

## Nylon Insulator Washers

Dampen vibration and seal leaks. They are also lightweight and waterproof. Long-barrel and short-barrel options are available to complement different bolt sizes.



For Screw Size	Corrugated Tubing Inside Dia.	Shoulder Outside Diameter	Shoulder Height	Sleeve Outside Diameter	Overall Height	Item No.	Pkg. Qty.
<b>Long Barrel, White</b>							
#2	0.09 in	0.181 in	0.047 in	0.12 in	0.297 in	4DCL3	40
#6	0.14 in	0.29 in	0.047 in	0.17 in	0.172 in	4DCJ5	40
#8	0.173 in	0.344 in	0.063 in	0.205 in	0.438 in	4DCJ7	40
	0.2 in	0.399 in	0.063 in	0.26 in	0.563 in	4DCE2	40
#10	0.2 in	0.399 in	0.063 in	0.26 in	0.813 in	4DCK2	40
	0.2 in	0.399 in	0.063 in	0.26 in	0.313 in	4DCP3	40
	0.26 in	0.513 in	0.063 in	0.313 in	0.313 in	4DCJ9	40
¼ in	0.26 in	0.513 in	0.063 in	0.313 in	0.563 in	4DCK6	40
	0.26 in	0.513 in	0.125 in	0.313 in	0.188 in	4DCN4	40
½ in	0.32 in	0.62 in	0.063 in	0.36 in	0.563 in	4DCL9	40
<b>Short Barrel, Black</b>							
#6	0.146 in	0.328 in	0.04 in	0.218 in	0.08 in	4DCC8	40
#8	0.174 in	0.375 in	0.05 in	0.25 in	0.1 in	4DCG1	40
#10	0.201 in	0.438 in	0.05 in	0.281 in	0.1 in	4DCG9	40
¼ in	0.26 in	0.562 in	0.06 in	0.375 in	0.12 in	4DCG7	40
½ in	0.385 in	0.75 in	0.06 in	0.5 in	0.12 in	4DCL7	40
<b>Short Barrel, White</b>							
#2	0.093 in	0.25 in	0.04 in	0.156 in	0.08 in	4DCE5	40
#6	0.146 in	0.328 in	0.04 in	0.218 in	0.08 in	4DCD2	40
#10	0.201 in	0.438 in	0.05 in	0.281 in	0.1 in	4DCP7	40
¼ in	0.26 in	0.562 in	0.06 in	0.375 in	0.12 in	4DCH8	40
½ in	0.385 in	0.75 in	0.06 in	0.5 in	0.12 in	4DCH6	40



1NU82



5TA59

## Countersunk Washers

Bowl-shaped to allow flat or oval countersunk head screws to lie flush with the work surface and to create a more professional finish. Their recessed shape also prevents the screws from damaging soft material.

