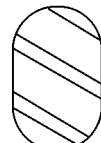


Type R



oval



octagon

Type RX



Type RX

API Flange and Joint Dimensions

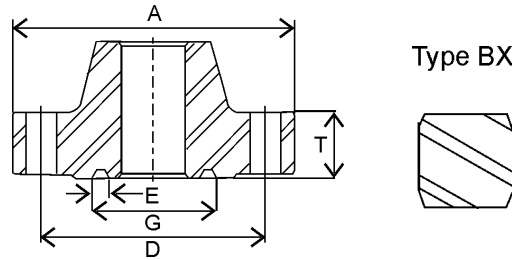
For 2000 to 5000 lb WOG

API Pressure Rating	Flange						Ring Groove					Bolt Studs					
	Nominal Size		Outside Diameter		T		P		E Width		Ring No	D Bolt Circle		No.	Size	Stud Length	
	in	mm	in	mm	in	mm	in	mm	in	mm		in	mm			in	mm
2000 psi 13.8 MPa (R or RX Gasket)	2 ^{1/16}	52.4	6 ^{1/2}	165	1 ^{5/16}	33.3	3 ^{1/4}	82.55	1 ^{5/32}	11.91	23	5	127.0	8	5/8	4 ^{1/2}	108
	2 ^{9/16}	65.1	7 ^{1/2}	191	1 ^{7/16}	36.5	4	101.60	1 ^{5/32}	11.91	26	5 ^{7/8}	149.2	8	3/4	5	127
	3 ^{1/8}	79.4	8 ^{1/4}	210	1 ^{9/16}	39.7	4 ^{7/8}	123.83	1 ^{5/32}	11.91	31	6 ^{5/8}	168.3	8	3/4	5 ^{1/4}	133
	4 ^{1/16}	103.2	10 ^{3/4}	273	1 ^{13/16}	46.0	5 ^{7/8}	149.23	1 ^{5/32}	11.91	37	8 ^{1/2}	215.9	8	7/8	6	152
	5 ^{1/8}	130.0	13	330	2 ^{1/16}	52.4	7 ^{1/8}	180.98	1 ^{5/32}	11.91	41	10 ^{1/2}	266.7	8	1	6 ^{3/4}	165
	7 ^{1/16}	179.4	14	356	2 ^{3/16}	55.6	8 ^{5/16}	211.14	1 ^{5/32}	11.91	45	11 ^{1/2}	292.1	12	1	7	178
	9	228.6	16 ^{1/2}	419	2 ^{1/2}	63.5	10 ^{5/8}	269.88	1 ^{5/32}	11.91	49	13 ^{3/4}	349.3	12	1 ^{1/8}	8	203
	11	279.4	20	508	2 ^{13/16}	71.4	12 ^{3/4}	323.85	1 ^{5/32}	11.91	53	17	431.8	16	1 ^{1/4}	8 ^{3/4}	222
	13 ^{5/8}	346.1	22	559	2 ^{15/16}	74.6	15	381.00	1 ^{5/32}	11.91	57	19 ^{1/4}	489.0	20	1 ^{1/4}	9	229
16 ^{3/4}	425.5	27	686	3 ^{5/16}	84.1	18 ^{1/2}	469.90	1 ^{5/32}	11.91	65	23 ^{3/4}	603.3	20	1 ^{1/2}	10 ^{1/4}	260	
21 ^{1/4}	539.8	32	813	3 ^{7/8}	98.4	23	584.20	1 ^{7/32}	13.49	73	28 ^{1/2}	723.9	24	1 ^{5/8}	11 ^{3/4}	298	
3000 psi 20.7 MPa (R or RX Gasket)	2 ^{1/16}	52.4	8 ^{1/2}	216	1 ^{13/16}	46.0	3 ^{3/4}	95.25	1 ^{5/32}	11.91	24	6 ^{1/2}	165.1	8	7/8	6	152
	2 ^{9/16}	65.1	9 ^{5/8}	244	1 ^{15/16}	49.2	4 ^{1/4}	107.95	1 ^{5/32}	11.91	27	7 ^{1/2}	190.5	8	1	6 ^{1/2}	165
