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*The annual listing of 10 companies that are at the forefront of providing Plastic Tech solutions and transforming businesses*

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### Expanding the Possibilities of Plastics Tech in Medical Industry

**F**ounded in 1984 by owner and CEO, Jim Dandeneau, Putnam Plastics has been providing polymer technologies to the medical device industry to improve the quality of life. Ryan Dandeneau, the current president of the family-owned business, is determined to take Putnam to greater heights while carrying forward the legacy of his father. “Throughout the journey of our company, we’ve been proud of delivering technology-driven solutions that expand the limits of what’s possible in medical plastics,” extols Ryan.

The company’s innovative and dependable technologies are used by medical device manufacturers for medical extrusions and minimally invasive medical devices. “Our top-notch engineering and R&D teams invest a great amount of time in analyzing the new opportunities, examine them thoroughly, and subsequently craft the solutions that are scalable and sustainable—even if it means developing new technologies,” highlights Ryan.


As a solution provider, Putnam Plastics, which now employs nearly 400 people, is at the forefront of delivering innovative products for both smaller start-ups to larger medical device companies based on their needs and specifications. Such offerings are supported by comprehensive services that include prototype development, process validation, and full-scale volume production. Their custom components unit also focuses on post-processing steps such as precision machining and laser welding, plasma etching and printing, and catheter tipping. This allows them to get the device from design to production and out to market—faster. In addition, the company offers custom, rapid prototyping for a range of minimally invasive devices for cardiovascular, neurovascular, and endovascular specialties. “Our ultimate objective is to minimize the labor-intensive methods in device assembly manufacturing, reduce costs, and provide quality products to the medical industry,” states Ryan.

Putnam Plastics’ unique technologies and capabilities are what set them apart from the other solution providers. With their wide technological capabilities, the company today manufactures complex catheter shafts in a continuous and more streamlined process that uniquely offers cost savings and often a reduction in lead time. They also specialize in the manufacturing of multi-lumen, coextruded, braided, coiled, wire-coated, bumped/tapered, and intermittent extruded tubes, as well as complete catheter assemblies. They have also devised extrusion tubing technology, known as TIE™ that can continuously transfer from one durometer to another without

having to create a secondary bond, allowing less labor-intensive and quality issues.

Putnam Plastics is also the first-ever to develop Super-Tri™, a multi-layer catheter shaft technology. It is a three-layer extrusion that significantly reduces elongation while boosting both tensile and burst strength. The Super-Tri™ catheter shaft technology is a proprietary process that aids in avoiding wire lock-up in catheters that transport guide-wires. The company is also one of the only solutions providers that offer polymer marker bands, an alternative to traditional metal marker bands made from tungsten-filled thermoplastics that form a molecular bond with the catheter shaft. This design eliminates the risk of a marker band separating from the catheter shaft. Putnam’s marker bands can be customized in different sizes, materials, and loading levels as per the client’s requirements.

Another technology that the company excels in is PTFE-coated mandrels and wires. They are designed to be reusable and come in various custom sizes and lengths. They developed a technology to apply a proprietary coating called RiISlix™ that incorporates unique surface chemistry that has been optimized for use as a processing aid in catheter manufacturing. Putnam Plastics promotes the best durability and releasability while utilizing PFOA free, REACH compliant materials, which not necessarily the case with most competitors in the industry.

With such innovative technologies up their sleeves, Putnam Plastics holds a bright future. For the road ahead, Putnam Plastics is working toward expanding its current manufacturing facility in Dayville, CT, by 50,000+ square feet to further serve the needs of medical device customers. The company has recently started Putnam Medical Corporation, which will have a dedicated space of about 20,000 square feet for producing fully-finished devices, offering services from design through packaging and sterilization. “Combining these two companies as a whole will give us a total of 200,000 square feet of manufacturing space in Connecticut, offering dedicated space for our key growth initiatives: finished catheter processing and new technology development,” concludes Ryan. 



Ryan Dandeneau