For Screw Size	Maximum Inside Diameter	Maximum Outside Diameter	Maximum Overall Height	Item No.	Pkg. Qty.
<b>Standard Countersunk Washers</b>					
<b>18-8 Stainless Steel, Plain</b>					
#6	0.172 in	2 <sup>9</sup> / <sub>64</sub> in	2 <sup>9</sup> / <sub>64</sub> in	1NU82	100
#8	0.203 in	3 <sup>3</sup> / <sub>64</sub> in	3 <sup>3</sup> / <sub>64</sub> in	1NU83	100
#10	0.25 in	1 <sup>9</sup> / <sub>32</sub> in	1 <sup>9</sup> / <sub>32</sub> in	1NU84	100
#12	0.297 in	1 <sup>1</sup> / <sub>16</sub> in	1 <sup>1</sup> / <sub>16</sub> in	1NU85	100
¼ in	0.328 in	2 <sup>9</sup> / <sub>32</sub> in	2 <sup>9</sup> / <sub>32</sub> in	1NU86	100
M3	3.2 mm	10 mm	10 mm	1.8 mm	6FY92
M4	4.3 mm	14 mm	14 mm	2.3 mm	6FY94
M5	5.3 mm	16 mm	16 mm	2.8 mm	6FY96
M6	6.4 mm	18 mm	18 mm	3.3 mm	6FY98
<b>6/6 Nylon, Plain</b>					
#6	0.143 in	3 <sup>1</sup> / <sub>16</sub> in	3 <sup>1</sup> / <sub>16</sub> in	0.1 in	4DCR8
#8	0.171 in	3 <sup>3</sup> / <sub>64</sub> in	3 <sup>3</sup> / <sub>64</sub> in	0.115 in	4DCD3
#10	0.196 in	3 <sup>7</sup> / <sub>64</sub> in	3 <sup>7</sup> / <sub>64</sub> in	0.152 in	4DCP9
#12	0.225 in	3 <sup>9</sup> / <sub>64</sub> in	3 <sup>9</sup> / <sub>64</sub> in	0.16 in	4DCR4
<b>Finishing Countersunk Washers</b>					
<b>Not Graded Steel, Black Oxide</b>					
#8	0.187 in	1 in	1 in	0.125 in	5TA59
#10	0.203 in	1 ¼ in	1 ¼ in	0.14 in	5TA62
¼ in	0.281 in	2 in	2 in	0.281 in	5TA67
M4	4.3 mm	16 mm	16 mm	3 mm	5TA48
M5	5.3 mm	22 mm	22 mm	3.5 mm	5TA50
M6	6.4 mm	32 mm	32 mm	4 mm	5TA53
<b>18-8 Stainless Steel, Plain</b>					
#8	0.187 in	¾ in	¾ in	0.125 in	1JYG5
#10	0.203 in	1 ¼ in	1 ¼ in	0.14 in	1JYG9
¼ in	0.281 in	1 ¼ in	1 ¼ in	0.281 in	1JYH1
<b>316 Stainless Steel, Plain</b>					
#10	0.203 in	¾ in	¾ in	0.125 in	45FP07
¼ in	0.281 in	¾ in	¾ in	0.125 in	45FP08

## Structural Washers

Are thick and heavy-duty for mechanical and structural use with high-strength fasteners. They are typically found in steel-to-steel connections for bridges, buildings, and other infrastructure.

**Flat washers** won't cup during installation to create a thick surface level for load distribution.

**Square beveled** washers secure angled structural beams and compensate for a lack of parallel surfaces.

For Screw Size	Inside Diameter	Outside Diameter	Minimum Thickness	Maximum Thickness	Item No.	Pkg. Qty.
<b>Flat Structural Washers</b>						
<b>Not Graded Steel, Black Oxide</b>						
M30	31 mm	56 mm	5 mm	5 mm	53GG55	100
<b>Not Graded Steel, Hot Dipped Galvanized</b>						
½ in	0.531 in	1 ½ in	0.097 in	0.177 in	6ZA26	50
¾ in	0.172 in	1 ¾ in	0.122 in	0.177 in	6ZA27	50
¾ in	0.813 in	1 ½ in	0.122 in	0.177 in	6ZA28	25
¾ in	0.938 in	1 ¾ in	0.136 in	0.177 in	6ZA29	25
1 in	1.063 in	2 in	0.136 in	0.177 in	6ZA30	10
1 ½ in	1.188 in	2 ¼ in	0.136 in	0.177 in	6ZA31	10
1 ¾ in	1.375 in	2 ½ in	0.136 in	0.177 in	6ZA32	10
<b>Square Beveled Structural Washers</b>						
<b>Not Graded Steel, Zinc Plated</b>						
M8	9 mm	22 mm	4.6 mm	4.6 mm	6GA10	10
M10	11 mm	22 mm	4.6 mm	4.6 mm	6GA12	10
M12	14 mm	26 mm	6.2 mm	6.2 mm	6GA14	10
M16	18 mm	32 mm	7.5 mm	7.5 mm	6GA16	10
M20	22 mm	40 mm	9.2 mm	9.2 mm	6GA18	5
M22	24 mm	44 mm	10 mm	10 mm	6GA20	5



Square Beveled



Flat

## Spherical Washers

Creates a flat bolting surface by clamping two uneven surfaces together ideal for fixture applications. Their thick bodies prevent bolts from bending and twisting.



