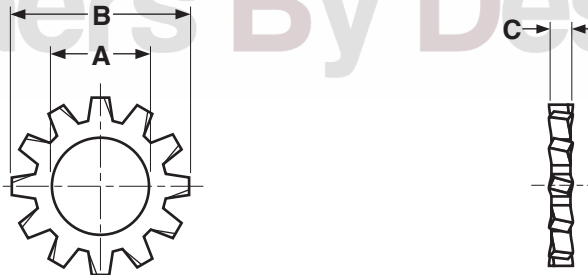


Fasteners By Design Inc.



EXTERNAL TOOTH LOCK WASHERS								ASME B18.21.1-2009	
Nominal Washer Size		A		B		C			
		Inside Diameter		Outside Diameter		Thickness			
		Max	Min	Max	Min	Max	Min		
#2	0.086	0.095	0.086	0.189	0.177	0.013	0.010		
#3	0.099	0.109	0.102	0.235	0.220	0.016	0.010		
#4	0.112	0.123	0.115	0.260	0.245	0.018	0.012		
#5	0.125	0.136	0.129	0.285	0.270	0.020	0.014		
#6	0.138	0.150	0.141	0.320	0.305	0.022	0.016		
#8	0.164	0.176	0.168	0.381	0.365	0.023	0.018		
#10	0.190	0.204	0.195	0.410	0.395	0.024	0.018		
#12	0.216	0.231	0.221	0.475	0.460	0.027	0.020		
1/4	0.250	0.267	0.256	0.510	0.494	0.028	0.023		
5/16	0.3125	0.332	0.320	0.610	0.588	0.034	0.028		
3/8	0.375	0.398	0.384	0.694	0.670	0.040	0.032		
7/16	0.438	0.464	0.448	0.760	0.740	0.040	0.032		
1/2	0.500	0.530	0.513	0.900	0.880	0.045	0.037		
9/16	0.5625	0.596	0.576	0.985	0.960	0.045	0.037		
5/8	0.625	0.663	0.641	1.070	1.045	0.050	0.042		
3/4	0.750	0.795	0.768	1.260	1.220	0.055	0.047		
7/8	0.875	0.927	0.897	1.410	1.380	0.060	0.052		
1	1.000	1.060	1.025	1.620	1.590	0.067	0.059		

Description	A hardened circular washer with twisted prongs or "teeth" which extend out from the outer edge of the washer.
Applications/ Advantages	This is the most preferable of all tooth-lock washers. It offers the greatest locking efficiency since the teeth are on the largest radius and provide greater torsional resistance.
Material	<p><i>Steel:</i> SAE 1050 - 1065 spring steel.</p> <p><i>18-8 Stainless:</i> SAE 301 - 305 stainless steel.</p> <p><i>316 Stainless:</i> SAE 316 stainless steel.</p> <p><i>410 Stainless:</i> SAE 410 stainless steel.</p>
Hardness	<p><i>Steel:</i> Rockwell C40 - 50</p> <p><i>18-8 Stainless:</i> Annealed 88 minimum Rockwell B, 1/4 hard through full hard Rockwell C20 - 45</p> <p><i>410 Stainless:</i> Rockwell C40 - 50</p>
Plating	See Appendix-A for information on the plating of steel lock washers.