

Simulation Model 1:1

Study 1 - Static Stress

Study Properties

Study Type	Static Stress
Last Modification Date	2020-08-18, 14:34:32

Settings

General

Contact Tolerance	0.1 mm
Remove Rigid Body Modes	No

Damping

Mesh

Average Element Size (% of model size)	
Solids	5
Scale Mesh Size Per Part	No
Average Element Size (absolute value)	-
Element Order	Linear
Create Curved Mesh Elements	No
Max. Turn Angle on Curves (Deg.)	60
Max. Adjacent Mesh Size Ratio	1.5
Max. Aspect Ratio	10
Minimum Element Size (% of average size)	10

Adaptive Mesh Refinement

Number of Refinement Steps	0
Results Convergence Tolerance (%)	20
Portion of Elements to Refine (%)	10
Results for Baseline Accuracy	Von Mises Stress

Materials

Contacts

Bonded

Mesh

Type	Nodes	Elements
Solids	49422	147594

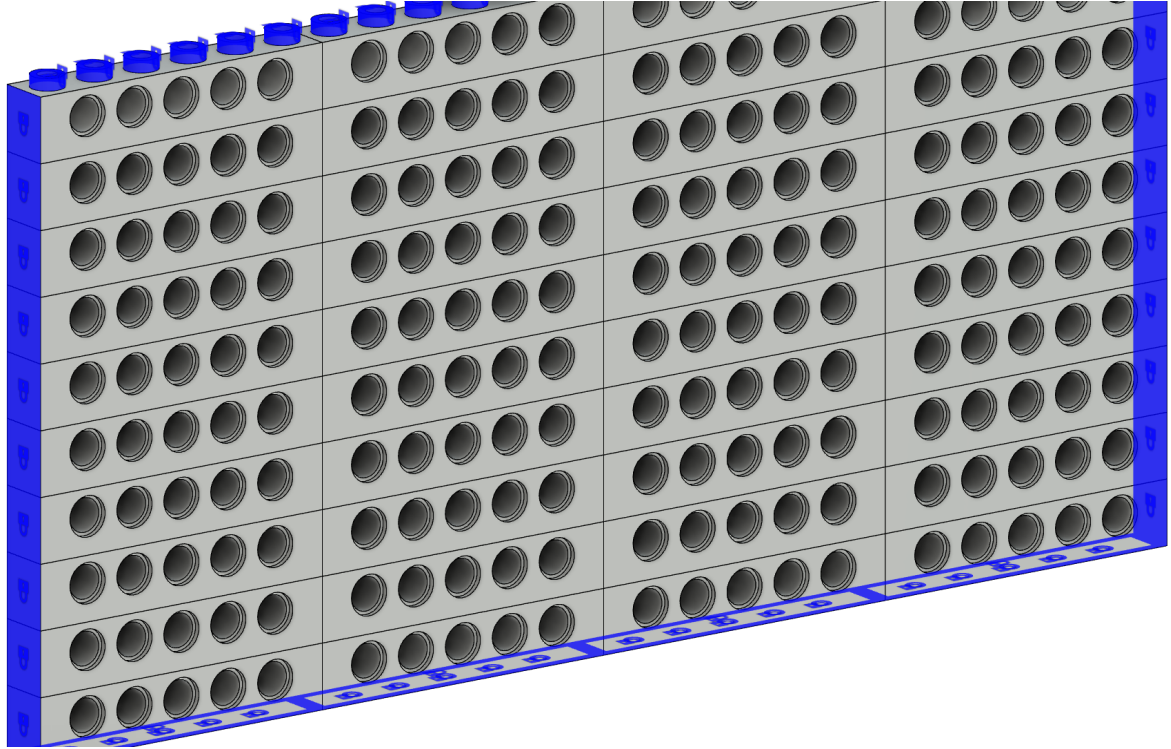
Load Case1

Constraints

Fixed1

Type	Fixed
Ux	Yes
Uy	Yes
Uz	Yes

Selected Entities

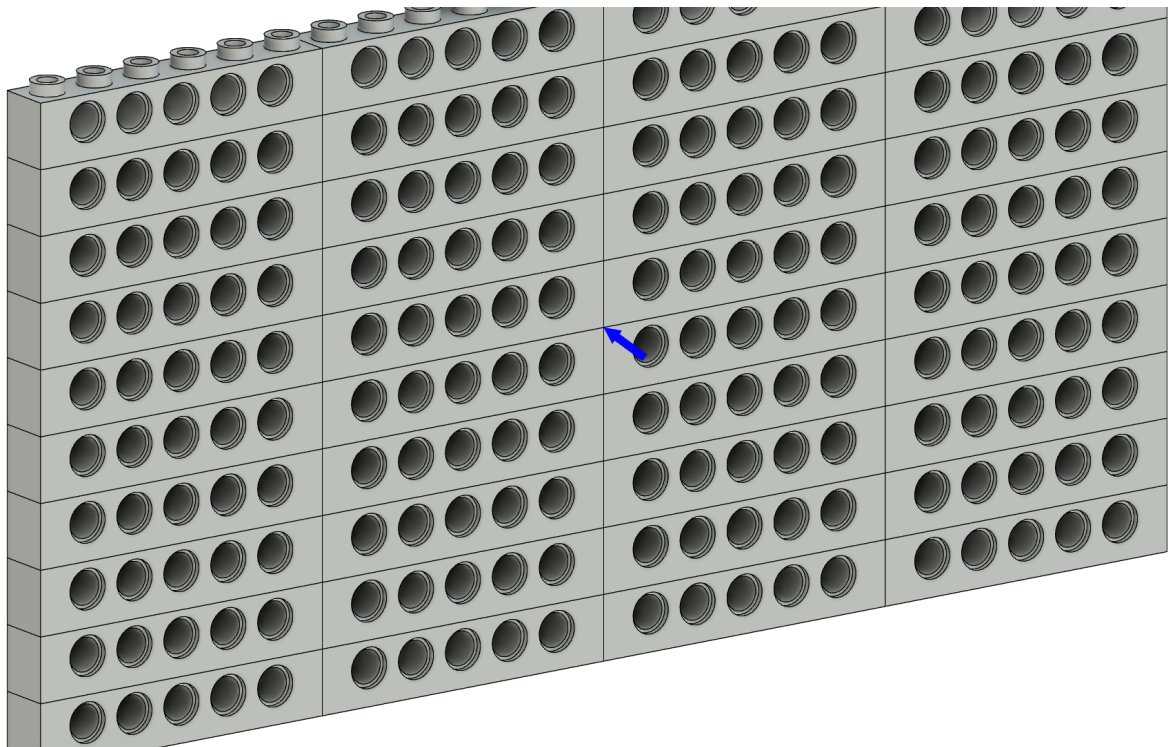


Loads

Force1

Type	Force
Magnitude	300 N
X Value	-173.2 N
Y Value	-173.2 N
Z Value	173.2 N
Force Per Entity	No

