Developed for:

Open Source Instruments
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Developed by:

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Cylindrical Compression Spring, Round Wire

Part # Development **Material** Stainless 316

Description Extreme Pitch Coil

End Type Closed/Not Ground **Condition** Not Preset/Not Peened **Autoadjusted Inactive Coils** ☑

Grade Precision **Buckling Constraints** End fixation not known **Coiling Direction** Right

Wire Diameter [in]	**0.0060**	Arbor Diameter [in]	0.0078	Active Coils	498.500
Wire Dia. Tol. (+/-) [in]		Coil ID [in]	0.0080	Total Coils	500.500
Wire Length [in]	22.8154	Coil Mean Diameter [in]	0.0140	Dead Coils	0.0000
Wire Weight [lb]	0.00018	Coil OD [in]	**0.0200**	Pitch [in]	**0.0120**
Minimum Tensile Strength (MTS) [psi]	246916	Coil Dia. Tol. (+/-) [in]		Pitch Angle [deg]	15.2610
		Shaft OD [in]		Free Length Tol. (+/-) [in]	
Spring Rate [lbf/in]	1.1843	Minimum Coil ID [in]		Allowable Solid Length [in]	
Spring Index	2.3333	Expanded Coil OD [in]		Estimated Cycle Life:	
Natural Frequency [Hz]	803	Hole Diameter [in]			

Wire Available Yes Next Smaller Wire Size 0.0050 Next Larger Wire Size 0.0070

	Free	Cycle Load 1	Cycle Load 2	Other Load	At Solid	At Buckle
Load [lbf]	**0**				3.542	
Load Tolerance (+/-) [lbf]	**0**					
Length [in]	**6.0000**				3.0090	
Deflection [in]	**0**				2.9910	
% of Max. Deflection	**0**				**100**	
Corrected Stress [psi]	**0**				1067614	
Corrected % of MTS	**0**				432.4	
Uncorrected Stress [psi]	**0**				584651	
Uncorrected % of MTS	**0**				236.7811	
Expanded Coil OD [in]						

Design Status:

Warning(s):

1. Slenderness ratio (L/D) = 428.57 ; buckling possible
2. Body diameter tolerance unavailable for given geometry.
3. Wire tolerance data unavailable for that size.
4. Excessive Pitch Angle
5. Spring Index < 4
6. Stress at Solid > 35% Safety Limit