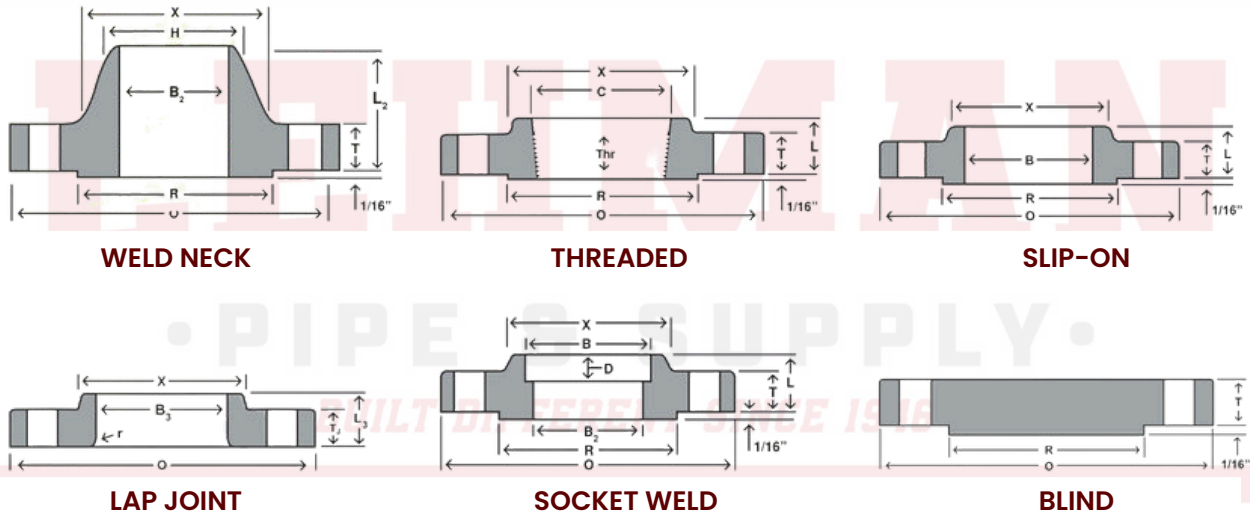


# ANSI B16.5 CLASS 150 FORGED FLANGES



Nom. Pipe Size	O	T	TJ	R	X	#/Dia of Holes	Bolt Circle Dia	B	B2B	B3	H	L	L2	L3C	r	D	Thr
1/2	3.5	0.38	0.44	1.38	1.19	4-0.62	2.38	0.88	0.62	0.9	0.84	0.56	1.81	0.62	0.12	0.38	0.62
3/4	3.88	0.44	0.5	1.69	1.5	4-0.62	2.75	1.09	0.82	1.11	1.05	0.56	2	0.62	0.12	0.44	0.62
1	4.25	0.5	0.56	2	1.94	4-0.62	3.12	1.36	1.05	1.38	1.32	0.62	2.12	0.69	0.12	0.5	0.69
1 1/4	4.62	0.56	0.62	2.5	2.31	4-0.62	3.5	1.7	1.38	1.72	1.66	0.75	2.19	0.81	0.19	0.56	0.81
1 1/2	5	0.62	0.69	2.88	2.56	4-0.62	3.88	1.95	1.61	1.97	1.9	0.81	2.38	0.88	0.25	0.62	0.88
2	6	0.69	0.75	3.62	3.06	4-0.75	4.75	2.44	2.07	2.46	2.38	0.94	2.44	1	0.31	0.69	1
2 1/2	7	0.81	0.88	4.12	3.56	4-0.75	5.5	2.94	2.47	2.97	2.88	1.06	2.69	1.12	0.31	0.75	1.12
3	7.5	0.88	0.94	5	4.25	4-0.75	6	3.57	3.07	3.6	3.5	1.12	2.69	1.19	0.38	0.81	1.19
3 1/2	8.5	0.88	0.94	5.5	4.81	8-0.75	7	4.07	3.55	4.1	4	1.19	2.75	1.25	0.38	0.88	1.25
4	9	0.88	0.94	6.19	5.31	8-0.75	7.5	4.57	4.03	4.6	4.5	1.25	2.94	1.31	0.44	0.94	1.31
5	10	0.88	0.94	7.31	6.44	8-0.88	8.5	5.66	5.05	5.69	5.56	1.38	3.44	1.44	0.44	0.94	1.44
6	11	0.94	1	8.5	7.56	8-0.88	9.5	6.72	6.07	6.75	6.63	1.5	3.44	1.56	0.5	1.06	1.56
8	13.5	1.06	1.12	10.62	9.69	8-0.88	11.75	8.72	7.98	8.75	8.63	1.69	3.94	1.75	0.5	1.25	1.75
10	16	1.12	1.19	12.75	12	12-1.00	14.25	10.88	10.02	10.92	10.75	1.88	3.94	1.94	0.5	1.31	1.94
12	19	1.19	1.25	15	14.38	12-1.00	17	12.88	12	12.92	12.75	2.12	4.44	2.19	0.5	1.56	2.19
14	21	1.31	1.38	16.25	15.75	12-1.12	18.75	14.14	13.25	14.18	14	2.19	4.94	3.12	0.5	1.63	2.25
16	23.5	1.38	1.44	18.5	18	16-1.12	21.25	16.16	15.25	16.19	16	2.44	4.94	3.44	0.5	1.75	2.5
18	25	1.5	1.56	21	19.88	16-1.25	22.75	18.18	17.25	18.2	18	2.62	5.44	3.81	0.5	1.94	2.69
20	27.5	1.62	1.69	23	22	20-1.25	25	20.2	19.25	20.25	20	2.81	5.62	4.06	0.5	2.13	2.88
22	29.5	1.75	1.81	25.25	24.25	20-1.38	27.25	22.22	21.25	22.25	22	3.07	5.82	4.25	0.5	2.38	3.13
24	32	1.81	1.88	27.25	26.12	20-1.38	29.5	24.25	23.25	24.25	24	3.19	5.94	4.38	0.5	2.5	3.25

