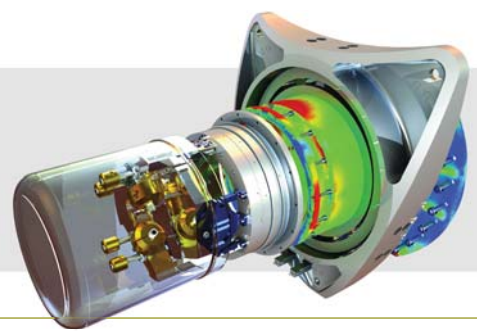


SIM3 Engineering Consulting



Company at a Glance

Sim3 Engineering Consulting is Graphics Systems Corporation's design analysis and consulting division. Sim3 was created in response to customer demand for product analysis to improve designs, reduce material costs, and design safer products. Sim3 specializes in assisting companies to improve products using finite element analysis (FEA), computational fluid dynamics (CFD), kinematic studies, and design optimization.

Sim3 Engineering Consulting is comprised of an expert analysis team with over 40 years of combined experience in automotive, consumer, industrial, and many other industries. Sim3's mission is to help companies test, analyze, and modify designs by establishing strong customer relationships through in-depth and cutting-edge analysis and software.

Consulting & Engineering Services

Finite Element Analysis (FEA) Consulting

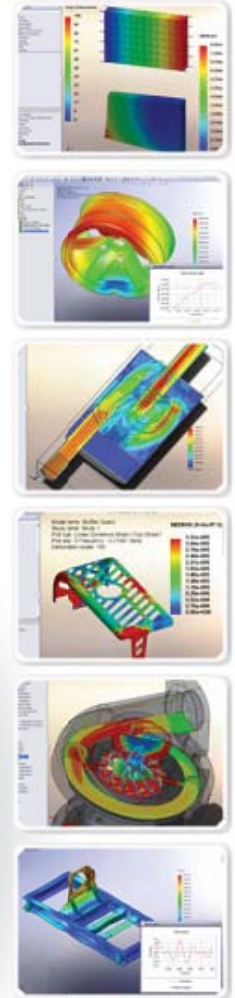
Sim3's comprehensive Finite Element Analysis (FEA) testing and advanced validation tools can improve your products by:

- Creating assembly and mechanical simulations.
- Simulating welded structures.
- Predicting product failure.
- Comparing and optimizing alternative designs.
- Simulating vibrations.
- Predicting buckling and collapse.
- Simulating drop tests.
- Simulating repeated loadings.
- Performing nonlinear dynamics analysis.
- Simulating plastic parts.

Computational Fluid Dynamics (CFD) Consulting

Sim3 Engineering Consulting specializes in various forms of CFD testing. With our CFD analysis capabilities, we can simulate liquid and gas flow in real world conditions, run "what if" scenarios, and quickly analyze the effects of fluid flow, heat transfer, and related forces on immersed or surrounding components. Sim3 can perform:

- Radiation heat transfer analysis of heat transfer between high-temperature surfaces, including solar radiation.
- Internal flow analysis of liquids and gases through valves, regulators, and ducts.
- Rotating reference frame analysis for understanding complex rotational flows inside turbo machinery (i.e., pumps and impellers).
- Transient flow analysis for simulating unsteady flow over time.
- Conduction and convection heat transfer analysis.
- Real gas simulation for accurately solving high-pressure or low-temperature gas applications.
- Humidity analysis for calculating relative humidity inside enclosures for climate control applications.
- Design optimization using CFD-based flow and dimensional parameters.



Graphics Systems Corp.

Areas of Expertise

Stress/Structural Analysis

- Static
- Linear
 - Geometric
 - Material
- Non-linear
- Non-linear contact
- Dynamic
 - Transient
 - Modal
 - Harmonic Response
 - Response Spectrum
 - Random Vibration
- Buckling
- Fatigue

Thermal

- Steady-State
- Transient
- Conduction
- Convection
- Radiation
- Phase Change

Electromagnetics

- Low Frequency

Design Optimization

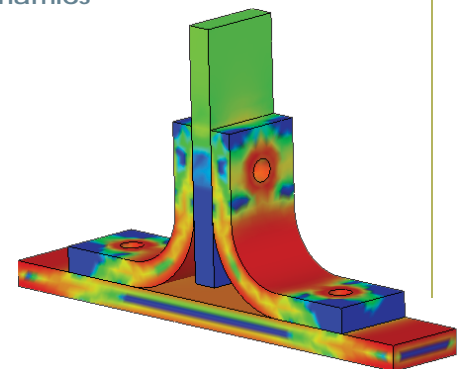
- Design of Experiments
- Variational Technology

Computational Fluid Dynamics

- Fluid Flow Simulation

Multi-Physics

- Fluid-Structure Interaction



Milwaukee, WI

800-454-CADD
www.sim3consulting.com

Madison, WI

Green Bay, WI

Chicago, IL