Liquid Silicone Rubber Resolves Precision Tubing Component Design Challenge

Zevex International Inc., a Salt Lake City, UT manufacturer of enteral nutrition products, chose GE–Silicones' injection–molded LIM 6050-D2 liquid silicone rubber to design a complex, precision tubing component and solve a big challenge. Struggling to apply miniaturization technology to enteral feeding systems, Zevex required an alternative to traditional smooth, extruded tubing which could not meet the new requirements. The innovative design featured a peristaltic pump where squeezing action pushed liquid through tubing at a programmed flow rate; optical sensing systems to monitor for occlusions and air-in-line; and a disposable tubing/frame component that snapped into the device.

"Our goal was to create a next-generation design that would improve quality of life for tube-fed patients," said Charity Williams, director of marketing for Zevex. "In particular, we wanted to let kids have the freedom to play with friends and enjoy school activities and family outings while receiving their feedings from a discreet, portable device. But to make this concept a reality, we needed fresh approaches and innovative materials such as GE's LIM liquid silicone rubber."

The 6.5-in.-long tubing component incorporates precise flanges and posts that integrate tightly with the pump and sensing system to ensure accurate fluid delivery, pressure detection, and free-flow protection. Its dimensional precision is also critical to proper placement and seating of the disposable tubing-cassette sub-assembly into the EnteraLite Infinity pump by the patient or family member.

Information: www.ge.com/advancedmaterials *[1].*

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