CONT	INUED	Flat Washers						
For Screw Size	Inside Diameter	Outside Diameter	Maximum Thickness	Item No.	Pkg. Qty.	For Screw Size M5	Inside Diameter 5.3 mm	Outs Diam 15 n
Grade 2 St	0.125 in	½ in	0.047 in	22UG82	100	M6	6.4 mm	18 n
π4	0.125 in 0.156 in	3⁄8 in 5∕16 in	0.047 in	22UG84 22UG86	100 100	IVIU	6.4 mm	12 n 24 n
#6	0.156 in	7∕16 in	0.047 in	22UG87	100	M8	8.4 mm 8.4 mm	16 n
	0.156 in 0.188 in	9/16 in	0.047 in 0.047 in 0.047 in 0.047 in 0.047 in 0.047 in 0.047 in 0.047 in	22UG88 22UG89	100	M10	10.5 mm 10.5 mm	30 m 20 m
#8 #10	0.188 in	3⁄8 in 13∕32 in	0.047 in 0.047 in	22UG89 22UG90	100		10.5 mm 13 mm	20 m
#8 #10	0.188 in 0.188 in 0.188 in	½ in	0.047 in	22UG91	100	M12	13 mm	37 n 44 n
#10 #8	0.188 in 0.188 in	9/16 in 5/8 in	0.047 in 0.063 in	22UG92 22UG93	100 100	M14	15 mm 15 mm	44 n 28 n
	0.188 in	<sup>23</sup> / <sub>32</sub> in	0.063 in 0.063 in	22UG94	100	M16	17 mm	30 n
#10	0.219 in 0.219 in	½ in ½ in	0.063 in 0.063 in	6RPN7 6RPN8	435 100		17 mm teel, Black	50 n
#12	0.25 in 0.25 in	%₁6 in	0.047 in 0.047 in	6RPN9 6RPR3	280	#6	0.156 in	3/8
#10	0.25 in	9⁄16 in	0.047 in		100	#8	0.188 in	7/16 1/2
1/:-	0.281 in 0.281 in	½ in <sup>23</sup> / <sub>32</sub> in	0.063 in 0.063 in	22UG96 22UG97	100	#10	0.203 in 0.203 in	1/2
1⁄4 in	0.281 in	1 in	0.063 in	22UG98	100	47.	0.281 in	5/8
	0.313 in 0.344 in	3/4 in 5/8 in	0.063 in 0.063 in	6RPR4 22UG99	100	1/4 in	0.281 in 0.281 in	5/8 5/8
	0.344 in 0.344 in	⅓ in	0.063 in 0.063 in	22UH01	100		0.344 in	3/4
5∕16 in	0.344 in	1 1/8 in 11/64 in	0.063 in 0.063 in	22UH02 6RPP1	100	5∕16 in	0.344 in 0.344 in	3/4 3/4
	0.344 in 0.375 in	⅓ in	0 078 in	6RPR5	100		0.406 in	3/ <sub>4</sub>   7/ <sub>8</sub>
	0.406 in 0.406 in	<sup>23</sup> ⁄ <sub>32</sub> in 1 in	0.063 in 0.063 in 0.109 in 0.063 in	22UH03	100	¾ in	0.406 in	7/8 i 1 i
3/8 in	0.406 in	1 1/4 in	0.109 in	22UH04 22UH05	100		0.406 in 0.469 in	- 11
	0.406 in	13/ <sub>16</sub> in	0.063 in	6RPP2	100	7∕16 in	0.469 in	1 i
	0.438 in 0.469 in	1 in ⅓ in	0.078 in 0.063 in	6RPR6 22UH06	100 50	47.	0.469 in 0.531 in	1 i 1 1/8
