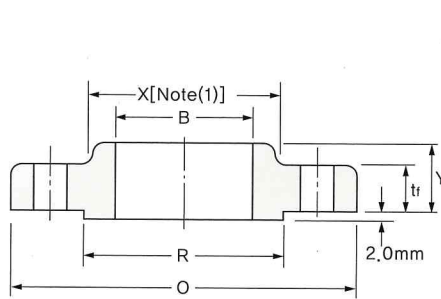
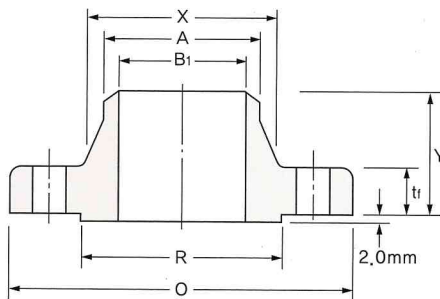


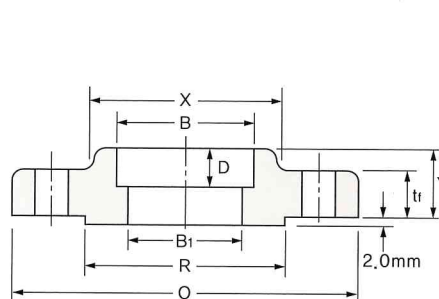
CLASS 150 FLANGES



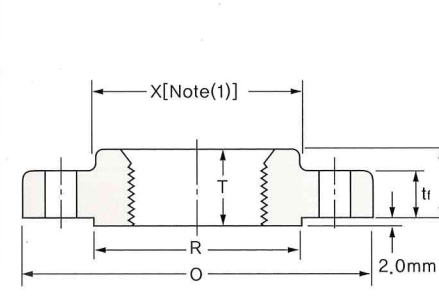
SLIP-ON WELDING



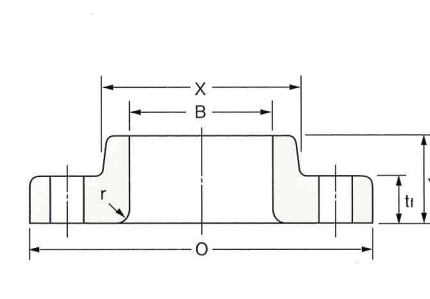
WELDING NECK



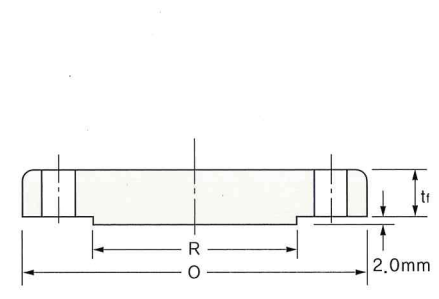
SOCKET WELDING



THREADED



LAPPED



BLIND

ASME B16.5 FORGED FLANGES

Nominal Pipe Size NPS	Outside Diameter of Flange	Thickness of Flange Min.	Thickness Lap Joint Min.	Outside Diameter of Raised Face	Diameter of Hub	Hub Diameter Begin- ning of Chamfer Welding Neck	Length thru hub			Thread Length Threaded Min.	Bore			Corner Radius of bore of Lapped Flange and pipe	Depth of Socket
							Thread- ed/ Slip-on/ Socket Welding	Lapped	Welding Neck		Slip-on/ Socket Welding, Min.	Lapped Min.	Welding Neck/ Socket Welding		
O	t _r Notes(2)-(4)	t _r	R	X	A Note(5)	Y			T	B		B ₁ Note(6)	r	D	
1/2	90.0	9.6	11.2	34.9	30.0	21.3	14.0	16.0	46.0	16.0	22.2	22.9	15.8	3.0	10.0
3/4	100.0	11.2	12.7	42.9	38.0	26.7	14.0	16.0	51.0	16.0	27.7	28.2	20.9	3.0	11.0
1	110.0	12.7	14.3	50.8	49.0	33.4	16.0	17.0	54.0	17.0	34.5	34.9	26.6	3.0	13.0
1 1/4	115.0	14.3	15.9	63.5	59.0	42.2	19.0	21.0	56.0	21.0	43.2	43.7	35.1	5.0	14.0
1 1/2	125.0	15.9	17.5	73.0	65.0	48.3	21.0	22.0	60.0	22.0	49.5	50.0	40.9	6.0	16.0
2	150.0	17.5	19.1	92.1	78.0	60.3	24.0	25.0	62.0	25.0	61.9	62.5	52.5	8.0	17.0
2 1/2	180.0	20.7	22.3	104.8	90.0	73.0	27.0	29.0	68.0	29.0	74.6	75.4	62.7	8.0	19.0
3	190.0	22.3	23.9	127.0	108.0	88.9	29.0	30.0	68.0	30.0	90.7	91.4	77.9	10.0	21.0
3 1/2	215.0	22.3	23.9	139.7	122.0	101.6	30.0	32.0	70.0	32.0	103.4	104.1	90.1	10.0	
4	230.0	22.3	23.9	157.2	135.0	114.3	32.0	33.0	75.0	33.0	116.1	116.8	102.3	11.0	
5	255.0	22.3	23.9	185.7	164.0	141.3	35.0	36.0	87.0	36.0	143.8	144.4	128.2	11.0	
6	280.0	23.9	25.4	215.9	192.0	168.3	38.0	40.0	87.0	40.0	170.7	171.4	154.1	13.0	
8	345.0	27.0	28.6	269.9	246.0	219.1	43.0	44.0	100.0	44.0	221.5	222.2	202.7	13.0	
10	405.0	28.6	30.2	323.8	305.0	273.0	48.0	49.0	100.0	49.0	276.2	277.4	254.6	13.0	
12	485.0	30.2	31.8	381.0	365.0	323.8	54.0	56.0	113.0	56.0	327.0	328.2	304.8	13.0	
14	535.0	33.4	35.0	412.8	400.0	355.6	56.0	79.0	125.0	57.0	359.2	360.2	To be Specified by pur- chaser	13.0	
16	595.0	35.0	36.6	469.9	457.0	406.4	62.0	87.0	125.0	64.0	410.5	411.2		13.0	
18	635.0	38.1	39.7	533.4	505.0	457.0	67.0	97.0	138.0	68.0	461.8	462.3		13.0	
20	700.0	41.3	42.9	584.2	559.0	508.0	71.0	103.0	143.0	73.0	513.1	514.4		13.0	
24	815.0	46.1	47.7	692.2	663.0	616.0	81.0	111.0	151.0	83.0	616.0	616.0		13.0	

