

WORKING WITH YOU
FROM CONCEPT TO LAUNCH



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**Design
Analysis
Manufacturing**

One Business. Limitless Solutions.

Who we are



Earning the trust of companies since 2004, FEAmax offers versatile services covering the life cycle of any engineering project. We offer a full range of engineering solutions from design to manufacturing, specializing in FEA, CFD, and Moldflow analysis. Our work is excellent and our experience results in superior designs.

Vision

One Business. Limitless Solutions. From the first innovative concept to the package on the assembly line, we're in your corner. Bring your tough questions, we'll listen. Let our real-world experience work for you.



Experience

Having successfully completed hundreds of engineering projects, we have the expertise you're looking for. Together, we'll meet your problems head on and create an outstanding product.



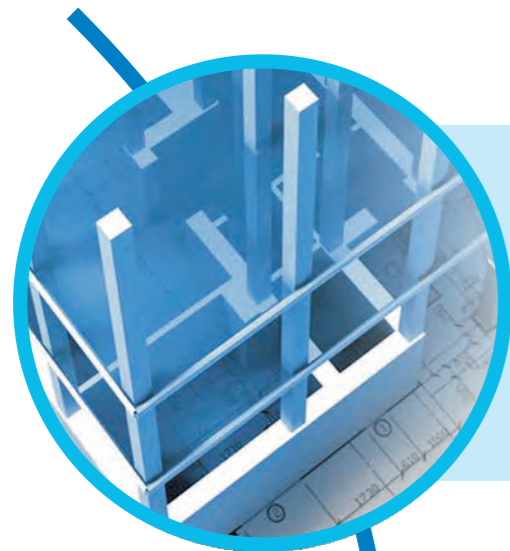
Spanning the Globe

At FEAmax, our roots go deep. We have longstanding partnerships with top universities and engineering firms from all over the world. Our people hail from all sectors of industry, giving us an analysis edge.

Working with you

We bring the right balance of CAD, simulation, and creative problem solving to the job. At every stage of development, we deliver world-class service and a quick turnaround time. Our highly-educated engineers were drawn from the industry, offering the advantage of hands-on experience.

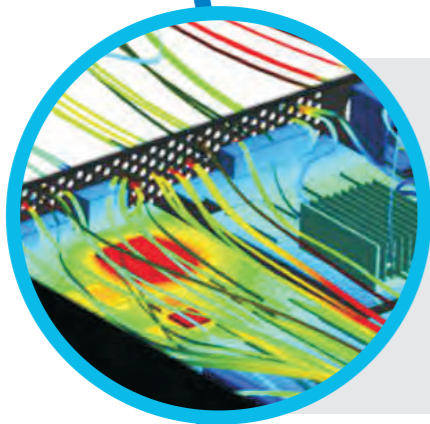
Our Services



DESIGN

- Product Design
- Mechanical Design
- Tooling/Mold Design

- Machinery Design
- CAD Modeling
- Reverse Engineering
- Design Optimization
- Design for Manufacture (DFM)



ANALYSIS

- Finite Element Analysis (FEA)
- Computational Fluid Dynamics (CFD)

- Moldflow Analysis
- Lab Testing and Verification
- Materials Characterization



MANUFACTURE

- Prototype Fabrication
- 3D Printing
- CNC

- Mold Fabrication
- Die Casting Mold
- Plastic Injection Mold
- Global Sourcing from China

Our Capabilities

FEA Analysis

- ▶ Linear/Nonlinear Analysis
- ▶ Static Stress Analysis
- ▶ Dynamic Impact/Drop Test
- ▶ Modal Analysis
- ▶ Random Vibration/Seismic
- ▶ Harmonic Analysis
- ▶ Forming Analysis
- ▶ Fracture/Fatigue Analysis
- ▶ Buckling Analysis
- ▶ Thermal Analysis
- ▶ Design/Shape Optimization
- ▶ Multiphysics Analysis
- ▶ Electromagnetic Analysis
- ▶ Composite Analysis

