

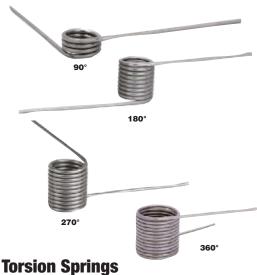
Precision Compression Springs

Manufactured to tighter load and dimensional tolerances.

Note: Additional sizes are available; on Grainger.com, search for "precision compression springs."

Type 302 Stainless Steel—Springs offer better corrosion resistance and perform well at up to 500°F. Meet ASTM A313 standards.

Length	Outside Dia. ainless St	Dia.	Compressed Length	Load (lb.)	Item No.	Pkg. Qty.	Overall Length	Outside Dia. arbon Ste	Dia.	Compressed Length c Wire	Load (lb.)	Item No.	Pkg. Qty.
1/4 in	0.12 in	0.016 in	0.114 in	1.6 lb	1NCG3	5	1/4 in	0.12 in	0.016 in	0.114 in	1.93 lb	1NBX9	5
3/8 in	0.12 in 0.24 in	0.022 in	0.111 in	2 lb	1NCG3 1NCG4	5	3⁄8 in	0.12 in (0.24 in (0.022 in	0.111 in	2.4 lb	1NBY1	5
	0.12 in	0.016 in	0.205 in	1.56 lb	1NCG5	<u>5</u>	-	0.12 in (0.016 in	0.205 in	1.87 lb	1NBY2	5
	0.12 in 0.18 in	0.022 II	0.309 in 0.132 in	3.62 lb 1.46 lb	1NCG7	5	-	0.12 in (0.18 in ().022 III) 018 in	0.309 in 0.132 in	4.34 lb 1.75 lb	1NBY3 1NBY4	5
½ in	0.3 in	0.022 in	0.106 in	1.57 lb	1NCG8	- 5	½ in -	0.3 in	0.022 in	0.106 in	1.89 lb	1NBY5	5
	0.36 in 0.48 in	0.032 in	0.145 in 0.192 in	3.75 lb 7.58 lb	1NCG9	5		0.36 in (0.022 in 0.032 in 0.045 in	0.145 in 0.192 in	4.5 lb 9.1 lb	1NBY6	5
	0.48 in 0.18 in	0.045 in	0.192 in 0.274 in	4.02 lb	1NCH1	5 5		0.48 in ().045 in).026 in	0.192 in 0.274 in	9.1 lb 4.83 lb	1NBY7 1NBY8	5
9∕16 in	0.24 in			1.93 lb	1NCH3	5	%16 in -	0.24 in (0.24 in (0.24 in (0.3 in (0.020 in	0.274 in		1NBY9	5
5/8 in	∩ 24 in	0 026 in	0 203 in	1.93 lb 3.12 lb	1NCH4	5	5% in -	0.24 in (0.026 in	0.203 in 0.273 in 0.128 in 0.241 in	3.75 lb	1NBZ1	5
70 111	0.24 in 0.3 in 0.3 in	0.032 in	0.273 in 0.128 in 0.241 in	5.6 lb	1NCH5	5	70 111	0.24 in (0.032 in	0.273 in	6.72 lb	1NBZ2	5
11/ ₁₆ in	0.3 in 0.3 in	0.022 If 0.032 in	0.128 III 0.1241 in	1.57 lb 4.93 lb	1NCH5	<u>5</u>	11/ ₁₆ in -	0.3 In (J.UZZ IN 1 032 in	0.128 III 0.241 in	5.92 lb	1NBZ3 1NBZ4	5
				1 92 lh	1NCH8	5		0.12 in (0.016 in	0.318 in	2.3 lb	1NBZ5	5
	0.12 in	0.018 in	0.351 in	2.12 lb	1NCH9	5		0.12 in (0.018 in	0.351 in	2.55 lb	1NBZ6	5
	0.18 in 0.24 in	0.01011	U. I / / III	1.06 lb 8.81 lb	1NCJ1	5 5	-	0.18 in (J.016 in	0.177 in 0.39 in	1.28 lb	1NBZ7	5
3/4 in	0.36 in	0.026 in	∩ 138 in	2.01 lb	1NCJ2	5	- 3∕4 in −	0.36 in 1	0.036 in	0.39 iii	10.58 lb 2.52 lh	1NBZ0	5
