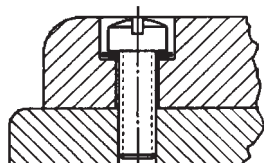


INTERNAL TYPE LOCKWASHERS



- Work best with smaller screw heads (such as fillister heads).
- Use where appearance warrants that teeth be hidden.
- Use where snagging or scratching could be a problem.
- Internal teeth lock into bolt head or nut to prevent backoff rotation.

MATERIALS: Part numbers shown are for washers made of spring steel. These washers are also available in bronze and bronze alloy and in 400 series stainless steel. Many of these are in stock at WCL. Washers can also be produced from 300 series stainless steel and other materials on request. *Specify material when inquiring or ordering.*

SPECIFICATIONS: All commercial and military tooth lockwashers supplied by WCL Company and listed on these pages conform to ASME B18.21.1 and to all applicable specifications as reported by IFI.

Nominal Washer Size	Hole Diameter		Outside Diameter		Thickness	WCL Part Number	Cross Reference	MS35333 -		
	Min.	Max.	Min.	Max.				Steel Plated	Stainless Steel	Bronze Alloy
2	.089	.095	.175	.200	.013	INT-0086-00-00	1202-00	-35	-69	-103
2	.089	.096	.175	.185	.007	INT-0086-01-00	1202-01			
2	.094	.098	.175	.185	.013	INT-0086-04-00	1202-04			
3	.102	.109	.215	.232	.015	INT-0099-00-00	1203-00			
3	.106	.109	.215	.225	.013	INT-0099-00-00	1203-01			
4	.115	.123	.255	.270	.015	INT-0112-00-00	1204-00	-36	-70	-104
4	.116	.123	.215	.225	.015	INT-0112-03-00	1204-03			
5	.129	.136	.245	.280	.017	INT-0125-00-00	1205-00			
5	.124	.128	.215	.225	.017	INT-0125-08-00	1205-08			
6	.141	.150	.275	.295	.017	INT-0138-00-00	1206-00	-37	-71	-105
6	.142	.150	.245	.255	.017	INT-0138-01-00	1206-01			
6	.146	.151	.275	.285	.018	INT-0138-05-00	1206-05			
6	.142	.150	.307	.317	.025	INT-0138-06-00	1206-06			
6	.142	.150	.278	.288	.013	INT-0138-07-00	1206-07			
8	.168	.176	.325	.340	.020	INT-0164-00-00	1208-00	-38	-72	-106
8	.168	.176	.325	.336	.025	INT-0164-01-00	1208-01			
8	.168	.176	.300	.311	.020	INT-0164-05-00	1208-05			
8	.168	.176	.325	.336	.010	INT-0164-06-00	1208-06			
8	.168	.176	.494	.506	.017	INT-0164-08-00	1208-08			
8	.166	.170	.275	.285	.020	INT-0164-11-00	1208-11			
8	.165	.169	.278	.288	.018	INT-0164-12-00	1208-12			
10	.195	.204	.365	.381	.022	INT-0190-00-00	1210-00	-39	-73	-107
10	.195	.204	.495	.505	.025	INT-0190-01-00	1210-01			
10	.188	.194	.593	.607	.029	INT-0190-03-02	1210-03			
10	.195	.204	.300	.311	.017	INT-0190-06-00	1210-06			
10	.195	.204	.370	.381	.010	INT-0190-07-00	1210-07			
10	.195	.204	.743	.758	.020	INT-0190-10-00	1210-10			
10	.204	.210	.300	.311	.017	INT-0190-15-00	1210-15			
12	.221	.231	.394	.410	.022	INT-0216-00-00	1212-00			
12	.218	.222	.372	.383	.017	INT-0216-03-00	1212-03			
12	.218	.222	.372	.383	.022	INT-0216-08-00	1212-04			

