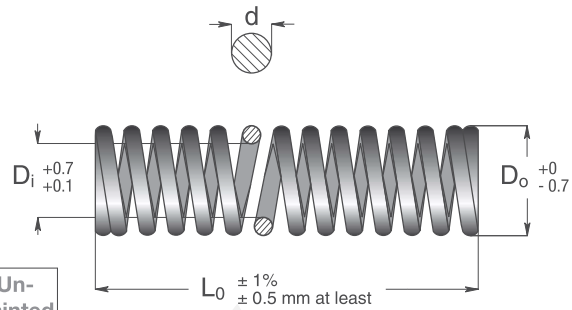
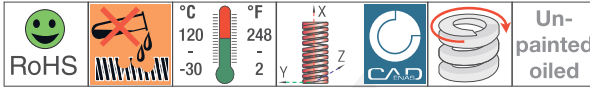


Round Wire

SERIES L

- IT** Molle non colorate con oliatura antiruggine.
- EN** Not painted springs with anti-rust lubricant.
- DE** Unlackierte Federn mit Rostschutzölung.
- FR** Ressorts non-peints avec huilage antirouille.
- ES** Muelles no pintados con lubricación antióxido.
- PT** Molas não coloridas com oleamento anti-ferrugem.



- D_o** Diametro esterno della molla
Spring outside diameter
Außendurchmesser Feder
Diamètre extérieur du ressort
Diámetro externo del muelle
Diâmetro exterior da mola
- D_i** Diametro interno della molla
Spring inside diameter
Innendurchmesser Feder
Diamètre intérieur du ressort
Diámetro interno del muelle
Diâmetro interno da mola
- d** Diametro del filo
Wire diameter
Drahtdurchmesser
Diamètre du fil
Diámetro del hilo
Diâmetro de fio
- L₀** Lunghezza libera della molla
Spring free length
Länge der unbelasteten Feder
Longueur libre du ressort
Longitud libre del muelle
Comprimento livre da mola
- R** Carico (N) necessario per deflettere la molla di 1 millimetro
Load (N) required for 1mm deflection
Kraftzunahme (N) für 1 mm gefragt pro
Charge exigée pour comprimer le ressort 1mm
Carga (N) necesaria para desviar el muelle de 1 milímetro
Carga (N) necessária para defletir a mola de 1 milímetro
- A** Deflessione totale consigliata per una durata della molla maggiore a 3.000.000 di cicli
Advised total working deflection for more than 3,000,000 cycles
Empfohlener Gesamtfederweg für eine Lebensdauer der Feder von mehr als 3.000.000 Zyklen

- B** Deflessione totale consigliata per una durata della molla di circa 1.500.000 di cicli
Advised total working deflection for about 1,500,000 cycles
Empfohlener Gesamtfederweg für eine Lebensdauer der Feder für eine durchschnittliche Lebensdauer von 1,500,000 Zyklen
Déflexion totale conseillée pour une durée du ressort d'environ 1,500,000 cycles
Deflexión total aconsejada para una duración del muelle de aproximadamente 1.500.000 de ciclos
Deflexão total aconselhada para duração da mola de cerca 1.500.000 de ciclos
- C** Deflessione totale consigliata per una durata della molla di circa 300.000 - 500.000 cicli
Advised total working deflection for about 300,000 - 500,000 cycles
Empfohlener Gesamtfederweg für eine Lebensdauer der Feder von ca. 300.000 bis 500.000 Zyklen
Déflexion totale conseillée pour une durée du ressort d'environ 300.000 - 500.000 cycles
Deflexión total aconsejada para una duración del muelle de aproximadamente 300.000 - 500.000 ciclos
Deflexão total aconselhada para duração da mola de cerca 300.000 - 500.000 ciclos
- D** Deflessione totale massima per una durata della molla di circa 100.000 - 200.000 cicli
Advised total working deflection for about 100,000 - 200,000 cycles.
Maximaler Gesamtfederweg für eine Lebensdauer der Feder von ca. 100.000 bis 200.000 Zyklen
Déflexion totale maximum pour une durée du ressort d'environ 100.000 - 200.000 cycles
Deflexión total máxima para una duración del muelle de aproximadamente 100.000 - 200.000 ciclos
Deflexão total máxima para duração da mola de cerca 100.000 - 200.000 ciclos

