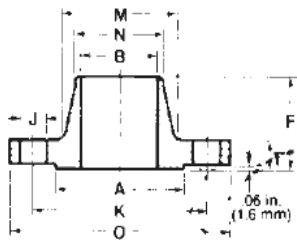
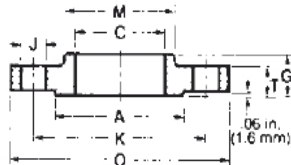
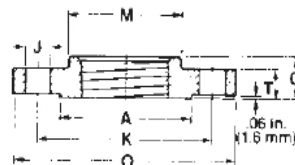
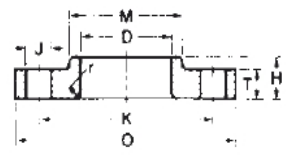


WELDING NECK

SLIP-ON

THREADED

LAP JOINT


NPS	DN	FLANGE OUTSIDE DIAMETER O	FLANGE ¹ THICKNESS MIN. T	RAISED FACE DIA. A	BORE			LENGTH TRU HUB ²		
					WELDING NECK & SOCKET WELDING B ³	SLIP-ON & SOCKET WELD SOCKET MIN. C	LAP JOINT MIN. D	WELDING NECK F	SLIP-ON, THREADED & SOCK. WELD G	LAP JOINT H
1/2	15	3.50	.44	1.38	.62	.88	.90	1.88	.62	.62
3/4	20	3.88	.50	1.69	.82	1.09	1.11	2.06	.62	.62
1	25	4.25	.56	2.00	1.05	1.36	1.38	2.19	.69	.69
1 1/4	32	4.62	.62	2.50	1.38	1.70	1.72	2.25	.81	.81
1 1/2	40	5.00	.69	2.88	1.61	1.95	1.97	2.44	.88	.88
2	50	6.00	.75	3.62	2.07	2.44	2.46	2.50	1.00	1.00
2 1/2	65	7.00	.88	4.12	2.47	2.94	2.97	2.75	1.12	1.12
3	80	7.50	.94	5.00	3.07	3.57	3.60	2.75	1.19	1.19
3 1/2	90	8.50	.94	5.50	3.55	4.07	4.10	2.81	1.25	1.25
4	100	9.00	.94	61.9	4.03	4.57	4.60	3.00	1.31	1.31
5	125	10.00	.94	7.31	5.05	5.66	5.69	3.50	1.44	1.44
6	150	11.00	1.00	8.50	6.07	6.72	6.75	3.50	1.56	1.56
8	200	13.50	1.12	10.62	7.98	8.72	8.75	4.00	1.75	1.75
10	250	16.00	1.19	12.75	10.02	10.88	10.92	4.00	1.94	1.94
12	300	19.00	1.25	15.00	12.00	12.88	12.92	4.50	2.19	2.19
14	350	21.00	1.38	16.25	To be specified by purchaser	14.14	14.18	5.00	2.25	3.12
16	400	23.50	1.44	18.50		359.2	360.2	127.0	57	79
18	450	25.00	1.56	21.00		16.16	16.19	5.00	2.50	3.44
20	500	27.50	1.69	23.00		410.4	411.2	127.0	64	87
24	600	32.00	1.88	27.25		18.18	18.20	5.50	2.69	3.81
						461.8	462.3	139.7	68	97
						20.20	20.25	5.69	2.88	4.06
						513.1	514.3	144.5	73	103
						24.25	24.25	6.00	3.25	4.38
						615.9	615.9	152.4	83	111

¹ Socket Welding Flanges, sizes NPS 3 1/2 (DN 90) and larger are not covered by ASME/ANSI B16.5.

² Includes .06" (1.6 mm) raised face.

³ These dimensions correspond to inside diameters of pipe as given in ANSI/ASME B36.10M for Standard Wall Pipe. Thickness of Standard Wall is the same as Schedule 40 in size NPS 10 (DN 250) and smaller.

INCHES
MILLIMETRES

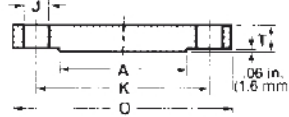
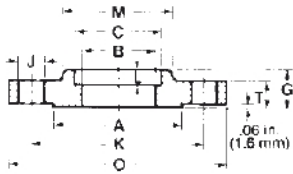
SOCKET WELDING



