

Description

The analysis of a structure made of composite material is performed. The structure is supported on a ring-shaped area representing the three-leg ring base on which the structure is sited. The external load is applied on the top face of the structure and it is **4788 Nt/m2 ~ 100psf**. The dead weight of the structure is also considered by applying gravitational acceleration to the FEA model.

Simulation of FEA ASSY

Date: Monday, 26 June 2023

Study name: 100psf M4

Analysis type: Static

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Assumptions

For all parts, the common faces are considered bonded. No bolt connections are considered between individual parts.

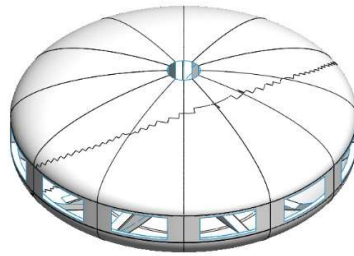
For skin composite material lamina characterization, the method described in the SOLIDWORKS training manual was used.

For more accurate results experimental material data need to be used for skin composite material lamina characterization.





Model Information









Model name: FEA ASSY
Current Configuration: Default

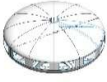



Composite Bodies


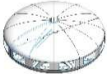


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<p>Shell-67</p>	<p>Total number of Plies: 3</p>																																

	<p>Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,3461</td> <td>0,28819 2</td> <td>75</td> <td>21,61 44</td> <td>211,82 1</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1	2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1	3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1
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3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1																										
<p>Shell-68</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,3461</td> <td>0,28819 2</td> <td>75</td> <td>21,61 44</td> <td>211,82 1</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1	2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1	3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1																										
3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1																										
<p>Shell-69</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,3461</td> <td>0,28819 2</td> <td>75</td> <td>21,61 44</td> <td>211,82 1</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1	2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1	3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1																										
3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1																										
<p>Shell-70</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,3461</td> <td>0,28819 2</td> <td>75</td> <td>21,61 44</td> <td>211,82 1</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,3461</td> <td>0,04169 71</td> <td>1.600</td> <td>66,71 54</td> <td>653,81 1</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1	2	25,4	0	11,3461	0,28819 2	75	21,61 44	211,82 1	3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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3	3,675	0	11,3461	0,04169 71	1.600	66,71 54	653,81 1																										







		Date Modified: Jun 15 17:23:57 2023						
Shell-31 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	
		Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023						
Shell-33 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	
		Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023						
Shell-35 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	
		Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023						
Shell-37 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	
		Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023						






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<p>Shell-39</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1" data-bbox="521 279 1507 516"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,346</td> <td>0,28818 9</td> <td>75</td> <td>21,61 42</td> <td>211,81 9</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9	3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3																										
<p>Shell-41</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1" data-bbox="521 730 1507 968"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,346</td> <td>0,28818 9</td> <td>75</td> <td>21,61 42</td> <td>211,81 9</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9	3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9																										
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3																										
<p>Shell-43</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1" data-bbox="521 1182 1507 1419"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,346</td> <td>0,28818 9</td> <td>75</td> <td>21,61 42</td> <td>211,81 9</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9	3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9																										
3	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3																										
<p>Shell-45</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1" data-bbox="521 1640 1507 1810"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>11,346</td> <td>0,04169 66</td> <td>1.600</td> <td>66,71 46</td> <td>653,80 3</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>11,346</td> <td>0,28818 9</td> <td>75</td> <td>21,61 42</td> <td>211,81 9</td> </tr> </tbody> </table>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3	2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9								
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
1	3,675	0	11,346	0,04169 66	1.600	66,71 46	653,80 3																										
2	25,4	0	11,346	0,28818 9	75	21,61 42	211,81 9																										







