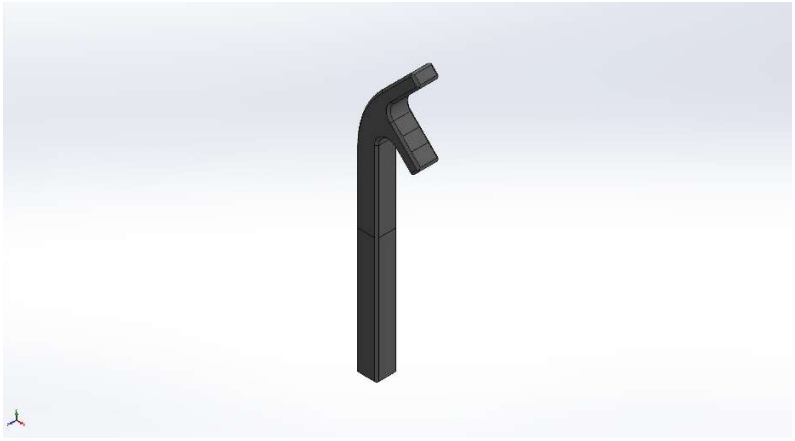


Simulation of Finger_FEM

Date: Freitag, 6. Februar 2026
Designer: Solidworks
Study name: Buckling 2
Analysis type: Buckling

Table of Contents

Description

No Data

Assumptions

Model Information

Model name: Finger_FEM
Current Configuration: Default

Solid Bodies

Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Cut-Extrude4 	Solid Body	**Mass:0,0158398 kg** **Volume:1,41427e-05 m^3** **Density:1 120 kg/m^3** **Weight:0,15523 N**	**C:\Users\arthur\OneDrive\FH\PDE\CAD\Finger_FEM.SLDPRT** Feb 6 16:49:08 2026

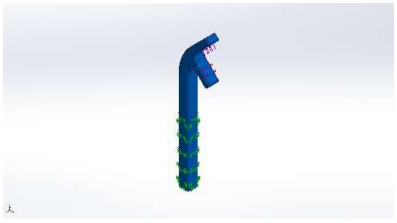
Study Properties

Study name	Buckling 2
Analysis type	Buckling
Mesh type	Solid Mesh
Number of modes	1
Solver type	FFEPlus
Incompatible bonding options	Automatic
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SOLIDWORKS Flow Simulation	Off
Soft Spring:	Off
Result folder	SOLIDWORKS document (C:\Users\arthur\OneDrive\FH\PDE\CAD)

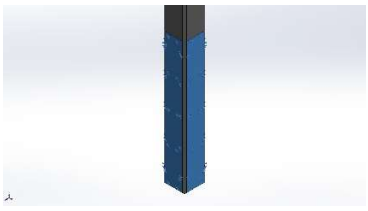
Units

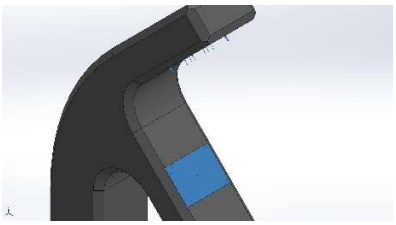
Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m^2

Material Properties

Model Reference	Properties	Components
	**Name:** PA Type 6 **Model type:** Linear Elastic Isotropic **Default failure criterion:** Max von Mises Stress **Yield strength:** 1,03649e+08 N/m^2 **Tensile strength:** 9e+07 N/m^2 **Mass density:** 1 120 kg/m^3 **Elastic modulus:** 2,62e+09 N/m^2 **Poisson's ratio:** 0,34	SolidBody 1(Cut-Extrude4)(Finger_FEM)
Curve Data:N/A		

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-1		**Entities:** 4 face(s) **Type:** Fixed Geometry

Load name	Load Image	Load Details
Force-2		**Entities:** 2 face(s) **Type:** Apply normal force **Value:** 5 N