Code	D _o	D _i	L ₀	R	A		B		C		D		Pcs
	Outside Diameter	Inside Diameter	Free Length	Spring Constant	16% L ₀	N	24% L ₀	N	28% L ₀	N	32% L ₀	N	
	d			± 10%	+ 3.000.000		~ 1.500.000		300 - 500.000		100 - 200.000		
	mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	
L 3 - 010	3	2	10	2.94	1.6	4.4	2.4	6.62	2.8	6.9	3.2	8.8	50
L 3 - 015			15	1.96	2.4		3.6		4.2		4.8		50
L 3 - 020			20	0.98	3.2		4.8		5.6		6.4		50
L 3 - 025			25	0.98	4		6		7.0		8		50
L 4 - 010	4	2.6	10	4.9	1.6	7.8	2.4	11.6	2.8	14.5	3.2	15.7	50
L 4 - 015			15	2.94	2.4		3.6		4.2		4.8		50
L 4 - 020			20	2.94	3.2		4.8		5.6		6.4		50
L 4 - 025			25	1.96	4		6		7.0		8		50
L 4 - 030	30	1.96	4.8	7.2	8.4	9.6	50						
L 6 - 015	6	4	15	7.85	2.4	17.7	3.6	26.5	4.2	32.4	4.8	35.5	50
L 6 - 020			20	5.88	3.2		4.8		5.6		6.4		50
L 6 - 025			25	4.9	4		6		7.0		8		50
L 6 - 030			30	3.92	4.8		7.2		8.4		9.6		50
L 6 - 035	35	2.94	5.6	8.4	9.8	11.2	50						

How to order: L 6 - 030 (Series) [D_H] - [L₀] 1 N = 0.1 daN = 0.102 kgf Load (N) = R (N/mm) x Deflection (mm) Special Springs 35-018

