

Texas Flange

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FAX:877-610-8893

E-MAIL:sales@texasflange.com

www.texasflange.com

DIMENSIONS OF RING-JOINT FACINGS



TOLERANCES

E(depth) +0.016
-0

F(width) ±0.008

P(pitch diam) ±0.005

R(radius at bottom)Max

23°(angle) ±1/2°

DIMENSIONS IN INCHES

NOMINAL PIPE SIZE							GROOVE NUMBER	GROOVE DIMENSIONS				DIAMETER OF RAISED PORTION K					
150 PSI	300 PSI	400 PSI	600 PSI	900 PSI	1500 PSI	2500 PSI		PITCH DIAMETER	DEPTH	WIDTH	RADIUS AT BOTTOM	150 PSI	300 PSI	400 PSI	900 PSI	1500 PSI	2500 PSI
P	E	F	R	150 PSI	300 PSI	400 PSI		600 PSI	900 PSI	1500 PSI	2500 PSI	150 PSI	300 PSI	400 PSI	900 PSI	1500 PSI	2500 PSI
-	1/2	-	1/2	-	-	-	R11	1-11/32	7/32	9/32	1/32	-	2-	-	-	-	
-	-	-	-	-	1/2	-	12	1-9/16	1/4	11/32	1/32	-	-	2-3/8	2-3/8	-	
-	3/4	-	3/4	-	-	1/2	13	1-11/16	1/4	11/32	1/32	-	2-1/2	-	-	2-9/16	
-	-	-	-	-	3/4	-	14	1-3/4	1/4	11/32	1/32	-	-	2-5/8	2-5/8	-	
1	-	-	-	-	-	-	15	1-7/8	1/4	11/32	1/32	2-1/2	-	-	-	-	
-	1	-	1	-	1	3/4	16	2	1/4	11/32	1/32	-	2-3/4	2-13/16	2-13/16	2-7/8	
1-1/4	-	-	-	-	-	-	17	2-1/4	1/4	11/32	1/32	2-7/8	-	-	-	-	
-	1-1/4	-	1-1/4	-	1-1/4	1	18	2-3/8	1/4	11/32	1/32	-	3-1/8	3-3/16	3-3/16	3-1/4	
1-1/2	-	-	-	-	-	-	19	2-9/16	1/4	11/32	1/32	3-1/4	-	-	-	-	
-	1-1/2	-	1-1/2	-	1-1/2	-	20	2-11/16	1/4	11/32	1/32	-	3-9/16	3-5/8	3-5/8	-	
-	-	-	-	-	-	1-1/4	21	2-27/32	5/16	15/32	1/32	-	-	-	-	4	
