

Description

No Data

Simulation of Assem1

Date: Sunday, March 23, 2025

Designer: Rutam R

Study name: Static 1

Analysis type: Static

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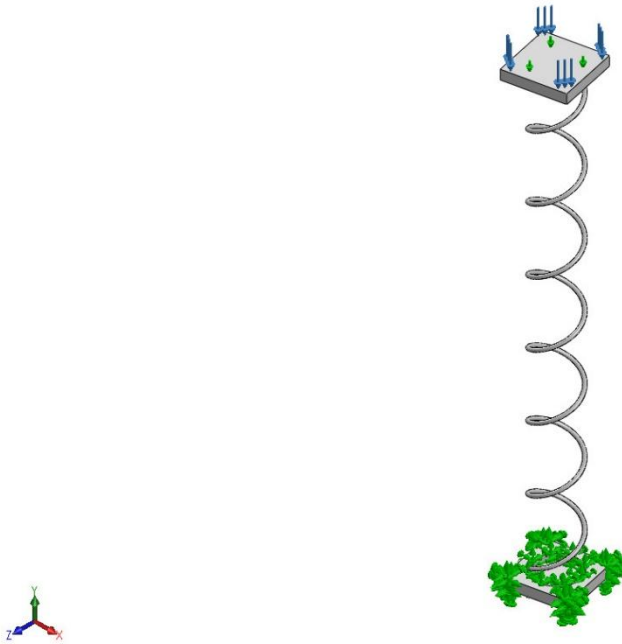


Assumptions



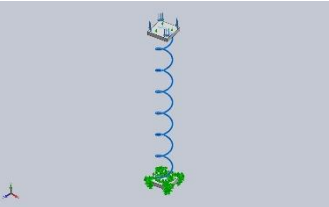
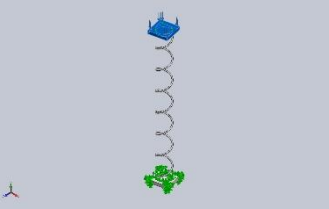
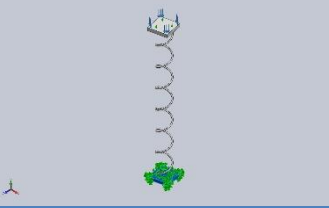
Model Information





Model name: Assem1
Current Configuration: Default

Solid Bodies

Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
SurfaceCut2 	Solid Body	Mass:0.0098485 kg Volume:9.65433e-06 m ³ Density:1,020.11 kg/m ³ Weight:0.0965153 N	C:\Users\rutam\OneDrive\Desktop\Spring.SLDPRT Mar 23 14:11:45 2025
Cut-Extrude1 	Solid Body	Mass:0.0259619 kg Volume:2.54528e-05 m ³ Density:1,020 kg/m ³ Weight:0.254426 N	C:\Users\rutam\OneDrive\Desktop\base.SLDPRT Mar 23 13:51:59 2025
Cut-Extrude1 	Solid Body	Mass:0.0259619 kg Volume:2.54528e-05 m ³ Density:1,020 kg/m ³ Weight:0.254426 N	C:\Users\rutam\OneDrive\Desktop\base.SLDPRT Mar 23 13:51:59 2025



Study Properties

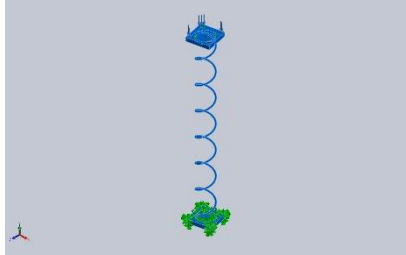
Study name	Static 1
Analysis type	Static
Mesh type	Solid Mesh
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SOLIDWORKS Flow Simulation	Off
Solver type	Automatic
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Friction	Off
Use Adaptive Method:	Off
Result folder	SOLIDWORKS document (C:\Users\rutam\OneDrive\Desktop)

