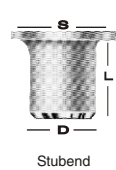
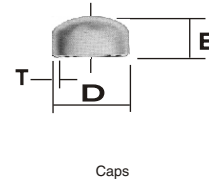
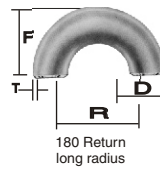
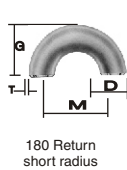
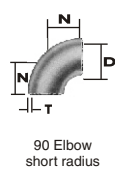
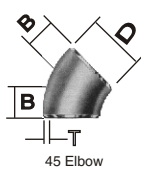
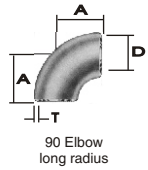


BUTT WELDING PIPE FITTING DIMENSIONAL STANDARD
ANSI B-16.9, B-16.28 & MS SS P43

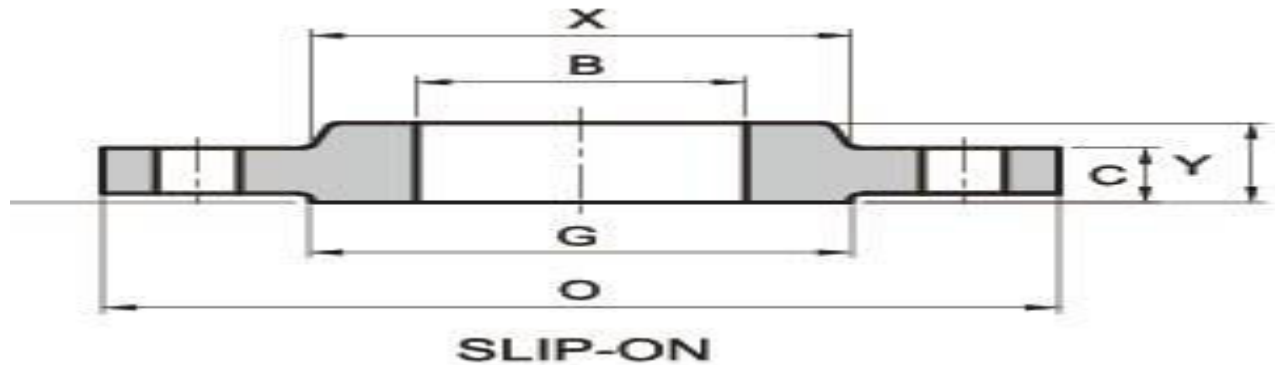


Nominal Pipe Size		Outside Diameter	Center to Face			Back to Face				Center to Center			Length 'L' MS SS P43
Inch.	mm	D	A	B	N	E	F	G	R	M	S	L	L
1/2	15	21.3	38.00	16.0	—	25.0	48.0	—	76.0	—	35.0	50.8	76.2
3/4	20	26.7	29.00	11.0	—	25.0	43.0	—	57.0	—	43.0	50.8	76.2
1	25	33.4	38.00	22.0	25.0	38.0	56.0	41.0	76.0	51.0	51.0	50.8	101.6
1 1/4	32	42.2	48.00	25.0	32.0	38.0	70.0	52.0	95.0	64.0	64.0	50.8	101.6
1 1/2	40	48.3	57.15	29.0	38.0	38.0	83.0	62.0	114.0	76.0	73.0	50.8	101.6
2	50	60.3	76.00	35.0	51.0	38.0	106.0	81.0	152.0	102.0	93.0	63.5	152.4
2 1/2	65	73	95.25	44.0	64.0	38.0	132.0	100.0	191.0	127.0	105.0	63.5	152.4
3	80	88.9	114.30	51.0	76.0	51.0	159.0	121.0	229.0	152.0	127.0	63.5	152.4
3 1/2	90	101.6	133.35	57.0	89.0	64.0	184.0	140.0	267.0	178.0	140.0	76.2	152.4
4	100	114.3	152.0	63.0	102.0	64.0	210.0	159.0	305.0	203.0	157.0	76.2	152.4
5	125	141.3	190.0	79.0	127.0	76.0	262.0	197.0	381.0	254.0	186.0	76.2	203.2
6	150	168.3	229.0	95.0	152.0	89.0	313.0	237.0	457.0	305.0	216.0	88.9	203.2
8	200	219.1	305.0	127.0	203.0	102.0	414.0	313.0	610.0	406.0	270.0	101.6	203.2
10	250	273.1	381.0	159.0	254.0	127.0	515.0	391.0	762.0	508.0	324.0	127	254
12	300	323.9	457.0	190.0	303.0	152.0	619.0	467.0	914.0	610.0	381.0	152.4	254
14	350	355.6	533.0	222.0	356.0	165.0	711.0	533.0	1067.0	711.0	413.0	152.4	305.0
16	400	406.4	610.0	254.0	406.0	178.0	813.0	610.0	1219.0	813.0	470.0	152.4	305.0
18	450	457.2	686.0	286.0	457.0	203.0	914.0	686.0	1372.0	914.0	533.0	152.4	305.0
20	500	508	762.0	318.0	508.0	229.0	1016.0	762.0	1524.0	1016.0	584.0	152.4	305.0
22	550	559	838.0	343.0	559.0	254.0	1118.0	838.0	1676.0	1118.0	614.4	152.4	305.0
24	600	610	914.0	381.0	610.0	267.0	1219.0	914.0	1829.0	1219.0	692.0	152.4	305.0

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com



ASME/ANSI B16.5 150lb Slip on Flange/Standards, Dimensions & Weight

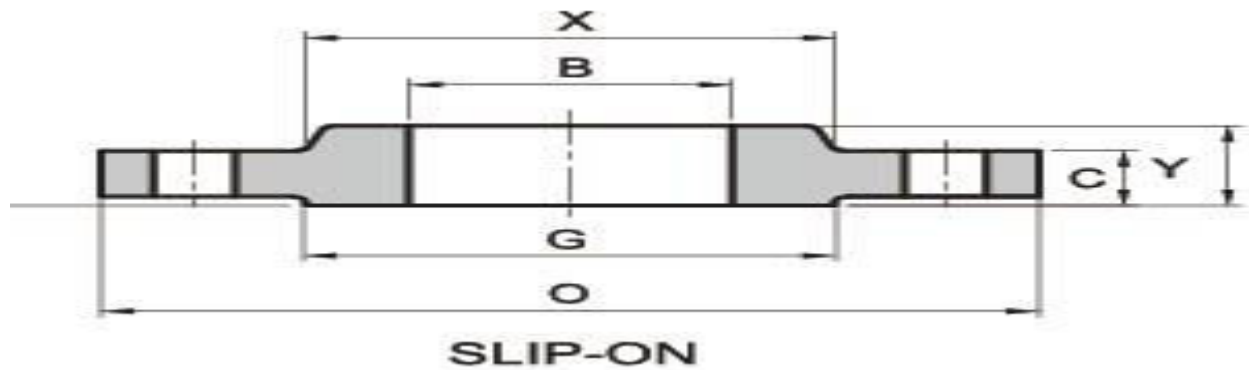
Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	Y	B	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	15.70	22.40	60.50	15.80	4	1/2"	0.4	0.9
3/4"	20	98.50	12.70	38.10	42.90	15.70	27.70	69.90	15.80	4	1/2"	0.7	1.5
1"	25	108.00	14.20	49.30	50.80	17.50	34.50	79.30	15.80	4	1/2"	0.8	1.8
1-1/4"	32	117.50	15.70	58.70	63.50	20.60	43.20	88.90	15.80	4	1/2"	1.2	2.6
1-1/2"	40	127.00	17.50	65.00	73.20	22.40	49.50	98.60	15.80	4	1/2"	1.4	3.1
2"	50	152.50	19.10	77.70	91.90	25.40	62.00	120.70	19.10	4	5/8"	2.2	4.8
2-1/2"	65	178.00	22.40	90.40	104.60	28.40	74.70	139.70	19.10	4	5/8"	3.5	7.7
3"	80	190.50	23.90	108.00	127.00	30.20	90.70	152.40	19.10	4	5/8"	3.8	8.4
3-1/2"	90	216.00	23.90	122.20	139.70	31.80	103.40	177.80	19.10	8	5/8"	5	11
4"	100	228.50	23.90	134.90	157.20	33.30	116.10	190.50	19.10	8	5/8"	5.6	12.3
5"	125	254.00	23.90	163.60	185.70	36.60	143.80	215.90	22.40	8	3/4"	6.5	14.3
6"	150	279.50	25.40	192.00	215.90	39.60	170.70	241.30	22.40	8	3/4"	8.1	18
8"	200	343.00	28.40	246.10	269.70	44.50	221.50	298.50	22.40	8	3/4"	13	28.6
10"	250	406.50	30.20	304.80	323.90	49.30	276.40	362.00	25.40	12	7/8"	18.4	40
12"	300	482.50	31.80	365.30	381.00	55.60	327.20	431.80	25.40	12	7/8"	28.5	63
14"	350	533.50	35.10	400.10	412.80	57.20	359.20	476.30	28.50	12	1"	37.5	83
16"	400	597.00	36.60	457.20	469.90	63.50	410.50	539.80	28.50	16	1"	44.5	98

SHREE RAMDEV FORGE & FITTING

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18"	450	635.00	39.60	505.00	533.40	68.30	461.80	577.90	31.80	16	1 1/8"	54	119
20"	500	698.50	42.90	558.80	584.20	73.20	513.10	635.00	31.80	20	1 1/8"	72	158
24"	600	813.00	47.80	663.40	692.20	82.60	616.00	749.30	35.10	20	1 1/4"	95	209



ASME/ANSI B16.5 300lb Slip on Flange/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	22.4	22.4	66.5	15.7	4	1/2"	0.7	1.5
3/4"	20	117.5	15.7	47.8	42.9	25.4	27.7	82.6	19.1	4	5/8"	1.2	2.6
1"	25	124.0	17.5	53.8	50.8	26.9	34.5	88.9	19.1	4	5/8"	1.4	3.1
1-1/4"	32	133.5	19.1	63.5	63.5	26.9	43.2	98.6	19.1	4	5/8"	1.8	4
1-1/2"	40	155.5	20.6	69.9	73.2	30.2	49.5	114.3	22.4	4	5/8"	2.7	6
2"	50	165.0	22.4	84.1	91.9	33.3	62	127	19.1	8	5/8"	3.2	7
2-1/2"	65	190.5	25.4	100.1	104.6	38.1	74.7	149.4	22.4	8	3/4"	4.5	9.9
3"	80	209.5	28.4	117.3	127	42.9	90.7	168.1	22.4	8	3/4"	5.9	13
3-1/2"	90	228.5	30.2	133.4	139.7	44.5	103.4	184.2	22.4	8	3/4"	7.5	16.5
4"	100	254.0	31.8	146.1	157.2	47.8	116.1	200.2	22.4	8	3/4"	10	22
5"	125	279.5	35.1	177.8	185.7	50.8	143.8	235	22.4	8	3/4"	12.5	27.5
6"	150	317.5	36.6	206.2	215.9	52.3	170.7	269.7	22.4	12	3/4"	16.5	36.4

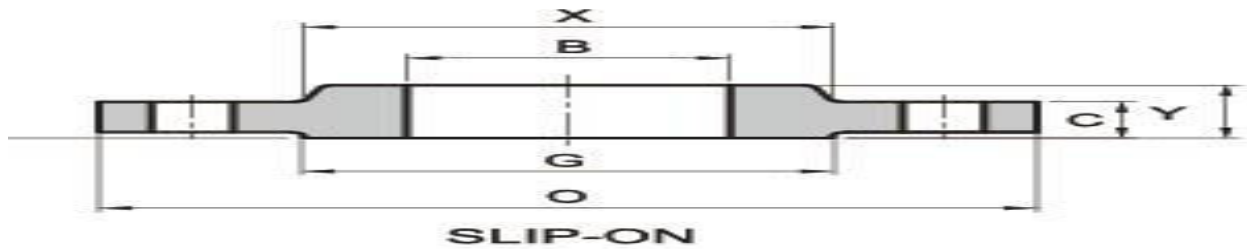
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

8"	200	381.0	41.1	260.4	269.7	62	221.5	330.2	25.4	12	7/8"	25.5	56
10"	250	444.5	47.8	320.5	323.9	66.5	276.4	387.4	28.4	16	1"	35	77
12"	300	520.5	50.8	374.7	381	73.2	327.2	450.9	31.8	16	1 1/8"	52	115
14"	350	584.0	53.8	425.5	412.8	76.2	359.2	514.4	31.8	20	1 1/8"	73	161
16"	400	647.5	57.2	482.6	469.9	82.6	410.5	571.5	35.1	20	1 1/4"	88	194
18"	450	711.0	60.5	533.4	533.4	88.9	461.8	628.7	35.1	24	1 1/4"	115	253
20"	500	774.5	63.5	587.2	584.2	95.3	513.1	685.8	35.1	24	1 1/4"	139	306
24"	600	914.5	69.9	701.5	692.2	106.4	616.0	812.8	41.1	24	1 1/2"	212	467

ASME/ANSI B16.5 600lb Slip on Flange/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	22.4	22.9	66.5	15.7	4	1/2"	0.8	1.8
3/4"	20	117.5	15.7	47.8	42.9	25.4	28.2	82.6	19.1	4	5/8"	1.4	3.1
1"	25	124.0	17.5	53.8	50.8	26.9	35.1	88.9	19.1	4	5/8"	1.7	3.7
1-1/4"	32	133.5	20.6	63.5	63.5	28.4	43.7	98.6	19.1	4	5/8"	2.1	4.6
1-1/2"	40	155.5	22.4	69.9	73.2	31.8	50	114.3	22.4	4	3/4"	3.1	6.8
2"	50	165.0	25.4	84.1	91.9	36.6	62.5	127	19.1	8	5/8"	3.9	8.6
2-1/2"	65	190.5	28.4	100.1	104.6	41.1	75.4	149.4	22.4	8	3/4"	5.4	11.9
3"	80	209.5	31.8	117.3	127	46	91.4	168.1	22.4	8	3/4"	7.3	16.1
3-1/2"	90	228.5	35.1	133.4	139.7	49.3	104.1	184.2	25.4	8	7/8"	9	19.8
4"	100	273.0	38.1	152.4	157.2	53.8	116.8	215.9	25.4	8	7/8"	16.5	36.4
5"	125	330.0	44.5	189	185.7	60.5	144.5	266.7	28.4	8	1"	28.5	62.8
6"	150	355.5	47.8	222.3	215.9	66.5	171.5	292.1	28.4	12	1"	36.2	79.8

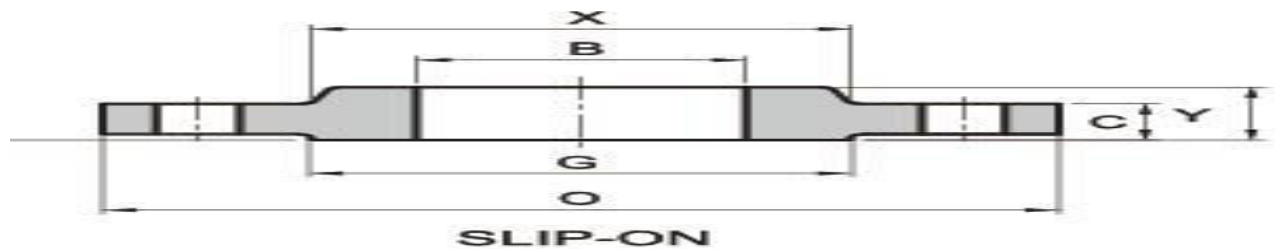
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

8"	200	419.0	55.6	273.1	269.7	76.2	222.3	349.3	31.8	12	1 1/8"	51.5	114
10"	250	508.0	63.5	342.9	323.9	85.9	277.4	431.8	35.1	16	1 1/4"	76.2	168
12"	300	559.0	66.5	400.1	381	91.9	328.2	489	35.1	20	1 1/4"	89.5	197
14"	350	603.5	69.9	431.8	412.8	93.7	360.2	527.1	38.1	20	1 3/8"	102	225
16"	400	686.0	76.2	495.3	469.9	106.4	411.2	603.3	41.1	20	1 1/2"	150	330
18"	450	743.0	82.6	546.1	533.4	117.3	462.3	654.1	44.5	20	1 5/8"	180	397
20"	500	813.0	88.9	609.6	584.2	127.0	514.4	723.9	44.5	24	1 5/8"	231	509
24"	600	940.0	101.6	717.6	692.2	139.7	616	838.2	50.8	24	1 7/8"	330	727

ASME/ANSI B16.5 900lb Slip on Flange/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Length Hub	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	120.7	22.4	38.1	31.8	22.4	82.6	22.4	4	3/4"	1.8	4
3/4"	20	130	25.4	44.5	35.1	27.7	88.9	22.4	4	3/4"	2.4	5.3
1"	25	149.4	28.4	52.3	41.1	34.5	101.6	25.4	4	7/8"	3.6	7.9
1-1/4"	32	158.8	28.4	63.5	41.1	43.2	111.3	25.4	4	7/8"	4.1	9
1-1/2"	40	177.8	31.8	69.9	44.5	49.5	124	28.4	4	1"	5.4	12
2"	50	215.9	38.1	104.6	57.2	62	165.1	25.4	8	7/8"	10.5	23.1
2-1/2"	65	244.3	41.1	124	63.5	74.7	190.5	28.4	8	1"	15.8	34.8
3"	80	241.3	38.1	127	53.8	90.7	190.5	25.4	8	7/8"	12.3	27
4"	100	292.1	44.5	158.8	69.9	116.1	235	31.8	8	1 1/8"	23.2	51
5"	125	349.3	50.8	190.5	79.2	143.8	279.4	35.1	8	1 1/4"	37.5	82.6
6"	150	381	55.6	235	85.9	170.7	317.5	31.8	12	1 1/8"	48.3	106
8"	200	469.9	63.5	298.5	101.6	221.5	393.7	38.1	12	1 3/8"	75	165

