

Compression Spring

Part# PC018156-22-SS-1.375

Wire Diameter: 0.018 inch

Outer Diameter: 0.156 inch

Inner Diameter: 0.12 inch

Free Length: 1.375 inch

Active Coils: 20

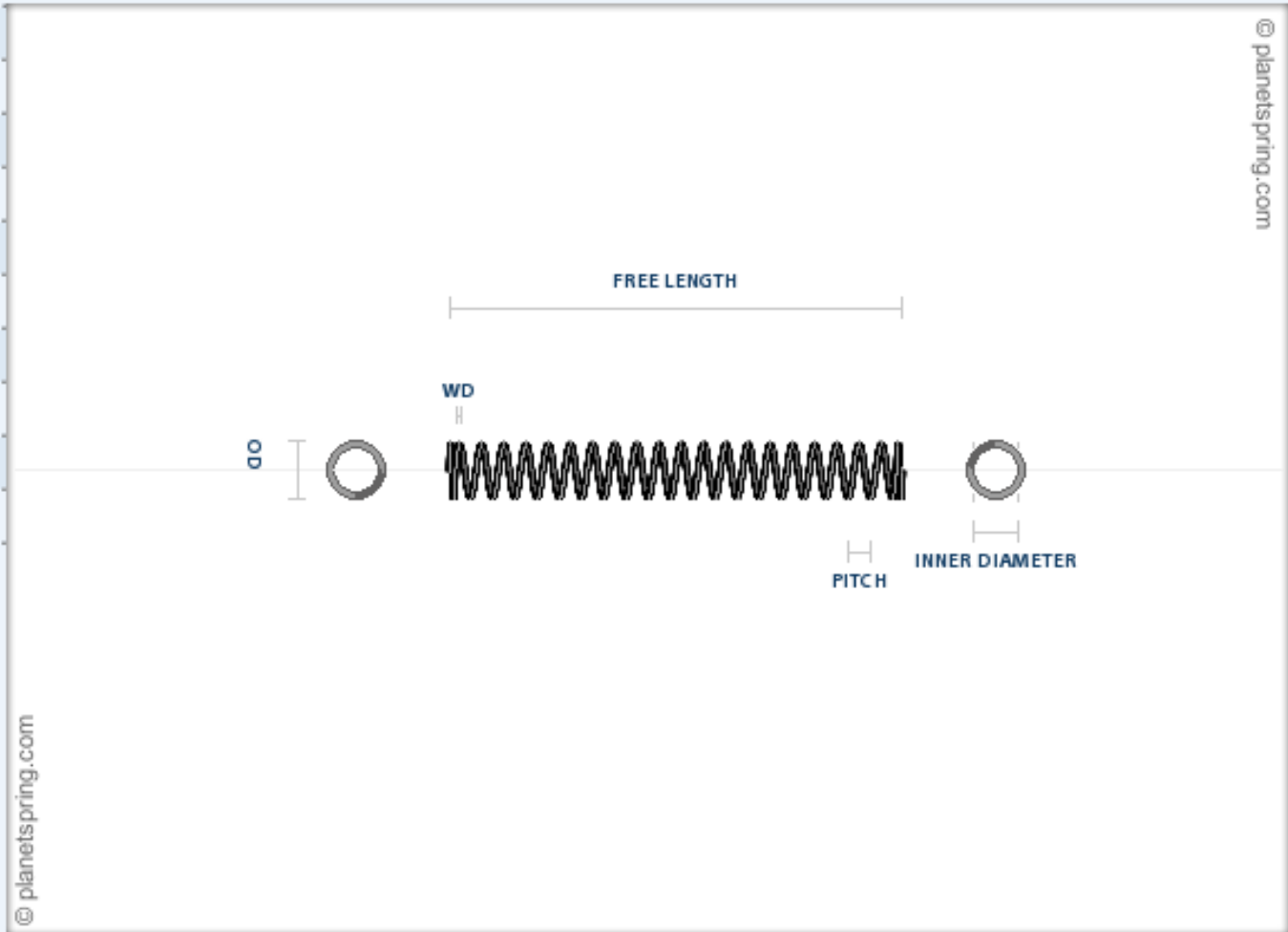
Total Coils: 22

End Type: Closed & Squared

Solid Height: 0.414 inch

Load 1: 0.8321043488160974 @ 1.04 loaded height

Load 2: 1.4282388073261374 @ .8 loaded height



	Date Drawn: 07 / 11 / 2013	Material: Stainless 302 A 313
Part Name:	Drawn by:	Approved by:
Part # PC018156-22-SS-1.375	Revision #:	Finish:
Drawing #:	Tolerances:	Scale: 2.09

Answers

Loads & Rates		0.000 lbF @ 1.375 Loaded Height	
True Maximum Load, True Fmax:	1.9880724373975 lbF	0.239 lbF @ 1.279 Loaded Height	
Maximum Load Considering Solid Height, Solid Height Fmax:	1.9880724373975 lbF	0.477 lbF @ 1.183 Loaded Height	
Spring constant (or Spring rate), k:	2.4838935779585 lbF/in	0.716 lbF @ 1.087 Loaded Height	
Safe Travel		0.955 lbF @ 0.991 Loaded Height	
True Maximum Travel, True Travelmax:	0.80038551371088 inch	1.194 lbF @ 0.895 Loaded Height	
Maximum Travel Considering Solid Height, Solid Height Travelmax:	0.80038551371088 inch	1.432 lbF @ 0.798 Loaded Height	
Physical Dimensions		1.671 lbF @ 0.702 Loaded Height	
Diameter of spring wire, d:	0.018 inch	1.910 lbF @ 0.606 Loaded Height	
Outer diameter of spring, Douter:	0.156 inch	2.148 lbF @ 0.510 Loaded Height	
Inner diameter of spring, Dinner:	0.12 inch	2.387 lbF @ 0.414 Loaded Height	
Mean diameter of spring, Dmean:	0.138 inch	Max Load For This Spring:	1.9880724373975 lbF
Free length of spring, Lfree:	1.375 inch		
Number of active coils, na:	20		
Number of total coils, nT:	22		
Solid height, Lsolid:	0.414 inch		
Type of ends:	closed & squared		
Spring index, C:	7.6666666666667		
Distance between coils, Coilpitch:	0.06605 inch		
Rise angle of coils:	8.6624298142032 inch		
Material Type			
Material type:	Stainless 302 A313		
Weights & Measures			
Weight of one spring, M:	0.00070147456396351 lb		
Weight per one thousand springs, M:	0.70147456396351 lb		
Length of wire required to make one spring, Lwire:	9.5378752962986 inch		
Stress Factors			
Material shear modulus, G:	9949475.9384432 psi		
Maximum shear stress possible, tmax:	142880		
Wahl correction factor, W:	1.1927173913043		
Suggested Part Number			
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