

Altair **SimSolid** is a structural analysis software developed specifically for **rapidly evolving design** processes. It eliminates geometry simplification and meshing, the two most time-consuming and expertise-extensive tasks done in traditional FEA, enabling the analysis of **fully-featured CAD assemblies** in minutes. SimSolid can analyze the most complex parts and large assemblies on a desktop class computer, providing **accurate results** in seconds to minutes.

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Reasons why **SimSolid** is reinventing simulation for designers

- 1. Design Faster:** By introducing simulation early in the product development process, users can confidently make design decision without compromising performance and risking time-consuming and costly redesign iterations. With SimSolid, model preparation is done in minutes.
- 2. Explore More:** SimSolid has been designed to analyze complex parts and large assemblies not practical with traditional FEA. SimSolid is tolerant of imprecise geometry. Its assembly connections are industry best at handling ragged contact surfaces with both gaps and overlapping geometry.
- 3. Boost Productivity:** SimSolid is fast and provide accurate results. Solution times are typically measured in second to minutes on a standard PC. With SimSolid, multiple design scenarios can be quickly analyzed and compared. Accuracy can be specified on an individual part level allowing a rapid drill down to any level of detail that is required.
- 4. Highly Cost Effective:** SimSolid is offered within Altair's simulation platform, HyperWorks, through a value-based, flexible licensing model. Get access to the broadest range of physics and simulation tools at the cost of one individual software license.
- 5. Unrivaled Support Organization:** A key differentiator for Altair, the high quality and timely support helps minimize disruptions while facilitating knowledge and experience sharing with customers.

Authorised Dealer:

Product Highlights

No Geometry Approximation: With SimSolid, your simulation model stays the same as your actual design model. That means you will be able to describe and simulate physics without the burden of geometry approximation, and to do it faster.

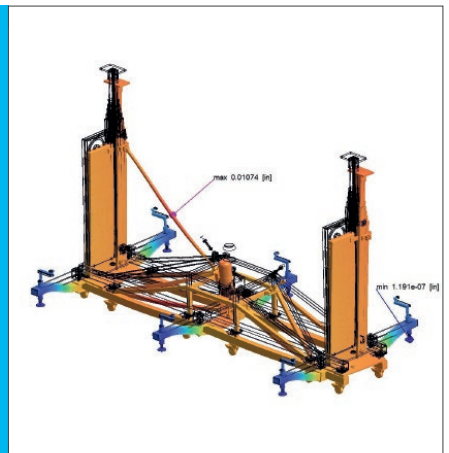
Works with all major CAD software: SimSolid has a direct data integration to all mainstream desktop- and Cloud-based CAD systems. Furthermore, it accepts standard STL or neutral format output from any CAD program.

Understand Loads and Paths: Bolts, joints, contacts are automatically detected and easily defined, keeping the simulation model truthful to the design specifications.

Fast and Robust Workflow: With extremely fast structural analysis results, designers can test multiple iterations to identify optimal concepts that meet both aesthetic and engineering performance criteria, reducing costly redesigns.

“When we are ordering tons and tons of the raw materials for our chains, a pound here and a pound there starts becoming important, so that’s where we spend a lot of time trying to optimize our product. Applying SimSolid to this challenge in the long run will make us a lot of money.”

Bob Adams, Engineering Manager Serapid, Inc.



Capabilities



SOLUTIONS

- Modal
- Linear Statics
- Nonlinear Statics
- Frequency Response
- Thermal
- Thermal-Stress
- Inertia Relief
- Bolt Pretension



MATERIALS

- Isotropic
- Elastoplastic
- Rigid
- User Extensible



CONNECTIONS

- Auto-connections
- Bonded, Sliding and Separation with Friction
- Spot Welds
- Seam Welds
- Virtual Connectors



RESULTS

- Contours and Animations
- Displacements, Stresses/ Strains
- Frequencies and Mode Shapes
- XY Plots
- Modal Participation Factors
- Forces: Reaction, Contact, Bolts and Welds
- Min/Max Labels
- Safety Factors
- Bookmarks