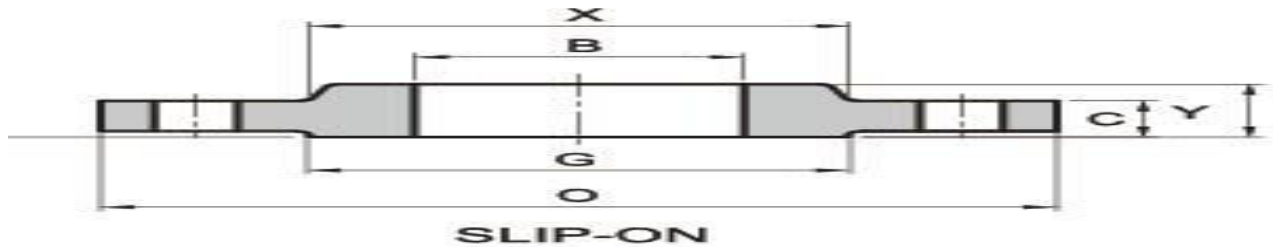
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

10"	250	546.1	69.9	368.3	108	276.4	469.9	38.1	16	1 3/8"	110	243
12"	300	609.6	79.2	419.1	117.3	327.2	533.4	38.1	20	1 3/8"	146	322
14"	350	641.4	85.9	450.9	130	359.2	558.8	41.1	20	1 1/2"	172	379
16"	400	704.9	88.9	508	133.4	410.5	616	44.5	20	1 5/8"	192	423
18"	450	787.4	101.6	565.2	152.4	461.8	685.8	50.8	20	1 7/8"	272	600
20"	500	857.3	108	622.3	158.8	513.1	749.3	53.8	20	2"	330	727
24"	600	1041	139.7	749.3	203.2	616	901.7	66.5	20	2 1/2"	632	1393

ASME/ANSI B16.5 1500lb Slip on Flange/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Length Hub	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	120.7	22.4	38.1	31.8	22.4	82.6	22.4	4	3/4"	1.8	4
3/4"	20	130	25.4	44.5	35.1	27.7	88.9	22.4	4	3/4"	2.4	5.3
1"	25	149.4	28.4	52.3	41.1	34.5	101.6	25.4	4	7/8"	3.6	7.9
1-1/4"	32	158.8	28.4	63.5	41.1	43.2	111.3	25.4	4	7/8"	4.1	9
1-1/2"	40	177.8	31.8	69.9	44.5	49.5	124	28.4	4	1"	5.4	12
2"	50	215.9	38.1	104.6	57.2	62	165.1	25.4	8	7/8"	10.5	23.1
2-1/2"	65	244.3	41.1	124	63.5	74.7	190.5	28.4	8	1"	15.8	34.8
3"	80	266.7	47.8	133.4			190.5	25.4	8	7/8"	21.5	43
4"	100	311.2	53.8	162.1			235	31.8	8	1 1/8"	31	68.3
5"	125	374.7	73.2	196.9			279.4	35.1	8	1 1/4"	58.8	130
6"	150	393.7	82.6	228.6			317.5	31.8	12	1 1/8"	74	163
8"	200	482.6	91.9	292.1			393.7	38.1	12	1 3/8"	112	247
10"	250	584.2	108	368.3			469.9	38.1	16	1 3/8"	184	406

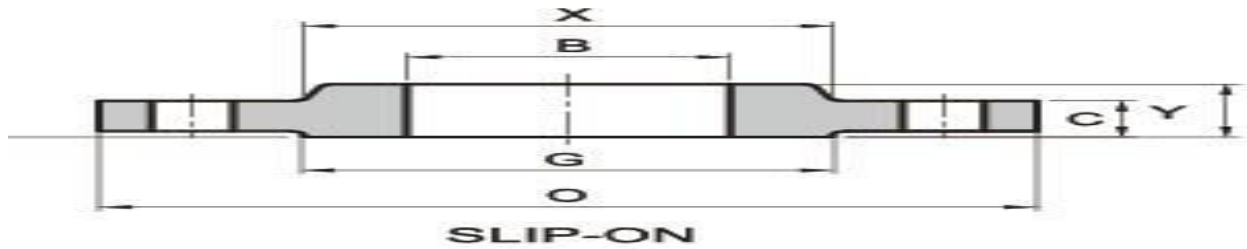
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

12"	300	673.1	124	450.9			533.4	38.1	20	1 3/8"	264	581
14"	350	749.3	133.4	495.3			558.8	41.1	20	1 1/2"		
16"	400	825.5	146.1	552.5			616	44.5	20	1 5/8"		
18"	450	914.4	162.1	596.9			685.8	50.8	20	1 7/8"		
20"	500	984.3	177.8	641.4			749.3	53.8	20	2"		
24"	600	1168.4	203.2	762			901.7	66.5	20	2 1/2"		

ASME/ANSI B16.5 2500lb Slip on Flange/Standards, Dimensions & Weight



Pipe Normal Diam.	Outside Diameter of Flange	Diameter Bore	thickness of Flange	Diameter of Raised Face	Height of Raised Face	Diameter of Hub at Base	Length through Hub	No. of Holes	Diameter of Holes	Diameter of Bolts	Diameter of Bolt Circle	Weight
inch	O		C	G		X	Y	BN	BH	BD	BC	lbs.
1/2	5.25	0.88	1.19	1.38	0.25	1.69	1.56	4	0.88	3/4	3.5	7
3/4	5.5	1.09	1.25	1.69	0.25	2	1.69	4	0.88	3/4	3.75	9
1	6.25	1.36	1.38	2	0.25	2.25	1.88	4	1	7/8	4.25	12
1 1/4	7.25	1.70	1.5	2.5	0.25	2.88	2.06	4	1.12	1	5.12	18
1 1/2	8	1.95	1.75	2.88	0.25	3.12	2.38	4	1.25	1 1/8	5.75	25
2	9.25	2.44	2	3.62	0.25	3.75	2.75	8	1.12	1	6.75	38
2 1/2	10.5	2.94	2.25	4.12	0.25	4.5	3.13	8	1.25	1 1/8	7.75	55
3	12	3.57	2.62	5	0.25	5.25	3.63	8	1.38	1 1/4	9	83
4	14	4.57	3	6.19	0.25	6.5	4.25	8	1.62	1 1/2	10.75	127
5	16.5	5.66	3.62	7.31	0.25	8	5.13	8	1.88	1 3/4	12.75	210
6	19	6.72	4.25	8.5	0.25	9.25	6	8	2.12	2	14.5	323
8	21.75	8.72	5	10.62	0.25	12	7	12	2.12	2	17.25	485
10	26.5	10.88	6.5	12.75	0.25	14.75	9	12	2.62	2 1/2	21.25	925
12	30	12.88	7.25	15	0.25	17.38	10	12	2.88	2 3/4	24.38	1300

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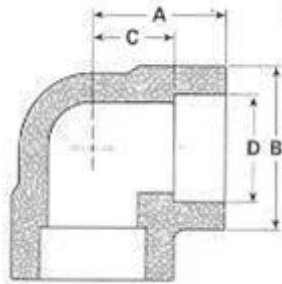
Website- www.ramdevforgefitting.com

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DIMENSION CATALOGUE OF SOCKET WELD FITTINGS



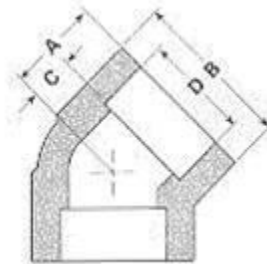
90° ELBOWS

Class 3000

Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	13/16	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
Dimension B	7/8	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	3 11/16	4 3/8	5 3/4
Dimension C	7/16	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 5/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
Approx. Wt. #	.20	.16	.25	.48	.68	1.06	1.59	2.13	3.78	6.74	10.94	24.13

Class 6000

Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
Dimension B	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	3 5/16	4	4 3/4	6
Dimension C	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 1/2	2 7/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
Approx. Wt. #	.16	.25	.48	.88	1.38	2.63	3.00	5.31	6.00	10.47	18.84	31.54



45° ELBOWS

Class 3000

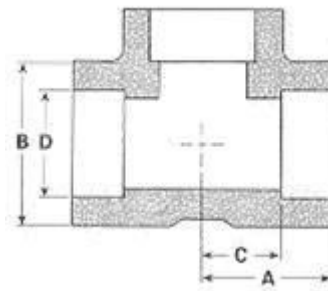
Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	13/16	3/4	7/8	1	1 1/8	1 5/16	1 3/8	1 11/16	2 1/8	2 9/16	3 1/8
Dimension B	7/8	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	4	4 3/4	5 3/4
Dimension C	5/16	5/16	5/16	7/16	1/2	9/16	11/16	13/16	1	1 1/8	1 1/4	1 5/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545

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Approx. Wt. #	.15	.13	.20	.43	.58	.89	1.40	1.70	2.69	7.88	11.25	20.75
Class 6000												
Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	3/4	7/8	1	1 1/8	1 5/16	1 3/8	1 11/16	1 13/16	2 1/8	2 9/16	3 1/8
Dimension B	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	3 5/16	4	4 3/4	5 3/4
Dimension C	5/16	5/16	7/16	1/2	9/16	11/16	13/16	1	1 1/8	1 1/8	1 1/4	1 5/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
Approx. Wt. #	---	---	---	.68	1.14	2.03	2.25	4.22	5.03	8.88	12.76	23.45



TEES

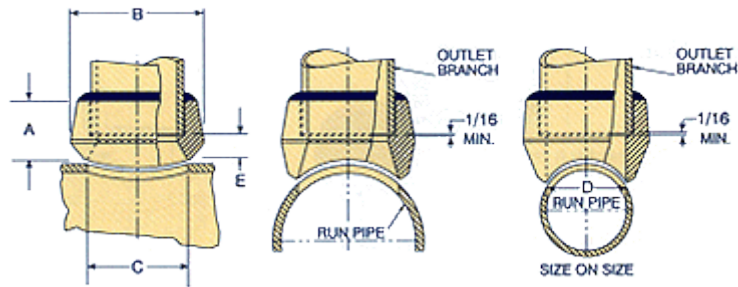
Class 3000												
Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	13/16	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
Dimension B	7/8	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	3 11/16	4 3/8	5 3/4
Dimension C	7/16	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 5/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
Approx. Wt. #	.23	.19	.33	.71	.87	1.44	2.19	2.98	4.57	8.60	13.00	31.30
Class 6000												
Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Dimension A	13/16	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
Dimension B	7/8	1 3/64	1 5/16	1 1/2	1 13/16	2 1/4	2 1/2	3 1/32	3 5/16	4	4 3/4	6
Dimension C	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 1/2	2 7/8
Dimension D	.420	.555	.690	.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
Approx. Wt. #	---	---	---	1.16	1.94	3.17	3.95	7.13	7.72	15.30	23.10	34.90

Socket

SHREE RAMDEV FORGE & FITTING

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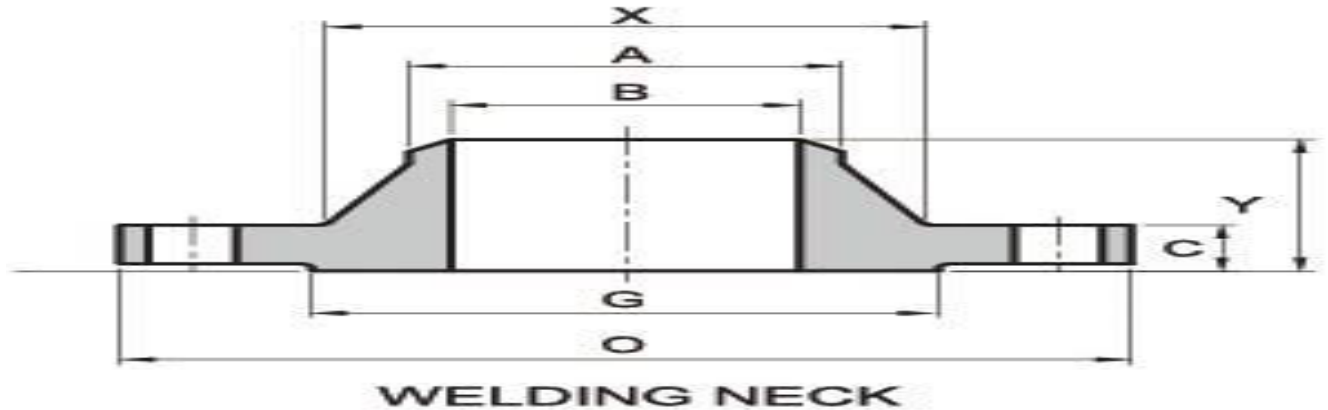
Website- www.ramdevforgefitting.com



REDUCING SIZES							
	Outlet Size Inches	Dimensions					Appx. Wt Pounds
		A	B	C	D	E	
CL 3000	1/8	3/4	1	5/8	0.269	9/32	0.10
	1/4	3/4	1	5/8	0.364	9/32	0.10
	3/8	13/16	1 1/4	3/4	0.493	7/16	0.20
	1/2	1	1 13/32	29/32	0.622	9/16	0.30
	3/4	1 1/16	1 23/32	1 5/32	0.824	9/16	0.35
	1	1 5/16	2	1 7/16	1.049	25/32	0.60
	1 1/4	1 5/16	2 9/16	1 3/4	1.380	3/4	0.85
	1 1/2	1 3/8	2 27/32	2	1.610	3/4	1.00
	2	1 1/2	3 15/32	2 9/16	2.067	13/16	1.60
	2 1/2	1 9/16	4 1/16	3	2.469	3/4	2.75
	3	1 3/4	4 13/16	3 11/16	3.068	15/16	3.80
	3 1/2	2 1/8	5 7/32	4	3.548	1	4.30
	4	1 7/8	5 31/32	4 3/4	4.026	1 1/16	7.25
	5	2 5/8	7 5/16	5 9/16	5.047	1 11/32	12.00
6	2 3/4	8 5/8	6 11/16	6.065	1 13/32	14.50	
CL 6000	1/2	1 1/4	1 23/32	3/4	0.466	7/8	0.50
	3/4	1 7/16	1 61/64	1	0.614	7/8	0.80
	1	1 9/16	2 7/16	1 5/16	0.815	15/16	1.30
	1 1/4	1 5/8	2 23/32	1 1/2	1.160	13/16	1.60
	1 1/2	1 11/16	3 1/4	1 15/16	1.338	7/8	2.00
	2	2 1/16	4 1/32	2 3/4	1.689	1 3/16	5.15
Size on Size							
	Outlet Size Inches	Dimensions					Appx. Wt in Pounds
		A	B	C	D	E	
CL3000	1/2	1	1 3/8	15/16	0.622	17/32	0.15
	3/4	1 1/16	1 5/8	1 3/16	0.824	15/32	0.25
	1	1 5/16	2	1 7/16	1.049	23/32	0.45
	1 1/4	1 5/16	2 3/8	1 3/4	1.380	9/16	0.65
	1 1/2	1 3/8	2 7/8	2	1.610	21/32	0.85
	2	1 1/2	3 1/2	2 9/16	2.067	15/16	1.40
	2 1/2	1 9/16	4 1/16	3	2.469	3/4	2.25
	3	1 3/4	4 13/16	3 11/16	3.068	15/16	3.75
	3 1/2	1 11/16	5 3/8	4 7/16	3.548	11/16	4.30
	4	1 7/8	6 1/16	4 3/4	4.026	1 1/16	6.60
	5	2 7/16	7 1/4	5 1/4	5.047	1	9.00
6	2 11/16	8 11/16	6 1/16	6.065	1 3/16	15.50	

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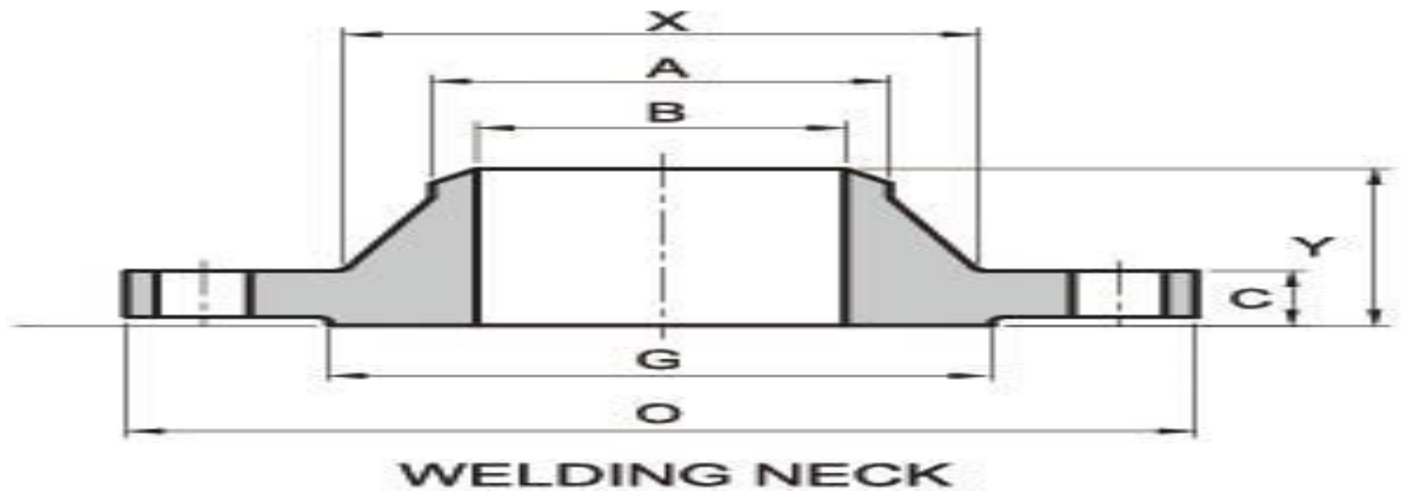
WNRF Flange dimensions of ANSI/ASME B16.5 150lb



