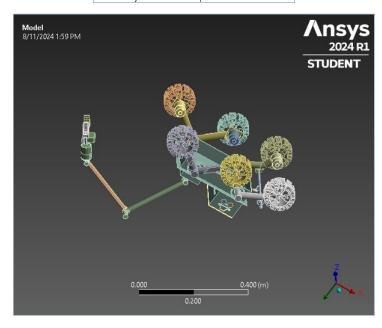
Project* Page 1 of 12



Project*

| | Sunday, August 11, 2024 |
|------------------------------|-------------------------|
| Last Saved | Sunday, August 11, 2024 |
| Product Version | 2024 R1 |
| Save Project Before Solution | No |
| Save Project After Solution | No |



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Contents

- Units
- Model
 - o Geometry Imports
 - Geometry Import
 - o Geometry ■ Parts
 - o Materials
 o Coordinate Systems
 - o Connections
 - Contacts
 - Contact Regions
 - o Mesh
- Material Data
 - o Structural Steel

Report Not Finalized

Not all objects described below are in a finalized state. As a result, data may be incomplete, obsolete or in error. View first state problem. To finalize this report, edit objects as needed

Units

TABLE 1

| Unit System | Metric (m, kg, N, s, V, A) Degrees rad/s Celsius |
|---------------------|--|
| Angle | Degrees |
| Rotational Velocity | rad/s |
| Temperature | Celsius |

Model

TABLE 2

Model > Geometry Imports

| Object Name | Geometry Imports |
|-------------|------------------|
| State | Solved |

TABLE 3

| Model > Geometr | y Imports > Geometry Import |
|-----------------|-----------------------------|
| Ohioot Namo | Coomodes Immode |

| Object Name | Geometry Import | | | | |
|-----------------------------------|---|--|--|--|--|
| State | Solved | | | | |
| | Definition | | | | |
| Source | C:\Users\jajoo\Downloads\Final Assembly v5.iges | | | | |
| Туре | lges | | | | |
| Basic | Geometry Options | | | | |
| Solid Bodies | Yes | | | | |
| Surface Bodies | Yes | | | | |
| Line Bodies | No | | | | |
| Attributes | No | | | | |
| Named Selections | No | | | | |
| Material Properties | No | | | | |
| Advance | d Geometry Options | | | | |
| Use Associativity | Yes | | | | |
| Coordinate Systems | No | | | | |
| Reader Mode Saves Updated File | No | | | | |
| Use Instances | Yes | | | | |
| Smart CAD Update | Yes | | | | |
| Compare Parts On Update | No | | | | |
| Analysis Type | 3-D | | | | |
| Mixed Import Resolution | None | | | | |
| Import Facet Quality | Source | | | | |
| Clean Bodies On Import | No | | | | |
| Stitch Surfaces On Import | None | | | | |
| Decompose Disjoint Geometry | Yes | | | | |
| Enclosure and Symmetry Processing | Yes | | | | |

Geometry

TABLE 4 Model > Geom

| Model > Geometry | | | | | | | | | |
|------------------|---|--|--|--|--|--|--|--|--|
| Object Name | Geometry | | | | | | | | |
| State | Underdefined | | | | | | | | |
| | Definition | | | | | | | | |
| Source | C:\Users\jajoo\Downloads\Final Assembly v5.iges | | | | | | | | |
| Туре | Iges | | | | | | | | |
| Length Unit | Inches | | | | | | | | |
| Element Control | Program Controlled | | | | | | | | |
| Display Style | Body Color | | | | | | | | |
| В | Sounding Box | | | | | | | | |
| Length X | 0.81429 m | | | | | | | | |
| Length Y | 0.52149 m | | | | | | | | |
| Length Z | 0.35169 m | | | | | | | | |
| | Properties | | | | | | | | |
| | | | | | | | | | |

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| Volume | 2.7822e-003 m³ | | | | |
|-----------------------------------|---------------------|--|--|--|--|
| Mass | | | | | |
| Scale Factor Value | 1. | | | | |
| 2D Tolerance | Default (1.e-005) | | | | |
| | Statistics | | | | |
| Bodies | 49 | | | | |
| Active Bodies | 49 | | | | |
| Nodes | 0 | | | | |
| Elements | 0 | | | | |
| Mesh Metric | None | | | | |
| U | pdate Options | | | | |
| Assign Default Material | No | | | | |
| Basic | Geometry Options | | | | |
| Solid Bodies | Yes | | | | |
| Surface Bodies | Yes | | | | |
| Line Bodies | No | | | | |
| Parameters | None | | | | |
| Attributes | No | | | | |
| Named Selections | No | | | | |
| Material Properties | No | | | | |
| Advance | ed Geometry Options | | | | |
| Use Associativity | Yes | | | | |
| Coordinate Systems | No | | | | |
| Reader Mode Saves Updated File | No | | | | |
| Use Instances | Yes | | | | |
| Smart CAD Update | Yes | | | | |
| Compare Parts On Update | No | | | | |
| Analysis Type | 3-D | | | | |
| Mixed Import Resolution | None | | | | |
| Import Facet Quality | Source | | | | |
| Clean Bodies On Import | No | | | | |
| Stitch Surfaces On Import | None | | | | |
| Decompose Disjoint Geometry | Yes | | | | |
| Enclosure and Symmetry Processing | Yes | | | | |
| , , | | | | | |

