

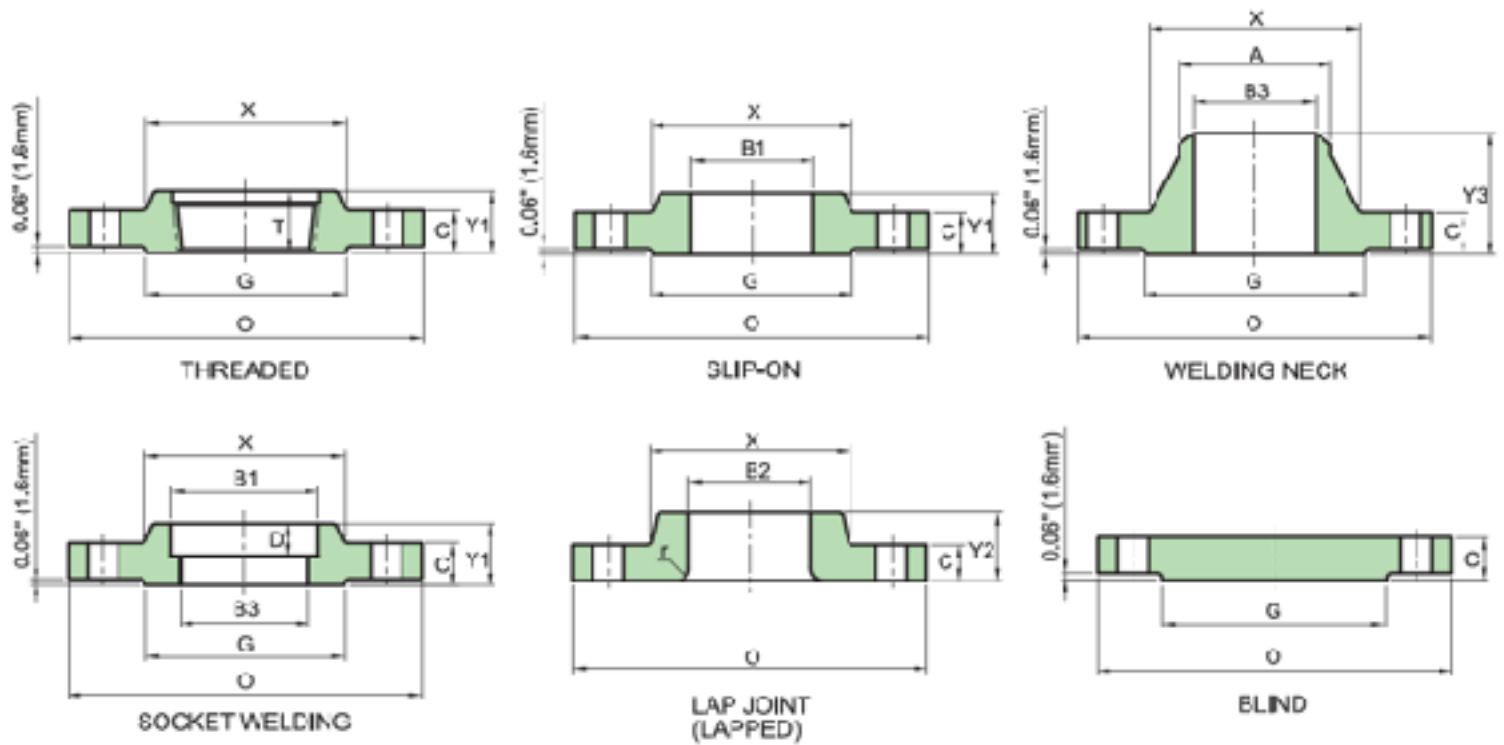
Catálogo



ACEROS
ALTAVISTA

Bridas

CLASS 150 FLANGES ANSI 16.5 FORGED FLANGES



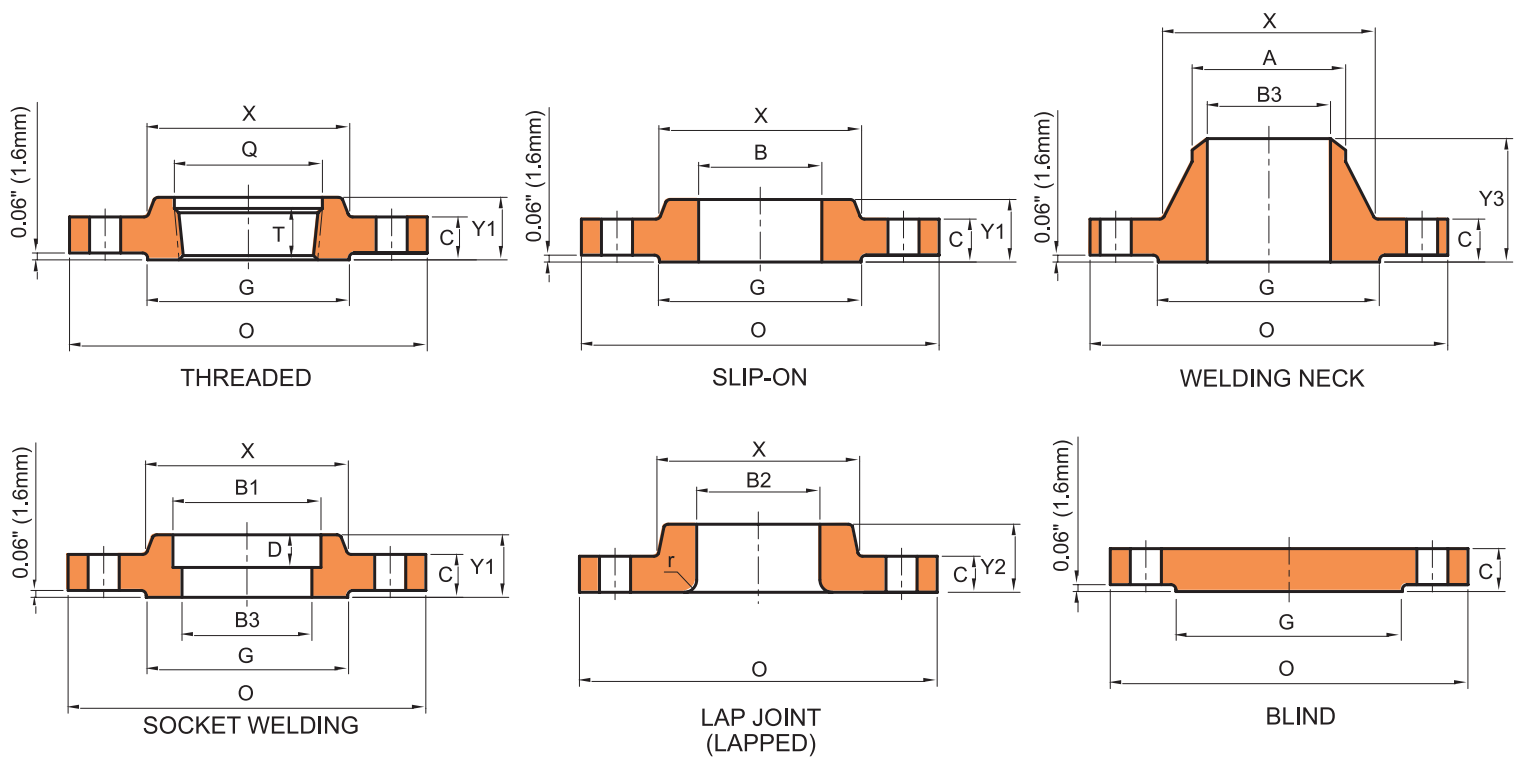
Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	O.D of Raised Face	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB			Thread Length	BORE			Corner Radius of Bore of Lapped Flange	Depth of Socket	DRILLING				LENGTH OF STUD BOLTS			
						Threaded Slip-on Socket Welding	Lapped	Welding Neck		Slip-on Socket Welding	Lapped	Welding Neck Socket Welding			Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Machine Bolts		Stud Bolts	
																			0.06 in Raised Face	0.06 in Raised Face	Ring Joint	
	O	C	X	G	A	Y1	Y2	Y3	T	B1	B2	B3	r	D								
1/2	3.50	0.44	1.19	1.38	0.84	0.62	0.62	1.88	0.62	0.88	0.90	0.62	0.12	0.38	2.38	0.62	4	1/2	2.00	2.25	-	
3/4	3.88	0.50	1.50	1.69	1.05	0.62	0.62	2.06	0.62	1.09	1.11	0.82	0.12	0.44	2.75	0.62	4	1/2	2.00	2.50	-	
1	4.25	0.56	1.94	2.00	1.32	0.69	0.69	2.19	0.69	1.36	1.38	1.05	0.12	0.50	3.12	0.62	4	1/2	2.25	2.50	3.00	
1 1/4	4.62	0.62	2.31	2.50	1.66	0.81	0.81	2.25	0.81	1.70	1.72	1.38	0.19	0.56	3.50	0.62	4	1/2	2.25	2.75	3.25	
1 1/2	5.00	0.69	2.56	2.88	1.90	0.88	0.88	2.44	0.88	1.95	1.97	1.61	0.25	0.62	3.88	0.62	4	1/2	2.50	2.75	3.25	
2	6.00	0.75	3.06	3.62	2.38	1.00	1.00	2.50	1.00	2.44	2.46	2.07	0.31	0.69	4.75	0.75	4	5/8	2.75	3.25	3.75	
2 1/2	7.00	0.88	3.56	4.12	2.88	1.12	1.12	2.75	1.12	2.94	2.97	2.47	0.31	0.75	5.50	0.75	4	5/8	3.00	3.50	4.00	
3	7.50	0.94	4.25	5.00	3.50	1.19	1.19	2.75	1.19	3.57	3.60	3.07	0.38	0.81	6.00	0.75	4	5/8	3.00	3.50	4.00	
