

GEMSTAR

CUSTOM PART SOLUTIONS



DESIGN. TEST. BUILD.

ROTATIONAL MOLDING

Rotational Molding is a biaxial heat-molding process that produces single-piece plastic parts with complex geometries. This process has been used and proven over the last fifty years. Full-scale secondary fabrication, 5-axis routing, and assembly services can be added to most rotational molding projects.



THERMOFORMING

Thermoforming is a manufacturing process that applies vacuum pressure to stretch a sheet of heated thermoplastic material over a mold to create a three-dimensional shape. Our thermoformed products can be finished with full-scale secondary fabrication, 5-axis routing, and assembly.



INJECTION MOLDING

Injection molding is a process that involves heating and injecting pressurized molten plastic into a mold. The molten plastic cools and solidifies into the shape of the mold, which is then opened to allow the parts to be removed for inspection, delivery, or secondary fabrication.



COLD FORMING

Cold forming is a technique that uses polycarbonate sheets to create clear plastic parts. Polycarbonate is a rigid, clear, high-impact-strength material. Its unique properties allow it to be bent and formed without the application of heat. Multiple fabrication services are used to create complex parts for multiple custom applications.



CUSTOM FABRICATION

Custom fabrication is the process of transforming raw pieces into finished plastic parts. Gemstar is a trusted, one-stop manufacturer of custom fabricated plastic components. After a part has been molded or formed, Gemstar performs the additional finishing steps needed to deliver the complete product, accurately and repeatedly.



5-AXIS CNC ROUTING

A 5-axis CNC Router is a tool that moves in five different directions — across the X, Y, and Z axes as well as A and B, around which it rotates. 5-axis CNC routing enables operators to approach a part from any direction in a single operation, maximizing efficiency by removing the need to manually reposition between operations.



PLASTIC WELDING

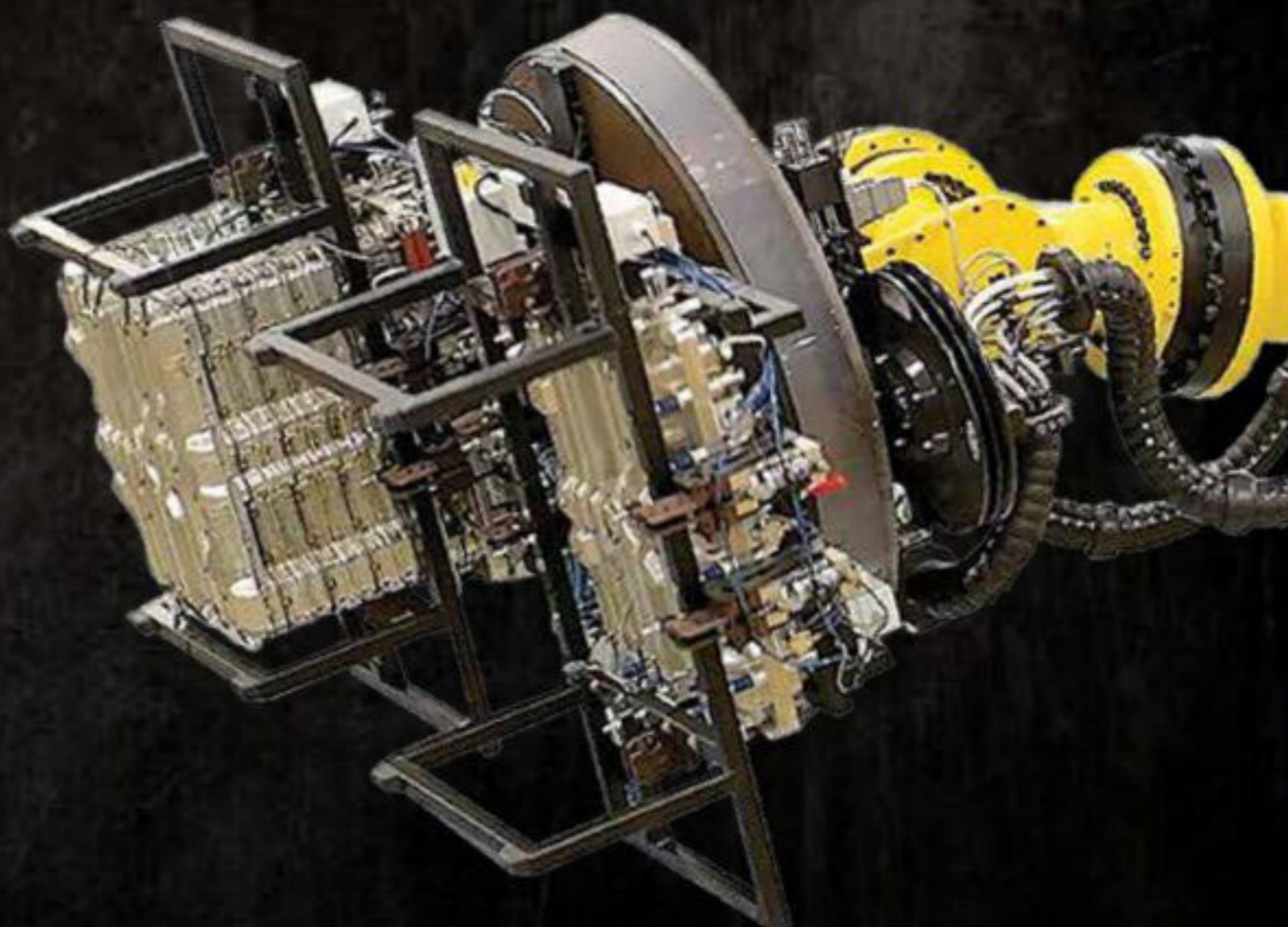
Plastic welding is a process used to bond two semi-finished thermoplastics, typically with the aid of heat. This type of welding is accomplished in three sequential stages: surface preparation, heat application, and cooling. Plastic welding offers superior strength and reduces cycle times.