Notes

- (1) This dimension is for large end of hub, which may be straight or tapered. Taper shall not exceed 7 deg on threaded, slip-on, socket-welding, and lapped flanges. This dimension is defined as the diameter at the intersection between the hub taper and the back face of the flange.
- (2) The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller is slightly greater than the thickness of flange on fitting which are reinforced by being cast integral with the body of the fitting.
- (3) The flat face may be either the full tr dimension of thickness plus 2mm or the tr dimension thickness without the raised face height.

(Dimension in mm)

Drilling Template				Bolt Length			Approximate Weight										Nominal pipe size
Diameter of Bolt Circle	Number of Holes	Diameter of Holes, in. (mm)	Diameter of Bolts in.	Machine Bolt Length	Stud Bolt Length		Welding Neck		Slip-on Threaded		Lap Joint		Blind		Socket Welding		
					Raised Face	Raised Face	Ring Joint	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	
60.3	4	5/8(15.9)	1/2	50.0	55.0	—	0.51	1.12	0.47	1.04	0.51	1.12	0.47	1.04	0.47	1.04	1/2
69.9	4	5/8(15.9)	1/2	50.0	65.0	—	0.73	1.61	0.58	1.28	0.64	1.41	0.63	1.39	0.59	1.30	3/4
79.4	4	5/8(15.9)	1/2	55.0	65.0	75.0	1.07	2.36	0.86	1.90	0.93	2.05	0.94	2.07	0.87	1.92	1
88.9	4	5/8(15.9)	1/2	55.0	70.0	85.0	1.40	3.09	1.08	2.38	1.16	2.56	1.23	2.71	1.11	2.45	1 1/4
98.4	4	5/8(15.9)	1/2	65.0	70.0	85.0	1.81	3.99	1.41	3.11	1.51	3.33	1.62	3.57	1.45	3.20	1 1/2
120.7	4	3/4(19.1)	5/8	70.0	85.0	95.0	2.59	5.71	2.26	4.98	2.38	5.25	2.64	5.82	2.33	5.14	2
139.7	4	3/4(19.1)	5/8	75.0	90.0	100.0	4.28	9.44	3.43	7.56	3.60	7.94	4.06	8.95	3.55	7.83	2 1/2
152.4	4	3/4(19.1)	5/8	75.0	90.0	100.0	5.18	11.42	3.87	8.53	4.04	8.91	4.90	10.80	4.02	8.86	3
177.8	8	3/4(19.1)	5/8	75.0	90.0	100.0	5.45	12.02	4.99	11.00	4.99	11.00	5.90	13.01			3 1/2
190.5	8	3/4(19.1)	5/8	75.0	90.0	100.0	7.32	16.14	5.75	12.68	5.96	13.14	7.41	16.34			4
215.9	8	7/8(22.2)	3/4	85.0	95.0	110.0	8.91	19.64	6.22	13.71	6.44	14.20	8.76	19.31			5
241.3	8	7/8(22.2)	3/4	85.0	100.0	115.0	11.26	24.82	7.38	16.27	7.59	16.73	11.31	24.93			6
298.5	8	7/8(22.2)	3/4	90.0	110.0	120.0	17.68	38.98	12.36	27.25	12.66	27.91	19.92	43.92			8
362.0	12	1 (25.4)	7/8	100.0	115.0	125.0	24.79	54.65	17.10	37.70	16.78	36.99	29.39	64.79			10
431.8	12	1 (25.4)	7/8	100.0	120.0	135.0	38.98	85.94	27.68	61.02	28.30	62.39	43.70	96.34			12
476.3	12	1 1/8(28.6)	1	115.0	135.0	145.0	51.71	114.00	35.20	77.60	41.50	91.49	59.42	131.00			14
539.8	16	1 1/8(28.6)	1	115.0	135.0	145.0	64.41	142.00	42.18	92.99	52.98	116.80	77.11	170.00			16
577.9	16	1 1/4(31.8)	1 1/8	125.0	145.0	160.0	74.84	164.99	49.71	109.59	59.00	130.07	94.80	209.00			18
635.0	20	1 1/4(31.8)	1 1/8	140.0	160.0	170.0	89.36	197.01	65.50	144.40	72.12	159.00	123.38	272.01			20
749.3	20	1 3/8(34.9)	1 1/4	150.0	170.0	185.0	119.66	263.81	90.50	199.52	99.02	218.30	188.24	415.00			24

- (4) The flange dimension illustrated is for regularly furnished 2 mm raised face (except lapped); for requirements of other facings, see page 53-54
- (5) For welding end bevel. See page 56.
- (6) Dimensions in bore of welding neck, socket welding correspond to the inside diameters of pipe as in ASME B36.10M for standard pipe. Thickness of standard Wall is the same as Schedule 40 in sizes NPS 10 and smaller. Tolerances in page 55 apply. These bore sizes are furnished unless otherwise specified by purchaser.