

# TORSION SPRINGS

## Guide to using tables

### Radius

please note that R (radius) where force is applied, is always 1/2 of A (length of leg).  
Dotted lines of legs show loaded position where values of T (Torque) will be achieved at R (Radius)

### Length of Leg

lengths of leg are shown on A in the sketches below.

### Outside Diameter

of spring body.

### Suggested Mandrel

size allows approximately a 10% clearance for the various deflections shown in examples below. If greater deflections are required, we suggest a suitable reduction in mandrel size.

### Lee Stock Number

Please add suffix **M** for Music Wire or **S** for 302 Stainless Steel when ordering.

### Wire Diameter

in ascending order of size.

### Torque

values shown are for average use. However, if properly mounted and the values shown under T (Torque) are reduced by approximately 20%, the life of the spring will be considerably improved (See note 6).

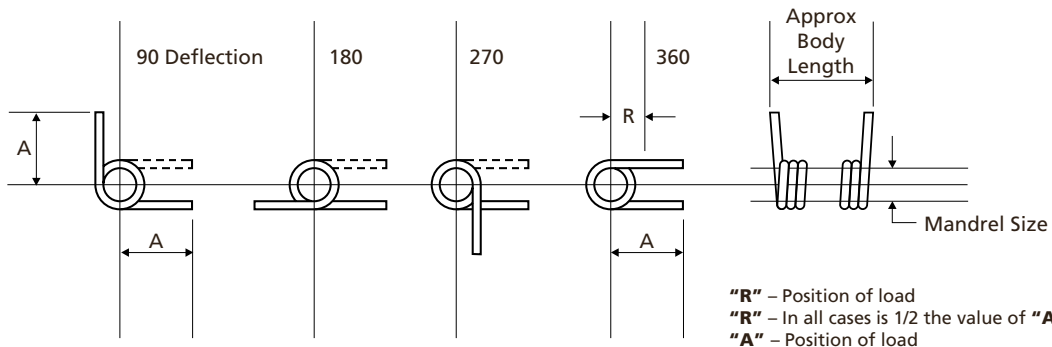
LEE STOCK NUMBER	NOMINAL WIRE DIAMETER		(T) TORQUE (see Footnotes)		(R) RADIUS		(A) LENGTH OF LEG		OUTSIDE DIAMETER		SUGGESTED MANDREL SIZE		(L) BODY LENGTH APPROX.		TOTAL NO. OF COILS	PRICE GROUP	
	MM	IN	N-MM	IN-LB	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN		M	P
LT 012A 01	0.30	0.012	5.65	0.050	4.75	0.187	9.52	0.375	2.67	0.105	1.65	0.065	1.37	0.054	3	F	H
LT 013 07	0.36	0.014	8.47	0.075	6.35	0.250	12.70	0.500	3.72	0.146	2.36	0.093	0.99	0.39	2	H	K
LT 014A 01	0.36	0.014	8.47	0.075	6.35	0.250	12.70	0.500	3.15	0.124	1.57	0.062	1.65	0.065	3.25	F	H
LT 014A 07	0.36	0.014	8.47	0.075	6.35	0.250	12.70	0.500	4.37	0.172	3.18	0.125	1.16	0.065	2.25	H	K
LT 015B 01	0.38	0.015	11.30	0.100	6.35	0.250	12.70	0.500	2.82	0.111	1.57	0.062	1.73	0.065	3.25	H	K
LT 015B 07	0.38	0.015	11.30	0.100	6.35	0.250	12.70	0.500	4.35	0.171	2.36	0.093	1.24	0.049	2.25	K	M
LT 017C 01	0.43	0.017	14.12	0.125	6.35	0.250	12.70	0.500	4.06	0.160	2.36	0.093	1.96	0.077	3.25	F	K
LT 017C 07	0.43	0.017	14.12	0.125	9.53	0.375	19.05	0.750	5.67	0.223	3.96	0.156	1.40	0.055	2.25	M	P
LT 019C 01	0.46	0.018	16.95	0.150	6.35	0.250	12.70	0.500	4.52	0.178	2.77	0.109	2.03	0.080	2.25	H	K
LT 019C 07	0.46	0.018	16.95	0.150	9.53	0.375	19.05	0.750	5.94	0.234	3.96	0.156	1.49	0.059	2.25	K	M
LT 020D 01	0.51	0.020	22.60	0.200	9.52	0.375	19.05	0.750	4.85	0.191	3.05	0.120	2.29	0.090	2.25	H	K
LT 020D 07	0.51	0.020	22.60	0.200	12.70	0.500	25.40	1.000	6.78	0.267	4.78	0.188	1.65	0.065	2.25	K	M
LT 021D 01	0.53	0.021	28.25	0.250	9.52	0.375	19.05	0.750	5.08	0.200	3.05	0.120	2.41	0.095	3.25	H	K
LT 021D 07	0.53	0.021	28.25	0.250	12.70	0.500	25.40	1.000	6.63	0.261	4.78	0.188	1.73	0.068	2.25	K	M
LT 023D 01	0.58	0.023	37.29	0.330	9.52	0.375	19.05	0.750	5.18	0.204	3.18	0.125	2.62	0.103	3.25	H	K
LT 023D 07	0.58	0.023	37.29	0.330	12.70	0.500	25.40	1.000	7.23	0.285	4.78	0.188	1.90	0.075	2.25	K	M
LT 025E 01	0.64	0.025	47.45	0.420	9.52	0.375	19.05	0.750	5.99	0.236	3.56	0.140	2.79	0.110	3.25	K	M
LT 025E 07	0.64	0.025	47.45	0.420	12.70	0.500	25.40	1.000	7.93	0.312	5.56	0.219	2.06	0.081	2.25	K	M
LT 028E 01	0.71	0.028	62.14	0.550	12.70	0.500	25.40	1.000	6.78	0.267	4.44	0.175	3.18	0.125	3.25	K	M
LT 028E 07	0.71	0.028	62.14	0.550	12.70	0.500	25.40	1.000	9.47	0.373	6.35	0.250	2.31	0.091	2.25	M	P
LT 030F 01	0.76	0.030	76.83	0.680	12.70	0.500	25.40	1.000	7.75	0.305	5.21	0.205	3.35	0.132	3.25	K	M
