

# CONTINUOUS LENGTH SPRINGS

## Round Wire Compression Springs

Engineers, designers, specifiers, repair and maintenance personnel find continuous length compression and extension springs extremely convenient for prototype and maintenance use. These springs are designed to be cut to the length required by any application.

## Material

Either hard drawn or music wire will be supplied, based on availability at time of shipment.

## Rate

To calculate rate at desired cut length: original rate X original length ÷ new length.

ROUND WIRE COMPRESSION SPRINGS - 10" (25 cm)										
Catalog Number	Hole Size*		Wire Diameter		Spring Rate (± 20%)		Approx. Solid Height		Min. Order	
	in	mm	in	mm	lb/in	N/mm	in	mm		
C093-010-10-L	0.093	2.36	0.010	0.254	0.12	0.021	2.80	71.12	12	
C093-014-10-L	0.093	2.36	0.014	0.356	0.50	0.088	3.99	101.35	12	
C125-012-10-L	0.125	3.18	0.012	0.305	0.11	0.019	3.00	76.20	12	
C125-016-10-L	0.125	3.18	0.016	0.406	0.38	0.067	4.00	101.60	12	
C188-014-10-L	0.188	4.78	0.014	0.356	0.08	0.014	1.96	49.78	12	
C188-018-10-L	0.188	4.78	0.018	0.457	0.26	0.046	2.52	64.01	12	
C188-026-10-L	0.188	4.78	0.026	0.660	1.39	0.243	3.38	85.85	12	
C188-035-10-L	0.188	4.78	0.035	0.889	3.84	0.672	6.65	168.91	12	
C250-018-10-L	0.250	6.35	0.018	0.457	0.14	0.025	1.71	43.43	12	
C250-022-10-L	0.250	6.35	0.022	0.559	0.26	0.046	2.53	64.26	12	
C250-026-10-L	0.250	6.35	0.026	0.660	0.69	0.121	2.47	62.74	12	
C250-031-10-L	0.250	6.35	0.031	0.787	1.46	0.256	3.10	78.74	12	
C250-035-10-L	0.250	6.35	0.035	0.889	1.82	0.319	4.55	115.57	12	
C250-041-10-L	0.250	6.35	0.041	1.041	5.83	1.021	3.69	93.73	12	
C250-047-10-L	0.250	6.35	0.047	1.194	9.35	1.637	4.70	119.38	12	
C312-022-10-L	0.312	7.92	0.022	0.559	0.15	0.026	2.20	55.88	12	
C312-031-10-L	0.312	7.92	0.031	0.787	0.63	0.110	3.41	86.61	12	
C312-037-10-L	0.312	7.92	0.037	0.940	1.35	0.236	4.07	103.38	12	
C312-041-10-L	0.312	7.92	0.041	1.041	2.88	0.504	3.28	83.31	12	
C312-047-10-L	0.312	7.92	0.047	1.194	6.06	1.061	3.53	89.66	12	
C312-055-10-L	0.312	7.92	0.055	1.397	11.45	2.005	4.40	111.76	12	
C375-031-10-L	0.375	9.53	0.031	0.787	0.33	0.058	3.41	86.61	12	
C375-035-10-L	0.375	9.53	0.035	0.889	0.61	0.107	3.50	88.90	12	
C375-043-10-L	0.375	9.53	0.043	1.092	2.19	0.383	3.01	76.45	12	
C375-047-10-L	0.375	9.53	0.047	1.194	2.67	0.468	4.00	101.60	12	
C375-055-10-L	0.375	9.53	0.055	1.397	7.03	1.231	3.30	83.82	12	
C375-062-10-L	0.375	9.53	0.062	1.575	12.36	2.164	4.03	102.36	12	
C375-075-10-L	0.375	9.53	0.075	1.905	27.77	4.863	5.25	133.35	12	
C438-035-10-L	0.438	11.13	0.035	0.889	0.54	0.095	2.45	62.23	12	
C438-047-10-L	0.438	11.13	0.047	1.194	1.87	0.327	3.29	83.57	12	
C438-055-10-L	0.438	11.13	0.055	1.397	4.49	0.786	3.30	83.82	12	
C438-062-10-L	0.438	11.13	0.062	1.575	6.90	1.208	4.03	102.36	12	
C438-075-10-L	0.438	11.13	0.075	1.905	19.81	3.469	4.13	104.90	12	
C438-085-10-L	0.438	11.13	0.085	2.159	31.15	5.454	5.10	129.54	12	
C500-035-10-L	0.500	12.70	0.035	0.889	0.25	0.044	3.15	80.01	12	
C500-047-10-L	0.500	12.70	0.047	1.194	1.10	0.193	3.53	89.66	12	
C500-055-10-L	0.500	12.70	0.055	1.397	2.33	0.408	3.85	97.79	12	
C500-062-10-L	0.500	12.70	0.062	1.575	7.11	1.245	2.40	60.96	12	
C500-075-10-L	0.500	12.70	0.075	1.905	15.03	2.632	3.38	85.85	12	
C500-091-10-L	0.500	12.70	0.091	2.311	32.54	5.698	4.55	115.57	12	
C500-115-10-L	0.500	12.70	0.115	2.921	91.47	16.016	6.33	160.78	12	

\* Hole size refers to the diameter of the hole the spring can be inserted in.