TABLE 5 Model > Geometry > Parts

| 011 111 | Final | Final | Final | Final | Final | Final | Final | Final | Final | Final | Final | | | |
|---------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|--|--|
| Object Name | Assembly v5- FreeParts | Assembly v5- FreeParts[2] | Assembly v5- FreeParts[3] | Assembly v5- FreeParts[4] | Assembly v5- FreeParts[5] | Assembly v5- FreeParts[6] | Assembly v5- FreeParts[7] | Assembly v5- FreeParts[8] | Assembly v5- FreeParts[9] | Assembly v5- FreeParts[10] | Assembly v5- FreeParts[11] | | | |
| State | | | | | | Underdefined | | | - | | | | | |
| | | | | | Graphics I | | | | | | | | | |
| Visible | | | | | | Yes | | | | | | | | |
| Transparency | | | | | | 1 | | | | | | | | |
| | | | | | Defin | | | | | | | | | |
| Suppressed | | | | | | No | | | | | | | | |
| Dimension | | 3D | | | | | | | | | | | | |
| Model Type | | Shell | | | | | | | | | | | | |
| Stiffness Behavior | | Flexible | | | | | | | | | | | | |
| Stiffness Option | | | | | Mer | mbrane and Ber | nding | | | | | | | |
| Coordinate System | | | | | Defa | ult Coordinate S | System | | | | | | | |
| Reference Temperature | | | | | | By Environmer | nt | | | | | | | |
| Thickness | | | | | | 0. m | | | | | | | | |
| Thickness Mode | | | | | F | Refresh on Upda | ate | | | | | | | |
| Offset Type | | | | | | Middle | | | | | | | | |
| Treatment | | | | | | None | | | | | | | | |
| | | | | | Mate | | | | | | | | | |
| Assignment | | | | | | Structural Stee | ·l | | | | | | | |
| Nonlinear Effects | | | | | | Yes | | | | | | | | |
| Thermal Strain Effects | | | | | | Yes | | | | | | | | |
| | | | | | Boundi | | | | | | | | | |
| Length X | 1.639e-002 m | 5.588e-003 m | 1.0668e-002 m | 5.08e-004 m | 4.8768e-002 m | 5.0799e-004 m | 1.1571e-002 m | 6.5826e-003 m | 1.3578e-002 m | 2.6489e-002 m | 9.216e-003 m | | | |
| Length Y | 5.0799e-004 m | 1.3208e-002 m | 5.0799e-004 m | 5.588e-003 m | 5.0799e-004 m | 5.588e-003 m | 5.0799e-004 m | 1.3208e-002 m | 5.0799e-004 m | 2.7186e-002 m | 5.0801e-004 m | | | |
| Length Z | | | | | | 3.048e-003 m | | | | | | | | |
| | | | | | Prope | | | | | | | | | |
| Volume | | | | | | 0. m³ | | | | | | | | |
| Mass | | | | | | | | | | | | | | |
| Centroid X | 0.20098 m | 0.1905 m | 0.18288 m | 0.1778 m | 0.20193 m | 0.22606 m | 0.22053 m | 0.21196 m | 0.20193 m | 0.18734 m | 0.20193 m | | | |
| Centroid Y | 0.27178 m | 0.26543 m | 0.25908 m | 0.25654 m | 0.254 m | 0.25654 m | 0.25908 m | 0.26543 m | 0.24568 m | 0.23839 m | 0.24204 m | | | |
| Centroid Z | | | | | | 0.15113 m | | | | | | | | |
| Moment of Inertia Ip1 | | | | | | 0. kg·m² | | | | | | | | |
| Moment of Inertia Ip2 | | | | | | 0. kg·m² | | | | | | | | |
| Moment of Inertia Ip3 | | | | | | 0. kg·m² | | | | | | | | |
| Surface Area (approx.) | 4.034e-005 m ² | 3.4743e-005 m ² | 2.5806e-005 m ² | 1.2903e-005 m ² | 1.2258e-004 m² | 1.2903e-005 m² | 2.8101e-005 m ² | 3.5758e-005 m ² | 3.3197e-005 m ² | 1.512e-004 m² | 2.2118e-005 m ² | | | |
| | | | | | Stati | stics | | | | | | | | |
| Nodes | | | | | | 0 | | | | | | | | |
| Elements | | | | | | 0 | | | | | | | | |
| | | | | | | | | | | | | | | |

Mesh Metric None

TABLE 6
Model > Geometry > Parts

| 1 | Model > Geometry > Parts | | | | | | | | | | | | | | |
|---------------------------------------|--|---|---|--|---|---|---|--|---|--|---|--|--|--|--|
| Object Name A | Final Assembly v5- FreeParts[12] | Final Assembly v5- asm1 Base Body | Final Assembly v5- asm1 Leg Shaft | Final Assembly v5- asm1 Leg Shaft[2] | Final Assembly v5- asm1 Rear Legs 2 | Final Assembly v5- asm1 Rear Legs | Final Assembly v5- asm1 Boggie Shaft | Final Assembly v5- asm1 Suspensions | Final Assembly v5- asm1 Suspensions 2 | Final Assembly v5- asm1 24V DC Gear Motor.step | Final Assembly v5- asm1 24V DC Gear Motor.step[2] | | | | |
| State L | Underdefined | | | | | | Fully Defined | | • | | | | | | |
| | | Graphics Properties | | | | | | | | | | | | | |
| Visible Transparency | Yes 1 | | | | | | Yes 1 | | | | | | | | |
| Папэрагенсу | | | Definition | | | | | | | | | | | | |
| Suppressed | No | No | | | | | | | | | | | | | |
| Dimension | 3D | | | | | | | | | | | | | | |
| Model Type Stiffness | Shell | | | | | | | | | | | | | | |
| Behavior | Flexible | | | | | | Flexible | | | | | | | | |
| | Membrane | | | | | | | | | | | | | | |
| | and Bending Default | | | | | | | | | | | | | | |
| Coordinate System | Coordinate | | Default Coordinate System | | | | | | | | | | | | |
| - | System | | | | | | | | | | | | | | |
| Reference Temperature | By Environment | | | | | | By Environme | nt | | | | | | | |
| Thickness | 0. m | | | | | | | | | | | | | | |
| Thickness Mode | Refresh on | | | | | | | | | | | | | | |
| Offset Type | Update Middle | | | | | | | | | | | | | | |
| Treatment | None | | | | | | None | | | | | | | | |
| Reference | | | | | | | Lagrangian | | | | | | | | |
| Frame | | | | | | Material | | | | | | | | | |
| Assignment | Structural Steel | | | | | | Structural Ste | el | | | | | | | |
| Nonlinear Effects | Yes | | | | | | Yes | | | | | | | | |
| Thermal Strain Effects | Yes | | | | | | Yes | | | | | | | | |
| ' | | | | | | Bounding B | | | | | | | | | |
| Length | 2.6489e-002 m | 0.30483 m | 0.28664 m | 0.28516 m | 0.149 | 913 m | 1.0797e-002 m | 2.9074e-002 m | 3.7812e-002 m | 3.9301e-002 m | 3.9734e-002 m | | | | |
| Length Y 2 | 2.7186e-002 m | 0.129 m | 0.14085 m | 0.13768 m | 0.146 | 649 m | 3.0668e-002 m | 2.1629e-002 m | 2.1508e-002 m | 3.9297e-002 m | 3.973e-002 m | | | | |
| Length Z 3 | 3.048e-003 m | 0.2032 m | | 0.10 | 016 m | | 0.3048 m | 1.2e-002 m | 9.8e-003 m | | e-002 m | | | | |
| | | | | | 1 | Properties | | | 1 | | | | | | |
| Volume | 0. m³ | 3.6668e-004 m³ | 1.6232e | | 1.2086e-004 m³ | m³ | 2.4218e-005 m³ | 1.3093e-006 m ³ | 1.0768e-006 m³ | | -005 m³ | | | | |
| Mass | | 2.8784 kg | 1.274 | | 0.94874 kg | 0.94776 kg | 0.19011 kg | 1.0278e-002 kg | 8.4526e-003 kg | | 87 kg | | | | |
| Centroid X | 0.21652 m | 0.12406 m | 1.7242e- 002 m | 1.7608e- 002 m | 0.24748 m | 0.24743 m | 0.29514 m | 0.27032 m | 0.27619 m | -9.9559e- 002 m | -0.10065 m | | | | |
| | 0.23839 m | 0.20879 m | 0.144 | | 0.15434 m | 0.15435 m | 0.15755 m | 0.18851 m | 0.18599 m | m | 8.1102e-002 m | | | | |
| | 0.15113 m | 0.24371 m | 0.34938 m | 0.13804 m | 0.3473 m | 0.14014 m | 0.0500000 | 0.24371 m | | 0.15564 m | 0.33178 m | | | | |
| Moment of Inertia Ip1 Moment of | 0. kg·m² | 1.3815e-002 kg·m² 3.6488e-002 | 5.011e-0 | | 2.4497e-003 kg·m² | 2.4471e-003 kg·m² 2.7756e-003 | 3.2562e-006 kg·m² 1.4306e-003 | 4.0837e-007 kg·m² | 6.9208e-007 kg·m² | 8.2725e-0 | 005 kg·m² | | | | |
| Inertia Ip2 Moment of | 0. kg·m² | kg·m² 2.7153e-002 | 4.0586e-0 | | kg·m² 4.741e-004 | kg·m² 4.7368e-004 | 1.4306e-003 kg·m² 1.4298e-003 | 2.1607e-007 kg·m² | 5.1542e-008 kg·m² | | 004 kg·m² | | | | |
| Inertia lp3 | 0. kg·m² 1.512e-004 | kg·m² | 1.7825e-0 | 03 kg·m² | kg·m² | kg·m² | kg·m² | 3.9293e-007 kg·m² | 6.9372e-007 kg·m² | 1.5802e-0 | 004 kg·m² | | | | |
| (approx.) | m ² | | | | | Statistics | | | | | | | | | |
| | | | | | | J.L | 0 | | | | | | | | |
| Nodes | 0 | | | | | | | | | | | | | | |
| Nodes Elements Mesh Metric | 0 0 None | | | | | | 0 None | | | | | | | | |