	0.469 in	1 1/8 in	0.063 in	22UH07	50	1½ in	0.531 in	1 1/8
7∕16 in	0.469 in 0.469 in	1 15/32 in 15/16 in	0.109 in 0.063 in	22UH08 6RPP3	50 50	5⁄8 in	0.656 in 0.656 in	1 3/8 1 1/4
	0.5 in	1 ½ in	0.078 in	6RPR7	100	70 111	0.656 in	1 3/8
	0.531 in 0.531 in	1 in 1 1/4 in	0.063 in 0.109 in	22UH09 22UH10	50 50	3/4 in	0.781 in 0.781 in	1 ½ 1 ⅓
1/2 in	0.531 in	1 3/4 in	0.109 in	22UH11	50	7⁄8 in	0.906 in	1 3/4
	0.531 in	1 ½ in	0.094 in	6RPP4	50	1 in	1.031 in	2 i 2 ½
	0.563 in 0.594 in	1 3/8 in 1 3/16 in	0.109 in 0.094 in	6RPR8 6RPP5	100 215	1 ½ in	1.156 in 1.281 in	2 1/2
9/16 in	0.625 in	1 ½ in	0.109 in	6RPR9	50	1 ¼ in	1.281 in	2 1/4
5/8 in	0.656 in 0.172 in	1 5/16 in 1 3/4 in	0.094 in 0.141 in	6RPP6 6RPT0	25 50	M3	3.2 mm 3.2 mm	8 m 12 n
	0.781 in	2 in	0.156 in	22UH15	20	M4	4.3 mm	10 n
3/4 in	0.813 in	1 ½ in	0.141 in	6RPP7	20 25	IVIT	4.3 mm	14 n
76 in	0.813 in 0.938 in	2 in 1 ¾ in	0.156 in 0.141 in	6RPT1 6RPP8	10	M5	5.3 mm 5.3 mm	11 n 15 n
⅓ in	0.938 in	2 ½ in 2 ½ in 2 ½ in 2 ¼ in	0.172 in	6RPT2	25	M6	6.4 mm	15 n 13 n
1 in	1.063 in	2 In 2 ½ in	0.141 in 0.172 in	6RPP9 6RPT3	10 25		6.4 mm 8.4 mm	18 n
1 1/8 in	1.063 in 1.188 in	2 1/4 in	0.172 in 0.141 in	6RPT3 6RPR0	25 46	M8	8.4 mm	16 n 22 n 19 n
1 1/4 in	1.313 in 1.375 in 1.563 in	2 ½ in 3 in	0.156 in 0.172 in 0.156 in	6RPR1	31	M10	10.5 mm 10.5 mm 13 mm	19 n
1 ½ in	1.563 in	3 in	0.156 in	6RPT5 6RPR2	25 21	M12	13 mm	23 n 22 n
M3	1 625 in	3 ½ in	0 188 in	6RPT7 38DR21	25 100		13 mm 15 mm	26 n
IVIO	3.2 mm 4.3 mm	6 mm 8 mm	0.5 mm 0.5 mm	38DR22	100	M14	15 mm	25 n 27 n
M4	4 3 mm	12 mm	1.6 mm	38DR33	100	M16	17 mm	28 n
	4.3 mm 5.3 mm	9 mm 9 mm	0.8 mm 1 mm	6EY55 38DR23	100		17 mm 21 mm	32 n 35 n
M5	5.3 mm	15 mm	2 mm	38DR34	100	M20	21 mm	35 n
	5.3 mm 6.4 mm	10 mm 11 mm	1 mm 1.6 mm	6EY57 38DR24	100	M24	25 mm 25 mm	40 n 43 n
M6	6.4 mm	17 mm	3 mm	38DR35	100	M30	31 mm	44 n
M7	6.4 mm	12 mm 14 mm	1.6 mm 1.6 mm	6EY59 6EY61	100	M36	31 mm 37 mm	48 n 50 n
IVII	7.4 mm 8.4 mm	15 mm	1.6 mm	38DR25	100		eel, Black	