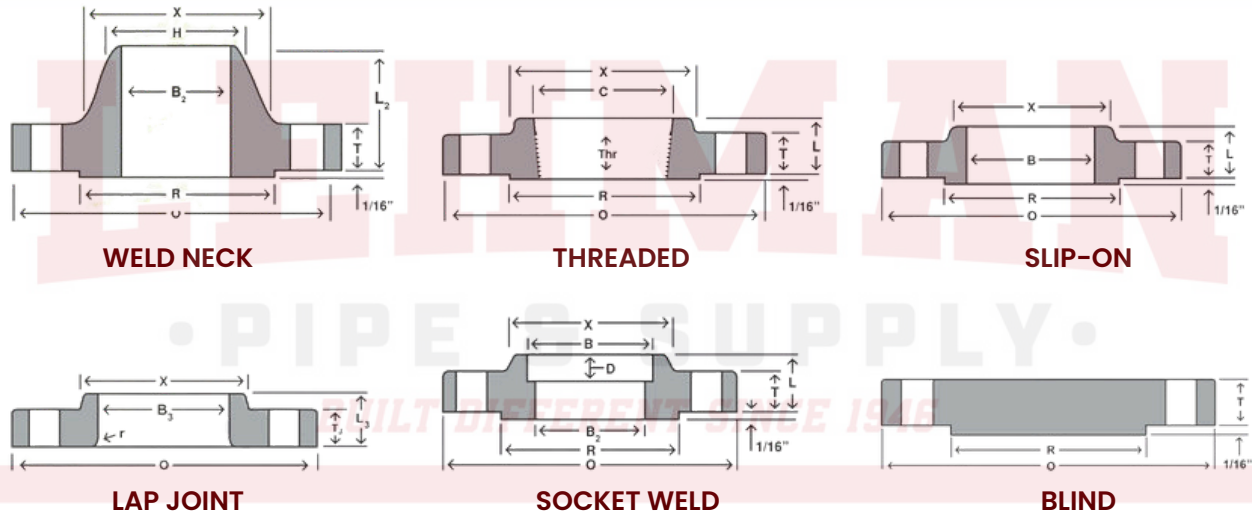
## DIMENSIONS ARE IN INCHES

(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

# ANSI B16.5 CLASS 300 FORGED FLANGES



Nom. Pipe Size	O	T	TJ	R	X	#/Dia of Holes	Bolt Circle Dia	B	B2B	B3	H	L	L2	L3C	r	C	D	Thr
1/2	3.75	0.5	0.56	1.38	1.5	4-0.63	2.62	0.88	0.62	0.9	0.84	0.81	2	0.88	0.12	0.93	0.38	0.62
3/4	4.62	0.56	0.62	1.69	1.88	4-0.75	3.25	1.09	0.82	1.11	1.05	0.94	2.19	1	0.12	1.14	0.44	0.62
1	4.88	0.62	0.69	2	2.12	4-0.75	3.5	1.36	1.05	1.38	1.32	1	2.38	1.06	0.12	1.41	0.5	0.69
1 1/4	5.25	0.69	0.75	2.5	2.5	4-0.75	3.88	1.7	1.38	1.72	1.66	1	2.5	1.06	0.19	1.75	0.56	0.81
1 1/2	6.12	0.75	0.81	2.88	2.75	4-0.88	4.5	1.95	1.61	1.97	1.9	1.13	2.63	1.19	0.25	1.98	0.62	0.88
2	6.5	0.81	0.88	3.62	3.31	8-0.75	5	2.44	2.07	2.46	2.38	1.25	2.69	1.31	0.31	2.5	0.69	1.12
2 1/2	7.5	0.94	1	4.12	3.94	8-0.88	5.88	2.94	2.47	2.97	2.88	1.44	2.94	1.5	0.31	3	0.75	1.25
3	8.25	1.06	1.12	5	4.62	8-0.88	6.62	3.57	3.07	3.6	3.5	1.63	3.06	1.69	0.38	3.63	0.81	1.25
3 1/2	9	1.12	1.19	5.5	5.25	8-0.88	7.25	4.07	3.55	4.1	4	1.69	3.13	1.75	0.38	4.13	....	1.44
4	10	1.19	1.25	6.19	5.75	8-0.88	7.88	4.57	4.03	4.6	4.5	1.82	3.32	1.88	0.44	4.63	....	1.44
5	11	1.31	1.38	7.31	7	8-0.88	9.25	5.66	5.05	5.69	5.56	1.94	3.82	2	0.44	5.69	....	1.69
6	12.5	1.38	1.44	8.5	8.12	12-0.88	10.62	6.72	6.07	6.75	6.63	2	3.82	2.06	0.5	6.75	....	1.81
8	15	1.56	1.62	10.62	10.25	12-1.00	13	8.72	7.98	8.75	8.63	2.38	4.32	2.44	0.5	8.75	....	2
10	17.5	1.81	1.88	12.75	12.62	16-1.12	15.25	10.88	10.02	10.92	10.75	2.56	4.56	3.75	0.5	10.88	....	2.19
12	20.5	1.94	2	15	14.75	16-1.25	17.75	12.88	12	12.92	12.75	2.82	5.06	4	0.5	12.94	....	2.38
14	23	2.06	2.12	16.25	16.75	20-1.25	20.25	14.14	13.25	14.18	14	2.94	5.56	4.38	0.5	14.19	....	2.5
16	25.5	2.19	2.25	18.5	19	20-1.38	22.5	16.16	15.25	16.19	16	3.19	5.69	4.75	0.5	16.19	....	2.69
18	28	2.31	2.38	21	21	24-1.38	24.75	18.18	17.25	18.2	18	3.44	6.19	5.12	0.5	18.19	....	2.75
20	30.5	2.44	2.5	23	23.12	24-1.38	27	20.2	19.25	20.25	20	3.69	6.32	5.5	0.5	20.19	....	2.88
22	33	2.57	2.63	25.25	25.25	24-1.63	29.25	22.22	21.25	22.25	22	3.93	6.43	5.75	0.5	22.19	....	3.13
24	36	2.69	2.75	27.25	27.62	24-1.63	32	24.25	23.25	24.25	24	4.13	6.56	6	0.5	24.19	....	3.25