TABLE 7
Model > Geometry > Parts

| | | | | | | Model > Geomet | ry > Parts | | | | |
|--------------------------|--|--|--|--|--|---------------------------------------|--|--|--|--|-------------------|
| Object Name | Final Assembly v5- asm1 24V DC Gear Motor.step [3] | Final Assembly v5- asm1 24V DC Gear Motor.step [4] | Final Assembly v5- asm1 24V DC Gear Motor.step [5] | Final Assembly v5- asm1 24V DC Gear Motor.step [6] | Final Assembly v5- asm1 24V DC Gear Motor.step [7] | Final Assembly v5- asm1 WHeeeeeeel | Final Assembly v5- asm1 WHeeeeeeel [2] | Final Assembly v5- asm1 WHeeeeeeel [3] | Final Assembly v5- asm1 WHeeeeeeel [4] | Final Assembly v5- asm1 WHeeeeeeel [5] | Final A asm1 I |
| State | | | | | | | Fully Defined | | | | |
| | | | | | | Graphi | cs Properties | | | | |
| Visible | | | | | | | Yes | | | | |
| Transparency | | | | | | | 1 | | | | |
| | | | | | | D | efinition | | | | |
| Suppressed | | | | | | | No | | | | |
| Stiffness Behavior | | | | | | | Flexible | | | | |
| Coordinate System | | | | | | De | fault Coordinate Syst | tem | | | |
| Reference Temperature | | | | | | | | | | | |
| Treatment | | | | | | - | None | - | - | - | |
| Reference Frame | | | | | | | Lagrangian | | | | |

| | | | | | | | М | aterial | | | | | | | |
|--------------------------|--------------------------------|-------------------|------------------------|----------------------------|----------------------------|-----------------|------------------------|-----------|--------------------|-------------------|---------------------|------------------|----------|---|---------|
| Assignment Nonlinear | | | | | | | | | ural Steel Yes | | | | | | |
| Effects Thermal | | | | | | | | | Yes | | | | | | |
| Strain Effects | | | | | | | Boun | nding Bo | | | | | | | |
| Length X | 4.1159e | -002 m | 3.9301e- 002 m | 3.9734e- 002 m | 7.9474e- 002 m | 0.13 | 3602 m | 0.14 | 1498 m | | 0.162 | 282 m | | 0.12423 m | 0 |
| Length Y | 4.1155e | -002 m | 3.9297e- 002 m | 3.973e- 002 m | 9.0847e- 002 m | 0.13 | 3605 m | 0.14 | 1495 m | | 0.162 | 283 m | | 0.12427 m | 0 |
| Length Z | | 8.3219 | e-002 m | | 4.0325e- 002 m | | | | | | 5.1803 | e-002 m | | | |
| Volume | | 6 | .0238e-005 r | n³ | | I | Pro | perties | | | 1 80816 | e-004 m³ | | | |
| Mass | | | 0.47287 kg | | -0.32606 | | | | | | | 94 kg | | | |
| Centroid X | 0.322 | 56 m | 0.13393 m 7.8279e- | 0.13281 m 7.6982e- | m | -0.10 | 0065 m | 0.13 | 3282 m | 0.13 | 393 m | -9.9558 | 8e-002 m | 0.32255 m | 0 |
| Centroid Y Centroid Z | 7.6478e | | 002 m | 002 m 0.33178 m | 0.36881 m | 8.1112 | 2e-002 m 0.3933 | | 7e-002 m | 7.8289 | 0.4051 | 7.979 e-002 m | e-002 m | 7.6486e-002 m 0.39387 m | 7.6· |
| Moment of | 0.15514 111 | | 725e-005 kg | | 0.23/ 13 111 | | 0.3933 | 57 111 | | | | 003 kg·m² | 2 | 0.39367 111 | 9.3 |
| Inertia Ip1 | | 1.5 | 796e-004 kg | ·m² | | | | | | | 1.7195e- | 003 kg·m² | 2 | | |
| Inertia Ip2 | | 1.5 | 802e-004 kg | ·m² | | | | | | | 1.7187e- | 003 kg·m² | 2 | | |
| Inertia Ip3 | | | | | | | Sta | atistics | | | | | | | |
| Nodes Elements | | | | | | | | | 0 | | | | | | |
| Mesh Metric | | | | | | | | N | lone | | | | | | |
| | | | | | | Mode | TABLE 8 I > Geometr | | s | | | | | | |
| | Final Assembly | Final Assembly | Final Assembly | Final | | ssembly | | | Final Assen | nhlv v5- | Final Asse | mhly v5- | | | |
| Object Name | v5- asm1 Hand | v5- asm1 Arm | v5- asm1 Arm | Assembly v5 asm1 Grippe | r asm1 EL | ECTRIC | Final Assen | | asm1 grippe (2) | | asm1 gripp (2)[| er Part3 | | inal Assembly v5- er Estrella_Predeter | rminado |
| | System Arm 01 | 02 | 02[2] | Motor Cup | BOX D | HAKNA | | | (-) | | | -, | | | |
| State | | | | | | | | | Graphic | Fully cs Prope | Defined erties | | | | |
| Visible Transparency | | | | | | | | | | | Yes 1 | | | | |
| Suppressed | | | | | | | | | De | efinition | No | | | | |
| Stiffness Behavior | | | | | | | | | | FI | exible | | | | |
| Coordinate System | | | | | | | | | De | fault Coo | rdinate Sys | stem | | | |
| Reference Temperature | | | | | | | | | | By En | vironment | | | | |
| Treatment Reference | | | | | | | | | | | Vone | | | | |
| Frame | | | | | | | | | N | Lag Material | rangian | | | | |
| Assignment Nonlinear | | | | | | | | | | | ural Steel | | | | |
| Effects Thermal | | | | | | | | | | | Yes | | | | |
| Strain Effects | | | | | | | | | Pour | nding Bo | Yes | | | | |
| Length X | 2.7547e- 002 m | 0.13952 m | 0.25857 m | 7.5336e-00 | 0.10 | 16 m | 4.7813e-0 | 002 m | Dou | 4.26e- | | | | 1.4917e-002 m | |
| Length Y | 8.9604e- 002 m | 0.25056 m | 0.12101 m | 8.6398e-000 m | 2 2.e-0 | 003 m | 5.4491e-0 | 002 m | | 4.70976 | -002 m | | | 1.3723e-002 m | |
| Length Z | 3.8556e- 002 m | 5.3052e- 002 m | 5.4991e- 002 m | 3.7839e-00 | 2 0.17 | 78 m | 0.10424 | 4 m | | 2.21896 | e-002 m | | | 3.6542e-002 m | |
| | | 1 | | 2.04570.00 | = | | 1 | | Pr | operties | | | | | |
| Volume | 4.0082e- 005 m ³ | | e-005 m³ | 2.0457e-00: m³ | 3.01296 | e-005 m³ | 1.8164e-0 | | | 5.5009e | | | | 6.779e-007 m ³ | |
| Mass Centroid X | 0.31464 kg 4.9619e- | -9.9682e- | -0.18618 | 0.16059 kg -0.31486 m | | 861 kg 197 m | -0.3627 | | -0.3721 | 4.3182e 3 m | -002 kg -0.378 | 39 m | | 5.3215e-003 kg -0.36908 m | |
| Centroid Y | 002 m 0.24461 m | | 0.45511 m | 0.38546 m | 0.28 | 195 m | 0.3144 | 7 m | 0.2951 | 7 m | 0.2984 | 19 m | | 0.32091 m | |
| Centroid Z Moment of | 0.24699 m 2.2779e- | | 0.24921 m 003 kg·m² | 0.23694 m 1.0215e-00 | 4 2.440 | 371 m 6e-004 | 0.23929 3.8403e-00 | | 0.2791 | | 0.1974 006 kg·m² | 1/ m | 3 | 0.23848 m 3.9567e-007 kg·m² | |
| Inertia lp1 Moment of | 004 kg·m² 2.7683e- | | 005 kg·m² | kg·m² 3.2381e-00 | 5 9.911 | ·m² 2e-004 | 1.1333e-00 | | | 2.811e-0 | | | | .1396e-007 kg·m² | |
| Inertia Ip2 Moment of | 005 kg·m² 2.2304e- | | 003 kg·m² | kg·m² 1.0394e-00 | 7.472 | ·m² 4e-004 | 1.5041e-00 | | | | 00 kg·m² | | | 2.9102e-008 kg·m² | |
| Inertia Ip3 | 004 kg·m² | | - 20 | kg·m² | kg | ·m² | 1.55776 00 | | | tatistics | | | | | |
| Nodes Elements | | | | | | | | | | | 0 | | | | |
| Mesh Metric | | | | | | | | | | 1 | None | | | | |
| | | | | | | Mode | TABLE 9 | | s | | | | | | |
| Object I | | Final Asser | | | al Assembly 1 gripper P | v5- | Fina | al Assem | | | Final Asser | | | Final Assembly v5- asm1 gripper Part2[| |
| | State | | | , | | | | Fully Def | | | .5 11 | | | | - |