BLIND



CLASS 150 (PN20) FLANGES FORGED STEEL ASTM A-105 ¹ASME/ANSI B16.5



NPS	DN	DRILLING			DEPTH ¹ OF SOCKET	DIAMETER OF HUB		LAP JOINT FILLET RADIUS	APPROXIMATE WEIGHT			
		NO. OF HOLES	DIA. OF HOLES	DIA. OF BOLT CIRCLE		AT BASE	AT CHAMFER		WELDING NECK	SLIP-ON, THREADED & SOCKET WELDING ¹	BLIND	LAP JOINT
1/2		4	.62	2.38	.38	1.19	.84	.12	2	1	1	1
	15	4	16	60.3	10	30.2	21.4	3	0.9	.05	0.5	0.5
3/4		4	.62	2.75	.44	1.50	1.05	.12	2	2	2	2
	20	4	16	69.8	11	38.1	26.6	3	0.9	0.9	0.9	0.9
1		4	.62	3.12	.50	1.94	1.32	.12	3	2	2	2
	25	4	16	79.4	13	49.2	33.5	3	1.4	0.9	0.9	0.9
1 1/4		4	.62	3.50	.56	2.31	1.66	.19	3	3	3	3
	32	4	16	88.9	14	58.7	42.1	5	1.4	1.4	1.4	1.4
1 1/2		4	.62	3.88	.62	2.56	1.90	.25	4	3	4	3
	40	4	16	98.4	16	65.1	48.3	6	1.8	1.4	1.8	1.4
2		4	.75	4.75	.69	3.06	2.38	.31	6	5	5	5
	50	4	20	120.6	17	77.6	60.4	8	2.7	2.3	2.3	2.3
2 1/2		4	.75	5.50	.75	3.56	2.88	.31	8	7	7	7
	65	4	20	139.7	19	90.5	73.0	8	3.6	3.2	3.2	3.2
3		4	.75	6.00	.81	4.25	3.50	.38	10	8	9	8
	80	4	20	152.4	21	107.9	88.9	10	4.5	3.6	4.1	3.6
3 1/2		8	.75	7.00	-	4.81	4.00	.38	12	11	13	11
	90	8	20	177.8	-	122.2	101.6	10	5.4	5.0	5.9	5.0
4		8	.75	7.50	-	5.31	4.50	.44	15	13	17	13
	100	8	20	190.5	-	134.9	114.3	11	6.8	5.9	7.7	5.9
5		8	.88	8.50	-	6.44	5.56	.44	19	15	20	15
	125	8	23	215.9	-	163.5	141.3	11	8.6	6.8	9.1	6.8
6		8	.88	9.50	-	7.56	6.63	.50	24	19	26	19
	150	8	23	241.3	-	192.1	168.3	13	10.9	8.6	11.8	8.6
8		8	.88	11.75	-	9.69	8.63	.50	39	30	45	30
	200	8	23	298.4	-	246.1	219.1	13	17.7	13.6	20.4	13.6
10		12	1.00	14.25	-	12.00	10.75	.50	52	43	70	43
	250	12	26	361.9	-	304.8	273.0	13	23.6	19.5	31.8	19.5
12		12	1.00	17.00	-	14.38	12.75	.50	80	64	110	64
	300	12	26	431.8	-	365.1	323.8	13	36.3	29.0	49.9	29.0
14		12	1.12	18.75	-	15.75	14.00	.50	110	90	140	105
	350	12	29	476.2	-	400.0	355.6	13	50.0	41.0	63.5	47.6
16		16	1.12	21.25	-	18.00	16.00	.50	140	98	180	140
	400	16	29	539.7	-	457.2	406.4	13	64.0	44.5	81.6	63.5
18		16	1.25	22.75	-	19.88	18.00	.50	150	130	220	160
	450	16	32	577.8	-	504.8	457.2	13	68.0	59.0	99.8	72.6
20		20	1.25	25.00	-	22.00	20.00	.50	180	165	285	195
	500	20	32	635.0	-	558.8	508.0	13	81.6	75.0	129.0	88.5
24		20	1.38	29.50	-	26.12	24.00	.50	260	220	430	275
	600	20	35	749.3	-	663.6	609.6	13	118	99.8	195.0	125.0

For bevel of Welding Neck, see page 48.

Gasket dimensions - page 20.

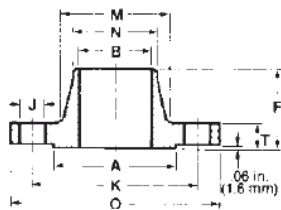
Bolting dimensions - page 22.

Flange facing dimensions - page 20.

