

STRATEGIES

MEDICAL MOLDER EXPANDS INTO FULL-SERVICE PRODUCT DEVELOPMENT

Processor Strategies: Mack Molding

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3

In July, Mack Molding acquired Synectic Engineering, Inc., Milford, Conn., a company focused 100% on medical product development.

The trend among OEMs of all types to push product design and development functions farther down the supply chain has forced custom molders to expand their range of skills and services. This is especially challenging to do in the medical field, which requires knowledge and capabilities well beyond the scope of plastics processing. In July, Mack Molding took an unusual step to fill this gap and acquired Synectic Engineering, Inc., Milford, Conn., a company focused 100% on medical product development.

Synectic Engineering employs 18, including mechanical, electrical, biomedical, materials, chemical, and quality engineers, clinicians, and industrial designers. Its facilities include 3D CAD, a model shop, in-vitro tissue lab, and Class 10,000 clean room for pilot manufacturing. The firm will remain in Milford.

Headquartered in Arlington, Vt., Mack is a \$300-million plastic molding, metalworking, and contract manufacturing company with 10 locations and 1800 employees in the U.S. and Mexico. Medical is only one of its markets, but by far the largest, accounting for almost half its business. (See Nov. 2012 On-Site article.)

"We're not just trying to get bigger—we want to get better," says Jeff Somple, president of Mack's Northern Operations. In his 25 years at Mack, Somple has seen a consistent problem: "There's always a rush to get products from the drawing board to market. That means we take on products that are not fully developed, so we are doing concurrent engineering after the product launch. Now we have an opportunity to break that cycle and to eliminate the finger-pointing between those who designed a product and those who manufactured it.

"It's so important in medical to get it right at the start. Medical development is a validating process, and you can't change the material, the press, cycle time, process, or secondary operations after you achieve validation. Or it's very expensive to do so."

There's another reason why the Synectic Engineering acquisition makes sense to Somple: "Medical OEMs want to hold fewer suppliers responsible for more. By augmenting Mack's capabilities with engineering resources skilled in proof-of-concept, pre-clinical R&D, and product development from design to pilot manufacturing, everyone wins." OEMs now can manage and audit only one full-service supplier, and Mack gains potential entry into a wider range of projects. That, Somple says, is much more important than any direct added revenue from Synectic's activities.

Mack already owns Mack Prototype in Gardner, Mass., which has rapid prototyping (SLA and FDM), polyurethane molding, and CNC machining capabilities. Those go well beyond the facilities of Synectic Engineering's model shop. In fact, Mack Prototype has done work for Synectic in the past. Mack also has an Application Development Center in Arlington, staffed with five design, development, and tooling engineers and equipped with another FDM rapid-prototyping machine. But the acquisition brings on board numerous specialized capabilities, such as a tissue lab that can test a mitral-valve

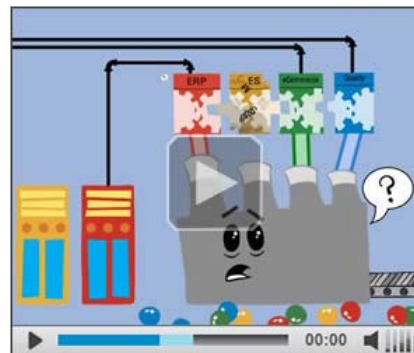
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Jeff Somple, president of Mack Molding's Northern Operations, says this acquisition fills a gap in the medical molding business and helps OEMs consolidate their supply base.



Acquisition of Synectic Engineering brings on board 18 engineers, designers, and clinicians dedicated 100% to medical product development.



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repair device in a sheep's heart or a hernia device in bovine tissue obtained from a local butcher. Or part-time consulting services of clinicians—medical doctors—who can test new devices in a hospital environment.

Says Adam Lehman, president of Synectic Engineering, "We'll now be able to provide uninterrupted oversight and support for the full life of the program, rather than handing off to a manufacturing partner. The whole process will now be seamless, because Mack will be involved from the start."

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