	3	3,675	0	11,346	0,0416966	1.600	66,7146	653,803
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
<p>Shell-47</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,0416966	1.600	66,7146	653,803
	2	25,4	0	11,346	0,288189	75	21,6142	211,819
	3	3,675	0	11,346	0,0416966	1.600	66,7146	653,803
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
<p>Shell-49</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	11,346	0,0416966	1.600	66,7146	653,803
	2	25,4	0	11,346	0,288189	75	21,6142	211,819
	3	3,675	0	11,346	0,0416966	1.600	66,7146	653,803
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Pie Piece Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
<p>Shell-9</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367
	2	25,4	0	2,27973	0,0579052	75	4,34289	42,5603
	3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
<p>Shell-51</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367






	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
	3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
Shell-52 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
	3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
Shell-53 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
	3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
Shell-54 	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
	3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>							
Shell-55	<p>Total number of Plies: 3 Symmetric: Yes</p>							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)



	<table border="1"> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>2,27973</td> <td>0,0579052</td> <td>75</td> <td>4,34289</td> <td>42,5603</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367	2	25,4	0	2,27973	0,0579052	75	4,34289	42,5603	3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367								
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3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367																										
<p>Shell-56</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>2,27973</td> <td>0,0579052</td> <td>75</td> <td>4,34289</td> <td>42,5603</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367	2	25,4	0	2,27973	0,0579052	75	4,34289	42,5603	3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367																										
<p>Shell-57</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>2,27973</td> <td>0,0579052</td> <td>75</td> <td>4,34289</td> <td>42,5603</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367	2	25,4	0	2,27973	0,0579052	75	4,34289	42,5603	3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367
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3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367																										
<p>Shell-10</p> 	<p>Total number of Plies: 3 Symmetric: Yes</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thicknes s(mm)</th> <th>Angle(de g)</th> <th>Area(m ^2)</th> <th>Volume (m^3)</th> <th>Density(kg/m^3)</th> <th>Mass(kg)</th> <th>Weight (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>2,27973</td> <td>0,0579052</td> <td>75</td> <td>4,34289</td> <td>42,5603</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>2,27973</td> <td>0,00837802</td> <td>1.600</td> <td>13,4048</td> <td>131,367</td> </tr> </tbody> </table> <p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)	1	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367	2	25,4	0	2,27973	0,0579052	75	4,34289	42,5603	3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367
Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)																										
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3	3,675	0	2,27973	0,00837802	1.600	13,4048	131,367																										
<p>Shell-58</p>	<p>Total number of Plies: 3 Symmetric: Yes</p>																																



	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
	3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>								
Shell-59 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7	
<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>								
Shell-60 	Total number of Plies: 3 Symmetric: Yes							
	Ply	Thicknes s(mm)	Angle(de g)	Area(m ^2)	Volume (m^3)	Density(kg/m^3)	Mass(kg)	Weight (N)
	1	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7
	2	25,4	0	2,27973	0,05790 52	75	4,342 89	42,560 3
3	3,675	0	2,27973	0,00837 802	1.600	13,40 48	131,36 7	
<p>Document Name: G:\003 Fiverr\001 FUTURO HOUSES\uslgtalent-attachments\Rounded Window Surfaces Only.SLDPRT Date Modified: Jun 15 17:23:57 2023</p>								



Study Properties



Study name	100psf M4
Analysis type	Static
Mesh type	Shell Mesh Using Surfaces
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 (G:\003 FIVERR\001 FUTURO HOUSES\USLGTALENT-ATTACHMENTS\20230519 FEA)

Units

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

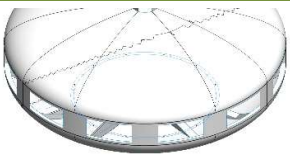


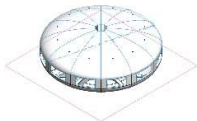
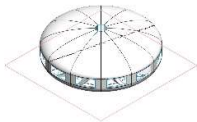
Material Properties