CFD Analysis

- ▶ Steady Flow Analysis
- ▶ Transient Flow Analysis
- ▶ Laminar-Turbulent Transition Modeling
- ▶ Heat Transfer
- ▶ Newtonian / Non-Newtonian Flow Analysis
- ▶ Acoustics / Liquid / Gas
- ▶ Rotating Machinery
- ▶ Erosion Analysis
- ▶ Chemical Reaction & Combustion
- ▶ Mass Transfer Simulation
- ▶ Multiple Streams
- ▶ Free Surface Flow & Cavitation
- ▶ Multiphase Flow/Particle Track
- ▶ Dynamic Cell Addition
- ▶ Motion and Multiphysics

Moldflow Analysis

- ▶ Injection Mold
- ▶ Gas-Assisted Injection Mold
- ▶ Flow/Pack Analysis
- ▶ Warpage Analysis
- ▶ Cooling Analysis/Design
- ▶ Multi-Component Molding
- ▶ Injection Gate Optimization
- ▶ Hot Runner Optimization
- ▶ Over-Mold / Insert-Mold
- ▶ Multi-shot Injection Mold

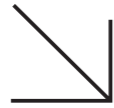
CAD / CAE

- ▶ 3D/2D Part Design
- ▶ CAD Format Conversion
- ▶ Sketch to CAD
- ▶ CAD Modeling & Drafting
- ▶ Machinery Design
- ▶ CAD Model generation
- ▶ Tolerance Analysis
- ▶ Rendering/Animation
- ▶ Tooling/Mold Design
- ▶ Design for Manufacturing

Manufacturing

- ▶ Material Analysis
- ▶ Product Testing
- ▶ Product Assembly
- ▶ Tooling Design
- ▶ Mold Fabrication
- ▶ 3D Printing
- ▶ Prototype Testing
- ▶ CNC / Die Casting
- ▶ Stamping/E.D.M
- ▶ Product Sourcing from China

Our Clients



You can find FEAmax in Charlotte, NC, but you'll find our clients all over the world. From local start-ups to Fortune 500's, FEAmax collaborates closely with our customers, because your success is our success.



Client Testimonials

Jack Plate, President at Ross Design & Engineering.

FEAmax did a great job and I am very impressed with the FEA simulation work on our caster project.

Eric Heidtman, VP of Engineering at Raymond Corporation.

This is one of the most thorough FEA reports I have ever seen. Thanks for such a great resource to complete the design and analysis work.

Sandra Skalmowski, Sr. Manager at Tribar Manufacturing.

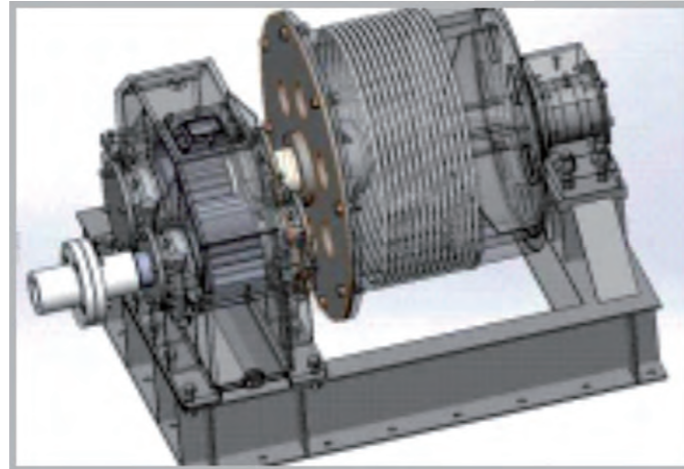
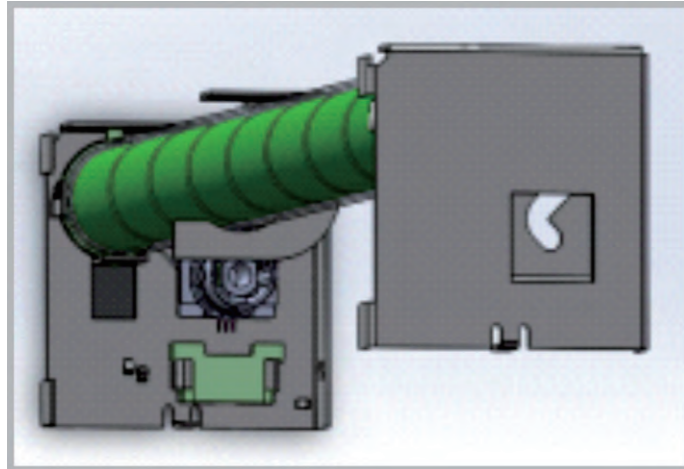
Thanks a lot for your work on this project. The analysis report looks great! I will definitely use your services again in the future!

