

Tips and Tricks

- Time saving tips for modeling in SolidWorks
 - YouTube channel: SOLIDWORKS > Playlist: “SolidWorks Time-Saving Tips”
 - G: zoom in to small areas
 - Mouse Gestures: right-click and move mouse
- Make sure you verify your mesh! (Any model)
 - Mesh model and solve
 - Refine mesh and solve
 - Compare results: look for a minimal change in results
- How to locate max values in your plots
 - SolidWorks Simulation: right-click and “Chart Options”
 - ANSYS Mechanical: max and min buttons
- Contacts and Contact Hierarchy (SolidWorks)
 - Contact options: bonded, no penetration, free
 - Hierarchy
 1. Global contact
 2. Override 1 with Component Contacts
 3. Override 1 & 2 with Contact Sets
 - Notes
 1. Individual contact sets is the only way to apply contact to surfaces that are *not* touching.
 2. Simulation takes no notice of SolidWorks’ mates—only whether surfaces are touching or not.
 3. Use Interference Detection with “Treat Coincident as Interference” to find touching surfaces.
 4. Use “Automatic generation of contact sets” to speed up contact definition.
- How to troubleshoot assemblies that give errors when solving (SolidWorks):
 - Right-click on study name and choose Properties > “Use soft spring to stabilize model”
 - When setting up the mesh, expand the Advanced section and enable “Draft Quality Mesh”
 - If you cannot see any parts “flying away,” right-click on the Displacement plot and “Edit Definition.” Change Deformed Shape scaling to “Automatic.”

Be sure to uncheck these items once the error is corrected!