2	-	-	-	-	-	-	22	3-1/4	1/4	11/32	1/32	4	-	-	-	-	
-	2	-	2	-	-	1-1/2	23	3-1/4	5/16	15/32	1/32	-	4-1/4	-	-	4-1/2	
-	-	-	-	-	2	-	24	3-3/4	5/16	15/32	1/32	-	-	4-7/8	4-7/8	-	
2-1/2	-	-	-	-	-	-	25	4	1/4	11/32	1/32	4-3/4	-	-	-	-	
-	2-1/2	-	2-1/2	-	-	2	26	4	5/16	15/32	1/32	-	5	-	-	5-1/4	
-	-	-	-	-	2-1/2	-	27	4-1/4	5/16	15/32	1/32	-	-	-	5-3/8	-	
-	-	-	-	-	-	2-1/2	28	4-3/8	3/8	17/32	1/16	-	-	-	-	5-7/8	
3	-	-	-	-	-	-	29	4-1/2	1/4	11/32	1/32	5-1/4	-	-	-	-	
-	-	-	-	-	-	-	30	4-5/8	5/16	15/32	1/32	-	-	-	-	-	
-	3	-	3	3	-	-	31	4-7/8	5/16	15/32	1/32	-	5-3/4	6-1/8	-	-	
-	-	-	-	-	-	3	32	5	3/8	17/32	1/16	-	-	-	-	6-5/8	
3-1/2	-	-	-	-	-	-	33	5-3/16	1/4	11/32	1/32	6-1/16	-	-	-	-	
-	3-1/2	-	3-1/2	-	-	-	34	5-3/16	5/16	15/32	1/32	-	6-1/4	-	-	-	
-	-	-	-	-	3	-	35	5-3/8	5/16	15/32	1/32	-	-	-	6-5/8	-	
4	-	-	-	-	-	-	36	5-7/8	1/4	11/32	1/32	6-3/4	-	-	-	-	
-	4	4	4	4	-	-	37	5-7/8	5/16	15/32	1/32	-	6-7/8	7-1/8	-	-	
-	-	-	-	-	-	4	38	6-3/16	7/16	21/32	1/16	-	-	-	-	8	
-	-	-	-	-	4	-	39	6-3/8	5/16	15/32	1/32	-	-	-	7-5/8	-	
5	-	-	-	-	-	-	40	6-3/4	1/4	11/32	1/32	7-5/8	-	-	-	-	
-	5	5	5	5	-	-	41	7-1/8	5/16	15/32	1/32	-	8-1/4	8-1/2	-	-	
-	-	-	-	-	-	5	42	7-1/2	1/2	25/32	1/16	-	-	-	-	9-1/2	
6	-	-	-	-	-	-	43	7-5/8	1/4	11/32	1/32	8-5/8	-	-	-	-	
-	-	-	-	-	5	-	44	7-5/8	5/16	15/32	1/32	-	-	-	9	-	
-	6	6	6	6	-	-	45	8-5/16	5/16	15/32	1/32	-	9-1/2	9-1/2	-	-	

