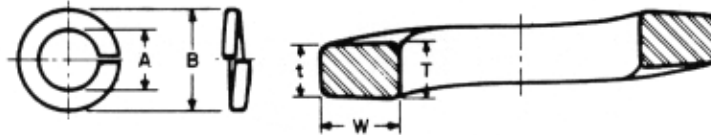


Regular¹ Helical Spring Lock Washers

(1965 Draft Revision of American Standard B27.1 - 1958)



Nominal Washer Size ²	Inside Diameter A		Outside Diameter B	Washer Section	
				Width W	Thickness $\frac{T+t}{2}$
	Min.	Max.	Max. ³	Min.	Min.
No. 2 (0.086)	0.088	0.094	0.172	0.035	0.020
No. 3 (0.099)	0.101	0.107	0.195	0.040	0.025
No. 4 (0.112)	0.115	0.121	0.209	0.040	0.025
No. 5 (0.125)	0.128	0.134	0.236	0.047	0.031
No. 6 (0.138)	0.141	0.148	0.250	0.047	0.031
No. 8 (0.164)	0.168	0.175	0.293	0.055	0.040
No. 10 (0.190)	0.194	0.202	0.334	0.062	0.047
No. 12 (0.216)	0.221	0.229	0.377	0.070	0.056
1/4 (0.250)	0.255	0.263	0.489	0.109	0.062
5/16 (0.312)	0.318	0.328	0.586	0.125	0.078
3/8 (0.375)	0.382	0.393	0.683	0.141	0.094
7/16 (0.438)	0.446	0.459	0.779	0.156	0.109
1/2 (0.500)	0.509	0.523	0.873	0.171	0.125
9/16 (0.562)	0.572	0.587	0.971	0.188	0.141
5/8 (0.625)	0.636	0.653	1.079	0.203	0.156
11/16 (0.688)	0.700	0.718	1.176	0.219	0.172
3/4 (0.750)	0.763	0.783	1.271	0.234	0.188
13/16 (0.812)	0.826	0.847	1.367	0.250	0.203
7/8 (0.875)	0.890	0.912	1.464	0.266	0.219
15/16 (0.938)	0.954	0.978	1.560	0.281	0.234
1 (1.000)	1.017	1.042	1.661	0.297	0.250
1 1/16 (1.062)	1.080	1.107	1.756	0.312	0.266
1 1/8 (1.125)	1.144	1.172	1.853	0.328	0.281
1 3/16 (1.188)	1.208	1.237	1.950	0.344	0.297
1 1/4 (1.250)	1.271	1.302	2.045	0.359	0.312
1 5/16 (1.312)	1.334	1.366	2.141	0.375	0.328
1 3/8 (1.375)	1.398	1.432	2.239	0.391	0.344
1 7/16 (1.438)	1.462	1.497	2.334	0.406	0.359
1 1/2 (1.500)	1.525	1.561	2.430	0.422	0.375

¹ Formerly designated Medium Helical Spring Lock Washers.

² The decimal equivalent of the numbered sizes and both the decimal and fractional dimension of all other sizes represent the basic diameter of the screw or bolt that should be used with the washer.

³ The maximum outside diameters specified allow for the commercial tolerances on cold drawn wire. See Introductory Notes and General Data for Helical Spring Lock Washers on Page 7.



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305 Winter Street • Waltham, Massachusetts 02254

Extra Duty¹ Helical Spring Lock Washers

(1965 Draft Revision of American Standard B27.1 - 1958)