Steve Trefry, Product Designer at Melling Engine Parts.

We appreciate your fast turnaround on the projects that you have done for us. Your reports are straight forward and the results are presented and explained very well. I look forward to working with FEAmax on future projects.



CAD/CAE Projects



Design /3D Model Generation:

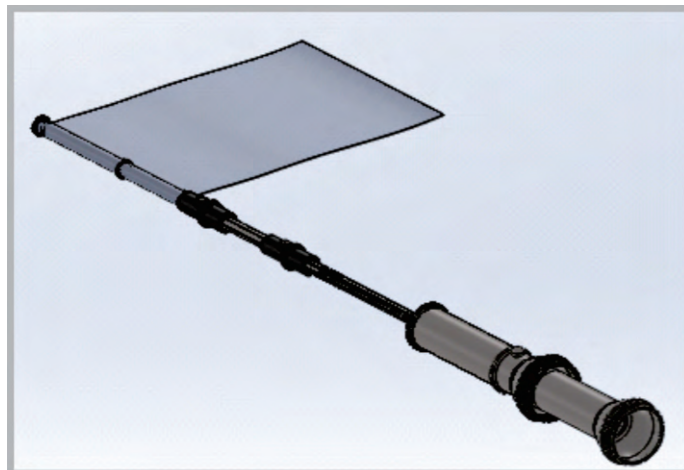
New product design. We generated 3D assembly with metal bracket, motor connection, and components.

Client: Procter & Gamble

3D Model Generation:

We created a 3D CAD assembly model from drawings. Provided rendering and animation.

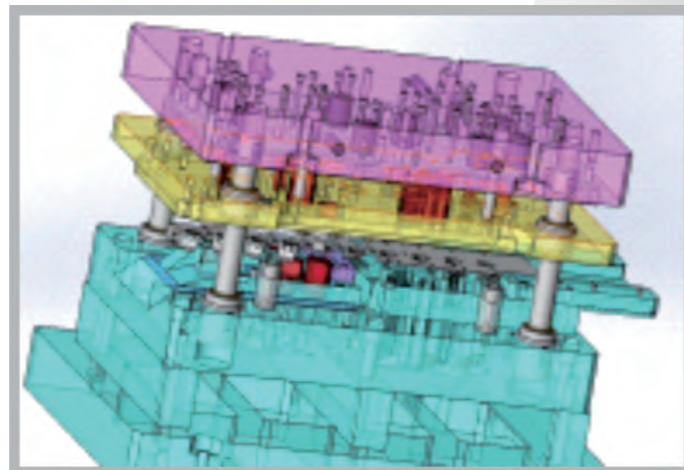
Client: Renal Solutions



Design/3D Model Generation:

For this flashlight flag monopod, we created a 3D assembly model and manufactured it in China.

Client: Individual Start-up company

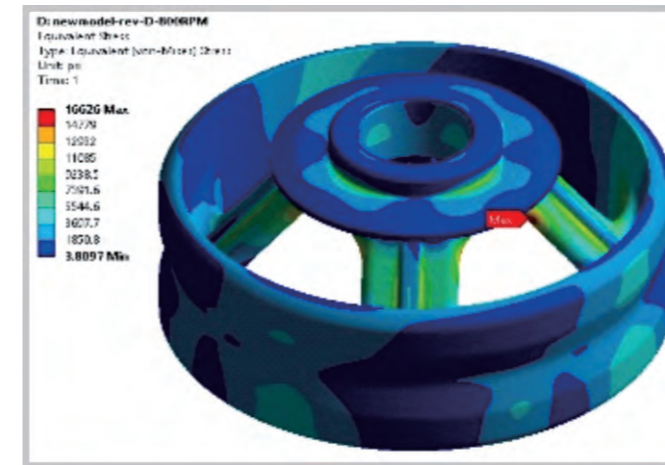


Tooling Design/3D Modeling:

We created a mold design and a 3D assembly model to manufacture this plastic product.