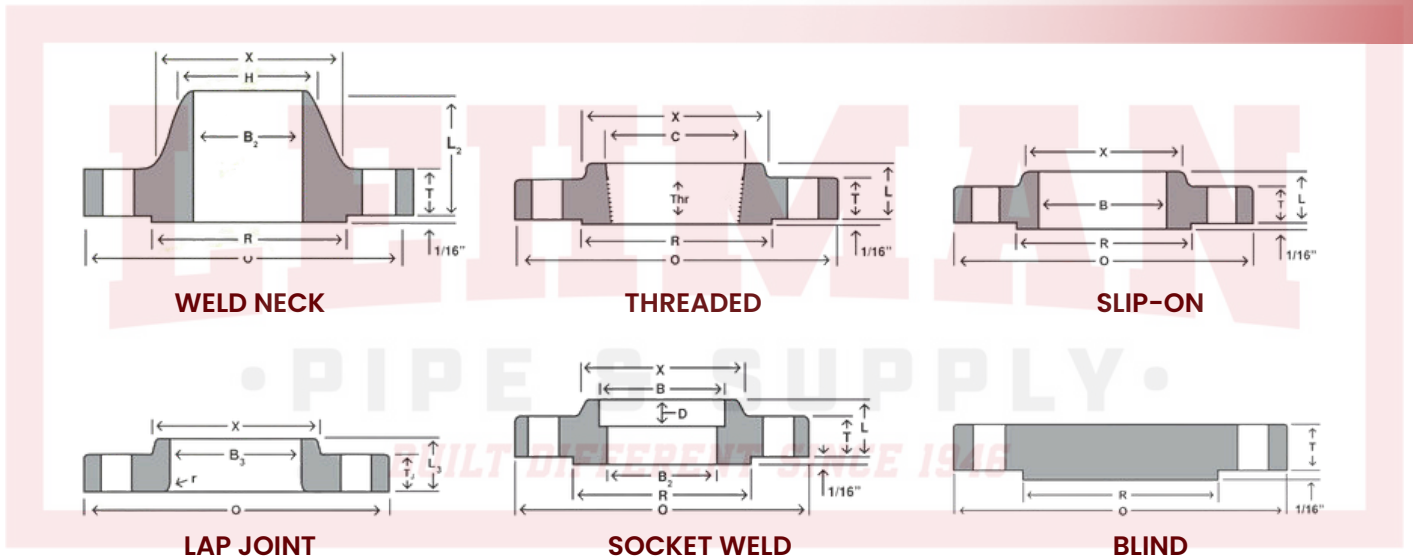
## DIMENSIONS ARE IN INCHES

(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

# ANSI B16.5 CLASS 600 FORGED FLANGES



Nom. Pipe Size	O	T	R	X	#/Dia of Holes	Bolt Circle Dia	B	B2b*	B3	H	L	L2	L3c	r	C	D	Thr
1/2	3.75	0.56	1.38	1.5	4-0.63	2.62	0.88		0.9	0.84	0.88	2.06	0.88	0.12	0.93	0.38	0.62
3/4	4.62	0.62	1.69	1.88	4-0.75	3.25	1.09		1.11	1.05	1	2.25	1	0.12	1.14	0.44	0.62
1	4.88	0.69	2	2.12	4-0.75	3.5	1.36		1.38	1.32	1.06	2.44	1.06	0.12	1.41	0.5	0.69
1¼	5.25	0.81	2.5	2.5	4-0.75	3.88	1.7		1.72	1.66	1.12	2.62	1.12	0.19	1.75	0.56	0.81
1½	6.12	0.88	2.88	2.75	4-0.88	4.5	1.95		1.97	1.9	1.25	2.75	1.25	0.25	1.99	0.62	0.88
2	6.5	1	3.62	3.31	8-0.75	5	2.44		2.46	2.38	1.44	2.88	1.44	0.31	2.5	0.69	1.12
2½	7.5	1.12	4.12	3.94	8-0.88	5.88	2.94		2.97	2.88	1.62	3.12	1.62	0.31	3	0.75	1.25
3	8.25	1.25	5	4.62	8-0.88	6.62	3.57		3.6	3.5	1.81	3.25	1.81	0.38	3.63	0.81	1.38
3½	9	1.38	5.5	5.25	8-1.00	7.25	4.07		4.1	4	1.94	3.38	1.94	0.38	4.13	....	1.56
4	10.75	1.5	6.19	6	8-1.00	8.5	4.57		4.6	4.5	2.12	4	2.12	0.44	4.63	....	1.62
5	13	1.75	7.31	7.44	8-1.12	10.5	5.66		5.69	5.56	2.38	4.5	2.38	0.44	5.69	....	1.88
6	14	1.88	8.5	8.75	12-1.12	11.5	6.72		6.75	6.63	2.62	4.62	2.62	0.5	6.75	....	2
8	16.5	2.19	10.62	10.75	12-1.25	13.75	8.72		8.75	8.63	3	5.25	3	0.5	8.75	....	2.25
10	20	2.5	12.75	13.5	16-1.38	17	10.88		10.92	10.75	3.38	6	4.38	0.5	10.88	....	2.56
12	22	2.62	15	15.75	20-1.38	19.25	12.88		12.92	12.75	3.62	6.12	4.62	0.5	12.94	....	2.75
14	23.75	2.75	16.25	17	20-1.50	20.75	14.14		14.18	14	3.69	6.5	5	0.5	14.19	....	2.88
16	27	3	18.5	19.5	20-1.63	23.75	16.16		16.19	16	4.19	7	5.5	0.5	16.19	....	3.06
18	29.25	3.25	21	21.5	20-1.75	25.75	18.18		18.2	18	4.62	7.25	6	0.5	18.19	....	3.12
20	32	3.5	23	24	24-1.75	28.5	20.2		20.25	20	5	7.5	6.5	0.5	20.19	....	3.25
22	34.25	3.75	25.25	26.25	24-1.75	30.63	22.22		22.25	22	5.25	7.75	6.88	0.5	....	....	--
24	37	4	27.25	28.25	24-2.00	33	24.25		24.25	24	5.5	8	7.25	0.5	24.19	....	3.62

