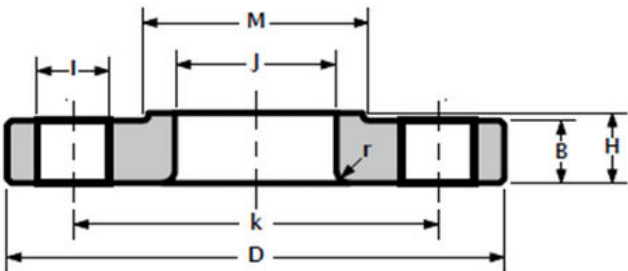


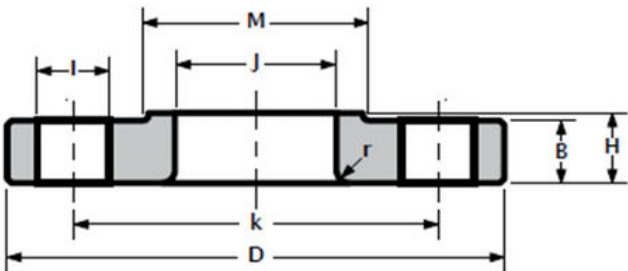
> Weights are approximate

PIPE		FLANGE DATA			HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	89	11.2	16	22.9	30	3	4	15.88	60.3	0.51
¾"	99	12.7	16	28.2	38	3	4	15.88	69.9	0.64
1"	108	14.3	17	34.9	49	3	4	15.88	79.4	0.93
1 ¼"	117	15.9	21	43.7	59	5	4	15.88	88.9	1.16
1 ½"	127	17.5	22	50.0	65	6	4	15.88	98.4	1.51
2"	152	19.1	25	62.5	78	8	4	19.05	120.7	2.38
2 ½"	178	22.3	29	75.4	90	8	4	19.05	139.7	3.60
3"	190	23.9	30	91.4	108	10	4	19.05	152.4	4.04
3 ½"	216	23.9	32	104.1	122	10	8	19.05	177.8	4.99
4"	229	23.9	33	116.8	135	11	8	19.05	190.5	5.96
5"	254	23.9	36	144.4	164	11	8	22.23	215.9	6.44
6"	279	25.4	40	171.4	192	13	8	22.23	241.3	7.59
8"	343	28.6	44	222.2	246	13	8	22.23	298.5	12.66
10"	406	30.2	49	277.4	305	13	12	25.40	362.0	16.78
12"	483	31.8	56	328.2	365	13	12	25.40	431.8	28.30
14"	533	35.0	79	360.2	400	13	12	28.58	476.3	41.50
16"	597	36.6	87	411.2	457	13	16	28.58	539.8	52.98
18"	635	39.7	97	462.3	505	13	16	31.75	577.9	59.00
20"	698	42.9	103	514.4	559	13	20	31.75	635.0	72.12
24"	813	47.7	111	616.0	663	13	20	34.93	749.3	99.02



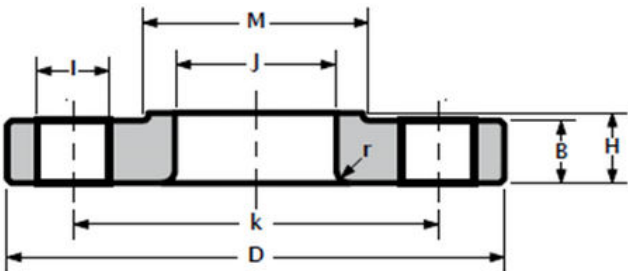
> Weights are approximate

PIPE		FLANGE DATA			HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	95	14.3	22	22.9	38	3	4	15.88	66.7	0.61
¾"	117	15.9	25	28.2	48	3	4	19.05	82.6	1.15
1"	124	17.5	27	34.9	54	3	4	19.05	88.9	1.38
1 ¼"	133	19.1	27	43.7	64	5	4	19.05	98.4	1.66
1 ½"	155	20.7	30	50.0	70	6	4	22.23	114.3	2.52
2"	165	22.3	33	62.5	84	8	8	19.05	127.0	2.79
2 ½"	190	25.4	38	75.4	100	8	8	22.23	149.2	4.22
3"	210	28.6	43	91.4	117	10	8	22.23	168.3	5.78
3 ½"	229	30.2	44	104.1	133	10	8	22.23	184.2	7.72
4"	254	31.8	48	116.8	146	11	8	22.23	200.0	10.07
5"	279	35.0	51	144.4	178	11	8	22.23	235.0	12.52
6"	318	36.6	52	171.4	206	13	12	22.23	269.9	15.95
8"	381	41.3	62	222.2	260	13	12	25.40	330.2	24.37
10"	444	47.7	95	277.4	321	13	16	28.58	387.4	39.92
12"	521	50.8	102	328.2	375	13	16	31.75	450.8	58.70
14"	584	54.0	111	360.2	425	13	20	31.75	514.4	83.46
16"	648	57.2	121	411.2	483	13	20	34.93	571.5	106.14
18"	711	60.4	130	462.3	533	13	24	34.93	628.6	133.95
20"	775	63.5	140	514.4	587	13	24	34.93	685.8	157.65
24"	914	69.9	152	616.0	702	13	24	41.28	812.8	240.40