Client: Jason Tooling Ltd.

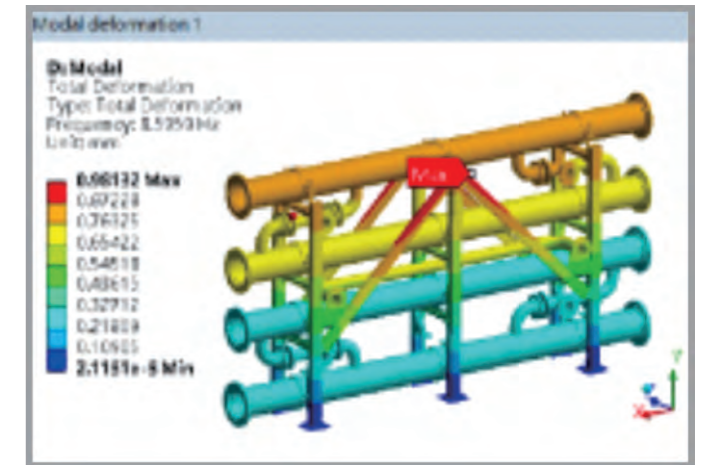
FEA Projects



Stress Analysis on Crank Pulley:

We ran a structure stress analysis on the pulley with dynamic load, quickly determining weak points.

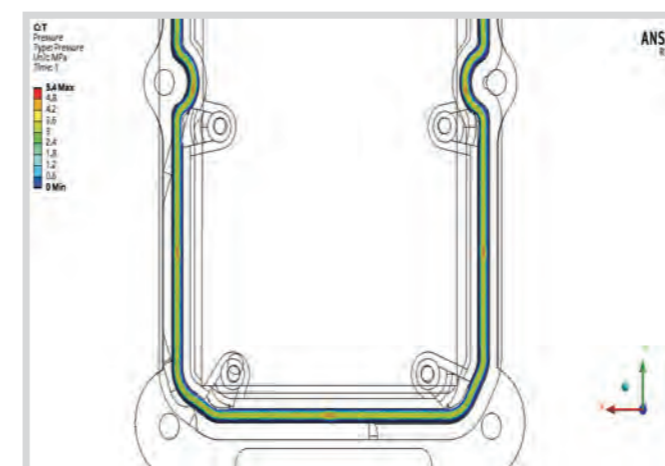
Client: Arotech Powertrain Inc.



Model/Seismic Analysis:

We performed a vibration and seismic analysis on the pipeline model, identifying unstable high stress areas.

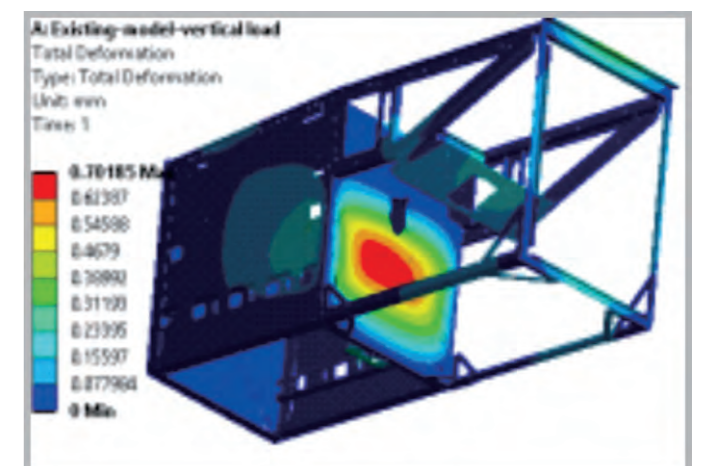
Client: Inertech Inc.