## DIMENSIONS ARE IN INCHES

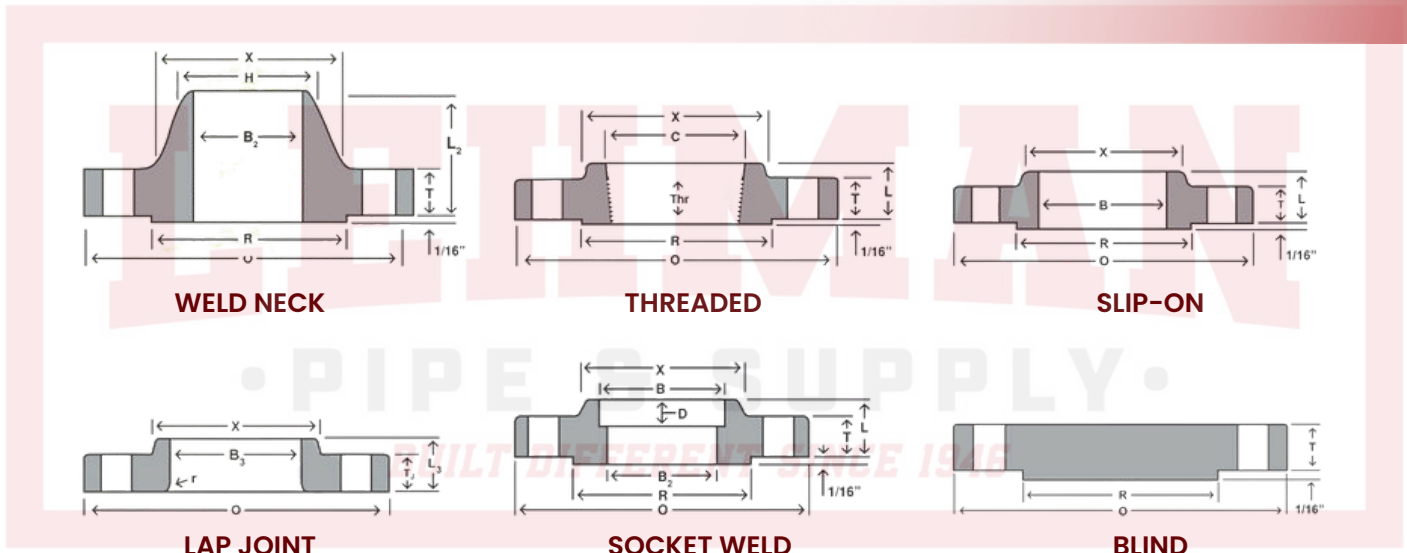
(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

\*To be specified by purchaser

# ANSI B16.5 CLASS 900 FORGED FLANGES



Nom. Pipe Size	O	T	R	X	#/Dia of Holes	Bolt Circle Dia	B	B2b*	B3	H	L	L2	L3c	r	C	Thr
Sizes 1/2" through 2 1/2" are identical to class 1500.																
3	9.5	1.5	5	5	8-1.00	7.5	3.57	3.6		3.5	2.12	4	2.12	0.38	3.63	1.62
4	11.5	1.75	6.19	6.25	8-1.25	9.25	4.57	4.6		4.5	2.75	4.5	2.75	0.44	4.63	1.88
5	13.75	2	7.31	7.5	8-1.38	11	5.66	5.69		5.56	3.12	5	3.12	0.44	5.69	2.12
6	15	2.19	8.5	9.25	12-1.25	12.5	6.72	6.75		6.63	3.38	5.5	3.38	0.5	6.75	2.25
8	18.5	2.5	10.63	11.75	12-1.50	15.5	8.72	8.75		8.63	4	6.38	4.5	0.5	8.75	2.5
10	21.5	2.75	12.75	14.5	16-1.50	18.5	10.88	10.92		10.75	4.25	7.25	5	0.5	10.88	2.81
12	24	3.12	15	16.5	20-1.50	21	12.88	12.92		12.75	4.63	7.88	5.62	0.5	12.94	3
14	25.25	3.38	16.25	17.75	20-1.63	22	14.14	14.18		14	5.12	8.38	6.12	0.5	14.19	3.25
16	27.75	3.5	18.5	20	20-1.75	24.25	16.16	16.19		16	5.25	8.5	6.5	0.5	16.19	3.38
18	31	4	21	22.25	20-2.00	27	18.18	18.2		18	6	9	7.5	0.5	18.19	3.5
20	33.75	4.25	23	24.5	20-2.13	29.5	20.2	20.25		20	6.25	9.75	8.25	0.5	20.19	3.62
24	41	5.5	27.25	29.5	20-2.63	35.5	24.25	24.25		24	8	11.5	10.5	0.5	24.19	4

## DIMENSIONS ARE IN INCHES

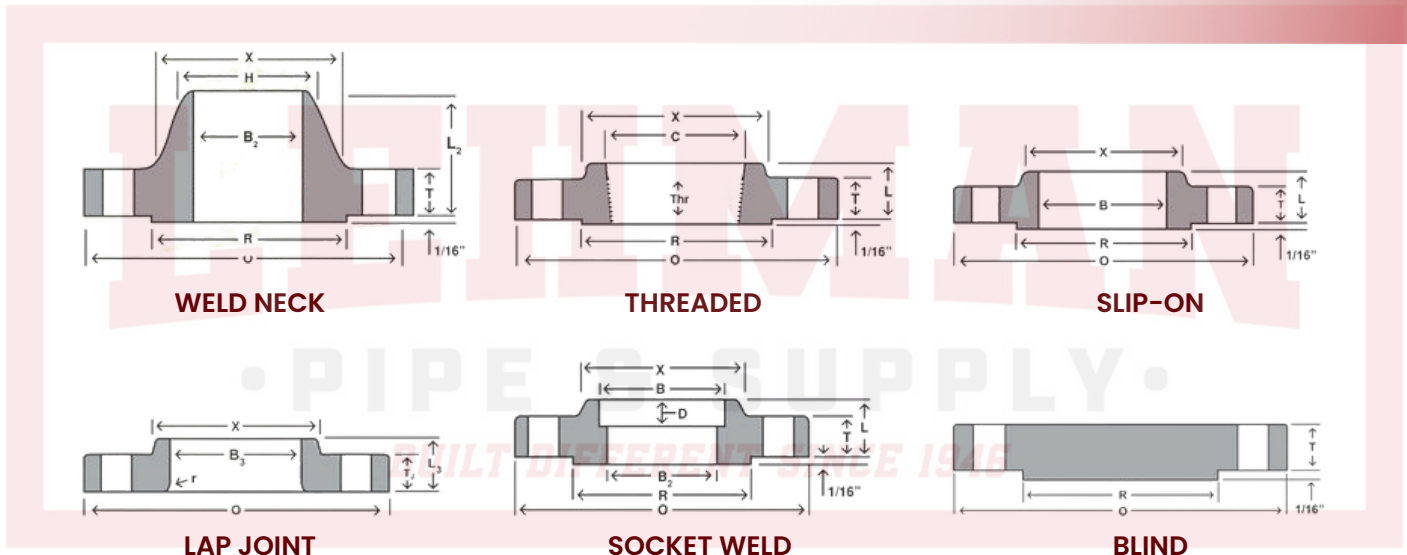
(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