Units

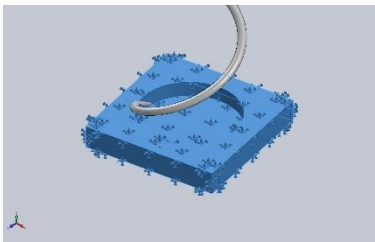
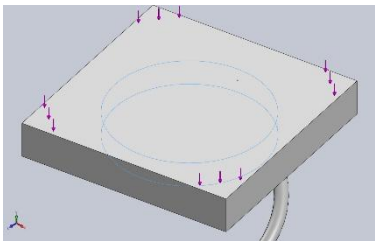
Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m ²

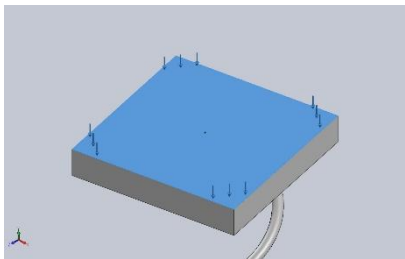


Material Properties

Model Reference	Properties	Components
	Name: Grade 2 Model type: Linear Elastic Isotropic Default failure criterion: Max von Mises Stress Yield strength: $2.1 \times 10^8 \text{ N/m}^2$ Tensile strength: $1.51 \times 10^9 \text{ N/m}^2$ Elastic modulus: $2 \times 10^9 \text{ N/m}^2$ Poisson's ratio: 0.394 Mass density: $1,020 \text{ kg/m}^3$ Shear modulus: $8.137 \times 10^{10} \text{ N/m}^2$	SolidBody 1(SurfaceCut2)(Spring-1), SolidBody 1(Cut-Extrude1)(base-1), SolidBody 1(Cut-Extrude1)(base-2)
Curve Data:N/A		

Loads and Fixtures

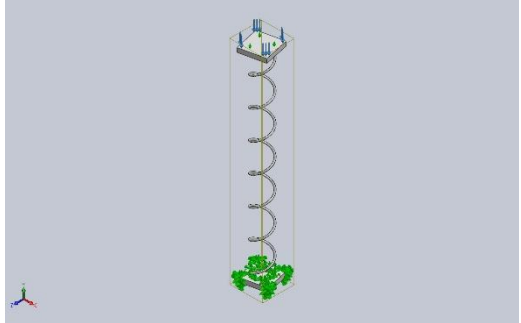
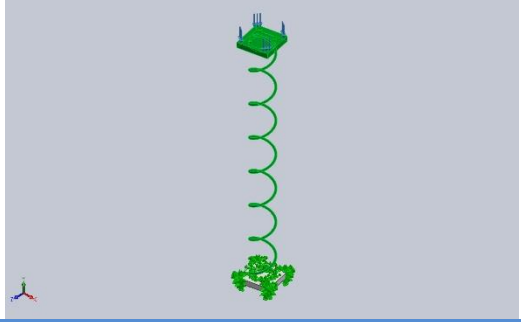
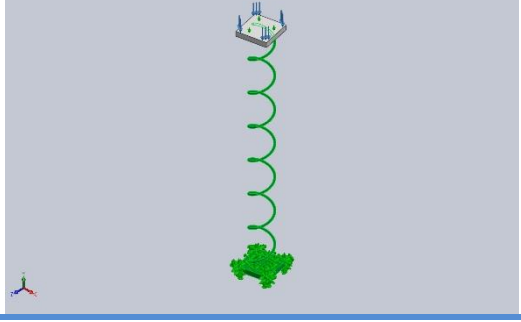
Fixture name	Fixture Image	Fixture Details			
Fixed-1		Entities: 8 face(s) Type: Fixed Geometry			
Resultant Forces					
Components		X	Y	Z	Resultant
Reaction force(N)		0.000798495	0.0104161	-0.000357758	0.0104527
Reaction Moment(N.m)		0	0	0	0
On Cylindrical Faces-1		Entities: 1 face(s) Type: On Cylindrical Faces Translation: 0, 0 rad., 20 Units: mil			
Resultant Forces					
Components		X	Y	Z	Resultant
Reaction force(N)		-0.0007658	499.99	0.000353575	499.99
Reaction Moment(N.m)		0	0	0	0

Load name	Load Image	Load Details			
Force-1		Entities: 1 face(s) Type: Apply normal force Value: 500 N			