3 1/2	8.50	0.94	4.81	5.50	4.00	1.25	1.25	2.81	1.25	4.07	4.10	3.55	0.38	-	7.00	0.75	8	5/8	3.00	3.50	4.00	
4	9.00	0.94	5.31	6.19	4.50	1.31	1.31	3.00	1.31	4.57	4.60	4.03	0.44	-	7.50	0.75	8	5/8	3.00	3.50	4.00	
5	10.00	0.94	6.44	7.31	5.56	1.44	1.44	3.50	1.44	5.66	5.69	5.05	0.44	-	8.50	0.88	8	3/4	3.25	3.75	4.25	
6	11.00	1.00	7.56	8.50	6.63	1.56	1.56	3.50	1.56	6.72	6.75	6.07	0.50	-	9.50	0.88	8	3/4	3.25	4.00	4.50	
8	13.50	1.12	9.69	10.62	8.63	1.75	1.75	4.00	1.75	8.72	8.75	7.98	0.50	-	11.75	0.88	8	3/4	3.50	4.25	4.75	
10	16.00	1.19	12.00	12.75	10.75	1.94	1.94	4.00	1.94	10.88	10.92	10.02	0.50	-	14.25	1.00	12	7/8	4.00	4.50	5.00	
12	19.00	1.25	14.38	15.00	12.75	2.19	2.19	4.50	2.19	12.88	12.92	12.00	0.50	-	17.00	1.00	12	7/8	4.00	4.75	5.25	
14	21.00	1.38	15.75	16.25	14.00	2.25	3.12	5.00	2.25	14.14	14.18	To be specified by purchaser	0.50	-	18.75	1.12	12	1	4.50	5.25	5.75	
16	23.50	1.44	18.00	18.50	16.00	2.50	3.44	5.00	2.50	16.16	16.19		0.50	-	21.25	1.12	16	1	4.50	5.25	5.75	
18	25.00	1.56	19.88	21.00	18.00	2.69	3.81	5.50	2.69	18.18	18.20		0.50	-	22.75	1.25	16	1 1/8	5.00	5.75	6.25	
20	27.50	1.69	22.00	23.00	20.00	2.88	4.06	5.69	2.88	20.20	20.25		0.50	-	25.00	1.25	20	1 1/8	5.50	6.25	6.75	
24	32.00	1.88	26.12	27.25	24.00	3.25	4.38	6.00	3.25	24.25	24.25		0.50	-	29.50	1.38	20	1 1/4	6.00	6.75	7.25	

NOTE :

- Class 150 flanges except Lap Joint will be furnished with 0.06 " (1.6mm) raised face, which is included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
- For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