	3 ^{1/8}	79.4	9 ^{1/2}	241	1 ^{13/16}	46.0	4 ^{7/8}	123.83	1 ^{5/32}	11.91	31	7 ^{1/2}	190.5	8	7/8	6	152
	4 ^{1/16}	103.2	11 ^{1/2}	292	2 ^{1/16}	52.4	5 ^{7/8}	149.23	1 ^{5/32}	11.91	37	9 ^{1/4}	235.0	8	1 ^{1/8}	7	178
	5 ^{1/8}	130.0	13 ^{3/4}	350	2 ^{5/16}	58.8	7 ^{1/8}	180.98	1 ^{5/32}	11.91	41	11	279.4	8	1 ^{1/4}	7 ^{3/4}	195
	7 ^{1/16}	179.4	15	381	2 ^{1/2}	63.5	8 ^{5/16}	211.14	1 ^{5/32}	11.91	45	12 ^{1/2}	317.5	12	1 ^{1/8}	8	203
	9	228.6	18 ^{1/2}	470	2 ^{13/16}	71.4	10 ^{5/8}	269.88	1 ^{5/32}	11.91	49	15 ^{1/2}	393.7	12	1 ^{3/8}	9	229
	11	279.4	21 ^{1/2}	546	3 ^{1/16}	77.8	12 ^{3/4}	323.85	1 ^{5/32}	11.91	53	18 ^{1/2}	469.9	16	1 ^{3/8}	9 ^{1/2}	241
	13 ^{5/8}	346.1	24	610	3 ^{7/16}	87.3	15	381.00	1 ^{5/32}	11.91	57	21	533.4	20	1 ^{3/8}	10 ^{1/4}	260
16 ^{3/4}	425.5	27 ^{3/4}	705	3 ^{15/16}	100.0	18 ^{1/2}	469.90	2 ^{1/32}	16.67	66	24 ^{1/4}	616.0	20	1 ^{5/8}	11 ^{3/4}	298	
20 ^{3/4}	527.1	33 ^{3/4}	857	4 ^{3/4}	120.7	23	584.20	2 ^{5/32}	19.84	74	29 ^{1/2}	749.3	20	2	14 ^{1/2}	368	
5000 psi 34.5 MPa (R or RX Gasket)	2 ^{1/16}	52.4	8 ^{1/2}	216	1 ^{13/16}	46.0	3 ^{3/4}	95.25	1 ^{5/32}	11.91	24	6 ^{1/2}	165.1	8	7/8	6	152
	2 ^{9/16}	65.1	9 ^{5/8}	244	1 ^{15/16}	49.2	4 ^{1/4}	107.95	1 ^{5/32}	11.91	27	7 ^{1/2}	190.5	8	1	6 ^{1/2}	165
	3 ^{1/8}	79.4	10 ^{1/2}	267	2 ^{3/16}	55.6	5 ^{3/8}	136.53	1 ^{5/32}	11.91	35	8	203.2	8	1 ^{1/8}	7 ^{1/4}	184
	4 ^{1/16}	103.2	12 ^{1/4}	311	2 ^{7/16}	61.9	6 ^{3/8}	161.93	1 ^{5/32}	11.91	39	9 ^{1/2}	241.3	8	1 ^{1/4}	8	203
	5 ^{1/8}	130.0	14 ^{3/4}	375	3 ^{3/16}	81.0	7 ^{5/8}	193.68	1 ^{5/32}	11.91	44	11 ^{1/2}	292.1	8	1 ^{1/2}	10	255
	7 ^{1/16}	179.4	15 ^{1/2}	394	3 ^{5/8}	92.1	8 ^{5/16}	211.14	1 ^{7/32}	13.49	46	12 ^{1/2}	317.5	12	1 ^{3/8}	10 ^{3/4}	273
	9	228.6	19	483	4 ^{1/16}	103.2	10 ^{5/8}	269.88	2 ^{1/32}	16.67	50	15 ^{1/2}	393.7	12	1 ^{5/8}	12	305
	11	279.4	23	584	4 ^{11/16}	119.1	12 ^{3/4}	323.85	2 ^{1/32}	16.67	54	19	482.6	12	1 ^{7/8}	13 ^{3/4}	349