Hyper-Elastic Rubber Seal Design:

We performed nonlinear FEA with hyper elastic rubber material, predicted seal pressure for better seal design.

Client: Zatkoff Seal & Packings



Stress and Buckling Analysis:

We conducted a static structure stress and buckling analysis, ensuring the safety of the frame.

Client: Coca-Cola

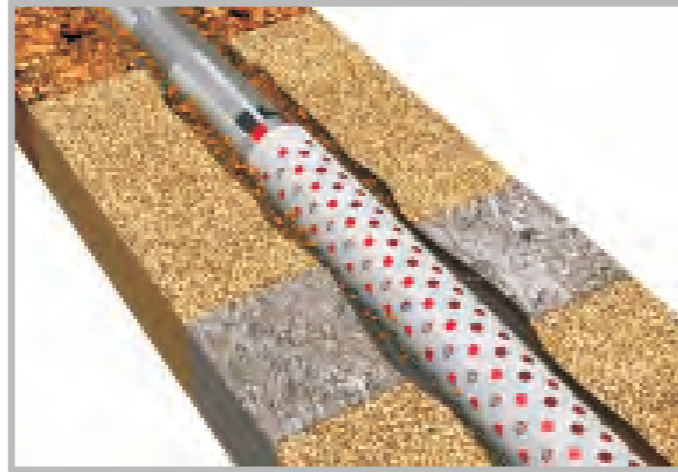
CFD Projects



Micro Device Thermal Analysis:

We conducted a transient thermal analysis on an electronic cooling device, obtaining the heat transfer.

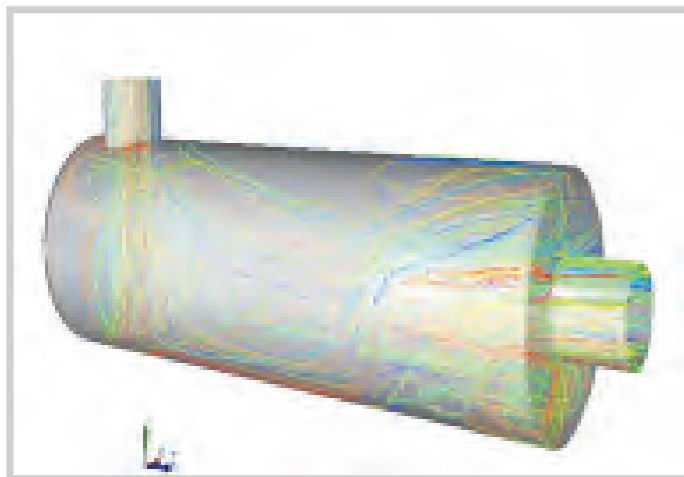
Client: D2M Inc.



Erosion Analysis on Pipe:

We ran an erosion analysis on oil and gas field piping, accurately evaluating abrasion caused by sand particles.

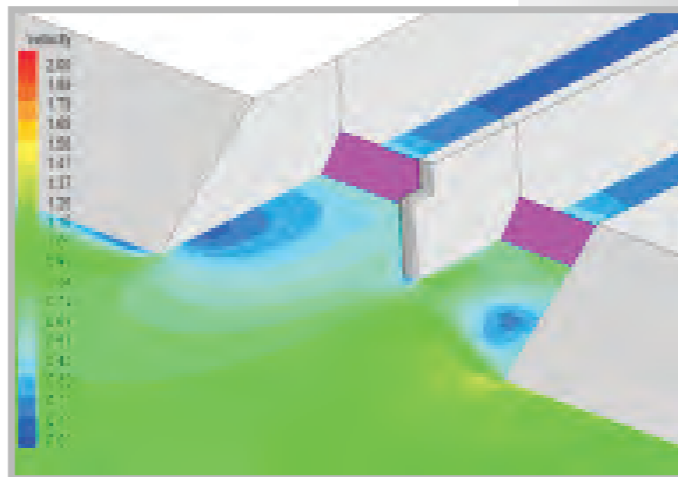
Client: Delta Screens LLC



Noise Analysis on Muffler:

We administered a noise analysis on this muffler model, improving the design by reducing the sound level.