\*To be specified by purchaser

# ANSI B16.5 CLASS 1500 FORGED FLANGES



Nom. Pipe Size	O	T	R	X	#/Dia of Holes	Bolt Circle Dia	B	B2b*	B3	H	L	L2	L3c	r	C	D	Thr
1/2	4.75	0.88	1.38	1.5	4-0.88	3.25	0.88		0.9	0.84	1.25	2.38	1.25	0.12	0.93	0.38	0.88
3/4	5.12	1	1.69	1.75	4-0.88	3.5	1.09		1.11	1.05	1.38	2.75	1.38	0.12	1.14	0.44	1
1	5.88	1.12	2	2.06	4-1.00	4	1.36		1.38	1.32	1.62	2.88	1.62	0.12	1.41	0.5	1.12
1 1/4	6.25	1.12	2.5	2.5	4-1.00	4.38	1.7		1.72	1.66	1.62	2.88	1.62	0.19	1.75	0.56	1.19
1 1/2	7	1.25	2.88	2.75	4-1.12	4.88	1.95		1.97	1.9	1.75	3.25	1.75	0.25	1.99	0.62	1.25
2	8.5	1.5	3.63	4.12	8-1.00	6.5	2.44		2.46	2.38	2.25	4	2.25	0.31	2.5	0.69	1.5
2 1/2	9.62	1.62	4.13	4.88	8-1.12	7.5	2.94		2.97	2.88	2.5	4.12	2.5	0.31	3	0.75	1.88
3	10.5	1.88	5	5.25	8-1.25	8	....		3.6	3.5	....	4.62	2.88	0.38	....	....	....
4	12.25	2.12	6.19	6.38	8-1.38	9.5	....		4.6	4.5	....	4.88	3.56	0.44	....	....	....
5	14.75	2.88	7.31	7.75	8-1.63	11.5	....		5.69	5.56	....	6.12	4.12	0.44	....	....	....
6	15.5	3.25	8.5	9	12-1.50	12.5	....		6.75	6.63	....	6.75	4.69	0.5	....	....	....
8	19	3.62	10.63	11.5	12-1.75	15.5	....		8.75	8.63	....	8.38	5.62	0.5	....	....	....
10	23	4.25	12.75	14.5	12-2.00	19	....		10.92	10.75	....	10	7	0.5	....	....	....
12	26.5	4.88	15	17.75	16-2.12	22.5	....		12.92	12.75	....	11.12	8.62	0.5	....	....	....
14	29.5	5.25	16.25	19.5	16-2.38	25	....		14.18	14	....	11.75	9.5	0.5	....	....	....
16	32.5	5.75	18.5	21.75	16-2.63	27.75	....		16.19	16	....	12.25	10.25	0.5	....	....	....
18	36	6.38	21	23.5	16-2.88	30.5	....		18.2	18	....	12.88	10.88	0.5	....	....	....
20	38.75	7	23	25.25	16-3.12	32.75	....		20.25	20	....	14	11.5	0.5	....	....	....
24	46	8	27.25	30	16-3.63	39	....		24.25	24	....	16	13	0.5	....	....	....

## DIMENSIONS ARE IN INCHES

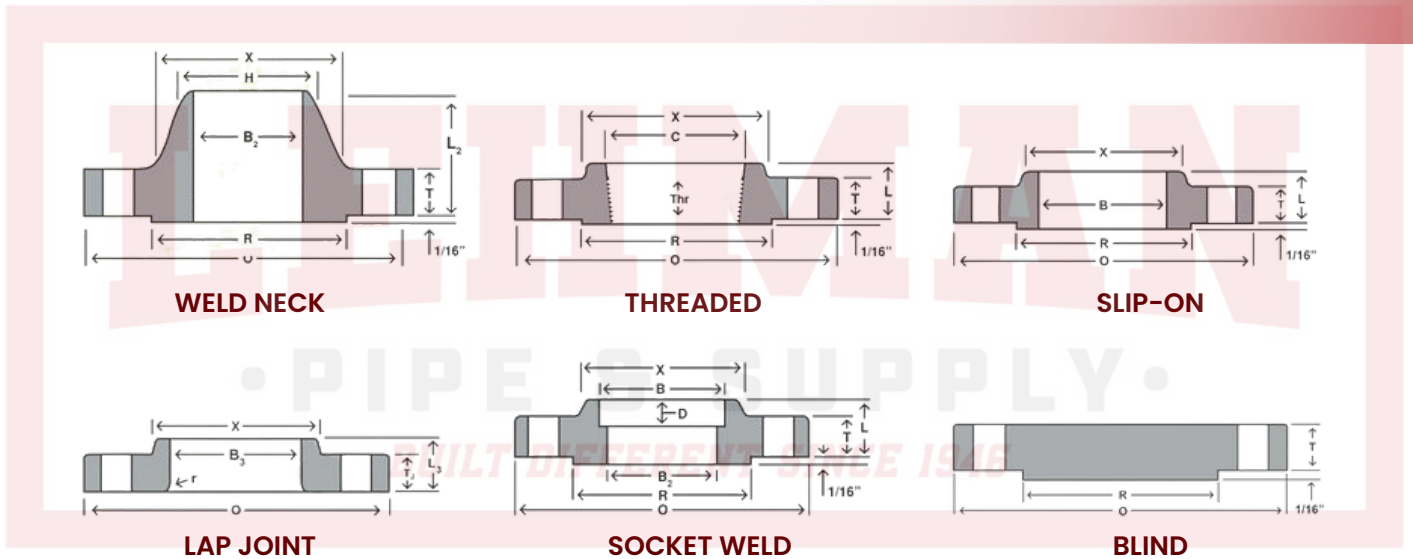
(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