(Figures are from API Spec 6A, 17th Edition November 1999)



API Flange and Joint Dimensions



For 5000 to 20,000 lb WOG

API Pressure Rating	Flange						Ring Groove					Bolt Studs					
	Nominal Size		A Outside Diameter		T		G		E Width		Ring No	D Bolt Circle		No.	Size	Stud Length	
	in	mm	in	mm	in	mm	in	mm	in	mm		in	mm			in	mm
5000 psi 34.5 MPa (BX Gasket)	13 ⁵ / ₈	346.1	26 ¹ / ₂	673	4 ⁷ / ₁₆	112.7	16.063	408.00	0.786	19.96	BX-160	23 ¹ / ₄	590.6	16	1 ⁵ / ₈	12 ¹ / ₂	318
	16 ³ / ₄	425.5	30 ³ / ₈	772	5 ¹ / ₈	130.2	18.832	478.33	0.705	17.91	BX-162	26 ⁵ / ₈	676.3	16	1 ⁷ / ₈	14 ¹ / ₂	368
	18 ³ / ₄	476.3	35 ⁵ / ₈	905	6 ¹⁷ / ₃₂	165.9	22.185	563.50	1.006	25.55	BX-163	31 ⁵ / ₈	803.3	20	2	17 ¹ / ₂	445
	21 ¹ / ₄	539.8	39	991	7 ¹ / ₈	181.0	24.904	632.56	1.071	27.20	BX-165	34 ⁷ / ₈	885.8	24	2	18 ³ / ₄	476
10,000 psi 69.0 MPa (BX Gasket)	1 ¹³ / ₁₆	46.0	7 ³ / ₈	187	1 ²¹ / ₃₂	42.1	3.062	77.77	0.466	11.84	BX-151	5 ³ / ₄	146.1	8	3/4	5	127
	2 ¹ / ₁₆	52.4	7 ⁷ / ₈	200	1 ⁴⁷ / ₆₄	44.1	3.395	86.23	0.498	12.65	BX-152	6 ¹ / ₄	158.8	8	3/4	5 ¹ / ₄	133
	2 ⁹ / ₁₆	65.1	9 ¹ / ₈	232	2 ¹ / ₆₄	51.2	4.046	102.77	0.554	14.07	BX-153	7 ¹ / ₄	184.2	8	7/8	6	152
	3 ¹ / ₁₆	77.8	10 ⁵ / ₈	270	2 ¹⁹ / ₆₄	58.3	4.685	119.00	0.606	15.39	BX-154	8 ¹ / ₂	215.9	8	1	6 ³ / ₄	171
	4 ¹ / ₁₆	103.2	12 ⁷ / ₁₆	316	2 ⁴⁹ / ₆₄	70.2	5.930	150.62	0.698	17.73	BX-155	10 ³ / ₁₆	258.8	8	1 ¹ / ₈	8	203
	5 ¹ / ₈	130.2	14 ¹ / ₁₆	357	3 ¹ / ₈	79.4	6.955	176.66	0.666	16.92	BX-169	11 ¹³ / ₁₆	300.0	12	1 ¹ / ₈	8 ³ / ₄	222
	7 ¹ / ₁₆	179.4	18 ⁷ / ₈	479	4 ¹ / ₁₆	103.2	9.521	241.83	0.921	23.39	BX-156	15 ⁷ / ₈	403.2	12	1 ¹ / ₂	11 ¹ / ₄	286
	9	228.6	21 ³ / ₄	552	4 ⁷ / ₈	123.8	11.774	299.06	1.039	26.39	BX-157	18 ³ / ₄	476.3	16	1 ¹ / ₂	13	330
	11	279.4	25 ³ / ₄	654	5 ⁹ / ₁₆	141.3	14.064	357.23	1.149	29.18	BX-158	22 ¹ / ₄	565.2	16	1 ³ / ₄	15	381
	13 ⁵ / ₈	346.1	30 ¹ / ₄	768	6 ⁵ / ₈	168.3	17.033	432.64	1.279	32.49	BX-159	26 ¹ / ₂	673.1	20	1 ⁷ / ₈	17 ¹ / ₄	438
	16 ³ / ₄	425.5	34 ⁵ / ₁₆	872	6 ⁵ / ₈	168.3	18.832	478.33	0.705	17.91	BX-162	30 ⁹ / ₁₆	776.3	24	1 ⁷ / ₈	17 ¹ / ₂	445
18 ³ / ₄	476.3	40 ¹⁵ / ₁₆	1040	8 ²⁵ / ₃₂	223.0	22.752	577.90	1.290	32.77	BX-164	36 ⁷ / ₁₆	925.5	24	2 ¹ / ₄	22 ¹ / ₂	572	
21 ¹ / ₄	539.8	45	1143	9 ¹ / ₂	241.3	25.507	647.88	1.373	34.87	BX-166	40 ¹ / ₄	1022.4	24	2 ¹ / ₂	24 ¹ / ₂	622	
