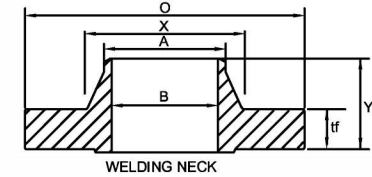
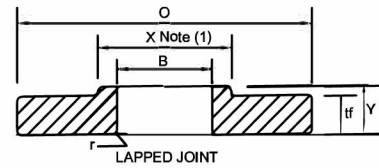
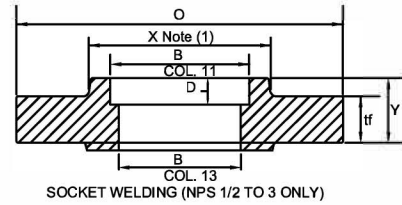
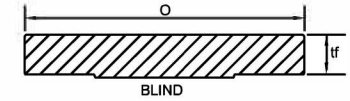
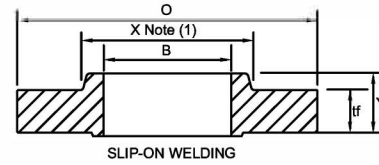
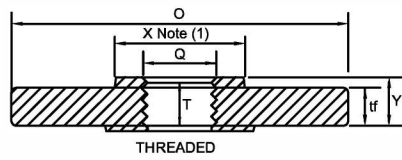




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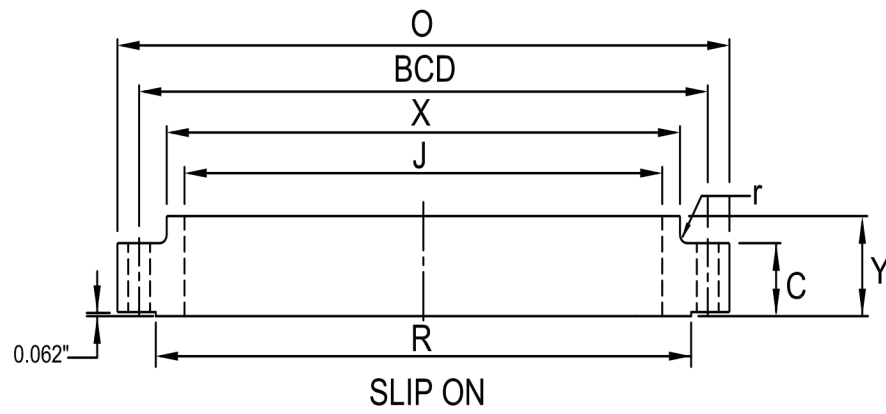
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SIZE	FLANGE			LENGTH THROUGH HUB					BORE					
Nominal Pipe Size	Outside Diameter of Flange O	Thickness of Flange Min., tf [Note (2)-(4)]	Thickness Lap Joint Min.	Diameter of Hub X	Diameter of Hub at point of welding A [note (5)]	Threaded	Lapped Joint Y	Welding Neck Y	Thread Length Threaded Min., T [Note 6]	Slip-on Socket Welding Min., B	Lapped Joint Min., B	Welding Neck Socket Welding B [Note (7)]	Corner Radius of Bore of Lapped Joint Flange and Pipe r	Depth of Socket D
						Slip-on Socket Welding Y								
1/2	3.50	0.38	0.44	1.19	0.84	0.56	0.62	1.81	0.62	0.88	0.90	0.62	0.12	0.38
3/4	3.88	0.44	0.50	1.50	1.05	0.56	0.62	2.00	0.62	1.09	1.11	0.82	0.12	0.44
1	4.25	0.50	0.56	1.94	1.32	0.62	0.69	2.12	0.69	1.36	1.38	1.05	0.12	0.50
1 1/4	4.62	0.56	0.62	2.31	1.66	0.75	0.81	2.19	0.81	1.70	1.72	1.38	0.19	0.56
1 1/2	5.00	0.62	0.69	2.56	1.90	0.81	0.88	2.38	0.88	1.95	1.97	1.61	0.25	0.62
2	6.00	0.69	0.75	3.06	2.38	0.94	1.00	2.44	1.00	2.44	2.46	2.07	0.31	0.69
2 1/2	7.00	0.81	0.88	3.56	2.88	1.06	1.12	2.69	1.12	2.94	2.97	2.47	0.31	0.75
3	7.50	0.88	0.94	4.25	3.50	1.12	1.19	2.69	1.19	3.57	3.60	3.07	0.38	0.81
3 1/2	8.50	0.88	0.94	4.81	4.00	1.19	1.25	2.75	1.25	4.07	4.10	3.55	0.38	...
4	9.00	0.88	0.94	5.31	4.50	1.25	1.31	2.94	1.31	4.57	4.60	4.03	0.44	...
5	10.00	0.88	0.94	6.44	5.56	1.38	1.44	3.44	1.44	5.66	5.69	5.05	0.44	...
6	11.00	0.94	1.00	7.56	6.63	1.50	1.56	3.44	1.56	6.72	6.75	6.07	0.50	...
8	13.50	1.06	1.12	9.69	8.63	1.69	1.75	3.94	1.75	8.72	8.75	7.98	0.50	...
10	16.00	1.12	1.19	12.00	10.75	1.88	1.94	3.94	1.94	10.88	10.92	10.02	0.50	...
12	19.00	1.19	1.25	14.38	12.75	2.12	2.19	4.44	2.19	12.88	12.92	12.00	0.50	...
14	21.00	1.31	1.38	15.75	14.00	2.19	3.12	4.94	2.25	14.14	14.18	To	0.50	...
16	23.50	1.38	1.44	18.00	16.00	2.44	3.44	4.94	2.50	16.16	16.19	be	0.50	...
18	25.00	1.50	1.56	19.88	18.00	2.62	3.81	5.44	2.69	18.18	18.20	Specified	0.50	...
20	27.50	1.62	1.69	22.00	20.00	2.81	4.06	5.62	2.88	20.20	20.25	by	0.50	...
24	32.00	1.81	1.88	26.12	24.00	3.19	4.38	5.94	3.25	24.25	24.25	Purchaser	0.50	...