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Hub Diam. Chamfer of W.N	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	A	Y	B	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	21.30	47.80	15.80	60.50	15.80	4	1/2"	0.7	1.5
3/4"	20	98.50	12.70	38.10	42.90	26.70	52.30	20.80	69.90	15.80	4	1/2"	0.8	1.8
1"	25	108.00	14.20	49.30	50.80	33.50	55.60	26.70	79.30	15.80	4	1/2"	1.1	2.4
1-1/4"	32	117.50	15.70	58.70	63.50	42.20	57.20	35.10	88.90	15.80	4	1/2"	1.5	3.3
1-1/2"	40	127.00	17.50	65.00	73.20	48.30	62.00	40.90	98.60	15.80	4	1/2"	1.8	4
2"	50	152.50	19.10	77.70	91.90	60.50	63.50	52.60	120.70	19.10	4	5/8"	2.7	6
2-1/2"	65	178.00	22.40	90.40	104.60	73.20	69.90	62.70	139.70	19.10	4	5/8"	4.4	9.8
3"	80	190.50	23.90	108.00	127.00	88.90	69.90	78.00	152.40	19.10	4	5/8"	5.2	11.5
3-1/2"	90	216.00	23.90	122.20	139.70	101.60	71.40	90.20	177.80	19.10	8	5/8"	6.4	14.2
4"	100	228.50	23.90	134.90	157.20	114.30	76.20	102.40	190.50	19.10	8	5/8"	7.5	16.6
5"	125	254.00	23.90	163.60	185.70	141.20	88.90	128.30	215.90	22.40	8	3/4"	9.2	20.2
6"	150	279.50	25.40	192.00	215.90	168.40	88.90	154.20	241.30	22.40	8	3/4"	11	24.3
8"	200	343.00	28.40	246.10	269.70	219.20	101.60	202.70	298.50	22.40	8	3/4"	18.4	40.6
10"	250	406.50	30.20	304.80	323.90	273.10	101.60	254.50	362.00	25.40	12	7/8"	25.5	56.2
12"	300	482.50	31.80	365.30	381.00	323.90	114.30	304.80	431.80	25.40	12	7/8"	37	81.4

14"	350	533.50	35.10	400.10	412.80	355.60	127.00		476.30	28.50	12	1"	51	113
16"	400	597.00	36.60	457.20	469.90	406.40	127.00		539.80	28.50	16	1"	61.5	136
18"	450	635.00	39.60	505.00	533.40	457.20	139.70		577.90	31.80	16	1 1/8"	71.5	158
20"	500	698.50	42.90	558.80	584.20	508.00	144.50		635.00	31.80	20	1 1/8"	85	187
24"	600	813.00	47.80	663.40	692.20	609.60	152.40		749.30	35.10	20	1 1/4"	119	262

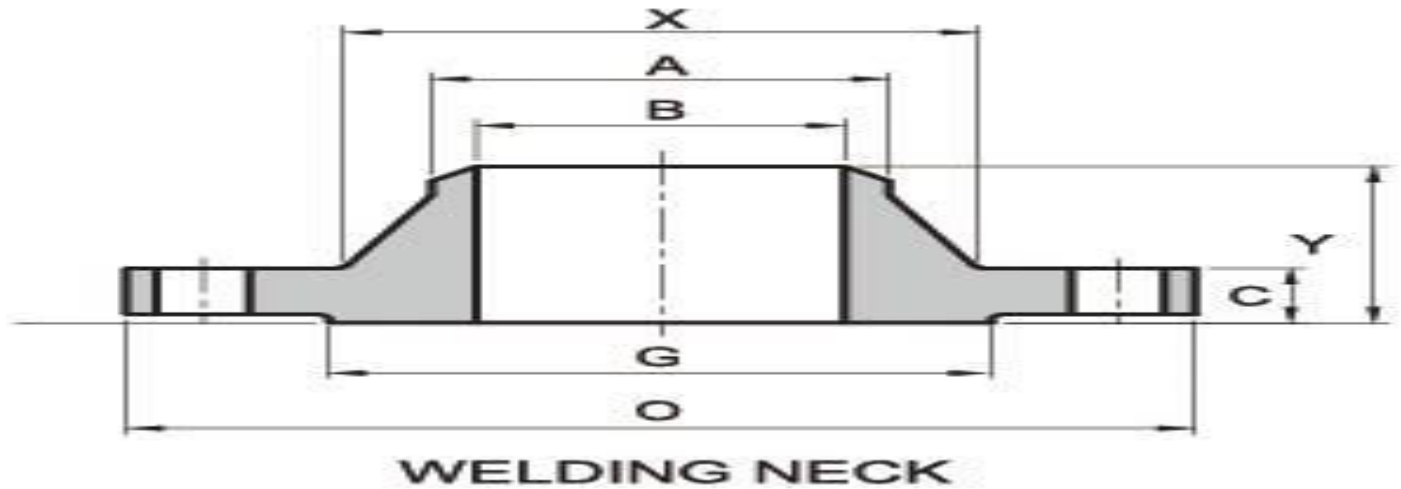
WNRF Flange dimensions of ANSI/ASME B16.5 300lb



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Hub Diam. Chamfer of W.N	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	A	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	21.3	52.3	15.7	66.5	15.7	4	1/2"	0.8	1.8
3/4"	20	117.5	15.7	47.8	42.9	26.7	57.2	20.8	82.6	19.1	4	5/8"	1.4	3.1
1"	25	124.0	17.5	53.8	50.8	33.5	62	26.7	88.9	19.1	4	5/8"	1.7	3.7
1-1/4"	32	133.5	19.1	63.5	63.5	42.2	65	35.1	98.6	19.1	4	5/8"	2.2	4.8
1-1/2"	40	155.5	20.6	69.9	73.2	48.3	68.3	40.9	114.3	22.4	4	5/8"	3.2	7
2"	50	165.0	22.4	84.1	91.9	60.5	69.9	52.6	127	19.1	8	5/8"	3.6	7.9
2-1/2"	65	190.5	25.4	100.1	104.6	73.2	76.2	62.7	149.4	22.4	8	3/4"	5.4	12
3"	80	209.5	28.4	117.3	127	88.9	79.2	78	168.1	22.4	8	3/4"	7.3	16.1
3-1/2"	90	228.5	30.2	133.4	139.7	101.6	81	90.2	184.2	22.4	8	3/4"	8.9	19.6
4"	100	254.0	31.8	146.1	157.2	114.3	85.9	102.4	200.2	22.4	8	3/4"	11.8	26
5"	125	279.5	35.1	177.8	185.7	141.2	98.6	128.3	235	22.4	8	3/4"	16	35.2

6"	150	317.5	36.6	206.2	215.9	168.4	98.6	154.2	269.7	22.4	12	3/4"	20.2	44.6
8"	200	381.0	41.1	260.4	269.7	219.2	111.3	202.7	330.2	25.4	12	7/8"	31.2	68.8
10"	250	444.5	47.8	320.5	323.9	273.1	117.3	254.5	387.4	28.4	16	1"	44.3	97.5
12"	300	520.5	50.8	374.7	381	323.9	130.0	304.8	450.9	31.8	16	1 1/8"	63.5	140
14"	350	584.0	53.8	425.5	412.8	355.6	142.7		514.4	31.8	20	1 1/8"	86	190
16"	400	647.5	57.2	482.6	469.9	406.4	146.1		571.5	35.1	20	1 1/4"	112	247
18"	450	711.0	60.5	533.4	533.4	457.2	158.8		628.7	35.1	24	1 1/4"	141	310
20"	500	774.5	63.5	587.2	584.2	508	162.1		685.8	35.1	24	1 1/4"	173	382
24"	600	914.5	69.9	701.5	692.2	609.6	168.1		812.8	41.1	24	1 1/2"	248	546

WNRF Flange dimensions of ANSI/ASME B16.5 600lb

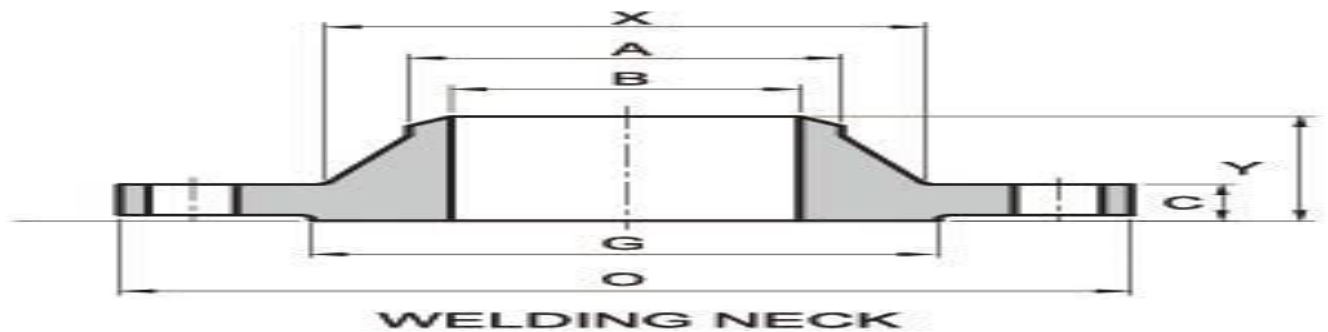


Pipe Normal Diam.	O.D. Flange		Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Hub Diam. Chamfer of W.N	Length Hub	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
	inch	dn										O	C
1/2"	15	95.5	14.2	38.1	35.1	22.4	52.3	66.5	15.7	4	1/2"	0.9	2
3/4"	20	117.5	15.7	47.8	42.9	25.4	57.2	82.6	19.1	4	5/8"	1.6	3.5
1"	25	124.0	17.5	53.8	50.8	26.9	62	88.9	19.1	4	5/8"	1.9	4.2
1-1/4"	32	133.5	20.6	63.5	63.5	28.4	66.5	98.6	19.1	4	5/8"	2.6	5.8
1-1/2"	40	155.5	22.4	69.9	73.2	31.8	69.9	114.3	22.4	4	3/4"	3.6	8
2"	50	165.0	25.4	84.1	91.9	36.6	73.2	127	19.1	8	5/8"	4.7	10.4
2-1/2"	65	190.5	28.4	100.1	104.6	41.1	79.2	149.4	22.4	8	3/4"	4.8	15
3"	80	209.5	31.8	117.3	127	46	82.6	168.1	22.4	8	3/4"	8.7	19.3
3-1/2"	90	228.5	35.1	133.4	139.7	49.3	85.9	184.2	25.4	8	7/8"	11.6	25.5

4"	100	273.0	38.1	152.4	157.2	53.8	101.6	215.9	25.4	8	7/8"	18.4	40.5
5"	125	330.0	44.5	189	185.7	60.5	114.3	266.7	28.4	8	1"	31	68
6"	150	355.5	47.8	222.3	215.9	66.5	117.3	292.1	28.4	12	1"	37	81.4
8"	200	419.0	55.6	273.1	269.7	76.2	133.4	349.3	31.8	12	1 1/8"	54.5	120
10"	250	508.0	63.5	342.9	323.9	85.9	152.4	431.8	35.1	16	1 1/4"	98.5	195
12"	300	559.0	66.5	400.1	381	91.9	155.4	489	35.1	20	1 1/4"	105	231
14"	350	603.5	69.9	431.8	412.8	93.7	165.1	527.1	38.1	20	1 3/8"	150	330
16"	400	686.0	76.2	495.3	469.9	106.4	177.8	603.3	41.1	20	1 1/2"	177	390
18"	450	743.0	82.6	546.1	533.4	117.3	184.2	654.1	44.5	20	1 5/8"	228	503
20"	500	813.0	88.9	609.6	584.2	127	190.5	723.9	44.5	24	1 5/8"	285	628
24"	600	940.0	101.6	717.6	692.2	139.7	203.2	838.2	50.8	24	1 7/8"	372	820

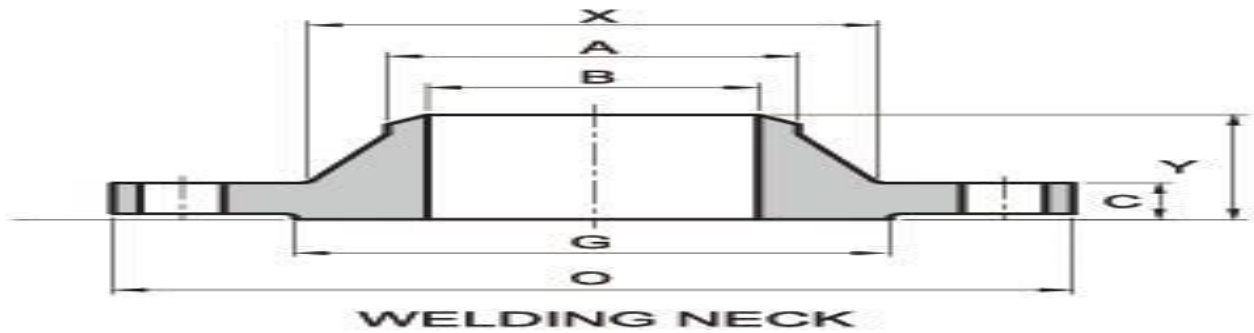
wurf flange include other pressure rating, like class 900, class 1500, class 2500, ansi b16.47 ser.A, ser.B etc.

ASME/ANSI B16.5 900LB WN Flange/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Hub Diam. Chamfer of W.N	Length Hub	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	A	Y	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	120.7	22.4	38.1	21.3	60.5	82.6	22.4	4	3/4"	2.1	4.6
3/4"	20	130	25.4	44.5	26.7	69.9	88.9	22.4	4	3/4"	2.7	5.9
1"	25	149.4	28.4	52.3	33.5	73.2	101.6	25.4	4	7/8"	3.9	8.6
1-1/4"	32	158.8	28.4	63.5	42.2	73.2	111.3	25.4	4	7/8"	4.5	9.9
1-1/2"	40	177.8	31.8	69.9	48.3	82.6	124	28.4	4	1"	6.2	13.7
2"	50	215.9	38.1	104.6	60.5	101.6	165.1	25.4	8	7/8"	11.3	24.9
2-1/2"	65	244.3	41.1	124	73.2	104.6	190.5	28.4	8	1"	16.3	36

3"	80	241.3	38.1	127	88.9	101.6	190.5	25.4	8	7/8"	15	33
4"	100	292.1	44.5	158.8	114.3	114.3	235	31.8	8	1 1/8"	24	52.8
5"	125	349.3	50.8	190.5	141.2	127	279.4	35.1	8	1 1/4"	38.5	85
6"	150	381	55.6	235	168.4	139.7	317.5	31.8	12	1 1/8"	50	110
8"	200	469.9	63.5	298.5	219.2	162.1	393.7	38.1	12	1 3/8"	85	187
10"	250	546.1	69.9	368.3	273.1	184.2	469.9	38.1	16	1 3/8"	123	271
12"	300	609.6	79.2	419.1	323.9	200.2	533.4	38.1	20	1 3/8"	168	370
14"	350	641.4	85.9	450.9	355.6	212.9	558.8	41.1	20	1 1/2"	198	436
16"	400	704.9	88.9	508	406.4	215.9	616	44.5	20	1 5/8"	225	495
18"	450	787.4	101.6	565.2	457.2	228.6	685.8	50.8	20	1 7/8"	318	701
20"	500	857.3	108	622.3	508	247.7	749.3	53.8	20	2"	376	829