Texas Flange

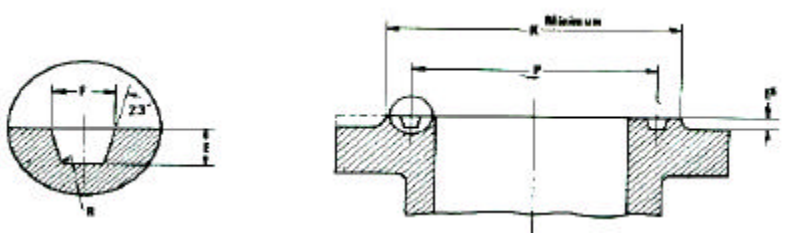
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DIMENSIONS OF RING-JOINT FACINGS



DIMENSIONS IN INCHES

NOMINAL PIPE SIZE							GROOVE NUMBER	GROOVE DIMENSIONS				DIAMETER OF RAISED PORTION K					
150 PSI	300 PSI	400 PSI	600 PSI	900 PSI	1500 PSI	2500 PSI		PITCH DIAMETER	DEPTH	WIDTH	RADIUS AT BOTTOM	150 PSI	300 PSI	400 PSI	900 PSI	1500 PSI	2500 PSI
								P	E	F	R						
-	-	-	-	-	6	-	R46	8-5/16	3/8	17/32	1/16	-	-	-	9-3/4	-	
-	-	-	-	-	-	6	47	9	1/2	25/32	1/16	-	-	-	-	11	
8	-	-	-	-	-	-	48	9-3/4	1/4	11/32	1/32	10-3/4	-	-	-	-	
-	8	8	8	8	-	-	49	10-5/8	5/16	15/32	1/32	-	11-7/8	12-1/8	-	-	
-	-	-	-	-	8	-	50	10-5/8	7/16	21/32	1/16	-	-	-	12-1/2	-	
-	-	-	-	-	-	8	51	11	9/16	29/32	1/16	-	-	-	-	13-3/8	
10	-	-	-	-	-	-	52	12	1/4	11/32	1/32	13	-	-	-	-	
-	10	10	10	10	-	-	53	12-3/4	5/16	15/32	1/32	-	14	14-1/4	-	-	
-	-	-	-	-	10	-	54	12-3/4	7/16	21/32	1/16	-	-	-	14-5/8	-	
-	-	-	-	-	-	10	55	13-1/2	11/16	13/16	3/32	-	-	-	-	16-3/4	
12	-	-	-	-	-	-	56	15	1/4	11/32	1/32	16	-	-	-	-	
-	12	12	12	12	-	-	57	15	5/16	15/32	1/32	-	16-1/4	16-1/2	-	-	
-	-	-	-	-	12	-	58	15	9/16	29/32	1/16	-	-	-	17-1/4	-	
14	-	-	-	-	-	-	59	15-5/8	1/4	11/32	1/32	16-3/4	-	-	-	-	
-	-	-	-	-	-	12	60	16	11/16	1-5/16	3/32	-	-	-	-	19-1/2	