	0.36 in 0.6 in	0.072 in	0.138 in 0.397 in 0.221 in	2.1 lb 22.09 lb	1NCJ4	5	_	0.6 in	0.026 in 0.072 in 0.055 in	0.138 in 0.397 in 0.221 in	2.52 lb 26.52 lb	1NCA1	5 1
	0.72 in	0.055 in	0.221 in	8.81 lb	1NCJ5	5	_	0.72 in (0.055 in	0.221 in	10.58 lb	1NCA2	5
	0.6 in 0.72 in 0.72 in 0.72 in	0.063 In	0.284 in 0.51 in	12.92 lb 3.75 lb	1NC 17	5 5		0.6 in (0.72 in (0.72 in (0.12 in (0.063 in 0.022 in	0.284 in 0.51 in	15.51 lb 4.5 lb	1NCA4	5
	0.24 in	0.022 in	0.199 in	1.96 lb	1NCJ8	5	-	0.24 in (0.022 in	0.199 in	2.35 lb	1NCA5	5 l:
40.4	0.24 in	0.042 in	0.505 in	11.5 lb	1NCJ9	5		0.24 in (0.042 in	0.505 in	13.8 lb	1NCA6	5
¹³ ⁄ ₁₆ in	0.3 in 0.36 in	0.045 in	0.417 in	11.9 lb 6.17 lb 8.16 lb	1NCK1	5 5	13/16 in	0.3 in (0.045 in 0.038 in	0.417 in 0.201 in	14.28 lb	1NCA7	5
	0.36 in	0.036 ii	0.201 in 0.306 in	8 16 lb	1NCK2	5	-	0.36 in (1.036 III 1.042 in	0.201 iii	7.41 lb 9.8 lb	1NCA9	5
	0.36 in 0.36 in	0.045 in	0.306 in 0.339 in	9.86 lb	1NCK4	5	-	0.36 in (0.042 in 0.045 in	0.339 in	11.84 lb	1NCB1	<u>5</u> 5
	0.18 in	0.026 in	0.391 in	4.12 lb	1NCK5	5	_	0.18 in (0.026 in	0.391 in	4.95 lb		5
	0.24 in 0.3 in	0.026 in 0.022 in	0.287 in 0.166 in	3.13 lb 1.57 lb	1NCK5	5	-	0.24 in (0.3 in (J.U26 IN 1 022 in	0.287 in 0.166 in	3.76 lb 1.89 lb	1NCB3	5
	0.36 in	0.032 in	∩ 200 in	3.83 lb	1NCK8	5	5 5 5 5 7/8 in 5 5 5 5	0.36 in (0.032 in	0 209 in	4 6 lb	1NCR5	5
	0.42 in 0.48 in	0.047 in	0.33 in	9.56 lb 4.64 lb	1NCK9 1NCL1	5		0.42 in (0.48 in (0.047 in 0.038 in	0.33 in	11.48 lb	1NCB6	5
7∕8 in	0.48 in 0.48 in	0.038 in	0.21 in	4.64 lb 7.44 lb	1NCL1 1NCL2	5		0.48 in (0.038 in 0.045 in	0.21 in	11.48 lb 5.57 lb 8.93 lb	1NCB7	5
	0.48 in	0.045 in	0.271111 0.373 in	6.65 lb	1NCL3	5		0.48 in (0.045 in	0.27 T III	15 58 lb	1NCB9	5
	0.48 in	0.063 in	0.457 in	18.95 lb	1NCL4	5		0.48 in (0.063 in		15.58 lb 22.75 lb	1NCC1	5
	0.6 in	0.045 in		6 lb	1NCL5	5		0.6 in (0.045 in		7.2 lb	1NCC2	5
	0.6 III 0.72 in 0.18 in 0.24 in 0.24 in 0.24 in	0.072 in	0.361 in 0.601 in	18.79 lb 7.01 lb	1NCL5	<u>5</u>		0.72 in (0.18 in (0.24 in ().072 in 1 032 in	0.361 in 0.601 in	22.56 lb	1NCC4	5 5 5
1 in	0.24 in	0.032 in	0.425 in	5 6 lb	1NCI 8	5	1 in -	0.24 in (0.032 in	0.425 in	12.18 lb 6.72 lb 10.71 lb 13.95 lb	1NCC5	5
1 ½ in	0.24 in	0.038 in	0.425 in 0.772 in 0.905 in	8.92 lb 11.62 lb	1NCN7	5	1 ½ in -	0.24 in (0.038 in	0.425 in 0.772 in 0.905 in	10.71 lb	1NCD4	5