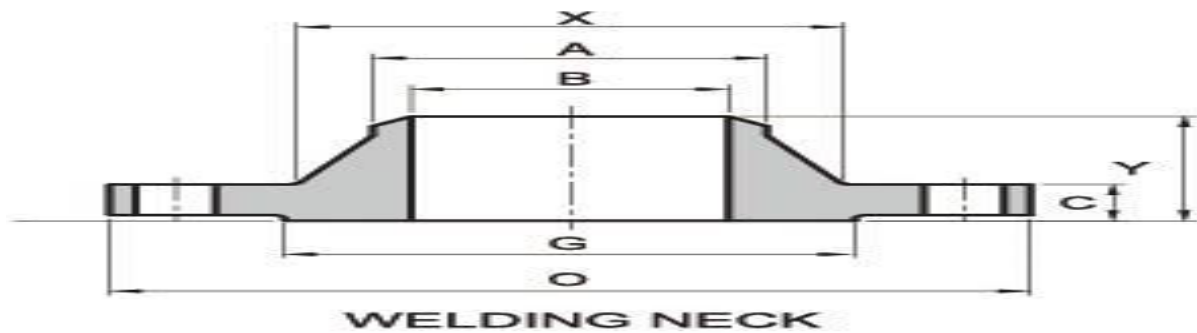
24"	600	1041	139.7	749.3	609.6	292.1	901.7	66.5	20	2 1/2"	680	1498
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ASME/ANSI B16.5 1500LB WN Flange/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Hub Diam. Chamfer of W.N	Length Hub	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	A	Y	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	120.7	22.4	38.1	21.3	60.5	82.6	22.4	4	3/4"	2.1	4.6
3/4"	20	130	25.4	44.5	26.7	69.9	88.9	22.4	4	3/4"	2.7	5.9
1"	25	149.4	28.4	52.3	33.5	73.2	101.6	25.4	4	7/8"	3.9	8.6
1-1/4"	32	158.8	28.4	63.5	42.2	73.2	111.3	25.4	4	7/8"	4.5	9.9
1-1/2"	40	177.8	31.8	69.9	48.3	82.6	124	28.4	4	1"	6.2	13.7
2"	50	215.9	38.1	104.6	60.5	101.6	165.1	25.4	8	7/8"	11.3	24.9
2-1/2"	65	244.3	41.1	124	73.2	104.6	190.5	28.4	8	1"	16.3	36

3"	80	266.7	47.8	133.4	88.9	117.3	190.5	25.4	8	7/8"	21	46.3
4"	100	311.2	53.8	162.1	114.3	124	235	31.8	8	1 1/8"	31.8	70.1
5"	125	374.7	73.2	196.9	141.2	155.4	279.4	35.1	8	1 1/4"	59	129.8
6"	150	393.7	82.6	228.6	168.4	171.5	317.5	31.8	12	1 1/8"	72	158
8"	200	482.6	91.9	292.1	219.2	212.9	393.7	38.1	12	1 3/8"	124	273
10"	250	584.2	108	368.3	273.1	254	469.9	38.1	16	1 3/8"	207	456
12"	300	673.1	124	450.9	323.9	282.4	533.4	38.1	20	1 3/8"	306	674
14"	350	749.3	133.4	495.3	355.6	298.5	558.8	41.1	20	1 1/2"	416	917
16"	400	825.5	146.1	552.5	406.4	311.2	616	44.5	20	1 5/8"	567	1250
18"	450	914.4	162.1	596.9	457.2	327.2	685.8	50.8	20	1 7/8"	736	1623
20"	500	984.3	177.8	641.4	508	355.6	749.3	53.8	20	2"	929	2048
24"	600	1168.4	203.2	762	609.6	406.4	901.7	66.5	20	2 1/2"	1504	3316

ASME/ANSI B16.5 2500LB WN Flange/Standards, Dimensions & Weight



Nominal Pipe Size		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Hub Diam. Chamfer of W.N	Length Hub.Y	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	A	Y	BC	BH	BN	BD		
1/2"	15	133.4	30.2	42.9	21.3	73.2	88.9	22.4	4	3/4"	3.2	7
3/4"	20	139.7	31.8	50.8	26.7	79.2	95.3	22.4	4	3/4"	3.6	8
1"	25	158.8	35.1	57.2	33.5	88.9	108	25.4	4	7/8"	5.4	12
1-1/4"	32	184.2	38.1	73.2	42.2	95.3	130	28.4	4	1"	7.8	17.2
1-1/2"	40	203.2	44.5	79.2	48.3	111.3	146.1	31.8	4	1 1/8"	11.5	25.4
2"	50	235	50.8	95.3	60.5	127	171.5	28.4	8	1"	19	42
2-1/2"	65	266.7	57.2	114.3	73.2	142.7	196.9	31.8	8	1 1/8"	24	52
3"	80	304.8	66.5	133.4	88.9	168.1	228.6	35.1	8	1 1/4"	42.6	94
4"	100	355.6	76.2	165.1	114.3	190.5	273.1	41.1	8	1 1/2"	64	141
5"	125	419.1	91.9	203.2	141.2	228.6	323.9	47.8	8	1 3/4"	111	244
6"	150	482.6	108	235	168.4	273.1	368.3	53.8	8	2"	171	378

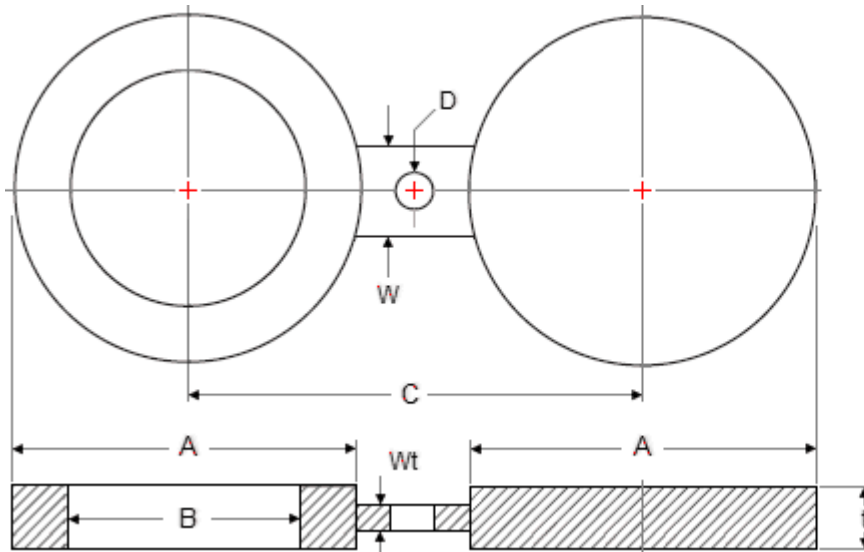
8"	200	552.5	127	304.8	219.2	317.5	438.2	53.8	12	2"	261	576
10"	250	673.1	165.1	374.7	273.1	419.1	539.8	66.5	12	2 1/2"	485	1068
12"	300	762	184.2	441.5	323.9	463.6	619.3	73.2	12	2 3/4"	698	1539

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

Dimensions Spectacle Blinds - ASME B16.48



Class 150

NPS	Outside \varnothing A	Inside \varnothing B	Centerline C	Thickness t	Web Width W
1/2	45	16	60	3	38
3/4	54	21	70	3	38
1	64	27	80	3	38
1.1/4	73	42	90	6.4	38
1.1/2	83	48	100	6.4	38

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

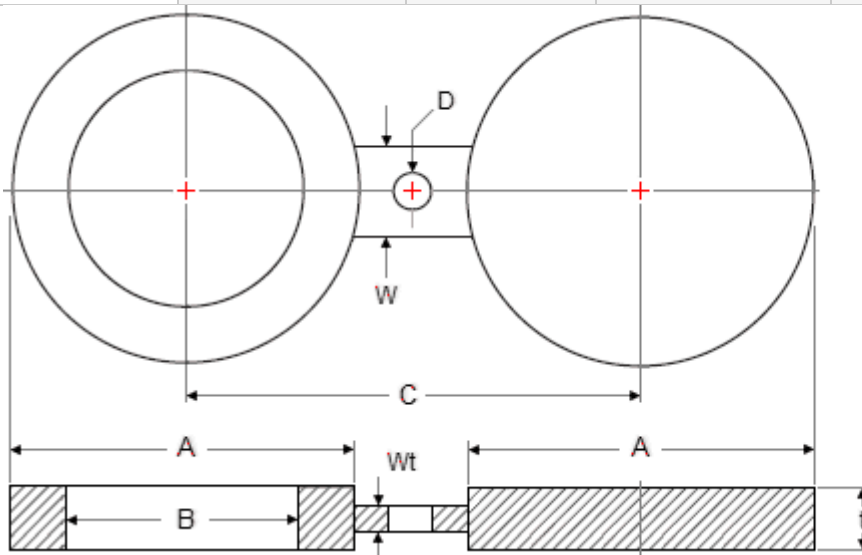
2	102	61	120	6.4	51
2.1/2	107	73	140	6.4	51
3	133	89	150	6.4	64
3.1/2	159	102	175	9.7	64
4	172	114	190	9.7	64
5	194	141	215	9.7	76
6	219	168	240	12.7	76
8	276	219	300	12.7	76
10	337	273	360	15.7	102
12	406	324	430	19.1	102
14	448	356	475	19.1	108
16	511	406	460	22.4	108
18	546	457	580	25.4	114
20	603	508	635	28.4	121

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

24	714	610	750	31.8	140
NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W



Class 300

NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	38
1.1/4	79	42	100	6.4	38

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

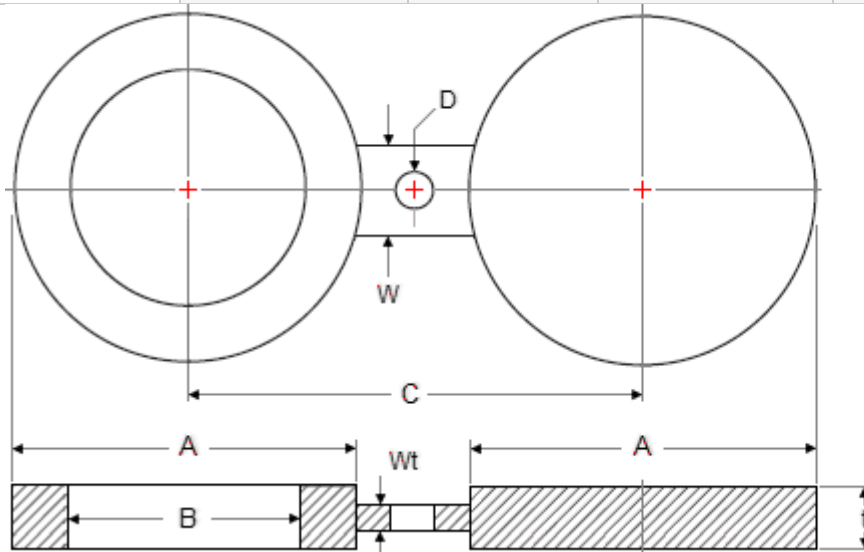
1.1/2	92	48	115	6.4	38
2	108	61	125	9.7	51
2.1/2	127	73	150	9.7	51
3	146	89	170	9.7	64
3.1/2	162	102	185	12.7	64
4	178	114	200	12.7	64
5	213	141	235	15.7	76
6	248	168	270	15.7	76
8	305	219	330	22.4	76
10	359	273	385	25.4	102
12	419	324	450	28.4	102
14	483	356	515	31.8	108
16	536	406	570	38.1	108
18	594	457	630	41.1	114

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

20	651	508	685	44.5	121
24	772	610	810	50.8	140
NPS	Outside \varnothing A	Inside \varnothing B	Centerline C	Thickness t	Web Width W



Class 600

NPS	Outside \varnothing A	Inside \varnothing B	Centerline C	Thickness t	Web Width W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	57

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

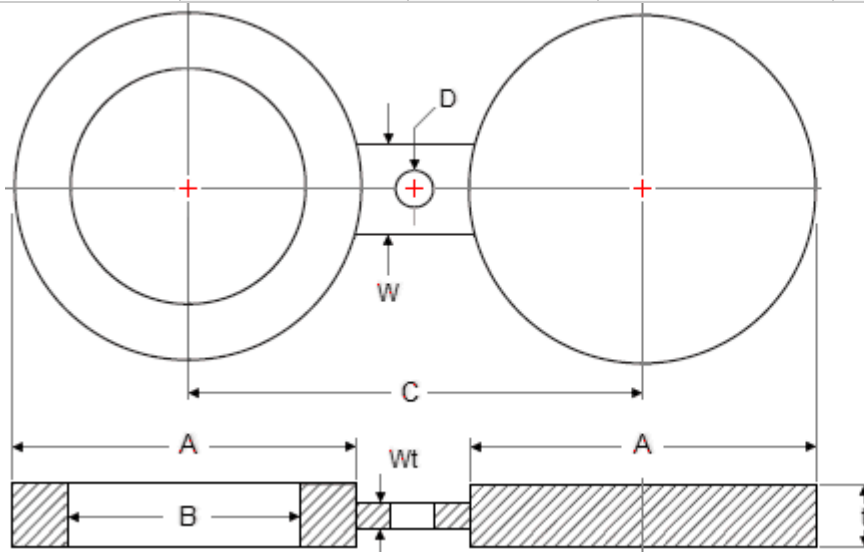
1.1/4	79	37	100	9.7	57
1.1/2	92	43	115	9.7	67
2	108	55	125	9.7	57
2.1/2	127	67	150	12.7	67
3	146	83	170	12.7	67
3.1/2	159	96	185	15.7	76
4	191	108	215	15.7	76
5	238	135	265	19.1	86
6	264	162	290	22.4	86
8	318	212	350	28.4	95
10	397	265	430	35.1	105
12	454	315	490	41.1	105
14	489	346	525	44.5	114
16	562	397	605	50.8	124

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

18	610	448	655	53.8	133
20	679	497	725	63.5	133
24	787	597	840	73.2	152
NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W



Class 900

NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W
1/2	60	16	80	6.4	38
3/4	67	21	90	6.4	41

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

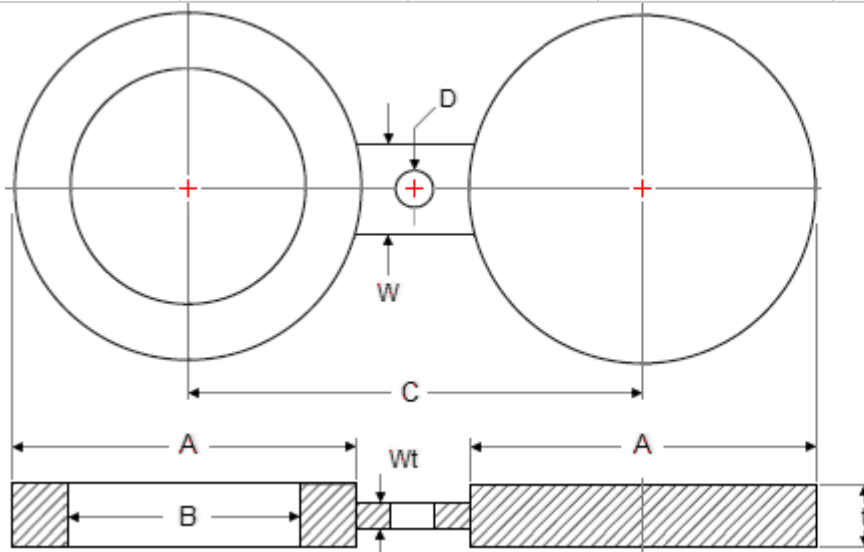
1	76	27	100	6.4	57
1.1/4	86	37	110	9.7	57
1.1/2	95	43	125	9.7	67
2	140	55	165	12.7	57
2.1/2	162	67	190	12.7	67
3	165	83	190	15.7	67
4	203	108	235	19.1	76
5	244	135	280	22.4	86
6	286	162	320	25.4	86
8	356	212	395	35.1	95
10	432	265	470	41.1	105
12	495	315	535	47.8	105
14	518	346	560	53.8	114
16	572	397	615	60.5	124

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

18	635	448	685	66.5	133
20	696	497	750	73.2	133
24	835	597	900	88.9	152
NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W



Class 1500

NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W
1/2	61	16	80	6.4	38
3/4	67	21	90	9.7	41

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

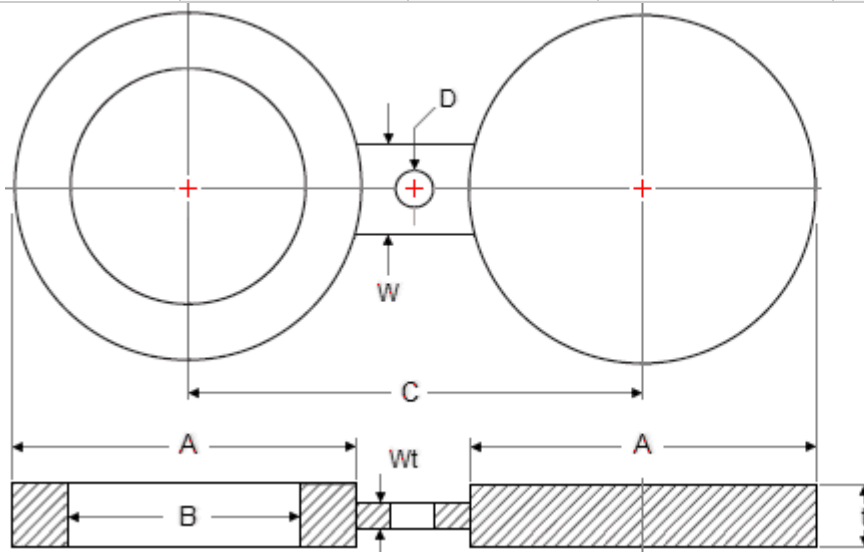
1	76	27	100	9.7	64
1.1/4	86	35	110	9.7	64
1.1/2	95	41	125	12.7	70
2	140	53	165	12.7	70
2.1/2	162	63	190	15.7	76
3	172	78	205	19.1	76
4	206	102	240	22.4	89
5	251	128	290	28.4	89
6	279	154	320	35.1	89
8	349	203	395	41.1	102
10	432	255	480	50.8	114
12	518	303	570	60.5	114
14	575	333	635	66.5	127
16	638	381	705	76.2	133