TR
L

L SERIES

Round Wire

Code	D _o Outside Diameter	D _i Inside Diameter	L ₀ Free Length	R Spring Constant	A 16% L ₀		B 24% L ₀		C 28% L ₀		D 32% L ₀		Pcs
					± 10%	+ 3.000.000	~ 1.500.000	300 - 500.000	100 - 200.000				
	d				mm	N	mm	N	mm	N	mm	N	
	mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	
L 8 - 015	8	5.4	15	12.75	2.4	31.4	3.6	47.1	4.2	55.6	4.8	62.8	50
L 8 - 020			20	9.81	3.2		4.8		5.6		6.4		50
L 8 - 025			25	7.85	4		6		7.0		8		50
L 8 - 030			30	6.86	4.8		7.2		8.4		9.6		50
L 8 - 035			35	5.88	5.6		8.4		9.8		11.2		50
L 8 - 040	40	4.9	6.4	9.6	11.2	12.8	50						
L 10 - 025	10	6.5	25	12.75	4	49	6	73.6	7.0	85.8	8	98	50
L 10 - 030			30	9.81	4.8		7.2		8.4		9.6		50
L 10 - 035			35	8.83	5.6		8.4		9.8		11.2		50
L 10 - 040			40	7.85	6.4		9.6		11.2		12.8		50
L 10 - 045			45	6.86	7.2		10.8		12.6		14.4		50
L 10 - 050	50	5.88	8	12	14.0	16	25						
L 12 - 025	12	8	25	17.65	4	70.6	6	106.9	7.0	124.1	8	141.2	50
L 12 - 030			30	14.71	4.8		7.2		8.4		9.6		50
L 12 - 035			35	12.75	5.6		8.4		9.8		11.2		50
L 12 - 040			40	10.79	6.4		9.6		11.2		12.8		25
L 12 - 045			45	9.81	7.2		10.8		12.6		14.4		25
L 12 - 050	50	8.83	8	12	14.0	16	25						
L 12 - 055	55	7.85	8.8	13.2	15.4	17.6	25						
L 12 - 060	60	7.85	9.6	14.4	16.8	19.2	25						
L 14 - 025	14	9.3	25	24.52	4	96.1	6	144.2	7.0	167.7	8	192.2	50
L 14 - 030			30	19.61	4.8		7.2		8.4		9.4		50
L 14 - 035			35	17.65	5.6		8.4		9.8		11.2		25
L 14 - 040			40	14.71	6.4		9.6		11.2		12.8		25
L 14 - 045			45	13.73	7.2		10.8		12.6		14.4		25
L 14 - 050	50	11.77	8	12	14.0	16	25						
L 14 - 055	55	10.79	8.8	13.2	15.4	17.6	25						
L 14 - 060	60	9.81	9.6	14.4	16.8	19.2	25						
L 14 - 065	65	8.83	10.4	15.6	18.2	20.8	20						
L 14 - 070	70	8.83	11.2	16.8	19.6	22.4	20						
L 16 - 025	16	10.7	25	31.38	4	125.5	6	188.3	7.0	219.8	8	251.1	50
L 16 - 030			30	26.48	4.8		7.2		8.4		9.4		50
L 16 - 035			35	22.56	5.6		8.4		9.8		11.2		25
L 16 - 040			40	19.61	6.4		9.6		11.2		12.8		25
L 16 - 045			45	17.65	7.2		10.8		12.6		14.4		25
L 16 - 050	50	15.69	8	12	14.0	16	25						
L 16 - 055	55	14.71	8.8	13.2	15.4	17.6	25						
L 16 - 060	60	12.75	9.6	14.4	16.8	19.2	25						
L 16 - 065	65	11.77	10.4	15.6	18.2	20.8	20						
L 16 - 070	70	10.79	11.2	16.8	19.6	22.4	20						
L 16 - 075	75	10.79	12	18	21.0	24	20						
L 16 - 080	80	9.81	12.8	19.2	22.4	25.6	20						
L 18 - 025	18	12	25	40.21	4	158.9	6	238.3	7.0	280.4	8	317.7	50
L 18 - 030			30	33.34	4.8		7.2		8.4		9.4		50
L 18 - 035			35	28.44	5.6		8.4		9.8		11.2		25
L 18 - 040			40	24.52	6.4		9.6		11.2		12.8		25
L 18 - 045			45	22.56	7.2		10.8		12.6		14.4		25
L 18 - 050	50	19.61	8	12	14.0	16	25						
L 18 - 055	55	17.65	8.8	13.2	15.4	17.6	25						
L 18 - 060	60	16.67	9.6	14.4	16.8	19.2	25						
L 18 - 065	65	15.69	10.4	15.6	18.2	20.8	20						
L 18 - 070	70	14.71	11.2	16.8	19.6	22.4	20						
L 18 - 075	75	13.73	12	18	21.0	24	20						
L 18 - 080	80	12.75	12.8	19.2	22.4	25.6	20						
L 18 - 090	90	10.79	14.4	21.6	25.2	28.8	20						
L 20 - 025	20	13.5	25	49.03	4	196.1	6	294.2	7.0	346.3	8	392.3	50
L 20 - 030			30	41.19	4.8		7.2		8.4		9.4		50
L 20 - 035			35	35.3	5.6		8.4		9.8		11.2		25
L 20 - 040			40	30.4	6.4		9.6		11.2		12.8		25
L 20 - 045			45	27.46	7.2		10.8		12.6		14.4		25
L 20 - 050	50	24.52	8	12	14.0	16	25						
L 20 - 055	55	22.56	8.8	13.2	15.4	17.6	25						
L 20 - 060	60	20.59	9.6	14.4	16.8	19.2	25						
L 20 - 065	65	18.63	10.4	15.6	18.2	20.8	20						
L 20 - 070	70	17.65	11.2	16.8	19.6	22.4	20						
L 20 - 075	75	16.67	12	18	21.0	24	20						
L 20 - 080	80	15.69	12.8	19.2	22.4	25.6	20						
L 20 - 090	90	13.73	14.4	21.6	25.2	28.8	20						
L 20 - 100	100	12.75	16	24	28.0	32	20						

Special Springs 36-018

How to order: L 6 - 030

(Series) -

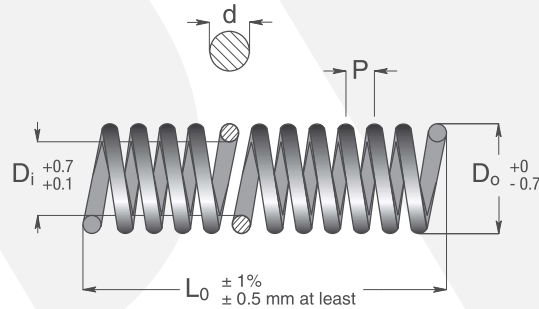
1 N = 0.1 daN = 0.102 kgf Load (N) = R (N/mm) x Deflection (mm)

