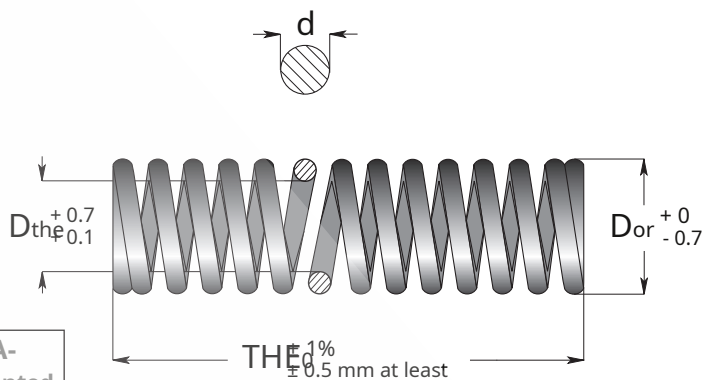
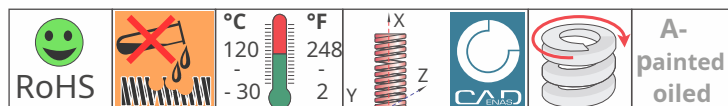



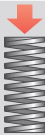
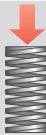


- IT** Molle non colorate con olio antiruggine Not
EN painted springs with anti-rust lubricant
FRO Unlackierte Federn mit Rostschutzölung
FR Ressorts non-peints avec huilage antirouille
ES Muelles no pintados con lubricación antióxido
PT Molas não coloridas com oleamento
 anti-ferrugem



D_{or} Outside diameter of the spring - Spring outside diameter
 Außendurchmesser Feder - Diamètre extérieur du ressort Diámetro
 externo del muelle - Diâmetro externo da grinding wheel

D_{the} Inside diameter of the spring - Spring inside diameter
 Innendurchmesser Feder - Diamètre intérieur du ressort Diámetro
 interior del muelle - Diâmetro interno da mola

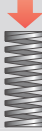




d Wire diameter
 Drahtdurchmesser
 Diameter of the thread
 Diámetro del hilo
 Diâmetro de fio

Code	D _{or} D _{the}		THER		TO		B		C		D		
	Outside Diameter	Inside Diameter	Free Length	Spring Rate	 16%THE ₀		 24%THE ₀		 28%THE ₀		 32%THE ₀		
	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	Pcs
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	4.0		6.0		7.0		8.0		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	4.0		6.0		7.0		8.0		50
L 4 - 030	0.6	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	4.90	4.0		6.0		7.0		8.0		50
L 6 - 030			30	3.92	4.8		7.2		8.4		9.6		50
L 6 - 035	0.9	35	2.94	5.6	8.4	9.8	11.2	50					
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	4.0		6.0		7.0		8.0		50
L 8 - 030			30	6.86	4.8		7.2		8.4		9.6		50
L 8 - 035	1.2		35	5.88	5.6		8.4		9.8		11.2		50
L 8 - 040			40	4.90	6.4		9.6		11.2		12.8		50
L 10 - 025	10	6.5	25	12.75	4.0	49	6.0	73.6	7.0	85.8	8.0	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	1.5		45	6.86	7.2		10.8		12.6		14.4		50
L 10 - 050			50	5.88	8.0		12.0		14.0		16.0		25
L 12 - 025	12	8	25	17.65	4.0	70.6	6.0	106.9	7.0	124.1	8.0	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	1.8		45	9.81	7.2		10.8		12.6		14.4		25
L 12 - 050			50	8.83	8.0		12.0		14.0		16.0		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	4.0	96.1	6.0	144.2	7.0	167.7	8.0	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	2.2		45	13.73	7.2		10.8		12.6		14.4		25
L 14 - 050			50	11.77	8.0		12.0		14.0		16.0		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



Special Springs Standard Round Wire

SERIES THE

Code	D _{or}		D _{the}		THER			TO			B			C			D		
	Outside Diameter	Inside Diameter	Free Length	Spring Rate	16%THE ₀	24%THE ₀		28%THE ₀	32%THE ₀										
	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		mm	N	Pcs
L 16 - 025	16	10.7	25	31.38	4.0	125.5		6.0	188.3		7.0	219.8		8.0	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	8.0		12.0	14.0		16.0	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	2.4		75	10.79	12.0		18.0	21.0	24.0	20									
L 16 - 080			80	9.81	12.8		19.2	22.4	25.6	20									
L 18 - 025	18	12	25	40.21	4.0	158.9		6.0	238.3		7.0	280.4		8.0	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	8.0		12.0	14.0		16.0	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	2.8		75	13.73	12.0		18.0	21.0	24.0	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	4.0	196.1		6.0	294.2		7.0	346.3		8.0	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	8.0		12.0	14.0		16.0	25								
L 20 - 055			55	22.56	8.8		13.2	15.4		17.6	25								
L 20 - 060			60	8.59pm	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	3		75	16.67	12.0		18.0	21.0	24.0	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	16.0		24.0	28.0	32.0	20									
L 22 - 025	22	14.7	25	59.82	4.0	237.3		6.0	356		7.0	415.9		8.0	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	8.0		12.0	14.0		16.0	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	9.57pm	11.2		16.8	19.6		22.4	20								
L 22 - 075	3.4		75	19.61	12.0		18.0	21.0	24.0	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			100	14.71	16.0		24.0	28.0	32.0	20									
L 25 - 025	25	17	25	76.49	4.0	307		6.0	459.9		7.0	537.9		8.0	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	8.0		12.0	14.0		16.0	25								
L 25 - 055			55	35.30	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	3.8		75	25.50	12.0		18.0	21.0	24.0	20									
L 25 - 080			80	23.54	12.8		19.2	22.4	25.6	20									
L 25 - 090			90	9.57pm	14.4		21.6	25.2	28.8	20									
L 25 - 100			100	19.61	16.0		24.0	28.0	32.0	20									
L 30 - 050	30	20	50	51.94	8.0	414		12.0	621		14.0	724.1		16.0	828		20		
L 30 - 060			60	44.10	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	4.5		100	25.48	16.0		24.0	28.0	32.0	10									
L 30 - 125			125	20.58	20.0		30.0	35.0	40.0	10									