

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 U1000	RED	9.53	0.375	8.89	0.350	3.81	0.150	4.72	0.186
LL 038 U1000	ORANGE								
LL 038 U1000	YELLOW								
LL 038 U1000	GREEN								
LL 038 U1000	VIOLET			8.89	0.350			4.72	0.186
LL 038 U1000	RED								
LL 038 U1000	ORANGE								
LL 038 U1000	YELLOW								
LL 038 U1000	GREEN								
LL 038 U1000	VIOLET								
LL 050 U1000	RED	12.7	0.500	12.32	0.485	5.54	0.218	6.63	0.261
LL 050 U1000	ORANGE								
LL 050 U1000	YELLOW								
LL 050 U1000	GREEN								
LL 050 U1000	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	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
		7.28	1.64			1.07	6.11			BN
		8.00	1.81			1.18	6.76			BN
		9.08	2.04			1.33	7.62			BN
		4.41	0.99	12.70	0.500	0.66	2.65	3.23	0.125	BP
		6.66	1.50			0.70	4.00			BP
		7.28	1.64			0.77	4.37			BP
		8.00	1.81			0.85	4.94			BP
		9.08	2.04			0.96	5.46			BP
1.07 x 2.84	0.042 x 0.112	8.47	1.91	12.70	0.500	0.85	5.40	3.76	0.148	BP
		12.82	2.88							BP
		14.00	3.15							BP
		15.50								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 colour coded strengths: red, orange, yellow, green, 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 U40G	GREEN VIOLET			8.89	0.350								
LL 038 050 U000 LL 038 050 U10G LL 038 050 U20G	RED ORANGE YELLOW												
LL 038 050 U30G LL 038 050 U40G	GREEN VIOLET												
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
LL 050 050 U30G LL 050 050 U40G	GREEN VIOLET			11.94	0.470								
LL 050 075 U000 LL 050 075 U10G LL 050 075 U20G	RED ORANGE YELLOW												
LL 050 075 U30G LL 050 075 U40G	GREEN VIOLET												
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		
LL 075 075 U30G LL 075 075 U40G	GREEN VIOLET			18.29	0.720								
LL 075 100 U000 LL 075 100 U10G LL 075 100 U20G	RED ORANGE YELLOW												
LL 075 100 U30G LL 075 100 U40G	GREEN VIOLET												
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
LL 100 100 U30G LL 100 100 U40G	GREEN VIOLET			24.51	0.965								
LL 100 125 U000 LL 100 125 U10G LL 100 125 U20G	RED ORANGE YELLOW												
LL 100 125 U30G LL 100 125 U40G	GREEN 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		
		9.08	2.04			1.33	7.62			BN		
		4.41	0.99			12.70	0.500			0.46	2.65	3.23
		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				
		9.08	2.04	0.96	5.46			BP				
		8.47	1.91	12.70	0.500			0.95	5.40	3.76	0.148	
		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						
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
18.19	4.09					1.28	7.33					BS
19.31	4.34					19.05	0.750					1.43
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								
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		
39.77	8.94			2.11	12.04					BU		
36.18	8.13			25.40	1.000					2.04	11.64	7.70
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						
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		
74.53	16.76					3.23	18.43			BV		

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