

LeeP™ PLASTIC COMPOSITE SPRINGS

Guide to using tables

Colour spring strength. arranged through the pages in ascending order of size.

Outside Diameter nominal dimension.

Inside Diameter the load or force required to bring all the coils into contact.

Load at Solid Height change in load or force per unit of deflection.

Spring Rate reference to the price list.

LeeP™ PLASTIC COMPOSITE SPRINGS • Ultem® PEI (polyetherimide) resin

LEE STOCK NUMBER	COLOUR	TO WORK IN HOLE DIAMETER MIN.		OUTSIDE DIAMETER		TO WORK OVER ROD DIAMETER MAX.		INSIDE DIAMETER	
		MM	IN	MM	IN	MM	IN	MM	IN
LL 038 050 U000	RED	9.53	0.375	8.89	0.350	3.81	0.150	4.72	0.188
LL 038 050 U100	ORANGE								
LL 038 050 U200	YELLOW								
LL 038 050 U300	GREEN								
LL 038 050 U380	BLUE			8.89	0.350			4.72	0.188
LL 038 050 U400	VIOLET								
LL 038 050 U450	RED								
LL 038 050 U500	ORANGE								
LL 038 050 U550	YELLOW								
LL 038 050 U600	GREEN								
LL 038 050 U650	BLUE								
LL 038 050 U700	VIOLET								

MATERIAL THICKNESS X RADIAL WALL		APPROXIMATE LOAD AT SOLID HEIGHT		NOMINAL FREE LENGTH		SPRING RATE		APPROXIMATE SOLID HEIGHT		PRICE GROUP
MM	IN	N	LB	MM	IN	N/MM	LB/IN	MM	IN	
0.76 x 2.08	0.03 x 0.082	4.41	0.99	9.53	0.375	0.65	3.70	2.74	0.108	BN
		6.66	1.50			0.98	5.59			BN
		7.29	1.64			1.07	6.11			BN
		8.00	1.81			1.18	6.76			BN
		8.63	1.94			1.27	7.25			BN
		9.26	2.08			1.33	7.82			BN
		4.41	0.99	12.70	0.512	0.46	2.65	3.23	0.127	BP
		6.66	1.50			0.70	4.00			BP
		7.29	1.64			0.77	4.37			BP
		8.00	1.81			0.85	4.84			BP
		8.63	1.94			0.91	5.19			BP
		9.26	2.08							BP
1.07 x 2.84	0.042 x 0.11	8.47	1.91							BP
		12.82								BP

Lee Stock Number ordering reference.

Minimum Hole Diameter required for the effective operation of the spring, allowing for manufacturing tolerances and normal working conditions.

Maximum Rod Diameter over which the spring will effectively operate, allowing for working conditions and manufacturing tolerances.

Material Thickness x Radial Wall nominal dimensions.

Free Length the overall length of the spring in the unloaded position.

Solid Height length when fully compressed.

ADDITIONAL INFORMATION

- LeeP™ plastic composite compression springs combine the strength of metal with the special attributes of high performance engineered thermoplastics.
- Manufactured in Ultem® PEI (polyetherimide) resin. Different formulations are designed to meet or exceed performance criteria.
- Benefits include:
 - Unique patent pending designs that maximise spring rates and cycle life, while minimizing solid height
 - High strength to weight ratios that optimise performance while reducing mass
 - Excellent stability of physical and mechanical properties at elevated temperatures up to 170°C (340°F)
 - High corrosion resistance and compatibility with many chemicals including strong acids, weak bases, aromatics, and ketones
 - Non-magnetic. Does not interfere with imaging and other ferro-sensitive technologies
 - Dielectric insulation. Suitable for non-conductive applications
 - Inert, non-contaminating material protects product purity
 - Low flammability and toxicity ensure environmental safety
 - Recyclable and compliant with global regulations including RoHS and REACH
- LeeP™ plastic composite springs are available in a variety of standard sizes and six colour coded strengths: red, orange, yellow, green, blue and violet, the strongest.
- Custom designs to meet precise performance requirements are available.

*Ultem resin is produced by SABIC Innovative Plastics, a leader in engineered thermoplastic material solutions.



