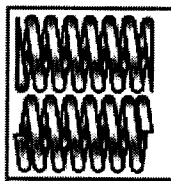
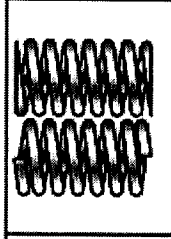
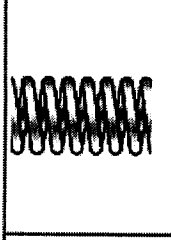

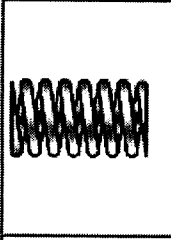
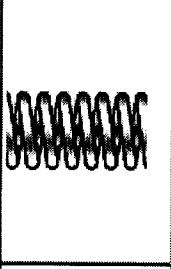
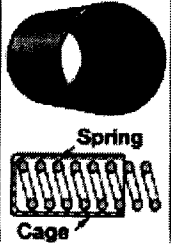


Compression Springs

1294 products match your specifications. Click a specification to narrow your search to only the products that match. Also, you may view the [catalog pages](#) on which these items appear.

	<p>Compression Springs: Standard compression springs in a wide variety of sizes, materials and end types.</p>
	<p>Precision Compression Springs: Use where meeting exact tolerances is critical. Springs are made to strict outside diameter and spring rate tolerances, are stress-relieved through heat treatment, and are load tested. Music Wire Springs meet ASTM B-633. Type 302 Stainless Steel Springs have a passivated finish to help prevent rusting and meet Federal Specification QQ-P35. Metric High-Carbon Steel Springs meet DIN 17223, Class C, 1.1200. Metric Stainless Steel Springs meet DIN 18224 per 1.431.</p>
	<p>Continuous-Length Compression Springs: For manufacturing, utility, and maintenance jobs. Cut to the length that matches your load requirements. Ends are open. The spring constant is used to calculate spring rate in pounds per inch, or to determine well how many coils are needed to generate a particular load rate. $Constant / \text{Number of Coils} = \text{Rate (in lbs./inch)}$. To cut springs up to 3/8" OD, use a hand-held nipper. For larger ODs use an abrasive cutoff saw.</p>
	<p>Conical Compression Springs: Cone-shaped Type 302 Stainless Steel springs allow the coils to nest within each other when deflected, providing a nearly constant rate and a solid height smaller than a normal compression spring. Ends are closed.</p>
	<p>Die Springs: Die springs provide a maximum load rate with minimal deflection. They are compression springs used in die applications, heavy duty press operations, stripper plates, pressure rods, and knockout presses. They're designed to fit into standard hole diameters and rod sizes and are available in a number of materials. A general rule in die spring selection is to use as many springs as the die will accommodate to produce the required load with the least amount of deflection.</p>
	<p>Continuous-Length Die Springs: At 36" long, these die springs are able to handle toolmaking requirements for long stock and can also be cut to size. Ends are open. The spring constant is used to calculate spring rate in pounds per inch, or to determine well how many coils are needed to generate a particular load rate. $Constant / \text{Number of Coils} = \text{Rate (in lbs./inch)}$. To cut springs, use a cutoff saw. These are constructed from Oil-Tempered Steel, a cold-drawn and heat-treated high-carbon steel for general purpose applications. ASTM rating: A229. Maximum temperature: 250° F.</p>
 <p>Spring Cage</p>	<p>Die Spring Cages: Protect dies from damage caused by spring failure. Cages retain spring fragments and make it easy to remove them. Made of case-hardened, cold-rolled steel. Cage length should be as close as possible to the distance travelled by the die.</p>

Compression Springs

For information about wire materials, see page 3299.

About Compression Springs

A compression spring offers resistance to a load or force applied along its length.

Pitch—The distance from center to center of the wire in adjacent active coils.

Load—The force applied to a spring that causes deflection.

Compressed Length/Solid Length—Length of compression spring when under sufficient load to bring all coils into contact with adjacent coils.

Open Ends—Each coil has a constant pitch, including the end coils.

Closed Ends—The most commonly used. End coils are bent so they touch, reducing the tendency for springs to tangle during shipment and storage.

Closed and Ground Ends—Like the closed ends, except ends are ground to provide a flat plane so they can stand on end.

Deflection @ Load—Total travel of spring from free length to solid length.

Rate lbs./Inch—A change in load per unit deflection, generally given in lbs./inch.

Constant—Constant divided by the number of coils/inch equals load rate lbs./in.

Note: Spring Inside Dia. = Spring Outside Dia. - (2x Wire Dia.)