Selected Entities



Results

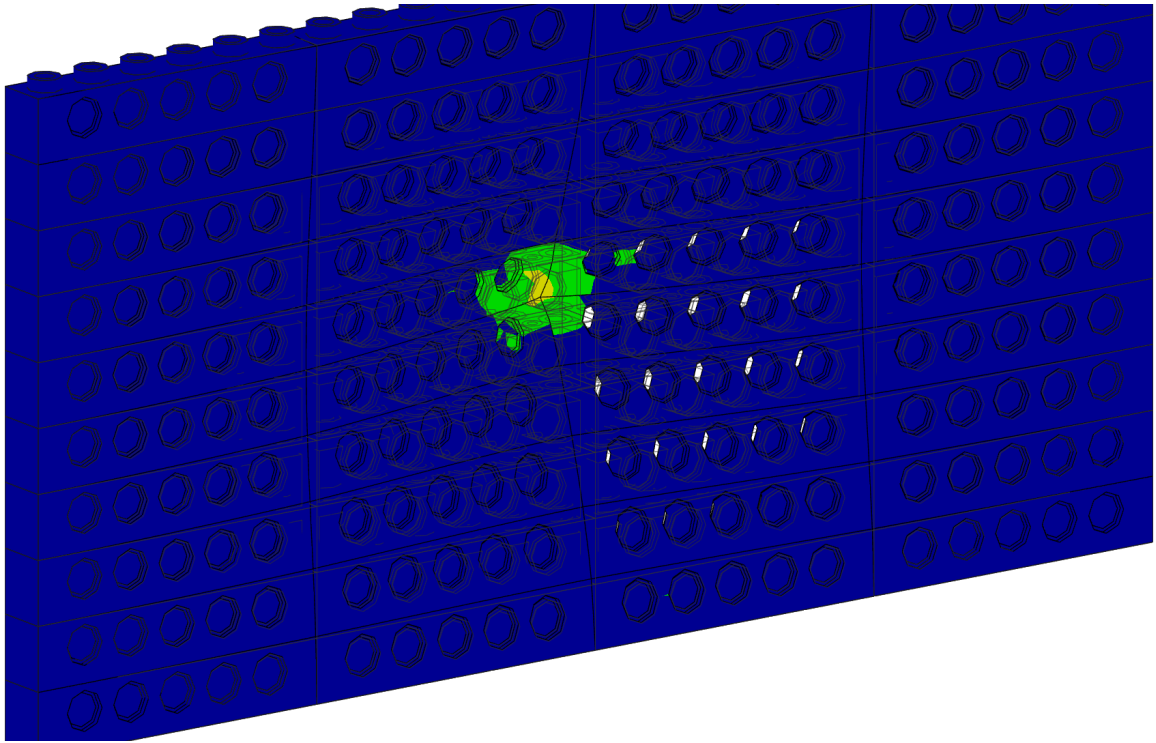
☐ Result Summary

Name	Minimum	Maximum
Safety Factor		
Safety Factor (Per Body)	2.107	15
Stress		
Von Mises	0 MPa	9.49 MPa
1st Principal	-7.755 MPa	6.355 MPa
3rd Principal	-18.06 MPa	1.45 MPa
Normal XX	-10.6 MPa	3.123 MPa
Normal YY	-13.04 MPa	4.9 MPa
Normal ZZ	-11.85 MPa	5.315 MPa
Shear XY	-3.998 MPa	1.576 MPa
Shear YZ	-3.245 MPa	2.814 MPa
Shear ZX	-2.234 MPa	2.754 MPa
Displacement		
Total	0 mm	0.2095 mm
X	-0.2043 mm	7.795E-04 mm
Y	-0.03874 mm	0.00581 mm
Z	-0.01437 mm	0.02701 mm
Reaction Force		
Total	0 N	25.59 N
X	-20.96 N	15.55 N
Y	-8.253 N	8.395 N
Z	-24.39 N	19.65 N
Strain		
Equivalent	0	0.007857
1st Principal	0	0.004962
3rd Principal	-0.008841	0
Normal XX	-0.002085	0.002036
Normal YY	-0.002851	0.001971
Normal ZZ	-0.002619	0.001831
Shear XY	-0.004926	0.001942
Shear YZ	-0.003998	0.003468
Shear ZX	-0.002753	0.003394
Contact Pressure		
Total	0 MPa	11.2 MPa
X	-3.206 MPa	2.244 MPa
Y	-7.883 MPa	3.228 MPa
Z	-5.053 MPa	7.287 MPa

☐ Safety Factor

☐ Safety Factor (Per Body)