CLASS 300 FLANGES ANSI 16.5 FORGED FLANGES



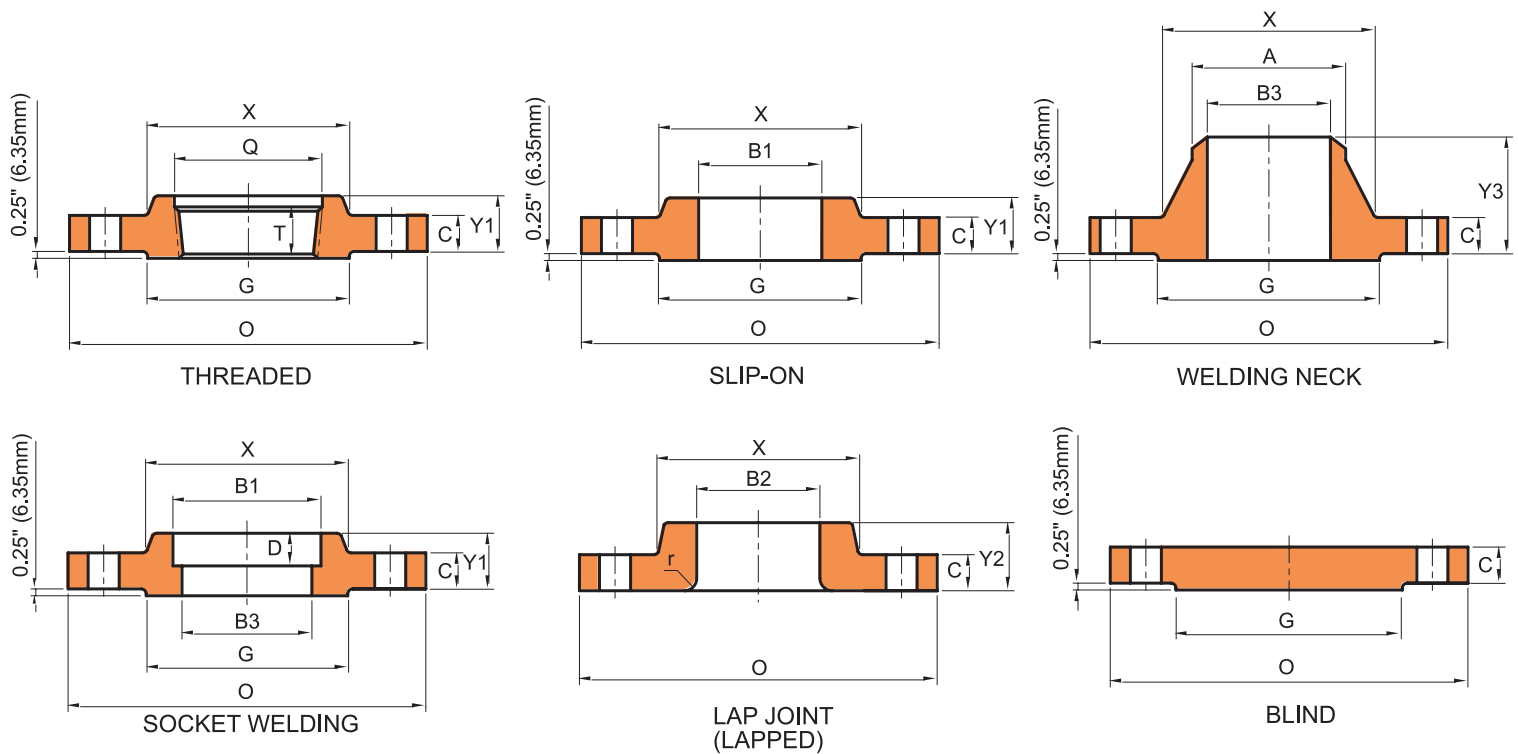
Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	O.D of Raised Face	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB			Thread Length	BORE			Comer Radius of Bore of Lapped Flange	Counter Bore Thread ed Flange Min.	Depth of Socket	DRILLING				LENGTH OF STUD BOLTS		
						Threaded Slip-on Socket Welding	Lapped	Welding Neck		Slip-on Socket Welding	Lapped	Welding Neck Socket Welding				Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Machine Bolts	Stud Bolts	
																					0.06 in Raised Face	0.06 in Raised Face
O	C	X	G	A	Y1	Y2	Y3	T	B1	B2	B3	r	Q	D								
1/2	3.75	0.56	1.50	1.38	0.84	0.88	0.88	2.06	0.62	0.88	0.90	0.62	0.12	0.93	0.38	2.62	0.62	4	1/2	2.25	2.50	3.00
3/4	4.62	0.62	1.88	1.69	1.05	1.00	1.00	2.25	0.62	1.09	1.11	0.82	0.12	1.14	0.44	3.25	0.75	4	5/8	2.50	3.00	3.50
1	4.88	0.69	2.12	2.00	1.32	1.06	1.06	2.44	0.69	1.36	1.38	1.05	0.12	1.41	0.50	3.50	0.75	4	5/8	2.50	3.00	3.50
1 1/4	5.25	0.75	2.50	2.50	1.66	1.06	1.06	2.56	0.81	1.70	1.72	1.38	0.19	1.75	0.56	3.88	0.75	4	5/8	2.75	3.25	3.75
1 1/2	6.12	0.81	2.75	2.88	1.90	1.19	1.19	2.69	0.88	1.95	1.97	1.61	0.25	1.98	0.62	4.50	0.88	4	3/4	3.00	3.50	4.00
2	6.50	0.88	3.31	3.62	2.38	1.31	1.31	2.75	1.12	2.44	2.46	2.07	0.31	2.50	0.69	5.00	0.75	8	5/8	3.00	3.50	4.00
2 1/2	7.50	1.00	3.94	4.12	2.88	1.50	1.50	3.00	1.25	2.94	2.97	2.47	0.31	3.00	0.75	5.88	0.88	8	3/4	3.25	4.00	4.50
3	8.25	1.12	4.62	5.00	3.50	1.69	1.69	3.12	1.25	3.57	3.60	3.07	0.38	3.63	0.81	6.62	0.88	8	3/4	3.50	4.25	4.75
3 1/2	9.00	1.19	5.25	5.50	4.00	1.75	1.75	3.19	1.44	4.07	4.10	3.55	0.38	4.13	-	7.25	0.88	8	3/4	3.75	4.25	5.00
4	10.00	1.25	5.75	6.19	4.50	1.88	1.88	3.38	1.44	4.57	4.60	4.03	0.44	4.63	-	7.88	0.88	8	3/4	3.75	4.50	5.00
5	11.00	1.38	7.00	7.31	5.56	2.00	2.00	3.88	1.69	5.66	5.69	5.05	0.44	5.69	-	9.25	0.88	8	3/4	4.25	4.75	5.25
6	12.50	1.44	8.12	8.50	6.63	2.06	2.06	3.88	1.81	6.72	6.75	6.07	0.50	6.75	-	10.62	0.88	12	3/4	4.25	4.75	5.50
8	15.00	1.62	10.25	10.62	8.63	2.44	2.44	4.38	2.00	8.72	8.75	7.98	0.50	8.75	-	13.00	1.00	12	7/8	4.75	5.50	6.00
10	17.50	1.88	12.62	12.75	10.75	2.62	3.75	4.62	2.19	10.88	10.92	10.02	0.50	10.88	-	15.25	1.12	16	1	5.50	6.25	6.75
12	20.50	2.00	14.75	15.00	12.75	2.88	4.00	5.12	2.38	12.88	12.92	12.00	0.50	12.94	-	17.75	1.25	16	1 1/8	5.75	6.75	7.25
14	23.00	2.12	16.75	16.25	14.00	3.00	4.38	5.62	2.50	14.14	14.18	To be specified by purchaser	0.50	14.19	-	20.25	1.25	20	1 1/8	6.25	7.00	7.50
16	25.50	2.25	19.00	18.50	16.00	3.25	4.75	5.75	2.69	16.16	16.19		0.50	16.19	-	22.50	1.38	20	1 1/4	6.50	7.50	8.00
18	28.00	2.38	21.00	21.00	18.00	3.50	5.12	6.25	2.75	18.18	18.20		0.50	18.19	-	24.75	1.38	24	1 1/4	6.75	7.75	8.25
20	30.50	2.50	23.12	23.00	20.00	3.75	5.50	6.38	2.88	20.20	20.25		0.50	20.19	-	27.00	1.38	24	1 1/4	7.25	8.00	8.75
24	36.00	2.75	27.62	27.25	24.00	4.19	6.00	6.62	3.25	24.25	24.25		0.50	24.19	-	32.00	1.62	24	1 1/2	8.00	9.00	10.00

NOTE :

- Class 300 flanges except Lap Joint will be furnished with 0.06 " (1.6mm) raised face, which is included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
- For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