Steel Springs

Spring OD	Wire Dia.	Load, lbs.	Defl. @ Load	Rate, lbs./inch	Compressed Lg.	Pkg. Qty.	Per Pkg.
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Music Wire

Open Ends

15/16" Overall Length							
1/16"	0.012"	0.12	0.56"	0.32	0.24"	12	9657K81 \$3.79
1 1/4" Overall Length							
9/32"	0.040"	3.37	1.06"	18.00	0.64"	12	9657K83 5.68
10" Overall Length							
1 1/64"	0.014"	0.75	5.00"	0.15	1.98"	12	9657K79 10.50

Closed Ends

1" Overall Length							
5/32"	0.016"	1.25	0.51"	2.40	0.28"	12	9657K59 5.22
3/16"	0.028"	5.87	0.20"	30.00	0.48"	12	9657K63 5.22
3/16"	0.012"	0.38	0.82"	0.46	0.18"	12	9657K43 5.22
3/16"	0.014"	0.58	0.78"	0.74	0.24"	12	9657K46 5.22
3/16"	0.020"	1.97	0.58"	3.40	0.34"	12	9657K49 5.22
3/16"	0.023"	2.91	0.35"	8.20	0.33"	12	9657K53 5.22
3/16"	0.028"	5.01	0.30"	16.90	0.45"	12	9657K56 5.22
7/32"	0.016"	0.81	0.81"	1.00	0.23"	12	9657K66 5.22
7/32"	0.018"	1.22	0.72"	1.70	0.26"	12	9657K69 5.22
7/32"	0.023"	2.52	0.51"	4.90	0.33"	12	9657K73 5.22
7/32"	0.028"	4.36	0.42"	10.30	0.42"	12	9657K76 5.22
1/4"	0.020"	1.23	0.72"	1.70	0.28"	12	9657K39 5.22

1 3/4" Overall Length

5/32"	0.016"	1.25	0.74"	1.70	0.37"	12	9657K61 5.22
5/32"	0.028"	5.87	0.28"	21.00	0.65"	12	9657K64 5.22
3/16"	0.012"	0.37	1.12"	0.33	0.24"	12	9657K44 5.22
3/16"	0.014"	0.58	1.07"	0.54	0.31"	12	9657K47 5.22
3/16"	0.020"	1.97	0.82"	2.40	0.46"	12	9657K51 5.22
3/16"	0.023"	2.91	0.54"	5.40	0.44"	12	9657K54 5.22
3/16"	0.028"	5.01	0.50"	10.00	0.70"	12	9657K57 5.22
7/32"	0.016"	0.81	1.11"	0.73	0.29"	12	9657K67 5.22
7/32"	0.018"	1.22	1.02"	1.20	0.35"	12	9657K71 5.22
7/32"	0.023"	2.52	0.70"	3.60	0.42"	12	9657K74 5.22
7/32"	0.028"	4.36	0.60"	7.30	0.56"	12	9657K77 5.22
1/4"	0.020"	1.23	0.95"	1.30	0.36"	12	9657K41 5.22

1 3/4" Overall Length

5/32"	0.016"	1.25	0.89"	1.40	0.44"	12	9657K62 5.22
5/32"	0.028"	5.87	0.36"	16.20	0.82"	12	9657K65 5.22
3/16"	0.012"	0.44	1.56"	0.29	0.27"	12	9657K45 5.22
3/16"	0.014"	0.58	1.35"	0.43	0.41"	12	9657K48 5.22
3/16"	0.020"	1.97	0.94"	2.10	0.52"	12	9657K52 5.22
3/16"	0.023"	2.91	0.81"	3.60	0.65"	12	9657K55 5.22
3/16"	0.028"	5.01	0.57"	8.80	0.79"	12	9657K58 5.22
7/32"	0.016"	0.81	1.35"	0.60	0.36"	12	9657K68 5.22
7/32"	0.018"	0.99	1.25"	0.79	0.49"	12	9657K72 5.22
7/32"	0.023"	2.52	0.90"	2.80	0.51"	12	9657K75 5.22
7/32"	0.028"	4.36	0.71"	6.10	0.68"	12	9657K78 5.22
1/4"	0.020"	1.14	1.27"	0.90	0.48"	12	9657K42 5.22

1 3/4" Overall Length

5/16"	0.022"	0.49	1.22"	0.65	0.51"	12	9657K84 5.68
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Closed and Ground Ends

2" Overall Length							
7/8"	0.120"	55.00	1.50"	110.00	1.00"	12	9657K99 13.96
2 1/2" Overall Length							
1 5/16"	0.080"	20.00	0.78"	16.00	0.69"	12	9657K101 10.50

Zinc-Plated Music Wire

Closed Ends

1 1/4" Overall Length							
1/4"	0.023"	2.22	0.77"	2.90	0.35"	12	9657K112 3.88
1 3/8" Overall Length							
9/32"	0.028"	2.95	0.68"	4.40	0.42"	12	9657K108 3.88
5/16"	0.031"	3.55	0.59"	6.00	0.41"	12	9657K35 5.28
1 1/2" Overall Length							
5/16"	0.023"	1.21	1.09"	1.10	0.42"	12	9657K107 3.88
3/8"	0.025"	1.22	1.12"	1.10	0.38"	12	9657K33 5.28
3/8"	0.028"	2.23	1.11"	2.00	0.38"	12	9657K135 3.88
2 1/2" Overall Length							
1/4"	0.028"	3.84	1.33"	2.80	0.87"	12	9657K171 3.88