Model Reference	Properties	Components																
Curve Data:N/A																		
<div style="border: 1px solid gray; padding: 5px;"> <p>Composite Options</p> <p><input checked="" type="checkbox"/> Sandwich</p> <p>Total Plies: <input type="text" value="3"/></p> <p><input checked="" type="checkbox"/> Symmetric</p> <p><input type="checkbox"/> All Plies Same Material</p> <p><input type="checkbox"/> Rotate 0° Reference</p> <p><input type="checkbox"/> Ply angles relative to ply 1</p> <p>mm</p> <table border="1"> <thead> <tr> <th>Ply</th> <th>Thickness</th> <th>Angle</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3,675</td> <td>0</td> <td>2xEglass Woven 24oz _CSM 4.7625</td> </tr> <tr> <td>2</td> <td>25,4</td> <td>0</td> <td>HoneyComp</td> </tr> <tr> <td>3</td> <td>3,675</td> <td>0</td> <td>2xEglass Woven 24oz _CSM 4.7625</td> </tr> </tbody> </table> </div>			Ply	Thickness	Angle	Material	1	3,675	0	2xEglass Woven 24oz _CSM 4.7625	2	25,4	0	HoneyComp	3	3,675	0	2xEglass Woven 24oz _CSM 4.7625
Ply	Thickness	Angle	Material															
1	3,675	0	2xEglass Woven 24oz _CSM 4.7625															
2	25,4	0	HoneyComp															
3	3,675	0	2xEglass Woven 24oz _CSM 4.7625															
	<p>Name: 2xEglass Woven 24oz _CSM 4.7625</p> <p>Model type: Linear Elastic Orthotropic</p> <p>Default failure criterion: Max von Mises Stress</p> <p>Yield strength: 1 N/m²</p> <p>Tensile strength in x: 1,23e+08 N/m²</p> <p>Tensile strength in y: 1,23e+08 N/m²</p> <p>Elastic modulus in x: 1,23457e+10 N/m²</p> <p>Elastic modulus in y: 1,23457e+10 N/m²</p> <p>Poisson's ratio in xy: 0,308</p> <p>Mass density: 1.600 kg/m³</p> <p>Shear modulus in xy: 2,49377e+09 N/m²</p>	<p><Material_ComponentList1 /></p>																
Curve Data:N/A																		
	<p>Name: HoneyComp</p> <p>Model type: Linear Elastic Orthotropic</p> <p>Default failure criterion: Max von Mises Stress</p> <p>Yield strength: 1 N/m²</p> <p>Tensile strength in x: 890.000 N/m²</p> <p>Tensile strength in y: 890.000 N/m²</p> <p>Compressive strength in x: 1,55e+06 N/m²</p> <p>Compressive strength in y: 1,55e+06 N/m²</p> <p>Elastic modulus in x: 6,54e+07 N/m²</p> <p>Elastic modulus in y: 6,54e+07 N/m²</p> <p>Poisson's ratio in xy: 0,394</p> <p>Mass density: 75 kg/m³</p> <p>Shear modulus in xy: 1,17e+07 N/m²</p> <p>Shear strength: 520.000 N/m²</p>	<p><Material_ComponentList1 /></p>																
Curve Data:N/A																		

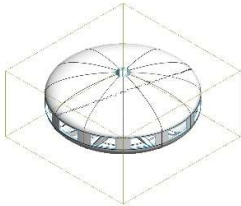


Loads and Fixtures

Fixture name	Fixture Image	Fixture Details		
Immovable-1		Entities: 12 face(s) Type: Immovable (No translation)		
Resultant Forces				
Components	X	Y	Z	Resultant
Reaction force(N)	-31,459	437.511	-28,2278	437.511
Reaction Moment(N.m)	0	0	0	1e-33

Load name	Load Image	Load Details
Pressure-1		Entities: 12 face(s), 1 plane(s) Reference: Top Plane Type: Normal To Plane Value: -4.788 Units: N/m ² Phase Angle: 0 Units: deg
Gravity-1		Reference: Top Plane Values: 0 0 -9,81 Units: m/s ²