Connector Definitions

No Data

Interaction Information

Interaction	Interaction Image	Interaction Properties
Global Interaction		Type: Bonded Components: 1 component(s) Options: Independent mesh
Component Interaction-1		Type: Bonded Components: 2 Solid Body (s) Options: Independent mesh
Component Interaction-2		Type: Bonded Components: 2 Solid Body (s) Options: Independent mesh

Mesh information

Mesh type	Solid Mesh
Mesher Used:	Blended curvature-based mesh
Jacobian points for High quality mesh	16 Points
Maximum element size	7.85642 mm
Minimum element size	1.07441 mm
Mesh Quality	High
Remesh failed parts independently	Off

Mesh information - Details

Total Nodes	73426
Total Elements	41019
Maximum Aspect Ratio	6.3071
% of elements with Aspect Ratio < 3	99.9
Percentage of elements with Aspect Ratio > 10	0
Percentage of distorted elements	0
Time to complete mesh(hh:mm:ss):	00:00:19
Computer name:	RUTAMS_DESKTOP

Sensor Details

No Data



Resultant Forces

Reaction forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	3.26941e-05	500	-4.18286e-06	500

Reaction Moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	0	0	0	0

Free body forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	9.72125e-05	-0.000387155	-4.45909e-05	0.000401656

Free body moments

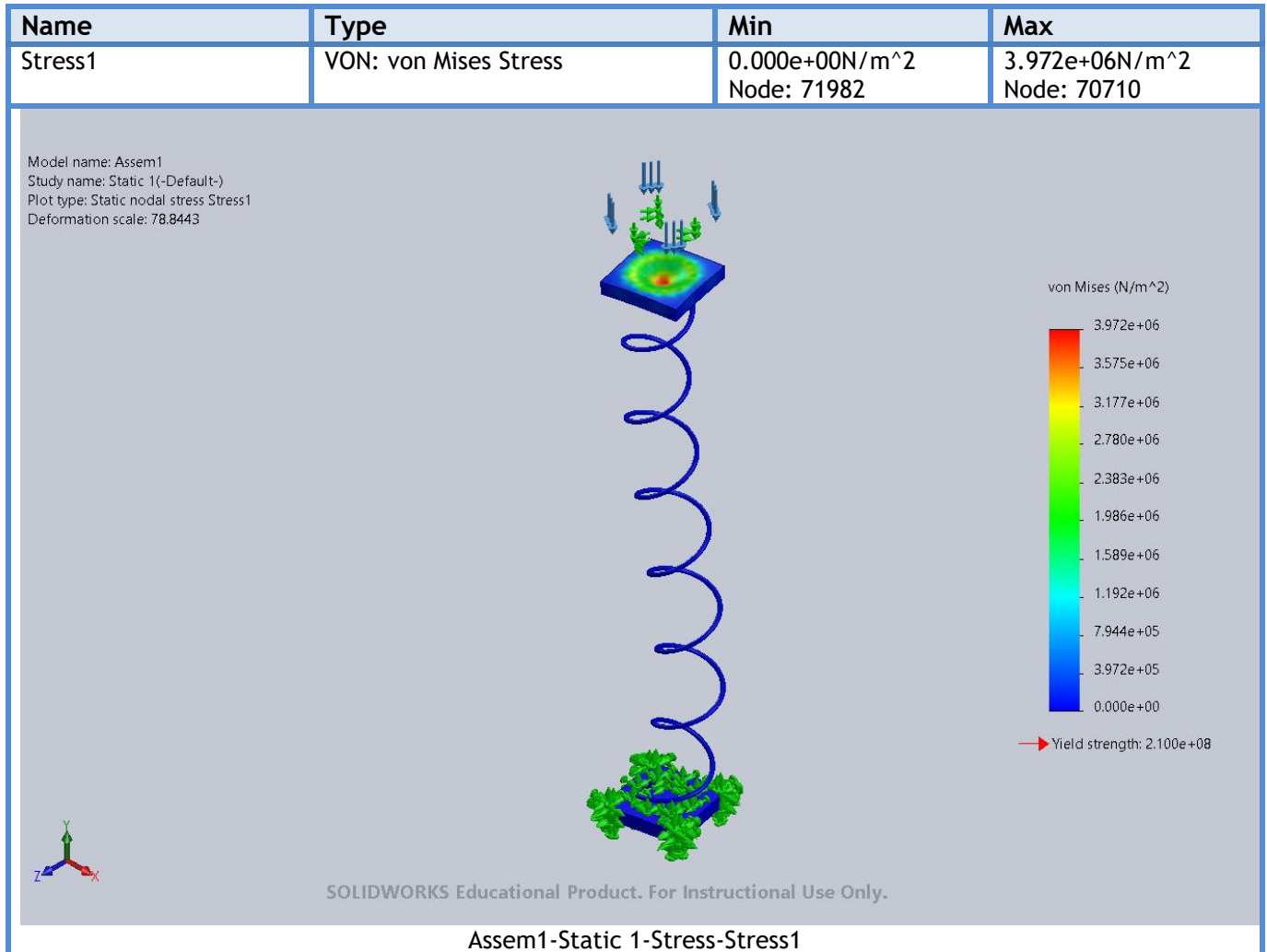
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	0	0	0	1e-33