Connector Definitions
No Data

Interaction Information
No Data

Mesh information

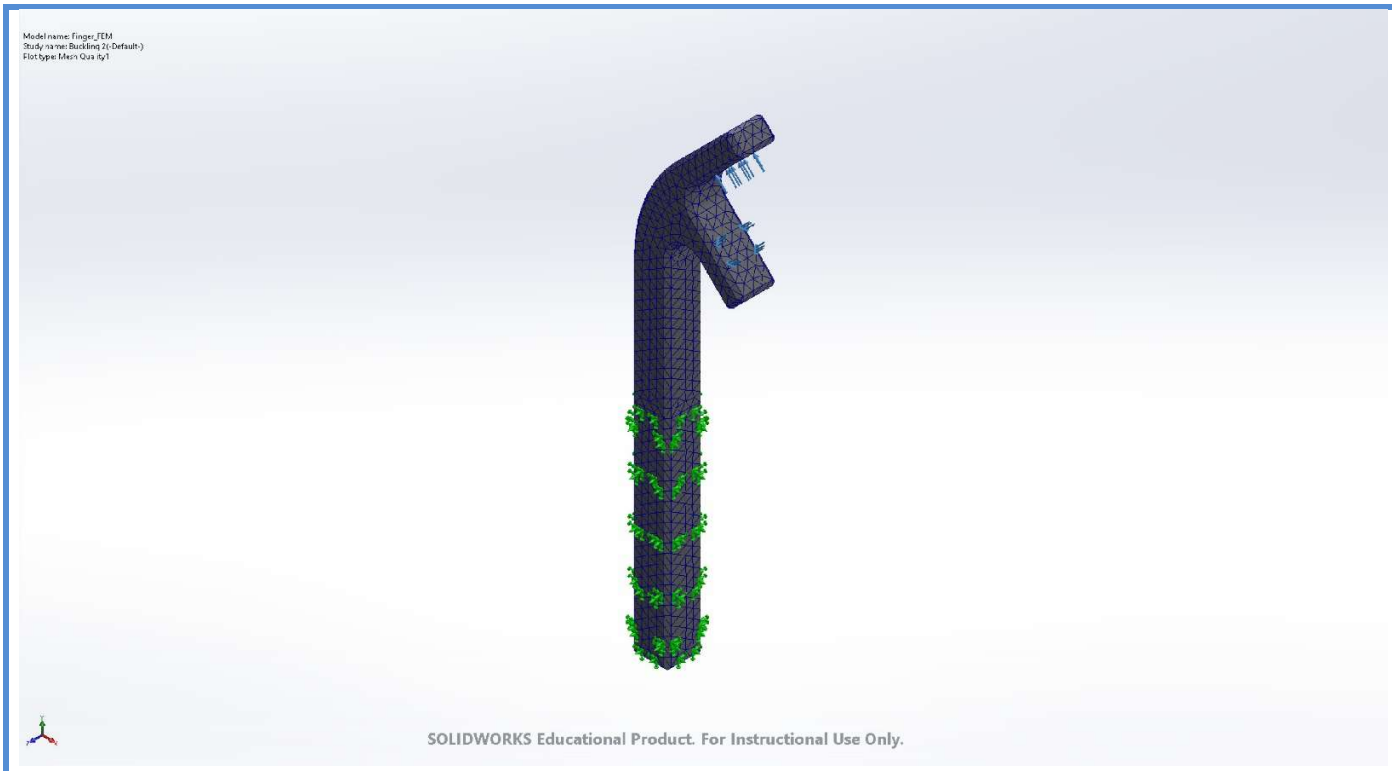
Mesh type	Solid Mesh
Mesher Used:	Blended curvature-based mesh
Jacobian points for High quality mesh	16 Points
Maximum element size	2,4192 mm
Minimum element size	2,4192 mm
Mesh Quality	High

Mesh information - Details

Total Nodes	17121
Total Elements	10738
Maximum Aspect Ratio	490,82
% of elements with Aspect Ratio < 3	99,1
Percentage of elements with Aspect Ratio > 10	0,745
Percentage of distorted elements	0
Time to complete mesh(hh;mm;ss):	00:00:04
Computer name:	