Contact Information

Contact	Contact Image	Contact Properties
Global Interaction		Type: Bonded Components: 1 component(s) Options: Independent mesh



Mesh information

Mesh type	Shell Mesh Using Surfaces
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian check for shell	On
Element Size	100 mm
Tolerance	5 mm
Mesh Quality	High

Mesh information - Details

Total Nodes	137192
Total Elements	68208
Time to complete mesh(hh:mm:ss):	00:00:15
Computer name:	

Resultant Forces

Reaction forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	-31,459	437.511	-28,2278	437.511

Reaction Moments

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

Free body forces

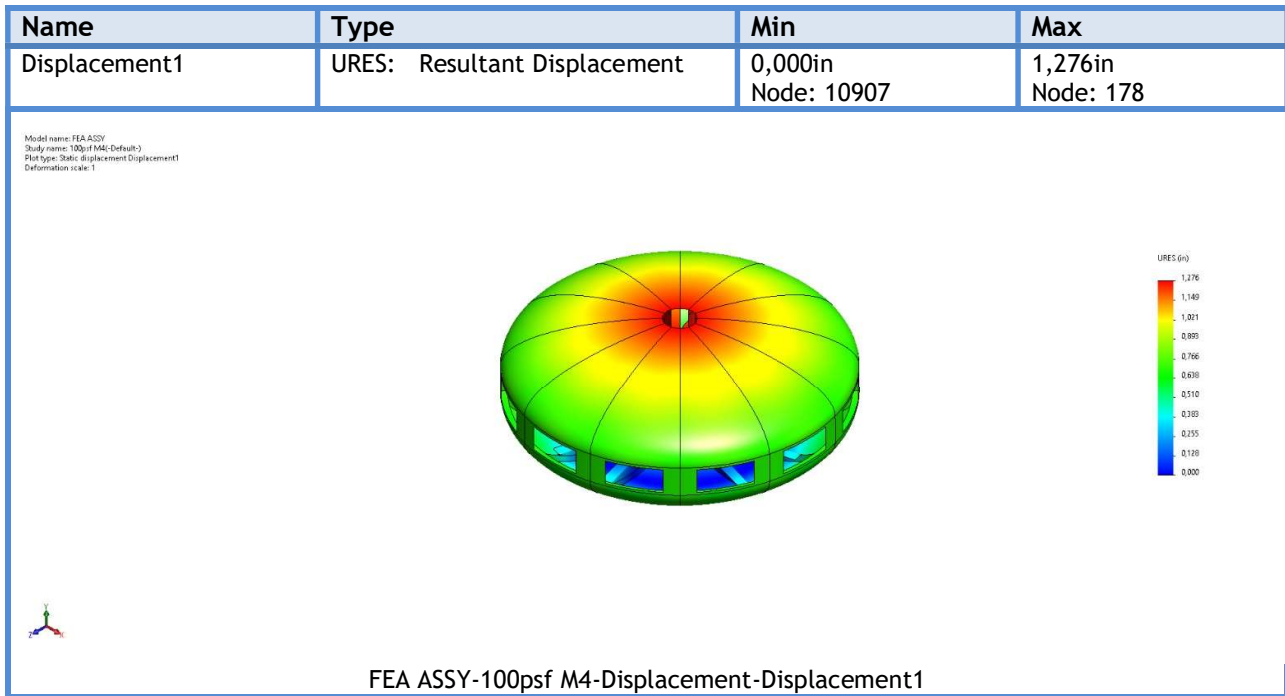
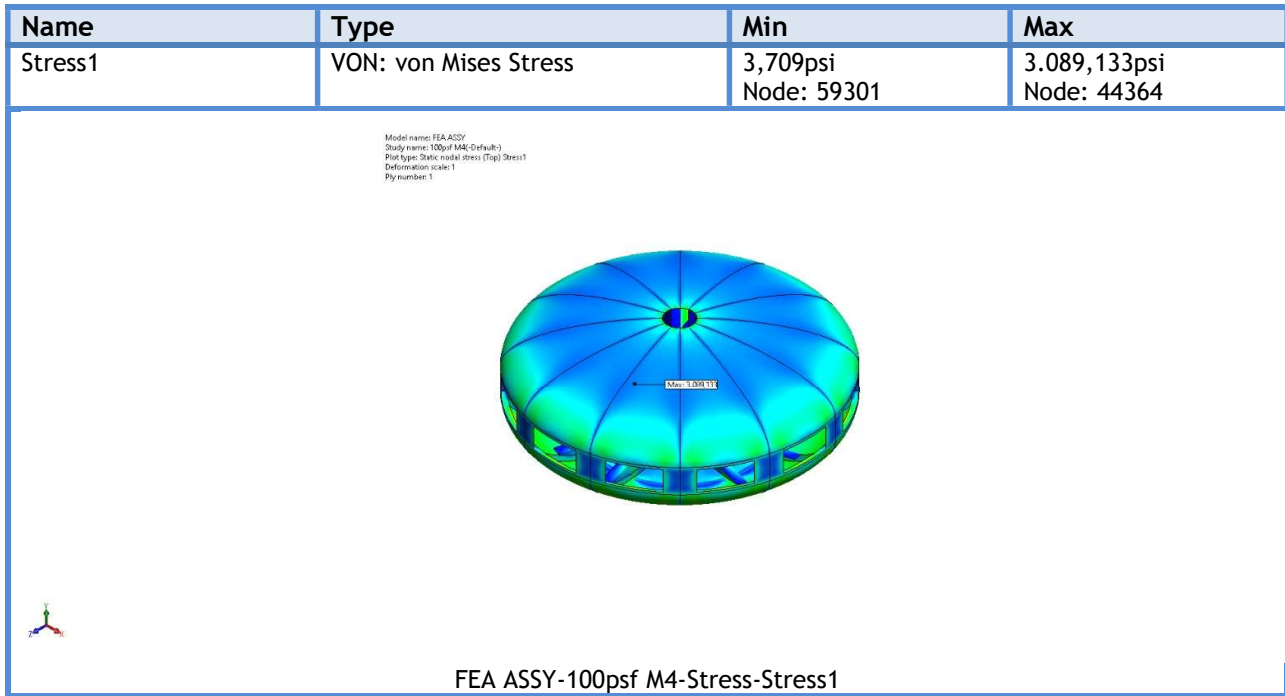
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	0,109116	0,543536	0,177949	0,58224