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

18	702	429	775	85.9	146
20	752	478	830	95.3	152
24	899	575	990	111.3	178
NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W



Class 2500

NPS	Outside ϕ A	Inside ϕ B	Centerline C	Thickness t	Web Width W
1/2	67	16	90	9.7	38
3/4	73	21	95	9.7	41

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

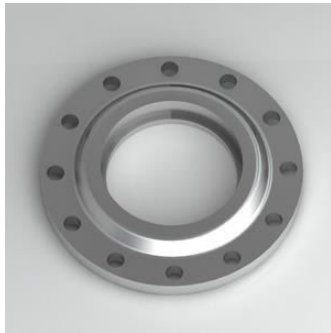
1	83	27	110	9.7	64
1.1/4	102	35	130	12.7	64
1.1/2	114	41	145	15.7	70
2	143	53	170	15.7	70
2.1/2	165	63	195	19.1	76
3	194	78	230	22.4	76
4	232	102	275	28.4	89
5	276	128	325	35.1	89
6	314	154	370	41.1	89
8	384	198	440	53.8	102
10	473	248	540	66.5	114
12	546	289	620	79.2	114

SHREE RAMDEV FORGE & FITTING

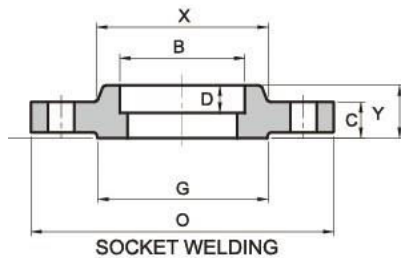
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Website- www.ramdevforgefitting.com

150lb Socket Welding Flange-ASME/ANSI B16.5



150lb Socket Welding Flange-ASME/ANSI B16.5/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Depth of Socket.D	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	Y	B	D	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	15.70	22.40	9.70	60.50	15.80	4	1/2"	0.4	0.9
3/4"	20	98.50	12.70	38.10	42.90	15.70	27.70	11.20	69.90	15.80	4	1/2"	0.7	1.5
1"	25	108.00	14.20	49.30	50.80	17.50	34.50	12.70	79.30	15.80	4	1/2"	0.9	2
1-1/4"	32	117.50	15.70	58.70	63.50	20.60	43.20	14.20	88.90	15.80	4	1/2"	1.2	2.6
1-1/2"	40	127.00	17.50	65.00	73.20	22.40	49.50	15.80	98.60	15.80	4	1/2"	1.5	3.3
2"	50	152.50	19.10	77.70	91.90	25.40	62.00	17.50	120.70	19.10	4	5/8"	2.3	5.1
2-1/2"	65	178.00	22.40	90.40	104.60	28.40	74.70	19.10	139.70	19.10	4	5/8"	3.7	8.1
3"	80	190.50	23.90	108.00	127.00	30.20	90.70	20.60	152.40	19.10	4	5/8"	4.2	9.2
3-	90	216.00	23.90	122.20	139.70	31.80	103.40		177.80	19.10	8	5/8"	5.2	11.4

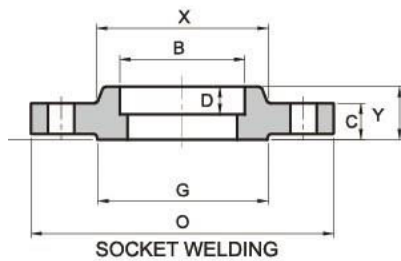
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

1/2"														
4"	100	228.50	23.90	134.90	157.20	33.30	116.10		190.50	19.10	8	5/8"	5.9	13
5"	125	254.00	23.90	163.60	185.70	36.60	143.80		215.90	22.40	8	3/4"	7	15.4
6"	150	279.50	25.40	192.00	215.90	39.60	170.70		241.30	22.40	8	3/4"	8.4	18.5
8"	200	343.00	28.40	246.10	269.70	44.50	221.50		298.50	22.40	8	3/4"	12.6	27.7
10"	250	406.50	30.20	304.80	323.90	49.30	276.40		362.00	25.40	12	7/8"	18	39.6
12"	300	482.50	31.80	365.30	381.00	55.60	327.20		431.80	25.40	12	7/8"	29.5	65
14"	350	533.50	35.10	400.10	412.80	57.20	359.20		476.30	28.50	12	1"	38	84
16"	400	597.00	36.60	457.20	469.90	63.50	410.50		539.80	28.50	16	1"	42	93
18"	450	635.00	39.60	505.00	533.40	68.30	461.80		577.90	31.80	16	1 1/8"	54	120
20"	500	698.50	42.90	558.80	584.20	73.20	513.10		635.00	31.80	20	1 1/8"	70	155
24"	600	813.00	47.80	663.40	692.20	82.60	616.00		749.30	35.10	20	1 1/4"	94	207

300lb Socket Welding Flange-ASME/ANSI B16.5/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Depth of Socket.D	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	Y	B	D	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	22.4	22.4	9.7	66.5	15.7	4	1/2"	0.7	1.5
3/4"	20	117.5	15.7	47.8	42.9	25.4	27.7	11.2	82.6	19.1	4	5/8"	1.2	2.6
1"	25	124.0	17.5	53.8	50.8	26.9	34.5	12.7	88.9	19.1	4	5/8"	1.4	3.1
1-1/4"	32	133.5	19.1	63.5	63.5	26.9	43.2	14.2	98.6	19.1	4	5/8"	1.9	4.2
1-1/2"	40	155.5	20.6	69.9	73.2	30.2	49.5	15.7	114.3	22.4	4	5/8"	2.8	6.2

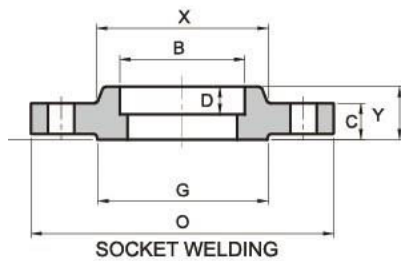
SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

2"	50	165.0	22.4	84.1	91.9	33.3	62	17.5	127	19.1	8	5/8"	3.3	7.3
2-1/2"	65	190.5	25.4	100.1	104.6	38.1	74.7	19.1	149.4	22.4	8	3/4"	4.6	10.1
3"	80	209.5	28.4	117.3	127	42.9	90.7	20.6	168.1	22.4	8	3/4"	6.3	13.9
3-1/2"	90	228.5	30.2	133.4	139.7	44.5	103.4	22.4	184.2	22.4	8	3/4"	7.8	17.2
4"	100	254.0	31.8	146.1	157.2	47.8	116.1		200.2	22.4	8	3/4"	10	22
5"	125	279.5	35.1	177.8	185.7	50.8	143.8		235	22.4	8	3/4"		
6"	150	317.5	36.6	206.2	215.9	52.3	170.7		269.7	22.4	12	3/4"		
8"	200	381.0	41.1	260.4	269.7	62	221.5		330.2	25.4	12	7/8"		
10"	250	444.5	47.8	320.5	323.9	66.5	276.4		387.4	28.4	16	1"		
12"	300	520.5	50.8	374.7	381	73.2	327.2		450.9	31.8	16	1 1/8"		
14"	350	584.0	53.8	425.5	412.8	76.2	359.2		514.4	31.8	20	1 1/8"		
16"	400	647.5	57.2	482.6	469.9	82.6	410.5		571.5	35.1	20	1 1/4"		
18"	450	711.0	60.5	533.4	533.4	88.9	461.8		628.7	35.1	24	1 1/4"		
20"	500	774.5	63.5	587.2	584.2	95.3	513.1		685.8	35.1	24	1 1/4"		
24"	600	914.5	69.9	701.5	692.2	106.4	616.0		812.8	41.1	24	1 1/2"		

600lb Socket Welding Flange-ASME/ANSI B16.5/Standards, Dimensions & Weight



Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub	Bore	Depth of Socket	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	Y	B	D	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	22.4	22.9	9.7	66.5	15.7	4	1/2"	1	2.2
3/4"	20	117.5	15.7	47.8	42.9	25.4	28.2	11.2	82.6	19.1	4	5/8"	1.6	3.5
1"	25	124.0	17.5	53.8	50.8	26.9	35.1	12.7	88.9	19.1	4	5/8"	1.8	4

SHREE RAMDEV FORGE & FITTING

(AN ISO 9001:2008 CERTIFIED COMPANY)

Website- www.ramdevforgefitting.com

1/2"	15	120.7	22.4	38.1	31.8	22.4	9.7	82.6	22.4	4	3/4"
3/4"	20	130	25.4	44.5	35.1	27.7	11.2	88.9	22.4	4	3/4"
1"	25	149.4	28.4	52.3	41.1	34.5	12.7	101.6	25.4	4	7/8"
1-1/4"	32	158.8	28.4	63.5	41.1	43.2	14.2	111.3	25.4	4	7/8"
1-1/2"	40	177.8	31.8	69.9	44.5	49.5	15.7	124	28.4	4	1"
2"	50	215.9	38.1	104.6	57.2	62	17.5	165.1	25.4	8	7/8"
2-1/2"	65	244.3	41.1	124	63.5	74.7	19.1	190.5	28.4	8	1"
3"	80	266.7	47.8	133.4				190.5	25.4	8	7/8"
4"	100	311.2	53.8	162.1				235	31.8	8	1 1/8"
5"	125	374.7	73.2	196.9				279.4	35.1	8	1 1/4"
6"	150	393.7	82.6	228.6				317.5	31.8	12	1 1/8"
8"	200	482.6	91.9	292.1				393.7	38.1	12	1 3/8"
10"	250	584.2	108	368.3				469.9	38.1	16	1 3/8"
12"	300	673.1	124	450.9				533.4	38.1	20	1 3/8"
14"	350	749.3	133.4	495.3				558.8	41.1	20	1 1/2"
16"	400	825.5	146.1	552.5				616	44.5	20	1 5/8"
18"	450	914.4	162.1	596.9				685.8	50.8	20	1 7/8"
20"	500	984.3	177.8	641.4				749.3	53.8	20	2"
24"	600	1168.4	203.2	762				901.7	66.5	20	2 1/2"

WEIGHT OF STAINLESS STEEL SHEETS / PLATES

Thickness in mm	Weight Kg/m ²	Weight Kg/ft.	Thickness in mm	Weight Kg/m ²	Weight Kg/ft.
0.18	1.44	0.134	1.75	14.00	1.301
0.20	1.60	0.149	2.00	16.00	1.487
0.22	1.76	0.164	2.25	18.00	1.673
0.24	1.92	0.178	2.50	20.00	1.859
0.27	2.16	0.201	2.75	22.00	2.045
0.28	2.24	0.208	3.00	24.00	2.231
0.32	2.56	0.238	3.25	26.00	2.417
0.38	3.04	0.282	3.50	28.00	2.603
0.44	3.52	0.327	3.75	30.00	2.788
0.50	4.00	0.372	4.00	32.00	2.788
0.56	4.48	0.416	4.25	34.00	3.160
0.63	5.04	0.468	4.50	36.00	3.346
0.75	6.00	0.558	5.00	40.00	3.718
0.88	7.04	0.654	5.50	44.00	4.090
1.00	8.00	0.744	6.00	48.00	4.462
1.13	9.04	0.840	6.50	52.00	4.833
1.25	10.00	0.929	7.00	56.00	5.205
1.38	11.04	1.026	7.50	60.00	5.577
1.50	12.00	1.115	8.00	64.00	5.949

WEIGHTS OF ROUND, SQUARE & HEXAGON BAR - (in kg. per meter)

Size	Round	Square	Hexagon	Size	Round	Square	Size	Round	Square
5	0.154	0.196	0.170	57	20.03	25.51	145	129.63	165.05
6	0.222	0.283	0.245	58	20.74	26.41	150	138.72	176.63
7	0.302	0.385	0.333	59	21.46	27.33	155	148.12	188.60
8	0.395	0.502	0.435	60	22.20	28.26	160	157.83	200.96
9	0.499	0.636	0.551	61	22.94	29.21	165	167.85	213.72
10	0.617	0.785	0.680	62	23.70	30.18	170	178.18	226.87
11	0.746	0.950	0.823	63	24.47	31.16	175	188.81	240.41
12	0.888	1.130	0.979	64	25.25	32.15	180	199.76	254.34
13	1.042	1.327	1.149	65	26.05	33.17	185	211.01	268.67
14	1.208	1.539	1.332	66	26.86	34.20	190	222.57	283.39
15	1.387	1.766	1.530	67	27.68	35.24	195	234.44	298.50
16	1.578	2.010	1.740	68	28.51	36.30	200	246.61	314.00
17	1.782	2.269	1.965	69	29.35	37.37	205	259.10	329.90
18	1.998	2.543	2.203	70	30.21	38.47	210	271.89	346.19
19	2.226	2.834	2.454	71	31.08	39.57	215	284.99	362.87
20	2.466	3.140	2.719	72	31.96	40.69	220	298.40	379.94
21	2.719	3.462	2.866	73	32.86	41.83	225	312.12	397.41
22	2.984	3.799	3.290	74	33.76	42.99	230	326.13	415.27
23	3.261	4.153	3.596	75	34.68	44.16	235	340.48	433.52
24	3.551	4.522	3.916	76	35.61	45.34	240	355.13	452.16
25	3.853	4.906	4.249	77	36.56	46.54	245	370.08	471.20
26	4.168	5.307	4.596	78	37.51	47.76	250	385.34	490.63
27	4.495	5.723	4.956	79	38.48	48.99	255	400.90	510.45
28	4.834	6.154	5.330	80	39.46	50.24	260	416.78	530.66
29	5.185	6.602	5.717	81	40.45	51.50	265	432.96	551.27
30	5.549	7.065	6.118	82	41.46	52.78	270	449.46	572.27
31	5.925	7.544	6.533	83	42.47	54.08	275	466.26	593.66
32	6.313	8.038	6.961	84	43.50	55.39	280	483.37	615.44
33	6.714	8.549	7.403	85	44.55	56.72	285	500.78	637.62
34	7.127	9.075	7.859	86	45.60	58.06	290	518.51	660.19
35	7.553	9.616	8.328	87	46.67	59.42	295	536.54	683.15
36	7.990	10.174	8.810	88	47.75	60.79	300	554.88	706.50
37	8.440	10.747	9.307	89	48.84	62.18	310	592.49	754.39
38	8.903	11.335	9.817	90	49.94	63.59	320	631.33	803.84
39	9.378	11.940	10.340	91	51.06	65.01	330	671.41	854.87
40	9.865	12.560	10.877	92	52.18	66.44	340	712.72	907.46
41	10.364	13.196	11.428	93	53.32	67.90	350	755.26	961.63
42	10.876	13.847	11.992	94	54.48	69.36	360	799.03	1017.36
43	11.400	14.515	12.570	95	55.64	70.85	370	844.04	1074.67
44	11.936	15.198	13.161	96	56.82	72.35	380	890.28	1133.54
45	12.485	15.896	13.766	97	58.01	73.86	390	937.75	1193.99
46	13.046	16.611	14.385	98	59.21	75.39	400	986.46	1256.00
47	13.619	17.341	15.017	99	60.43	76.94	410	1036.40	1319.59
48	14.205	18.086	15.663	100	61.65	78.50	420	1087.57	1384.74
49	14.803	18.848	16.322	105	67.97	86.55	430	1139.98	1451.47
50	15.413	19.625	16.996	110	74.60	94.99	440	1193.62	1519.76
51	16.04	20.42	17.682	115	81.54	103.82	450	1248.49	1589.63
52	16.67	21.23	18.382	120	89.78	113.04	460	1304.59	1661.06
53	17.32	22.05	19.096	125	96.33	122.66	470	1361.93	1734.07
54	17.98	22.89	19.823	130	104.19	132.67	480	1420.50	1808.64
55	18.65	23.75	20.564	135	112.36	143.07	490	1480.31	1884.79
56	19.34	24.62	21.319	140	120.84	153.86	500	1541.34	1962.50

STAINLESS STEEL PIPE DIMENSION AS PER ASTM & WEIGHT-KG. PER MTR. (ANSI B36.19)

Nominal Bore		Outside Diameter	Schedule 5S		Schedule 10S		Schedule 40S		Schedule 80S		Schedule 160S		Schedule XXS	
mm	INCH	mm	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)
3	1/8	10.3	1.24	0.276	1.24	0.28	1.73	0.37	2.41	0.47	-	-	-	-
6	1/4	13.7	1.24	0.390	1.65	0.49	2.24	0.631	3.02	0.80	-	-	-	-
10	3/8	17.1	1.24	0.490	1.65	0.63	2.31	0.845	3.20	1.10	-	-	-	-
15	1/2	21.3	1.65	0.800	2.11	1.00	2.77	1.27	3.75	1.62	4.75	1.94	7.47	2.55
20	3/4	26.7	1.65	1.03	2.11	1.28	2.87	1.68	3.91	2.20	5.54	2.89	7.82	3.63
25	1	33.4	1.65	1.30	2.77	2.09	3.38	2.50	4.55	3.24	6.35	4.24	9.09	5.45
32	1 1/4	42.2	1.65	1.65	2.77	2.70	3.56	3.38	4.85	4.47	6.35	5.61	9.70	7.77
40	1 1/2	48.3	1.65	1.91	2.77	3.11	3.68	4.05	5.08	5.41	7.14	7.25	10.16	9.54
50	2	60.3	1.65	2.40	2.77	3.93	3.91	5.44	5.54	7.48	8.74	11.1	11.07	13.44
65	2 1/2	73.0	2.11	3.69	3.05	5.26	5.16	8.63	7.01	11.4	9.53	14.9	14.2	20.39
80	3	88.9	2.11	4.51	3.05	6.45	5.49	11.30	7.62	15.2	11.1	21.3	15.24	27.65
100	4	114.3	2.11	5.84	3.05	8.36	6.02	16.07	8.56	22.3	13.49	33.54	17.12	41.03
125	5	141.3	2.77	9.47	3.40	11.57	6.55	21.8	9.53	31.97	15.88	49.11	19.05	57.43
150	6	168.3	2.77	11.32	3.40	13.84	7.11	28.3	10.97	42.7	18.2	67.56	21.95	79.22
200	8	219.1	2.77	14.79	3.76	19.96	8.18	42.6	12.7	64.6	23.0	111.2	22.23	107.8
250	10	273.1	3.40	22.63	4.19	27.78	9.27	60.5	12.7	96.0	28.6	172.4	25.40	155.15
300	12	323.9	3.96	31.25	4.57	36.00	9.52	73.88	12.7	132.0	33.32	238.76	25.40	186.97
350	14	355.6	3.96	34.36	4.78	41.3	11.13	94.59	19.05	158.08	35.71	281.70	-	-
400	16	406.4	4.19	41.56	4.78	47.29	12.7	123.30	21.41	203.33	40.46	365.11	-	-
450	18	457.2	4.19	46.80	4.78	53.42	14.27	155.80	23.8	254.36	45.71	466.40	-	-
500	20	508.0	4.78	59.25	5.54	68.71	15.09	183.42	26.19	311.2	49.99	564.68	-	-
600	24	609.6	5.54	82.47	6.35	94.45	17.48	255.41	30.96	442.08	59.54	808.22	-	-

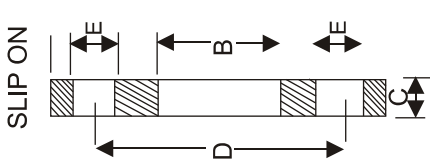
Formula - Pipe Weight Kg / Mtr. ● OD - Thick x Thick x 0.0248 = Kg Per Mtr.