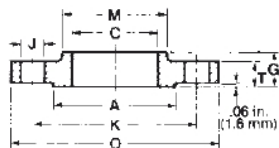
POUNDS

KILOGRAMS

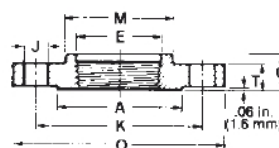
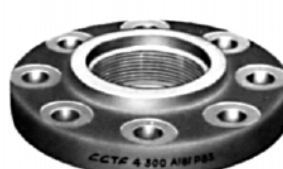
WELDING NECK



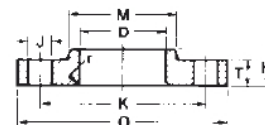
SLIP-ON



THREADED



LAP JOINT



NPS	DN	FLANGE ² OUTSIDE DIAMETER O	FLANGE ² THICKNESS MIN. T	RAISED FACE DIA. A	BORE				LENGTH THRU HUB ³		
					WELDING NECK & SOCKET WELDING B ¹	SLIP-ON & SOCKET WELD SOCKET MIN. C	LAP JOINT MIN. D	THREADED COUNTER- BORE MIN. E	WELDING NECK F	SLIP-ON, THREADED & SOCK. WELD G	LAP JOINT H
1/2		3.75	.56	1.38	.62	.88	.90	.93	2.06	.88	.88
	15	95	14.5	34.9	15.8	22.2	22.9	23.5	52.4	22	22
3/4		4.62	.62	1.69	.82	1.09	1.11	1.14	2.25	1.00	1.00
	20	117	16.0	42.9	20.8	27.8	28.2	29.0	57.1	25	25
1		4.88	.69	2.00	1.05	1.36	1.38	1.41	2.44	1.06	1.06
	25	124	17.5	50.8	26.6	34.5	34.9	36.0	61.9	27	27
1 1/4		5.25	.75	2.50	1.38	1.70	1.72	1.75	2.56	1.06	1.06
	32	133	19.5	63.5	35.1	43.3	43.7	44.5	65.1	27	27
1 1/2		6.12	.81	2.88	1.61	1.95	1.97	1.99	2.69	1.19	1.19
	40	156	21.0	73.0	40.9	49.6	50.0	50.5	68.3	30	30
2		6.50	.88	3.62	2.07	2.44	2.46	2.50	2.75	1.31	1.31
	50	165	22.5	92.1	52.6	61.9	62.5	63.5	69.8	33	33
2 1/2		7.50	1.00	4.12	2.47	2.94	2.97	3.00	3.00	1.50	1.50
	65	191	25.5	104.8	62.7	74.6	75.4	76	76.2	38	38
3		8.25	1.12	5.00	3.07	3.57	3.60	3.63	3.12	1.69	1.69
	80	210	29.0	127.0	77.9	90.7	91.4	92	79.4	43	43
3 1/2		9.0	1.19	5.50	3.55	4.07	4.10	4.13	3.19	1.75	1.75
	90	229	30.5	139.7	90.1	103.4	104.1	105	81.0	44	44
4		10.0	1.25	6.19	4.03	4.57	4.60	4.63	3.38	1.88	1.88
	100	254	32.0	157.2	102.3	116.1	116.8	118	85.7	48	48
5		11.0	1.38	7.31	5.05	5.66	5.69	5.69	3.88	2.00	2.00
	125	279	35.0	185.7	128.2	143.7	144.5	145	98.4	51	51
6		12.5	1.44	8.50	6.07	6.72	6.75	6.75	3.88	2.06	2.06
	150	318	37.0	215.9	154.1	170.7	171.4	171	98.4	52	52
8		15.0	1.62	10.62	7.98	8.72	8.75	8.75	4.38	2.44	2.44
	200	381	41.5	269.9	202.7	221.5	222.2	222	111.1	62	62
10		17.5	1.88	12.75	10.02	10.88	10.92	10.88	4.62	2.62	3.75
	250	445	48.0	323.8	254.5	276.2	277.4	276	117.5	67	95
12		20.5	2.00	15.00	12.00	12.88	12.92	12.94	5.12	2.88	4.00
	300	520	51.0	381.0	304.8	327.0	328.2	329	130.2	73	102
14		23.0	2.12	16.25	To be specified by purchaser	14.14	14.18	14.19	5.62	3.00	4.38
	350	585	54.0	412.8		359.2	360.2	360	142.9	76	111
16		25.5	2.25	18.50		16.16	16.19	16.19	5.75	3.25	4.75
	400	650	57.5	469.9		410.4	411.2	411	146.0	83	121
18		28.0	2.38	21.00		18.18	18.20	18.19	6.25	3.50	5.12
	450	710	60.5	533.4		461.8	462.3	462	158.7	89	130
20		30.5	2.50	23.00		20.20	20.25	20.19	6.38	3.75	5.50
	500	775	63.5	584.2		513.1	514.3	513	161.9	95	140
24		36.0	2.75	27.25		24.25	24.25	24.19	6.62	4.19	6.00
	600	915	70.0	692.2		615.9	615.9	614	168.3	106	152

¹ Socket Welding Flanges, sizes NPS 3 1/2 (DN 90) and larger are not covered by ASME/ANSI B16.5.

² Includes .06" (1.6 mm) raised face.

³ These dimensions correspond to inside diameters of pipe as given in ANSI/ASME B36.10M for Standard Wall Pipe. Thickness of Standard Wall is the same as Schedule 40 in size NPS 10 (DN 250) and smaller.