CLASS 600 FLANGES ANSI 16.5 FORGED FLANGES



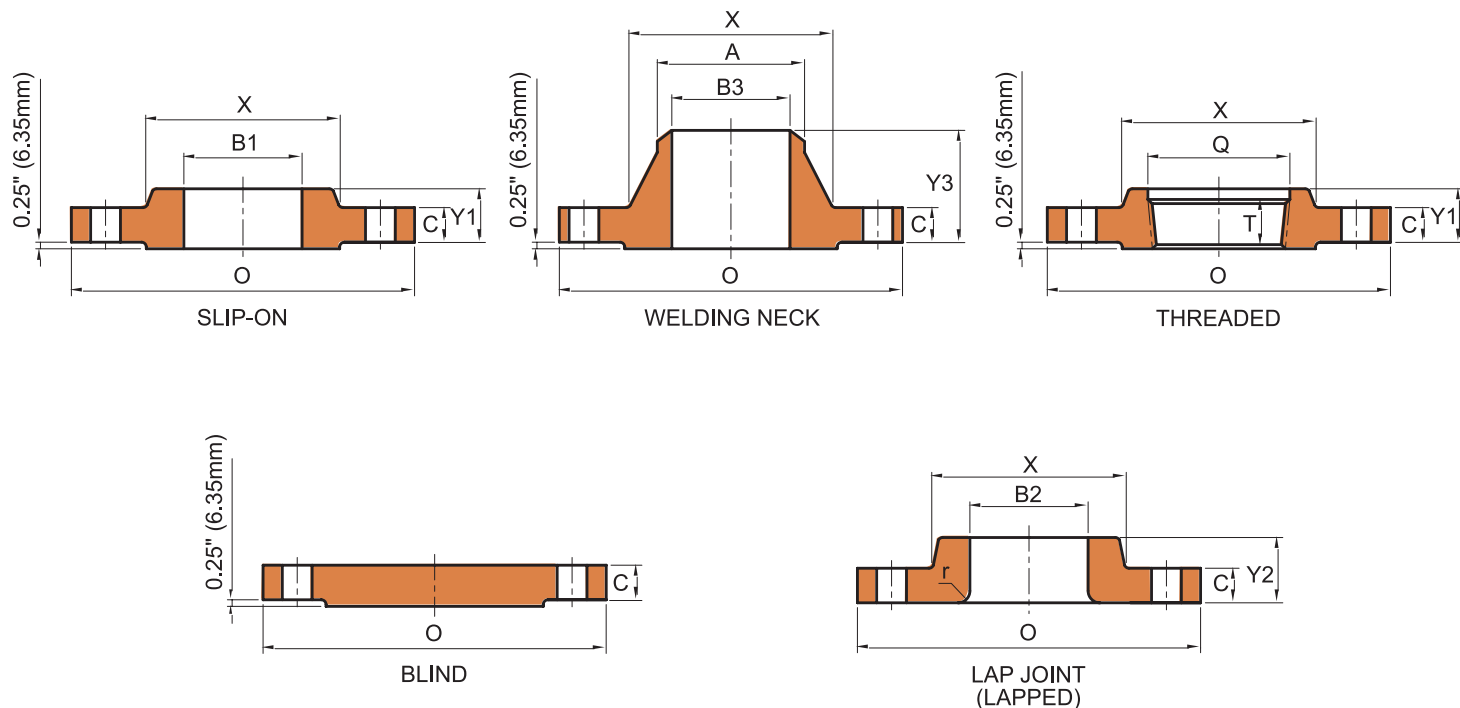
Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	O.D of Raised Face	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB			Thread Length	BORE			Corner Radius of Bore of Lapped Flange	Counter Bore Threaded Flange Min.	Depth of Socket	DRILLING				LENGTH OF STUD BOLTS		
						Threaded Slip-on Socket Welding	Lapped	Welding Neck		Slip-on Socket Welding	Lapped	Welding Neck Socket Welding				Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Raised Face (0.25 Inch)	Male & Female or Tongue & Groove	Ring Joint
						O	C	X		G	A	Y1				Y2	Y3	T	B1	B2	B3	r
1/2	3.75	0.56	1.50	1.38	0.84	0.88	0.88	2.06	0.62	0.88	0.90	To be specified by purchaser.	0.12	0.93	0.38	2.62	0.62	4	1/2	3.00	2.75	3.00
3/4	4.62	0.62	1.88	1.69	1.05	1.00	1.00	2.25	0.62	1.09	1.11		0.12	1.14	0.44	3.25	0.75	4	5/8	3.50	3.25	3.50
1	4.88	0.69	2.12	2.00	1.32	1.06	1.06	2.44	0.69	1.36	1.38		0.12	1.41	0.50	3.50	0.75	4	5/8	3.50	3.25	3.50
1 1/4	5.25	0.81	2.50	2.50	1.66	1.12	1.12	2.62	0.81	1.70	1.72		0.19	1.75	0.56	3.88	0.75	4	5/8	3.75	3.50	3.75
1 1/2	6.12	0.88	2.75	2.88	1.90	1.25	1.25	2.75	0.88	1.95	1.97		0.25	1.99	0.62	4.50	0.88	4	3/4	4.25	4.00	4.25
2	6.50	1.00	3.31	3.62	2.38	1.44	1.44	2.88	1.12	2.44	2.46		0.31	2.50	0.69	5.00	0.75	8	5/8	4.25	4.00	4.25
2 1/2	7.50	1.12	3.94	4.12	2.88	1.62	1.62	3.12	1.25	2.94	2.97		0.31	3.00	0.75	5.88	0.88	8	3/4	4.75	4.50	4.75
3	8.25	1.25	4.62	5.00	3.50	1.81	1.81	3.25	1.38	3.57	3.60		0.38	3.63	0.81	6.62	0.88	8	3/4	5.00	4.75	5.00
3 1/2	9.00	1.38	5.25	5.50	4.00	1.94	1.94	3.38	1.56	4.07	4.10		0.38	4.13	-	7.25	1.00	8	7/8	5.50	5.25	5.50
4	10.75	1.50	6.00	6.19	4.50	2.12	2.12	4.00	1.62	4.57	4.60		0.44	4.63	-	8.50	1.00	8	7/8	5.75	5.50	5.75
5	13.00	1.75	7.44	7.31	5.56	2.38	2.38	4.50	1.88	5.66	5.69		0.44	5.69	-	10.50	1.12	8	1	6.50	6.25	6.50
6	14.00	1.88	8.75	8.50	6.63	2.62	2.62	4.62	2.00	6.72	6.75		0.50	6.75	-	11.50	1.12	12	1	6.75	6.50	6.75
8	16.50	2.19	10.75	10.62	8.63	3.00	3.00	5.25	2.25	8.72	8.75		0.50	8.75	-	13.75	1.25	12	1 1/8	7.50	7.25	7.75
10	20.00	2.50	13.50	12.75	10.75	3.38	4.38	6.00	2.56	10.88	10.92		0.50	10.88	-	17.00	1.38	16	1 1/4	8.50	8.25	8.50
12	22.00	2.62	15.75	15.00	12.75	3.62	4.62	6.12	2.75	12.88	12.92		0.50	12.94	-	19.25	1.38	20	1 1/4	8.75	8.50	8.75
14	23.75	2.75	17.00	16.25	14.00	3.69	5.00	6.50	2.88	14.14	14.18		0.50	14.19	-	20.75	1.50	20	1 3/8	9.25	9.00	9.25
16	27.00	3.00	19.50	18.50	16.00	4.19	5.50	7.00	3.06	16.16	16.19		0.50	16.19	-	23.75	1.62	20	1 1/2	10.00	9.75	10.00
18	29.25	3.25	21.50	21.00	18.00	4.62	6.00	7.25	3.12	18.18	18.20		0.50	18.19	-	25.75	1.75	20	1 5/8	10.75	10.50	10.75
20	32.00	3.50	24.00	23.00	20.00	5.00	6.50	7.50	3.25	20.20	20.25		0.50	20.19	-	28.50	1.75	24	1 5/8	11.25	11.00	11.50
24	37.00	4.00	28.25	27.25	24.00	5.50	7.25	8.00	3.62	24.25	24.25		0.50	24.19	-	33.00	2.00	24	1 7/8	13.00	12.75	13.25

NOTE :

- Class 600 flanges except Lap Joint will be furnished with 0.25 " (6.35mm) raised face, which is not included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
- For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or taper within the limits of 7 degrees.

