

# DIE SPRINGS

## Guide to using tables

**Maximum Rod Diameter**  
over which the spring will effectively operate.

**Nominal Outside Diameter**  
of the spring.

**Nominal Wire Diameter**  
of the spring.

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

**Nominal Rate**  
change in load or force per unit of deflection.

**Lee Stock Number**  
ordering reference.

**Price Group**  
reference to the price list.

**Material**  
MW = Music Wire or  
CS = Chrome Silicon.

**Number of Coils**  
total coils in each spring.

**Minimum Hole Diameter**  
required for the effective operation of the spring.

**Solid Height**  
length when fully compressed

**Load at % Deflection**  
the load required to deflect the spring to a point expressed as a percentage of its free length.

**DIE SPRINGS**  
**Medium Load – Grey**

● Ideal Operating Range 25% to 35% of Free Length ● Music Wire (MW), Chrome Silicon (CS)

LEE STOCK NUMBER	MATERIAL	TO WORK IN HOLE		TO WORK OVER ROD DIAMETER		NOMINAL OUTSIDE DIAMETER		NOMINAL WIRE DIAMETER		NOMINAL FREE LENGTH		NOMINAL RATE		LOAD AT 50% DEFLECTION (free foot/lb)		APPROX. SOLID HEIGHT		APPROX. NO. OF COILS	PRICE GROUP
		IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	N	MM	IN	MM		
LHL 375A 01	MW	0.53	0.375	4.76	0.188	8.74	0.344	1.32	0.052	25.40	1.00	9.82	56.0	125	28.0	12.6	0.50	18.5	AA
LHL 375A 02						8.48	0.334	1.32	0.052	31.75	1.25	8.41	48.0	134	30.0	15.6	0.62	11	AA
LHL 375A 03						8.61	0.339	1.32	0.052	38.10	1.50	6.66	38.0	137	28.5	15.2	0.72	13.8	AA
LHL 375A 04						8.41	0.331	1.32	0.052	44.45	1.75	5.96	34.0	135	29.8	21.0	0.85	16.3	AB
LHL 375A 05						8.61	0.339	1.32	0.052	50.80	2.00	4.91	28.0	125	28.0	23.7	0.94	18.0	AB
LHL 375A 06						8.31	0.327	1.32	0.052	63.50	2.50	4.21	24.0	134	30.0	30.5	1.20	23.1	AB
LHL 375A 07						8.53	0.336	1.32	0.052	76.20	3.00	3.16	18.0	120	27.0	36.2	1.60	27.4	AC
LHL 375A 08						8.38	0.330	1.32	0.052	152.40	6.00	1.67	9.5	127	25.0	71.0	2.65	53.8	AE
LHL 500A 01	MW	12.70	0.500	7.14	0.281	12.19	0.480	1.78	0.070	25.40	1.00	17.53	100.0	223	50.0	12.4	0.49	7.0	AA
LHL 500A 02						11.96	0.471	1.83	0.072	31.75	1.25	16.13	92.0	256	57.5	15.7	0.62	8.6	AA
LHL 500A 03						11.81	0.465	1.83	0.072	38.10	1.50	13.32	76.0	254	57.0	19.1	0.75	10.0	AA
LHL 500A 04						11.58	0.456	1.83	0.072	44.45	1.75	11.92	68.0	265	59.5	21.1	0.87	12.1	AA
LHL 500A 05						12.01	0.473	1.91	0.075	50.80	2.00	11.22	64.0	285	64.0	23.8	1.00	13.3	AB
LHL 500A 06						11.86	0.467	1.91	0.075	63.50	2.50	9.12	52.0	289	65.0	31.1	1.24	16.5	AB
LHL 500A 07						12.07	0.475	1.91	0.075	76.20	3.00	7.01	40.0	267	60.0	37.8	1.49	19.9	AB
LHL 500A 08						11.84	0.466	1.83	0.072	89.90	3.50	5.26	30.0	234	52.5	42.4	1.67	23.2	AC
LHL 500A 09						12.14	0.478	1.91	0.075	114.30	4.50	4.38	25.0	250	56.3	56.8	2.04	29.8	AD
LHL 500A 10						12.01	0.473	1.91	0.075	139.70	5.50	3.68	21.0	257	57.8	69.2	2.40	36.3	AD
LHL 500A 11						11.63	0.458	1.83	0.072	165.10	6.50	2.80	16.0	232	52.0	80.6	3.18	44.1	AF
LHL 500A 12						11.84	0.466	1.78	0.070	190.50	7.50	1.93	11.0	184	41.3	93.5	3.68	52.6	AG
LHL 625A 01	MW	15.88	0.625	8.73	0.344	14.76	0.581	2.08	0.082	25.40	1.00	22.96	131.0	292	65.5	12.6	0.50	6.0	AB
