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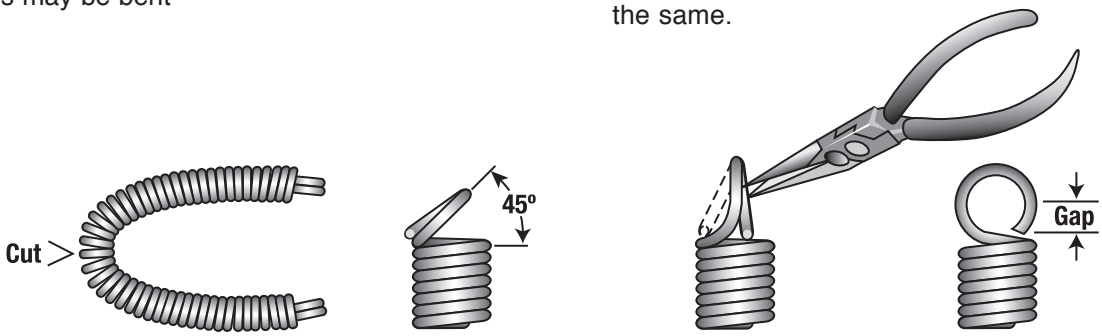
LONG LENGTH EXTENSION SPRINGS

The primary purpose of our 20-inch long stainless and 36-inch long hard-drawn carbon steel spring bodies, found in the following tables, is to offer a means for our customers to create a desired custom length and/or spring extension travel for a given load. Once cut, the end coils may be bent into hooks or loops as depicted below. These springs are offered in unfinished spring wire.

As wire size increases, it is necessary to use different tools including a vise to hold the coil body and a pry bar to bend up the last coil. The technique, however, is the same.



STEP 1
Fold spring 180° at desired length and cut. Cut shorter than needed by one-half the coil body diameter.

STEP 2
Across from cut end, bend last coil up at 45° angle. To form double loop, bend last two coils up 45°. DO NOT USE HEAT.

STEP 3
Twist cut end of loop into center of coil body. May require pliers. May have to twist past center to allow new loop to flex back.

STEP 4
Cut end of newly formed loop to obtain gap, if necessary, for mounting.

Selecting a Long Length Extension Spring:

The spring-rate constant (lbs./in.) can be determined for any cut length by simply dividing the final coil body length, in inches, into the appropriate rate-Inch value listed for the spring body.

The spring rate is merely the pounds it takes to extend the spring each inch, i.e., if the rate = 5 lbs. per inch, it would take 5 pounds to extend it one inch and 10 pounds to extend it 2 inches, etc.. Each spring has an initial tension force (pounds) that must be overcome before stretching commences. The initial tension is the minimum force required to separate adjacent coils.

LONG LENGTH EXTENSION SPRINGS
STAINLESS STEEL (302) 20 INCH LENGTHS

CENTURY STOCK NUMBER	O.D.		WIRE DIA.		APPROX. INIT. TENSION		RATE-INCH		SUGG. MAX. LOAD	
	Inches	mm	Inches	mm	Lbs.	N	Lbs.	N	Lbs.	N
SS2-13	0.125	3.18	0.013	0.33	.1	.44	.32	1.4	.72	3.20
SS2-15	0.125	3.18	0.015	0.38	.2	.89	.72	3.2	1.1	4.89
SS2-17	0.125	3.18	0.017	0.43	.3	1.33	1.4	6.2	1.5	6.67
SS2-20	0.125	3.18	0.020	0.51	.5	2.22	3.5	16	2.4	10.68
SS3-15	0.187	4.75	0.015	0.38	.1	.44	.18	.80	.74	3.29
SS3-17	0.187	4.75	0.017	0.43	.2	.89	.36	1.6	1.0	4.45
SS3-20	0.187	4.75	0.020	0.51	.3	1.33	.86	3.8	1.7	7.56
SS3-26	0.187	4.75	0.026	0.66	.7	3.11	3.5	16	3.5	15.57
SS4-15	0.250	6.35	0.015	0.38	.02	.09	.07	.31	.55	2.45
SS4-17	0.250	6.35	0.017	0.43	.1	.44	.14	.62	.80	3.56
SS4-20	0.250	6.35	0.020	0.51	.2	.89	.32	1.4	1.3	5.78
SS4-26	0.250	6.35	0.026	0.66	.4	1.78	1.2	5.3	2.7	12.01
SS4-32	0.250	6.35	0.032	0.81	1.0	4.45	4.1	18	4.8	21.35
SS5-20	0.312	7.92	0.020	0.51	.05	.22	.16	.71	1.0	4.45
SS5-26	0.312	7.92	0.026	0.66	.3	1.33	.62	2.8	2.2	9.79
SS5-32	0.312	7.92	0.032	0.81	.6	2.67	1.9	8.5	3.9	17.35
SS5-41	0.312	7.92	0.041	1.04	2.0	8.90	7.2	32	7.8	34.69
SS6-32	0.375	9.53	0.032	0.81	.4	1.78	1.0	4.4	3.3	14.68
SS6-41	0.375	9.53	0.041	1.04	1.	4.45	3.9	17.3	6.6	29.4
SS6-54	0.375	9.53	0.054	1.37	4.	17.79	17	76	14.0	62.27
SS7-41	0.438	11.13	0.041	1.04	1.	4.45	2.3	10.2	5.7	25.35
SS7-54	0.438	11.13	0.054	1.37	3.	13.34	10	44	12.0	53.38
SS8-54	0.500	12.70	0.054	1.37	2.	8.90	6.5	29	10.5	46.70
SS8-72	0.500	12.70	0.072	1.83	6.	26.69	29	129	24.0	106.75
SS9-54	0.562	14.27	0.054	1.37	1.5	6.67	4.4	20	9.6	42.70
SS9-72	0.562	14.27	0.072	1.83	5.	22.24	19	85	21.0	93.41
SS9-91	0.562	14.27	0.091	2.31	12.	53.38	68	302	40.0	177.92
SS10-72	0.625	15.88	0.072	1.83	4.	17.79	14	62	19.0	84.51
SS10-91	0.625	15.88	0.091	2.31	10.	44.48	51	227	36.0	160.13
SS12-91	0.750	19.05	0.091	2.31	8.	35.58	27	120	30.0	133.44