	0.24 in 0.3 in	0.042 in 0.026 in	0.905 in 0.229 in	11.62 lb 2.54 lb	1NCN8	5		0.24 in 0	0.042 in 0.026 in	0.905 in 0.229 in	3.05 lb	1NCD5	5
1 in		0.020 in	0.223 in	4.5 lb	1NCN1	5	1 in -	0.3 in (0.020 in	0.337 in		1NCC7	5
	0.3 in	0.038 in	0.571 in	7.31 lb	1NCN9	5		0.3 in (0.038 in	0.571 in	8.78 lb	1NCD6	5
1 ½ in	0.3 in	0.042 in	ı 0.673 in	9.5 lb	1NCP1	5	1 ½ in	0.3 in (0.042 in	0.673 in	11.4 lb	1NCD7	5
1 1/8 in	0.3 in 0.36 in	0.045 in 0.026 in	0.743 in 0.19 in	11.7 lb 2.13 lb	1NCP2 1NCN2	<u>5</u>	1 1/8 in	0.3 In (0.045 in 0.026 in	0.743 in 0.19 in	14.04 lb 2.56 lb	1NCC8	5
1 70 111	0.36 in	0.032 in	0.338 in	3.8 lb	1NCP3	5	1 70 111	0.36 in (0.032 in	0.338 in	4.57 lb	1NCD9	5
	0.36 in	0.038 in	0.477 in	6 15 lb	1NCP4	5		0.36 in (0.038 in	0.477 in	7.38 lb 9.72 lb	1NCE1	5
	0.36 in 0.36 in	0.045 in	0.586 in	8.09 lb 9.75 lb		5		0.36 in (0.042 in	0.527 in 0.586 in	9.72 lb 11.7 lb	1NCE2 1NCE3	5
1 ½ in	0.42 in 0.42 in 0.42 in 0.48 in 0.48 in	0.043 ir	0.381 in	5.31 lb		5	5 5 5 5 1½ in	0.42 in (0.043 in	0.381 in	6.37 lh	1NCF4	5
	0.42 in	0.042 in	0.442 in	7 lb	1NCP8			0.42 in (0.42 in (0.42 in (0.48 in (0.042 in	0.381 in 0.442 in	8.4 lb 17.92 lb	1NCE5	5 5 5
	0.42 in	0.055 in	0.661 in	14.93 lb	1NCP9	5		0.42 in (0.055 in	0.661 in	17.92 lb	1NCE6	
	0.48 III 0.48 in	0.038 If	0.315 in 0.379 in	4.65 lb 6.16 lb	1NCR2	5		0.48 in 0).038 in).042 in	0.315 in 0.379 in	5.58 lb 7.4 lb	1NCE7 1NCE8	5
	U.48 III	U.U45 II	U.4U4 III	7.42 lb	1NCR3	5	-	0.48 in (0.404 in	8.91 lb	1NCE9	5
	0.48 in			13.19 lb	1NCR4	5	5 5 5	0.48 in (0.055 in	0.565 in	15.84 lb	1NCF1	5
	0.48 in 0.6 in	0.063 in 0.045 in		19.11 lb 6.01 lb	1NCR5	5		0.48 in 0.6 in 0	0.063 in 0.045 in	0.694 in 0.35 in	22.94 lb	1NCF2	5
	0.6 in	0.055 in	0.427 in	10.62 lb	1NCR7	5		0.6 in (0.045 in	0.427 in	7.22 lb 12.75 lb 18.48 lb	1NCF4	5
	0.6 in 0.6 in	0.055 in 0.063 in 0.067 in	0.427 in 0.552 in 0.705 in	10.62 lb 15.39 lb	1NCR8	5		0.6 in (0.055 in 0.063 in	0.427 in 0.552 in 0.705 in	18.48 lb	1NCF5	5 5
1 ¾ in	0.6 in	0.067 in	0.705 in	18.19 lb 25.49 lb	1NCR9	5	1 ¾ in	0.6 in (0.067 in 0.072 in 0.055 in	0.705 in 0.596 in	21.84 lb	1NCF6	5 L
	0.6 in 0.72 in	0.072 lf 0.055 in	0.596 in 1 0.304 in		1NCN3	5		0.6 in 0 0.72 in 0).072 IN).055 in	0.596 in 0.304 in	30.6 lb 10.08 lb	1NCD1	5
1 1/4 in				12 98 lh	1NCN5	5	1 ¼ in -	0.72 in (າ 063 in	∩ 441 in	15 58 lh	1NCD2	5 1.