15,000 psi 103.5 MPa (BX Gasket)	1 ¹³ / ₁₆	46.0	8 ³ / ₁₆	208	1 ²⁵ / ₃₂	45.2	3.062	77.77	0.466	11.84	BX-151	6 ⁵ / ₁₆	160.3	8	7/8	5 ¹ / ₂	140
	2 ¹ / ₁₆	52.4	8 ³ / ₄	222	2	50.8	3.395	86.23	0.498	12.65	BX-152	6 ⁷ / ₈	174.6	8	7/8	6	152
	2 ⁹ / ₁₆	65.1	10	254	2 ¹ / ₄	57.2	4.046	102.77	0.554	14.07	BX-153	7 ⁷ / ₈	200.0	8	1	6 ³ / ₄	171
	3 ¹ / ₁₆	77.8	11 ⁵ / ₁₆	287	2 ¹⁷ / ₃₂	64.3	4.685	119.00	0.606	15.39	BX-154	9 ¹ / ₁₆	230.2	8	1 ¹ / ₈	7 ¹ / ₂	191
	4 ¹ / ₁₆	103.2	14 ³ / ₁₆	360	3 ³ / ₃₂	78.6	5.930	150.62	0.698	17.73	BX-155	11 ⁷ / ₁₆	290.5	8	1 ³ / ₈	9 ¹ / ₄	235
	7 ¹ / ₁₆	179.4	19 ⁷ / ₈	505	4 ¹¹ / ₁₆	119.1	9.521	241.83	0.921	23.39	BX-156	16 ⁷ / ₈	428.6	16	1 ¹ / ₂	12 ³ / ₄	324
	9	228.6	25 ¹ / ₂	648	5 ³ / ₄	146.1	11.774	299.06	1.039	26.39	BX-157	21 ³ / ₄	552.5	16	1 ⁷ / ₈	15 ³ / ₄	400
	11	279.4	32	813	7 ³ / ₈	187.3	14.064	357.23	1.149	29.18	BX-158	28	711.2	20	2	19 ¹ / ₄	489
	13 ⁵ / ₈	346.1	34 ⁷ / ₈	886	8 ¹ / ₁₆	204.8	17.033	432.60	1.279	32.50	BX-159	30 ⁷ / ₈	784.2	20	2 ¹ / ₄	21 ¹ / ₄	540
	18 ³ / ₄	476.3	45 ³ / ₄	1162	10 ¹ / ₁₆	255.6	22.752	577.90	1.290	32.77	BX-164	4	1016.0	20	3	26 ³ / ₄	679
20,000 psi 138.0 MPa (BX Gasket)	1 ¹³ / ₁₆	46.0	10 ¹ / ₈	257	2 ¹ / ₂	63.5	3.062	77.77	0.466	11.84	BX-151	8	203.2	8	1	7 ¹ / ₂	191
	2 ¹ / ₁₆	52.4	11 ⁵ / ₁₆	287	2 ¹³ / ₁₆	71.4	3.395	86.23	0.498	12.65	BX-152	9 ¹ / ₁₆	230.2	8	1 ¹ / ₈	8 ¹ / ₄	210
	2 ⁹ / ₁₆	65.1	12 ¹³ / ₁₆	325	3 ¹ / ₈	79.4	4.046	102.77	0.554	14.07	BX-153	10 ⁵ / ₁₆	261.9	8	1 ¹ / ₄	9 ¹ / ₄	235
	3 ¹ / ₁₆	77.8	14 ¹ / ₁₆	357	3 ³ / ₈	85.7	4.685	119.00	0.606	15.39	BX-154	11 ⁵ / ₁₆	287.3	8	1 ³ / ₈	10	254
	4 ¹ / ₁₆	103.2	17 ⁹ / ₁₆	446	4 ³ / ₁₆	106.4	5.930	150.62	0.698	17.73	BX-155	14 ¹ / ₆	357.2	8	1 ³ / ₄	12 ¹ / ₄	311
	7 ¹ / ₁₆	179.4	25 ¹³ / ₁₆	656	6 ¹ / ₂	165.1	9.521	241.83	0.921	23.39	BX-156	21 ¹³ / ₁₆	554.0	16	2	17 ¹ / ₂	445
	9	228.6	31 ¹¹ / ₁₆	805	8 ¹ / ₁₆	204.8	11.774	399.06	1.039	26.39	BX-157	27	685.8	16	2 ¹ / ₂	22 ³ / ₈	568
	11	279.4	34 ³ / ₄	883	8 ¹³ / ₁₆	223.8	14.064	357.23	1.149	29.18	BX-158	29 ¹ / ₂	749.3	16	2 ³ / ₄	23 ³ / ₄	603
	13 ⁵ / ₈	346.1	35 ³ / ₄	1162	11 ¹ / ₂	292.1	17.033	432.64	1.279	32.49	BX-159	40	1016.0	20	3 ¹ / ₈	30	762

Figures are from API Spec 6A, 17th Edition November 1999)