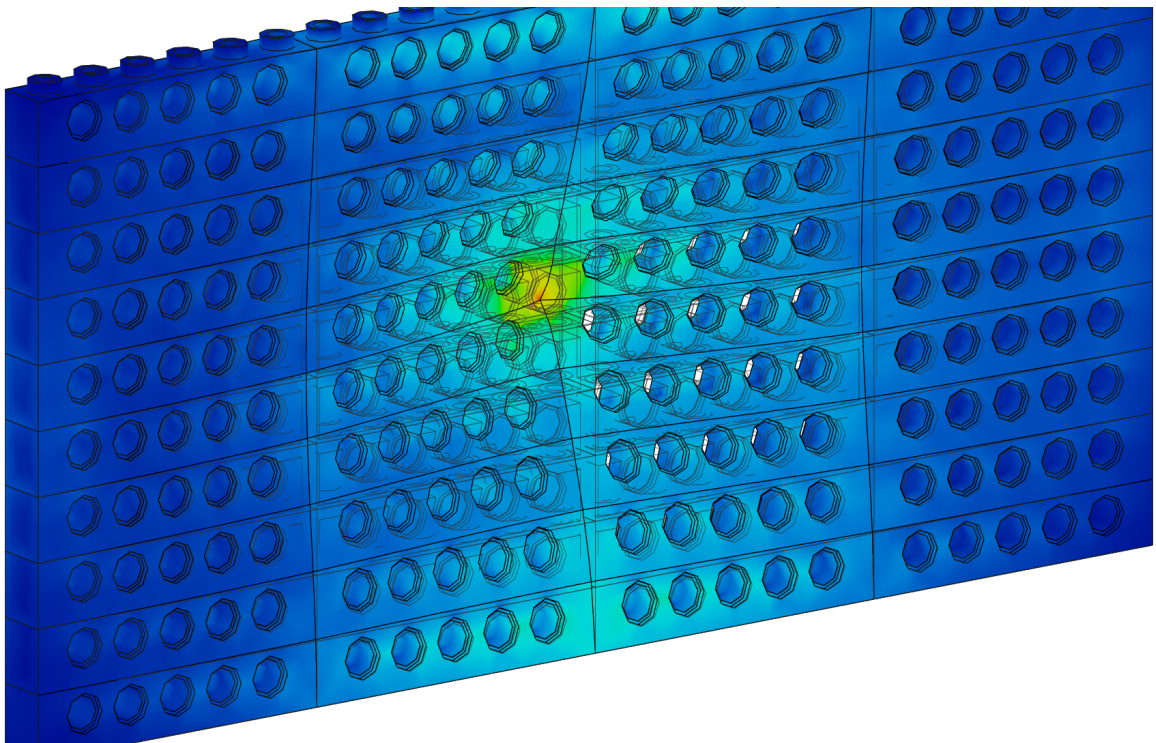
0  8



☐ **Stress**

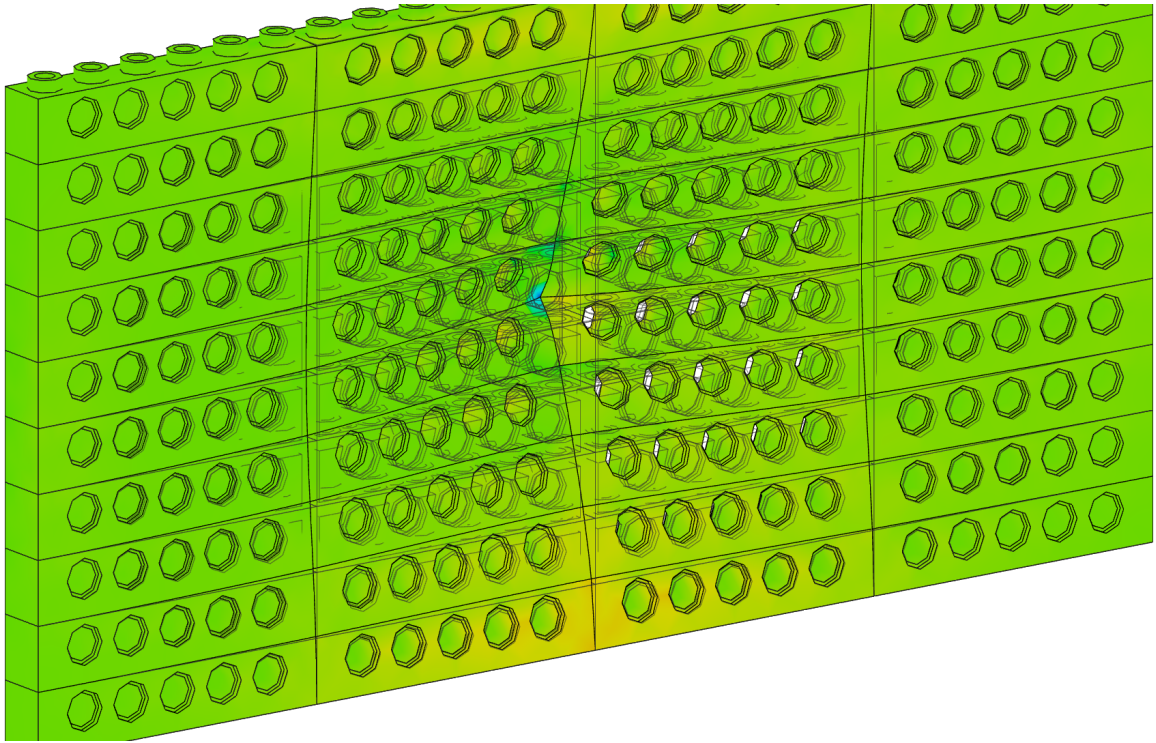
☐ **Von Mises**

[MPa] 0  9.49