LT 030F 07	0.76	0.030	76.83	0.680	12.70	0.500	25.40	1.000	10.10	0.398	7.14	0.281	2.48	0.098	2.25	M	P
LT 032F 01	0.81	0.032	98.86	0.875	12.70	0.500	25.40	1.000	7.32	0.288	4.57	0.180	3.68	0.145	3.25	K	M
LT 032F 07	0.81	0.032	98.86	0.875	12.70	0.500	25.40	1.000	10.21	0.402	7.14	0.281	2.64	0.104	2.25	M	P
LT 035G 01	0.89	0.035	120.90	1.070	15.88	0.625	31.75	1.250	8.03	0.316	4.75	0.187	3.89	0.153	3.25	K	M
LT 035G 07	0.89	0.035	120.90	1.070	15.88	0.625	31.75	1.250	11.88	0.468	8.74	0.344	2.89	0.114	2.25	M	P
LT 038G 01	0.96	0.038	144.62	1.280	15.88	0.625	31.75	1.250	9.80	0.386	6.35	0.250	4.32	0.170	3.25	K	M
LT 038G 07	0.96	0.038	144.62	1.280	15.88	0.625	31.75	1.250	13.74	0.541	10.31	0.406	3.14	0.124	2.25	M	P
LT 040H 01	1.02	0.040	169.48	1.500	15.88	0.625	31.75	1.250	8.51	0.335	5.38	0.212	5.50	0.220	4.25	K	M
LT 040H 07	1.02	0.040	169.48	1.500	12.70	0.500	25.40	1.000	10.28	0.405	7.14	0.281	4.32	0.170	3.25	M	P
LT 045H 01	1.14	0.045	242.92	2.150	15.88	0.625	31.75	1.250	9.07	0.357	5.72	0.225	6.22	0.245	4.25	K	M
LT 045H 07	1.14	0.045	242.92	2.150	15.88	0.625	31.75	1.250	11.49	0.453	7.95	0.313	4.86	0.191	3.25	M	P
LT 048I 01	1.22	0.048	310.70	2.750	15.88	0.625	31.75	1.250	9.86	0.388	5.84	0.230	6.6	0.260	4.25	M	P
LT 048I 07	1.22	0.048	310.70	2.750	15.88	0.625	31.75	1.250	11.70	0.460	7.95	0.313	5.18	0.204	3.25	P	R
LT 051J 01	1.30	0.051	350.25	3.100	25.40	1.000	50.80	2.000	10.36	0.408	6.35	0.250	6.98	0.275	4.25	M	P
LT 051J 07	1.30	0.051	350.25	3.100	15.88	0.625	31.75	1.250	13.14	0.517	9.53	0.375	5.51	0.217	3.25	P	R
LT 054K 01	1.37	0.054	395.45	3.500	25.40	1.000	50.80	2.000	12.29	0.484	8.00	0.315	7.49	0.295	4.25	P	R
LT 054K 07	1.37	0.054	395.45	3.500	15.88	0.625	31.75	1.250	14.56	0.573	10.31	0.406	5.83	0.230	3.25	R	T
LT 059K 01	1.50	0.059	508.44	4.500	25.40	1.000	50.80	2.000	12.67	0.499	7.92	0.312	8.13	0.320	4.25	R	T
LT 059K 07	1.50	0.059	508.44	4.500	25.40	1.000	50.80	2.000	16.11	0.634	11.91	0.469	6.37	0.251	3.25	T	V
LT 063L 01	1.60	0.063	621.43	5.500	25.40	1.000	50.80	2.000	14.22	0.560	9.52	0.375	8.89	0.350	4.25	T	V
LT 063L 07	1.60	0.063	621.43	5.500	25.40	1.000	50.80	2.000	17.15	0.675	11.91	0.469	6.80	0.268	3.25	V	X
LT 070M 01	1.78	0.070	847.40	7.500	25.40	1.000	50.80	2.000	15.06	0.593	9.78	0.385	9.53	0.375	4.25	V	X
LT 070M 07	1.78	0.070	847.40	7.500	25.40	1.000	50.80	2.000	19.15	0.754	13.49	0.573	7.49	0.295	4.25	V	Z



• Left Hand or Right Helix • Music Wire (Plated), or Stainless Steel (Passivated)

### ADDITIONAL INFORMATION

- To translate torque values to direct load: Use  $F = \frac{T}{R}$  Formula  
F = Load applied at Radius R. T = Torque
- To calculate torque values other than those listed (Position of Ends), a direct proportion may be used.
- Inspection of Load. Loads should always be checked at the Radius (R value).
- Direction of Wind. Good design dictates that torsion springs should be used in the direction that winds the coil. When ordering be sure to specify either Left or Right Hand wind.
- Material specifications, finishes and tolerances are detailed on page 163.



NOTE: The Torsion Springs illustrated above are shown LEFT HAND WOUND

- Please note that the torque listed in the following torsion spring tables relates only to music wire.  
When choosing stainless steel multiply the factors by 0.933.