Free body moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	-0,335142	0,158469	-0,995305	1,0621

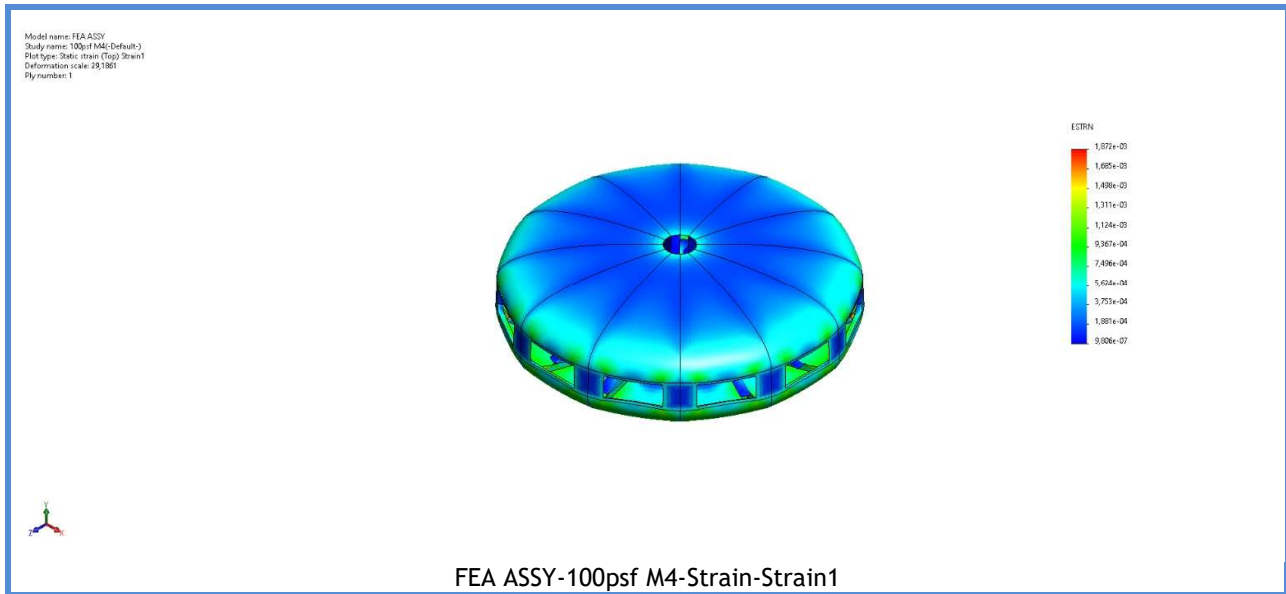


Study Results

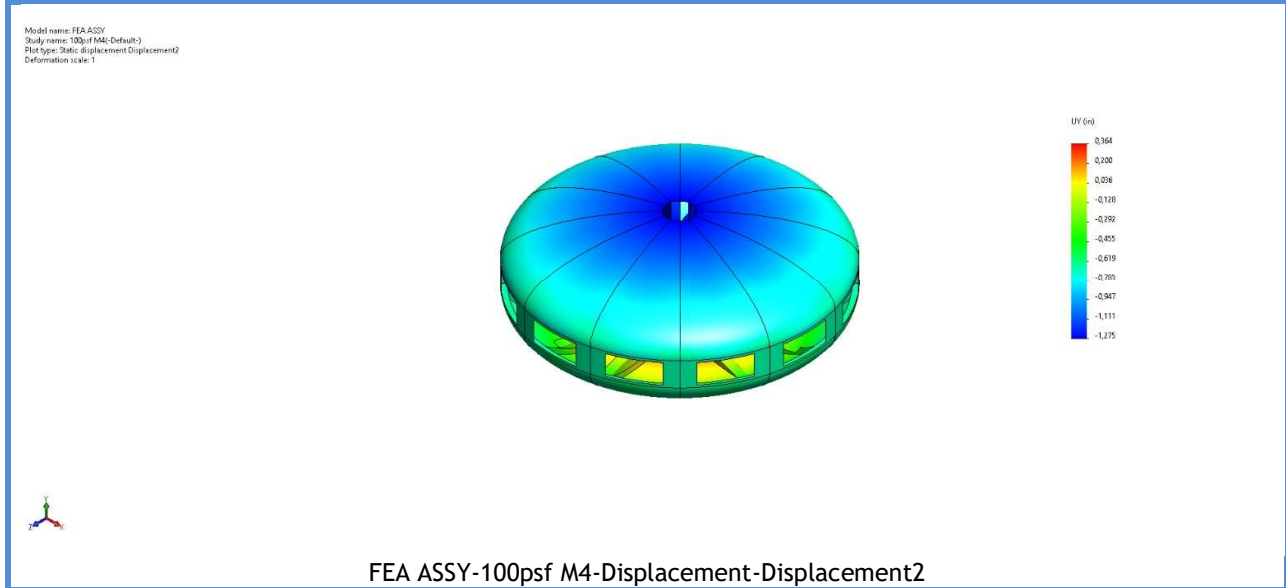


Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	9,806e-07 Element: 34372	1,872e-03 Element: 46639





Name	Type	Min	Max
Displacement2	UY: Y Displacement	-1,275in Node: 178	0,364in Node: 123382



Y Deformation