* Left Hand Twist

INTERNAL TYPE LOCKWASHERS

Nominal Washer Size	Hole Diameter		Outside Diameter		Thickness	WCL Part Number	Cross Reference	MS35333 -		
	Min.	Max.	Min.	Max.				Steel Plated	Stainless Steel	Bronze Alloy
1/4	.256	.267	.466	.478	.025	INT-0250-00-00	1214-00	-40	-74	-108
1/4	.256	.267	.555	.565	.025	INT-0250-01-00	1214-01			
1/4	.256	.267	.396	.408	.017	INT-0250-05-00	1214-05	-125	-135	-145
1/4	.256	.267	.466	.478	.025	INT-0250-06-00	1214-06*			
1/4	.256	.267	.806	.818	.025	INT-0250-07-00	1214-07			
1/4	.256	.267	.618	.632	.025	INT-0250-09-00	1214-09			
1/4	.256	.267	.396	.408	.025	INT-0250-10-00	1214-10			
1/4	.256	.267	.396	.408	.013	INT-0250-11-00	1214-11			
1/4	.256	.267	.618	.632	.029	INT-0250-12-00	1214-12			
1/4	.256	.267	.595	.615	.022	INT-0250-14-00	1214-14			
1/4	.252	.256	.396	.408	.017	INT-0250-15-00	1214-15			
16	.285	.296	.494	.506	.029	INT-0281-01-00	1216-01			
5/16	.320	.332	.594	.610	.029	INT-0312-00-00	1218-00	-41	-75	-109
5/16	.314	.322	.425	.435	.022	INT-0312-02-00	1218-02			
5/16	.314	.322	.425	.435	.015	INT-0312-04-00	1218-04			
5/16	.320	.332	.740	.760	.045	INT-0312-05-00	1218-05			
3/8	.384	.398	.670	.692	.035	INT-0375-00-00	1220-00	-42	-76	-110
3/8	.384	.398	.678	.692	.022	INT-0375-01-00	1220-01			
3/8	.377	.391	.493	.507	.022	INT-0375-02-00	1220-02			
3/8	.405	.415	.678	.692	.022	INT-0375-04-00	1220-04			
3/8	.380	.387	.557	.567	.017	INT-0375-05-00	1220-05†			
3/8	.384	.398	1.147	1.166	.035	INT-0375-06-00	1220-06			
3/8	.410	.425	.595	.615	.022	INT-0375-08-00	1220-08			
3/8	.380	.387	.557	.567	.025	INT-0375-10-00	1220-10†			
3/8	.380	.387	.557	.567	.020	INT-0375-13-00	1220-13†			
3/8	.395	.400	.733	.747	.039	INT-0375-14-00	1220-14			
3/8	.377	.391	.595	.615	.022	INT-0375-15-00	1220-15			
7/16	.448	.464	.740	.789	.035	INT-0437-00-00	1222-00	-43	-77	-111
7/16	.472	.480	.593	.607	.017	INT-0437-01-00	1222-01†			
7/16	.439	.442	.533	.547	.022	INT-0437-04-00	1222-04			
7/16	.448	.463	.774	.789	.020	INT-0437-05-00	1222-05			
7/16	.472	.480	.593	.607	.022	INT-0437-09-00	1222-09†			
7/16	.448	.463	.593	.607	.017	INT-0437-13-00	1222-13			
15/32	.472	.480	.593	.607	.017	INT-0468-00-02		-126	-136	-146
1/2	.512	.530	.867	.900	.039	INT-0500-00-00	1224-00	-44	-78	-113
1/2	.505	.512	.620	.630	.020	INT-0500-02-00	1224-02†			
1/2	.512	.529	.867	.883	.039	INT-0500-03-00	1224-03			
1/2	.545	.560	.765	.785	.025	INT-0500-06-00	1224-06			
1/2	.512	.529	.774	.789	.035	INT-0500-07-00	1224-07			
1/2	.512	.529	.774	.789	.010	INT-0500-08-00	1224-08			
1/2	.545	.560	.765	.785	.030	INT-0500-10-00	1224-10			
1/2	.505	.512	.620	.630	.013	INT-0500-12-00	1224-12†			
1/2	.520	.530	.733	.747	.029	INT-0500-14-00	1224-14			
9/16	.576	.596	.957	.985	.039	INT-0562-00-00	1226-00			
9/16	.575	.585	.763	.777	.029	INT-0562-03-00	1226-03			