1JYH6

For Screw Size	Top Washer Inside Diameter	Top Washer Outside Diameter	Bottom Washer Inside Diameter	Bottom Washer Outside Diameter	Washer Radius	Maximum Thickness	Item No.
<b>Steel, Black Oxide</b>							
¼ in	0.281 in	0.625 in	0.313 in	0.625 in	0.75 in	0.188 in	1JYH6
¾ in	0.406 in	0.875 in	0.438 in	0.875 in	1.25 in	0.25 in	1JYH7
¾ in	0.438 in	0.875 in	0.406 in	0.875 in	1.25 in	0.25 in	2YHK6
½ in	0.531 in	1.125 in	0.562 in	1.125 in	1.5 in	0.313 in	1JYH8
½ in	0.563 in	1.125 in	0.531 in	1.125 in	1.5 in	0.313 in	2YHK7
¾ in	0.688 in	1.375 in	0.656 in	1.375 in	1.75 in	0.313 in	2YHK8
¾ in	0.813 in	1.625 in	0.781 in	1.625 in	2.25 in	0.375 in	2YHK9
1 in	1.063 in	2 in	1.063 in	2 in	2.75 in	0.5 in	2YH2
1 ¼ in	1.312 in	2.5 in	1.375 in	2.5 in	3 in	0.5 in	1JYJ5
1 ½ in	1.625 in	2.875 in	1.563 in	2.875 in	3 in	0.5 in	2YH5
M6	6.4 mm	12 mm	7.1 mm	12 mm	9 mm	4.2 mm	5RY96
M10	10.5 mm	21 mm	12 mm	21 mm	15 mm	6.5 mm	5TA10
M16	17 mm	30 mm	19 mm	30 mm	22 mm	9.6 mm	5TA14
<b>18-8 Stainless Steel, Plain</b>							
¼ in	0.281 in	0.625 in	0.313 in	0.625 in	0.75 in	0.188 in	45FN96
¾ in	0.406 in	0.875 in	0.406 in	0.875 in	1.25 in	0.25 in	2YJD7
¾ in	0.406 in	0.875 in	0.438 in	0.875 in	1.25 in	0.25 in	45FN97
½ in	0.531 in	1.125 in	0.562 in	1.125 in	1.5 in	0.313 in	45FN98
1 in	1.062 in	2 in	1.125 in	2 in	2.75 in	0.5 in	45FP03
1 ¼ in	1.312 in	2.5 in	1.375 in	2.5 in	3 in	0.5 in	45FP05
M10	10.5 mm	21 mm	12 mm	21 mm	15 mm	6.5 mm	5TA11

## Wave Washers

These irregular, wavy-shaped washers act as a spring when compressed to maintain fastener tension and sustain loads. Wave washers also eliminate rattles, absorb shock, and compensate for expansion and contraction in components.