**Material** - Either hard drawn or music wire will be supplied, based on availability at time of shipment.

## Assortments/Kits

Assortment A-10-R consists of one each of the above 41 different springs. Material will be hard drawn wire.

ROUND WIRE COMPRESSION SPRINGS - 18" (45 cm)										
Catalog Number	Hole Size*		Wire Diameter		Spring Rate (± 20%)		Approx. Solid Height		Min. Order	
	in	mm	in	mm	lb/in	N/mm	in	mm		
C500-041-18-L	0.500	12.70	0.041	1.04	0.61	0.107	3.32	84.33	12	
C500-054-18-L	0.500	12.70	0.054	1.37	2.32	0.406	3.89	98.81	12	
C562-062-18-L	0.562	14.27	0.062	1.57	1.86	0.326	6.42	163.07	12	
C562-072-18-L	0.562	14.27	0.072	1.83	5.30	0.928	5.18	131.57	12	
C625-054-18-L	0.625	15.88	0.054	1.37	1.42	0.249	2.92	74.17	12	
C688-062-18-L	0.688	17.48	0.062	1.57	1.87	0.327	3.35	85.09	12	
C688-068-18-L	0.688	17.48	0.068	1.73	2.26	0.396	4.28	108.71	12	
C688-072-18-L	0.688	17.48	0.072	1.83	3.17	0.555	4.21	106.93	12	
C812-062-18-L	0.812	20.62	0.062	1.57	1.25	0.219	2.79	70.87	12	
C812-080-18-L	0.812	20.62	0.080	2.03	3.85	0.674	3.60	91.44	12	
C875-098-18-L	0.875	22.23	0.098	2.49	7.95	1.392	3.97	100.84	12	
C938-080-18-L	0.938	23.83	0.080	2.03	2.32	0.406	3.53	89.66	12	
C938-125-18-L	0.938	23.83	0.125	3.18	14.52	2.542	6.19	157.23	12	
C1000-098-18-L	1.000	25.40	0.098	2.49	5.72	1.002	3.44	87.38	12	
C1062-085-18-L	1.062	26.97	0.085	2.16	2.21	0.387	7.29	185.17	12	
C1062-125-18-L	1.062	26.97	0.125	3.18	13.61	2.383	4.50	114.30	12	
C1125-125-18-L	1.125	28.58	0.125	3.18	7.89	1.382	3.60	91.44	12	
C1125-135-18-L	1.125	28.58	0.135	3.43	9.98	1.747	6.19	157.23	12	
C1188-090-18-L	1.188	30.18	0.090	2.29	2.77	0.485	2.84	72.14	12	
C1188-125-18-L	1.188	30.18	0.125	3.18	9.10	1.593	4.50	114.30	12	
C1375-148-18-L	1.375	34.93	0.148	3.76	12.83	2.247	4.46	113.28	12	
C1625-148-18-L	1.625	41.28	0.148	3.76	8.09	1.417	3.99	101.35	12	
C1875-148-18-L	1.875	47.63	0.148	3.76	4.66	0.816	4.66	118.36	12	

\* Hole size refers to the diameter of the hole the spring can be inserted in.

**Material** - Either hard drawn or music wire will be supplied, based on availability at time of shipment.

## Assortments/Kits

Assortment A-18-R consists of one each of the above 23 different springs. Material will be hard drawn wire.

# CONTINUOUS LENGTH SPRINGS

## Round Wire Extension Springs

Continuous length Extension Springs are designed to be cut to the length required by any specific application.

To determine the rate per inch of extension at the final cut length, use the formula on the right:

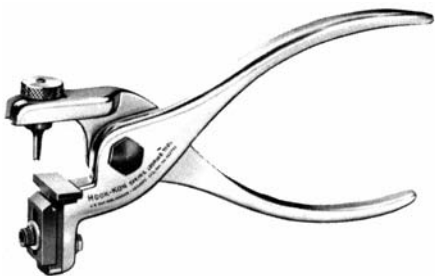
$N =$  Number of coils per inch x length in inches

Rate =  $C/N$ , C being the constant for each size of spring, as per tables below.

To determine load at an extended length, multiply the deflection by the rate.