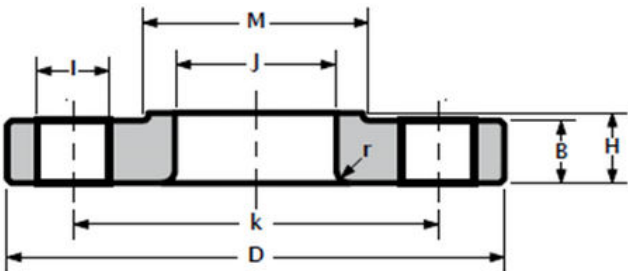
> Weights are approximate
> 1/2" - 3 1/2" = 600LBS

PIPE		FLANGE DATA			HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	95	14.3	22	22.9	38	3	4	15.88	66.7	0.80
¾"	117	15.9	25	28.2	48	3	4	19.05	82.6	1.36
1"	124	17.5	27	34.9	54	3	4	19.05	88.9	1.59
1 ¼"	133	20.7	29	43.7	64	5	4	19.05	98.4	2.04
1 ½"	155	22.3	32	50.0	70	6	4	22.23	114.3	2.96
2"	165	25.4	37	62.5	84	8	8	19.05	127.0	3.63
2 ½"	190	28.6	41	75.4	100	8	8	22.23	149.2	4.99
3"	210	31.8	46	91.4	117	10	8	22.23	168.3	6.35
3 ½"	229	35.0	49	104.1	133	10	8	25.40	184.2	9.08
4"	254	35.0	51	116.8	146	11	8	25.40	200.0	9.98
5"	279	38.1	54	144.5	178	11	8	25.40	235.0	13.15
6"	318	41.3	57	171.4	206	13	12	25.40	269.9	16.78
8"	381	47.7	68	222.2	260	13	12	28.58	330.0	26.16
10"	444	54.0	102	277.4	321	13	16	31.75	387.4	43.09
12"	521	57.2	108	328.2	375	13	16	34.93	450.8	68.95
14"	584	60.4	117	360.2	425	13	20	34.93	514.4	95.25
16"	648	63.5	127	411.2	483	13	20	38.10	571.5	127.00
18"	711	66.7	137	462.3	533	13	24	38.10	628.6	156.47
20"	775	69.9	146	514.4	587	13	24	41.28	685.8	190.51
24"	914	76.2	159	616.0	702	13	24	47.63	812.8	278.96



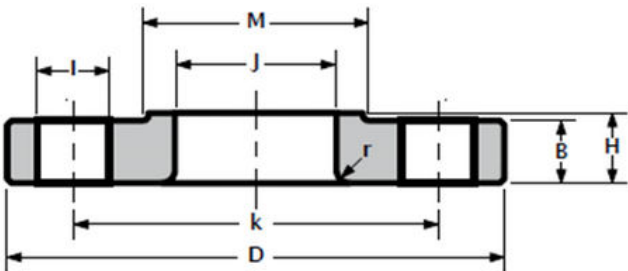
> Weights are approximate

PIPE		FLANGE DATA			HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	95	14.3	22	22.9	38	3	4	15.88	66.7	0.80
¾"	117	15.9	25	28.2	48	3	4	19.05	82.6	1.36
1"	124	17.5	27	34.9	54	3	4	19.05	88.9	1.59
1 ¼"	133	20.7	29	43.7	64	5	4	19.05	98.4	2.04
1 ½"	155	22.3	32	50.0	70	6	4	22.23	114.3	2.96
2"	165	25.4	37	62.5	84	8	8	19.05	127.0	3.63
2 ½"	190	28.6	41	75.4	100	8	8	22.23	149.2	4.99
3"	210	31.8	46	91.4	117	10	8	22.23	168.3	6.35
3 ½"	229	35.0	49	104.1	133	10	8	25.40	184.2	9.08
4"	273	38.1	54	116.8	152	11	8	25.40	215.9	14.06
5"	330	44.5	60	144.4	189	11	8	28.58	266.7	27.50
6"	356	47.7	67	171.4	222	13	12	28.58	292.1	35.38
8"	419	55.6	76	222.2	273	13	12	31.75	349.2	50.80
10"	508	63.5	111	277.4	343	13	16	34.93	431.8	74.00
12"	559	66.7	117	328.2	400	13	20	34.93	489.0	108.56
14"	603	69.9	127	360.2	432	13	20	38.10	527.0	111.00
16"	686	76.2	140	411.2	495	13	20	41.28	603.2	165.71
18"	743	82.6	152	462.3	546	13	20	44.45	654.0	294.00
20"	813	88.9	165	514.4	610	13	24	44.45	723.9	258.78
24"	940	101.6	184	616.0	718	13	24	50.80	838.2	362.00