| | | Gra | phics Properties | | | | | | | | | | |
|---------------------------|----------------------------|---------------|---------------------------|------------|------------|--|--|--|--|--|--|--|--|
| Visible | | | Yes | | | | | | | | | | |
| Transparency | | | 1 | | | | | | | | | | |
| | | | Definition | | | | | | | | | | |
| Suppressed | | | | | | | | | | | | | |
| Stiffness Behavior | | Flexible | | | | | | | | | | | |
| Coordinate System | | | Default Coordinate System | | | | | | | | | | |
| Reference Temperature | | | By Environment | | | | | | | | | | |
| Treatment | | | None | | | | | | | | | | |
| Reference Frame | | | Lagrangian | | | | | | | | | | |
| · | | | Material | | | | | | | | | | |
| Assignment | | | Structural Steel | | | | | | | | | | |
| Nonlinear Effects | | | Yes | | | | | | | | | | |
| Thermal Strain Effects | | | Yes | | | | | | | | | | |
| | | E | Bounding Box | | | | | | | | | | |
| Length X | 1.3946e-002 m | 1.4069e-002 m | 1.3002e-002 m | 3.9718€ | -002 m | | | | | | | | |
| Length Y | 1.1759e-002 m | 1.6348e-002 m | 2.1913e-002 m | 4.3716€ | -002 m | | | | | | | | |
| Length Z | 1.3079e-002 m | 3.432e-002 m | 3.6708e-002 m | 2.79686 | -002 m | | | | | | | | |
| | • | | Properties | | | | | | | | | | |
| Volume | 2.9294e-007 m ³ | 5.6828 | e-007 m³ | 5.0043e | -006 m³ | | | | | | | | |
| Mass | 2.2996e-003 kg | 4.461€ | e-003 kg | 3.9284e | -002 kg | | | | | | | | |
| Centroid X | -0.34465 m | -0.36667 m | -0.37511 m | -0.38426 m | -0.38928 m | | | | | | | | |
| Centroid Y | 0.34118 m | 0.32569 m | 0.32194 m | 0.27471 m | 0.27737 m | | | | | | | | |
| Centroid Z | 0.23743 m | 0.26709 m | 0.21026 m | 0.27112 m | 0.20558 m | | | | | | | | |
| Moment of Inertia | 2.2627e-008 kg·m² | 2.5522e- | 008 kg·m² | 7.9807e-0 | 06 kg·m² | | | | | | | | |
| Moment of Inertia | 2.324e-008 kg·m² | 3.513e-0 | 007 kg·m² | 3.1539e-0 | 06 kg·m² | | | | | | | | |
| Moment of Inertia | 3.7995e-008 kg·m² | 3.7013e- | 007 kg·m² | 7.4727e-0 | 06 kg·m² | | | | | | | | |
| | | | Statistics | | | | | | | | | | |
| Nodes | | | 0 | · | | | | | | | | | |
| Elements | <u> </u> | <u> </u> | 0 | | | | | | | | | | |
| Mesh Metric | | | None | | | | | | | | | | |

TABLE 10 Model > Materials

| Widdel - Waterials | | | | | | |
|----------------------|---------------|--|--|--|--|--|
| Object Name | Materials | | | | | |
| State | Fully Defined | | | | | |
| Statistics | | | | | | |
| Materials | 1 | | | | | |
| Material Assignments | 0 | | | | | |