CLASS 900 FLANGES ANSI 16.5 FORGED FLANGES



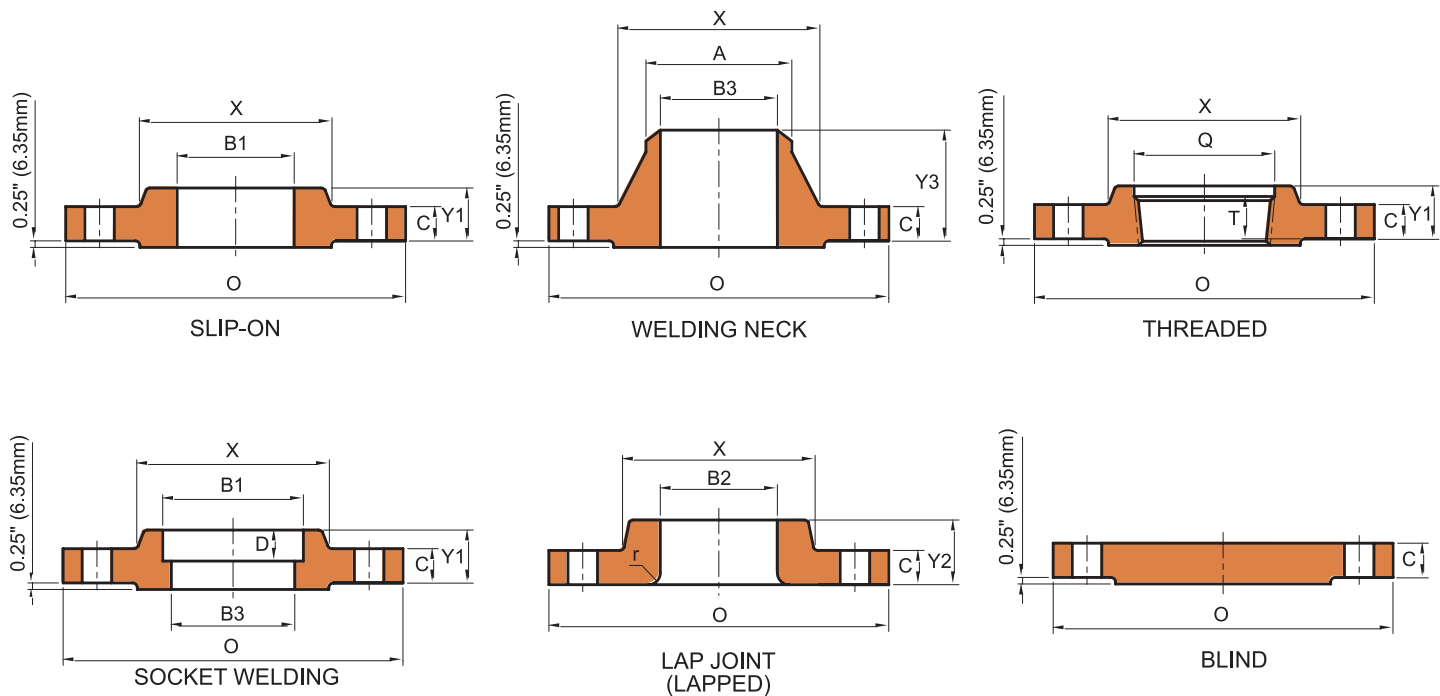
Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB				BORE			Corner Radius of Bore of Lapped Flange	Counter bore Threaded Flange Min.	DRILLING				LENGTH OF STUD BOLTS		
					Threaded Slip-on	Lapped	Welding Neck	Thread Length	Slip-on	Lapped	Welding Neck			Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Raised Face (0.25 Inch)	Male & Female or Tongue & Groove	Ring Joint
	O	C	X	A	Y1	Y2	Y3	T	B1	B2	B3	r	Q							
1/2	4.75	0.88	1.50	0.84	1.25	1.25	2.38	0.88	0.88	0.90	To be specified by purchaser.	0.12	0.93	3.25	0.88	4	3/4	4.25	4.00	4.25
3/4	5.12	1.00	1.75	1.05	1.38	1.38	2.75	1.00	1.09	1.11		0.12	1.14	3.50	0.88	4	3/4	4.50	4.25	4.50
1	5.88	1.12	2.06	1.32	1.62	1.62	2.88	1.12	1.36	1.38		0.12	1.41	4.00	1.00	4	7/8	5.00	4.75	5.00
1 1/4	6.25	1.12	2.50	1.66	1.62	1.62	2.88	1.19	1.70	1.72		0.19	1.75	4.38	1.00	4	7/8	5.00	4.75	5.00
1 1/2	7.00	1.25	2.75	1.90	1.75	1.75	3.25	1.25	1.95	1.97		0.25	1.99	4.88	1.12	4	1	5.50	5.25	5.50
2	8.50	1.50	4.12	2.38	2.25	2.25	4.00	1.50	2.44	2.46		0.31	2.50	6.50	1.00	8	7/8	5.75	5.50	5.75
2 1/2	9.62	1.62	4.88	2.88	2.50	2.50	4.12	1.88	2.94	2.97		0.31	3.00	7.50	1.12	8	1	6.25	6.00	6.25
3	9.50	1.50	5.00	3.50	2.12	2.12	4.00	1.62	3.57	3.60		0.38	3.63	7.50	1.00	8	7/8	5.75	5.50	5.75
4	11.50	1.75	6.25	4.50	2.75	2.75	4.50	1.88	4.57	4.60		0.44	4.63	9.25	1.25	8	1 1/8	6.75	6.50	6.75
5	13.75	2.00	7.50	5.56	3.12	3.12	5.00	2.12	5.66	5.69		0.44	5.69	11.00	1.38	8	1 1/4	7.50	7.25	7.50
6	15.00	2.19	9.25	6.63	3.38	3.38	5.50	2.25	6.72	6.75		0.50	6.75	12.50	1.25	12	1 1/8	7.50	7.25	7.75
8	18.50	2.50	11.75	8.63	4.00	4.50	6.38	2.50	8.72	8.75		0.50	8.75	15.50	1.50	12	1 3/8	8.75	8.50	8.75
10	21.50	2.75	14.50	10.75	4.25	5.00	7.25	2.81	10.88	10.92		0.50	10.88	18.50	1.50	16	1 3/8	9.25	9.00	9.25
12	24.00	3.12	16.50	12.75	4.62	5.62	7.88	3.00	12.88	12.92		0.50	12.94	21.00	1.50	20	1 3/8	10.00	9.75	10.00
14	25.25	3.38	17.75	14.00	5.12	6.12	8.38	3.25	14.14	14.18		0.50	14.19	22.00	1.62	20	1 1/2	10.75	10.50	11.00
16	27.75	3.50	20.00	16.00	5.25	6.50	8.50	3.38	16.16	16.19		0.50	16.19	24.25	1.75	20	1 5/8	11.25	11.00	11.50
18	31.00	4.00	22.25	18.00	6.00	7.50	9.00	3.50	18.18	18.20		0.50	18.19	27.00	2.00	20	1 7/8	12.75	12.50	13.25
20	33.75	4.25	24.50	20.00	6.25	8.25	9.75	3.62	20.20	20.25		0.50	20.19	29.50	2.12	20	2	13.75	13.50	14.25
24	41.00	5.50	29.50	24.00	8.00	10.50	11.50	4.00	24.25	24.25		0.50	24.19	35.50	2.62	20	2 1/2	17.25	17.00	18.00

NOTE :

- Class 900 flanges except Lap Joint will be furnished with 0.25 " (6.35mm) raised face, which is not included in 'Thickness' (C) and 'Length through Hub' (Y1), (Y3).
- For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.

CLASS 1500 FLANGES ANSI 16.5 FORGED FLANGES

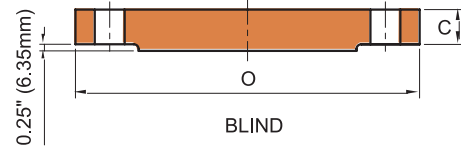
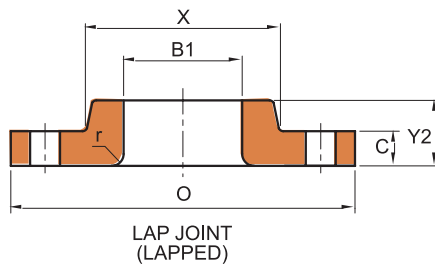
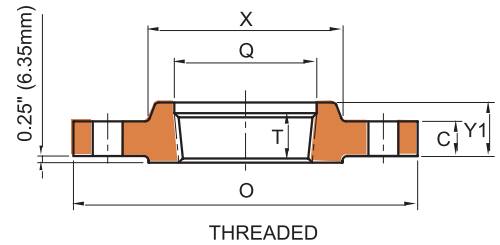
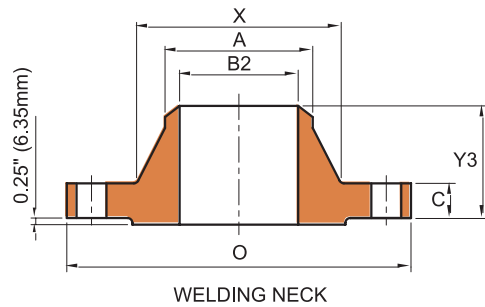


Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB			Thread Length	BORE			Corner Radius of Bore of Lapped Flange	Counter bore Threaded Flange Min.	Depth of Socket	DRILLING				LENGTH OF STUD BOLTS		
					Threaded Slip-on Socket Welding	Lapped	Welding Neck		Slip-on Socket Welding	Lapped	Welding Neck Socket Welding				Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Raised Face (0.25 Inch)	Male & Female or Tongue & Groove	Ring Joint
	O	C	X	A	Y1	Y2	Y3	T	B1	B2	B3	r	Q	D							
1/2	4.75	0.88	1.50	0.84	1.25	1.25	2.38	0.88	0.88	0.90	To be specified by Purchaser.	0.12	0.93	0.38	3.25	0.88	4	3/4	4.25	4.00	4.25
3/4	5.12	1.00	1.75	1.05	1.38	1.38	2.75	1.00	1.09	1.11		0.12	1.14	0.44	3.50	0.88	4	3/4	4.50	4.25	4.50
1	5.88	1.12	2.06	1.32	1.62	1.62	2.88	1.12	1.36	1.38		0.12	1.41	0.50	4.00	1.00	4	7/8	5.00	4.75	5.00
1 1/4	6.25	1.12	2.50	1.66	1.62	1.62	2.88	1.19	1.70	1.72		0.19	1.75	0.56	4.38	1.00	4	7/8	5.00	4.75	5.00
1 1/2	7.00	1.25	2.75	1.90	1.75	1.75	3.25	1.25	1.95	1.97		0.25	1.99	0.62	4.88	1.12	4	1	5.50	5.25	5.50
2	8.50	1.50	4.12	2.38	2.25	2.25	4.00	1.50	2.44	2.46		0.31	2.50	0.69	6.50	1.00	8	7/8	5.75	5.50	5.75
2 1/2	9.62	1.62	4.88	2.88	2.50	2.50	4.12	1.88	2.94	2.97		0.31	3.00	0.75	7.50	1.12	8	1	6.25	6.00	6.25
3	10.50	1.88	5.25	3.50	-	2.88	4.62	-	-	3.60		0.38	-	-	8.00	1.25	8	1 1/8	7.00	6.75	7.00
4	12.25	2.12	6.38	4.50	-	3.56	4.88	-	-	4.60		0.44	-	-	9.50	1.38	8	1 1/4	7.75	7.50	7.75
5	14.75	2.88	7.75	5.56	-	4.12	6.12	-	-	5.69		0.44	-	-	11.50	1.62	8	1 1/2	9.75	9.50	9.75
6	15.50	3.25	9.00	6.63	-	4.69	6.75	-	-	6.75		0.50	-	-	12.50	1.50	12	1 3/8	10.25	10.00	10.50
8	19.00	3.62	11.50	8.63	-	5.62	8.38	-	-	8.75		0.50	-	-	15.50	1.75	12	1 5/8	11.50	11.25	12.75
10	23.00	4.25	14.50	10.75	-	7.00	10.00	-	-	10.92		0.50	-	-	19.00	2.00	12	1 7/8	13.25	13.00	13.50
12	26.50	4.88	17.75	12.75	-	8.62	11.12	-	-	12.92		0.50	-	-	22.50	2.12	16	2	14.75	14.50	15.25
14	29.50	5.25	19.50	14.00	-	9.50	11.75	-	-	14.18		0.50	-	-	25.00	2.38	16	2 1/4	16.00	15.75	16.75
16	32.50	5.75	21.75	16.00	-	10.25	12.25	-	-	16.19		0.50	-	-	27.75	2.62	16	2 1/2	17.50	17.25	18.50
18	36.00	6.38	23.50	18.00	-	10.88	12.88	-	-	18.20		0.50	-	-	30.50	2.88	16	2 3/4	19.50	19.25	20.75
20	38.75	7.00	25.25	20.00	-	11.50	14.00	-	-	20.25		0.50	-	-	32.75	3.12	16	3	21.25	21.00	22.25
24	46.00	8.00	30.00	24.00	-	13.00	16.00	-	-	24.25		0.50	-	-	39.00	3.62	16	3 1/2	24.25	24.00	25.50

NOTE : B3 = Bore size to be specified by customer

CLASS 2500 FLANGES ANSI 16.5 FORGED FLANGES



Unit : inch

Nominal Pipe Size	Outside Diam. of Flanges	Thk. of Flange Min.	Diam. of Hub	Hub Diam. Chamfer of W.N	LENGTH THROUGH HUB				Thread Length	BORE		Comer Radius of Bore of Lapped Flange	Counter bore Threaded- Flange Min.	DRILLING				LENGTH OF STUD BOLTS		
					Threaded	Lapped	Welding Neck	Lapped		Welding Neck	Diam. of Bolt Circle			Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts	Raised Face (0.25 Inch)	Male & Female or Tongue & Groove	Ring Joint	
O	C	X	A	Y1	Y2	Y3	T	B1	B2	r	Q									
1/2	5.25	1.19	1.69	0.84	1.56	1.56	2.88	1.12	0.90	To be specified by Purchaser.	0.12	0.93	3.50	0.88	4	3/4	4.75	4.50	4.75	
3/4	5.50	1.25	2.00	1.05	1.69	1.69	3.12	1.25	1.11		0.12	1.14	3.75	0.88	4	3/4	5.00	4.75	5.00	
1	6.25	1.38	2.25	1.32	1.88	1.88	3.50	1.38	1.38		0.12	1.41	4.25	1.00	4	7/8	5.50	5.25	5.50	
1 1/4	7.25	1.50	2.88	1.66	2.06	2.06	3.75	1.50	1.72		0.19	1.75	5.12	1.12	4	1	6.00	5.75	6.00	
1 1/2	8.00	1.75	3.12	1.90	2.38	2.38	4.38	1.75	1.97		0.25	1.99	5.75	1.25	4	1 1/8	6.75	6.50	6.75	
2	9.25	2.00	3.75	2.38	2.75	2.75	5.00	2.00	2.46		0.31	2.50	6.75	1.12	8	1	7.00	6.75	7.00	
2 1/2	10.50	2.25	4.50	2.88	3.12	3.12	5.62	2.25	2.97		0.31	3.00	7.75	1.25	8	1 1/8	7.75	7.50	8.00	
3	12.00	2.62	5.25	3.50	-	3.62	6.62	-	3.60		0.38	-	9.00	1.38	8	1 1/4	8.75	8.50	9.00	
4	14.00	3.00	6.50	4.50	-	4.25	7.50	-	4.60		0.44	-	10.75	1.62	8	1 1/2	10.00	9.75	10.25	
5	16.50	3.62	8.00	5.56	-	5.12	9.00	-	5.69		0.44	-	12.75	1.88	8	1 3/4	11.75	11.50	12.25	
6	19.00	4.25	9.25	6.63	-	6.00	10.75	-	6.75		0.50	-	14.50	2.12	8	2	13.50	13.25	14.00	
8	21.75	5.00	12.00	8.63	-	7.00	12.50	-	8.75		0.50	-	17.25	2.12	12	2	15.00	14.75	15.50	
10	26.50	6.50	14.75	10.75	-	9.00	16.50	-	10.92	0.50	-	21.25	2.62	12	2 1/2	19.25	19.00	20.00		
12	30.00	7.25	17.38	12.75	-	10.00	18.25	-	12.92	0.50	-	24.38	2.88	12	2 3/4	21.25	21.00	22.00		

