

## Cylindrical Compression Spring, Round Wire

Part # Material Music Wire

Description



End Type Closed/Ground Condition Not Preset/Not Peened Autoadjusted Inactive Coils ☐  
 Grade Precision Buckling Constraints End fixation not known Coiling Direction Optional

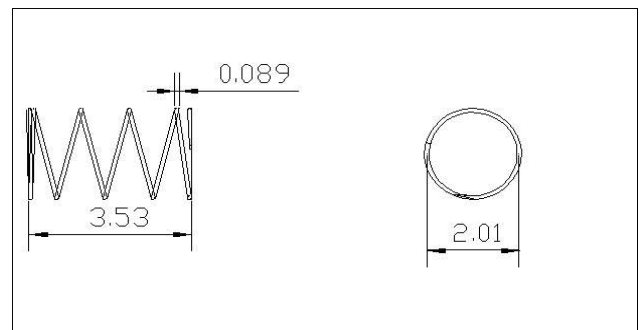
Wire Diameter [in]	<b>0.0890</b>			Active Coils	3.210
Wire Dia. Tol. (+/-) [in]	0.0008	Coil ID [in]	1.9210	Total Coils	5.210
Wire Length [in]	33.0878	Coil Mean Diameter [in]	2.0100	Dead Coils	0.0000
Wire Weight [lb]	0.05846	Coil OD [in]	<b>2.0990</b>	Pitch [in]	1.0442
Minimum Tensile Strength (MTS) [psi]	276411	Coil Dia. Tol. (+/-) [in]	<b>0.0200</b>	Pitch Angle [deg]	9.3900
		Shaft OD [in]		Free Length Tol. (+/-) [in]	<b>0.0600</b>
Spring Rate [lbf/in]	<b>3.4600</b>	Minimum Coil ID [in]	1.9010	Allowable Solid Length [in]	
Spring Index	22.5843	Expanded Coil OD [in]	2.1702		
Natural Frequency [Hz]	97	Hole Diameter [in]			
Wire Available	Yes	Next Smaller Wire Size	0.0880	Next Larger Wire Size	0.0900

	Free	Minimum Cycle Load	Maximum Cycle Load	Other Load	At Solid	At Buckle
Load	<b>0</b>	4.429	8.581		10.609	
Load Tolerance (+/-) [lbf]	<b>0</b>	0.2740	0.3363			
Length [in]	<b>3.5300</b>	<b>2.2500</b>	<b>1.0500</b>		0.4637	
Deflection [in]	<b>0</b>	1.2800	2.4800		3.0663	
% of Max. Deflection	<b>0</b>	41.7	80.9		<b>100</b>	
Corrected Stress [psi]	<b>0</b>	34148	66162		81804	
Corrected % of MTS	<b>0</b>	12.4	23.9		29.6	
Uncorrected Stress [psi]	<b>0</b>	32155	62301		77030	
Uncorrected % of MTS	<b>0</b>	11.6332	22.5392		27.8679	
Expanded Coil OD [in]		2.1426	2.1619		2.1702	

## Design Status:

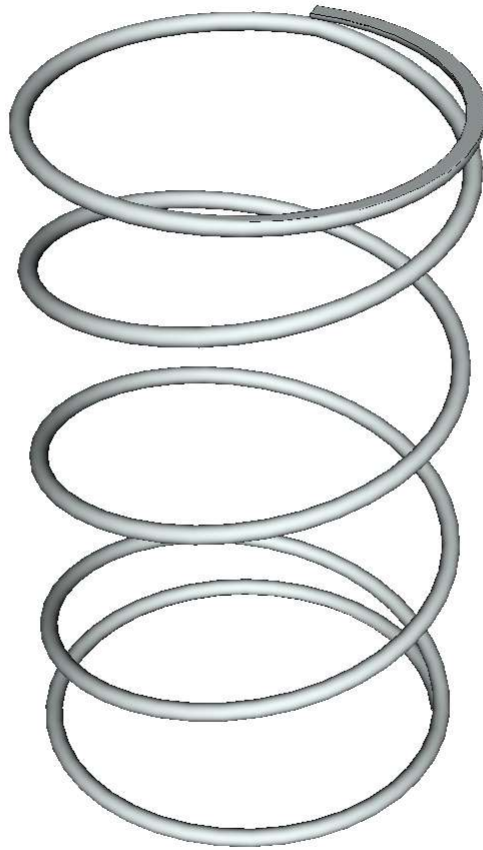
## Warning(s):

1. Body diameter tolerance unavailable for given geometry.



## Material Properties

Name	Music Wire	Specification	ASTM A228	Density [lb/in^3]	0.284	Safety Factor	N/A
Bending Modulus [psi]	3.00E7	Torsion Modulus [psi]	1.15E7				
Min. Tensile Strength [psi]	276411	Allow. % MTS (Bending)	N/A	Allow. % MTS	45.0	Allow. % MTS Preset	60.0
Max. Wire Diameter [in]	0.2500	Wire Size Group	Music Wire; Stainless Steel				



**Load vs. Length**  
**with 15%-85% lines and tolerance**  
**bands**