Beams

No Data

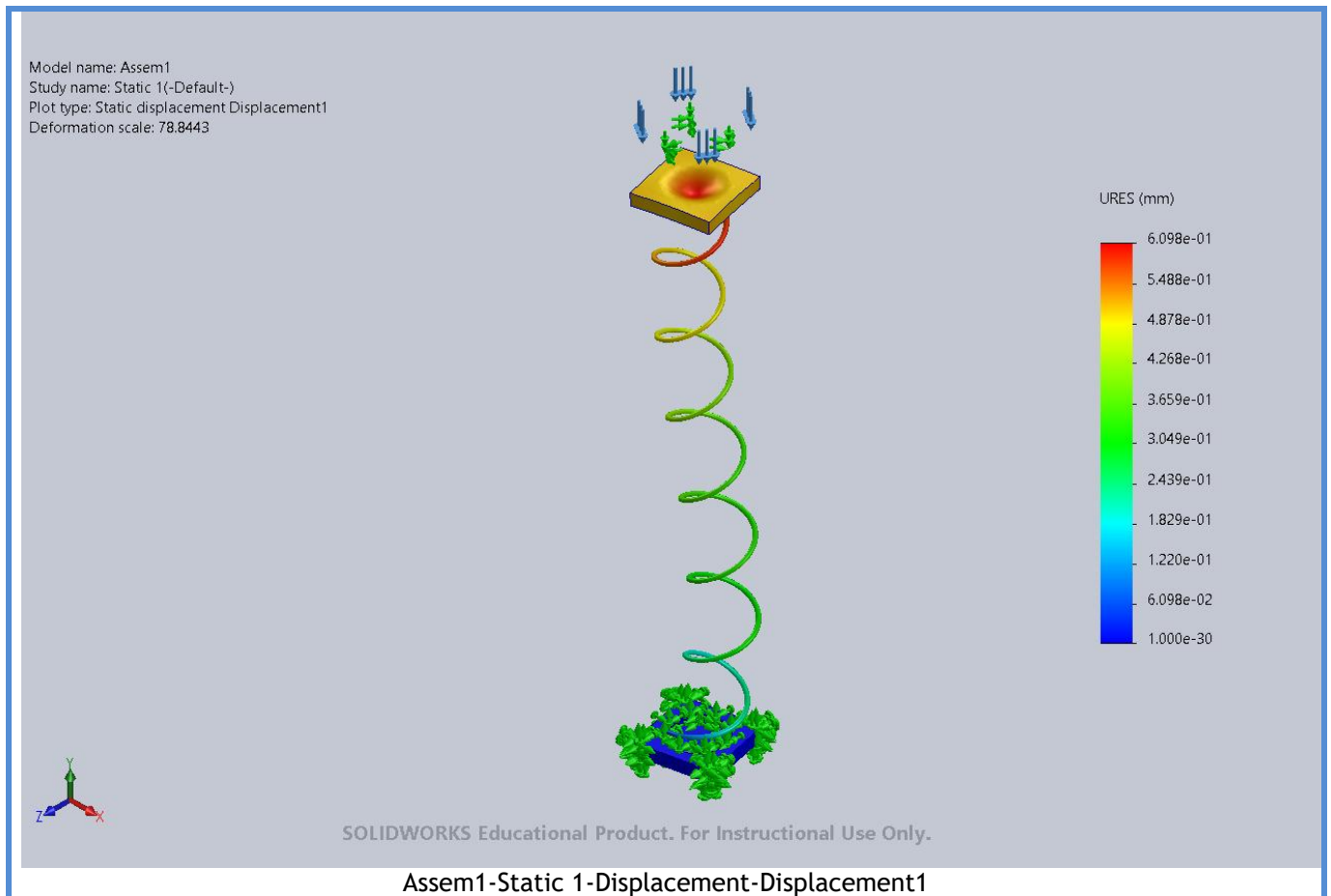


Study Results

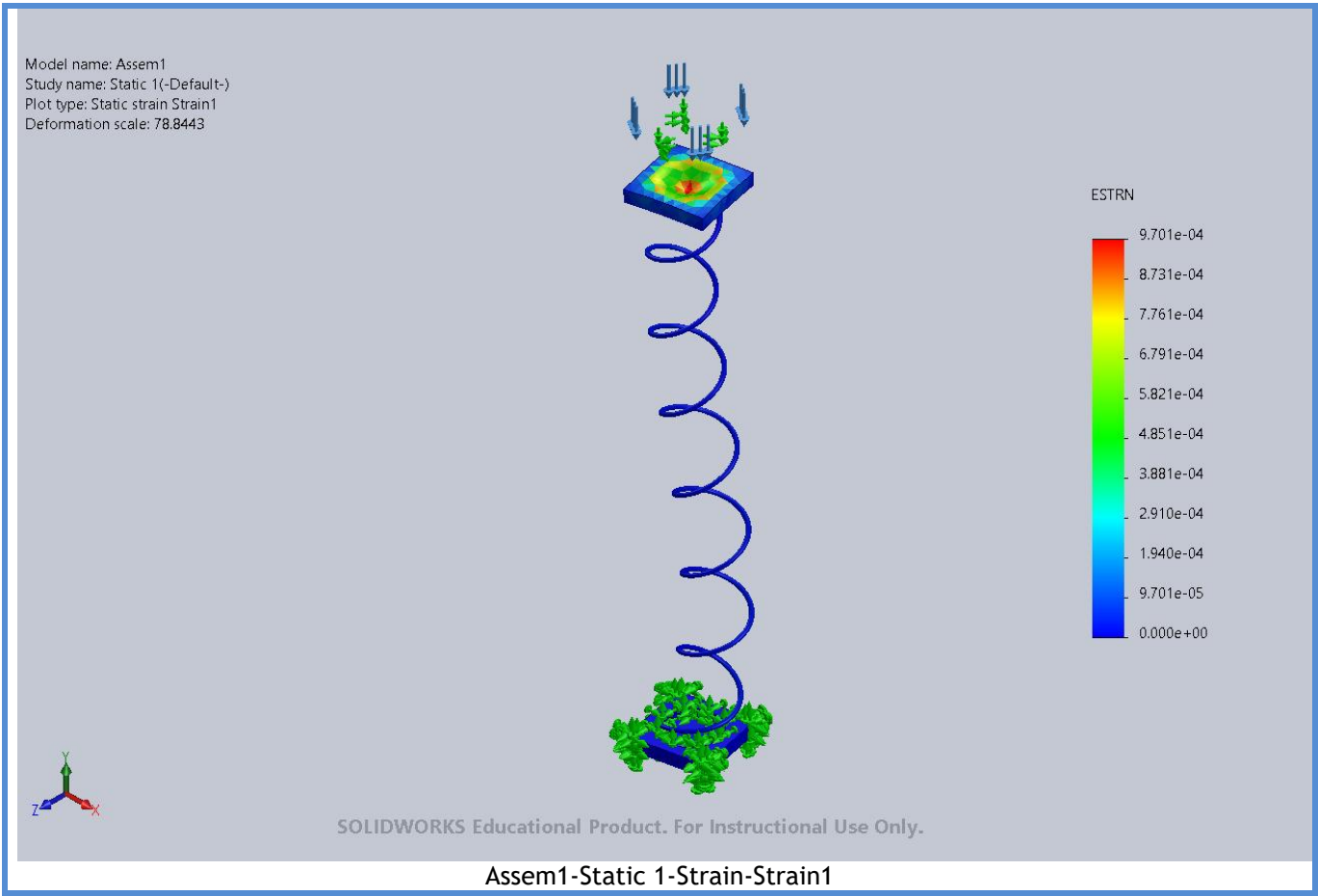


Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000e+00mm Node: 71982	6.098e-01mm Node: 71797