NOTE : B = Bore size to be specified by customer

APPROXIMATE WEIGHT OF FLANGES

FLANGE ANSI 16.5

SIZE	CLASS 150										CLASS 300									
	WELDING-NECK		SLIP-ON		LAP JOINT		THREADED		BLIND		WELDING-NECK		SLIP-ON		LAP JOINT		THREADED		BLIND	
	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb
1/2	0.7	1.5	0.4	0.9	0.4	0.9	0.4	0.9	0.5	1.1	0.8	1.8	0.7	1.5	0.7	1.5	0.7	1.5	0.8	1.8
3/4	0.8	1.8	0.7	1.5	0.7	1.5	0.7	1.5	0.8	1.8	1.4	3.1	1.2	2.6	1.2	2.6	1.2	2.6	1.2	2.6
1	1.1	2.4	0.8	1.8	0.8	1.8	0.8	1.8	0.9	2.0	1.7	3.7	1.4	3.1	1.4	3.1	1.4	3.1	1.5	3.3
1 1/4	1.5	3.3	1.2	2.6	1.1	2.4	1.2	2.6	1.3	2.9	2.2	4.8	1.8	4.0	1.8	4.0	1.9	4.2	2.0	4.4
1 1/2	1.8	4.0	1.4	3.1	1.4	3.1	1.5	3.3	1.6	3.5	3.2	7.0	2.7	6.0	2.7	6.0	2.8	6.2	2.9	6.4
2	2.7	6.0	2.2	4.8	2.2	4.8	2.3	5.1	2.6	5.7	3.6	7.9	3.2	7.0	3.2	7.0	3.3	7.3	3.5	7.7
2 1/2	4.4	9.8	3.5	7.7	3.5	7.7	3.7	8.1	4.1	9.0	5.4	12.0	4.5	9.9	4.5	9.9	4.6	10.1	5.3	11.7
3	5.2	11.5	3.8	8.4	3.8	8.4	4.1	9.0	5.1	11.2	7.3	16.1	5.9	13.0	5.9	13.0	6.3	13.9	7.2	15.9
3 1/2	6.4	14.2	5.0	11.0	5.0	11.0	5.1	11.2	6.5	14.3	8.9	19.6	7.5	16.5	7.5	16.5	7.8	17.2	9.2	20.3
4	7.5	16.6	5.6	12.3	5.6	12.3	5.9	13.0	7.5	16.5	11.8	26.0	10	22.0	10	22.0	10.2	22.4	12.2	26.8
5	9.2	20.2	6.5	14.3	6.5	14.3	7.0	15.4	9.2	20.3	16.0	35.2	12.5	27.5	12.5	27.5	12.9	28.4	16.0	35.2
6	11.0	24.3	8.1	18.0	8.1	18.0	8.4	18.5	11.8	26.0	20.2	44.6	16.5	36.4	16.5	36.4	16.8	37.0	22.0	48.4
8	18.4	40.6	13.0	28.6	13.0	28.6	13.0	28.6	20.4	45.0	31.2	68.8	25.5	56.0	25.5	56.0	26.0	57.2	36.0	79.5
10	25.5	56.2	18.4	40.0	18.4	40.0	18.0	39.5	31.0	68.0	44.3	97.5	35.0	77.0	35.0	77.0	37.5	82.5	55.0	121.0
12	37.0	81.4	28.5	63.0	28.5	63.0	29.0	64.0	47.0	103.0	63.5	140.0	52.0	115.0	62.0	137.0	53.0	117.0	82.5	182.0
14	51.0	113.0	37.5	83.0	41.5	91.5	39.0	86.0	60.0	132.0	86.0	190.0	73.0	161.0	86.0	190.0	73.0	161.0	108.0	238.0
16	61.5	136.0	44.5	98.0	53.0	117.0	47.0	103.0	81.0	178.0	112.0	247.0	88.0	194.0	113.0	249.0	88.0	194.0	139.0	306.0
18	71.5	158.0	54.0	119.0	59.0	130.0	57.0	126.0	93.0	205.0	141.0	310.0	115.0	253.0	134.0	295.0	115.0	253.0	178.0	392.0
20	85.0	187.0	72.0	158.0	74.0	163.0	76.0	167.0	127.0	280.0	173.0	382.0	139.0	306.0	167.0	368.0	139.0	306.0	228.0	503.0
24	119.0	262.0	95.0	209.0	99.0	218.0	97.0	214.0	190.0	419.0	248.0	546.0	212.0	467.0	240.0	549.0	212.0	467.0	350.0	772.0

SIZE	CLASS 600										CLASS 900									
	WELDING-NECK		SLIP-ON		LAP JOINT		THREADED		BLIND		WELDING-NECK		SLIP-ON		LAP JOINT		THREADED		BLIND	
	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb
1/2	0.9	2.0	0.8	1.8	0.8	1.8	0.9	2.0	0.8	1.8	2.1	4.6	1.8	4.0	1.8	4.0	1.8	4.0	1.9	4.2
3/4	1.6	3.5	1.4	3.1	1.4	3.1	1.4	3.1	1.4	3.1	2.7	5.9	2.4	5.3	2.3	5.0	2.3	5.0	2.7	6.0
1	1.9	4.2	1.7	3.7	1.7	3.7	1.8	4.0	1.7	3.7	3.9	8.6	3.6	7.9	3.6	7.9	3.6	7.9	3.7	8.1
1 1/4	2.6	5.8	2.1	4.6	2.1	4.6	2.3	5.0	2.4	5.3	4.5	9.9	4.1	9.0	4.1	9.0	4.1	9.0	4.3	9.5
1 1/2	3.6	8.0	3.1	6.8	3.1	6.8	3.3	7.3	3.4	7.5	6.2	13.7	5.4	12.0	5.4	12.0	5.4	12.0	5.9	13.0
2	4.7	10.4	3.9	8.6	3.9	8.6	4.0	8.8	4.4	9.7	11.3	24.9	10.5	23.1	10.5	23.1	10.5	23.1	11.3	24.9
2 1/2	4.8	15.0	5.4	11.9	5.4	11.9	5.5	12.1	6.8	15.0	16.3	36.0	15.8	34.8	15.8	34.8	15.8	34.8	16.0	35.2
3	8.7	19.3	7.3	16.1	7.3	16.1	7.4	16.3	8.9	19.7	15.0	33.0	12.3	27.0	11.8	26.0	12.3	27.0	16.8	37.0
3 1/2	11.6	25.5	9.0	19.8	9.0	19.8	9.2	20.2	12.7	28.0	-	-	-	-	-	-	-	-	-	-
4	18.4	40.5	16.5	36.4	16.1	35.5	16.8	37.0	18.6	41.0	24.0	52.8	23.2	51.0	22.6	49.8	23.2	51.0	24.5	54.0
5	31.0	68.0	28.5	62.8	27.5	60.6	28.5	62.8	30.8	68.0	38.5	85.0	37.5	82.6	36.5	80.5	37.5	82.6	39.5	87.0
6	37.0	81.4	36.2	79.8	35.4	78.0	36.2	79.8	38.0	83.6	50.0	110.0	48.3	106.0	47.5	105.0	48.3	106.0	51.5	113.5
8	54.5	120.0	51.5	114.0	49.5	109.0	21.5	114.0	62.2	137.0	85.0	187.0	75.0	165.0	86.0	190.0	75.0	165.0	89.0	196.0
10	98.5	195.0	76.2	168.0	74.0	163.0	76.2	168.0	102.0	225.0	123.0	271.0	110.0	243.0	124.0	273.0	110.0	243.0	131.0	289.0
12	105.0	231.0	89.5	197.0	89.0	196.0	89.5	197.0	132.0	291.0	168.0	370.0	146.0	322.0	167.0	368.0	146.0	322.0	187.0	412.0
14	150.0	330.0	102.0	225.0	111.0	245.0	102.0	225.0	158.0	348.0	198.0	436.0	172.0	379.0	180.0	397.0	172.0	379.0	224.0	494.0
16	177.0	390.0	150.0	330.0	165.0	363.0	150.0	330.0	225.0	496.0	225.0	495.0	192.0	423.0	210.0	463.0	192.0	423.0	259.0	593.0
18	228.0	503.0	180.0	397.0	194.0	428.0	180.0	397.0	285.0	628.0	318.0	701.0	272.0	600.0	294.0	648.0	272.0	600.0	383.0	844.0
20	285.0	628.0	231.0	509.0	255.0	562.0	231.0	509.0	365.0	805.0	376.0	829.0	330.0	727.0	365.0	805.0	330.0	727.0	482.0	1063.0
24	372.0	820.0	330.0	727.0	362.0	798.0	330.0	727.0	532.0	1170.0	680.0	1498.0	632.0	1393.0	700.0	1543.0	632.0	1393.0	905.0	1995.0

