

VERDEX TECHNOLOGIES CREATES GAME-CHANGING NONWOVEN PRODUCTS THROUGH NOZZLE SCALEUP DESIGN PROJECT

ABOUT VERDEX TECHNOLOGIES. Verdex Technologies, Inc. was founded in 2010 by Dr. Larry Marshall, who spent his career at DuPont developing and commercializing Tyvek®. Since then, Verdex has been a Richmond, Virginia-based technology multi-disciplined inventor and producer of state of the art revolutionary and game changing nanofiber technology. With proprietary nanofiber technology at its foundation, providing precision engineering solutions and systems, Verdex creates disruptive innovative products and technology for the industrial filtration, automotive, textile, pharmaceutical, food and domestic markets. In addition, Verdex uses a proprietary solvent-free process to produce its nanofiber media.

THE CHALLENGE. Verdex developed a nozzle which spins nanofibers and simultaneously aspirates functionalizing particles into the fiber matrix to target specific challenges and problems in multiple industries to create game-changing nonwoven products. Verdex needed outside expertise to scale the process to a 25-inch width incorporating a number of closely spaced nozzles.

MEP CENTER'S ROLE. GENEDGE, part of the MEP National Network™, with third party SPARK Product Development LLC, held a kickoff meeting with Verdex to review the project in detail. SPARK would develop a design for a single module for the purpose of prototyping and validation testing by Verdex using the supplied QFD Specifications. This prototype nozzle would be able to mount to a frame for testing. Once the individual nozzle design was validated, SPARK would further develop a scaled design, incorporating multiple modules, to achieve the desired sheet width. As necessary, periodic engineering design reviews would be held until a final design was completed. Verdex would advise the third party of validation testing results and any further design modifications for the module. The design was completed, incorporating the changes from validation testing along with creation of 2-D documentation suitable for production. As a result of this project a new 3,300-square-foot space for a \$1,000,000 nanofiber manufacturing operation was opened.

"Right from the very first meeting with GENEDGE, we knew that we were dealing with an organization that could help us in our mission to scale Verdex. The full team at GENEDGE were very helpful, knowledgeable, and professional."

-Damien Deehan, Co-CEO

RESULTS



3 jobs expected created or retained



\$20,000 in anticipated cost savings

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