M8	8.4 mm	21 mm	4 mm	38DR36	100	1/2 in	0.5 in	1 ½16 1/8
	8.4 mm 10.5 mm	16 mm 18 mm	1.6 mm 1.6 mm	6EY63 38DR26	100		0.5 in 0.625 in	78 1 i
M10	10.5 mm	25 mm	4 mm	38DR37	100	5⁄8 in	0.625 in	1 i
	10.5 mm 13 mm	20 mm 24 mm	2 mm 2.5 mm	6EY65 22UH22	100 50		0.688 in 0.75 in	1 5/10
M12	13 mm 13 mm	20 mm	2 mm 6 mm	38DR27 38DR38	100	3/4 in	0.75 in 0.813 in	1 ½ 1 ½ 1 ½ 1 ½
	13 mm	30 mm	6 mm	38DR38 25DL13	100 50		0.813 in	1 15/3 1 3/8
M14	15 mm 15 mm	44 mm 24 mm	3 mm 2.5 mm 2.5 mm	38DR28	100	74 :	0.875 in 0.875 in 0.875 in	1 3/8
	15 mm	28 mm	2.5 mm	38DR28 6EY19	50	⅓ in	0.875 in	1 3/8
M16	17 mm	30 mm 28 mm	3 mm 2.5 mm	22UE53 38DR29	25 100		0.938 in 1 in	1 ¾ 2 i
	17 mm 17 mm	40 mm	6 mm	38DR39	100	1 in	1 in	2 i 1 ½
M18	19 mm 19 mm	34 mm 30 mm	3 mm 2.5 mm	2WY99 38DR30	25 100	1 1/8 in	1 in 1.125 in	1 ½ 2 ¼ 2 ½
IVITO	20 mm	56 mm	4 mm	25DL14	25	1 /8 111	1.25 in	2 1/2
MOO	21 mm	37 mm	3 mm	22UE54	10	1 ¼ in	1.25 in	1 1/8
M20	21 mm 21 mm	34 mm 44 mm	3 mm 8 mm	38DR31 38DR41	100	1 % in	1.25 in 1.375 in	1 1/8 2 1/8
M22	23 mm	50 mm	8 mm	38DR42	50	1 ½ in	1.5 in	2 1/4
M24	25 mm 25 mm	44 mm 50 mm	4 mm 1 mm	22UH23 38DR43	10 50	1 % in	1.5 in 1.875 in	2 ½ 2 %
	26 mm	72 mm	5 mm	25DL15	10	M30	31 mm	56 n
M27	28 mm 31 mm	50 mm 56 mm	4 mm 4 mm	25DK94 22UE55	5 5	M36 M48	37 mm 50 mm	66 n 92 n
M30	33 mm	92 mm	6 mm	29DJ22	5		teel, Hot Di	pped G
M33	34 mm 37 mm	60 mm	5 mm	25DK95	2	½ in	0.531 in	1 ½ 1 ½
M36	37 mm 39 mm	66 mm 110 mm	5 mm 8 mm	22UE56 29DJ24	2	5/8 in 3/4 in	0.688 in 0.813 in	1 15/5
M39	40 mm	72 mm 78 mm	6 mm	22UE57 22UE58	2	₹ in	0.938 in	1 3/4 2 i
M42 M48	43 mm	02 mm	7 mm 8 mm	22UE58 25DK97	2	1 in	1.125 in	2 i 2 1/4
M56	58 mm	105 mm	9 mm	25DK97	1	1 ½ in	1.25 in	2 1/2
Grade 2 St	58 mm teel, Zinc \ 0.172 in 0.813 in 1.625 in	<b>/ellow</b> 1 ¾ in	0.134 in	5DJE0	750	Grade 8 St	0.938 in 1.125 in 1.125 in 1.25 in 1.25 in teel, Zinc Y	ellow 2 ¾
3/4 in	0.172 III 0.813 in	2 in 3 ½ in	0.149 in	5DJD9 5DJD8	500	1 78 111	1.188 in 1.375 in	
1 ½ in	1.625 in	3 ½ in	0.164 in	5DJD8	150	1 1/4 in	1.375 in	2 1/2