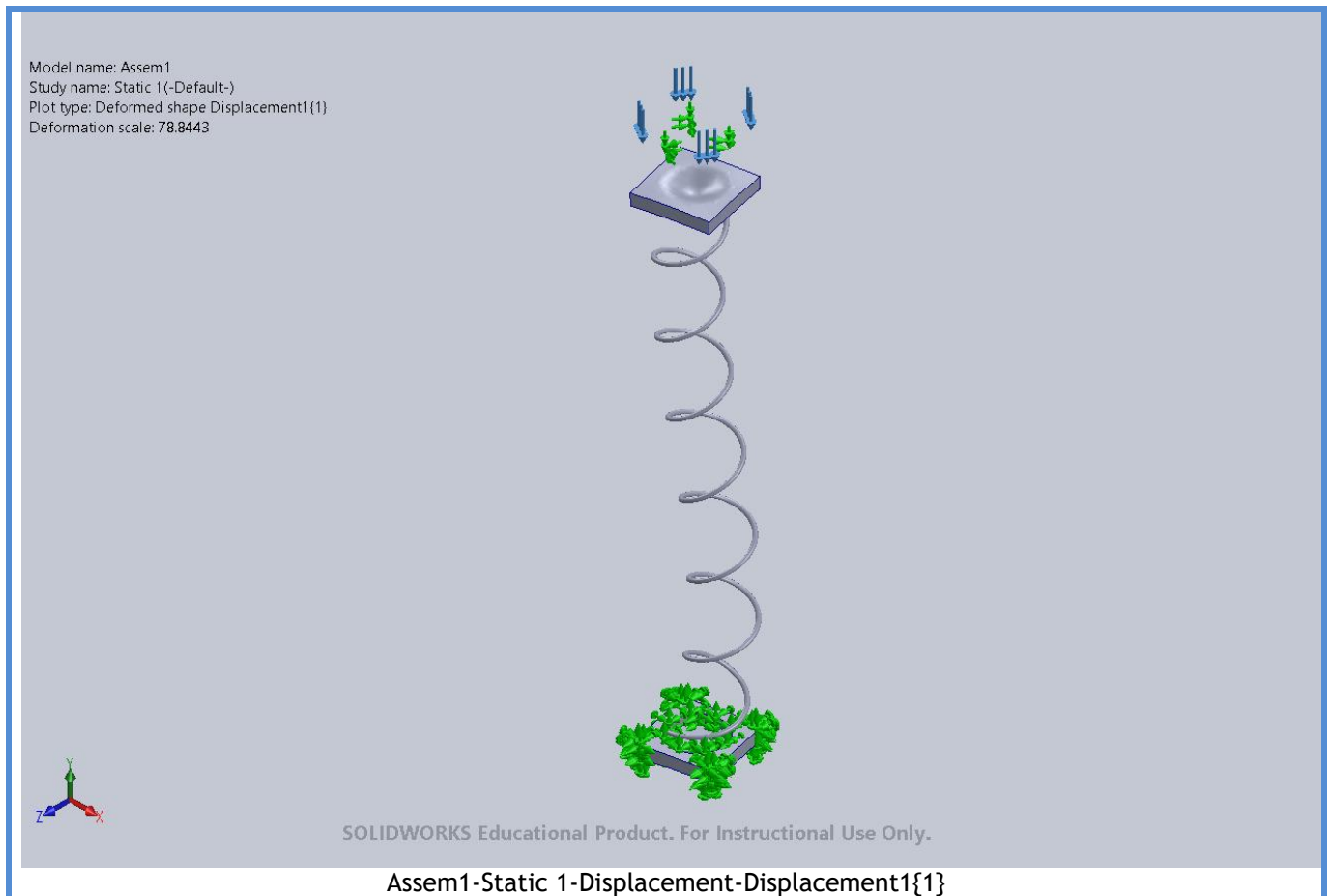


Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	0.000e+00 Element: 40290	9.701e-04 Element: 40204