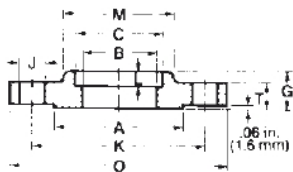
SOCKET WELDING



BLIND



CLASS 300 (PN50) FLANGES FORGED STEEL ASTM A-105 ¹ASME/ANSI B16.5



NPS	DN	DRILLING			DEPTH ¹ OF SOCKET	DIAMETER OF HUB		LAP JOINT FILLET RADIUS	APPROXIMATE WEIGHT			
		NO. OF HOLES	DIA. OF HOLES	DIA. OF BOLT CIRCLE		AT BASE	AT CHAMFER		WELDING NECK	SLIP-ON, THREADED & SOCKET WELDING ¹	BLIND	LAP JOINT
1/2		4	.62	2.62	.38	1.50	.84	.12	2	2	2	2
	15	4	.16	66.7	10	38.1	21.4	3	0.9	0.9	0.9	0.9
3/4		4	.75	3.25	.44	1.88	1.05	.12	3	3	3	3
	20	4	.20	82.5	11	47.6	26.6	3	1.4	1.4	1.4	1.4
1		4	.75	3.50	.50	2.12	1.32	.12	4	3	3	3
	25	4	.20	88.9	13	53.8	33.5	3	1.8	1.4	1.4	1.4
1 1/4		4	.75	3.88	.56	2.50	1.66	.19	5	4	4	4
	32	4	.20	98.4	14	63.5	42.1	5	2.3	1.8	1.8	1.8
1 1/2		4	.88	4.50	.62	2.75	1.90	.25	7	6	6	6
	40	4	.23	114.3	16	69.9	48.3	6	3.2	2.7	2.7	2.7
2		8	.75	5.00	.69	3.31	2.38	.31	9	7	8	7
	50	8	.20	127.0	17	84.1	60.3	8	4.1	3.2	3.6	3.2
2 1/2		8	.88	5.88	.75	3.94	2.88	.31	12	10	12	10
	65	8	.23	149.2	19	100.0	73.0	8	5.4	4.5	5.4	4.5
3		8	.88	6.62	.81	4.62	3.50	.38	15	13	16	13
	80	8	.23	168.3	21	117.5	88.9	10	6.8	5.9	7.3	5.9
3 1/2		8	.88	7.25	-	5.25	4.00	.38	18	17	21	17
	90	8	.23	184.1	-	133.3	101.6	10	8.2	7.7	9.5	7.7
4		8	.88	7.88	-	5.75	4.50	.44	25	22	27	22
	100	8	.23	200.0	-	146.0	114.3	11	11.3	10.0	12.2	10.0
5		8	.88	9.25	-	7.00	5.56	.44	32	28	35	28
	125	8	.23	234.9	-	177.8	141.3	11	14.5	12.7	15.9	12.7
6		12	.88	10.62	-	8.12	6.63	.50	42	39	50	39
	150	12	.23	269.9	-	206.4	168.3	13	19.0	17.7	22.7	17.7
8		12	1.00	13.0	-	10.25	8.63	.50	67	58	81	58
	200	12	.26	330.2	-	260.3	219.1	13	30.4	26.3	36.7	26.3
10		16	1.12	15.25	-	12.62	10.75	.50	91	81	125	91
	250	16	.29	387.3	-	320.7	273.0	13	41.3	36.7	56.7	41.3
12		16	1.25	17.75	-	14.75	12.75	.50	140	115	185	140
	300	16	.32	450.8	-	374.6	323.8	13	63.5	52.2	83.9	63.5
14		20	1.25	20.25	-	16.75	14.00	.50	180	165	250	190
	350	20	.32	514.3	-	425.5	355.6	13	81.6	74.8	113	86.2
16		20	1.38	22.50	-	19.00	16.00	.50	250	190	295	250
	400	20	.35	571.5	-	482.6	406.4	13	113	86.2	134	113
18		24	1.38	24.75	-	21.00	18.00	.50	320	250	395	295
	450	24	.35	628.6	-	533.4	457.2	13	145	113	179	134
20		24	1.38	27.00	-	23.12	20.00	.50	400	315	505	370
	500	24	.35	685.80	-	587.4	508.0	13	181	143	229	168
24		24	1.62	32.00	-	27.62	24.00	.50	580	475	790	550
	600	24	.42	812.80	-	701.7	609.6	13	263	215	358	249

¹ Socket Welding Flanges, sizes NPS 3 1/2 (DN 90) and larger are not covered by ASME/ANSI B16.5.

For bevel of Welding Neck, see page 48.

Gasket dimensions - page 20.

Bolting dimensions - page 22.

Flange facing dimensions - page 20.

POUNDS
KILOGRAMS