	0.72 in	0.072 in	0.47 in	18.97 lb	1NCN6	5		0.72 in 1	1 072 in	0.47 in	22.77 lb	1NCD3	5
	0.6 IN	0.072 In	0.939 IN 1	22.31 lb 8 02 lb	INCT2	5	-	0.72 in (0.6 in (0.72 in (J.U/2 IN 1 055 in	0.939 in 0.421 in	20./8 lb	INCF2	5
2 in	0.72 in	0.063 in	0.939 in 1 0.421 in 0.616 in	18.97 lb 22.31 lb 8.92 lb 13.01 lb	1NCT3	5	2 in	0.72 in (0.063 in	0.421 III 0.616 in	22.77 lb 26.78 lb 10.71 lb 15.62 lb	1NCF9	5
	0.72 in 0.6 in 0.72 in 0.72 in 0.72 in	0.067 in	0.606 in	18.U8 ID	INC14	5		0.72 in (0.72 in (0.72 in (0.72 in (0.72 in (0.067 in	0.606 in	21.7 ID	INGGI	5
	0.72 in	u.072 in	0.686 in	18.83 lb	1NCT5	5	3 in (0.72 in (0.7188 in (J.U/2 in	0.686 in 1.116 in	22.6 lb 42.6 lb	1NCG2	5
							J III U	J.1 100 III	III Coo.u	1.110 111	72.0 IU	0011170	<u>, , , , , , , , , , , , , , , , , , , </u>



With straight legs and ends.

Note: Additional sizes are available; on Grainger.com, search for "torsion springs."

									302 CT	AINLESS
									ST	EEL
-					0		Torque		RIGHT-	LEFT-
				Max. Rod	Spring Length	No.	@ ½ Le Length		WOUND	HAND WOUND
	Outside	Wire	Leg	Outside	@	of	(in	Pkg	. Item	Item
-	Dia.	Dia.	Length	Dia.	Torque	Coils	lb.)*	Qty.	No.	No.
	90° Angle 0.776 in (0.453 in	1.5 in	2 25	16.0	1	3HPR6	3HPP3
	0.776 in 0			0.455 in	1.75 in	3.25 3.25	20 97	+	3HPR7	3HPP4
_	0.989 in ().125 in	1 4 in	0.591 in	2 in	4.25	32.0	1	3HPR9	3HPP6
-	1.102 in (0.135 in	4 in	0.666 in	2 in	4.25	40.0	1	3HPT2	3HPP8
-	180° Ang 0.982 in 0	105 in	etlectio	n 0.609 in	1.75 in	7.0	21.0	1	3HPT1	3HPP7
	1.082 in (0.666 in		9.0	32.0	+	3HPT3	3HPP9
_	1.189 in ().135 in	1 4 in	0.735 in	2 in 2 in	9.0	40.0	1	3HPT4	3HPR1
-	1.356 in (0.125 in	4 in	0.885 in	2 in	7.0	32.0	1	3HPT5	3HPR2
	360° Ang 0.798 in (1 e ot b i 1 063 in	enectio 1 2 in	n 0.516 in	1 in	10.5	5.15	1	3HPR8	3HPP5
	1.755 in (1.188 in	2 in	12.5	40.0	Ť	3HPR5	
_									RIGHT-	LEFT-
-									HAND	HAND
							Torque		WOUND Carbon	WOUND CARBON
							Torque @ ½		STEEL	STEEL
-				Max.	Spring		Leg		MUSIC	MUSIC
-				Rod	Length		Length	ь.	WIRE	WIRE
	Outside Dia.	Wire Dia.	Leg Length	Outside Dia.	@ Torque	No. of Coils	(In lb.)*	Pkg. Qty.	Item No.	Item No.
_	90° Angle			Dia.	Torque	00113	10.7	uty.	140.	140.