-	14	14	14	-	-	-	61	16-1/2	5/16	15/32	1/32	-	18	-	-	-	
-	-	-	-	14	-	-	62	16-1/2	7/16	21/32	1/16	-	-	18-3/8	-	-	
-	-	-	-	-	14	-	63	16-1/2	5/8	1-1/16	3/32	-	-	-	19-1/4	-	
16	-	-	-	-	-	-	64	17-7/8	1/4	11/32	1/32	19	-	-	-	-	
-	16	16	16	-	-	-	65	18-1/2	5/16	15/32	1/32	-	20	-	-	-	
-	-	-	-	16	-	-	66	18-1/2	7/16	21/32	1/16	-	-	20-5/8	-	-	
-	-	-	-	-	16	-	67	18-1/2	11/16	1-3/16	3/32	-	-	-	21-1/2	-	
18	-	-	-	-	-	-	68	20-3/8	1/4	11/32	1/32	21-1/2	-	-	-	-	
-	18	18	18	-	-	-	69	21	5/16	15/32	1/32	-	22-5/8	-	-	-	
-	-	-	-	18	-	-	70	21	1/2	25/32	1/16	-	-	23-3/8	-	-	
-	-	-	-	-	18	-	71	21	11/16	1-3/16	3/32	-	-	-	24-1/8	-	
20	-	20	-	-	-	-	72	22	1/4	11/33	1/32	23-1/2	-	-	-	-	
-	20	-	20	-	-	-	73	23	3/8	17/32	1/16	-	25	-	-	-	
-	-	-	-	20	-	-	74	23	1/2	25/32	1/16	-	-	25-1/2	-	-	
-	-	-	-	-	20	-	75	23	11/16	1-5/16	3/32	-	-	-	26-1/2	-	
24	-	-	-	-	-	-	76	26-1/2	1/4	11/32	1/32	28	-	-	-	-	
-	24	24	24	-	-	-	77	27-1/4	7/16	21/32	1/16	-	29-1/2	-	-	-	
-	-	-	-	24	-	-	78	27-1/4	5/8	1-1/16	3/32	-	-	30-3/8	-	-	
-	-	-	-	-	24	-	79	27-1/4	13/16	17/16	3/32	-	-	-	31-1/4	-	

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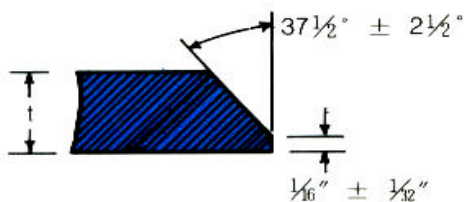
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DIMENSIONAL TOLERANCES ANSI B16.5 - 1992a