Coordinate Systems

| ••• | BLE 11 | | | | | | |
|----------------------|---------------------------|--|--|--|--|--|--|
| | stems > Coordinate System | | | | | | |
| Object Name | Global Coordinate System | | | | | | |
| State | Fully Defined | | | | | | |
| De | Definition | | | | | | |
| Туре | Cartesian | | | | | | |
| Coordinate System ID | 0. | | | | | | |
| (| Origin | | | | | | |
| Origin X | 0. m | | | | | | |
| Origin Y | 0. m | | | | | | |
| Origin Z | 0. m | | | | | | |
| Direction | onal Vectors | | | | | | |
| X Axis Data | [1.0.0.] | | | | | | |
| Y Axis Data | [0. 1. 0.] | | | | | | |
| Z Axis Data | [0. 0. 1.] | | | | | | |
| Transfe | r Properties | | | | | | |
| Source | | | | | | | |
| Read Only | No | | | | | | |

Connections

TABLE 12 Model > Connections

| woder > Connections | |
|--|---------------|
| Object Name | Connections |
| State | Fully Defined |
| Auto Detection | |
| Generate Automatic Connection On Refresh | Yes |
| Transparency | |
| Enabled | Yes |
| Statistics | |
| Contacts | 47 |
| Active Contacts | 47 |
| Joints | 0 |
| Active Joints | 0 |
| Beams | 0 |
| Active Beams | 0 |
| Bearings | 0 |
| Active Bearings | 0 |
| Springs | 0 |
| Active Springs | 0 |
| Body Interactions | 0 |
| | |
| | |

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Active Body Interactions 0

TABLE 13
Model > Connections > Contacts

| Model > Connection | Model > Connections > Contacts | | | | | | |
|---------------------------|--------------------------------|--|--|--|--|--|--|
| Object Name | Contacts | | | | | | |
| State | Fully Defined | | | | | | |
| Definition | | | | | | | |
| Connection Type | Contact | | | | | | |
| Scope | | | | | | | |
| Scoping Method | Geometry Selection | | | | | | |
| Geometry | All Bodies | | | | | | |
| Auto Detec | tion | | | | | | |
| Tolerance Type | Slider | | | | | | |
| Tolerance Slider | 0. | | | | | | |
| Tolerance Value | 2.5723e-003 m | | | | | | |
| Use Range | No | | | | | | |
| Face/Face | Yes | | | | | | |
| Face-Face Angle Tolerance | 75. ° | | | | | | |
| Face Overlap Tolerance | Off | | | | | | |
| Cylindrical Faces | Include | | | | | | |
| Face/Edge | No | | | | | | |
| Edge/Edge | No | | | | | | |
| Priority | Include All | | | | | | |
| Group By | Bodies | | | | | | |
| Search Across | Bodies | | | | | | |
| Statistic | S | | | | | | |
| Connections | 47 | | | | | | |
| Active Connections | 47 | | | | | | |
| | | | | | | | |

TABLE 14

| Model > Connections > Contacts > | Contact Regions |
|----------------------------------|-----------------|

| Color Color Contact Contact Contact Contact Contact Region Section Contact | | | | | | Model > Connection | Jiis - Contact | s > Contact Region | | | | |
|--|-------------------|-----------------------------|--|------------------------------|------------------------------|--|--|----------------------|--|--|---------------------------------------|-------------------|
| Scoping | | Contact Region | Contact Region 2 | Contact Region 3 | Contact Region 4 | Contact Region 5 | Region 6 | - | Contact Region 8 | Contact Region 9 | Contact Region 10 | Contact Region 11 |
| Scoping Method 2 Faces 5 Faces 2 Faces 1 Face 2 Faces | State | | | | | | Fully | Defined | | | | |
| Method Contact Conta | | | | | | | Scope | | | | | |
| Second S | Scoping Method | | | | | | Geomet | ry Selection | | | | |
| Contact Cont | | | 2 F | aces | | 5 Faces | 2 Faces | 1 Face | 2 Fa | aces | 1 F | ace |
| Final Assembly A | | 3 F: | | | aces | | 2 . 0000 | | | | | |
| Final Assembly A | | 0.1 | | | | | | | | | | |
| Final Bodies Sambully Sambu | | | | Fir | nal Assembly | v5-asm1 Base Body | | | | | embly v5-asm1 Leg S | Shaft |
| Type | | Assembly v5- asm1 Leg | Assembly v5- asm1 Leg | Assembly v5- asm1 Rear | Assembly v5- asm1 Rear | Final Assembly v5- asm1 Suspensions | Assembly v5- asm1 Hand System Arm | v5- asm1 ELECTRIC | Assembly v5- asm1 24V DC Gear Motor.step | Assembly v5- asm1 24V DC Gear Motor.step | Final Assembly v5- asm1 WHeeeeeeel | asm1 WHeeeeeeel |
| Type | Protected | | | | | • | | No | • | • | | |
| Type | | | | | | | Definition | | | | | |
| Scope Mode Automatic Behavior Program Controlled | Type | | | | | | | onded | | | | |
| Behavior Program Controlled Trim Contract Program Controlled | | | | | | | | | | | | |
| Trim 2.5723e-003 m Trim 2.5723e-003 m Maximum Offset 1.e-007 m Offset No Breakable No Contact APDL Name Target APDL Name No Suppressed No Advanced Formulation No Small Siting Program Controlled Small Siting Program Controlled Detection Program Controlled Method Program Controlled Penetration Program Controlled Tildreance Program Controlled Elastic Silp Program Controlled Siffness Program Controlled Update Siffness Program Controlled Update Siffness Program Controlled Electric Conductance | | | | | | | | | | | | |
| Trim Tolerance 2.5723e-003 m Maximum Offset 1.e-007 m Orset No Contact APDL Name No Target APDL Name No Sypressed No Element Normals Hormals Advance Formulation Program Controlled Small Silding Program Controlled Detection Method Program Controlled Penetration Tolerance Program Controlled Elastic Silp Tolerance Program Controlled Normal Siffness Program Controlled Stiffness Program Controlled Update Siffness Program Controlled Thermal Conductance Program Controlled Electric Region Program Controlled Restitution Factor Program Controlled | | | | | | | | | | | | |
| Tolerance | | | | | | | | | | | | |
| Maximum Offset 1.e-007 m | | | | | | | 2.572 | 3e-003 m | | | | |
| Offset Breakable No Contact APDL Name No Target APDL Name No Suppressed No Uspressed No Element Nomals No Formulation Program Controlled Small Sliding Program Controlled Detection Method Program Controlled Penetration Tolerance Program Controlled Elastic Slip Tolerance Program Controlled Normal Stiffness Program Controlled Update Stiffness Program Controlled Thermal Conductance Program Controlled Electric Conductance Program Controlled Region Program Controlled Restitution Factor Program Controlled | | | | | | | | | | | | |
| Breakable | | | | | | | 1.e | -007 m | | | | |
| Contact | | | | | | | | No | | | | |
| APDL Name Supressed No No Supressed Su | | | | | | | | INO | | | | |
| Target APDL Name No | | | | | | | | | | | | |
| Name Suppressed No | | | | | | | | | | | | |
| Suppressed No | | | | | | | | | | | | |
| Belement Normals | | | | | | | | No | | | | |
| Element Normals No | Опррисовси | | | | | | | 110 | | | | |
| Normals Formulation Small Sliding Detection Method Penetration Tolerance Elastic Slip Tolerance Normal Stiffness Update Stif | Flement | | | | | | | | | | | |
| Formulation | | | | | | | | No | | | | |
| Formulation Small Sliding Detection Method Penetration Tolerance Elastic Slip Tolerance Normal Stiffness Update Stiffness Thermal Conductance Electric Condu | 1101111410 | | | | | | Advanced | | | | | |
| Small Sliding Program Controlled Detection Method Program Controlled Penetration Tolerance Program Controlled Elastic Slip Tolerance Program Controlled Normal Stiffness Program Controlled Update Stiffness Program Controlled Thermal Conductance Program Controlled Electric Capacitance Program Controlled Pinball Region Program Controlled Restitution Factor Program Controlled | Formulation | | | | | | | Controlled | | | | |
| Detection Method Program Controlled Program Control | | | | | | | | | | | | |
| Method Penetration Tolerance Elastic Slip Tolerance Normal Stiffness Update Stiffness Thermal Conductance Electric Conductance Electric Capacitance Program Controlled | | | | | | | Flogran | Controlled | | | | |
| Penetration Tolerance Elastic Slip Tolerance Normal Stiffness Program Controlled Program Controlled Update Stiffness Program Controlled | | | | | | | Progran | n Controlled | | | | |
| Elastic Slip Tolerance Normal Stiffness Update Stiffness Program Controlled Program Controlled Stiffness Program Controlled Program Controlled Electric Conductance Electric Conductance Electric Capacitance Program Controlled | Penetration | | | | | | Progran | n Controlled | | | | |
| Tolerance Normal Stiffness Update Stiffness Update Stiffness Thermal Conductance Electric Conductance Electric Capacitance Program Controlled | | | | | | | | | | | | |
| Normal Stiffness Update Stiffness Thermal Conductance Electric Conductance Electric Capacitance Program Controlled | | | | | | | Progran | n Controlled | | | | |
| Stiffness Update Stiffness Thermal Conductance Electric Conductance Electric Capacitance Program Controlled Restitution Factor | | | | | | | | | | | | |
| Update Stiffness Thermal Conductance Electric Conductance Electric Capacitance Program Controlled | | | | | | | Progran | n Controlled | | | | |
| Stiffness Thermal Conductance Electric Conductance Electric Conductance Electric Capacitance Program Controlled | | | | | | | | | | | | |
| Thermal Conductance Electric Conductance Electric Capacitance Flogram Controlled Program Controlled Restitution Factor | | | | | | | Progran | n Controlled | | | | |
| Conductance Electric Conductance Electric Capacitance Program Controlled Restitution Factor Program Controlled Program Controlled | | | · | | | | | | | | | |
| Electric Conductance Electric Capacitance Pinball Region Restitution Factor Program Controlled | | | Program Controlled | | | | | | | | | |
| Conductance Electric Capacitance Program Controlled Restitution Factor Program Controlled | | | | | | | | | | | | |
| Electric Capacitance Pinball Program Controlled Pegion Program Controlled Restitution Factor Program Controlled Program Controlled Program Controlled Program Controlled | | | Program Controlled | | | | | | | | | |
| Pinball Region Program Controlled Restitution Factor 1 | Electric | | Program Controlled | | | | | | | | | |
| Restitution 1 | Pinball | | | | | | | | | | | |
| Factor | Restitution | | , and the second | | | | | | | | | |
| RBD Contact Program Controlled | ractor | | | | | | | | | | | |
| • | RBD Contact | | | | | | Progran | n Controlled | | | | |
| | | 1 | | | | | | | | | | |