Client: Idea Tech Inc.

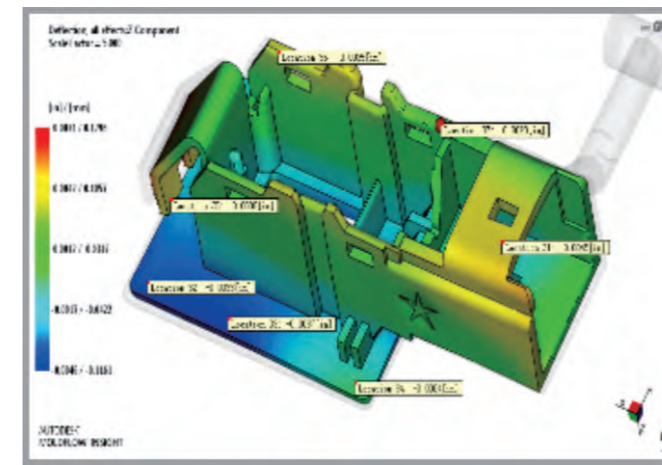


CFD Fluid Analysis on Dam Gate:

We ran a steady fluid analysis on a dam intake gate, enhancing the design and optimizing the dam gate.

Client: Hagler Systems Inc.

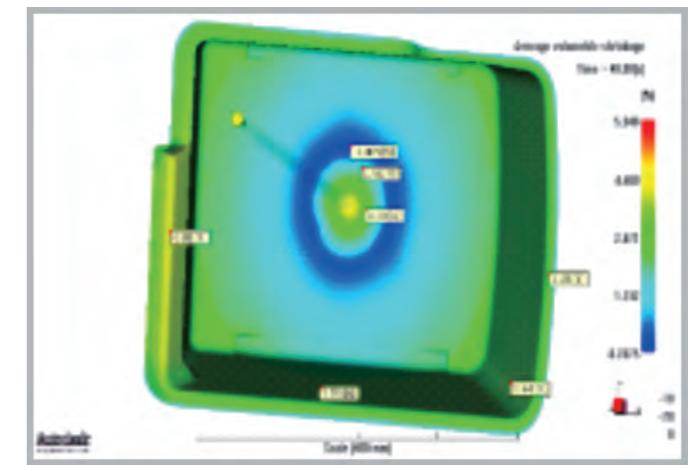
Moldflow Projects



Moldflow Warpage Analysis:

We ran Moldflow filling, packing, and warpage analysis, assessing the performance of the tooling design.

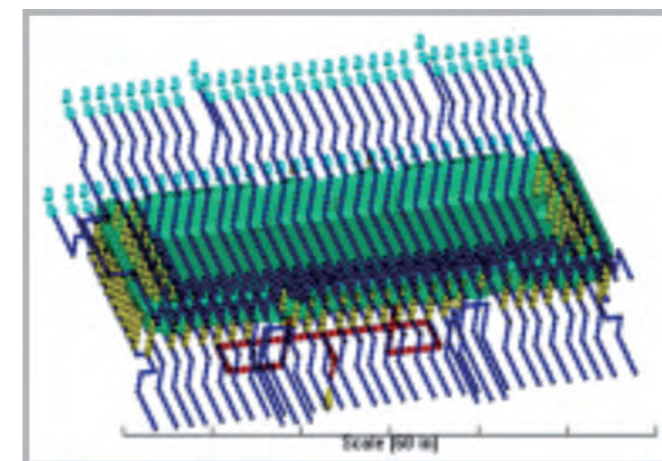
Client: Multicraft International



Moldflow Filling & Packing Analysis:

We performed moldflow filling and packing analysis to determine the fill time, pressure, weldline, etc.

