

AUTOMATED PROCESSES FOR REVOLUTIONARY NEW PRODUCT

ABOUT REVMEDX. RevMedx was formed in 2010 by a group of combat veterans, scientists and engineers. It is well known that hemorrhaging or “bleeding out” from wounds on the battlefield is the leading cause of death for soldiers. RevMedx’s flagship XSTAT® product can be rapidly deployed where it may be impossible to put a tourniquet or apply manual compression externally, providing fast-acting hemorrhage control to stabilize a wounded patient for transport. The XSTAT® product was granted FDA approval in April of 2014. Today, RevMedx manufactures the XSTAT® product out of a cleanroom facility in Wilsonville, Oregon. With 25 employees, the company has developed a suite of products that work in conjunction with the XSTAT® and continues to conduct research on new and innovative medical products.

THE CHALLENGE. Early acceptance of the XSTAT® product by the military, and subsequently by Emergency Medical Services (EMS) and law enforcement personnel around the country, is requiring RevMedx to expand its production capabilities. In addition, the company is engaging in a secondary effort to reduce the cost of producing the XSTAT®, to make it more affordable. RevMedx has been fortunate to work with great partners, including the Oregon Manufacturing Extension Partnership (OMEP), part of the MEP National Network. To scale up the manufacturing of XSTAT® products, OMEP worked alongside partners MilTech (Bozeman, Montana) and Automation Solutions (Beaverton, Oregon) to complete proof-of-concept projects for RevMedx to reduce the risk of implementing automated equipment.

MEP CENTER'S ROLE. RevMedx personnel collaborated with OMEP, MilTech, and Automation Solutions to develop automated equipment that would meet the company’s needs. After identifying new, high-volume production processes requiring unique specialized equipment, the team performed proof-of-concept testing and developed custom machine specifications. The XSTAT® product works by injecting a large number of small, rapidly expanding minisponges into a wound cavity using a syringe-like applicator. The compressed minisponges expand upon contacting blood and swell to fill the wound cavity, providing internal pressure to slow down or stop internal hemorrhaging within 20 seconds. The new machines highly automate the minisponge production using a combination of robots, cameras, and other advanced processing techniques. RevMedx is adding jobs and dramatically expanding its production capacity to increase yield, drive down costs, and improve the affordability of the XSTAT® product.

"Working with OMEP is a distinct pleasure. The OMEP consultants are professional, timely, drive projects to completion without being overbearing, and bring a wealth of knowledge to every project. RevMedx has benefited tremendously from the knowledge, wisdom, and efforts of OMEP."

-Scott Zellmer, Vice President and Director of Operations

RESULTS



Capacity expected to improve by up to **10** times



Added **4** new jobs



Automated minisponge production, increasing yield



Improved product affordability

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