Get your next project started by speaking to one of our experts at 800-533-3631 or visit us at GemstarMFG.com.

MADE IN THE
USA





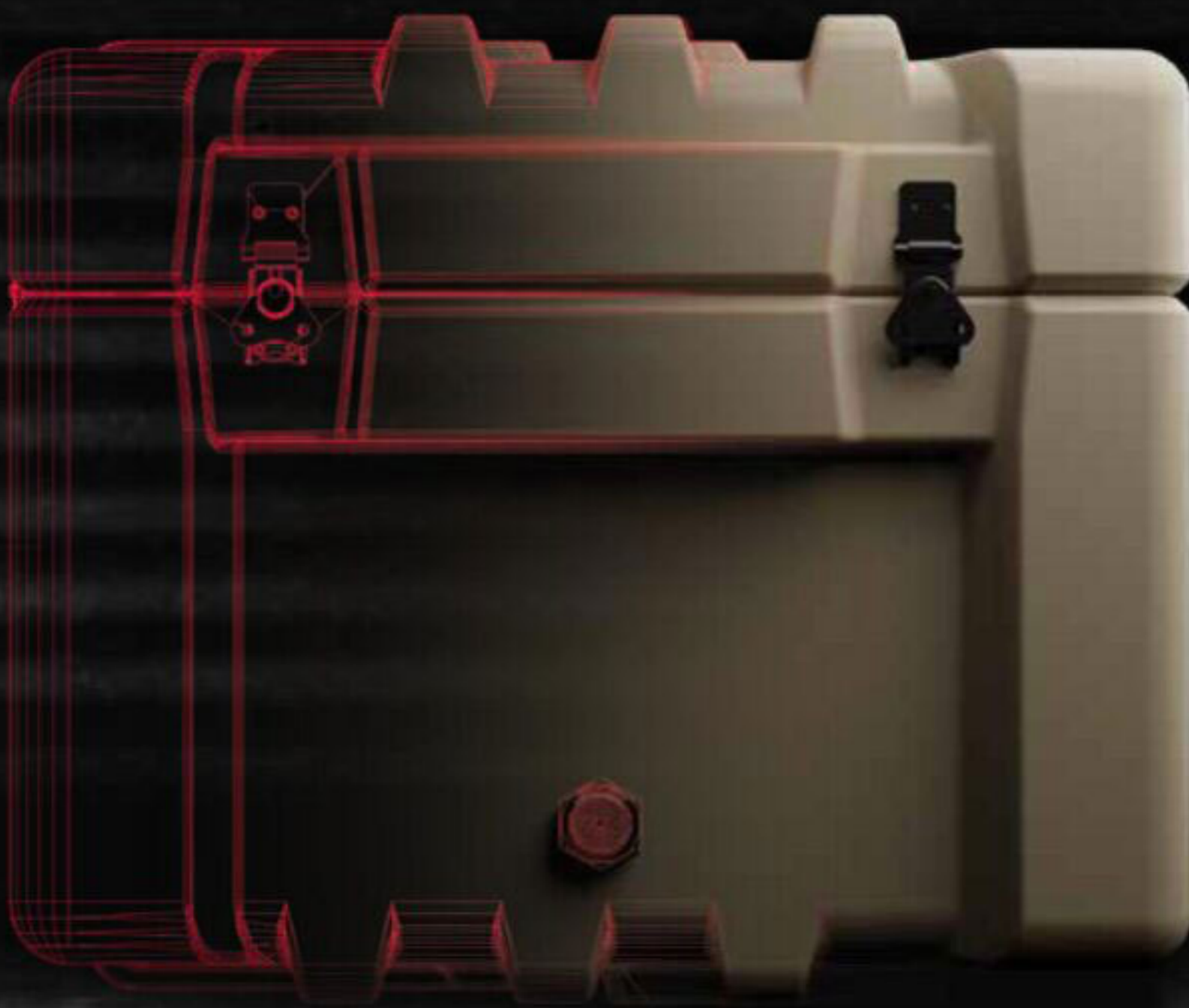
INTRODUCING

ROBOMOLD[®] TECHNOLOGY

BY GEMSTAR MANUFACTURING

Gemstar's exclusive Robomold Technology leverages cutting-edge robotics technology to deliver the most precise fabrication and finishing capabilities possible. Robomold makes it possible to layer different compounds and coatings into finished parts, making it the ideal manufacturing solution for military, OEM, industrial and commercial applications. Gemstar Manufacturing is the only company in America that uses this state-of-the-art technology.

- Design flexibility / computer-controlled process
- Heat specific zones to correspond to varying thickness
- Yields high tolerance with precision
- Optimized strength to weight ratio
- Layer different compounds & coatings to finished parts

