

WASHERS

USS Steel Flat Washers

Commonly used with carbon steel bolting and all thread studs, such as A307 Grade A or B.

NOMINAL SIZE	ACTUAL ID	ACTUAL OD	THICKNESS GAUGE
3/16	1/4	9/16	18 (3/64)
1/4	5/16	3/4	16 (1/16)
5/16	3/8	7/8	14 (5/64)
3/8	7/16	1	14 (5/64)
7/16	1/2	1 1/4	14 (5/64)
1/2	9/16	1 3/8	12 (7/64)
9/16	5/8	1 1/2	12 (7/64)
5/8	11/16	1 3/4	10 (9/64)
3/4	13/16	2	9 (5/32)
7/8	15/16	2 1/4	8 (11/64)
1	1 1/16	2 1/2	8 (11/64)
1 1/8	1 1/4	2 3/4	8 (11/64)
1 1/4	1 3/8	3	8 (11/64)
1 3/8	1 1/2	3 1/4	7 (3/16)
1 1/2	1 5/8	3 1/2	7 (3/16)
1 5/8	1 3/4	3 3/4	7 (3/16)
1 3/4	1 7/8	4	7 (3/16)
1 7/8"	2	4 1/4	7 (3/16)
2	2 1/8	4 1/2	7 (3/16)
2 1/4	2 3/8	4 3/4	5 (7/32)
2 1/2	2 5/8	5	4 (15/64)
2 3/4	2 7/8	5 1/4	3 (1/4)
3	3 1/8	5 1/2	2 (17/64)

Washers are intended for general use with bolt, nut, and stud applications to provide increased bearing surface, spacing and to prevent galling. Unless otherwise specified, the washers are furnished with dimensions conforming to ANSI B.18.22.1.

* ASTM Designation: F844-90, page 265, 1.2-1.3

* Available in plain, zinc plated, HDG, Tripac 2000 Blue Coating System

SAE Steel Flat Washers

SAE washers have smaller inside and outside diameters and are commonly used with carbon steel bolts and studs.

NOMINAL SIZE	ACTUAL ID	ACTUAL OD	THICKNESS GAUGE
6 (1/8)	5/32	3/8	18 (3/64)
8 (5/32)	3/16	7/16	18 (3/64)
10	7/32	1/2	18 (3/64)
12	1/4	9/16	18 (3/64)
1/4	9/32	5/8	16 (1/16)
5/16	11/32	11/16	16 (1/16)
3/8	13/32	13/16	16 (1/16)
7/16	15/32	59/64	16 (1/16)
1/2	17/32	1 1/16	13 (3/32)
9/16	19/32	1 3/16	13 (3/32)
5/8	21/32	1 5/16	13 (3/32)
3/4	13/16	1 1/2	10 (9/64)
7/8	15/16	1 3/4	10 (9/64)
1	1 1/16	2	10 (9/64)
1 1/8	1 3/16	2 1/4	10 (9/64)
1 1/4	1 5/16	2 1/2	9 (5/32)
1 3/8	1 7/16	2 3/4	9 (5/32)
1 1/2	1 9/16	3	9 (5/32)

Fender Washers

Fender washers have a larger outside diameter than other steel washers.

NOMINAL SIZE	ACTUAL OD	THICKNESS GAUGE
1/8	1	.062/.080
3/16	1	.062/.080
3/16	1 1/8	.062/.080
3/16	1 1/4	.062/.080
1/4	1	.062/.080
1/4	1 1/4	.062/.080
1/4	1 1/2	.062/.080
5/16	1 1/4	.062/.080
5/16	1 1/2	.062/.080
3/8	1 1/4	.062/.080
3/8	1 1/2	.062/.080
3/8	2	.096/.116
1/2	1 1/2	.062/.080
1/2	2	.062/.080
1/2	2	.096/.116

TRIPAC

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WASHERS

ASTM F436 (A325) Washers
Commonly used with alloy steel,
high strength bolting and studs,
such as ASTM A193B7, SAE J429
& Grade 8, A325 & A490.

NOMINAL SIZE	ACTUAL ID	ACTUAL OD	THICKNESS GAUGE
	A	B	T
1/4	9/32	5/8	.051/.08
5/16	11/32	11/16	.051/.08
3/8	13/32	13/16	.051/.08
7/16	15/32	59/64	.051/.08
1/2	17/32	1 1/16	.097/.17
5/8	11/16	1 5/16	.122/.17
3/4	13/16	1	.122/.17
7/8	15/16	1 3/4	.136/.17
1	1 1/8	2	.136/.17
1 1/8	1 1/4	2 1/4	.136/.17
1 1/4	1 3/8	2 1/2	.136/.17
1 3/8	1 1/2	2 3/4	.136/.17
1 1/2	1 5/8	3	.136/.17
1 3/4	1 7/8	3 3/8	.178/.28
2	2 1/8	3 3/4	.178/.28
2 1/4	2 3/8	4	.24/.34
2 1/2	2 5/8	4 1/2	.24/.34
2 3/4	2 7/8	5	.24/.34
3	3 1/8	5 1/2	.24/.34
3 1/4	3 3/8	6	.24/.34

Stainless Steel Washers
With Large and Small I.D./O.D.
Commonly used with stainless
steel bolts and studs such as
ASTM F593, A193, B8 & B8M.

NOMINAL SIZE	ACTUAL ID	ACTUAL OD	THICKNESS GAUGE
	A	B	T
1/4	.281	5/8	.050
5/16	.343	3/4	.050
3/8	.406	7/8	.050
3/8	.406	1	.050
7/16	.500	1 1/8	.062
1/2	.531	1 1/4	.062
5/8	.687	1 5/16	.078
5/8	.687	1 1/2	.078
3/4	.812	1 1/2	.109
3/4	.812	1 3/4	.109
3/4	.812	1 7/8	.109
7/8	.937	1 3/4	.109
7/8	.937	1 7/8	.109
1	1.062	2	.125
1	1.062	2 1/4	.125
1	1.062	2 1/2	.125
1 1/8	1.187	2 1/4	.125
1 1/8	1.187	2 1/2	.125
1 1/4	1.312	2 1/4	.125
1 1/4	1.312	2 3/4	.125
1 1/2	1.562	2 3/4	.140
1 1/2	1.562	3 1/4	.140
1 3/4	1.812	3 1/2	.140
2	2.125	3 3/4	.187
2	2.125	4	.187

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