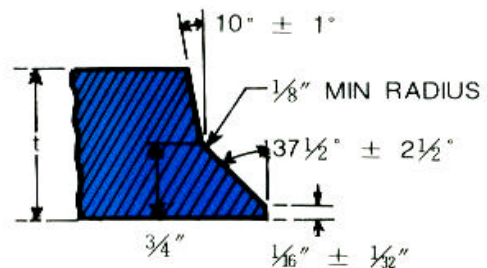
Thread, Socket-welding, slip-on, Lap joint and Blind			Welding Neck		
Outside Diameter	when O.D. is 24" or less	±1/16" (1.6mm)	Outside Diameter	when O.D. is 24" or less	±1/16" (1.6mm)
	when O.D. is Over 24"	±1/8" (3.2mm)		when O.D. is Over 24"	±1/8" (3.2mm)
Inside Diameter	Threaded	Within limits on boring gauge	Inside Diameter	10" and Smaller	±1/32"(0.8mm)
	socket-welding, slip-on and Lap joint	10" & Smaller		12" thru 18"	±1/16"(1.6mm)
+ 1/32"(0.8mm), -0"		12" & Larger			+1/8"(3.2mm)
Outside Diameter of Hub	12" and Smaller	+3/32"(2.4mm)	Diameter of Contact Face	1/16" Raised Face	±1/32"(0.8mm)
	14" and Larger	-1/16"(1.6mm)		1/4" Raised Face Tongue & Groove Male, Female	±1/64"(0.4mm)
Diameter of Contact Face	1/16" Raised Face	±1/32"(0.8mm)	Diameter of Hub at Base	When Hub Base is 24" or Smaller	±1/16"(1.6mm)
	1/4" Raised Face Tongue & Groove Male, Female	±1/64"(0.4mm)		When Hub Base is Over 24"	±1/8"(3.2mm)
Diameter of counterbore	Same as for Inside Diameter		Diameter of Hub at Point of Welding	5" and Smaller	+3/32"(2.4mm)
Drilling	Bolt Circle	±1/16"(1.6mm)		6" and Larger	+5/32(4.0mm)
	Bolt hole spacing	±1/32"(0.8mm)	Drilling	Bolt Circle	±1/16"(1.6mm)
	Eccentricity of Bolt Circle with Respect to Facing	2-1/2" & Smaller		Bolt hole spacing	±1/32"(0.8mm)
1/32"(0.8mm) max		3" & Larger		Eccentricity of Bolt Circle with Respect to Facing	2-1/2" & Smaller
Thickness	18" and Smaller	+1/8"(3.2mm), -0"	Thickness	18" and Smaller	+1/8"(3.2mm), -0"
	20" and Larger	+3/16"(4.8mm), -0"		20" and Larger	+3/16"(4.8mm), -0"
Length Thru Hub	18" and Smaller	+1/8"(3.2mm), -1/32(0.8mm)	Length Thru Hub	10" and Smaller	±1/16"(1.6mm)
	20" and Larger	+3/16"(4.8mm), -1/16"(1.6mm)		12" and Larger	±1/8"(3.2mm)

WELDING BEVEL STANDARDS

For Wall thickness "t" 3/16" to 3/4" incl.



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



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FORGED FLANGES ANSI B16.5

APPROX. WEIGHT LIST

UNIT POUND AND (kg)