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.
- (2) The minimum thickness of these loose flanges, in sizes NPS 3 1/2 and smaller, is slightly greater than the thickness of flanges on fittings, Table F9, which are reinforced by being cast integral with the body of the fitting.
- (3) When these flanges are required with flat face. The flat face may be either the full tf dimension of thickness plus 0.06 in., or the or the tf dimension thickness without the raised face height. See para. 6.3.2 for additional restrictions.
- (4) The flange dimensions illustrated are for regularly furnished 0.06 in. raised face (except lapped): for requirements of other facings, see Fig F7
- (5) For welding end bevel, see para. 6.7.
- (6) For thread of threaded flanges, see para. 6.9
- (7) Dimensions in Column 13 correspond to the inside diameters of pipe as given in ASME B36.10M for Standard Wall pipe. Thickness of Standard Wall is the same as Schedule 40 in sizes NPS 10 and smaller. Tolerances in para. 7.5.2. apply. These bore sizes are apply. These bore sizes are furnished unless otherwise specked by the purchaser.

GENERAL NOTES:

- (a) Dimensions are in inches.
- (b) For tolerances, see para. 7.
- (c) For facings, see para. 6.4.
- (d) For flange bolt holes, see para. 6.5 and Table F7.
- (e) For spot facing, see para. 6.6.
- (f) For reducing threaded and slip-on flanges, see Table F6.
- (g) Blind flanges may be made with or without hubs at the manufacturer's option.
- (h) For reducing welding neck flanges, see para. 6.8.



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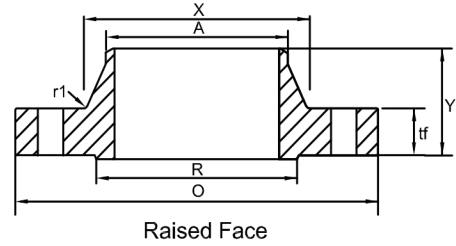
"SERIES A SLIP-ON"

