



- Large, sculpted parts can be molded economically.
- Variable thickness walls allow for greater design freedom.
- Closed molds produce accurately molded and structurally strong parts.
- Lower tooling cost and shorter tooling lead time.
- A wide variety of material properties including UL94VO.
- Electronic components can be encapsulated.
- Metal parts can be encapsulated.

RIM parts are lower cost than the same parts made from metal or fiberglass.

Composites - RIM parts can be reinforced with many materials.

Exothermic capabilities:

- CAD Engineering Review
- Mold Design
- Mold Manufacture
- Mold Repair/ Modification
- RIM Molding
- Precision Painting
- Silk Screening
- Assembly

ISO 9002 Compliant

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RIM Enables Complex Design Geometries in Medical System Enclosure Panels

The PHOENIX Automated Microbiology System, developed by the Biosciences division of Becton Dickinson and Company, is used in large commercial and hospital laboratories. The system performs automated analysis of infectious agents and has the capacity to perform from one to 100 determinations simultaneously. When they were in the design phase, they were drawn to RIM Technology due to complex geometries of the relatively large parts, varying wall thicknesses and the requirement of reinforcing ribs and molded-in bosses. The access door, door frame and the large right and left front panels of the unit's carousel bay are made with the polyurethane RIM process, provided by Exothermic Molding, Inc.



Exothermic Molding utilized RIM to manufacture cutting edge designs in the door, door frame, right and left door panels.

The four RIM-molded parts feature a complex, convex-curved surface. At more than 32 inches tall and 21 inches wide, the door and its frame feature an arc radius of 18 inches. The door has raised surface features as well. The RIM process is ideally suited for both of these design features. Designers agreed they couldn't achieve such complex geometries with sheet metal. The process also allowed varying wall thicknesses from as little as 0.090 inches to as much as 0.40 inches, as well as extensive reinforcing rib structure.

The RIM parts are molded with aluminum tooling cut directly from CAD files. Only three molds were necessary to create the four parts, with the right and left panels produced from a family mold. This creative tooling approach, along with 3D CAD files, are cost cutting features made possible by the experience of Exothermic Molding and the design flexibility of the RIM process.

Exothermic painted and silk-screened the molded parts in-house. In addition, significant assembly is done for Becton Dickinson including installing metal inserts, sheet metal shielding, latches and various other components. Exothermic provides value added sourcing and assembly of dozens of components including sheet metal, insulation, bushings, injection molded components, solenoids and hardware. The parts are then carefully packed and shipped directly to BD's assembly floor.

Exothermic molding delivers large, lightweight RIM parts quickly ... at competitive prices.