DIMENSIONS IN INCHES

CLASS	NOMINAL PIPE SIZE	SLIP ON TYPE				BLIND	WELDING NECK
		SLIP ON	THREADED	SOCKET	LAP JOINT		
150lb	1/2	1 (0.45)	1 (0.45)	2 (0.91)	1 (0.45)	2 (0.91)	2 (0.91)
	3/4	1-1/2 (0.68)	1-1/2 (0.68)	2 (0.91)	1-1/2 (0.68)	2 (0.91)	2 (0.91)
	1	2 (0.91)	2 (0.91)	2 (0.91)	2 (0.91)	2 (0.91)	2-1/2 (1.14)
	1-1/4	2-1/2 (1.14)	2-1/2 (1.14)	3 (1.36)	2-1/2 (1.14)	3 (1.36)	2-1/2 (1.14)
	1-1/2	3 (1.36)	3 (1.36)	3 (1.36)	3 (1.36)	3 (1.36)	4 (1.81)
	2	5 (2.18)	5 (2.27)	5 (2.27)	5 (2.27)	4 (1.82)	6 (2.72)
	2-1/2	8 (3.45)	8 (3.63)	7 (3.18)	8 (3.63)	7 (3.18)	10 (4.54)
	3	9 (4.01)	10 (4.54)	8 (3.63)	9 (4.09)	9 (4.09)	11-1/2 (5.22)
	3-1/2	11 (4.99)	12 (5.45)	11 (4.99)	11 (4.99)	13 (5.90)	12 (5.45)
	4	13 (5.63)	13 (5.90)	13 (5.90)	12 (5.45)	17 (7.72)	16-1/2 (7.49)
	5	15 (6.74)	15 (6.81)	15 (6.81)	13 (5.90)	20 (9.08)	21 (9.53)
	6	17 (7.90)	19-1/2 (8.85)	19 (8.63)	18 (8.17)	27 (12.26)	26 (11.80)
	8	28 (12.90)	30 (13.62)	30 (13.62)	28 (12.71)	47 (21.34)	42 (19.07)
	10	40 (17.60)	41 (18.61)	43 (19.52)	36 (16.34)	67 (30.42)	54 (24.52)
	12	61 (27.69)	65 (29.51)	64 (29.06)	60 (27.24)	123 (45.00)	88 (39.95)
	14	83 (37.68)	85 (38.59)	85 (38.59)	77 (34.96)	139 (63.11)	114 (51.76)
	16	106 (48.12)	93 (42.22)	93 (42.22)	104 (47.22)	187 (84.90)	142 (64.47)
	18	109 (49.49)	120 (54.48)	120 (54.48)	146 (66.28)	217 (98.52)	165 (74.90)
20	148 (67.19)	155 (70.37)	155 (70.37)	159 (72.19)	283 (128.48)	197 (89.44)	
24	204 (92.62)	210 (95.34)	210 (95.34)	195 (88.53)	415 (188.41)	268 (121.67)	
300lb	1/2	1-1/2 (0.68)	1-1/2 (0.68)	3 (1.36)	1-1/2 (0.68)	2 (0.91)	2 (0.91)
	3/4	2-1/2 (1.14)	2-1/2 (1.14)	3 (1.36)	2-1/2 (1.14)	3 (1.36)	3 (1.36)
	1	3 (1.36)	3 (1.36)	3 (1.36)	3 (1.36)	4 (1.82)	4 (1.82)
	1-1/4	4-1/2 (2.04)	4-1/2 (2.04)	4 (1.82)	4-1/2 (2.04)	6 (2.72)	5 (2.27)
	1-1/2	6-1/2 (2.95)	6-1/2 (2.95)	6 (2.72)	6-1/2 (2.95)	7 (3.18)	7 (3.18)
	2	7 (3.18)	7 (3.18)	7 (3.18)	7 (3.18)	8 (3.63)	8 (3.63)
	2-1/2	10 (4.54)	10 (4.54)	10 (4.54)	10 (4.54)	12 (5.45)	12 (5.45)
	3	13 (5.90)	14 (6.36)	13 (5.90)	14-1/2 (6.58)	16 (7.26)	18 (8.17)
	3-1/2	16 (7.26)	16 (7.26)	17 (7.72)	16 (7.26)	21 (9.53)	20 (9.10)
	4	23-1/2 (10.67)	24 (10.90)	22 (9.99)	24 (10.90)	28 (12.71)	26-1/2 (12.03)
	5	29 (13.17)	31 (14.07)	-	26 (11.80)	37 (16.80)	36 (16.34)
	6	36 (16.34)	36 (16.34)	-	38 (17.25)	48 (21.79)	45 (20.43)
	8	56 (25.42)	56 (25.42)	-	55 (24.97)	79 (35.87)	69 (31.33)
	10	77 (34.96)	80 (36.32)	-	88 (39.95)	122 (55.39)	100 (45.40)
	12	113 (51.30)	110 (49.94)	-	139 (63.11)	183 (83.08)	142 (64.47)
	14	159 (72.19)	164 (74.46)	-	184 (83.54)	241 (109.41)	206 (93.52)
	16	210 (95.34)	220 (99.88)	-	234 (106.24)	315 (143.01)	249 (113.05)
	18	253 (114.86)	280 (127.12)	-	305 (138.47)	414 (187.96)	306 (138.92)
20	307 (139.38)	325 (147.55)	-	375 (170.25)	515 (233.81)	369 (167.53)	
24	490 (222.46)	490 (222.46)	-	530 (240.62)	800 (363.20)	519 (235.63)	

