

## INNOVATIVE AUTOMATION SOLUTION BOOSTS OPERATIONAL EFFICIENCY

**ABOUT RIMECO PRODUCTS INC.** Located just outside Cleveland, Ohio, Rimeco Products, Inc. is a leading family-owned CNC machine shop with a strong legacy of precision and performance. Strategically situated near one of the Midwest's major manufacturing centers, Rimeco benefits from direct access to a robust network of NADCAP-certified special processors, renowned trade schools focused on advanced CNC machining and manufacturing, and a readily available supply chain for materials. Specializing in CNC-machined components for air and fluid conveyance tubing systems, Rimeco has built a reputation as a world-class supplier by consistently surpassing the demanding requirements of the aerospace industry. The company proudly serves as both a direct and indirect supplier to top names such as G.E. Aviation, Parker Aerospace, Héroux-Devtek, Siemens, StandardAero, and numerous first-tier suppliers.

**THE CHALLENGE.** Rimeco's President was interested in finding ways to apply automation to its various manufacturing processes to boost capacity and efficiency. MAGNET sponsored an initial study to assess the feasibility of several potential applications. The study's results pointed to a machine tending project that involved integrating a collaborative robot with a Haas VF 2 CNC mill to produce a high-volume customer part. This solution would decrease the labor required for manufacturing this part.

**MEP CENTER'S ROLE.** MAGNET applied its proven 4D approach to the design, build, and integration of a collaborative robotic system at Rimeco Products, Inc., a leading CNC machine shop just outside Cleveland. The project focused on seamlessly integrating a Universal Robots (UR) collaborative robot with a Haas CNC milling machine to boost productivity and reduce manual effort. Key elements included installing a comprehensive machine safety system, designing and fabricating custom fixtures to stage raw materials and collect finished parts, and developing specialized end-of-arm tooling for the robot. MAGNET's team also programmed the robot to automatically load raw parts into the CNC machine and unload completed components after machining. Simultaneously, CNC programs were created to interface with the robotic system, ensuring precise synchronization throughout the process. Advanced part inspection algorithms were used to calculate tooling offsets in real time, allowing the system to run continuously with minimal human oversight—limited to part reloading and periodic tool changes. This innovative automation solution has greatly increased operational efficiency at Rimeco, enabling team members to focus on higher-value tasks across the production floor. The project demonstrates the power of strategic collaboration and smart manufacturing technology in transforming the future of U.S.-based production.

## RESULTS



\$55,000 in new investment



\$2,500 in new products



\$10,000 in cost savings



New Robotics technology rededicates workers to other areas

## CONTACT US

77 South High St., 28th Floor  
Columbus, OH 43215-1068

(614)466-0398

[development.ohio.gov/business/manufacturing/ohio-manufacturing-extension-partnership](http://development.ohio.gov/business/manufacturing/ohio-manufacturing-extension-partnership)Department of  
DevelopmentManufacturing Extension  
Partnership

"Automation is something we know we need to be doing in order to remain competitive in today's manufacturing world. Although we are committed to automation and increased efficiency, it is very difficult to fund and allocate the necessary resources and manpower to manage a project like this.

Working with MAGNET allowed us to move forward with this project and gain the knowledge and ability to understand what it will take to implement automation in our CNC machine shop. MAGNET had a very well-developed process for designing and implementing the project, and they managed the project from start to finish.

Since the project's completion, we have purchased probing systems for all of the new CNC machines we have acquired, and we have also purchased two new robots to be used on two of our CNC turning centers."

-John Ribic, President