> Weights are approximate
> 1/2" - 2 1/2" = 1500LBS

PIPE		FLANGE DATA			HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	121	22.3	32	22.9	38	3	4	22.23	82.6	1.80
¾"	130	25.4	35	28.2	44	3	4	22.23	88.9	2.27
1"	149	28.6	41	34.9	52	3	4	25.40	101.6	3.40
1 ¼"	159	28.6	41	43.7	64	5	4	25.40	111.1	4.09
1 ½"	178	31.8	44	50.0	70	6	4	28.58	123.8	5.40
2"	216	38.1	57	62.5	105	8	8	25.40	165.1	9.53
2 ½"	244	41.3	64	75.4	124	8	8	28.58	190.5	13.15
3"	241	38.1	54	91.4	127	10	8	25.40	190.5	11.34
4"	292	44.5	70	116.8	159	11	8	31.75	235.0	22.60
5"	349	50.8	79	144.4	190	11	8	34.93	279.4	36.74
6"	381	55.6	86	171.4	235	13	12	31.75	317.5	47.50
8"	470	63.5	114	222.2	298	13	12	38.10	393.7	86.00
10"	546	69.9	127	277.4	368	13	16	38.10	469.9	125.64
12"	610	79.4	143	328.2	419	13	20	38.10	533.4	167.00
14"	641	85.8	156	360.2	451	13	20	41.28	558.8	180.07
16"	705	88.9	165	411.2	508	13	20	44.45	616.0	211.11
18"	787	101.6	190	462.3	565	13	20	50.80	685.8	295.10
20"	857	108.0	210	514.4	622	13	20	53.98	749.3	367.74
24"	1041	139.7	267	616.0	749	13	20	66.68	901.7	700.00



> Weights are approximate

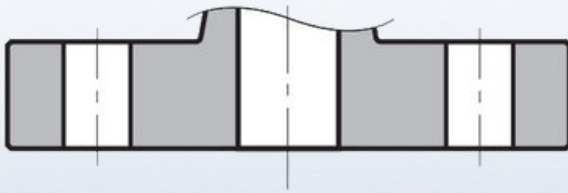
PIPE	FLANGE DATA				HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	121	22.3	32	22.9	38	3	4	22.23	82.6	1.80
¾"	130	25.4	35	28.2	44	3	4	22.23	88.9	2.27
1"	149	28.6	41	34.9	52	3	4	25.40	101.6	3.40
1 ¼"	159	28.6	41	43.7	64	5	4	25.40	111.1	4.09
1 ½"	178	31.8	44	50.0	70	6	4	28.58	123.8	5.40
2"	216	38.1	57	62.5	105	8	8	25.40	165.1	9.53
2 ½"	244	41.3	64	75.4	124	8	8	28.58	190.5	13.15
3"	267	47.7	73	91.4	133	10	8	31.75	203.2	17.24
4"	311	54.0	90	116.8	162	11	8	34.93	241.3	29.00
5"	375	73.1	105	144.4	197	11	8	41.28	292.1	54.00
6"	394	82.6	119	171.4	229	13	12	38.10	317.5	62.00
8"	483	92.1	143	222.2	292	13	12	44.45	393.7	129.73
10"	584	108.0	178	277.4	368	13	12	50.80	482.6	220.19
12"	673	123.9	219	328.2	451	13	16	53.98	571.5	286.02
14"	749	133.4	241	360.2	495	13	16	60.33	635.0	404.06
16"	826	146.1	260	411.2	552	13	16	66.68	704.8	522.10
18"	914	162.0	276	462.3	597	13	16	73.03	774.7	669.65
20"	984	177.8	292	514.4	641	13	16	79.38	831.8	805.85
24"	1168	203.2	330	616.0	762	13	16	92.08	990.6	1285.55