-	0.16 in 0				0.25 in	3.25	0.125	6	3HPC3	3HPF8
	0.235 in 0				0.375 in	3.25	0.402	6	3HPC4	3HPF9
	0.281 in (0.288 in 0		1 in	0.172 in	0.5 in	3.25	0.67 0.879	6	3HPC5 3HPC6	3HPG1 3HPG2
-	0.309 in (0.04 in	1.25 in	0.172 in 0.187 in	0.625 in	4.25	1.473	6	3HPC8	3HPG4
-	0.315 in 0	.035 in	1.25 in	0.187 in	0.625 in	3.25	1.071	6	3HPC7	3HPG3
	0.357 in 0 0.375 in 0	.045 in	1.25 in	0.203 in	0.625 in	4.25 4.25	2.143	6	3HPC9 3HPD1	3HPG5 3HPG6
	0.408 in 0			0.234 in	1.0 in	4.25	3.107	6	3HPD2	3HF UU
-	0.408 in 0	.051 in	2 in	0.234 in	1 in	3 25	3.107	6	_	3HPG7
-	0.484 in 0		2 in	0.296 in	1 in	3.25	3.509	6	3HPD3	3HPG8
	0.499 in 0 0.56 in 0		2 in	0.296 in 0.343 in	1 in 1 in	4.25	4.5 5.518	6	3HPD4 3HPD5	3HPG9 3HPH1
_	0.50 iii 0	.078 in	2 in 2 in	0.406 in	1 in	4.25 4.25	10.446	6	3HPD6	3HPH2
-	0.776 in 0	.095 in	3 in	0.453 in	1.5 in	3.25	17.14	1	3HPL9	3HPK6
	0.848 in 0 0.989 in 0		3.5 in	0.5 in 0.591 in	1.75 in 2 in	3.25 4.25	22.47 34.29	1	3HPN1 3HPN3	3HPK7 3HPK9
	1.102 in 0			0.666 in	2 in	4.25	42.86	1	3HPN5	3HPL2
-	180° Ang 0.133 in 0	le of D	eflectio	n						
-	0.133 in 0	.014 in	0.5 in	0.078 in	0.25 in	6.0	0.075	6	3HPD8	3HPH4
	0.224 in 0 0.249 in 0		0.75 in 1 in	0.14 in 0.14 in	0.375 in 0.5 in	7.0	0.402 0.552	6	3HPE3 3HPE4	3HPH8 3HPH9
_	0.404 in 0		1.25 in	0.14 in	0.625 in	8.0	2.679	6	3HPE6	3HPJ2
-	0.767 in 0		2 in	0.5 in	1 in	6.0	5.518	6	3HPE8	3HPJ4
	0.803 in 0	.078 in	2 in 3.5 in	0.5 in 0.609 in	1 in 1.75 in	7.0	10.446	6	3HPE9 3HPN4	3HPJ5 3HPL1
	0.982 in 0 1.082 in 0			0.666 in	2 in	7.0	22.5 34.28	1	3HPN4 3HPN6	3HPL1
_	1.189 in 0		4 in	0.735 in	2 in	9.0	42.86 34.29	1	3HPN7	3HPL4
-	1.356 in 0	.125 in	4 in	0.885 in	2 in	7.0	34.29	1	3HPN8	3HPL5
	270° Ang				1 in	7 7F	2 142	6	SUDEE	2UDV4
	0.556 in 0 0.826 in 0	.045 IN).()7 in	2 in	0.359 in 0.531 in	1 in 1 in	7.75 8.75	2.143 7.5	6	3HPF5 3HPF6	3HPK1 3HPK2
-	1.342 in 0	.105 in	3.5 in	0.891 in	1.75 in	7.75	22.5	1	3HPN9	3HPL6
	1.666 in 0		4 in	1.112 in	2 in	9.75	42.86	1	3HPL7	3HPK4
	360° Ang 0.271 in 0	ne of Do	eflectio 1 in	n 0.187 in	0.5 in	9.5	0.234	6	3HPF7	3НРК3
	0.271 III 0 0.798 in 0			0.167 III 0.516 in	1 in	10.5	5.52	1	3HPN2	3HPK8
-				th is a re			0.02			
-	Julyan	J . 2 E C	. J _ong	10	. 5. 51100.					