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| Detection | ıl | | | | | | | | | | |
|-------------------------------------|---|---|--|--|--|------------------------|--|--|---|--|---|
| Dotootion | | | | | Geometric | Modification | on | | | | |
| Contact Geometry Correction | , | | | | | None | | | | | |
| Target Geometry Correction | , | | | | | None | | | | | |
| | | | | Model > Co | | BLE 15 Contacts > 0 | Contact Regions | | | | |
| Object Name | Contact | Contact Region 13 | Contact Region 14 | Contact Region 15 | Contact Region 16 | Contact Region 17 | Contact Region 18 | Contact Region 19 | Contact Region 20 | Contact Region 21 | Contact Region |
| State | Region 12 | Region 13 | | | Region 10 | Fully De | fined | Region 19 | Region 20 | | |
| | | | | | | Scope | | | | | |
| Scoping Method | | | | | | Geometry S | Selection | | | | |
| Contact | 2 Fa | aces | | 1 Face | | | 2 Faces | 1 Face | | 2 Faces | |
| Target | | ace | 2 Fa | aces | 1 Face | | 2 Faces | 1 Face | | 2 Faces | |
| Contact Bodies | | Final Ass | embly v5-asm1 Leg \$ | Shaft[2] | Final Ass | embly v5-as | m1 Rear Legs 2 | Final As | sembly v5-a | sm1 Rear Legs | Final Assemb v5-asm1 Bogg Shaft |
| Target Bodies | Final Assembly v5- asm1 24V DC Gear Motor.step | Final Assembly v5- asm1 24V DC Gear Motor.step | Final Assembly v5- asm1 WHeeeeeeel [3] | Final Assembly v5- asm1 WHeeeeeeel [4] | Final Assembly v5- asm1 Boggie Shaft | Motor.step | Final Assembly v5- asm1 WHeeeeeeel [5] | Final Assembly v5- asm1 Boggie Shaft | Final Assembly v5- asm1 24V DC Gear Motor.step | Final Assembly v5- asm1 WHeeeeeeel [6] | Final Assemb v5- asm1 Suspensi 2 |
| Protected | Wiotor.stcp | [5] | | | | [4] No | | | [3] | | |
| Protected | | | | | D | efinition | | | | | |
| Туре | | | | | | Bond | | | | | |
| Scope Mode | | | | | | Autom | | | | | |
| Behavior Trim Contact | | | | | | Program Co | | | | | |
| Trim | | | | | | 2.5723e- | | | | | |
| Tolerance | | | | | | 2.37236= | 003 111 | | | | |
| Maximum Offset | | | | | | 1.e-00 | 7 m | | | | |
| Breakable | | | | | | No | | | | | |
| Contact APDL Name Target APDL | | | | | | | | | | | |
| Name | | | | | | | | | | | |
| Suppressed | | | | | | No | | | | | |
| Element | | | | | <u> </u> | Display | | | | | |
| Normals | | | | | | No | | | | | |
| | | | | | A | dvanced | | | | | |
| Formulation Small Sliding | | | | | | Program Co | | | | | |
| Detection Method | | Program Controlled Program Controlled | | | | | | | | | |
| Penetration Tolerance | | | | | | Program Co | ontrolled | | | | |
| Elastic Slip Tolerance | | | | | | Program Co | ontrolled | | | | |
| Normal Stiffness | | | | | | Program Co | ontrolled | | | | |
| Update Stiffness | | | | | | Program Co | ontrolled | | | | |
| Thermal | | | | | | Program Co | ontrolled | | | | |