WEIGHT & THICKNESS OF S.S GAUGE PIPES

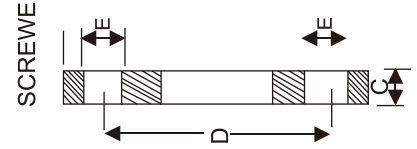
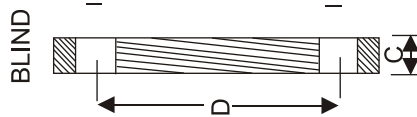
DIMENSION		10G (3.25)	12G (2.64)	14G (2.03)	16G (1.62)	18G (1.21)	20G (0.91)	22G (0.71)
Size inches	OD IN MM	(0.128")	(0.104")	(0.080")	(0.064")	(0.048")	(0.036")	(0.028")
		WALL THICKNESS						
1/4"	6/35	0.075	0.070	0.065	0.058	0.046	0.037	0.030
5/16"	7.93	0.114	0.105	0.089	0.079	0.060	0.048	0.038
3/8"	9.52	0.152	0.135	0.113	0.097	0.080	0.058	0.046
1/2"	12.7	0.226	0.200	0.157	0.134	0.105	0.079	0.063
3/4"	19.05	0.386	0.326	0.256	0.215	0.161	0.124	0.097
1"	25.4	0.541	0.450	0.351	0.294	0.218	0.057	0.131
1 1/4"	31.750	0.696	0.580	0.448	0.575	0.275	0.200	0.162
1 1/2"	38.1	0.851	0.700	0.542	0.452	0.332	0.250	0.196
1 3/4"	44.45	1.020	0.832	0.646	0.530	0.390	0.294	0.230
2"	50.8	1.161	0.960	0.733	0.607	0.447	0.336	0.263
2 1/4"	57.15	1.315	1.085	0.828	0.687	0.504	-	-
2 1/2"	63.5	1.472	1.210	0.924	0.792	0.562	-	-
2 3/4"	69.85	1.630	1.338	1.022	0.847	0.619	-	-
3"	76.2	1.782	1.460	1.115	0.924	0.676	-	-
3 1/2"	88.9	1.092	1.718	1.306	1.082	0.791	-	-
4"	101.6	2.403	1.971	1.497	1.239	0.905	-	-
4 1/2"	114.3	2.713	2.224	1.608	1.397	1.020	-	-
5"	127.0	3.023	2.466	1.879	1.584	1.134	-	-
5 1/2"	139.7	3.336	2.730	2.070	1.713	1.250	-	-
6"	152.4	3.654	2.983	2.264	1.875	1.364	-	-
6 1/2"	165.1	3.975	3.256	2.452	2.028	1.478	-	-

CARBON STEEL SEAMLESS PIPE DIMENSION & WEIGHT - KG. PER MTR. (ANSI B 36.10)

Nominal Pipe size		O/D	Schedule 10		Schedule 20		Schedule 30		Schedule STD		Schedule 40		Schedule 60		Schedule Extra Strong (XS)		Schedule 80		Schedule 100		Schedule 120		Schedule 140		Schedule 160		Schedule Double Extra Strong (XXS)		
mm	inch	mm	mm	kg/m	mm	kg/m	mm	kg/m	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	
3	1/8	10.3							1.73	0.37	1.73	0.37			2.41	0.47	2.41	0.47											
6	1/4	13.7							2.24	0.63	2.24	0.63			3.02	0.80	3.02	0.80											
10	3/8	17.1							2.31	0.84	2.31	0.84			3.20	1.10	3.20	1.10											
15	1/2	21.3							2.77	1.27	2.77	1.27			3.73	1.62	3.73	1.62								4.78	1.95	7.5	2.55
20	3/4	26.7							2.87	1.69	2.87	1.69			3.91	2.20	3.91	2.20								5.6	2.90	7.82	3.64
25	1	33.4							3.38	2.50	3.38	2.50			4.55	3.24	4.55	3.24								6.35	4.24	9.1	5.45
32	1¼	42.2							3.56	3.39	3.56	3.39			4.85	4.47	4.85	4.47								6.35	5.61	9.7	7.77
40	1½	48.3							3.68	4.05	3.68	4.05			5.08	5.41	5.08	5.41								7.14	7.25	10.2	9.56
50	2	60.3							3.91	5.44	3.91	5.44			5.54	7.48	5.54	7.48								8.74	11.11	11.07	13.4
65	2½	73.0							5.16	8.63	5.16	8.63			7.01	11.41	7.01	11.41								9.53	14.92	14.0	20.4
80	3	88.9							5.49	11.3	5.49	11.3			7.62	15.27	7.62	15.3								11.13	21.35	15.24	27.7
90	3½	101.6							5.74	13.57	5.74	13.57			8.08	18.63	8.08	18.63										16.2	34.1
100	4	114.3							6.02	16.07	6.02	16.07			8.56	22.3	8.56	22.3				11.13	28.32			13.5	33.5	17.12	41.03
125	5	141.3							6.55	21.77	6.55	21.77			9.53	30.9	9.53	30.9				12.7	40.2			15.9	49.11	19.0	57.4
150	6	168.3							7.11	28.26	7.11	28.26			10.97	42.5	10.97	42.5				14.3	54.2			18.3	67.5	21.95	79.22
200	8	219.1			6.35	33.3	7.0	36.8	8.18	42.5	8.18	42.55	10.31	53.10	12.7	64.6	12.7	64.5	15.1	75.92	18.3	90.4	20.6	100.9	23.0	111.27	22.23	108.0	
250	10	273.0			6.35	41.7	7.8	51.3	9.27	60.3	9.27	60.31	12.70	81.50	12.7	81.5	15.1	96.0	18.3	114.7	21.44	133.0	25.4	155	28.6	172.3	25.4	155.0	
300	12	323.9			6.35	49.7	8.4	65.2	9.53	73.8	10.31	79.73	14.30	109.0	12.7	97.4	17.5	132.0	21.4	160.0	25.4	187.0	28.6	208	33.3	238.7	25.4	187.0	
350	14	355.6	6.35	54.6	7.92	67.9	9.53	81.3	9.53	81.3	11.13	94.55	15.10	126.4	12.7	107.4	19.0	158.0	23.8	195.0	27.8	224.0	31.8	253.5	35.7	281.7			
400	16	406.4	6.35	62.6	7.92	77.9	9.53	93.3	9.53	93.3	12.7	123.3	16.70	160.0	12.7	123.3	21.44	203.5	26.2	245.5	30.9	286.6	36.53	333	40.5	365.4			
450	18	457.0	6.35	70.5	7.92	87.7	11.13	122.4	9.53	105.0	14.27	156.0	19.05	206.0	12.7	139.0	23.8	254.6	29.36	309.6	34.9	363.6	39.7	408.3	45.2	459.4			
500	20	508.0	6.35	78.5	9.53	117.2	12.7	155.1	9.53	117.2	15.09	183.4	20.62	248.5	12.7	155.1	26.2	311.2	32.54	381.5	38.1	441.5	44.4	508	50.0	564.8			
550	22	559.0	6.35	86.5	9.53	129.0	12.7	171.0	9.53	129.0			22.20	294.0	12.7	171.0	28.6	373.8	34.9	451.4	41.3	527.0	47.6	600	54.0	672.0			
600	24	610.0	6.35	94.5	9.53	141.0	14.3	209.7	9.53	141.0	17.48	255.4	24.61	355.0	12.7	187.0	30.96	442.08	38.89	547.7	46.0	640.0	52.4	720.15	59.5	808.22			
650	26	660.0	7.92	127.0	12.7	203.0			9.53	153.0					12.7	202.7													
700	28	711.0	7.92	137.4	12.7	218.7	15.88	271.2	9.53	165.0					12.7	218.7													
750	30	762.0	7.92	147.3	12.7	234.6	15.88	292.18	9.53	176.8					12.7	234.7													
800	32	813.0	7.92	157.0	12.7	250.6	15.88	312.0	9.53	188.2	17.48	342.9			12.7	250.6													
850	34	864.0	7.92	167.0	12.7	266.6	15.88	332.1	9.53	200.3	17.48	364.9			12.7	266.6													
900	36	914.4	7.92	176.9	12.7	282.3	15.88	351.7	9.53	212.5	19.05	420.4			12.7	282.2													
A 106 Gr B ()																													
We also supply pipes API - 5L - Gr B ()																													
A 333 Gr 6 ()																													
A 335 P 5 ()																													



BS 10 Pipes



BS 10 Pipes

N.B. Size	Table	Dia of Flange A	Bore of Slip-on B	Thickness of Flange C	Pitch circle Dia D	Dia of Bolt Holes E	No. of Bolts
1/2"	D	3 3/4	0.88	3/16	2 5/8	9/16	4
	E	3 3/4	0.88	1/4	2 5/8	9/16	4
	F	3 3/4	0.88	3/8	2 7/8	9/16	4
	H	4 1/2	0.88	1/2	3 1/4	11/16	4
3/4"	D	4	1.09	3/16	2 7/8	9/16	4
	E	4	1.09	1/4	2 7/8	9/16	4
	F	4	1.09	3/8	2 7/8	9/16	4
	H	4 1/2	1.09	1/2	3 1/4	11/16	4
1"	D	4 1/2	1.36	3/16	3 1/4	9/16	4
	E	4 1/2	1.36	9/32	3 1/4	9/16	4
	F	4 3/4	1.36	3/8	3 7/16	11/16	4
	H	4 3/4	1.36	9/16	3 7/16	11/16	4
1 1/4"	D	4 3/4	1.70	1/4	3 7/16	9/16	4
	E	4 3/4	1.70	5/16	3 7/16	9/16	4
	F	5 1/4	1.70	1/2	3 7/8	11/16	4
	H	5 1/4	1.70	11/16	3 7/8	11/16	4
1 1/2"	D	5 1/4	1.95	1/4	3 7/8	9/16	4
	E	5 1/4	1.95	11/32	3 7/8	9/16	4
	F	5 1/2	1.95	1/2	4 1/8	11/16	4
	H	5 1/2	1.95	11/16	4 1/8	11/16	4
2"	D	6	2.44	5/16	4 1/2	11/16	4
	E	6	2.44	3/8	4 1/2	11/16	4
	F	6 1/2	2.44	5/8	5	11/16	4
	H	6 1/2	2.44	3/4	5	11/16	4
2 1/2"	D	6 1/2	2.94	5/16	5	11/16	4
	E	6 1/2	2.94	13/32	5	11/16	4
	F	7 1/4	2.94	5/8	5 3/4	11/16	8
	H	7 1/4	2.94	3/4	5 3/4	11/16	8
3"	D	7 1/4	3.57	3/8	5 3/4	11/16	4
	E	7 1/4	3.57	7/16	5 3/4	11/18	4
	F	8	3.57	5/8	6 1/2	11/16	8
	H	8	3.57	7/8	6 1/2	11/16	8
3 1/2"	D	8	4.07	3/8	6 1/2	11/16	4
	E	8	4.07	15/32	6 1/2	11/16	8
	F	8 1/2	4.07	3/4	7	11/16	8
	H	8 1/2	4.07	7/8	7	11/16	8
4"	D	8 1/2	4.57	3/8	7	11/16	4
	E	8 1/2	4.57	1/2	7	11/16	8
	F	9	4.57	3/4	7 1/2	11/16	8
	H	9	4.57	1	7 1/2	11/16	8
5"	D	10	5.56	1/2	8 1/4	11/16	8
	E	10	5.66	9/16	8 1/4	11/16	8
	F	11	5.66	7/8	9 1/4	7/8	8
	H	11	5.66	1 1/8	9 1/4	7/8	8

N.B. Size	Table	Dia of Flange A	Bore of Slip-on B	Thickness of Flange C	Pitch circle Dia D	Dia of Bolt Holes E	No. of Bolts
6"	D	11	6.72	1/2	9 1/4	11/16	8
	E	11	6.72	11/16	9 1/4	7/8	8
	F	12	6.72	7/8	10 1/4	7/8	12
	H	12	6.72	1 1/8	10 1/4	7/8	12
8"	D	13 1/4	8.72	1/2	11 1/2	11/16	8
	E	13 1/4	8.72	3/4	11 1/2	7/8	8
	F	14 1/4	8.72	1	12 3/4	7/8	12
	H	14 1/2	8.72	1 1/4	1 1/4	12 3/4	12
10"	D	16	10.88	5/8	14	7/8	8
	E	16	10.88	7/8	14	7/8	12
	F	17	10.88	1 1/8	15	1	12
	H	17	10.88	1 3/8	15	1	12
12"	D	18	12.88	3/4	16	7/8	12
	E	18	12.88	1	16	1	12
	F	19 1/4	12.88	1 1/4	17 1/4	1	16
	H	19 1/4	12.88	1 5/8	17 1/4	1	16
14"	D	20 3/4	14.14	7/8	18 1/2	1	12
	E	20 3/4	14.14	1 1/8	18 1/2	1	12
	F	21 3/4	14.14	1 3/4	19 1/2	1 1/8	16
	H	21 3/4	14.14	1 7/8	19 1/2	1 1/8	16
16"	D	22 3/4	16.16	7/8	20 1/2	1	12
	E	22 3/4	16.16	1 1/4	20 1/2	1	12
	F	24	16.16	1 5/8	21 3/4	1 1/8	20
	H	26 1/2	18.18	2 3/4	24	1 1/4	20
18"	D	25 1/4	18.18	1	23	1	12
	E	25 1/4	18.18	1 3/8	23	1	16
	F	26 1/2	18.18	1 3/4	24	1 1/4	20
	H	26 1/4	18.18	2 3/8	24	1 1/4	20
20"	D	27 3/4	20.20	1 1/8	25 1/4	1	16
	E	27 3/4	20.20	1 1/2	25 1/4	1	16
	F	29	20.20	2	26 1/2	1 1/4	24
	H	29	20.20	2 5/8	26 1/2	1 1/4	24
22"	D	30	22.22	1 1/8	27 1/2	1 1/8	16
	E	30	22.22	1 3/4	27 1/2	1 1/8	16
	F	31	22.22	2 1/8	28 1/2	1 1/4	24
	H	31	22.22	2 3/8	28 1/2	1 1/4	24
24"	D	32 1/2	24.25	1 1/4	29 3/4	1 1/8	16
	E	32 1/2	24.25	1 7/8	29 3/4	1 1/4	16
	F	33 1/2	24.25	2 1/4	30 3/4	1 3/8	24
	H	33 1/2	24.25	3	30 3/4	1 3/8	24

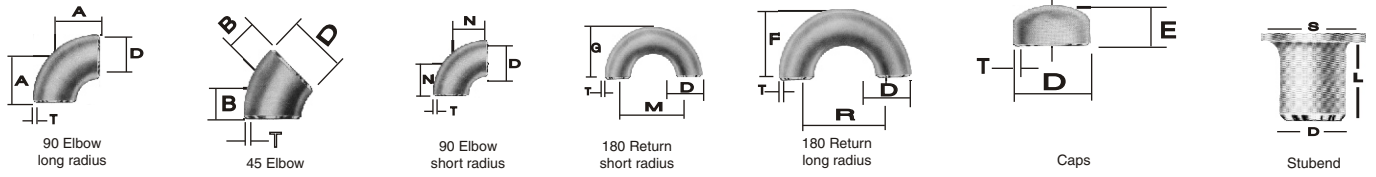
ASTM SPECIFICATION & TOLERANCE FOR TUBING & PIPING

