



MECHANICAL ENGINEERING DESIGN + ANALYSIS

Services

Mechanical Design

- Professional Engineer (P.E.)
- CAD & Fabrication Drawings
- Design for Manufacturing (DFM)
- Physics-Based Simulations
- **SolidWorks and ANSYS**

Structural Analysis

- Finite Element Analysis (FEA)
- Stress Analysis
- Structural Assembly Analysis
- Failure & Fatigue Analysis
- Custom Hand Calculations

Thermal Analysis

- Finite Element Analysis (FEA)
- Thermal Management
- Pressure Drop Analysis
- Transient Analysis
- Heat Transfer Analysis
- Heat Exchanger Design

Fluid-Flow Analysis

- Computational Fluid Dynamics (CFD)
- Transient & Steady State
- Fluid Distribution
- Cold Plate Design
- Electronics Cooling & Packaging

Capabilities

- ☞ Concept Development and Fast Iteration
- ☞ Custom Part, Assembly and Test Fixture Design
- ☞ **Prototyping** and Testing
- ☞ Component and Assembly **Fabrication & Build**
- ☞ **Structural & Thermal FEA**
- ☞ **Computational Fluid Dynamics (CFD)**
- ☞ **Process and Research Commercialization**
- ☞ Liquid and Air-Cooled **Thermal Management**
- ☞ **Subject-Matter-Expert (SME)** in Electronics Cooling and Packaging
- ☞ **Project Management.** Schedule, Budget and Reporting.

About Us

We are a team of mechanical engineers and designers combining expertise in advanced **thermal, structural and fluid-flow analysis** with **research & development, prototyping & testing, custom part design, and design for manufacturing** services. Our clients hire us to solve mechanical engineering challenges that support their project goals on their timeline.

We provide a network of local fabrication vendors working with **metals, plastics and composites.**

We've worked with 100+ large and small businesses, research institutions, and cross-disciplinary engineering firms to successfully **develop new machines, equipment, products and devices.**