\*To be specified by purchaser

# ANSI B16.5 CLASS 2500 FORGED FLANGES



Nom. Pipe Size	O	T	R	X	#/Dia of aHoles	Bolt Circle Dia	B2b*	B3	H	L	L2	L3	r	C	Thr
1/2	5.25	1.19	1.38	1.69	4-0.88	3.5		0.9	0.84	1.56	2.88	1.56	0.12	0.93	1.12
3/4	5.5	1.25	1.69	2	4-0.88	3.75		1.11	1.05	1.69	3.12	1.69	0.12	1.14	1.25
1	6.25	1.38	2	2.25	4-1.00	4.25		1.38	1.32	1.88	3.5	1.88	0.12	1.41	1.38
1¼	7.25	1.5	2.5	2.88	4-1.12	5.13		1.72	1.66	2.06	3.75	2.06	0.19	1.75	1.5
1½	8	1.75	2.88	3.12	4-1.25	5.75		1.97	1.9	2.38	4.38	2.38	0.25	1.99	1.75
2	9.25	2	3.63	3.75	8-1.12	6.75		2.46	2.38	2.75	5	2.75	0.31	2.5	2
2½	10.5	2.25	4.13	4.5	8-1.25	7.75		2.97	2.88	3.12	5.62	3.12	0.31	3	2.25
3	12	2.62	5	5.25	8-1.38	9		3.6	3.5	....	6.62	3.62	0.38	....	....
4	14	3	6.19	6.5	8-1.63	10.75		4.6	4.5	....	7.5	4.25	0.44	....	....
5	16.5	3.62	7.31	8	8-1.88	12.75		5.69	5.56	....	9	5.12	0.44	....	....
6	19	4.25	8.5	9.25	8-2.12	14.5		6.75	6.63	....	10.75	6	0.5	....	....
8	21.75	5	10.63	12	12-2.12	17.25		8.75	8.63	....	12.5	7	0.5	....	....
10	26.5	6.5	12.75	14.75	12-2.63	21.25		10.92	10.75	....	16.5	9	0.5	....	....
12	30	7.25	15	17.38	12-2.88	24.38		12.92	12.75	....	18.25	10	0.5	....	....

## DIMENSIONS ARE IN INCHES

(A) Bolt hole diameter 1/8" larger than bolt diameter

(B) Standard bore dimensions provided. See bore chart for other wall thicknesses

(C) This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub

(D) Slip On's and Socket Welds are not included in ASME/ANSI code for 2500# Class.

(E) Sizes larger than 12" in 2500# can be quoted, but we would require a drawing to be supplied.

\*To be specified by purchaser

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

**LEHMAN**  
• PIPE & SUPPLY •

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
150 lb	1/2	1	1	2	1	2	2
	3/4	2	2	2	2	2	2
	1	2	2	2	2	2	3
	1¼	3	3	3	3	3	3
	1½	3	3	3	3	4	4
	2	5	5	5	5	5	6
	2½	8	8	8	8	7	10
	3	9	9	9	9	9	11.5
	3½	11	12	11	11	13	12
	4	13	13	13	13	17	16.5
	5	15	15	15	15	20	21
	6	19	19	19	19	27	26
	8	30	30	30	30	47	42
	10	43	43	43	43	70	54
	12	64	64	64	64	123	88
	14	90	90	90	105	140	114
	16	106	98	98	140	180	140
	18	130	130	130	160	220	165
	20	165	165	165	195	285	197
22	185	185	185	245	355	225	
24	220	220	220	275	430	268	

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

**LEHMAN**  
• PIPE & SUPPLY •

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
300 lb	1/2	2	2	3	2	2	2
	3/4	3	3	3	3	3	3
	1	3	3	3	3	4	4
	1¼	4.5	4.5	4	4.5	6	5
	1½	6.5	6.5	6	6.5	7	7
	2	7	7	7	7	8	9
	2½	10	10	10	10	12	12
	3	13	14	13	14.5	16	18
	3½	17	17	17	17	21	20
	4	23.5	24	22	24	28	26.5
	5	29	31	28	28	37	36
	6	39	39	39	39	50	45
	8	58	58	58	58	81	69
	10	81	81	81	91	124	100
	12	115	115	115	140	185	142
	14	165	165	165	190	250	206
	16	210	220	190	234	315	250
	18	253	280	250	305	414	320
	20	315	325	315	375	515	400
22	370	370	370	435	640	465	
24	490	490	475	550	800	580	

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

**LEHMAN**  
• PIPE & SUPPLY •

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
400 lb	1/2	2	2	2	2	2	3
	3/4	3	3	3	3	3	3.5
	1	3.5	3.5	3.5	3.5	4	4
	1¼	4.5	4.5	4.5	4.5	6	4.5
	1½	6.5	6.5	6.5	6.5	8	8
	2	8	8	8	8	10	10
	2½	12	12	12	11	15	14
	3	15	15	15	14	20	18
	3½	21	21	21	20	29	26
	4	26	26	26	25	33	35
	5	31	31	31	29	44	43
	6	44	44	44	42	61	57
	8	67	67	67	64	100	89
	10	91	91	91	110	155	125
	12	130	130	130	152	226	175
	14	191	191	191	210	310	233
	16	253	253	253	280	398	295
18	310	310	310	345	502	360	
20	378	378	378	420	621	445	
22	405	405	405	455	720	505	
24	539	539	539	615	936	640	

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

**LEHMAN**  
• PIPE & SUPPLY •

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
600 lb	1/2	2	2	2	2	3	3
	3/4	3	3	3	3	4	4
	1	4	4	4	4	4	4
	1¼	5	5	5	5	6	6
	1½	7	7	7	7	8	8
	2	9	9	9	9	10	12
	2½	13	13	13	12	15	18
	3	16	16	16	15	20	23
	3½	21	21	21	20	29	26
	4	37	37	37	36	41	42
	5	63	63	63	63	68	68
	6	80	80	80	78	86	81
	8	115	15	15	112	140	120
	10	177	177	177	195	231	190
	12	215	215	215	240	295	226
	14	259	259	259	290	378	347
	16	366	366	366	400	527	481
	18	476	476	476	469	665	555
20	612	612	612	604	855	690	
22	590	590	590	670	1000	720	
24	876	876	876	866	1250	977	