Nominal Pipe Size	O.D. of Flange	Thickness of Flange	Length Through Hub	Hub Base DIA	Drilling			Raised Face DIA	Fillet Radius Min.	Flange Bore
					Bolt Circle DIA	No. of Bolt Holes	DIA of Bolt Hole			
26	34.25	2.69	3.69	28.25	31.75	24	1.38	29.50	0.38	26.25
28	36.50	3.06	3.81	30.50	34.00	28	1.38	31.50	0.44	28.25
30	38.75	3.31	3.94	32.50	36.00	28	1.38	33.75	0.44	30.25
32	41.75	3.41	4.18	34.50	38.50	28	1.62	36.00	0.44	32.25
34	43.75	3.68	4.25	36.50	40.50	32	1.62	38.00	0.50	34.25
36	46.00	3.96	4.56	38.75	42.75	32	1.62	40.25	0.50	36.25
38	48.75	4.06	4.56	41.25	45.25	32	1.62	42.25	0.50	38.25
40	50.75	4.18	4.81	43.25	47.25	36	1.62	44.25	0.50	40.25
42	53.00	4.43	5.06	45.50	49.50	36	1.62	47.00	0.50	42.25
44	55.00	4.68	5.18	47.75	51.75	40	1.62	49.00	0.50	44.25
46	57.25	4.86	5.31	49.75	53.75	40	1.62	51.00	0.50	46.25
48	59.50	5.06	5.56	52.00	56.00	44	1.62	53.50	0.50	48.25

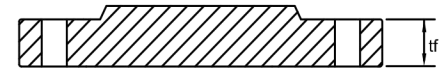
Note:
 Standard facing is 125-250 Ra.
 The 1/16" raised face is included in thickness "C" and length through hub.
 The thickness of flat face flanges shall be no less than the applicable "C" dimension.
 Facing and drilling matches MSS SP-44 and ASME B16.47 Series A.



FLANGES CLASS 150 SERIES A



Raised Face



BLIND

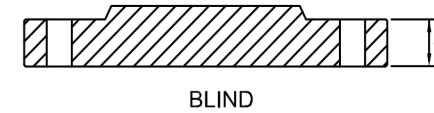
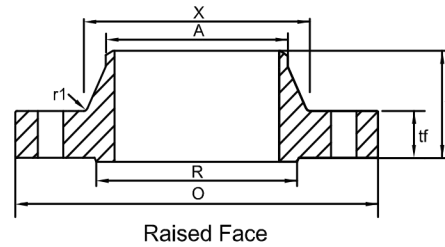
Nominal Pipe Size	O.D. of Flange, O	Minimum Thickness of Flange, tf [Note(1)]		Length Through Hub, Y	Diam. Of Hub, X [Note (2)]	Hub Diam. Top, A [Note (3)]	Raised Face Diam., R	Drilling			Minimum Fillet Radius, r1	
		WNF	BLIND					Diam. of Bolt Circle	No. of Bolt Holes	Diam. of Bolt Hole		
26	34.25	2.63	2.63	4.69	26.62	26.00	29.50	31.75	24	1 3/8	1 1/4	0.38
28	36.50	2.75	2.75	4.88	28.62	28.00	31.50	34.00	28	1 3/8	1 1/4	0.44
30	38.75	2.88	2.88	5.32	30.75	30.00	33.75	36.00	28	1 3/8	1 1/4	0.44
32	41.75	3.13	3.13	5.63	32.75	32.00	36.00	38.50	28	1 5/8	1 1/2	0.44
34	43.75	3.19	3.19	5.82	34.75	34.00	38.00	40.50	32	1 5/8	1 1/2	0.50
36	46.00	3.50	3.50	6.13	36.75	36.00	40.25	42.75	32	1 5/8	1 1/2	0.50
38	48.75	3.38	3.38	6.13	39.00	38.00	42.25	45.25	32	1 5/8	1 1/2	0.50
40	50.75	3.50	3.50	6.38	41.00	40.00	44.25	47.25	36	1 5/8	1 1/2	0.50
42	53.00	3.75	3.75	6.69	43.00	42.00	47.00	49.50	36	1 5/8	1 1/2	0.50
44	55.25	3.94	3.94	6.94	45.00	44.00	49.00	51.75	40	1 5/8	1 1/2	0.50
46	57.25	4.00	4.00	7.25	47.12	46.00	51.00	53.75	40	1 5/8	1 1/2	0.50
48	59.50	4.19	4.19	7.50	49.12	48.00	53.50	56.00	44	1 5/8	1 1/2	0.50
50	61.75	4.32	4.32	7.94	51.25	50.00	55.50	58.25	44	1 7/8	1 3/4	0.50
52	64.00	4.50	4.50	8.19	53.25	52.00	57.50	60.50	44	1 7/8	1 3/4	0.50
54	66.25	4.69	4.69	8.44	55.25	54.00	59.50	62.75	44	1 7/8	1 3/4	0.50
56	68.75	4.82	4.82	8.94	57.38	56.00	62.00	65.00	48	1 7/8	1 3/4	0.50
58	71.00	5.00	5.00	9.19	59.38	58.00	64.00	67.25	48	1 7/8	1 3/4	0.50
60	73.00	5.13	5.13	9.38	61.38	60.00	66.00	69.25	52	1 7/8	1 3/4	0.50