Name	Type
Displacement1{1}	Deformed shape





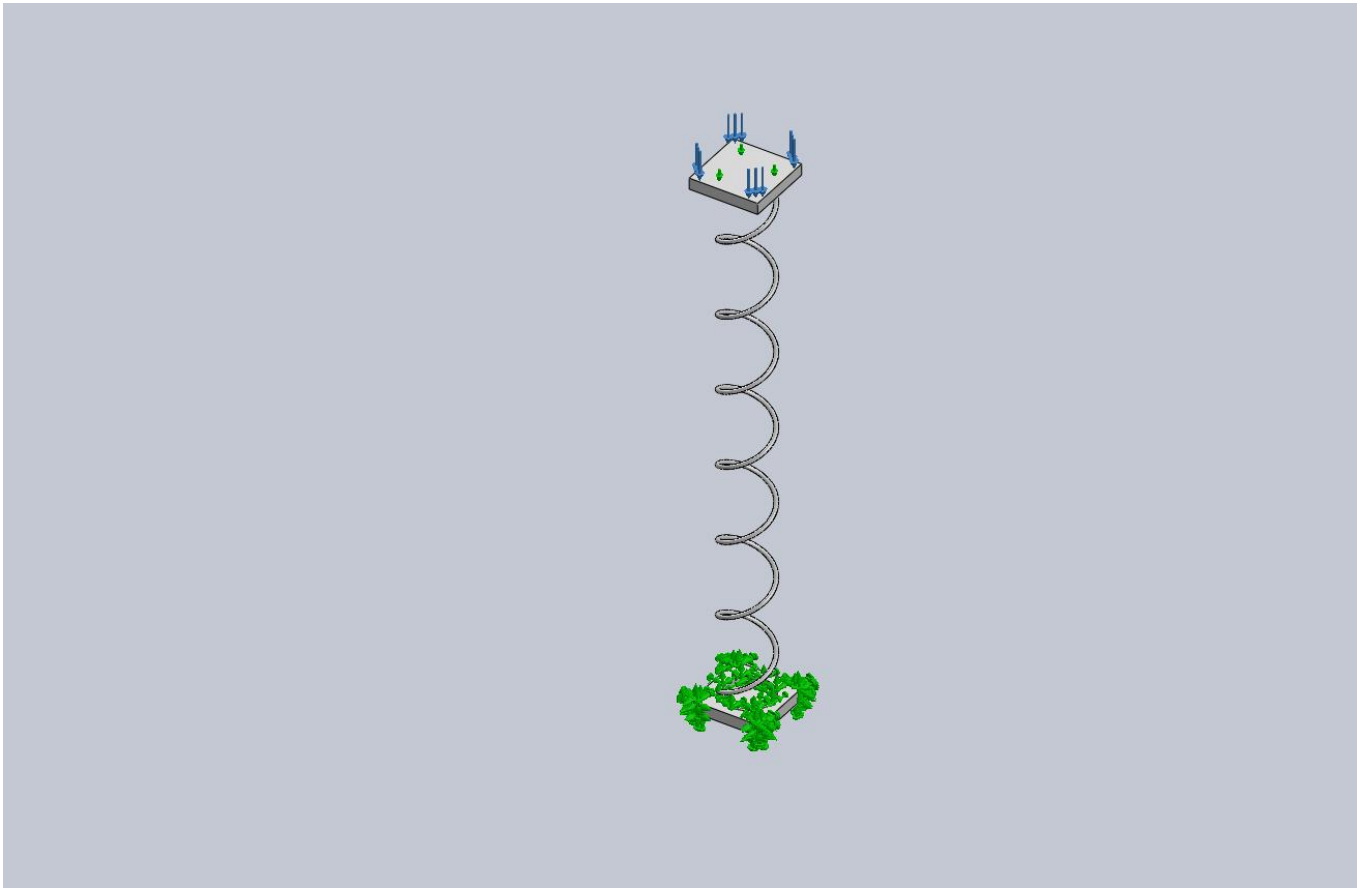


Image-1

Conclusion