* Left Hand Twist

† Alternate Tooth Twist

INTERNAL TYPE LOCKWASHERS

Nominal Washer Size	Hole Diameter		Outside Diameter		Thickness	WCL Part Number	Cross Reference	MS35333 -		
	Min.	Max.	Min.	Max.				Steel Plated	Stainless Steel	Bronze Alloy
9/16	.565	.572	.678	.692	.017	INT-0562-07-00	1226-07	-127	-137	-147
9/16	.575	.585	.763	.777	.015	INT-0562-08-00	1226-08			
5/8	.640	.663	1.045	1.071	.045	INT-0625-00-00	1228-00	-46	-80	-115
5/8	.640	.659	1.053	1.071	.022	INT-0625-01-00	1228-01			
5/8	.640	.659	.867	.883	.022	INT-0625-02-00	1228-02			
5/8	.690	.700	.945	.968	.029	INT-0625-03-00	1228-03			
5/8	.640	.659	1.053	1.071	.045	INT-0625-04-00	1228-04*			
5/8	.640	.659	.867	.883	.022	INT-0625-05-00	1228-05*			
5/8	.625	.630	.774	.789	.020	INT-0625-06-00	1228-06			
5/8	.640	.659	.945	.965	.045	INT-0625-07-00	1228-07			
11/16	.704	.728	1.130	1.166	.045	INT-0687-00-00	1230-00			
3/4	.769	.795	1.220	1.245	.050	INT-0750-00-00	1232-00	-47	-81	-116
3/4	.769	.795	1.220	1.245	.025	INT-0750-03-00	1232-03			
3/4	.757	.760	1.047	1.077	.022	INT-0750-04-00	1232-04			
3/4	.775	.785	1.047	1.077	.022	INT-0750-07-00	1232-07	-129	-139	-149
3/4	.790	.800	1.220	1.245	.050	INT-0750-08-00	1232-08			
3/4	.757	.760	1.047	1.077	.022	INT-0750-12-00	1232-12†			
13/16	.832	.861	1.290	1.315	.050	INT-0812-00-00	1233-00			
13/16	.832	.856	1.047	1.386	.050	INT-0812-03-00	1233-03			
13/16	.860	.870	1.365	1.386	.050	INT-0812-04-00	1233-04			
7/8	.894	.927	1.364	1.410	.055	INT-0875-00-00	1234-00	-48	-82	-117
7/8	.894	.918	1.364	1.386	.025	INT-0875-01-00	1234-01			
7/8	.880	.890	1.080	1.110	.020	INT-0875-04-00	1234-04			
7/8	.894	.918	1.364	1.386	.020	INT-0875-05-00	1234-05			
15/16	.985	1.015	1.360	1.390	.029	INT-0937-02-00	1235-02			
1	1.019	1.060	1.590	1.637	.062	INT-1000-00-00	1236-00	-49	-83	-118
1	1.010	1.020	1.360	1.390	.025	INT-1000-05-00	1236-05			
1 1/8	1.144	1.192	1.799	1.830	.062	INT-1125-00-00	1238-00			
1 1/8	1.163	1.175	1.425	1.450	.015	INT-1125-04-00	1238-04			
1 1/8	1.163	1.175	1.425	1.450	.025	INT-1125-08-00	1238-08			
1 3/16	1.206	1.231	1.799	1.825	.030	INT-1187-02-00	1239-02			
1 1/4	1.260	1.280	1.921	1.950	.062	INT-1250-01-00	1240-01	-51	-85	-120
1 1/4	1.260	1.280	1.799	1.825	.025	INT-1250-02-00	1240-02			
1 5/16	1.331	1.356	1.921	1.950	.062	INT-1312-00-00	1241-00			
1 3/8	1.394	1.418	1.920	1.950	.062	INT-1375-00-00	1242-00			
1 3/8	1.394	1.418	1.920	1.950	.030	INT-1375-01-00	1242-01			
1 1/2	1.500	1.530	2.485	2.515	.078	INT-1500-00-00	1244-00			
1 1/2	1.500	1.530	2.485	2.515	.055	INT-1500-01-00	1244-01			
1 5/8	1.630	1.645	1.797	1.827	.015	INT-1625-02-00	1246-02			
1 3/4	1.750	1.780	2.625	2.655	.078	INT-1750-00-00	1248-00			
1 3/4	1.768	1.790	2.219	2.281	.029	INT-1750-01-00	1248-01			
1 3/4	1.750	1.780	2.610	2.640	.055	INT-1750-02-00	1248-02			
1 7/8	1.875	1.905	2.495	2.545	.078	INT-1875-00-00	1250-00			
1 15/16	1.938	1.968	2.610	2.640	.078	INT-1937-00-00	1251-00			
2	2.010	2.030	2.865	2.900	.062	INT-2000-01-00	1252-01			
2	2.015	2.030	2.470	2.500	.025	INT-2000-02-00	1252-02			
2 1/2	2.490	2.510	2.985	3.015	.078	INT-2500-01-00	1260-01			

* Left Hand Twist

† Alternate Tooth Twist