## **Mil Spec Flat Washers**

Outside

Diameter 15 mm

15 mm 18 mm 12 mm 24 mm 16 mm 30 mm 20 mm

20 mm 24 mm 37 mm 44 mm 28 mm 30 mm 50 mm

3/8 in 1/16 in 1/2 in 1/2 in 5/8 in 5/8 in 5/8 in 3/4 in

1 3/4 in

12 mm 10 mm 14 mm 11 mm

18 mm

16 mm 22 mm 19 mm

23 mm 22 mm

22 mm 26 mm 25 mm 27 mm 28 mm 32 mm 35 mm

35 mm 40 mm 43 mm 44 mm

Maximum

Thickness

1.6 mm 1.6 mm 2 mm

1.6 mm 2.5 mm 2 mm

2.5 mm

3 mm 3 mm 2.5 mm

0.078 0.078 0.093 0.093 0.125

0.125 in 0.125 in 0.187 in 0.125 in 0.156 in 0.187 in 0.125 in 0.187 in 0.125 in 0.125 in

0.125 in 0.312 in 0.312 in

3 mm 2 mm 3 mm 2 mm

3.5 mm 2.5 mm 4.5 mm

3 mm 5 mm mm

5 mm 3 mm

5 mm

3 mm 5 mm

3.5 mm 5 mm 3.5 mm

5 mm 4 mm

6.5 mm 4 mm

0.047 in

0.078 in 0.177 in

0.051 in 0.078 in 0.141 in 0.051 in 0.064 in 0.078 in 0.141 in 0.078 in 0.078 in 0.141 in 0.078 in 0.141 in

6 mm 8 mm

0.177 in 0.177 in 0.177 in 0.177 in 0.177 in 0.177 in 0.136 in 0.136 in

25DL19 2WY87 25DL21

2WY88 25DL22 2WY89

25DL23 25DL24 2WY91 22YG89 25DL25

5RU42 5RU44 5RU45

5R1192 5RY23 5RU51 5RU9 5RY26 5RU54

5RU96 5RY29 5RU57 5RU57 5RU98 5RY32 5RU59

5RY34 5RU62 5RY12

5RY3

5RY16

5RY18 5RY20

5RU76

5RY22 5RE85

5RF86 5RE8

5RU10 5RE88 5RU11

5RE89 5RU12 5RE90

5RU13

5RU14

5RU15 5RE93 5RU16 5RE94

5RU17 5RF95

5RU18 5RE96 5RU19 5RE97

31JL55 5MXC1 5MXA2 5MXC2 31JL56

5MXA3

5MXC3 31JL57

5MXA4 5MXC4 5MXD1

31JL58 31JL59 5MXC5

5MXD2

5MXC7 5MXD3 5MXC8 5MXC9

5KFF4

31JM16 31JM17

31JM18 31JM19 31JM20 31JM21 31JM22

25 10

5 10

5 10

5 10

5 10



Meet rigorous U.S. military specifications and standards to ensure high performance and reliability in demanding environments.

For Screw Size	Inside Diameter	Outside Diameter	Maximum Thickness	ltem No.	Pkg. Qtv.
	less Steel,		THIOKHOOO		Qty.
#8	0.172 in	19/64 in	0.11 in	36RL32	100
	0.188 in	3/8 in	0.11 in	36RL31	100
1/4 in	0.281 in	5⁄8 in	0.08 in	36RL33	50
3/8 in	0.406 in	13/16 in	0.195 in	36RL34	25
1/2 in	0.531 in	1 1/16 in	0.265 in	36RL35	5
5⁄8 in	0.656 in	1 5/16 in	0.265 in	36RL36	5

## **Slotted Flat Washers**



These "C-shaped" washers can be slipped on and removed from a bolted joint making for easier installation than other flat washers. They are commonly used in construction, fixtures, jigs, work-holding set-ups, and other environments where it would be dangerous or time-consuming to disassemble the existing fastened installation to add a new washer.