LHL 625A 02						14.94	0.588	2.21	0.087	31.75	1.25	22.44	128.0	356	80.0	15.7	0.62	7.1	AB
LHL 625A 03						14.66	0.577	2.21	0.087	38.10	1.50	18.93	108.0	361	81.0	18.8	0.74	8.0	AB
LHL 625A 04						14.27	0.562	2.21	0.087	44.45	1.75	16.83	96.0	374	84.0	22.1	0.87	10.0	AB
LHL 625A 05						14.78	0.582	2.29	0.090	50.80	2.00	15.43	88.0	392	88.0	25.1	0.99	11.0	AC
LHL 625A 06						14.53	0.572	2.21	0.087	63.50	2.50	10.52	60.0	334	75.0	31.1	1.23	14.1	AC
LHL 625A 07						14.68	0.578	2.29	0.090	76.20	3.00	9.82	56.0	374	84.0	37.8	1.49	16.6	AD
LHL 625A 08						14.61	0.575	2.29	0.090	89.90	3.50	8.41	48.0	374	84.0	44.2	1.74	19.3	AD
LHL 625A 09						14.35	0.565	2.29	0.090	101.60	4.00	7.71	44.0	392	88.0	50.4	1.99	22.1	AE
LHL 625A 10						14.61	0.575	2.29	0.090	152.40	6.00	4.91	28.0	374	84.0	72.4	2.85	31.7	AF
LHL 750A 01	MW	19.05	0.750	9.52	0.375	18.29	0.720	2.41	0.095	25.40	1.00	28.05	160.0	356	80.0	12.2	0.48	5.1	AD
LHL 750A 02						18.42	0.725	2.49	0.098	31.75	1.25	22.79	130.0	362	81.3	15.4	0.61	6.2	AD
LHL 750A 03						18.42	0.725	2.54	0.100	38.10	1.50	20.16	115.0	384	86.3	18.3	0.72	7.2	AD
LHL 750A 04						18.29	0.720	2.54	0.100	44.45	1.75	17.53	100.0	390	87.5	20.6	0.81	8.1	AD
LHL 750A 05						18.29	0.720	2.59	0.102	50.80	2.00	15.78	80.0	401	90.0	24.4	0.96	9.4	AE
LHL 750A 06						18.29	0.720	2.59	0.102	63.50	2.50	12.27	70.0	390	87.5	29.7	1.17	11.5	AE
LHL 750A 07						18.29	0.720	2.59	0.102	76.20	3.00	10.52	60.0	401	90.0	33.8	1.33	13.0	AF
LHL 750A 08						18.36	0.723	2.67	0.105	89.90	3.50	9.64	55.0	429	96.3	41.4	1.63	15.5	AF
LHL 750A 09						18.36	0.723	2.67	0.105	101.60	4.00	8.76	50.0	445	100.0	45.1	1.78	16.9	AG
LHL 750A 10						18.16	0.715	2.67	0.105	114.30	4.50	7.89	45.0	451	101.3	51.2	2.02	19.2	AG
LHL 750A 11						18.03	0.710	2.67	0.105	127.00	5.00	7.01	40.0	445	100.0	58.2	2.29	21.8	AH
LHL 750A 12						18.03	0.710	2.67	0.105	139.70	5.50	6.14	35.0	429	96.3	65.8	2.59	24.7	AH
LHL 750A 13						18.03	0.710	2.67	0.105	152.40	6.00	5.61	32.0	434	97.5	70.4	2.77	26.4	AJ

102 Deflection is expressed as a percentage of free length, with the approximate load required to attain that position.

### ADDITIONAL INFORMATION

- 1 Determine if the springs are to be used for low stress, medium stress or high stress applications, and refer to the relevant section, i.e. Medium Load, Heavy Load etc.
- 2 The more rapidly the springs are cycled, the greater the need to ensure operation is within the ideal operating ranges detailed at the head of each page.
- 3 Ensure that the hole diameter and/or the rod diameter suitably match your application as faulty spring guidance will cause buckling and possible failure of the springs and risk damage to the die itself. Use as many springs in the die as space permits, with the least amount of deflection.
- 4 Preventative maintenance of dies should be performed on a regular basis and die springs should be replaced at appropriate intervals to reduce downtime. Replace all springs in a die at the same time. This will ensure an even distribution of the applied load.
- 5 Material specifications, finishes and tolerances are detailed on page 163.

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