Nominal Washer Size ²	Inside Diameter A		Outside Diameter B	Washer Section	
	Min.	Max.	Max. ³	Width W	Thickness $\frac{T+t}{2}$
				Min.	Min.
No. 2 (0.086)	0.088	0.094	0.208	0.053	0.027
No. 3 (0.099)	0.101	0.107	0.239	0.062	0.034
No. 4 (0.112)	0.115	0.121	0.253	0.062	0.034
No. 5 (0.125)	0.128	0.134	0.300	0.079	0.045
No. 6 (0.138)	0.141	0.148	0.314	0.079	0.045
No. 8 (0.164)	0.168	0.175	0.375	0.096	0.057
No. 10 (0.190)	0.194	0.202	0.434	0.112	0.068
No. 12 (0.216)	0.221	0.229	0.497	0.130	0.080
1/4 (0.250)	0.255	0.263	0.535	0.132	0.084
5/16 (0.312)	0.318	0.328	0.622	0.143	0.108
3/8 (0.375)	0.382	0.393	0.741	0.170	0.123
7/16 (0.438)	0.446	0.459	0.839	0.186	0.143
1/2 (0.500)	0.509	0.523	0.939	0.204	0.162
9/16 (0.562)	0.572	0.587	1.041	0.223	0.182
5/8 (0.625)	0.636	0.653	1.157	0.242	0.202
11/16 (0.688)	0.700	0.718	1.258	0.260	0.221
3/4 (0.750)	0.763	0.783	1.361	0.279	0.241
13/16 (0.812)	0.826	0.847	1.463	0.298	0.261
7/8 (0.875)	0.890	0.912	1.576	0.322	0.285
15/16 (0.938)	0.954	0.978	1.688	0.345	0.308
1 (1.000)	1.017	1.042	1.799	0.366	0.330
1 1/16 (1.062)	1.080	1.107	1.910	0.389	0.352
1 1/8 (1.125)	1.144	1.172	2.019	0.411	0.375
1 3/16 (1.188)	1.208	1.237	2.124	0.431	0.396
1 1/4 (1.250)	1.271	1.302	2.231	0.452	0.417
1 5/16 (1.312)	1.334	1.366	2.335	0.472	0.438
1 3/8 (1.375)	1.398	1.432	2.439	0.491	0.458
1 7/16 (1.438)	1.462	1.497	2.540	0.509	0.478
1 1/2 (1.500)	1.525	1.561	2.638	0.526	0.496

¹Formerly designated Extra Heavy Helical Spring Lock Washers.

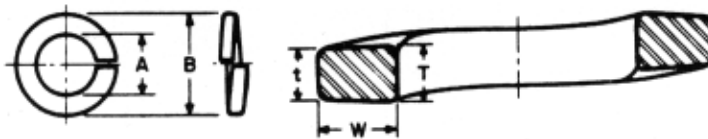
²The decimal equivalent of the numbered sizes and both the decimal and fractional dimension of all other sizes represent the basic diameter of the screw or bolt that should be used with the washer.

³The maximum outside diameters specified allow for the commercial tolerances on cold drawn wire.

See Introductory Notes and General Data for Helical Spring Lock Washers on Page 7.

Hi-Collar¹ Helical Spring Lock Washers

(1965 Draft Revision of American Standard B27.1 - 1958)



Nominal Washer Size ²	Inside Diameter A		Outside Diameter B	Washer Section	
	Min.	Max.		Width W	Thick-ness $\frac{T+t}{2}$
			Min.	Max. ³	Min.
No. 4 (0.112)	0.115	0.121	0.173	0.022	0.022
No. 5 (0.125)	0.128	0.134	0.202	0.030	0.030
No. 6 (0.138)	0.141	0.148	0.216	0.030	0.030
No. 8 (0.164)	0.168	0.175	0.267	0.042	0.047
No. 10 (0.190)	0.194	0.202	0.294	0.042	0.047
1/4 (0.250)	0.255	0.263	0.365	0.047	0.078
5/16 (0.312)	0.318	0.328	0.460	0.062	0.093
3/8 (0.375)	0.382	0.393	0.553	0.076	0.125
7/16 (0.438)	0.446	0.459	0.647	0.090	0.140
1/2 (0.500)	0.509	0.523	0.737	0.103	0.172
5/8 (0.625)	0.636	0.653	0.923	0.125	0.203
3/4 (0.750)	0.763	0.783	1.111	0.154	0.218
7/8 (0.875)	0.890	0.912	1.296	0.182	0.234
1 (1.000)	1.017	1.042	1.483	0.208	0.250
1 1/8 (1.125)	1.144	1.172	1.669	0.236	0.313
1 1/4 (1.250)	1.271	1.302	1.799	0.236	0.313
1 3/8 (1.375)	1.398	1.432	2.041	0.292	0.375
1 1/2 (1.500)	1.525	1.561	2.170	0.292	0.375
1 3/4 (1.750)	1.775	1.811	2.602	0.383	0.469
2 (2.000)	2.025	2.061	2.852	0.383	0.469
2 1/4 (2.250)	2.275	2.311	3.352	0.508	0.508
2 1/2 (2.500)	2.525	2.561	3.602	0.508	0.508
2 3/4 (2.750)	2.775	2.811	4.102	0.633	0.633
3 (3.000)	3.025	3.061	4.352	0.633	0.633

¹For use with 1960 Series Socket Head Cap Screws.