Spring OD	Wire Dia.	Load, lbs.	Defl. @ Load	Rate, lbs./inch	Compressed Lg.	Pkg. Qty.	Per Pkg.
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Hard-Drawn Steel

Open Ends

10" Overall Length							
1/4"	0.022"	1.30	5.00"	0.26	2.49"	12	9657K82 \$8.53

Closed Ends

2" Overall Length							
3/16"	0.035"	7.00	0.50"	5.50	1.40"	6	9657K233 8.55
1/4"	0.041"	20.00	1.12"	20.00	1.03"	6	9657K231 8.55
7/8"	0.120"	55.00	1.50"	110.00	1.00"	12	9657K99 13.96
2 5/8" Overall Length							
1 9/32"	0.040"	2.66	1.44"	3.55	0.38"	12	9657K92 5.68
2 1/2" Overall Length							
5/16"	0.047"	16.00	1.08"	15.00	1.32"	6	9657K227 8.55

3" Overall Length

5/16"	0.035"	5.00	1.74"	3.00	1.19"	6	9657K232 8.55
5/16"	0.041"	15.00	1.89"	8.00	1.11"	6	9657K229 8.55
3/8"	0.054"	22.00	1.38"	16.00	1.51"	6	9657K225 8.55
9/16"	0.080"	39.00	1.32"	30.00	1.52"	6	9657K217 9.75
3 1/2" Overall Length							
3/8"	0.041"	3.00	1.00"	3.00	1.68"	6	9657K228 9.15
7/16"	0.047"	4.00	1.48"	3.00	1.93"	6	9657K226 9.15
7/16"	0.054"	13.00	1.77"	8.00	1.62"	6	9657K224 9.15
7/16"	0.072"	48.00	1.56"	32.00	1.80"	6	9657K219 9.15

4" Overall Length

1/2"	0.054"	16.00	2.75"	6.00	1.46"	6	9657K223 9.15
1/2"	0.063"	16.00	1.79"	9.00	2.08"	6	9657K222 9.15
5/8"	0.080"	26.00	1.76"	15.00	2.08"	6	9657K216 10.80
5/8"	0.105"	97.00	1.58"	65.00	2.21"	6	9657K214 10.80
4 1/2" Overall Length							
1/2"	0.072"	38.00	2.16"	18.00	2.30"	6	9657K218 9.75
9/16"	0.063"	11.00	2.16"	5.00	2.33"	6	9657K221 9.75

5" Overall Length

3/4"	0.091"	39.00	2.64"	15.00	2.18"	6	9657K215 10.80
3/4"	0.105"	61.00	2.27"	28.00	2.73"	6	9657K213 11.25

6" Overall Length

7/8"	0.105"	35.00	2.50"	14.00	3.26"	6	9657K212 11.25
7/8"	0.120"	80.00	3.24"	25.00	3.48"	6	9657K211 12.15

Closed and Ground Ends

1 3/4" Overall Length							
3/4"	0.125"	110.00	1.25"	220.00	1.06"	6	9657K96 15.00
2 5/8" Overall Length							
1 1/8"	0.048"	0.52	1.90"	7.20	1.00"	12	9657K88 9.30
3 1/8" Overall Length							
7/8"	0.092"	16.13	2.31"	21.50	1.10"	12	9657K98 13.20

Zinc-Plated Hard-Drawn Steel

Closed Ends

7/8" Overall Length							
7/8"	0.091"	21.48	0.24"	90.90	0.46"	12	9657K132 4.59
1" Overall Length							
1/4"	0.029"	3.59	0.38"	9.58	0.32"	12	9657K149 5.22
5/16"	0.029"	2.91	0.50"	5.80	0.27"	12	9657K152 5.95
5/16"	0.035"	5.01	0.37"	13.58	0.32"	12	9657K154 6.40
1 1/32"	0.041"	5.70	0.31"	18.40	0.46"	12	9657K105 3.88

1 1/4" Overall Length

3/16"	0.023"	2.55	0.50"	5.09	0.46"	12	9657K147 4.74
5/16"	0.041"	6.22	0.32"	19.40	0.54"	12	9657K106 3.88
3/8"	0.035"	4.22	0.81"	5.22	0.43"	12	9657K155 6.55
1 1/16"	0.091"	26.86	0.26"	103.00	0.64"	12	9657K133 4.59
1 3/8" Overall Length							
9/16"	0.072"	17.00	0.31"	54.40	0.65"	12	9657K134 4.59
1 1/2" Overall Length							
5/16"	0.035"	4.02	0.51"	7.80	0.56"	12	9657K111 3.88
1 1/32"	0.047"	8.30	0.37"	27.00	0.62"	12	9657K109 3.88
3/8"	0.048"	9.96	0.49"	20.33	0.58"	12	9657K156 7.60

1 5/8" Overall Length

5/16"	0.041"	6.22	0.40"	15.70	0.66"	12	9657K38 5.28
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