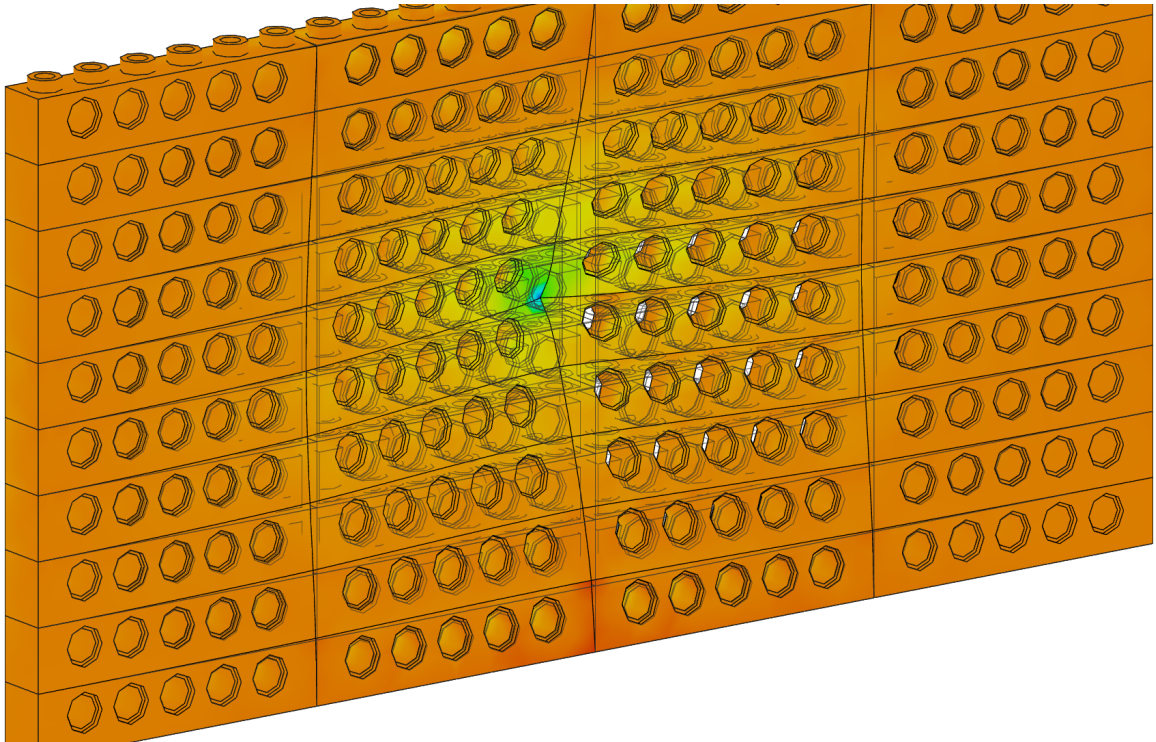
☐ **1st Principal**

[MPa] -7.755  6.355



3rd Principal

[MPa] -18.06 1.45



Displacement

Total

[mm] 0 0.2095