²The decimal equivalent of the numbered sizes and both the decimal and fractional dimension of all other sizes represent the basic diameter of the screw or bolt that should be used with the washer.

³The maximum outside diameters specified allow for the commercial tolerances on cold drawn wire.

See Introductory Notes and General Data for Helical Spring Lock Washers on Page 7.

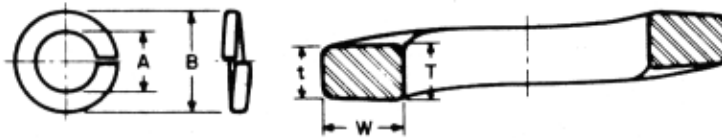


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Light Helical Spring Lock Washers¹

(1965 Draft Revision of American Standard B27.1 - 1958)



Nominal Washer Size ²	Inside Diameter A		Outside Diameter B	Washer Section	
	Min.	Max.		Width W	Thick-ness $\frac{T+t}{2}$
			Min.	Max. ³	Min.
No. 2 (0.086)	0.088	0.094	0.162	0.030	0.015
No. 3 (0.099)	0.101	0.107	0.185	0.035	0.020
No. 4 (0.112)	0.115	0.121	0.199	0.035	0.020
No. 5 (0.125)	0.128	0.134	0.222	0.040	0.025
No. 6 (0.138)	0.141	0.148	0.236	0.040	0.025
No. 8 (0.164)	0.168	0.175	0.277	0.047	0.031
No. 10 (0.190)	0.194	0.202	0.320	0.055	0.040
No. 12 (0.216)	0.221	0.229	0.361	0.062	0.047
1/4 (0.250)	0.255	0.263	0.485	0.107	0.047
5/16 (0.312)	0.318	0.328	0.570	0.117	0.056
3/8 (0.375)	0.382	0.393	0.673	0.136	0.070
7/16 (0.438)	0.446	0.459	0.775	0.154	0.085
1/2 (0.500)	0.509	0.523	0.871	0.170	0.099
9/16 (0.562)	0.572	0.587	0.967	0.186	0.113
5/8 (0.625)	0.636	0.653	1.075	0.201	0.126
11/16 (0.688)	0.700	0.718	1.170	0.216	0.138
3/4 (0.750)	0.763	0.783	1.269	0.233	0.153
13/16 (0.812)	0.826	0.847	1.365	0.249	0.168
7/8 (0.875)	0.890	0.912	1.460	0.264	0.179
15/16 (0.938)	0.954	0.978	1.552	0.277	0.191
1 (1.000)	1.017	1.042	1.645	0.289	0.202
1 1/16 (1.062)	1.080	1.107	1.734	0.301	0.213
1 1/8 (1.125)	1.144	1.172	1.825	0.314	0.224
1 3/16 (1.188)	1.208	1.237	1.910	0.324	0.234
1 1/4 (1.250)	1.271	1.302	1.999	0.336	0.244
1 5/16 (1.312)	1.334	1.366	2.083	0.346	0.254
1 3/8 (1.375)	1.398	1.432	2.169	0.356	0.264
1 7/16 (1.438)	1.462	1.497	2.254	0.366	0.273
1 1/2 (1.500)	1.525	1.561	2.336	0.375	0.282
1 5/8 (1.625)	1.650	1.686	2.493	0.391	0.344
1 3/4 (1.750)	1.775	1.811	2.618	0.391	0.344
1 7/8 (1.875)	1.900	1.936	2.747	0.393	0.384
2 (2.000)	2.025	2.061	2.872	0.393	0.384
2 1/4 (2.250)	2.275	2.311	3.190	0.427	0.422
2 1/2 (2.500)	2.525	2.561	3.440	0.427	0.422
2 3/4 (2.750)	2.775	2.811	3.752	0.458	0.458
3 (3.000)	3.025	3.061	4.002	0.458	0.458

¹See Preferred Series of Washers on Pages 10, 11 and 12.