Specification	Allowable Outside Diameter Variation in mm			Allowable Wall Thickness Variation		Exact Length Tolerance in mm		Testing
	Nominal Diameter	Over	Under	%Over	%Under	Over	Under	
ASTM-A213 Seamless Boiler Superheater and Heat Exchanger Tubes	Under 25.4	.1016	.1016	+20	-0	3.175	0	Flattening Test Tension Test Flare Test Hardness Test 100% Hydrostatic test Refer to ASTM A-450
	25.4-38.1 incl	.1524	.1524	+22	-0	3.175	0	
	38.1-50.8 excl	.2032	.2032	+22	-0	3.176	0	
	50.8-63.5 excl	.254	.254	+2	-0	4.46	0	
	63.5-76.2 excl	.3048	.3048	+22	-0	4.76	0	
	76.2-101.6 incl	.381	.381	+22	-0	4.76	0	
ASTM-A249 Welded Boiler Superheater, Heat Exchanger And Condenser Tubes	Under 25.4	.1016	.1016	+10	-10	3.175	0	Tension Test Flattening Test Flange Test Reverse Bend Test Hardness Test 100% Hydrostatic Test Refer to ASTM A-450
	25.4-38.1 incl	.1524	.1524	+10	-10	3.175	0	
	38.1-50.8 Excl	.2032	.2032	+10	-10	3.175	0	
	50.0-63.5 excl	.254	.254	+10	-10	4.762	0	
	63.5-76.2 excl	.3848	.3048	+10	-10	4.762	0	
	76.2-101.6 incl	.381	.381	+10	-10	4.762	0	
ASTM-A269 Seamless & Welded Tubing for General Service	Untp 12.7	.13	.13	+15	-15	3.2	0	Flare Test (Seamless Only) Flange Test (Welded Only) Hardness Test Reverse Flattening Test (Welded only) 100% Hydrostatic Test Refer to ASTM-A269
	12.7-38.1 excl	.13	.13	+10	-10	3.2	0	
	38.1-88.9 excl	.25	.25	+10	-10	4.8	0	
	88.9-139.7 excl	.38	.38	+10	-10	4.8	0	
	139.7-203.2 excl	.76	.76	+10	-10	4.8	0	
ASTM-A270 Seamless & Welded Sanitary Tubing	25.4	.05	.20	+10.0	-10.0	3.2	0	Reverse flattening Test 100% Hydrostatic Test External' polish on all tubes Refer to ASTM A-270
	38.1	.05	.20	+10.0	-10.0	3.2	0	
	50.8	.05	.28	+10.0	-10.0	3.2	0	
	60.5	.05	.28	+10.0	-10.0	3.2	0	
	76.2	.08	.30	+10.0	-10.0	3.2	0	
	101.6	.08	.38	+10.0	-10.0	4.8	0	
ASTM-A312 Seemless & Welded pipe	3.175-38.1 incl	.4	.79	Minimum Wall 12.5% under nominal wall Specified		6.4	0	Tension Test Flattening Test 100% Hydrostatic Test Refer to ASTM A-530
	38.1-1016 incl	.79	.79			6.4	0	
	101.6-203.2 imcl	1.59	.79			6.4	0	
						(Normally Random Lengths ordered)		
ASTM A-358 Welded pipe	219.08-750mm or 0.01 inch	+0.5%		-0.3		6.0		Refer to ASTM A-530

DIMENSIONS AND WEIGHTS OF STEEL TUBES N ACCORDANCE WITH IS 1239 : 1964 METRIC UNITS

Nominal Bore			Outside Diameters of Black Tube				Thickness			Weight per mtr. of Black Tube			Ordinary Socket	
			Light		Medium & Heavy					Pain Ends				
Approximate Outside Diam.			Max.	Min.	Max.	Min.	Light	Medium	Heavy	Light	Medium	Heavy	Approx. Outside Diam.	Min. Length
in	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg	kg	mm	mm
1/8	6	10.2	10.1	9.7	10.6	9.8	1.8	2.0	2.65	0.378	0.410	0.493	15	17
1/4	8	13.5	13.6	13.2	14.0	13.2	1.8	2.35	2.9	0.52/2	0.659	0.762	19	25
3/8	10	17.2	17.1	16.7	17.5	16.7	1.8	2.35	2.9	0.68/8	0.850	1.03	21.3	26
1/2	15	21.3	21.4	21.0	21.8	21.0	2.0	2.65	3.25	0.96	1.21	1.44	26.9	34
3/4	20	26.9	26.9	26.9	26.4	27.4	26.5	2.35	2.65	3.25	1.41	1.57	1.89	33.7
1	25	33.7	33.8	33.2	34.2	33.3	2.65	3.25	4.05	2.01	2.42	2.95	42.6	43
1 1/4	32	42.4	42.5	41.9	42.9	42.0	2.65	3.25	4.05	2.57	3.11	3.81	51	48
1 1/2	40	48.3	48.4	47.8	48.8	42.9	2.9	3.25	4.05	3.27	3.59	4.41	57	48
2	50	60.3	60.2	59.6	60.8	59.7	2.9	3.26	4.5	4.14	5.07	6.17	70	56
2 1/2	65	76.1	76.0	75.2	76.6	75.3	3.25	3.65	4.5	5.80	6.49	7.92	88.9	65
3	80	88.9	88.7	87.9	89.5	88.0	3.25	.05	4.50	6.81	8.43	10.10	101.6	71
3 1/2	90	101.6	101.2	100.3	102.1	100.4	3.65	4.05	4.85	8.76	9.70	11.90	114.3	75
4	100	114.3	113.9	113.0	115.0	113.1	3.65	4.5	5.4	9.90	12.10	14.50	127	83
5	125	139.7	-	-	140.8	138.5	-	4.85	5.4	-	16.60	17.90	159	92
6	150	165.1	-	-	166.5	163.9	-	4.85	5.4	-	19.70	21.20	177.8	92

BUTT WELDING PIPE FITTING DIMENSIONAL STANDARD
ANSI B-16.9, B-16.28 & MS SS P43



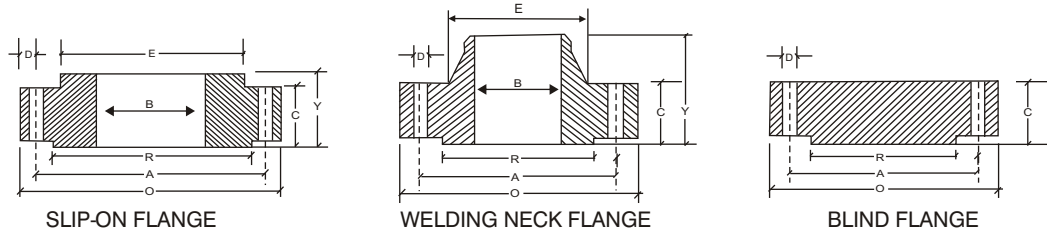
Nominal Pipe Size		Outside Diameter	Center to Face			Back to Face				Center to Center			Length 'L' MS SS P43
Inch.	mm	D	A	B	N	E	F	G	R	M	S	L	L
1/2	15	21.3	38.00	16.0	—	25.0	48.0	—	76.0	—	35.0	50.8	76.2
3/4	20	26.7	29.00	11.0	—	25.0	43.0	—	57.0	—	43.0	50.8	76.2
1	25	33.4	38.00	22.0	25.0	38.0	56.0	41.0	76.0	51.0	51.0	50.8	101.6
1 1/4	32	42.2	48.00	25.0	32.0	38.0	70.0	52.0	95.0	64.0	64.0	50.8	101.6
1 1/2	40	48.3	57.15	29.0	38.0	38.0	83.0	62.0	114.0	76.0	73.0	50.8	101.6
2	50	60.3	76.00	35.0	51.0	38.0	106.0	81.0	152.0	102.0	93.0	63.5	152.4
2 1/2	65	73	95.25	44.0	64.0	38.0	132.0	100.0	191.0	127.0	105.0	63.5	152.4
3	80	88.9	114.30	51.0	76.0	51.0	159.0	121.0	229.0	152.0	127.0	63.5	152.4
3 1/2	90	101.6	133.35	57.0	89.0	64.0	184.0	140.0	267.0	178.0	140.0	76.2	152.4
4	100	114.3	152.0	63.0	102.0	64.0	210.0	159.0	305.0	203.0	157.0	76.2	152.4
5	125	141.3	190.0	79.0	127.0	76.0	262.0	197.0	381.0	254.0	186.0	76.2	203.2
6	150	168.3	229.0	95.0	152.0	89.0	313.0	237.0	457.0	305.0	216.0	88.9	203.2
8	200	219.1	305.0	127.0	203.0	102.0	414.0	313.0	610.0	406.0	270.0	101.6	203.2
10	250	273.1	381.0	159.0	254.0	127.0	515.0	391.0	762.0	508.0	324.0	127	254
12	300	323.9	457.0	190.0	303.0	152.0	619.0	467.0	914.0	610.0	381.0	152.4	254
14	350	355.6	533.0	222.0	356.0	165.0	711.0	533.0	1067.0	711.0	413.0	152.4	305.0
16	400	406.4	610.0	254.0	406.0	178.0	813.0	610.0	1219.0	813.0	470.0	152.4	305.0
18	450	457.2	686.0	286.0	457.0	203.0	914.0	686.0	1372.0	914.0	533.0	152.4	305.0
20	500	508	762.0	318.0	508.0	229.0	1016.0	762.0	1524.0	1016.0	584.0	152.4	305.0
22	550	559	838.0	343.0	559.0	254.0	1118.0	838.0	1676.0	1118.0	614.4	152.4	305.0
24	600	610	914.0	381.0	610.0	267.0	1219.0	914.0	1829.0	1219.0	692.0	152.4	305.0

DIMENSIONAL TOLERANCES

Threaded, Socket-Welding, Slip-on, Lap Joint and Blind		
Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (16mm)
Diameter	When O.D. is Over 24"	$\pm 1/8"$ (3.2mm)
Inside Diameter	Threaded	Within limits on boring guage
	Socket-Welding, Slip-on and Lap joint	10" & Smaller $+ 1/32"$ (0.8mm) - 0" 12" & Larger $+ 1/16"$ (1.6mm) - 0"
Outside Diameter of Hub	12" and Smaller	$+ 1/32"$ (0.8mm) - $1/16"$ (1.6mm)
	14" and Larger	$\pm 1/8"$ (3.2mm)
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)
Diameter of Counterbore	Same as for Inside Diameter	
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)
	Bolt hole Spacing	$\pm 1/32"$ (0.8mm)
	Eccentricity of Both Circle with Respect to Facing	21/2" & Smaller $1/32"$ (0.8mm) max 3" & Larger $1/16"$ (1.6mm) max
	Eccentricity of Both Circle with Respect to Bore	$1/32"$ (0.8mm) max
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) max
Thickness	18" and Smaller	$+ 1/8"$ (3.2mm) - 0"
	20" and Larger	$+ 3/16"$ (4.8mm) - 0"
Length Thru Hub	10" and Smaller	$\pm 1/16"$ (1.6mm)
	12" and Larger	$\pm 1/8"$ (3.2mm)

Welding Neck		
Outside Diameter	When O.D. is 24" or less	$\pm 1/6"$ (16mm)
Diameter	When O.D. is over 24"	$\pm 1/18"$ (3.2mm)
Inside Diameter	10" and Smaller	$+ 1/32"$ (0.8mm)
	12" thru 18"	$+ 1/16"$ (1.6mm)
	20" and Larger	$+ 1/8"$ (3.2mm) - $1/16"$ (1.6mm)
Diameter of Contact Face	1/16" Raised Face	$+ 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$+ 1/64"$ (0.4mm)
Diameter of Hub at Base	When Hub Base is 24" or Smaller	$= 1/16"$ (1.6mm)
	When Hub Base is Over 24"	- $1/8"$ (3.2mm)
Diameter of Hub at Point of Welding	5" and Smaller	$+ 3/32"$ (2.4mm) - $1/32"$ (0.8mm)
	6" and Larger	$+ 5/32"$ (4.0mm) - $1/32"$ (0.8mm)
Drilling	Bolt Circle	$+ 1/16"$ (1.6mm)
	Bolt hole spacing	$+ 1/32"$ (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	21/2" & Smaller $1/32"$ (0.8mm) max 3" & Larger $1/16"$ (1.6mm) max
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) max
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) max
Thickness	18" and Smaller	$+ 1/8"$ (3.2mm)-0"
	20" and Larger	$+ 3/16"$ (4.8mm)-0"
Length Thru Hub	10" and Smaller	$+ 1/16"$ (1.6mm)
	12" and Larger	$+ 1/8"$ (3.2mm)

FORGED FLANGES TO ANSI B 16.5 (ASA 150 / 300 LBS)



150 LBS

Nominal Pipe Size (MM) (INCH.)		Flange Dia O	Dia of Bolt Circle A	Dia of Bolt Holes D	No. of Holes	Thk. of Flange C	Dia of Hub E	Length through Hub			Dia of Bore		Dia of R/F R	Depth of Socket F
								S/O & S/W Y	W/N Y	L/J Y	S/O & S/W B	L/J B		
15	1/2	88.9	60.3	15.9	4	11.1	30.2	15.9	47.6	15.9	22.3	22.9	34.9	9.5
20	3/4	98.4	69.8	15.9	4	12.7	38.1	15.9	52.4	15.9	27.7	28.2	42.9	11.1
25	1	107.9	79.4	15.9	4	14.3	49.2	17.5	55.6	17.5	34.5	35.0	50.8	12.7
32	1 1/4	117.5	88.9	15.9	4	15.9	58.7	20.6	57.1	20.6	43.2	43.7	63.5	14.3
40	1 1/2	127.0	98.4	15.9	4	17.5	65.1	22.2	61.9	22.2	49.5	50.0	73.0	15.9
50	2	152.4	120.6	19.0	4	19.0	77.8	25.4	63.5	25.4	62.0	62.5	92.1	17.5
65	2 1/2	177.8	139.7	19.0	4	22.2	90.5	28.6	69.8	28.6	74.7	75.4	104.8	19.0
80	3	190.5	152.4	19.0	4	23.8	107.9	30.2	69.8	30.2	90.7	91.4	127.0	20.6
100	4	228.6	190.5	19.0	8	23.8	134.9	33.3	76.2	33.3	116.1	116.8	157.2	23.8
125	5	254.0	215.9	22.2	8	23.8	163.5	36.5	88.9	36.5	143.8	144.5	185.7	23.8
150	6	279.4	241.3	22.2	8	25.4	192.1	39.7	88.9	39.7	170.7	171.4	215.9	27.0
200	8	342.9	298.4	22.2	8	28.6	246.1	44.4	101.6	44.4	221.5	222.2	269.9	31.7
250	10	406.4	361.9	25.4	12	30.2	304.8	49.2	101.6	49.2	276.3	277.4	323.8	33.3
300	12	482.6	431.8	25.4	12	31.8	365.1	55.6	114.3	55.6	327.1	328.2	381.0	39.7
350	14	533.4	476.2	28.6	12	34.9	400.0	57.1	127.0	79.4	359.1	360.2	412.7	41.3
400	16	596.9	539.7	28.6	16	36.5	457.2	63.5	127.0	87.3	410.5	411.2	469.9	44.4
450	18	635.0	577.8	31.7	16	39.7	504.8	68.3	139.7	96.8	461.8	462.3	533.4	49.2
500	20	698.5	635.0	31.7	20	42.9	558.8	73.0	144.5	103.2	513.1	514.3	584.2	54.0
600	24	812.8	749.3	34.9	20	47.6	663.6	82.5	152.4	111.1	615.9	615.9	692.1	63.5

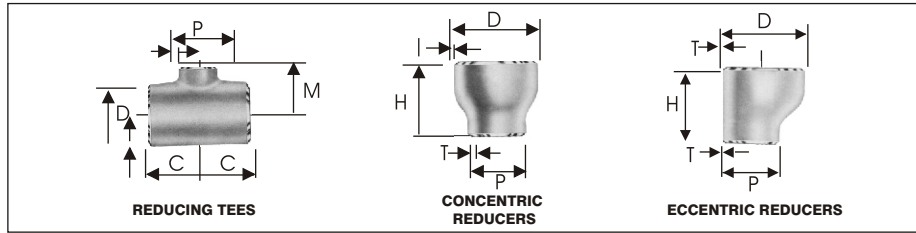
300 LBS

Nominal Pipe Size (MM) (INCH.)		Flange Dia O	Dia of Bolt Circle A	Dia of Bolt Holes D	No. of Holes	Thk. of Flange C	Dia of Hub E	Length through Hub			Dia of Bore		Dia of R/F R	Depth of Socket F
								S/O & S/W Y	W/N Y	L/J Y	S/O & S/W B	L/J B		
15	1/2	95.2	66.7	15.9	4	14.3	38.1	22.2	52.4	22.2	22.3	22.9	34.9	9.5
20	3/4	117.5	82.5	19.0	4	15.9	47.6	25.4	57.1	25.4	27.7	28.2	42.9	11.1
25	1	123.8	88.9	19.0	4	17.5	54.0	27.0	61.9	27.0	34.5	35.0	50.8	12.7
32	1 1/4	133.3	98.4	19.0	4	19.0	63.5	27.0	65.1	27.0	43.2	43.7	63.5	14.3
40	1 1/2	155.6	114.3	22.2	4	20.6	69.8	30.2	68.3	30.2	49.5	50.0	73.0	15.9
50	2	165.1	127.0	19.0	8	22.2	84.1	33.3	69.8	33.3	62.0	62.5	92.1	17.5
65	2 1/2	190.5	149.2	22.2	8	25.4	100.0	38.1	76.2	38.1	74.7	75.4	104.8	19.0
80	3	209.5	168.3	22.2	8	28.6	117.5	42.9	79.4	42.9	90.7	91.4	127.0	20.6
100	4	254.0	200.0	22.2	8	31.8	146.0	47.6	85.7	47.6	116.1	116.8	157.2	23.8
125	5	279.4	234.9	22.2	8	34.9	177.8	50.8	98.4	50.8	143.8	144.5	185.7	-
150	6	317.5	269.9	22.2	12	36.5	206.4	52.4	98.4	52.4	170.7	171.4	215.9	-
200	8	381.0	330.2	25.4	12	41.3	260.3	61.9	111.1	61.9	221.5	222.2	269.9	-
250	10	444.5	387.3	28.6	16	47.6	320.7	66.7	117.5	95.2	276.3	277.4	323.8	-
300	12	520.7	450.8	31.7	16	50.8	374.6	73.0	130.2	101.6	327.1	328.2	381.0	-
350	14	584.2	514.3	31.7	20	54.0	425.4	76.2	142.9	111.1	359.1	360.2	412.7	-
400	16	647.7	571.5	34.9	20	57.2	482.6	82.5	146.0	120.6	410.5	411.2	469.9	-
450	18	711.2	628.5	34.9	24	60.3	533.4	88.9	158.7	130.2	461.8	462.3	533.4	-
500	20	774.7	685.8	34.9	24	63.5	587.4	95.2	161.9	139.7	513.1	514.3	584.2	-
600	24	914.4	812.8	41.3	24	69.8	701.7	106.4	168.3	152.4	615.9	615.9	692.1	-

All Dimensions are in Millimeters ● Flanges except Lap Joint will be furnished with (1.6) Raised Face, which is included in "Thickness(C)" and "Length through Hub(Y)"

● 600, 900, 1500, 2500 class flange are also available on request.