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

# LEHMAN

• PIPE & SUPPLY •

BUILT DIFFERENT SINCE 1946

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
900 lb	1/2	6	6	6	6	4	7
	3/4	6	6	6	6	6	7
	1	7.5	7.5	7.5	7.5	9	8.5
	1¼	10	10	10	10	10	10
	1½	14	14	14	14	14	14
	2	22	22	22	21	25	24
	2½	31	31	31	25	32	31
	3	36	36	36	29	35	36
	4	53	53	53	51	54	53
	5	83	83	83	81	87	86
	6	110	110	110	105	115	110
	8	172	172	172	190	200	187
	10	245	245	245	277	290	268
	12	326	326	326	371	415	372
	14	400	400	400	415	520	562
	16	459	459	459	488	619	685
	18	647	647	647	670	880	924
20	792	792	792	868	1107	1164	
24	1480	1480	1480	1659	2099	2107	

# ANSI B16.5 - 1/2" - 24" FORGED FLANGES

## APPROXIMATE WEIGHT LIST (LBS)

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
	1/2	6	6	6	6	4	7
	3/4	6	6	6	6	6	7
	1	8	8	8	8	9	9
	1¼	10	10	10	10	10	10
	1½	14	14	14	14	14	14
	2	25	25	25	25	25	25
	2½	36	36	36	35	35	36
	3	48	48	48	47	48	48
	4	73	73	73	75	73	73
	1500 lb	5	132	132	132	140	140
	6	165	165	165	170	160	165
	8	260	260	260	286	302	275
	10	436	436	436	485	510	455
	12	667	667	667	749	775	690
	14	940	940	940	890	975	940
	16	1250	1250	1250	1250	1300	1250
	18	1625	1625	1625	1475	1750	1625
	20	2050	2050	2050	1775	2225	2050
	24	2825	2825	2825	2825	3625	3325

CLASS	Nominal Pipe Size	Slip On	Threaded	Socket Weld	Lap Joint	Blind	Weld Neck
2500 lb	1/2	....	7	....	7	7	8
	3/4	....	9	....	8	10	9
	1	....	12	....	12	12	13
	1¼		18		17	18	20
	1½	.... ....	25	.... ....	24	25	28
	2	....	38	....	37	39	42
	2½		55		53	56	52
	3	....	83	....	80	86	94
	4	....	127	....	122	133	146
	5	....	210	....	204	223	244
	6	....	323	....	314	345	378
	8	....	485	....	471	533	576
	10	....	925	....	897	1025	1068
	12		1300		1262	1464	1608

# DIMENSIONAL TOLERANCES

## B16.5-2003

### THREADED | SOCKET WELD SLIP ON | LAP JOINT | BLIND

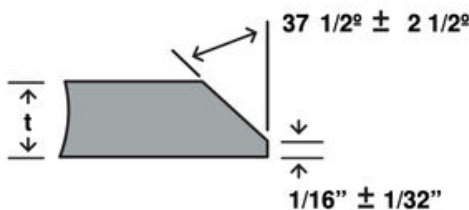
### WELD NECK

<b>Outside Diameter (1)</b>	when the O.D. is 24" or less	$\pm 1/16"$	
	when the O.D. is over 24"	$\pm 1/8"$	
<b>Inside Diameter</b>	Threaded	within limits on boring gauge	
	Socket-Welding, Slip On and Lap-Joint	$\leq 10" +1/32", -0"$ $\geq 12" +1/16", -0"$	
<b>Outside Diameter of Hub (1)</b>	$\leq 12"$	$+3/32"$ $-1/16"$	
	$\geq 14"$	$\pm 1/8"$	
<b>Diameter of Contact Face</b>	1/16" Raised Face	$\pm 1/32"$	
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$	
<b>Diameter of Counterbore</b>	Same as for Inside diameter		
<b>Drilling</b>	Bolt Circle	$\pm 1/16"$	
	Bolt Hole Spacing	$\pm 1/32"$	
	Concentricity of Bolt Circle with Respect to Facing	NPS $\leq 2 1/2"$	1/32" max
		NPS $\geq 3"$	1/16" max
<b>Thickness</b>	$\leq 18"$	$+1/8", -0"$	
	$\geq 20"$	$+3/16", -0"$	
<b>Length Through the Hub (1)</b>	$\leq 18"$	$+1/8", -1/32"$	
	$\geq 20"$	$+3/16", -1/16"$	

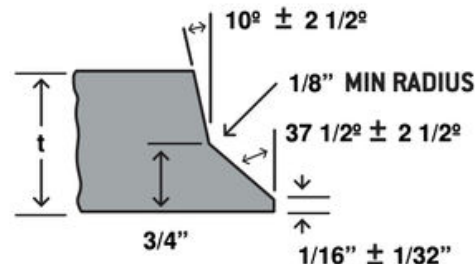
<b>Outside Diameter (1)</b>	when the O.D. is 24" or less	$\pm 1/16"$	
	when the O.D. is over 24"	$\pm 1/8"$	
<b>Inside Diameter</b>	$\leq 10"$	$\pm 1/32"$	
	12" through 18" $\geq 20"$	$\pm 1/16"$ $+1/8"$ $-1/16"$	
<b>Diameter of Contact Face</b>	1/16" Raised Face	$\pm 1/32"$	
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$	
<b>Diameter of Hub at Base (1)</b>	when Hub Base is 24" or less	$+1/16"$	
	when Hub Base is over 24"	$\pm 1/8"$	
<b>Diameter of Hub at Point of Welding</b>	NPS $\leq 5"$	$+3/32"$ $-1/32"$	
	NPS $\leq 6"$	$+5/32"$ $1/32"$	
<b>Drilling</b>	Bolt Circle	$\pm 1/16"$	
	Bolt Hole Spacing	$\pm 1/32"$	
	Concentricity of Bolt Circle with Respect to Facing	NPS $\leq 2 1/2"$	1/32" max
		NPS $\geq 3"$	1/16" max
<b>Thickness</b>	$\leq 18"$	$+1/8", -0"$	
	$\geq 20"$	$+3/16", -0"$	
<b>Length Through the Hub</b>	NPS $\leq 4"$	$\pm 1/16"$	
	$5 \leq \text{NPS} \leq 10"$	$+1/16", -1/8"$	
	$\geq 12"$	$+1/8", -3/16"$	

### WELDING BEVEL STANDARDS

For wall thickness "t" 3/16" to 3/4" included



For wall thickness "t" greater than 3/4"