Round Wire

SERIES L

Code	D _o Outside Diameter	D _i Inside Diameter	L ₀ Free Length	R Spring Constant	A 16% L ₀		B 24% L ₀		C 28% L ₀		D 32% L ₀		Pcs
					d	± 10%	+ 3.000.000	~ 1.500.000	300 - 500.000	100 - 200.000			
	mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	
L 22 - 025	22	14.7	25	59.82	4	237.3	6	356	7.0	415.9	8	474.6	50
L 22 - 030			30	49.03	4.8		7.2		8.4		9.4		50
L 22 - 035			35	42.17	5.6		8.4		9.8		11.2		25
L 22 - 040			40	37.27	6.4		9.6		11.2		12.8		25
L 22 - 045			45	33.34	7.2		10.8		12.6		14.4		25
L 22 - 050			50	29.42	8		12		14.0		16		25
L 22 - 055			55	27.46	8.8		13.2		15.4		17.6		25
L 22 - 060			60	24.52	9.6		14.4		16.8		19.2		20
L 22 - 065			65	22.56	10.4		15.6		18.2		20.8		20
L 22 - 070			70	21.57	11.2		16.8		19.6		22.4		20
L 22 - 075	75	19.61	12	18	21.0	24	20						
L 22 - 080	80	18.63	12.8	19.2	22.4	25.6	20						
L 22 - 090	90	16.67	14.4	21.6	25.2	28.8	20						
L 22 - 100	3.4	100	14.71	16	24	28.0	20						
L 25 - 025	25	17	25	76.49	4	307	6	459.9	7.0	537.9	8	613.9	50
L 25 - 030			30	63.74	4.8		7.2		8.4		9.6		25
L 25 - 035			35	54.92	5.6		8.4		9.8		11.2		25
L 25 - 040			40	48.05	6.4		9.6		11.2		12.8		25
L 25 - 045			45	42.17	7.2		10.8		12.6		14.4		25
L 25 - 050			50	38.25	8		12		14.0		16		25
L 25 - 055			55	35.3	8.8		13.2		15.4		17.6		20
L 25 - 060			60	32.36	9.6		14.4		16.8		19.2		20
L 25 - 065			65	29.42	10.4		15.6		18.2		20.8		20
L 25 - 070			70	27.46	11.2		16.8		19.6		22.4		20
L 25 - 075	75	25.5	12	18	21.0	24	20						
L 25 - 080	80	23.54	12.8	19.2	22.4	25.6	20						
L 25 - 090	90	21.57	14.4	21.6	25.2	28.8	20						
L 25 - 100	3.8	100	19.61	16	24	28.0	20						
L 30 - 050	30	20	50	51.94	8	414	12	621	14.0	724.1	16	828	20
L 30 - 060			60	44.1	9.6		14.4		16.8		19.2		20
L 30 - 070			70	37.24	11.2		16.8		19.6		22.4		20
L 30 - 080			80	32.34	12.8		19.2		22.4		25.6		10
L 30 - 090			90	28.42	14.4		21.6		25.2		28.8		10
L 30 - 100			100	25.48	16		24		28.0		32		10
L 30 - 125	4.5	125	20.58	20	30	35.0	10						

- IT** Spezzoni con terminali aperti
- EN** Long size open ends
- DE** Meterware
- FR** Ressorts avec longueur ébauché
- ES** Piezas desmochadas con terminales abiertos
- PT** Pontas de refugo com terminais abertos



Code	D _o Outside Diameter	D _i Inside Diameter	d Wire Diameter	L ₀ Free Length	P Pitch	Pcs
	mm	mm	mm	mm	mm	
L 03 - 300	3	2.0	0.4	300	1.04	10
L 04 - 300	4	2.6	0.6	300	1.50	10
L 06 - 300	6	4.0	0.9	300	2.00	10
L 08 - 300	8	5.4	1.2	300	2.80	10
L 10 - 300	10	6.5	1.5	300	3.50	10
L 12 - 300	12	8.0	1.8	300	4.30	10
L 14 - 300	14	9.3	2.2	300	4.80	10
L 16 - 300	16	10.7	2.4	300	5.50	10
L 18 - 300	18	12.0	2.8	300	5.30	10
L 20 - 300	20	13.5	3.0	300	6.80	10
L 22 - 300	22	14.7	3.4	300	6.70	10
L 25 - 300	25	17.0	3.8	300	8.20	10

How to order: L 6 - 300 (Series D_H - L₀) 1 N = 0.1 daN = 0.102 kgf Load (N) = R (N/mm) x Deflection (mm) Special Springs 37-018