

U.S.S. STANDARD

S.A.E.

Bolt Size In.	Outside Dia. In.	Inside I.D. In.	Thickness	Approx. Lbs. per M Pcs.	Approx. No./Pcs. Per Lb.
3/16	9/16	1/4	.036/.065	2.8	361
1/4	3/4	5/16	.051/.080	6.7	149
5/16	7/8	3/8	.064/.104	11.5	87
3/8	1	7/16	.064/.104	14.9	67
7/16	1 1/4	1/2	.064/.104	24.4	41
1/2	1 3/8	9/16	.086/.132	38.5	26
9/16	1 1/2	5/8	.086/.132	45.5	22
5/8	1 3/4	1 1/16	.108/.160	77	13
3/4	2	1 3/16	.122/.177	110	9.1
7/8	2 1/4	1 5/16	.136/.192	153	6.5
1	2 1/2	1 7/16	.136/.192	188	5.3
1 1/8	2 3/4	1 1/4	.136/.192	220	4.5
1 1/4	3	1 3/8	.136/.192	260	3.8
1 3/8	3 1/4	1 1/2	.153/.213	333	3
1 1/2	3 1/2	1 5/8	.153/.213	385	2.6
1 5/8	3 3/4	1 3/4	.153/.213	448	2.3
1 3/4	4	1 7/8	.153/.213	500	2
1 7/8	4 1/4	2	.153/.213	569	1.8
2	4 1/2	2 1/8	.153/.213	630	1.6
2 1/4	4 3/4	2 3/8	.193/.248	826	1.2
2 1/2	5	2 5/8	.210/.280	961	1

Bolt Size In.	Outside Dia. In.	Inside I.D. In.	Thickness	Approx. Lbs. per M Pcs.	Approx. No./Pcs. Per Lb.
#6	3/8	5/32	.036/.065	1.26	790
#8	7/16	3/16	.036/.065	1.7	585
#10	1/2	7/32	.036/.065	2.3	435
#12	9/16	1/4	.051/.080	3.4	280
1/4	5/8	9/32	.051/.080	4.5	222
5/16	1 1/16	1 1/32	.051/.080	5.2	192
3/8	1 3/16	1 3/32	.051/.080	7.2	140
7/16	1 5/8	1 5/32	.051/.080	9.5	105
1/2	1 7/16	1 7/32	.074/.121	18.3	55
9/16	1 9/16	1 9/32	.074/.121	23.4	43
5/8	1 11/16	2 1/32	.074/.121	27.7	36
3/4	1 13/16	1 3/16	.108/.160	47.4	21
7/8	1 15/16	1 5/16	.108/.160	63	16
1	2	1 7/16	.108/.160	83	12
1 1/8	2 1/4	1 3/16	.108/.160	109	9.2
1 1/4	2 1/2	1 5/16	.136/.192	160	6.3
1 3/8	2 3/4	1 7/16	.136/.213	190	5.25
1 1/2	3	1 9/16	.153/.213	240	4.25

ANSI SPECIFICATIONS ALLOW A TOLERANCE OF PLUS OR MINUS A GAUGE ON NOMINAL THICKNESS OF COMMERCIAL WASHERS.

HARDENED STEEL WASHERS

THROUGH HARDENED TO 38-45 HRC.

GRADE 8 U.S.S. STANDARD

GRADE 8 S.A.E. DIMENSIONS

Bolt Size In.	Outside Dia., In.	Inside Dia., In.	Thickness	Approx. Lbs. Per M Pcs.
1/4	3/4	5/16	.055/.072	6.4
5/16	7/8	3/8	.064/.080	10.0
3/8	1	7/16	.064/.080	13.0
7/16	1-1/4	1/2	.064/.080	21.0
1/2	1-3/8	9/16	.097/.121	38.0
9/16	1-1/2	5/8	.097/.121	45.0
5/8	1-3/4	21/32	.122/.146	77.0
3/4	2	13/16	.122/.146	100.0
7/8	2-1/4	15/16	.136/.160	138.0
1	2-1/2	1-1/16	.136/.160	169.0
1-1/8	2-3/4	1-1/4	.136/.160	198.0
1-1/4	3	1-3/8	.136/.160	234.0
1-3/8	3-1/4	1-1/2	.136/.160	271.0
1-1/2	3-1/2	1-5/8	.136/.160	316.0

Bolt Size In.	Outside Dia., In.	Inside Dia., In.	Thickness	Approx. Lbs. Per M Pcs.
1/4	5/8	9/32	.055/.072	4.8
5/16	11/16	11/32	.055/.072	5.1
3/8	13/16	13/32	.055/.072	7.2
7/16	59/64	15/32	.055/.072	9.1
1/2	1-1/16	17/32	.097/.121	18.2
9/16	1-3/16	19/32	.097/.121	23.4
5/8	1-5/16	21/32	.122/.146	38.4
3/4	1-15/32	13/16	.122/.146	44.5
7/8	1-3/4	15/16	.136/.160	66.8
1	2	1-1/16	.136/.160	89.4
1-1/8	2-1/4	1-1/4	.136/.160	111.0
1-1/4	2-1/2	1-3/8	.136/.160	138.0
1-3/8	2-3/4	1-1/2	.136/.160	173.0
1-1/2	3	1-5/8	.136/.160	209.0
1-3/4	3-3/8	1-7/8	.178/.201	328.0
2	3-3/4	2-1/8	.178/.201	398.0

TO ASTM F 436

HIGH STRENGTH STRUCTURAL WASHERS

ROUND

Bolt Size In.	Outside Dia., In.	Inside Dia., In.	Thickness, In.	Approx. Lbs. Per M Pcs.	Approx. No. Pcs. 50# Carton
1/2	1-1/16	17/32	.097/.177	18.2	2,500
5/8	1-5/16	11/16	.122/.177	38.4	1,250
3/4	1-15/32	13/16	.122/.177	44.5	1,125
7/8	1-3/4	15/16	.136/.177	66.8	625
1	2	1-1/8	.136/.177	89.4	500
1-1/8	2-1/4	1-1/4	.136/.177	111.0	375
1-1/4	2-1/2	1-3/8	.136/.177	138.0	300
1-1/2	3	1-5/8	.136/.177	209.0	250

(300 SERIES)

STAINLESS STEEL WASHER

BOLT SIZE	O.D. (In.)	I.D. (In.)	Thickness	Approx. Wt. per M Pcs.
1/4"	.625	.281	.050	3.2
5/16"	.750	.344	.050	4.9
3/8"	.875	.406	.050	6.6
7/16"	.875	.406	.062	8.2
1/2"	1.000	.406	.050	9.2
5/8"	1.125	.500	.062	13.8
3/4"	1.250	.531	.062	17.4
7/8"	1.500	.688	.078	31.0
1"	1.875	.812	.109	68.0
1 1/8"	2.250	.937	.109	99.0
1 1/4"	2.500	1.062	.125	140.0