> Weights are approximate

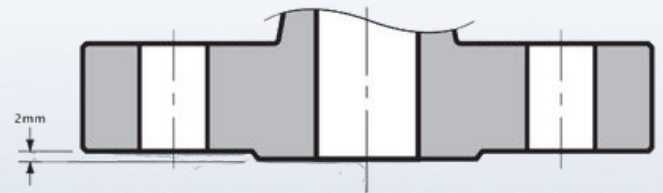
PIPE	FLANGE DATA				HUB DATA		DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness min.	Length through hub	Inside diameter	Diameter of hub	Corner radius	Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
NPS	D	B	H	J	M	R		I	k	
½"	133	30.2	40	22.9	43	3	4	22.23	88.9	3.00
¾"	140	31.8	43	28.2	51	3	4	22.23	95.2	3.63
1"	159	35.0	48	34.9	57	3	4	25.40	108.0	4.99
1 ¼"	184	38.1	52	43.7	73	5	4	28.58	130.2	7.26
1 ½"	203	44.5	60	50.0	79	6	4	31.75	146.0	9.99
2"	235	50.9	70	62.5	95	8	8	28.58	171.4	16.80
2 ½"	267	57.2	79	75.4	114	8	8	31.75	196.8	24.06
3"	305	66.7	92	91.4	133	10	8	34.93	228.6	36.32
4"	356	76.2	108	116.8	165	11	8	41.28	273.0	54.48
5"	419	92.1	130	144.4	203	11	8	47.63	323.8	92.53
6"	483	108.0	152	171.4	235	13	8	53.98	368.3	143.01
8"	552	127.0	178	222.2	305	13	12	53.98	438.2	213.38
10"	673	165.1	229	277.4	375	13	12	66.68	539.8	408.60
12"	762	184.2	254	328.2	441	13	12	73.03	619.1	572.95

FLANGE FACING TYPES

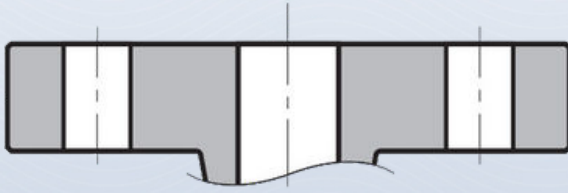
ASTM A182 ASME B16.5



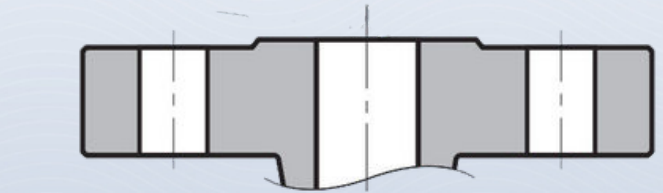
FLAT FACE



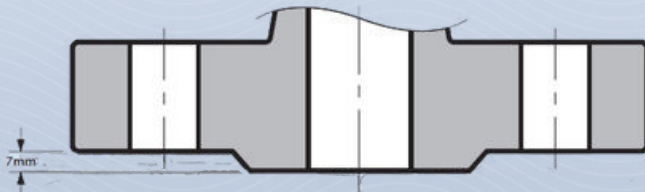
RAISED FACE (150 - 300LBS)



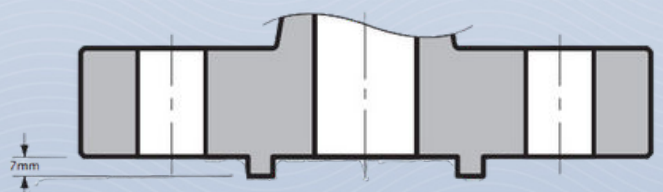
RAISED FACE (400LBS AND UP)



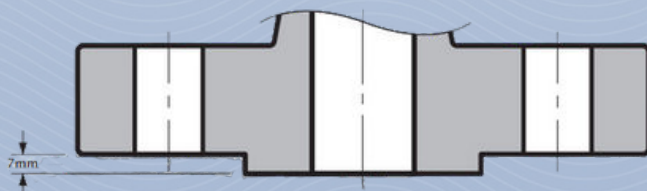
TONGUE AND GROOVE FACE



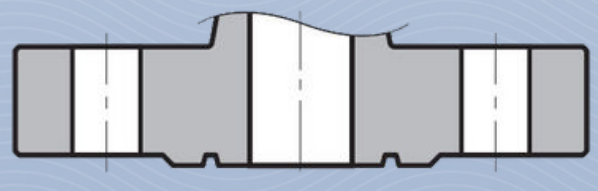
MALE AND FEMALE FACE



RING TYPE JOINT FACE



MALE AND FEMALE FACE



RING TYPE JOINT FACE