ROUND WIRE EXTENSION SPRINGS - 20" (50 cm) - NO LOOPS - STAINLESS STEEL						
Catalog Number	Outside Diameter		Wire Diameter		Approx. Number of coils/ inch	C*
	in	mm	in	mm		
E0125-013-CS	0.125	3.175	0.013	0.33	76	25
E0125-017-CS	0.125	3.175	0.017	0.43	57.5	83
E0187-015-CS	0.187	4.750	0.015	0.38	66.5	12
E0187-020-CS	0.187	4.750	0.020	0.51	49	43
E0187-026-CS	0.187	4.750	0.026	0.66	38.5	137
E0250-017-CS	0.250	6.350	0.017	0.43	57.5	8
E0250-020-CS	0.250	6.350	0.020	0.51	49	16
E0250-032-CS	0.250	6.350	0.032	0.81	31.5	131
E0312-020-CS	0.312	7.925	0.020	0.51	49	8
E0312-026-CS	0.312	7.925	0.026	0.66	38.5	24
E0312-032-CS	0.312	7.925	0.032	0.81	31.5	59
E0312-041-CS	0.312	7.925	0.041	1.04	24	176
E0375-032-CS	0.375	9.525	0.032	0.81	31.5	32
E0375-041-CS	0.375	9.525	0.041	1.04	24	95
E0375-054-CS	0.375	9.525	0.054	1.37	18.5	321
E0438-041-CS	0.438	11.125	0.041	1.04	24	57
E0438-054-CS	0.438	11.125	0.054	1.37	18.5	188
E0500-054-CS	0.500	12.700	0.054	1.37	18.5	120
E0500-072-CS	0.500	12.700	0.072	1.83	14	428
E0562-072-CS	0.562	14.275	0.072	1.83	14	286
E0562-091-CS	0.562	14.275	0.091	2.31	10.5	820
E0625-072-CS	0.625	15.875	0.072	1.83	14	199
E0625-091-CS	0.625	15.875	0.091	2.31	10.5	563
E0750-091-CS	0.750	19.050	0.091	2.31	10.5	300

\*C is the constant for each size of spring.



### Spring Looping Tool

Loops springs from 1/8" (3.175 mm) to 1/2" (12.7 mm) O.D.

Catalog Number H1

Used to make cross over loops on continuous length extension springs up to 1/2" (12.7 mm) outside diameter and up to .062" (1.57 mm) diameter wire. In addition, two forming punches are provided with the tool.

ROUND WIRE EXTENSION SPRINGS - 20" (50 cm) - NO LOOPS - HARD DRAWN						
Catalog Number	Outside Diameter		Wire Diameter		Approx. Number of coils/ inch	C*
	in	mm	in	mm		
E0125-017-CH	0.125	3.175	0.016	0.41	61.5	73
E0125-023-CH	0.125	3.175	0.023	0.58	43.5	379
E0187-023-CH	0.187	4.750	0.023	0.58	43.5	91
E0187-028-CH	0.187	4.750	0.028	0.71	36	220
E0250-028-CH	0.250	6.350	0.028	0.71	36	81
E0250-035-CH	0.250	6.350	0.035	0.89	30	217
E0312-035-CH	0.312	7.925	0.035	0.89	30	101
E0312-047-CH	0.312	7.925	0.047	1.19	21	395
E0375-035-CH	0.375	9.525	0.035	0.89	30	55
E0375-047-CH	0.375	9.525	0.047	1.19	21	208
E0438-035-CH	0.438	11.125	0.035	0.89	30	33
E0438-047-CH	0.438	11.125	0.047	1.19	21	123
E0500-047-CH	0.500	12.700	0.047	1.83	21	79
E0500-072-CH	0.500	12.700	0.072	1.83	14	493
E0562-063-CH	0.562	14.275	0.063	1.60	16	128
E0625-080-CH	0.625	15.875	0.080	2.03	12.5	380
E0750-105-CH	0.750	19.050	0.105	2.67	9.5	651
E0875-105-CH	0.875	22.225	0.105	2.67	9.5	383
E1000-092-CH	1.000	25.400	0.092	2.34	10.5	138
E1000-120-CH	1.000	25.400	0.120	3.05	8.5	446
E1125-135-CH	1.125	28.575	0.135	3.43	8	492

\*C is the constant for each size of spring.

### Assortments/Kits

Each package assortment includes a range of sizes that enables the user to customize the spring to the application. Our spring loop tool assists in making correctly looped ends.

#### Assortment E0125-E0250 (8 items) - includes one piece each of springs:

E0125-017-CH	E0187-023-CH	E0250-028-CH
E0125-023-CH	E0187-028-CH	E0250-035-CH
E0312-035-CH	E0312-047-CH	

#### Assortment E0375-E0625 (8 items) - includes one piece each of springs:

E0375-035-CH	E0438-035-CH	E0500-047-CH
E0375-047-CH	E0438-047-CH	E0500-072-CH
E0562-063-CH	E0625-080-CH	

#### Assortment E0625-E1125 (6 items) - includes one piece each of springs:

E0625-080-CH	E0875-105-CH	E1000-120-CH
E0750-105-CH	E1000-092-CH	E1125-135-CH

#### Assortment E017-E120 (6 items) - includes one piece each of springs:

E0125-017-CH	E0250-035-CH	E0625-080-CH
E0187-023-CH	E0375-047-CH	E1000-120-CH

#### Assortment E023-E105 (6 items) - includes one piece each of springs:

E0125-023-CH	E0250-035-CH	E0375-035-CH
E0187-028-CH	E0750-105-CH	E0500-072-CH

