20	12.70	15.70	3.000	38.10		15.70	69.85	
1	1.315	4.250	1.380	0.560	0.690	0.120	1.940	4	0.620	3.120	0.76
	33.40	108.0	35.10	14.20	17.50	3.000	49.30		15.70	79.25	
1 1/4	1.660	4.620	1.720	0.620	0.810	0.190	2.310	4	0.620	3.500	1.01
	42.20	117.3	43.70	15.70	20.60	4.800	58.70		15.70	88.90	
1 1/2	1.900	5.000	1.970	0.690	0.880	0.250	2.560	4	0.620	3.880	1.30
	48.30	127.0	50.00	17.50	22.40	6.400	65.00		15.70	98.60	
2	2.375	6.000	2.460	0.750	1.000	0.310	3.060	4	0.750	4.750	2.03
	60.30	152.4	62.50	19.10	25.40	7.900	77.70		19.10	120.7	
2 1/2	2.875	7.000	2.970	0.880	1.120	0.310	3.560	4	0.750	5.500	3.25
	73.00	177.8	75.40	22.40	28.40	7.900	90.40		19.10	139.7	
3	3.500	7.500	3.600	0.940	1.190	0.380	4.250	4	0.750	6.000	3.81
	88.90	190.5	91.40	23.90	30.20	9.700	108.0		19.10	152.4	
3 1/2	4.000	8.500	4.100	0.940	1.250	0.380	4.810	8	0.750	7.000	4.76
	101.6	215.9	104.1	23.90	31.75	9.700	122.2		19.10	177.8	
4	4.500	9.000	4.600	0.940	1.310	0.440	5.310	8	0.750	7.500	5.25
	114.3	228.6	116.8	23.90	33.30	11.20	134.9		19.10	190.5	
5	5.563	10.00	5.690	0.940	1.440	0.440	6.440	8	0.880	8.500	6.02
	141.3	254.0	114.5	23.90	36.60	11.20	163.6		22.40	215.9	
6	6.625	11.00	6.750	1.000	1.560	0.500	7.560	8	0.880	9.500	7.40
	168.3	279.4	171.5	25.40	39.60	12.70	192.0		22.40	241.3	
8	8.625	13.50	8.750	1.120	1.750	0.500	9.690	8	0.880	11.75	12.1
	219.1	342.9	222.3	28.40	44.50	12.70	246.1		22.40	298.5	
10	10.75	16.00	10.92	1.190	1.940	0.500	12.00	12	1.000	14.25	16.4
	273.0	406.4	277.4	30.20	49.30	12.70	304.8		25.40	362.0	
12	12.75	19.00	12.92	1.250	2.190	0.500	14.38	12	1.000	17.00	26.1
	323.8	482.6	328.2	31.75	55.60	12.70	365.3		25.40	431.8	
14	14.00	21.00	14.18	1.380	3.120	0.500	15.75	12	1.120	18.75	34.5
	355.6	533.4	360.2	35.10	79.25	12.70	400.1		28.40	476.3	
16	16.00	23.50	16.19	1.440	3.440	0.500	18.00	16	1.120	21.25	44.6
	406.4	596.9	411.2	36.60	87.40	12.70	457.2		28.40	539.8	
18	18.00	25.00	18.20	1.560	3.810	0.500	19.88	16	1.250	22.75	48.7
	457.2	635.0	462.3	39.60	96.80	12.70	505.0		31.75	577.9	
20	20.00	27.50	20.25	1.690	4.060	0.500	22.00	20	1.250	25.00	61.6
	508.0	698.5	514.4	42.90	103.1	12.70	558.8		31.75	635.0	
24	24.00	32.00	24.25	1.880	4.380	0.500	26.12	20	1.380	29.50	86.6
	609.6	812.8	616.0	47.80	111.3	12.70	663.4		35.10	749.3	

Notes

- Weights are based on manufacturer's data and are approximate.