



FORUM PLASTICS



CORPORATE **CAPABILITIES** BROCHURE

www.forummolding.com

Forum Plastics is a full-service contract manufacturer that has served the medical device and life science industries for over 25 years. Our mission is to support customer projects with the highest levels of quality, consistency, and efficiency. We are constantly evaluating new innovative technologies and vertical integration platforms to support the unmet and under-supported needs of the industry.

Our culture is built on honesty and integrity to deliver products on time and on budget. We bring expertise in complex geometries, technically challenging injection, insert and over-molding as well as, full multi-component assembly and customized verification and release testing, all of which can be conducted in our Class 7 cleanroom.

As a part of the Squadron Capital group of companies, we reinvest a significant percentage of our proceeds into technology enhancements and advancements, thus affording our clients some of the newest innovations available in our industry.

At our core, we're an engineering-based company. From concept, planning, and design for manufacturability (DFM) to mold construction, cleanroom assembly, and release testing, our passionate team members thrive on solving complex product challenges to support lifesaving and quality of life enhancing products.

Our Commitment To Quality

As a partner to the medical device community, we recognize and value how critical each step is in the development and manufacture of our clients' devices. From partnerships with supply chain members to exacting traceability through all internal processes and ever-increasing continuous improvement objectives, Forum is committed to maintaining the highest levels of quality, traceability, and consistency to ensure we are best supporting client products and the extended needs of both our clients and their customers.

Our Certifications:

- ISO 13485:2016 Certified
- ISO 14001:2015 Certified
- ITAR Registered
- FDA Registered
- 21CFR Part 820 Compliant



Our Capabilities

Forum Plastics operates a clean space with over 45,000 sq. ft. of molding and assembly areas in our Waterbury, CT location. We leverage 50 molding presses ranging from 11T to 275T, automated and robotic processes, in-line inspection capabilities, and scientific methodologies, maximizing operational efficiency to support a superior value proposition for our customer base.

Examples of Medical Market Segments We Support:

- Surgical devices and tooling
- Wearable, connected, and patient monitoring technologies
- Implant technologies:
 - Neurological
 - Spinal and orthopedic
 - Cardio and peripheral vascular
- Minimally invasive, endoscopic, and laparoscopic tools
- Urological devices
- Surgical robotics
- Diagnostic devices
- Women's health products
- Diabetes management



Medical Injection Molding

For over 25 years, Forum Plastics has offered customers superior medical injection molding services. Our ISO 13485:2016 quality certifications, investment in technology, tool financing, and continuous commitment to exceeding expectations make our experienced medical injection molding team an important asset to Class I, II(b), and III device success.



Our molding services encompass:

- ISO Class 8 Cleanroom Molding
- Thin wall and tight tolerance injection molding capabilities ranging from 3mm – 254mm
- A wide range of engineering and medical grade material options and compounds
- In-line visual inspection support
- Precision color mixing
- Ability to mold radiopaque, carbon fiber-filled, and glass filled materials to tight tolerances

Cleanroom Assembly

Forum offers a full suite of assembly services in ISO Class 7 cleanroom facilities. As an FDA-certified company, we can provide full assembly and packaging services up to a finished or semi-finished part. All our processes are efficient and operate under Lean Six Sigma methodology and the development of a quality focused multi-step release criteria that allow for go/no-go gauges, integrated process verification, and final testing phases.

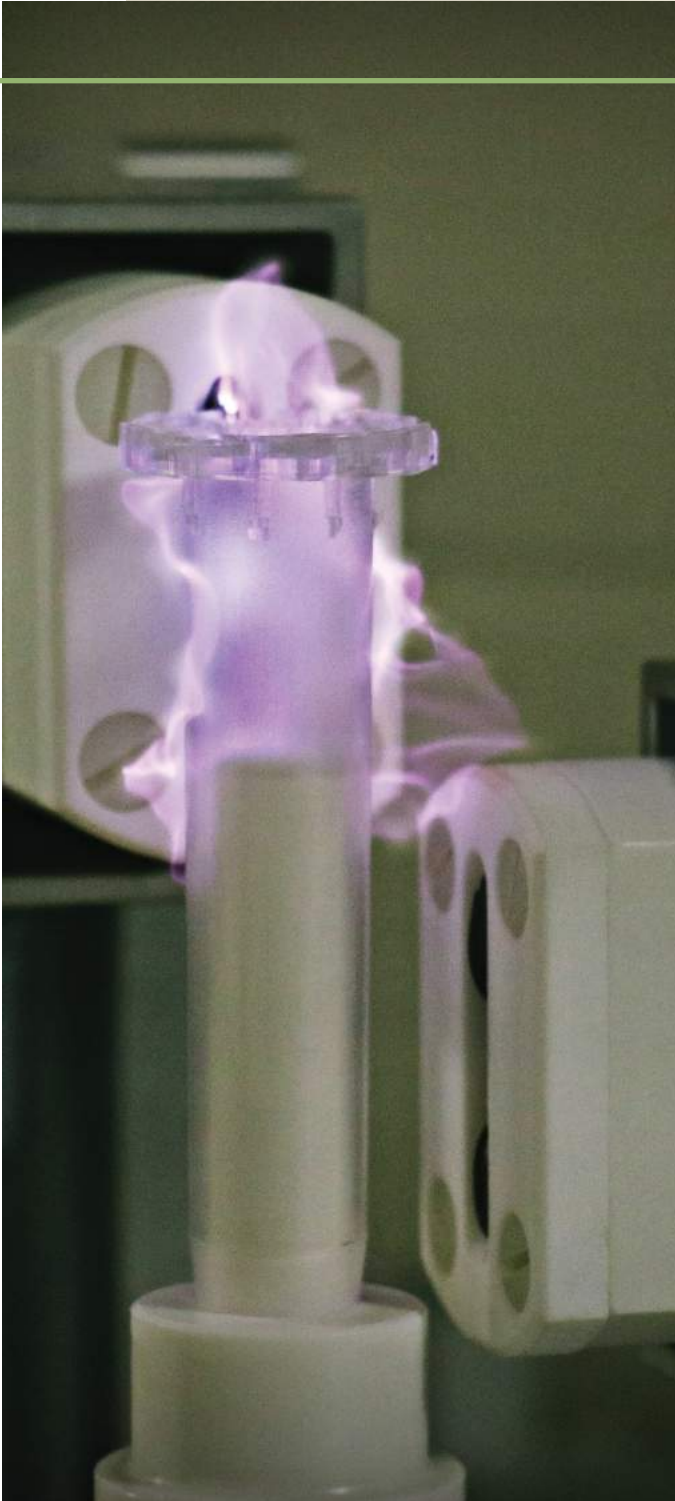
Additional assembly services include:

- Mechanical and manual assembly of components and subassemblies
- Bluetooth enabled or Wi-fi connected device assembly
- Multi-component sourcing
- Device sequential and regulatory requirement labeling
- Serialization services
- Tooling and fixture development
- Pre-sterilization device packaging and labeling



Secondary Ops and Pad Printing

Forum has worked closely with leading medical device manufacturing, R&D, and design engineers to develop secondary operations and pad printing processes that meet their specific needs during both prototype and production phases. Multi-stage secondary operations process development and optimization and medical device pad printing on difficult or irregular surfaces are among Forum's differentiated specialties.



Secondary Operations Capabilities Include:

- Heat insert installation
- Friction fit assembly (Press Fits)
- Automated trimming/cutting/slitting
- Tooling and fixture development
- Heat staking
- Ultrasonic inserting and welding
- Adhesive processes; gluing and bonding

Pad Printing Capabilities:

- Complex surfaces and geometry, multi-color, and multi-hit
- Automated and semi-automated print stations
- Specialty inks and pre- and post-surface conditioning treatments
- Custom graphic clichés and component fixtures to ensure accurate orientation and location
- Company logos, highly accurate graphics scales, instructions, and surgical device indicators

3DP / Rapid Prototyping

Forum Plastics has combined rapid prototyping services with injection molding to support design and development initiatives, speed to market goals and low volume/custom part support.

From consumable bridge tooling and temporary printed cavities created through our 3DP technologies, to steel based, CNC machined quick turn tooling, to our newest technology introduction, Free Form Injection Molding, providing for sacrificial molds, complex geometries and rapid turn prototypes formed from USP Class VI approved materials, Forum is committed to supporting our customers early-stage development programs.



Quality and Metrology

With a keen understanding of the critical requirements needed to ensure the highest levels of quality, continuity and consistency for medical device development and qualification, one of the key pillars to Forum's values is our focus on quality. Forum maintains full material lot, equipment, labor resource, and locational traceability throughout the product lifecycle. In addition, we build risk mitigation provisions into our development and production processes to include multi-equipment cross qualification, on-site tool maintenance, full external system backups of our key ERP/MRP systems, and strong supply chain partnerships throughout the industry. As part of our innovative technology differentiation platform, we offer CT scanning and MoldFlow assessments to support our device development partners.

Internal Metrology Services:

- Complete validation, qualification, PPAP protocols
- IQ / OQ / PQ
- Gage R&R and PFMEA
- ANOVA studies, DOE design, and analysis with Minitab
- First article, in process, and final inspection
- CT scanning capabilities:
 - Ability to perform full FAIs without having to fixture and handle product
 - CT scanning allows for in depth analysis of parts
 - Provides extensive engineering assessment and optimization capabilities



Program Management

As an engineering-based company with a customer-first approach, Forum supports customers through every step of a project. We employ many specialists with backgrounds in implantable devices and components, surgical instrumentation, full device assembly and interstage testing, precision machining, complex over-molding, tool design, and more. Supported by this strong depth of experience across our organization, we're proud to offer world-class contract manufacturing, injection molding, and cleanroom assembly services. Our engineers and program managers work directly with clients to provide support through all project phases: from concept, planning, and design for manufacturing to mold construction, FAI and final parts approval to full-scale commercialization. Each Forum program manager serves as a consistent point of contact committed to providing quick response times, optimization recommendations and value-added support.



Our Commitment To Our Customers

Forum Plastics is committed to supporting the medical device industry at the highest levels, from technical support and product optimization to customer service, internal scalability options, and superior quality and consistency. The wide depth of knowledge and expertise held across our organization lends itself to providing our customers with a level of experienced service and support dedicated to the success of their product and achievement of their business objectives.

Having a wide and constantly evolving portfolio of in-house capabilities to include injection molding, 3D printing, metrology, full secondary operations, and cleanroom assembly affords our clients a vertically integrated partner driven to support MedDev program success. Working with startup companies through global OEMs in early-stage prototype volumes and through full scale commercialization, we pride ourselves on offering technical and strategic support to quickly respond to shifting customer needs throughout the device development and regulatory process.


With a focus on innovation, automation, and continuous improvement opportunities, Forum consistently engages in broadening the breadth of products and services available to the medical device industry.

We are a passionate group that thrives on solving complex product challenges to support the next scientific breakthrough. Our customers count on us to deliver at the highest level of quality and performance while optimizing product, process, and supply chain options to reduce risk and provide additional security through continuity of supply.

Let us be a part of the team that helps brings your project to success.

FORUM

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