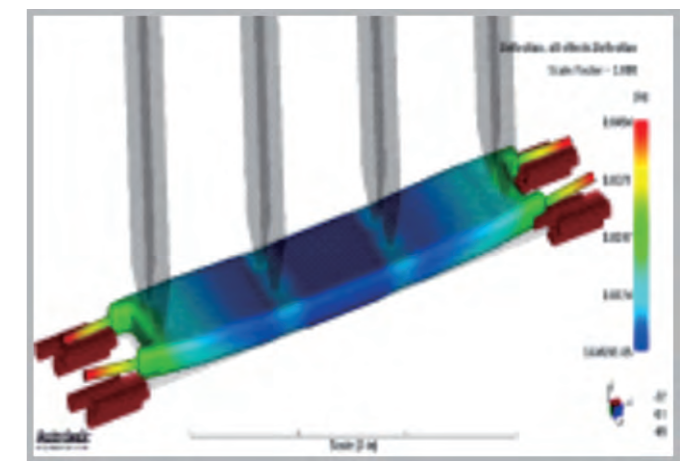
Client: Electrolux



Moldflow Cooling Design:

We administered a full Moldflow analysis and designed a cooling system to optimize the cycle time.

Client: Plano Molding



Over-Mold Analysis:

We conducted a Moldflow analysis on the over-mold part, determining the fill time and tooling issues.

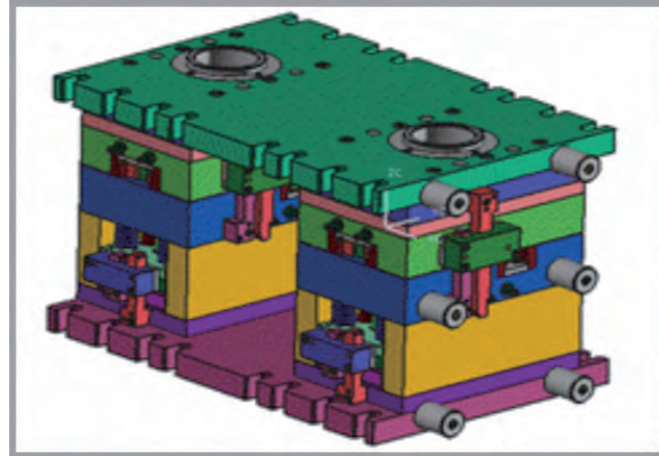
Client: Schlumberger

Manufacturing Projects



Die Casting Part:

We made this high quality die casting part for a client at a substantial savings.



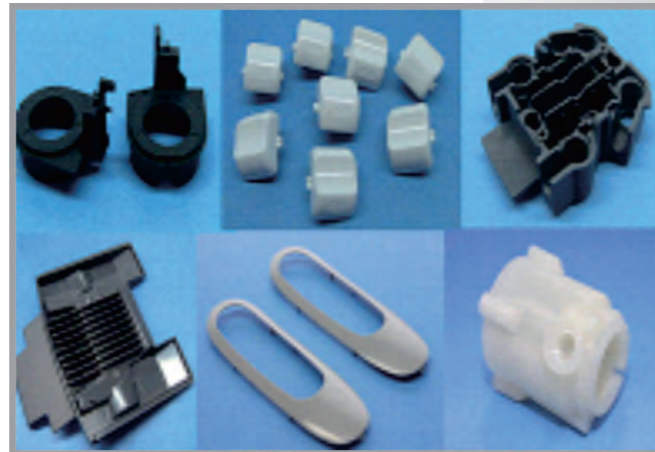
Mold Design/Manufacturing:

We design and build injection molds for producing plastic parts.



Stamping /Die Casting Products:

Here are some examples of stamping and die casting products.



Injection Molded Products:

Here are some samples of plastic components.

Contact Us

For Further Information Contact FEAmax LLC

Web: www.FEAmax.com

Email: info@FEAmax.com

Tel: 1-240-421-0756

Fax: 1-866-304-9034

Our Office Headquarters in the USA:

15720 Brixham Hill Ave. Suite #300, Charlotte, North Carolina.
USA 28277

Our Manufacturing Center:

Shenzhen City, GuangDong Province, China 511700