# BOLT AND STUD DIMENSIONS

## ASME B16.5

Nominal Pipe Size	150 LB. Flanges				300 LB. Flanges				600 LB. Flanges			
	# Bolts or Studs	Dia of Bolts or Studs	Length of Stud		# Bolts or Studs	Dia of Bolts or Studs	Length of Stud		# Bolts or Studs	Dia of Bolts or Studs	Length of Stud	
			1/16 RF	RTJ			1/16 RF	RTJ			1/4 RF	RTJ
1/2	4	0.5	2-1/4	-	4	0.5	2-1/2	3	4	0.5	3	3
3/4	4	0.5	2-1/2	-	4	0.63	3	3-1/2	4	0.63	3-1/2	3-1/2
1	4	0.5	2-1/2	3	4	0.63	3	3-1/2	4	0.63	3-1/2	3-1/2
1-1/4	4	0.5	2-3/4	3-1/4	4	0.63	3-1/4	3-3/4	4	0.63	3-3/4	3-3/4
1-1/2	4	0.5	2-3/4	3-1/4	4	0.75	3-1/2	4	4	0.75	4-1/4	4-1/4
2	4	0.63	3-1/4	3-3/4	8	0.63	3-1/2	4	8	0.63	4-1/4	4-1/4
2-1/2	4	0.63	3-1/2	4	8	0.75	4	4-1/2	8	0.75	4-3/4	4-3/4
3	4	0.63	3-1/2	4	8	0.75	4-1/4	4-3/4	8	0.75	5	5
3-1/2	8	0.63	3-1/2	4	8	0.75	4-1/4	5	8	0.88	5-1/2	5-1/2
4	8	0.63	3-1/2	4	8	0.75	4-1/2	5	8	0.88	5-3/4	5-3/4
5	8	0.75	3-3/4	4-1/4	8	0.75	4-3/4	5-1/4	8	1	6-1/2	6-1/2
6	8	0.75	4	4-1/2	12	0.75	4-3/4	5-1/2	12	1	6-3/4	6-3/4
8	8	0.75	4-1/4	4-3/4	12	0.88	5-1/2	6	12	1.13	7-1/2	7-3/4
10	12	0.88	4-1/2	5	16	1	6-1/4	6-3/4	16	1.25	8-1/2	8-1/2
12	12	0.88	4-3/4	5-1/4	16	1.13	6-3/4	7-1/4	20	1.25	8-3/4	8-3/4
14	12	1	5-1/4	5-3/4	20	1.13	7	7-1/2	20	1.38	9-1/4	9-1/4
16	16	1	5-1/4	5-3/4	20	1.25	7-1/2	8	20	1.5	10	10
18	16	1.13	5-3/4	6-1/4	24	1.25	7-3/4	8-1/4	20	1.63	10-3/4	10-3/4
20	20	1.13	6-1/4	6-3/4	24	1.25	8	8-3/4	24	1.63	11-1/4	11-1/2
24	20	1.25	6-3/4	7-1/4	24	1.50	9	10	24	1.88	13	13-1/4

Nominal Pipe Size	900 LB. Flanges				1500 LB. Flanges				2500 LB. Flanges			
	# Bolts or Studs	Dia of Bolts or Studs	Length of Stud		# Bolts or Studs	Dia of Bolts or Studs	Length of Stud		# Bolts or Studs	Dia of Bolts or Studs	Length of Stud	
			1/4 RF	RTJ			1/4 RF	RTJ			1/4 RF	RTJ
1/2	4	0.75	4-1/4	4-1/4	4	0.75	4-1/4	4-1/4	4	0.75	4-3/4	4-3/4
3/4	4	0.75	4-1/2	4-1/2	4	0.75	4-1/2	4-1/2	4	0.75	5	5
1	4	0.88	5	5	4	0.88	5	5	4	0.88	5-1/2	5-1/2
1-1/4	4	0.88	5	5	4	0.88	5	5	4	1	6	6
1-1/2	4	1	5-1/2	5-1/2	4	1	5-1/2	5-1/2	4	1.13	6-3/4	6-3/4
2	8	0.88	5-3/4	5-3/4	8	0.88	5-3/4	5-3/4	8	1	7	7
2-1/2	8	1	6-1/4	6-1/4	8	1	6-1/4	6-1/4	8	1.13	7-3/4	8
3	8	0.88	5-3/4	5-3/4	8	1.13	7	7	8	1.25	8-3/4	9
4	8	1.13	6-3/4	6-3/4	8	1.25	7-3/4	7-3/4	8	1.5	10	10-1/4
5	8	1.25	7-1/2	7-1/2	8	1.5	9-3/4	9-3/4	8	1.75	11-3/4	12-1/4
6	12	1.13	7-1/2	7-3/4	12	1.38	10-1/4	10-1/2	8	2	13-1/2	14
8	12	1.38	8-3/4	8-3/4	12	1.63	11-1/2	12-3/4	12	2	15	15-1/2
10	16	1.38	9-1/4	9-1/4	12	1.88	13-1/4	13-1/2	12	2.5	19-1/4	20
12	20	1.38	10	10	16	2	14-3/4	15-1/4	12	2.75	21-1/4	22
14	20	1.5	10-3/4	11	16	2.25	16	16-3/4	-	-	-	-
16	20	1.63	11-1/4	11-1/2	16	2.5	17-1/2	18-1/2	-	-	-	-
18	20	1.88	12-3/4	13-1/4	16	2.75	19-1/2	20-3/4	-	-	-	-
20	20	2	13-3/4	14-1/4	16	3	21-1/4	22-1/4	-	-	-	-
24	20	2.5	17-1/4	18	16	3.5	24-1/4	25-1/2	-	-	-	-

DIMENSIONS ARE IN INCHES

# **NOTE**

## **ASME B16.47**

ASME has incorporated most of the MSS-SP44 specification into B16.47 Series A and most of the API 605 specification into B16.47 Series B. They have also added Blind Flanges to these two specs. You may note that either spec only includes Weld Necks and Blinds.

For Slip On's over 24", please specify one of the following:

- a. Industry standard per B16.1 dims (125LW, 125/150, 250)
- b. AWWA C207 (Rings or Hubs and Class B, D, E, or F)
- c. Boiler code flanges (75#, 175#, 350#)
- d. SO to Ser A or Ser B dims. We have now included these dimensions on pp 28-30.

For a more detailed explanation of large diameter slip on's please see the FAQ page at [www.texasflange.com](http://www.texasflange.com).

If you need help deciding which flange best suits your application, feel free to contact us.