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FORGED FLANGES ANSI B16.5

APPROX. WEIGHT LIST

UNIT POUND AND (kg)

DIMENSIONS IN INCHES

CLASS	NOMINAL PIPE SIZE	SLIP ON TYPE			BLIND	WELDING NECK
		SLIP ON	THREADED	LAP JOINT		
400lb	1/2	2 (0.91)	2 (0.91)	2 (0.91)	2 (0.91)	3 (1.36)
	3/4	3 (1.36)	3 (1.36)	3 (1.36)	3 (1.36)	3-1/2 (1.59)
	1	3-1/2 (1.59)	3-1/2 (1.59)	3-1/2 (1.59)	4 (1.82)	4 (1.82)
	1-1/4	4-1/2 (2.04)	4-1/2 (2.04)	4-1/2 (2.04)	6 (2.72)	5-1/2 (2.50)
	1-1/2	6-1/2 (2.95)	6-1/2 (2.95)	6-1/2 (2.95)	8 (3.63)	8 (3.63)
	2	8 (3.63)	8 (3.63)	8 (3.63)	10 (4.54)	10 (4.54)
	2-1/2	12 (5.45)	12 (5.45)	11 (4.99)	15 (6.81)	14 (6.36)
	3	15 (6.81)	15 (6.81)	14 (6.36)	20 (9.08)	18 (8.17)
	3-1/2	21 (9.53)	21 (9.53)	20 (9.08)	29 (13.17)	26 (11.80)
	4	24 (10.90)	24 (10.90)	22 (9.99)	33 (14.98)	30 (13.62)
	5	31 (14.07)	31 (14.07)	29 (13.17)	44 (19.98)	39 (17.71)
	6	39 (17.71)	39 (17.71)	37 (16.80)	61 (27.69)	49 (22.45)
	8	63 (28.60)	63 (28.60)	59 (26.79)	100 (45.40)	78 (35.41)
	10	91 (41.31)	91 (41.31)	95 (43.13)	155 (70.37)	110 (49.94)
	12	129 (58.57)	129 (58.57)	152 (69.01)	226 (102.60)	160 (72.64)
	14	191 (86.71)	191 (86.71)	210 (95.34)	310 (140.74)	233 (105.78)
	16	253 (114.86)	253 (114.86)	280 (127.12)	398 (180.69)	294 (133.78)
	18	310 (140.74)	310 (140.74)	345 (156.63)	502 (227.91)	360 (163.44)
20	378 (171.61)	378 (171.61)	420 (190.68)	621 (281.93)	445 (202.03)	
24	539 (244.71)	539 (244.71)	615 (279.21)	936 (424.94)	640 (290.56)	
600lb	1/2	2 (0.91)	2 (0.91)	2 (0.91)	2 (0.91)	3 (1.36)
	3/4	3 (1.36)	3 (1.36)	3 (1.36)	3 (1.36)	3-1/2 (1.59)
	1	3-1/2 (1.59)	3-1/2 (1.59)	3-1/2 (1.59)	4 (1.82)	4 (1.82)
	1-1/4	4-1/2 (2.04)	4-1/2 (2.04)	4-1/2 (2.04)	6 (2.72)	5-1/2 (2.50)
	1-1/2	6-1/2 (2.95)	6-1/2 (2.95)	6-1/2 (2.95)	8 (3.63)	8 (3.63)
	2	8 (3.63)	8 (3.63)	8 (3.63)	10 (4.54)	10 (4.54)
	2-1/2	12 (5.45)	12 (5.45)	11 (4.99)	15 (6.81)	14 (6.36)
	3	15 (6.81)	15 (6.81)	14 (6.36)	20 (9.08)	18 (8.17)
	3-1/2	21 (9.53)	21 (9.53)	20 (9.08)	29 (13.17)	26 (11.80)
	4	33 (14.98)	33 (14.98)	31 (14.07)	41 (18.61)	37 (16.80)
	5	63 (28.60)	63 (28.60)	63 (28.60)	68 (30.87)	68 (30.87)
	6	80 (36.32)	80 (36.32)	78 (35.41)	86 (39.04)	73 (33.14)
	8	97 (44.04)	97 (44.04)	112 (50.85)	139 (63.11)	112 (50.85)
	10	177 (80.36)	177 (80.36)	195 (88.53)	231 (104.87)	189 (85.81)
	12	215 (97.61)	215 (97.61)	240 (108.96)	295 (133.93)	226 (102.60)
	14	259 (117.59)	259 (117.59)	290 (131.66)	378 (148.91)	347 (157.54)
	16	366 (166.16)	366 (166.16)	400 (181.60)	527 (239.26)	481 (218.37)
	18	476 (216.10)	476 (216.10)	469 (212.93)	665 (301.91)	555 (251.97)
20	612 (277.85)	612 (277.85)	604 (274.22)	855 (388.17)	690 (313.26)	
24	876 (397.70)	876 (397.70)	866 (393.16)	1175 (533.45)	977 (443.56)	