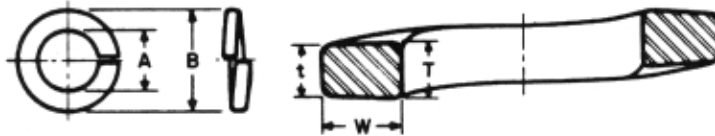
²The decimal equivalent of the numbered sizes and both the decimal and fractional dimension of all other sizes represent the basic diameter of the screw or bolt that should be used with the washer.

³The maximum outside diameters specified allow for the commercial tolerances on cold drawn wire.

See Introductory Notes and General Data for Helical Spring Lock Washers on Page 7.

Heavy Helical Spring Lock Washers¹

(1965 Draft Revision of American Standard B27.1 - 1958)



Nominal Washer Size ²	Inside Diameter A		Outside Diameter B	Washer Section	
				Width W	Thickness $\frac{T+t}{2}$
	Min.	Max.	Max. ³	Min.	Min.
No. 2 (0.086)	0.088	0.094	0.182	0.040	0.025
No. 3 (0.099)	0.101	0.107	0.209	0.047	0.031
No. 4 (0.112)	0.115	0.121	0.223	0.047	0.031
No. 5 (0.125)	0.128	0.134	0.252	0.055	0.040
No. 6 (0.138)	0.141	0.148	0.266	0.055	0.040
No. 8 (0.164)	0.168	0.175	0.307	0.062	0.047
No. 10 (0.190)	0.194	0.202	0.350	0.070	0.056
No. 12 (0.216)	0.221	0.229	0.391	0.077	0.063
1/4 (0.250)	0.255	0.263	0.491	0.110	0.077
5/16 (0.312)	0.318	0.328	0.596	0.130	0.097
3/8 (0.375)	0.382	0.393	0.691	0.145	0.115
7/16 (0.438)	0.446	0.459	0.787	0.160	0.133
1/2 (0.500)	0.509	0.523	0.883	0.176	0.151
9/16 (0.562)	0.572	0.587	0.981	0.193	0.170
5/8 (0.625)	0.636	0.653	1.093	0.210	0.189
11/16 (0.688)	0.700	0.718	1.192	0.227	0.207
3/4 (0.750)	0.763	0.783	1.291	0.244	0.226
13/16 (0.812)	0.826	0.847	1.391	0.262	0.246
7/8 (0.875)	0.890	0.912	1.494	0.281	0.266
15/16 (0.938)	0.954	0.978	1.594	0.298	0.284
1 (1.000)	1.017	1.042	1.705	0.319	0.306
1- 1/16 (1.062)	1.080	1.107	1.808	0.338	0.326
1- 1/8 (1.125)	1.144	1.172	1.909	0.356	0.345
1- 3/16 (1.188)	1.208	1.237	2.008	0.373	0.364
1- 1/4 (1.250)	1.271	1.302	2.113	0.393	0.384
1- 5/16 (1.312)	1.334	1.366	2.211	0.410	0.403
1- 3/8 (1.375)	1.398	1.432	2.311	0.427	0.422
1- 7/16 (1.438)	1.462	1.497	2.406	0.442	0.440
1- 1/2 (1.500)	1.525	1.561	2.502	0.458	0.458
1- 5/8 (1.625)	1.650	1.686	2.693	0.491	0.458
1- 3/4 (1.750)	1.775	1.811	2.818	0.491	0.458
1- 7/8 (1.875)	1.900	1.936	2.943	0.491	0.458
2 (2.000)	2.025	2.061	3.068	0.491	0.458
2- 1/4 (2.250)	2.275	2.311	3.388	0.526	0.496
2- 1/2 (2.500)	2.525	2.561	3.638	0.526	0.496
2- 3/4 (2.750)	2.775	2.811	3.888	0.526	0.496
3 (3.000)	3.025	3.061	4.138	0.526	0.496

¹See Preferred Series of Washers on Pages 10, 11 and 12.

²The decimal equivalent of the numbered sizes and both the decimal and fractional dimension of all other sizes represent the basic diameter of the screw or bolt that should be used with the washer.

³The maximum outside diameters specified allow for the commercial tolerances on cold drawn wire. See Introductory Notes and General Data for Helical Spring Lock Washers on Page 7.



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