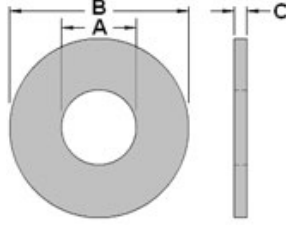


Standard Flat Washers

USS Pattern and SAE Pattern



USS Pattern

Grade 2, ASTM F844

Grade 8, ASTM F436

SAE Pattern

Grade 2, ASTM F844

Grade 8, ASTM F436

Plain = WUSS020---

Plain = WUSS080---

Plain = WSAE020---

Plain = WSAE080---

Zinc = WUSS020---Z1

Zinc = WUSS080---Z1

Zinc = WSAE020---Z1

Zinc = WSAE080---Z1

USS PATTERN

Bolt Size	A	B	C	Pounds per 100 pcs	Pieces per Pound
4 6 8					
10 12 1/4	1/4 5/16	9/16 3/4	.065 .065	.277 .671	361 149
5/16 3/8 7/16	3/8 7/16 1/2	7/8 1 1 1/4	.083 .083 .083	1.11 1.49 2.44	90 67 41
1/2 9/16 5/8	9/16 5/8 11/16	1-3/8 1 1/2 1-3/4	.109 7/64 .134	3.85 4.55 7.69	26 22 13
3/4 7/8 1	13/16 15/16 1-1/16	2 2-1/4 2-1/2	.148 .165 .165	10.99 14.29 20	9.1 7 5
1-1/8 1-1/4 1-3/8	1-1/4 1-3/8 1-1/2	2-3/4 3 3-1/4	.165 .165 .180	22.2 25 33.3	4.5 4 3
1-1/2 1-5/8 1-3/4	1-5/8 1-3/4 1-7/8	3-1/2 3-3/4 4	.180 .180 .180	38.5 43.5 50	2.6 0 0
1-7/8 2 2-1/4	2 2-1/8 2-3/8	4-1/4 4-1/2 4-3/4	.180 .180 .220	55.56 62.5 83.3	1.8 1.6 1.2
2-1/2 2-3/4 3	2-5/8 2-7/8 3-1/8	5 5-1/4 5-1/2	.238 .259 .284	100 111.11 125	1 .9 .8

ANSI 1.2 Type A - Wide Type 5

SAE PATTERN

Bolt Size	A	B	C	Pounds per 100 pcs	Pieces per Pound
4 6 8	1/8 5/32 3/16	5/16 3/8 7/16	1/32 3/64 3/64	.126 .171	790 585
10 12 1/4	7/32 1/4 9/32	1/2 9/16 5/8	3/64 1/16 .065	.23 .277 .45	435 361 222
5/16 3/8 7/16	11/32 13/32 15/32	11/16 13/16 59/64	.065 .065 .065	.521 .714 .952	192 140 105
1/2 9/16 5/8	17/32 19/32 21/32	1 1/16 1 3/16 1 5/16	.095 .095 .095	1.82 2.33 2.77	55 43 36
3/4 7/8 1	13/16 15/16 1 1/16	1-1/2 1-3/4 2	.134 .134 .134	4.76 6.25 8.33	21 16 12
1-1/8 1-1/4 1-3/8	1 3/16 1 5/16 1 7/16	2-1/4 2-1/2 2-3/4	.134 .165 .165	10.9 15.87 18.87	9.2 6.3 5.3
1-1/2 1-5/8 1-3/4	1 9/16 1 5/8 1 7/8	3 3-1/4 3-3/8	.165	23.25	4.3
1-7/8 2 2-1/4	2 2 1/8 4	3-1/2 3-3/4 4			
2-1/2 2-3/4 3		4-1/2 5 5-1/2			

ANSI 1.2 Type A - Narrow Type 5

Note: F436 and Grade 8 thru hardened are interchangeable.