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FORGED FLANGES ANSI B16.5

APPROX. WEIGHT LIST

UNIT POUND AND (kg)

DIMENSIONS IN INCHES

CLASS	NOMINAL PIPE SIZE	SLIP ON TYPE			BLIND	WELDING NECK
		SLIP ON	THREADED	LAP JOINT		
900lb	1/2	6 (2.72)	6 (2.72)	6 (2.72)	4 (1.82)	7 (3.18)
	3/4	6 (2.72)	6 (2.72)	6 (2.72)	6 (2.72)	7 (3.18)
	1	7-1/2 (3.41)	7-1/2 (3.41)	7-1/2 (3.41)	9 (4.09)	8-1/2 (3.86)
	1-1/4	10 (4.54)	10 (4.54)	10 (4.54)	10 (4.54)	10 (4.54)
	1-1/2	14 (6.36)	14 (6.36)	14 (6.36)	14 (6.36)	14 (6.36)
	2	22 (9.99)	22 (9.99)	21 (9.53)	25 (11.35)	24 (10.90)
	2-1/2	36 (16.34)	36 (16.34)	29 (13.17)	35 (15.89)	36 (16.34)
	3	31 (14.07)	31 (14.07)	25 (11.35)	32 (14.53)	29 (13.17)
	4	53 (24.06)	53 (24.06)	51 (23.15)	54 (24.52)	51 (23.15)
	5	83 (37.68)	83 (37.68)	81 (36.77)	87 (39.50)	86 (39.04)
	6	108 (49.03)	108 (49.03)	105 (47.67)	113 (51.30)	110 (49.94)
	8	172 (78.09)	172 (78.09)	188 (85.35)	197 (89.44)	187 (84.90)
	10	245 (111.23)	245 (111.23)	277 (125.76)	290 (131.66)	268 (121.67)
	12	326 (148.00)	326 (148.00)	371 (168.43)	413 (187.50)	372 (168.89)
	14	380 (172.52)	380 (172.52)	397 (180.24)	494 (224.28)	562 (255.15)
	16	459 (208.39)	459 (208.39)	488 (221.55)	619 (281.03)	685 (310.99)
18	647 (293.74)	647 (293.74)	670 (304.18)	880 (399.52)	924 (419.50)	
20	792 (359.57)	792 (359.57)	868 (394.07)	1107 (502.58)	1164 (528.46)	
24	1480 (671.92)	1480 (671.92)	1659 (753.19)	2099 (952.95)	2107 (956.58)	
1500lb	1/2	6 (2.72)	6 (2.72)	6 (2.72)	4 (1.82)	7 (3.18)
	3/4	6 (2.72)	6 (2.72)	6 (2.72)	6 (2.72)	7 (3.18)
	1	7-1/2 (3.41)	7-1/2 (3.41)	7-1/2 (3.41)	9 (4.09)	8-1/2 (3.86)
	1-1/4	10 (4.54)	10 (4.54)	10 (4.54)	10 (4.54)	10 (4.54)
	1-1/2	14 (6.36)	14 (6.36)	14 (6.36)	14 (6.36)	14 (6.36)
	2	22 (9.99)	22 (9.99)	21 (9.53)	25 (11.35)	24 (10.90)
	2-1/2	36 (16.34)	36 (16.34)	29 (13.17)	35 (15.89)	36 (16.34)
	3	48 (21.79)	48 (21.79)	38 (17.25)	48 (21.79)	48 (21.79)
	4	73 (33.14)	73 (33.14)	75 (34.05)	73 (33.14)	69 (31.33)
	5	132 (59.93)	132 (59.93)	138 (62.65)	142 (64.47)	132 (59.93)
	6	164 (74.46)	164 (74.46)	170 (77.18)	159 (72.19)	164 (74.46)
	8	258 (117.13)	258 (117.13)	286 (129.84)	302 (137.11)	273 (123.94)
10	436 (197.94)	436 (197.94)	485 (220.19)	507 (230.18)	454 (206.12)	
12	667 (302.82)	667 (302.82)	749 (340.05)	775 (351.85)	690 (313.26)	
2500lb	1/2	7 (3.18)	7 (3.18)	7 (3.18)	7 (13.18)	8 (3.63)
	3/4	9 (4.09)	9 (4.09)	8 (3.63)	10 (4.54)	9 (4.09)
	1	12 (5.45)	12 (5.45)	12 (5.45)	12 (5.45)	13 (5.90)
	1-1/4	18 (8.17)	18 (8.17)	17 (7.72)	18 (8.17)	20 (9.08)
	1-1/2	25 (11.35)	25 (11.35)	24 (10.90)	25 (11.35)	28 (12.71)
	2	38 (17.25)	38 (17.25)	37 (16.80)	39 (17.71)	42 (19.07)
	2-1/2	55 (24.97)	55 (24.97)	53 (24.06)	56 (25.42)	52 (23.61)
	3	83 (37.68)	83 (37.68)	80 (36.32)	86 (39.04)	94 (42.68)
	4	127 (57.66)	127 (57.66)	122 (55.39)	133 (60.38)	146 (66.28)
	5	210 (95.34)	210 (95.34)	204 (92.62)	223 (101.24)	244 (110.78)
	6	323 (146.64)	323 (146.64)	314 (142.56)	345 (156.63)	378 (171.61)
	8	485 (220.19)	485 (220.19)	471 (213.83)	533 (241.98)	576 (261.50)
10	925 (419.95)	925 (419.95)	897 (407.24)	1025 (465.35)	1068 (484.87)	
12	1300 (590.20)	1300 (590.20)	1262 (572.95)	1464 (644.66)	1608 (730.03)	