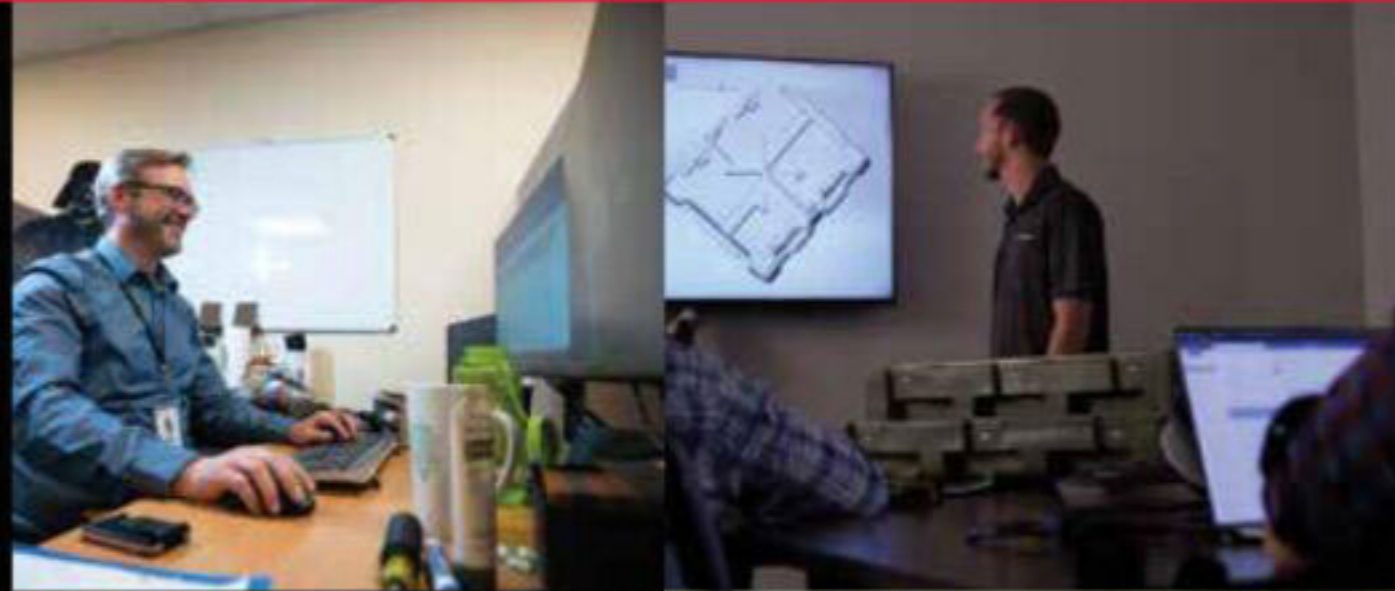


UNLEASH THE POTENTIAL OF PLASTIC.

Inside its state-of-the-art manufacturing facility in Cannon Falls, Minnesota, Gemstar is shaping the future of plastic. With advanced capabilities in design, engineering, and manufacturing Gemstar delivers fully custom engineered solutions for OEM, military, industrial and commercial applications, from start to finish. These capabilities are complemented by a team of dedicated experts who are deeply committed to helping solve the greatest challenges out there with next-generation technologies that offer unmatched precision and repeatability. No matter the size or scope of your next project, Gemstar Manufacturing design solutions make it possible. What can we design, test, and build for you?

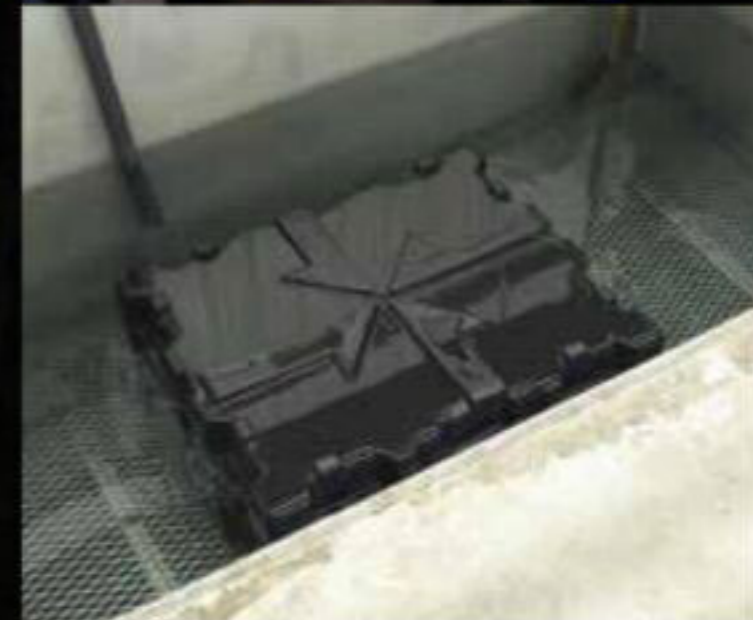
DESIGN

Gemstar's in-house designers, technicians, and project managers surround your project with expertise from start to finish. From design, R&D consultation and 3D rapid prototyping to material composition and sourcing, Gemstar will work closely with you to deliver a plastic design solution that meets the exacting requirements and specifications of the job.



TEST

Gemstar's comprehensive in-house testing capabilities help to ensure that every plastic component is built for the long haul. Putting plastic parts through the rigors of submersion, vibration, air and water tightness, and impact testing enables Gemstar to manufacture to some of the most demanding industry standards and tightest specifications.



BUILD

Gemstar custom part solutions are proudly backed by the three most trusted words in manufacturing: Made in America. With in-house tooling, 5-axis routing, four manufacturing processes, and a wide range of secondary and finishing services, Gemstar is a one-stop plastic solutions powerhouse capable of solving your greatest challenges.

