

MOTION DYNAMICS CORP.

SPRING DESIGN REPORT (for reference only)

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KEVAN PROTOTYPE

OPEN SOURCE INSTR.

Compression	Cylind	CENG	Stainless 316	Round	
Wire Dia (in)	0.002000	Mean Dia (in)	0.008000	Active Coils	1498.500
				Total Coils	1500.500
				Inactive Coils	0.0000
Rate (#/in)	0.0261	Inside Dia (in)	0.006000	Pitch (in)	0.004000
Spring Index C	4.0000	Outside Dia (in)	0.0100	1/Pitch (per in)	250.0000
Nat Freq (Hz)	269.1915	Max O.D. (in)	0.0101	Pitch Ang (deg)	9.0431
Slenderness Lf/D	750.0000	Solid Hgt (in)	3.0030	Devel Lngth (in)	37.7117
				Weight (lbs)	0.000033

	Free	Point 1	Point 2	Solid
Load (lbs)		0.0261	0.0326	0.0781
Length (in)	6.0000	5.0000	4.7500	3.0030
Deflection (in)		1.0000	1.2500	2.9970
Defl, % of Max Defl		33.4	41.7	
UNK Stress (psi)		66381	82976	198944
UNK Stress % of MTS		27.2	34.0	81.5
CORR Stress (psi)		93182	116478	279267
CORR Stress % of MTS		38.2	47.7	114.5

NORMAL MANUFACTURING TOLERANCES: (All other dimensions ref. only)

Coil Diameter: Consult your springmaker.

NOTES:

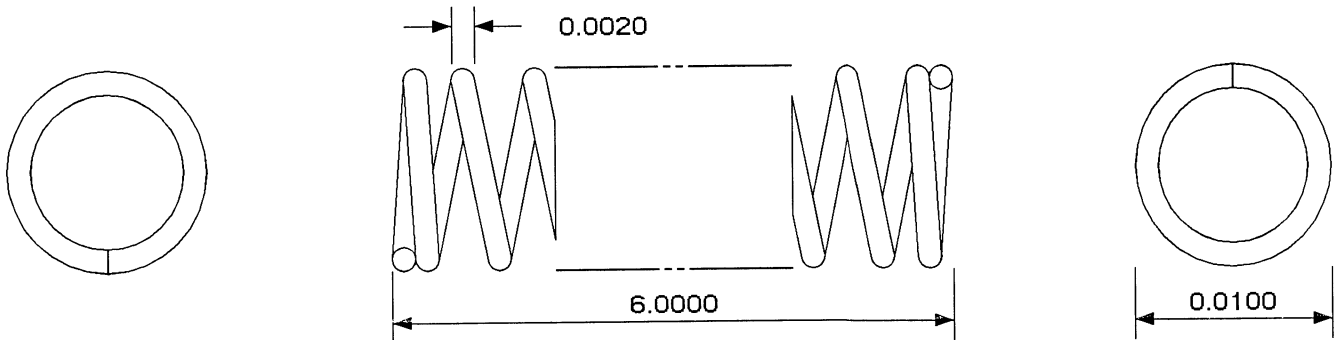
Minimum Allowable Working Height (before set) is 5.08 (in)

Spring may take a set at solid.

Wire dia outside range of MTS eqn

May take a set at operating load.

CENG designs are not evaluated for buckling instability by SD 2.x



Dimensions in inches

Illustration Only - Not for manufacture - Not to scale

Analysis performed with the SMI SPRING DESIGNER, Ver. 2.1 on 01/07/14