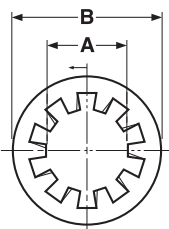


Steel & Stainless
Lockwashers

INTERNAL TOOTH

ECOM
Fasteners

INTERNAL 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	0.089	0.200	0.175	0.016	0.010
#3	0.099	0.109	0.102	0.232	0.215	0.016	0.010
#4	0.112	0.123	0.115	0.270	0.245	0.018	0.012
#5	0.125	0.136	0.129	0.280	0.255	0.020	0.014
#6	0.138	0.150	0.141	0.295	0.275	0.022	0.016
#8	0.164	0.176	0.168	0.340	0.325	0.023	0.018
#10	0.190	0.204	0.195	0.381	0.365	0.024	0.018
#12	0.216	0.231	0.221	0.410	0.394	0.027	0.020
1/4	0.250	0.267	0.256	0.478	0.460	0.028	0.023
5/16	0.312	0.332	0.320	0.610	0.594	0.034	0.028
3/8	0.375	0.398	0.384	0.692	0.670	0.040	0.032
7/16	0.438	0.464	0.448	0.789	0.740	0.040	0.032
1/2	0.500	0.530	0.512	0.900	0.867	0.045	0.037
9/16	0.5625	0.596	0.576	0.985	0.957	0.045	0.037
5/8	0.625	0.663	0.640	1.071	1.045	0.050	0.042
3/4	0.750	0.795	0.769	1.245	1.220	0.055	0.047
7/8	0.875	0.927	0.894	1.410	1.364	0.060	0.052
1	1.000	1.060	1.019	1.637	1.590	0.067	0.059
1 1/8	1.125	1.192	1.144	1.830	1.799	0.067	0.059
1 1/4	1.250	1.325	1.275	1.975	1.921	0.067	0.059
1 3/8	1.375	1.420	1.395	1.980	1.930	0.067	0.059
1 5/8	1.625	1.710	1.650	2.465	2.365	0.067	0.059
1/8	Pipe	0.425	0.410	0.615	0.595	0.022	0.017

Dimensions for "Pipe" washer and for sizes greater than 1 1/4" nominal diameter are independent of ASME B18.21.1

Description	A hardened circular washer with twisted prongs or "teeth" which extend inward from the inside edge of the washer.
Applications/ Advantages	This is preferred when finished appearance is crucial and the teeth must be hidden under the head of the screw; also recommended for use with small heads such as fillisters.
Material	Steel: SAE 1050 - 1065 spring steel. 18-8 Stainless: SAE 301 - 305 stainless steel. 316 Stainless: SAE 316 stainless steel. 410 Stainless: SAE 410 stainless steel.
Hardness	Steel: Rockwell C40 - 50 18-8 Stainless: Annealed 88 minimum Rockwell B, 1/4 hard through full hard Rockwell C20 - 45 410 Stainless: Rockwell C40 - 50
Plating	See Appendix-A for information on the plating of steel lock washers.