Electric Conductance Program Controlled Electric Program Controlled

Pinball Region Program Controlled

Region
Restitution
Factor
RBD Contact
Detection Program Controlled **Geometric Modification**

Contact Geometry Correction None Target Geometry Correction None

TABLE 16
Model > Connections > Contacts > Contact Regions

1

| Object Name | Contact Region 23 | Contact Region 24 | Contact Region 25 | Contact Region 26 | Contact Region 27 | Contact Region 28 | Contact Region 29 | Contact Region 30 | Contact Region | |
|-------------------|---------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|----------------|--|
| State | State Fully Defined | | | | | | | | | |
| | Scope | | | | | | | | | |
| Scoping Method | | Geometry Selection | | | | | | | | |
| Contact | 2 Faces | | 4 Faces 6 Faces | | | | | | | |
| Target | 1 Face | | 2 Faces | | | | | | | |
| | | | | | | | | | | |

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| Contact Bodies | Final Asse v5- asm1 Suspe | as | m1 24V DC | Final Assembly v5- asm1 24V DC Gear Motor.step[2] | Final Assembly v5- asm1 24V DC Gear Motor.step[3] | asm1 24V | /DC as | I Assembly v5 sm1 24V DC r Motor.step[5 | asm1 24V E | C Final Assem | bly v5-asm1∣24V ∣ |
|-----------------------------------|--------------------------------------|---|--|---|---|--|----------------------------|---|----------------|--|--|
| Target Bodies | Final Asse v5- asm1 Suspe 2 | Filial | | Final Assembly v5- asm1 WHeeeeeeel | Final Assembly v5- asm1 WHeeeeeeel [6] | | | I Assembly v5 1 WHeeeeeee | | | Final Assembly v5- asm1 gripper Ba |
| Protected | | · · · · | | | | | No |) | | <u>'</u> | |
| Туре | | | | | | L | Definition Bond | led | | | |
| Scope Mode | | | | | | | Autom | | | | |
| Behavior Trim Contact | | | | | | | Program C Program C | | | | |
| Trim | | | | | | | 2.5723e- | | | | |
| Tolerance Maximum | | | | | | | | | | | |
| Offset | | | | | | | 1.e-00 | | | | |
| Breakable Contact | | | | | | | No |) | | | |
| APDL Name | | | | | | | | | | | |
| Target APDL Name | | | | | | | | | | | |
| Suppressed | | | | | | | No Display |) | | | |
| Element | | | | | | | No | <u> </u> | | | |
| Normals | | | | | | Δ | dvanced | , | | | |
| Formulation | | | | | | | Program C | ontrolled | | | |
| Small Sliding Detection | | | | | | | Program C | | | | |
| Method | | | | | | | Program C | ontrolled | | | |
| Penetration Tolerance | | | | | | | Program C | ontrolled | | | |
| Elastic Slip Tolerance | | | | | | | Program C | ontrolled | | | |
| Normal | | | | | | | Program C | | | | |
| Stiffness Update | | | | | | | | | | | |
| Stiffness | | | | | | | Program C | ontrolled | | | |
| Thermal Conductance | | | | | | | Program C | ontrolled | | | |
| Electric Conductance | | | | | | | Program C | ontrolled | | | |
| Electric | | | | | | | Program C | ontrolled | | | |
| Capacitance Pinball | | | | | | | Program C | ontrolled | | | |
| Region Restitution | | | | | | | 1 | | | | |
| Factor RBD Contact | | | | | | | | | | | |
| Detection | | | | | | Coomet | Program C ric Modifica | | | | |
| Contact Geometry Correction | | | | | | Geomet | Non | | | | |
| Target Geometry Correction | | | | | | | Non | ie | | | |
| | | | | Model > | TABL Connections > Co | | tact Regions | s | | | |
| Object Name | Contact Region | Contact Region 35 | Contact Regio | n 36 Contact Regio | on 37 Contact F | Region 38 | Contact Re | gion 39 Con | tact Region 40 | Contact Region 41 | Contact Region 4 |
| State | 34 | | | | | | | Fully Def | ined | | |
| Scoping | | | | | | | | Scope | | | |
| Method | | | | | | | | Geometry S | | | |
| Contact Target | | aces | | 9 Faces | | aces | 6 Fac | | 2 Faces | 4 Faces | 2 Faces |
| Contact Bodies | Final Assembly | com1/Arm 02 Final Assembly v5-asm1 gripper Base (2) | | | | | | Final Assembly v | | | |
| Target Bodies | Final Assembly | Final Assembly v5- asm1 Gripper Motor Cup | Final Assembl asm1 gripper l (2) | | Part3 asm1 grip | embly v5- per Servo edeterminado | Final Asser asm1 grippe | | | Final Assembly v5- asm1 gripper Part2 | Final Assembly vi asm1 gripper Par [2] |
| Protected | 1 | | | | | | г | No Definition | | | |
| Туре | | | | | | | | | | | |
| Scope Mode Behavior | Automatic Program Controlled | | | | | | | | | | |
| Trim Contact | Program Controlled | | | | | | | | | | |
| Trim Tolerance | | 2.5723e-003 m | | | | | | | | | |
| Maximum Offset | | | | | | | | 1.e-007 | ' m | | |
| Breakable | | No | | | | | | | | | |

Breakable

| Contact | |
|-----------------------|------------------------|
| APDL Name | |
| Target APDL | |
| Name | |
| Suppressed | No |
| опри осооч | Display |
| Element | • • |
| Normals | No |
| | Advanced |
| Formulation | Program Controlled |
| Small Sliding | Program Controlled |
| Detection | Program Controlled |
| Method | Program Controlled |
| Penetration | Program Controlled |
| Tolerance | , regulii Contolica |
| Elastic Slip | Program Controlled |
| Tolerance | g |
| Normal Stiffness | Program Controlled |
| Update | |
| Stiffness | Program Controlled |
| Thermal | |
| Conductance | Program Controlled |
| Electric | |
| Conductance | Program Controlled |
| Electric | Program Controlled |
| Capacitance | Flogram Controlled |
| Pinball | Program Controlled |
| Region | , regian commone |
| Restitution | 1 |
| Factor RBD Contact | |
| Detection | Program Controlled |
| Detection | Geometric Modification |
| Contact | Geometric modification |
| Geometry | None |
| Correction | |
| Target | |
| Geometry | None |
| Correction | |
| | |

