

Revision Military is  
**ACHIEVING  
PRECISION WITH  
AUTOMATION**

in Injection Molding  
Eyewear Manufacturing



RIGOROUS

## ***Part Tender***

Automate the precision you need with our  
smart machine tending robot, the Part Tender.

# THE CHALLENGE

## Balancing Safety and Precision

In 2022, Garth Blocher, the Technical Program Manager for Revision's R&D business unit, started searching for an automated pick-and-place solution for their insert molding process. Due to the high precision requirements, they couldn't use operators for this task, as they couldn't touch the inserted product except in tiny designated areas.

Initially, Revision explored using a traditional gantry-style robot but discovered that it was not suitable for the complex maneuvers required to insert the product into the mold. They needed to find a way to bridge the gap and combine the flexibility and maneuverability of a 6-axis robot with the out-of-the-box ease-of-use of gantry style.

## Protecting the Front Lines

**“Our users rely on our eyewear in life-or-death situations; they expect our eyewear to protect them and to get them home safely. We take this to heart from the beginning of the product life-cycle to the end.” - Revision**





**Revision prioritizes safety and excellence in their manufacturing culture, constantly improving quality and safety standards through automation.**

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# PARTNERSHIP

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## A Rigorous Approach

We develop purpose-built automation systems that align with specific business goals and operational requirements. We emphasize a collaborative approach to creating tailored robotic solutions through a detailed process involving design, development, and deployment stages. This approach ensures that the robotics systems are not only efficient and safe but also adaptable and supportive of long-term business objectives, with ongoing monitoring and optimization.

## The Design Process

We met with the Revision team regularly throughout the design process to ensure that we account for any necessary adjustments. This is something that Garth's team particularly appreciated.

"Rigorous' attention to detail and focus on our project has been great. It has been a pleasure to work with Colin and the rest of the Rigorous team throughout the completed projects, as well as the current maintenance and development efforts. The robot and automation system starts up, operates, and shuts down reliably. We have had no issues with homing or other operations, and have greatly appreciated the straightforward interface and controls." - Garth Blocher

# REVISION

## RELENTLESS DEDICATION

Revision specializes in ballistic and laser-protective eyewear. They utilize robust design and development expertise and experience combined with significant investment in efficient high-volume manufacturing and vertical integration to drive a fundamental and powerful objective: delivering protective eyewear solutions that save lives.



**“These lenses literally saved my vision.  
Will never deploy without them again.”**

- Federal Law Enforcement Agent







Revision was established in 2001 as an eyewear company. It's a leader in designing, developing, and manufacturing world-class protective eyewear for men and women in uniform worldwide.



**CLEAR VISION.**

**CLEAR PURPOSE.**

**CLEARLY FOCUSED.**

The company is fully owned and operated in the USA. The team works together under one roof at their 53,000 square foot facility located in Essex Junction, Vermont. They assemble 100% of the eyewear in-house using state-of-the-art manufacturing equipment.



# THE SOLUTION

## RIGOROUS CHECKED ALL THE BOXES

Rigorous installed the Part Tender at Revision Military in the summer of 2023. Since then their team has been running the system in their R&D center where it's providing the precision throughout the mold process that they need.



### **IMM - SPECIFIC CONTROLS & SAFETY**

Significantly enhances machine performance and ensures operator safety through precise control mechanisms and dedicated safety protocols.



### **FLEXIBILITY & RANGE OF MOTION**

Adapts to various mold designs and sizes, increasing their versatility and efficiency in producing diverse products.



### **VERSATILE PRE AND POST PROCESSES**

Enhances your system's adaptability, allowing for a wide range of material handling and finishing options that improve product quality and manufacturing efficiency.



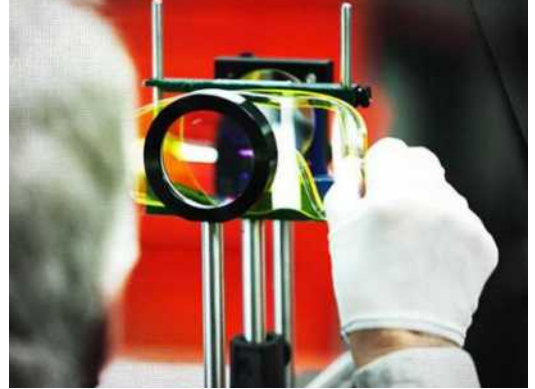
### **NATIVE EUROMAP 67 INTEGRATION**

Ensures seamless communication and interoperability between robots and injection molding machines, enhancing efficiency and reducing setup times.

# WHAT'S NEXT

The Revision team is continuing to leverage the partnership with Rigorous. They plan to implement new systems to ensure repeatable and robust development and production work. Increasing automation will enable the company to maintain consistent cycles of parts and prevent contamination from manual handling.

It is critical to continually align their needs and operational nuances with our solutions. Working closely together to tailor the automation process ensures it not only enhances efficiency and productivity but also drives meaningful, long-term value for their business. This partnership approach guarantees that implementation is smooth, technology is fully leveraged, and Revision is empowered to harness the full potential of its new robotic systems.



**LOOKING TO ACHIEVE SIMILAR RESULTS?**

Reach out to [sales@rigoroustech.com](mailto:sales@rigoroustech.com)







# RIGOROUS

## DEPLOYING ROBOTS THAT WORK LIKE MACHINES

Rigorous is an industrial robotics company with a mission to increase access to automation for manufacturers.

We do so by providing turnkey systems that are field-tested and fully supported.

Laser focused on the operator experience, Rigorous systems are easy to use with embedded safety systems.

Rigorous integrations are successful when our customers are effectively operating their robots day-after-day, shift-after-shift.



### FULLY SUPPORTED

Customers can rely on remote support, field calls, preventative maintenance, and production data analysis from the Rigorous team.



### TAILORED TURNKEY

We work with your team to understand your workflows, product and preferences to ensure the system delivered fits your operational requirements.



### NO-CODE

Modern user interface designed for the operator experience.



# RIGOROUS



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# *Part Tender*

Automate the precision you need.



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