

Implantable Molding Services

Creating medical device components for long-term implantation inside the human body

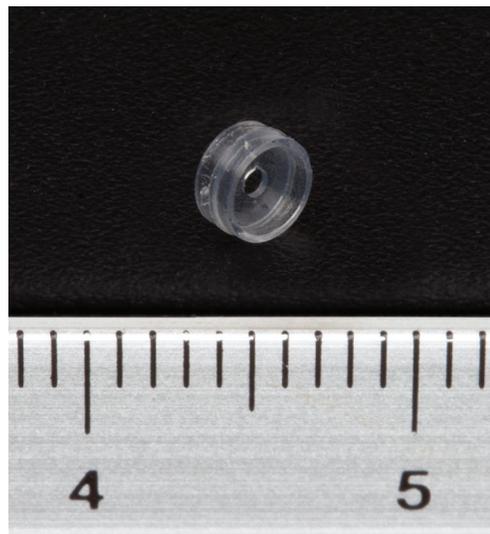
MRPC creates high-quality medical device components that are safe for long-term implantation inside the human body, including components for cardiac rhythm management, neuromodulation, orthopedic surgery, sports medicine and dental implants. MRPC has manufactured implantables from a variety of materials certified for long-term implantation, such as PEEK, PPSU, liquid silicone and combinations of these materials through the process of overmolding.

Manufacturing an implantable device begins with the design. MRPC consults with clients to optimize designs for manufacturability, using their expertise and experience with the many nuances in implantables manufacturing. MRPC's molding process optimizes part quality and consistency, minimizes waste, cuts costs and allows for the production of small to micro-sized components.

Because implantables must be safe for long-term use in the human body, the manufacturing environment and process controls are more critical than for other molded medical components. MRPC's attention to detail and dedication to quality ensure that your implantable devices satisfy health and safety regulations. MRPC's implantable components are manufactured by qualified, trained personnel in class 10,000 cleanrooms and are tested for quality using agreed-upon testing and validation protocols. All elements of the manufacturing process are documented for traceability and repeatability, producing a consistent output every time.

A customer came to MRPC after a competing molder had failed to meet their implantable device's strength requirements. The customer transferred their mold to MRPC, and we identified and corrected problems in both the part design and tooling. MRPC was able to exceed the strength requirements twofold and considerably minimize the range in strength variation. The completed device has since been used in orthopedic surgeries on several professional athletes.

MRPC's strong part and mold design, material selection capabilities and process optimization allowed us to outperform the competition. After successfully overhauling their implantable component project, MRPC is now this customer's first choice for their molding projects.



Our team of experienced engineers can create implantable components with the following specifications:

- Prototype sample quantity: 1 to 100
- Production run quantity: Up to 1 million
- Required lead time: 3-8 weeks with expediting options
- Part volume: 0.04 to 15 grams

Please consider MRPC early in the design stage of your next program and allow us to help optimize your components.