TABLE 18 Model > Connections > Contacts > Contact Regions

| | | - Connections - Contacts - Contact No | | | | | | | |
|-----------------------------|-------------------------------|---|---|--|--|--|--|--|--|
| Object Name | | Contact Region 46 | Contact Region 47 | | | | | | |
| State | | Fully Defined | t | | | | | | |
| Scope | | | | | | | | | |
| Scoping Method | | Geometry Selection | | | | | | | |
| Contact | | aces | 1 Face | | | | | | |
| Target | | 2 Faces | 1 Face | | | | | | |
| Contact Bodies | | pper Estrella_Predeterminado | Final Assembly v5-asm1 gripper Servo MG966R_Predeterminado | | | | | | |
| | | Final Assembly v5-asm1 gripper Part4[2] | Final Assembly v5-asm1 gripper Servo MG966R_Predeterminado[2] | | | | | | |
| Protected | | No | | | | | | | |
| | | Definition | | | | | | | |
| Туре | | Bonded | | | | | | | |
| Scope Mode | | Automatic | | | | | | | |
| Behavior | | Program Contro | | | | | | | |
| Trim Contact | | Program Contro | | | | | | | |
| Trim Tolerance | | 2.5723e-003 | m | | | | | | |
| Maximum Offset | | 1.e-007 m | | | | | | | |
| Breakable | | No | | | | | | | |
| Contact APDL Name | | | | | | | | | |
| Target APDL Name | | | | | | | | | |
| Suppressed | | No | | | | | | | |
| | | Display | | | | | | | |
| Element Normals | | No | | | | | | | |
| | | Advanced | | | | | | | |
| Formulation | | Program Contro | | | | | | | |
| Small Sliding | | Program Contro | | | | | | | |
| Detection Method | 1 | Program Contro | | | | | | | |
| Penetration Tolerance | | Program Contro | | | | | | | |
| Elastic Slip Tolerance | | Program Contro | | | | | | | |
| Normal Stiffness | | Program Contro | | | | | | | |
| Update Stiffness | | Program Controlled | | | | | | | |
| Thermal Conductance | | Program Controlled | | | | | | | |
| Electric Conductance | | Program Controlled | | | | | | | |
| Electric Capacitance | Program Controlled | | | | | | | | |
| Pinball Region | Program Controlled | | | | | | | | |
| Restitution Factor | | 1 | | | | | | | |
| RBD Contact Detection | | Program Contro | olled | | | | | | |
| | | Geometric Modification | | | | | | | |
| Contact Geometry Correction | | | | | | | | | |
| Target Geometry Correction | rget Geometry Correction None | | | | | | | | |

Mesh

| Model > Mesh | | | | | | |
|--------------|------------|--|--|--|--|--|
| Object Name | Mesh | | | | | |
| State | Not Solved | | | | | |
| Display | | | | | | |
| | | | | | | |

| | Use Geometry Setting | |
|--|----------------------------|--|
| Defaults | | |
| Physics Preference | Mechanical | |
| Element Order | Program Controlled | |
| Element Size | Default (1.9424e-003 m) | |
| Sizing | , | |
| Use Adaptive Sizing | No | |
| Use Uniform Size Function For Sheets | Yes | |
| Growth Rate | Default (1.2) | |
| Max Size | Default (1.9424e-003 m | |
| Mesh Defeaturing | Yes | |
| Defeature Size | Default (9.7118e-006 m) | |
| Capture Curvature | Yes | |
| Curvature Min Size | Default (1.9424e-005 m) | |
| Curvature Normal Angle | Default (30.0°) | |
| Capture Proximity | No | |
| Enable Washers | No | |
| Bounding Box Diagonal | 1.0289 m | |
| Average Surface Area | 2.4146e-004 m ² | |
| Minimum Edge Length | 1.71e-005 m | |
| Quality | | |
| Check Mesh Quality | Yes, Errors | |
| Error Limits | Aggressive Mechanical | |
| Target Element Quality | Default (5.e-002) | |
| Smoothing | Medium | |
| Mesh Metric | None | |
| Inflation | | |
| Use Automatic Inflation | None | |
| Inflation Option | Smooth Transition | |
| Transition Ratio | 0.272 | |
| Maximum Layers | 5 | |
| Growth Rate | 1.2 | |
| Inflation Algorithm | Pre | |
| Inflation Element Type | Wedges | |
| View Advanced Options | No | |
| Batch Connection | s | |
| Mesh Based Connection | No | |
| Advanced | | |
| Number of CPUs for Parallel Part Meshing | Program Controlled | |
| Straight Sided Elements | No | |
| Rigid Body Behavior | Dimensionally Reduced | |
| Triangle Surface Mesher | Program Controlled | |
| Topology Checking | Yes | |
| Pinch Tolerance | Default (1.7481e-005 m) | |
| Generate Pinch on Refresh | No | |
| Sheet Loop Removal | No | |
| Statistics | | |
| Nodes | | |
| Elements | | |
| Show Detailed Statistics | No | |
| | | |

Material Data

Structural Steel

TABLE 20 Structural Steel > Constants

| Density | 7850 kg m^-3 |
|---|------------------|
| Isotropic Secant Coefficient of Thermal Expansion | 1.2e-005 C^-1 |
| Specific Heat Constant Pressure | |
| Isotropic Thermal Conductivity | 60.5 W m^-1 C^-1 |
| Isotropic Resistivity | 1.7e-007 ohm m |

TABLE 21 Structural Steel > Appearance Red Green Blue 132 139 179

TABLE 22 Structural Steel > Compressive Ultimate Strength

Compressive Ultimate Strength Pa 0

TABLE 23 Structural Steel > Compressive Yield Strength Compressive Yield Strength Pa 2.5e+008

TABLE 24 Structural Steel > Tensile Yield Strength Tensile Yield Strength Pa 2.5e+008

TABLE 25
Structural Steel > Tensile Ultimate Strength
Tensile Ultimate Strength Pa
4.6e+008

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TABLE 26
Structural Steel > Isotropic Secant Coefficient of Thermal Expansion
Zero-Thermal-Strain Reference Temperature C

TABLE 27 Structural Steel > S-N Curve

| Structural Steel > 3-14 Curve | | | | | |
|-------------------------------|---------|----------------|--|--|--|
| Alternating Stress Pa | Cycles | Mean Stress Pa | | | |
| 3.999e+009 | 10 | 0 | | | |
| 2.827e+009 | 20 | 0 | | | |
| 1.896e+009 | 50 | 0 | | | |
| 1.413e+009 | 100 | 0 | | | |
| 1.069e+009 | 200 | 0 | | | |
| 4.41e+008 | 2000 | 0 | | | |
| 2.62e+008 | 10000 | 0 | | | |
| 2.14e+008 | 20000 | 0 | | | |
| 1.38e+008 | 1.e+005 | 0 | | | |
| 1.14e+008 | 2.e+005 | 0 | | | |
| 8.62e+007 | 1.e+006 | 0 | | | |

TABLE 28 Structural Steel > Strain-Life Parameters

| Strength Coefficient Pa | Strength Exponent | Ductility Coefficient | Ductility Exponent | Cyclic Strength Coefficient Pa | Cyclic Strain Hardening Exponent |
|-------------------------|-------------------|------------------------------|--------------------|--------------------------------|----------------------------------|
| 9.2e+008 | -0.106 | 0.213 | -0.47 | 1.e+009 | 0.2 |

TABLE 29

Structural Steel > Isotropic Elasticity

| Young's Modulus Pa | Poisson's Ratio | Bulk Modulus Pa | Shear Modulus Pa | Temperature C |
|--------------------|-----------------|-----------------|------------------|---------------|
| 2.e+011 | 0.3 | 1.6667e+011 | 7.6923e+010 | |

TABLE 30
Structural Steel > Isotropic Relative Permeability
Relative Permeability
10000