

Market – Aerospace

Precision Molding for Low and High Volume Production

High performance, long term endurance, weight, structural integrity, thermal stability, fire retardant and EMI solutions are all critical factors to the Aerospace market. Parts and components used in the aerospace industry need to withstand extreme changes in temperature, yet maintain their stability. Spectrum Plastics Group is a contract manufacturer of avionic controls for the leading avionic suppliers of North America. Product applications include radar antennas for collision avoidance systems, electronic enclosures, communication equipment, cockpit components and many more.

Spectrum Plastics Group has extensive experience with metal-to-plastic conversions using composite materials and has strong working relationships with composite material suppliers to assist in material selection along with engineering expertise to support product designs. Finite Element Analysis (FEA) tools, such as MoldFlow Analysis software assists in validating design concepts to help manage program risks, including cost and technical feasibility.

We assist customers with the selection of materials, design for manufacturability, rapid prototyping and tooling, molding and assembly services. Plus

we offer a wide range of value-added services including electrical/mechanical assembly, painting, EMI coatings, product acceptance testing, and total supply base management of all components and services your program may require. Spectrum Plastics Group works with each customer to establish the required quality validation processes to provide repeatable results.

Spectrum Plastics Group has extensive experience with metal-to-plastic conversions using composite materials.



Our full service capability acts as an extension to your current engineering and manufacturing by providing the following group of services:

Design & Engineering Services

- Rapid Prototyping (SLA, LS, RTV Castings, CNC Machining)
- Rapid Tooling (aluminum, P-20, or hardened steel)
- Product Design Support
- Design for Manufacturability and Assembly (DFM & DFA)
- MoldFlow Analysis
- Resins / Materials Expertise
- Tool Design and Build
- Molding Process (developed and validated utilizing decoupled/scientific molding methodology)
- Gage R & Rs
- Value Analysis / Cost Reduction
- Secured Electronic Communication

Manufacturing Services

- Injection Molding, Insert Molding, Over-Molding, Reel-to-Reel Molding, and Liquid Silicone Rubber (LSR) using Liquid Injection Molding (LIM) Technology (all available for low, medium and high volume production)
- Advanced CNC Plastic Machining (including tight tolerances, critical features and non-moldable geometries)
- Assembly & Sub-assembly (manual, semi-automated or automated)
- Stringent Process Qualification & Validations Methods (in process, on-going, and final testing as required)
- Molding Process (developed and validated utilizing decoupled/scientific molding methodology)

Value-Added Services

- Decoration (pad printing, hot stamping, screen printing, painting and decal application)
- Adhesive, Heat, Spin, Vibration, Solvent and Ultrasonic Welding
- Annealing
- EMI and RFI shielding
- Electro-less & Electrolytic Plating
- EM (Electro-mechanical) Assembly
- General Assembly (manual and semi-automated)

Quality Certifications

- ISO 9001:2008

To find out more, go to: www.spectrumplasticsgroup.com

Have a project you'd like to discuss?

Contact at us at sales@spectrumplasticsgroup.com

SPECTRUM PLASTICS™
GROUP

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One Stop...Taking Your Design from Prototype through Production

- Design & Engineering
- Design for Manufacturability
- Rapid Prototyping
- Rapid Tooling
- Tool Design & Build
- Injection Molding Technologies
- Value-Added Services

Certifications

- ISO 9001:2008