For Screw Size	Slot Width	Outside Diameter	Maximum Thickness	Item No.	Pkg. Qty.		
18-8 Stain	less Steel,	Plain					
1/4 in	0.281 in	3/4 in	0.25 in	1JYF2	1		
74 III ·	0.281 in	1 in	0.25 in	1JYF3	1		
5/16 in	0.344 in	1 1/4 in	0.313 in	1JYF4	1		
3/8 in	0.406 in	1 ½ in	0.375 in	1JYF6	1		
98 III	0.406 in	1 3/4 in	0.375 in	1JYF7	1		
½ in -	0.531 in	1 % in	0.375 in	1JYF8	1		
72 III ·	0.531 in	2 1/4 in	0.375 in	1JYF9	1		
5⁄8 in	0.656 in	2 1/8 in	0.375 in	1JYG1	1		
3/4 in	0.781 in	2 ½ in	0.438 in	1JYG2	1		
1 in	1.031 in	2 ½ in	0.438 in	1JYG3	1		
1 1/4 in	1.313 in	3 in	0.438 in	1JYG4	1		
Grade 5 Steel, Black Oxide							
1/4 in	0.281 in	1 in	0.25 in	5RY79	1		
5/16 in	0.344 in	1 1/4 in	0.313 in	5RY80	1		
3/8 in	0.406 in	1 1/4 in	0.375 in	5RY81	1		
½ in -	0.531 in	2 1/4 in	0.375 in	5RY85	1		
72 III ·	0.531 in	2 in	0.375 in	5RY93	1		
5⁄8 in	0.656 in	2 1/8 in	0.375 in	5RY86	1		
3/4 in	0.781 in	2 ½ in	0.438 in	5RY87	1		
94 111	1.281 in	3 in	0.625 in	5RY95	1		
1 in	1.031 in	3 in	0.563 in	5RY94	1		
1 1/4 in	1.313 in	3 in	0.438 in	5RY89	1		

## **Square Flat Washers**



420R31

Larger surface area than round washers for better torque distribution. They are thick with a broad shape to protect against the damage of wood fibers used in wood construction.

	For Screw	Inside	Square	Maximum	Item	Pkg.			
	Size	Diameter	Width	Thickness	No.	Qty.			
	Grade 2 Stainless Steel, Plain								
		0.688 in	2 in	0.2 in	420R31	- 1			
	5⁄8 in	0.688 in	3 in	0.515 in	420R42	1			
		0.688 in	4 in	0.515 in	420R41	- 1			
	3/4 in	0.813 in	3 in	0.515 in	420R44	1			
		0.813 in	4 in	0.515 in	420R43	1			
	⅓ in	0.938 in	2 in	0.265 in	420R30	1			
	1 in	1.063 in	3 in	0.515 in	420R46	- 1			
		1.063 in	4 in	0.515 in	420R45	1			
	1 1/4 in	1.313 in	3 in	0.515 in	420R48	1			
		1.313 in	4 in	0.515 in	420R47	- 1			
	1 ½ in	1.563 in	3 in	0.515 in	420R50	1			
	Grade 2 Steel, Galvanized								
	1/4 in	0.312 in	2 in	0.265 in	1JUT9	2			
	3∕8 in	0.438 in	2 in	0.265 in	1JUV1	2 2 2			
	½ in	0.562 in	2 in	0.265 in	1JUV2				
	5⁄8 in	0.688 in	2 in	0.265 in	1JUV3	2			
	3∕4 in	0.812 in	2 in	0.265 in	1JUV4	2			
	1 in	1.062 in	2 in	0.265 in	1JUV5	2			

56 mm 66 mm 92 mm

ped Galvanized