Mesh Quality Plots

Name	Type	Min	Max
Quality1	Mesh	-	-



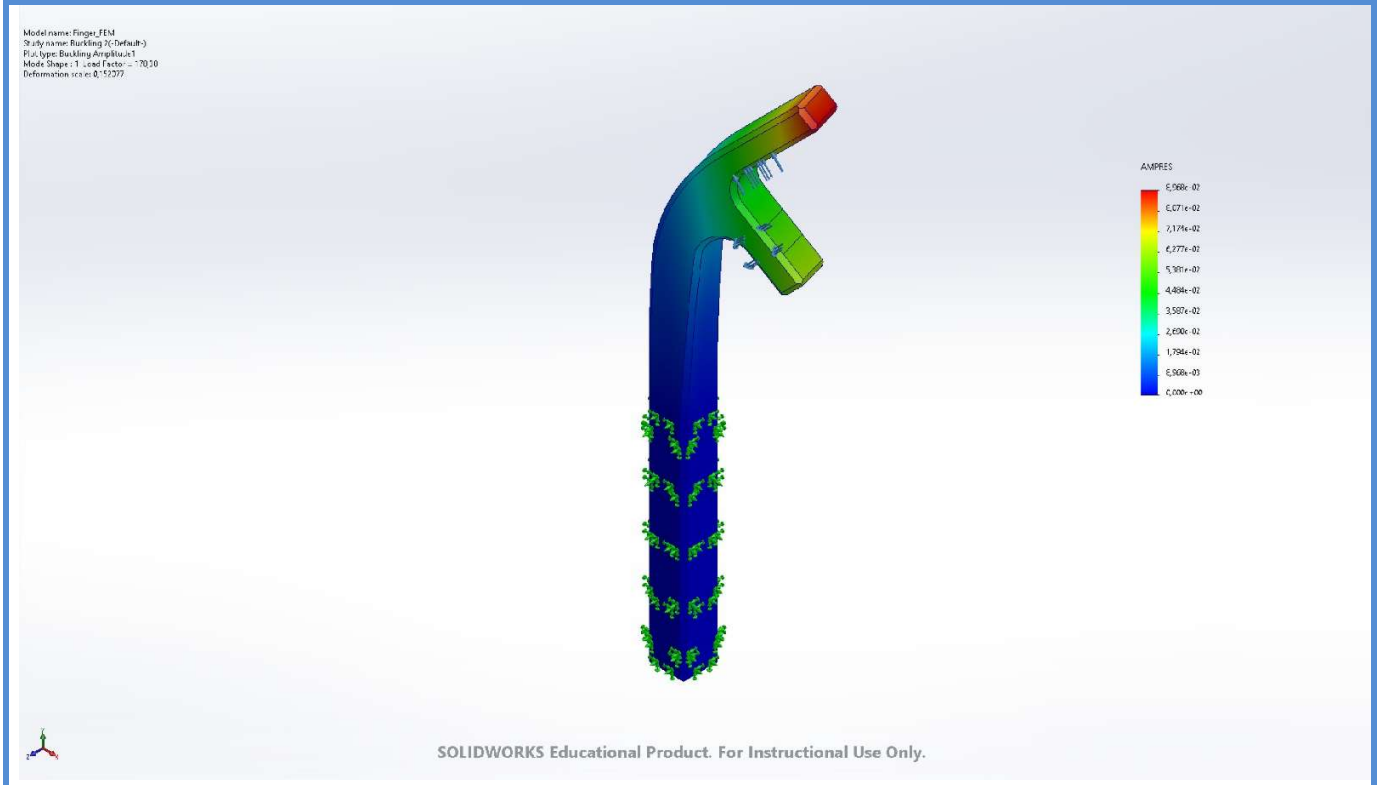
Finger_FEM-Buckling 2-Quality-Quality1

Sensor Details

No Data

Study Results

Name	Type	Min	Max
Amplitude1	AMPRES: Resultant Amplitude Plot for Mode Shape: 1(Load Factor = 178,377)	0,000e+00 Node: 9	8,968e-02 Node: 45



Finger_FEM-Buckling 2-Amplitude-Amplitude1

Mode List

Mode Number	Load Factor
1	178,38

Conclusion