LeeP™ PLASTIC COMPOSITE SPRINGS

● Ultem* PEI (polyetherimide) resin

LEE STOCK NUMBER	COLOUR	TO WORK IN HOLE DIAMETER MIN.		OUTSIDE DIAMETER		TO WORK OVER ROD DIAMETER MAX.		INSIDE DIAMETER					
		MM	IN	MM	IN	MM	IN	MM	IN				
LL 038 038 U000 LL 038 038 U10G LL 038 038 U20G	RED ORANGE YELLOW	9.53	0.375	8.89	0.350	3.81	0.150	4.72	0.186				
LL 038 038 U30G LL 038 038 U36G LL 038 038 U40G	GREEN BLUE VIOLET												
LL 038 050 U000 LL 038 050 U10G LL 038 050 U20G	RED ORANGE YELLOW												
LL 038 050 U30G LL 038 050 U36G LL 038 050 U40G	GREEN BLUE VIOLET			8.89	0.350			4.72	0.186				
LL 050 050 U000 LL 050 050 U10G LL 050 050 U20G	RED ORANGE YELLOW			12.70	0.500			12.32	0.485	5.54	0.218	6.63	0.261
LL 050 050 U30G LL 050 050 U36G LL 050 050 U40G	GREEN BLUE VIOLET												
LL 050 075 U000 LL 050 075 U10G LL 050 075 U20G	RED ORANGE YELLOW	11.94	0.470			6.25	0.246						
LL 050 075 U30G LL 050 075 U36G LL 050 075 U40G	GREEN BLUE VIOLET	18.29	0.720			9.55	0.376						
LL 075 075 U000 LL 075 075 U10G LL 075 075 U20G	RED ORANGE YELLOW	19.05	0.750			18.29	0.720	8.71	0.343			9.55	0.376
LL 075 075 U30G LL 075 075 U36G LL 075 075 U40G	GREEN BLUE VIOLET												
LL 075 100 U000 LL 075 100 U10G LL 075 100 U20G	RED ORANGE YELLOW			18.29	0.720					9.55	0.376		
LL 075 100 U30G LL 075 100 U36G LL 075 100 U40G	GREEN BLUE VIOLET			24.51	0.965	12.83	0.505						
LL 100 100 U000 LL 100 100 U10G LL 100 100 U20G	RED ORANGE YELLOW			25.40	1.000	24.51	0.965			11.91	0.469	12.83	0.505
LL 100 100 U30G LL 100 100 U36G LL 100 100 U40G	GREEN BLUE VIOLET												
LL 100 125 U000 LL 100 125 U10G LL 100 125 U20G	RED ORANGE YELLOW	24.51	0.965					12.83	0.505				
LL 100 125 U30G LL 100 125 U36G LL 100 125 U40G	GREEN BLUE VIOLET												

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MATERIAL THICKNESS X RADIAL WALL		APPROXIMATE LOAD AT SOLID HEIGHT		NOMINAL FREE LENGTH		SPRING RATE		APPROXIMATE SOLID HEIGHT		PRICE GROUP
MM	IN	N	LB	MM	IN	N/MM	LB/IN	MM	IN	
0.76 x 2.08	.030 x .082	4.41	0.99	9.53	0.375	0.65	3.70	2.74	0.108	BN
		6.66	1.50			0.98	5.59			BN
		7.28	1.64			1.07	6.11			BN
		8.06	1.81			1.18	6.76			BN
		8.63	1.94			1.27	7.25			BN
		9.08	2.04			1.33	7.62			BN
		4.41	0.99	12.70	0.500	0.46	2.65	3.23	0.127	BP
		6.66	1.50			0.70	4.00			BP
		7.28	1.64			0.77	4.37			BP
		8.06	1.81			0.85	4.84			BP
		8.63	1.94			0.91	5.19			BP
		9.08	2.04			0.96	5.46			BP
1.07 x 2.84	.042 x .112	8.47	1.91	12.70	0.500	0.95	5.40	3.76	0.148	BP
		12.82	2.88			1.43	8.16			BP
		14.00	3.15			1.56	8.91			BP
		15.50	3.48			1.73	9.87			BP
		16.61	3.73			1.85	10.57			BP
		17.46	3.93			1.95	11.12			BP
		8.83	1.99	19.05	0.750	0.62	3.56	4.90	0.193	BS
		13.35	3.00			0.94	5.38			BS
		14.58	3.28			1.03	5.88			BS
		16.15	3.63			1.14	6.50			BS
		17.30	3.89			1.22	6.97			BS
		18.19	4.09			1.28	7.33			BS
1.57 x 4.37	.062 x .172	19.31	4.34	19.05	0.750	1.43	8.18	5.61	0.221	BS
		29.19	6.56			2.17	12.37			BS
		31.88	7.17			2.37	13.51			BS
		35.30	7.94			2.62	14.96			BS
		37.82	8.50			2.81	16.03			BS
		39.77	8.94			2.95	16.85			BS
		19.31	4.34	25.40	1.000	1.02	5.85	6.58	0.259	BU
		29.19	6.56			1.55	8.84			BU
		31.88	7.17			1.69	9.65			BU
		35.30	7.94			1.87	10.69			BU
		37.82	8.50			2.01	11.45			BU
		39.77	8.94			2.11	12.04			BU
2.16 x 5.84	.085 x .230	36.18	8.13	25.40	1.000	2.04	11.64	7.70	0.303	BU
		54.70	12.30			3.08	17.60			BU
		59.74	13.43			3.37	19.23			BU
		66.15	14.87			3.73	21.28			BU
		70.88	15.93			3.99	22.81			BU
		74.53	16.76			4.20	23.98			BU
		36.18	8.13	31.75	1.250	1.57	8.95	8.71	0.343	BV
		54.70	12.30			2.37	13.53			BV
		59.74	13.43			2.59	14.77			BV
		66.15	14.87			2.87	16.36			BV
		70.88	15.93			3.07	17.53			BV
		74.53	16.76			3.23	18.43			BV

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