BUTT - WELDING PIPE FITTINGS ANSI B 16.9 AND B 16.28

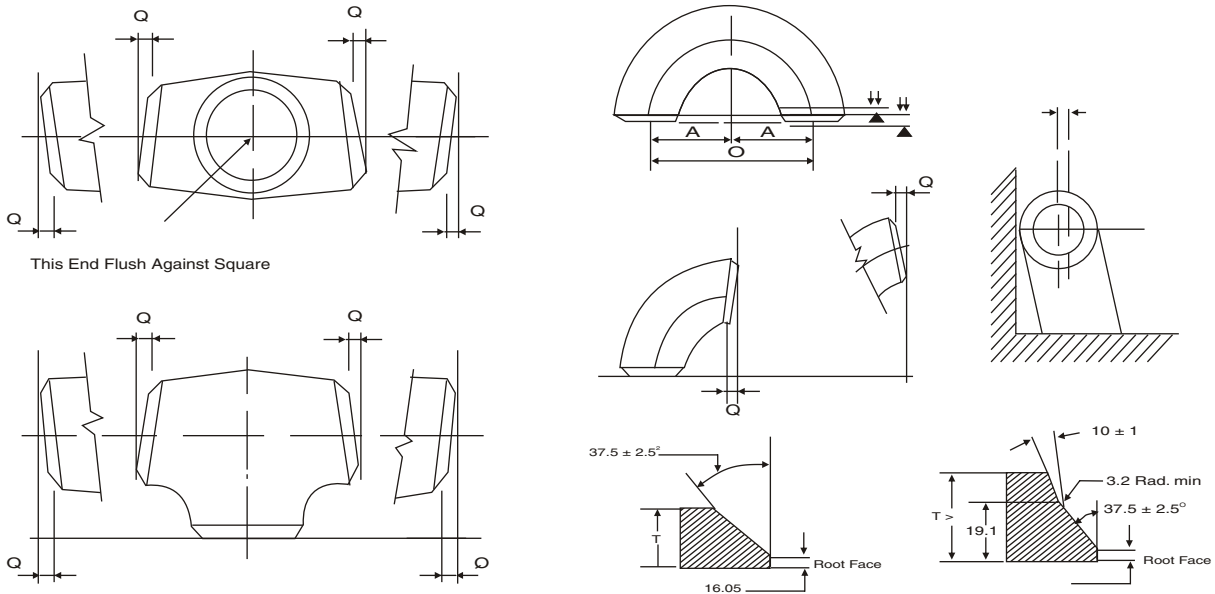


11/4 x 1	32 x 25	42.2	33.4	48	48	51	
11/4 x 3/4	32 x 20	42.2	26.7	48	48	51	
11/4 x 1/2	32 x 15	42.2	21.3	48	48	51	
11/2 x 11/2	40 x 32	48.3	42.2	57	57	64	
11/2 x 1	40 x 25	48.3	33.4	57	57	64	
11/2 x 3/4	40 x 20	48.3	26.7	57	57	64	
11/2 x 1/2	40 x 15	48.3	21.3	57	57	64	
2 x 11/2	50 x 40	60.3	48.2	64	60	76	
2 x 11/4	50 x 32	60.3	42.2	64	57	76	
2 x 1	50 x 25	60.3	33.4	64	51	76	
2 x 3/4	50 x 20	60.3	26.7	64	44	76	
21/2 x 2	65 x 50	73.0	60.3	76	70	89	
21/2 x 11/2	65 x 40	73.0	48.3	76	67	89	
21/2 x 11/4	65 x 32	73.0	42.2	76	64	89	
21/2 x 1	65 x 25	73.0	33.4	76	57	89	
3 x 21/2	80 x 65	88.9	73.0	86	83	89	
3 x 2	80 x 50	88.9	60.3	86	76	89	
3 x 11/2	80 x 40	88.9	48.3	86	73	89	
3 x 11/4	80 x 32	88.9	42.2	86	70	89	
4 x 31/2	100 x 90	114.3	101.6	105	102	102	
4 x 3	100 x 80	114.3	88.9	105	98	102	
4 x 21/2	100 x 65	114.3	73.0	105	95	102	
4 x 2	100 x 50	114.3	60.3	105	89	102	
4 x 11/2	100 x 40	114.3	48.3	105	86	102	
5 x 4	125 x 100	141.3	114.3	124	117	127	
5 x 31/2	125 x 90	141.3	101.6	124	114	127	
5 x 3	125 x 80	141.3	88.9	124	111	127	
5 x 21/2	125 x 65	141.3	73.0	124	108	127	
5 x 2	125 x 50	141.3	60.3	124	105	127	
6 x 5	150 x 125	168.3	141.3	143	137	140	
6 x 4	150 x 100	168.3	114.3	143	130	140	
6 x 31/2	150 x 90	168.3	101.6	143	127	140	
6 x 3	150 x 80	168.3	88.9	143	124	140	
6 x 21/2	150 x 65	168.3	73.0	143	121	140	

Nominal Pipe Size		Outside Diameter		Center to End		Length
Inch.	mm	D	P	C	M	H
8 x 6	200x150	219.1	168.3	178	168	152
8 x 5	200 x 125	219.1	141.3	178	162	152
8 x 4	200 x 100	219.1	114.3	178	156	152
8 x 31/2	200 x 90	219.1	101.6	178	152	152
10 x 8	250 x 200	273.1	219.1	216	203	178
10 x 6	250 x 150	273.1	168.1	216	194	178
10 x 5	250 x 125	273.1	141.3	216	191	178
10 x 4	250 x 100	273.1	114.3	216	184	178
12 x 10	300 x 250	323.9	273.1	254	241	203
12 x 8	300 x 200	323.9	219.1	254	229	203
12 x 6	300 x 150	323.9	168.3	254	219	203
12 x 5	300 x 125	323.9	141.3	254	216	203
14 x 12	350 x 300	355.6	323.9	279	270	330
14 x 10	350 x 250	355.6	273.1	279	257	330
14 x 8	350 x 200	355.6	219.1	279	248	330
14 x 6	350 x 150	355.6	168.3	279	238	330
16 x 14	400 x 350	406.4	355.6	305	305	356
16 x 12	400 x 300	406.4	323.9	305	295	356
16 x 10	400 x 250	406.4	273.1	305	283	356
16 x 8	400 x 200	406.4	219.1	305	273	356
16 x 6	400 x 150	406.4	168.3	305	264	-
18 x 16	450 x 400	457.0	406.4	343	330	381
18 x 14	450 x 350	457.0	355.6	343	330	381
18 x 12	450 x 300	457.0	323.9	343	321	381
18 x 10	450 x 250	457.0	273.1	343	308	381
18 x 8	450 x 200	457.0	219.1	343	298	-
20 x 18	500 x 450	508.0	457.0	381	368	508
20 x 16	500 x 400	508.0	406.4	381	356	508
20 x 14	500 x 350	508.0	355.6	381	356	508
20 x 12	500 x 300	508.0	323.9	381	346	508
20 x 10	500 x 250	508.0	273.1	381	333	-
20 x 8	500 x 200	508.0	219.1	381	324	-
24 x 22	600 x 550	610.0	559.0	432	432	508
24 x 20	600 x 500	610.0	508.0	432	432	508
24 x 18	600 x 450	610.0	457.0	432	419	508
24 x 16	600 x 400	610.0	406.4	432	406	508
24 x 14	600 x 350	610.0	355.6	432	406	-
24 x 12	600 x 300	610.0	323.9	432	397	-
24 x 10	600 x 250	610.0	273.1	432	384	-

DIMENSIONAL TOLERANCES AS PER ANSI B 16.9 / B 16.28 / MSS SP -43 BUTT WELD FITTING

ALL FITTINGS				90°/60°/45° /30° ELBOWS & TEES		REDUCERS		180° RETURNS				CAPS		ANGULARITY TOLERANCE								
Nominal Pipe Size Inch/mm	Outside Diameter at Level		Inside Dia meter	Wall Thickness at End		Centre to End		Overall Length Dimensions		Centre to End		Back to Face Dimensions		Alignment of End Dimensions		Overall length		Nominal Pipe Size	Off Angle Inch/mm		Off Plane	
	D		T	A,B,C,M		H		O		K		U		E		Q		P				
	(1) B16.9	MSS SP43	(2) B16.9	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9		
1/2" TO 2 1/2" 15 TO 65	±1.0		±0.8			FROM 1/2"TO10" 15TO250	FROM 3/4"	FROM 1/2"TO10" 15TO250	FROM 1/2"TO8" 15TO200							±4	±3.17	1/2" TO 4" 15 TO 100	1		1	
3" TO 3 1/2" 80 TO 90		±0.79																5" TO 8" 125 TO 200	2		4	
4" 100	+2 -1		±1.6			±2	±1.59	±2	±1.59	±7	±6.35	±7	±6.35	±1.0	±0.79			10" TO 12" 250 TO 300	3		5	
5" TO 6" 125 TO 150	+3 -1	+1.59														±7	±6.35	14" TO 16" 350 TO 400	3	16" TO 24"	7	
8" 200	±2	-0.79		Not Less Than	Not Less Than													18" TO 24" 450 TO 600	4	400 TO 600 1.6	10	
10" TO 18" 250 TO 450	+4 -3	+2.38 -0.79	±3.2	87.5% Nominal Thk.	87.5% Nominal Thk.	FROM 12"TO30" ±3	±2.38	FROM 12"TO30" ±3	10"TO24" +2.38									26" TO 30" 650 TO 750	5	26" TO 36" 650 TO	10	
20" TO 24" 500 TO 600	+6 -5	3.17 0.79				300 TO 750		300 TO 750	250 TO 600	±10"	±9.53			±2.0"	±1.59			32" TO 42" 800 TO 1050	5	900 2.4	13	
26" TO 30" 650 TO 750	+7 -5		±4.8													±10		44" TO 48" 1100 TO 1200	5	38" TO 48"	20	
32" TO 48" 800 TO 1200	+7 -5					±5												42" TO 48" 1050 TO 1200	±5	950 TO 1200 3.2	±20	

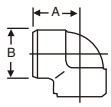


1. Out of round is the sum of absolute values of plus and minus tolerance.
2. The inside diameter at ends and the nominal wall thickness are to be specified by the purchaser.
3. Out of roundness tolerances shall be the difference between the Max. dia measured on any radial cross-section.
4. All dimensions are in millimeters except nominal pipe sizes which are in inches.

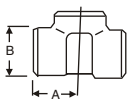
WELDING BEVEL STANDARDS ANSI B 16.25

FORGED SCREWED FITTING TO ANSI B-16.11 3000/6000 LBS. THREADED TO ASA B 2.1

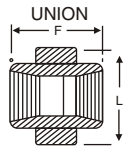
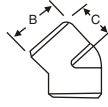
90° ELBOWS



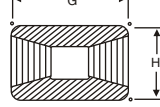
TEE



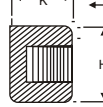
45° ELBOW



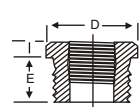
COUPLING



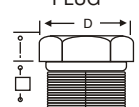
PIPE CAP



BUSHING



HEX HEAD PLUG



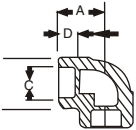
(DIMENSIONS IN MM)

HALF COUPLING = G/2

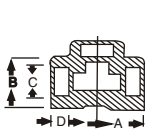
NOM BORE	PIPE O.D.	3000 LBS						COMMON FACTORS						6000 LBS					
		A	B	C	G	H	K	D	E	F	I	J	L	A	B	C	G	H	K
1/8"	10.3	21	22	17	32	16	19	11	10	40	-	6	-	25	25	19	32	22	-
1/4"	13.7	25	25	19	35	19	25	16	11	43	3	6	32	29	33	22	35	25	27
3/8"	17.2	29	33	22	38	22	25	17.5	13	48	4	8	38	33	38	25	38	32	27
1/2"	21.3	33	38	25	48	29	32	22	15	51	5	8	46	38	46	29	48	38	33
3/4"	26.7	38	46	29	51	35	37	27	16	57	6	10	51	44	56	33	51	44	38
1"	33.4	44	56	33	60	44	41	35	19	64	6	10	60	51	62	35	60	57	43
1 1/4"	42.2	51	62	35	67	57	44	44.5	21	70	7	14	72	60	75	43	67	64	46
1 1/2"	48.3	60	75	43	79	64	44	51	21	79	8	16	80	64	84	44	79	76	48
2"	60.3	64	84	45	86	76	48	63.5	22	88	9	17	94	83	102	52	86	92	51
2 1/2"	73.02	83	102	52	92	92	60	76	27	118	10	21	122	95	121	64	92	108	64
3"	89.0	95	121	64	108	108	65	89	29	121	10	65	140	106	146	79	108	127	68
4"	114.5	114	152	79	121	140	68	117.5	32	150	13	25	180	114	152	79	121	159	75

SOCKET WELD FITTING TO ANSI B-16.11

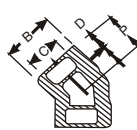
90° ELBOWS



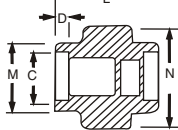
TEE



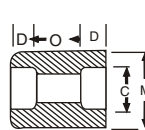
45° ELBOW



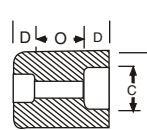
UNION



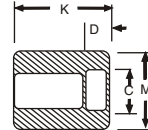
COUPLING



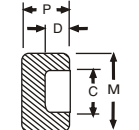
REDUCER



HALF COUPLING



CAP



NOM BORE	PIPE O.D.	3000 LBS.									COMMON FACTORS				6000 LBS.				
		A max.	B max.	K	J	L	M	N	P	Q	C min.	D min.	O min.	O max.	A	B	M	K	N
1/8"	10.3	22	18.5	26	16	40	17.3	32	17.5	10	10.7	10	5	8	22	22	20	25	46
1/4"	13.7	22	22	26	18	43	21.2	32	17.5	10	14.1	10	5	8	27	25	24	25	51
3/8"	17.2	25	25	26	19	48	25.4	36	19	10	17.6	10	3	9	27	28	28	26	60
1/2"	21.3	27	32	30	21	51	31	43	22	10	21.7	10	6	13	31	34	34	31	72
3/4"	26.7	34	38	36	24	57	37	50	25	13	27	13	6	13	37	42	41	35	80
1"	33.4	37	46	40	25	64	45.2	60	27	13	33.8	13	9	17	42	50	50	40	94
1 1/4"	42.2	42	56	40	29	70	55	70	30	13	42.6	13	9	17	47	59	58	41	100
1 1/2"	48.3	47	62	40	30	79	61.4	78	32	13	48.7	13	9	17	53	67	66	43	122
2"	60.3	56	75	52	37	89	75	95	38	13	61.2	16	15	23	59	84	83	55	
2 1/2"	73.02	60	92	52	48	114	91.3	125	38	16	73.8	16	14	24		102		56	
3"	89.00	76	110	52	51	127	108.8	140	44	16	89.8	16	14	24		121		58	
4"	114.50	88	137	58		150	136.9		48	19	115.5	19	14	24		152		64	

DIMENSIONS AND OTHERS SPECIFICATIONS AS PER CUSTOMERS REQUIREMENTS ARE AVAILABLE ON REQUEST