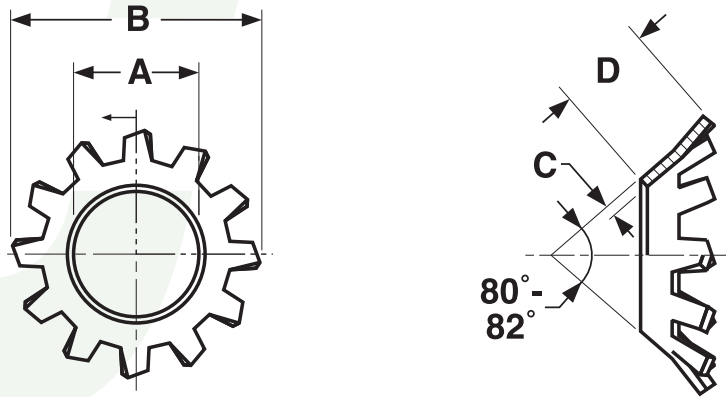


WASHERS

COUNTERSUNK EXTERNAL TOOTH

Steel & Stainless
Lockwashers

COUNTERSUNK EXTERNAL TOOTH LOCKWASHERS									ASME B18.21.1-2009
Nominal Washer Size		A		B	C		D		
		Inside Diameter		Outside Diameter	Thickness		Length		
		Max	Min	Approx	Max	Min	Max	Min	
2**	0.086	0.095	0.089	0.180	-	0.013	-	-	
4	0.112	0.123	0.113	0.213	0.019	0.015	0.065	0.050	
6	0.138	0.150	0.140	0.289	0.021	0.017	0.092	0.082	
8	0.164	0.177	0.167	0.322	0.021	0.017	0.099	0.083	
10	0.190	0.205	0.195	0.354	0.025	0.020	0.105	0.088	
12	0.216	0.231	0.220	0.421	0.025	0.020	0.128	0.118	
1/4	0.250	0.267	0.255	0.454	0.025	0.020	0.128	0.113	
5/16	0.3125	0.333	0.318	0.599	0.028	0.023	0.192	0.165	
3/8	0.375	0.398	0.383	0.765	0.034	0.028	0.255	0.242	
1/2	0.500	0.529	0.512	0.976	0.045	0.037	0.304	0.294	

**ITW Shakeproof specification, not ASME B18.21.1

Description	An external tooth lock washer with a conical shaped bearing surface.
Applications/ Advantages	Designed for use with flat or oval head screws with countersunk angles of 82° or 100°.
Material	<i>Steel:</i> SAE 1050 - 1065 spring steel. <i>18-8 Stainless:</i> SAE 301 - 305 stainless steel.
Hardness	<i>Steel:</i> Rockwell C40 - 50 <i>18-8 Stainless:</i> Annealed 88 minimum Rockwell B, 1/4 hard through full hard Rockwell C20 - 45
Plating	See Appendix-A for information on the plating of steel lock washers.