For Screw Size	Inside Diameter	Outside Diameter	Thickness	Overall Height	Type	Item No.	Pkg. Qty.
<b>Stainless Steel Wave Washers</b>							
<b>Plain Stainless Steel</b>							
#2	0.091 in	0.13 in	0.004 in	0.04 in	Single Wave	2JH27	10
¾ in	0.411 in	0.702 in	0.01 in	0.08 in	Triple Wave	6Y99	25
½ in	0.523 in	0.865 in	0.01 in	0.101 in	Triple Wave	6ZA11	25
1 ½ in	0.713 in	1.13 in	0.015 in	0.135 in	Triple Wave	6ZA12	10
<b>Steel Wave Washers</b>							
<b>Black Oxide Spring Steel</b>							
#8	0.169 in	0.385 in	0.012 in	0.055 in	Triple Wave	6ZA16	100
#10	0.224 in	0.26 in	0.008 in	0.05 in	Triple Wave	6ZA17	100
¼ in	0.262 in	0.385 in	0.01 in	0.06 in	Triple Wave	6ZA18	50
¾ in	0.33 in	0.447 in	0.008 in	0.04 in	Triple Wave	6ZA19	50
¾ in	0.403 in	0.51 in	0.007 in	0.07 in	Triple Wave	6ZA20	50
¾ in	0.46 in	0.76 in	0.015 in	0.09 in	Triple Wave	6ZA21	50
½ in	0.53 in	0.76 in	0.015 in	0.09 in	Triple Wave	6ZA22	50
¾ in	0.66 in	0.86 in	0.01 in	0.07 in	Triple Wave	6ZA23	50
¾ in	0.762 in	1.072 in	0.015 in	0.115 in	Triple Wave	6ZA24	25



6FY57

## Conical Washers

■ Meet DIN 6796

Also known as Belleville washers, can be stacked together to create longer springs and higher force in tight spaces than split lock washers. They flatten as pressure is applied, dampening and absorbing vibration and shock.

For Screw Size	Inside Diameter	Outside Diameter	Overall Height	Item No.	Pkg. Qty.
<b>18-8 Stainless Steel, Plain</b>					
M3	3.2 mm	7 mm	0.85 mm	6FY51	10
M4	4.3 mm	9 mm	1.3 mm	6FY53	25
M5	5.3 mm	11 mm	1.55 mm	6FY55	25
M6	6.4 mm	14 mm	2 mm	6FY57	25
M8	8.4 mm	18 mm	2.6 mm	6FY59	10
M10	10.5 mm	23 mm	3.2 mm	6FY61	25
M12	13 mm	29 mm	3.95 mm	6FY62	10
M16	17 mm	39 mm	5.25 mm	6FY64	5
M20	21 mm	45 mm	6.4 mm	6FY66	1
M24	25 mm	56 mm	7.75 mm	6FY68	1
<b>Not Graded Steel, Black Oxide</b>					
M4	4.3 mm	9 mm	1.3 mm	6FY74	100
M5	5.3 mm	11 mm	1.55 mm	6FY76	100
M6	6.4 mm	14 mm	2 mm	6FY78	50
M8	8.4 mm	18 mm	2.6 mm	6FY80	25
M10	10.5 mm	23 mm	3.2 mm	6FY82	10
M12	13 mm	29 mm	3.95 mm	6FY84	10
M16	17 mm	39 mm	5.25 mm	6FY86	1
M20	21 mm	45 mm	6.4 mm	6FY88	1
M24	25 mm	56 mm	7.75 mm	6FY90	1

## Nylon Retaining Washers

Well-suited for high torque, vibration, and heat environments. In addition to being firm, they are flexible and easy to install or remove compared to more traditional flat and lock washers.

For Screw Size	Inside Diameter	Outside Diameter	Thickness	Item No.	Pkg. Qty.
#2	0.115 in	1 <sup>3</sup> / <sub>64</sub> in	0.032 in	3XYX2	50
#4	0.156 in	1 <sup>1</sup> / <sub>64</sub> in	0.032 in	3XYX7	50
#6	0.198 in	2 <sup>1</sup> / <sub>64</sub> in	0.032 in	3XYX1	50
#8	0.235 in	2 <sup>5</sup> / <sub>64</sub> in	0.062 in	3XYX9	50
#10	0.277 in	2 <sup>9</sup> / <sub>64</sub> in	0.062 in	3XYX5	50
¼ in	0.375 in	1 <sup>9</sup> / <sub>32</sub> in	0.062 in	3XYX4	50
¾ in	0.564 in	1 <sup>1</sup> / <sub>16</sub> in	0.062 in	3	