GENERAL NOTES:

- (a) Dimensions are in inches.
- (b) For tolerances, see section 7.
- (c) For facings, see para. 6.1.
- (d) For flange bolt holes, see para. 6.2.
- (e) For spot facing, see para. 6.3.
- (f) The bore is to be specified by the purchaser. Tolerances in para 7.3.2 apply.
- (g) Blind flanges may be made with or without hubs at the manufacturer's option.

NOTES:

- (1) The minimum flange thickness does not include the raised face thickness (see para. 6.1.1).
- (2) This dimension is for the large end of hub, which may be straight or tapered.
- (3) For welding and bevel, see para. 6.4.



FLANGES CLASS 150 SERIES B

Nominal Pipe Size	O.D. of Flange, O	Minimum Thickness of Flange, tf [Note(1)]		Length Through Hub, Y	Diam. Of Hub, X [Note (2)]	Hub Diam. Top, A [Note (3)]	Raised Face Diam., R	Drilling			Minimum Fillet Radius, r1	
		WNF	BLIND					No. of Bolt Holes	Diam. of Bolt Hole	Diam. of Bolt		
26	30.94	1.57	1.69	3.44	26.94	26.06	28.00	29.31	36	7/8	3/4	0.38
28	32.94	1.69	1.82	3.69	28.94	28.06	30.00	31.31	40	7/8	3/4	0.38
30	34.94	1.69	1.94	3.88	31.00	30.06	32.00	33.31	44	7/8	3/4	0.38
32	37.06	1.75	2.07	4.19	33.06	32.06	34.00	35.44	48	7/8	3/4	0.38
34	39.56	1.88	2.19	4.28	35.12	34.06	36.25	37.69	40	1	7/8	0.38
36	41.62	2.00	2.25	4.57	37.19	36.06	38.25	39.75	44	1	7/8	0.38
38	44.25	2.07	2.44	4.82	39.25	38.12	40.25	42.12	40	1 1/8	1	0.38
40	46.25	2.13	2.57	5.00	41.31	40.12	42.50	44.12	44	1 1/8	1	0.38
42	48.25	2.25	2.63	5.19	43.38	42.12	44.50	46.12	48	1 1/8	1	0.44
44	50.25	2.32	2.75	5.32	45.38	44.12	46.50	48.12	52	1 1/8	1	0.44
46	52.81	2.38	2.88	5.63	47.44	46.12	48.62	50.56	40	1 1/4	1 1/8	0.44
48	54.81	2.50	3.00	5.82	48.50	48.12	50.75	52.56	44	1 1/4	1 1/8	0.44
50	56.81	2.63	3.13	6.00	51.50	50.12	52.75	54.56	48	1 1/4	1 1/8	0.44
52	58.81	2.69	3.25	6.13	53.56	52.12	54.75	56.56	52	1 1/4	1 1/8	0.44
54	61.00	2.75	3.38	6.32	55.62	54.12	56.75	58.75	56	1 1/4	1 1/8	0.44
56	63.00	2.82	3.50	6.50	57.69	56.12	58.75	60.75	60	1 1/4	1 1/8	0.56
58	65.94	2.88	3.62	6.82	59.69	58.12	60.75	63.44	48	1 3/8	1 1/4	0.56
60	67.94	2.94	3.75	7.00	61.81	60.12	63.00	65.44	52	1 3/8	1 1/4	0.56

GENERAL NOTES:

- (a) Dimensions are in inches.
- (b) For tolerances, see section 7.
- (c) For facings, see para. 6.1.
- (d) For flange bolt holes, see para. 6.2.
- (e) For spot facing, see para. 6.3.
- (f) The bore is to be specified by the purchaser. Tolerances in para 7.3.2 apply.
- (g) Blind flanges may be made with or without hubs at the manufacturer's option.

NOTES:

- (1) The minimum flange thickness does not include the raised face thickness (see para. 6.1.1).
- (2) This dimension is for the large end of hub, which may be straight or tapered.
- (3) For welding and bevel, see para. 6.4.