FLANGE ANSI B 16.5

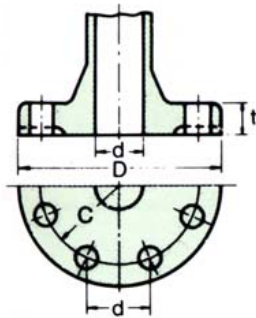
SIZE	CLASS 1500									
	WELDING-NECK		SLIP-ON		LAP JOINT		THREADED		BLIND	
	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb
1/2	2.1	4.6	1.8	4.0	1.8	4.0	1.8	4.0	1.9	4.2
3/4	2.7	5.9	2.4	5.3	2.3	5.0	2.3	5.0	2.7	6.0
1	3.9	8.6	3.6	7.9	3.6	7.9	3.6	7.9	3.7	8.1
1 1/4	4.5	9.9	4.1	9.0	4.1	9.0	4.1	9.0	4.3	9.5
1 1/2	6.2	13.7	5.4	12.0	5.4	12.0	5.4	12.0	5.9	13.0
2	11.3	24.9	10.5	23.1	10.5	23.1	10.5	23.1	11.3	24.9
2 1/2	16.3	36.0	15.8	34.8	15.8	34.8	15.8	34.8	16.0	35.2
3	21.0	46.3	21.5	43.0	18.5	40.8	18.5	40.8	19.5	43.0
3 1/2	-	-	-	-	-	-	-	-	-	-
4	31.8	70.1	31.0	68.3	29.0	64.0	29.0	64.0	33.0	72.8
5	59.0	129.8	58.8	130.0	54.0	119.0	53.0	117.0	60.0	132.0
6	72.0	158.0	74.0	163.0	62.0	137.0	61.0	134.0	75.0	165.0
8	124.0	273.0	112.0	247.0	106.0	233.0	105.0	231.0	125.0	275.0
10	207.0	456.0	184.0	406.0	173.0	381.0	172.0	379.0	215.0	474.0
12	306.0	674.0	264.0	581.0	262.0	577.0	264.0	582.0	316.0	697.0
14	416.0	917.0	-	-						
16	567.0	1250.0	-	-						
18	736.0	1623.0	-	-						
20	929.0	2048.0	-	-						
24	1504.0	3316.0	-	-						

SIZE	CLASS 2500							
	WELDING-NECK		LAP JOINT		THREADED		BLIND	
	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb
1/2	3.2	7.0	3.0	6.6	3.0	6.6	3.0	7.0
3/4	3.6	8.0	4.0	8.8	4.0	8.8	4.5	10.0
1	5.4	12.0	5.0	11.0	5.0	11.0	5.0	12.0
1 1/4	7.8	17.2	8.0	17.6	8.0	17.6	8.0	18.0
1 1/2	11.5	25.4	11.0	25.0	11.0	25.0	11.0	25.0
2	19.0	42.0	17.0	38.0	17.0	38.0	17.0	38.0
2 1/2	24.0	52.0	25.0	55.0	25.0	55.0	25.0	55.0
3	42.6	94.0	38.0	83.0	38.0	83.0	39.0	86.0
3 1/2	-	-	-	-	-	-	-	-
4	64.0	141.0	58.0	127.0	58.0	127.0	60.0	133.0
5	111.0	244.0	95.0	210.0	95.0	210.0	101.0	223.0
6	171.0	378.0	146.0	323.0	146.0	323.0	156.0	345.0
8	261.0	576.0	220.0	485.0	220.0	485.0	242.0	533.0
10	485.0	1068.0	420.0	925.0	420.0	925.0	465.0	1023.0
12	698.0	1539.0	590.0	1300.0	590.0	1300.0	665.0	1463.0

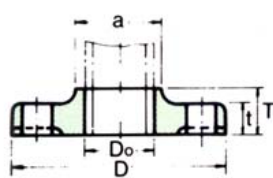
SIZE	SOCKET - WELDING					
	CLASSES					
	150		300		600	
	Kg	Lb	Kg	Lb	Kg	Lb
1/2	0.4	0.9	0.7	1.5	1.0	2.2
3/4	0.7	1.5	1.2	2.6	1.6	3.5
1	0.9	2.0	1.4	3.1	1.8	4.0
1 1/4	1.2	2.6	1.9	4.2	2.6	5.7
1 1/2	1.5	3.3	2.8	6.2	3.3	7.7
2	2.3	5.1	3.3	7.3	3.9	8.6
2 1/2	3.7	8.1	4.6	10.1	6.0	13.2
3	4.2	9.2	6.3	13.9	7.4	16.3
3 1/2	5.2	11.4	7.8	17.2	9.5	20.9
4	5.9	13.0	10.0	22.0	-	-
5	7.0	15.4	-	-	-	-
6	8.4	18.5	-	-	-	-
8	12.6	27.7	-	-	-	-
10	18.0	39.6	-	-	-	-
12	29.5	65.0	-	-	-	-
14	38.0	84.0	-	-	-	-
16	42.0	93.0	-	-	-	-
18	54.0	120.0	-	-	-	-
20	70.0	155.0	-	-	-	-
24	94.0	207.0	-	-	-	-

TOLERANCE ANSI B 16.5 FORGED FLANGES

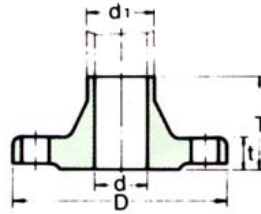
SOLID FLANGE



SLIP-ON FLANGE

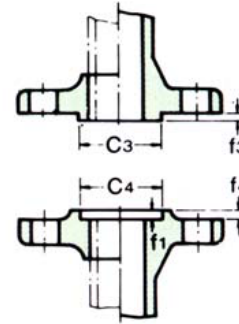


WELDING NECK FLANGE

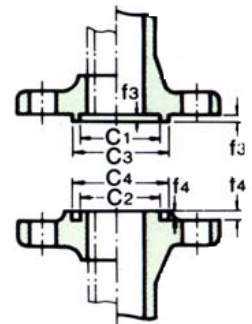


TYPE OF GASKET SURFACE

MALE & FEMALE TYPE



TONGUE & GROOVE TYPE



THREADED, SOCKET-WELDING, SLIP-ON, LAP JOINT AND BLIND.

Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*
	When O.D. is Over 2"	$\pm 1/8"$ (3.2mm)*
Inside Diameter	Threaded	Within limits on boring gague
	Socket-Welding, Slip-on and Lap joint	10" & Smaller $+1/32"$ (0.8mm), -C" 12" & Larger $+1/16"$ (1.6mm), -C"
Outside Diameter of Hub	5" and Smaller	$+3/32"$ (2.4mm) $-1/32"$ (0.8mm)
	6" and Larger	$+5/32"$ (4.0mm) $-1/32"$ (0.8mm)
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)
Diameter of Counterbore	Same as for Inside Diameter	
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" & Smaller $1/32"$ (0.8mm) Max. 3" & Larger $1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*
Thickness	18" and Smaller	$+1/8"$ (3.2mm), -0"
	20" and Larger	$+3/16"$ (4.8mm), -C"
Length Thru Hub	10" and Smaller	$\pm 1/16"$ (1.6mm)
	12" and Larger	$\pm 1/8"$ (3.2mm)

NOTE : * This tolerance is not covered in ANSI B16.5, but maker's option.

WELDING NECK

Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*
	When O.D. is Over 2"	$\pm 1/8"$ (3.2mm)*
Inside Diameter	10" and Smaller	$\pm 1/32"$ (0.8mm)
	12" thru 18"	$\pm 1/16"$ (1.6mm)
	20" and Larger	$+1/8"$ (3.2mm) $-1/16"$ (1.6mm)
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)
Diameter of Hub at Base	When Hub Base is 24" or Smaller	$\pm 1/16"$ (1.6mm)
	When Hub Base is Over 24"	$\pm 1/8"$ (3.2mm)
Diameter of Hub at Point of Welding	5" and Smaller	$+3/32"$ (2.4mm) $-1/32"$ (0.8mm)
	6" and Larger	$+5/32"$ (4.0mm) $-1/32"$ (0.8mm)
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" & Smaller $1/32"$ (0.8mm) Max. 3" & Larger $1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*
Thickness	18" and Smaller	$+1/8"$ (3.2mm), -0"
	20" and Larger	$+3/16"$ (4.8mm), -C"
Length Thru Hub	10" and Smaller	$\pm 1/16"$ (1.6mm)
	12" and Larger	$\pm 1/8"$ (3.2mm)

NOTE : * This tolerance is not covered in ANSI B16.5, but maker's option.

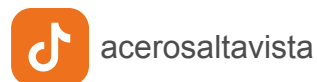
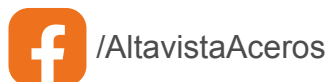


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