

## PRECISION AUTOMATION FOR HIGH-QUALITY SURFACE FINISHES

Manufacturers face increasing demands for precise surface finishes, tight tolerances, and repeatable quality—often while working with complex geometries and challenging materials. Manual material removal processes such as grinding, sanding, cutting, and deburring can introduce variability, increase cycle times, and expose operators to safety risks.

As a full-service system integrator, Midwest Engineered Systems (MWES) designs and integrates custom robotic material removal automation systems that deliver the speed, accuracy, and consistency required for high-quality results. Every system is engineered around your unique part geometry, material type, and production goals—helping reduce cycle times while improving finish quality and operator safety.

### Why MWES?

- ◆ Custom-engineered material removal solutions
- ◆ Full-service system integrator—from concept to commissioning
- ◆ Proven experience with complex materials and geometries
- ◆ 24/7 service and long-term support
- ◆ OEM-agnostic technology selection

### KEY BENEFITS :

- ▶ **IMPROVE QUALITY & CONSISTENCY**  
Achieve uniform material removal and surface finishes with repeatable robotic processes.
- ▶ **REDUCE CYCLE TIMES**  
Optimize tool paths, force control, and process parameters for faster, more efficient production.
- ▶ **ENHANCE OPERATOR SAFETY**  
Minimize exposure to dust, sparks, sharp edges, and repetitive motion through automation.
- ▶ **HANDLE COMPLEX GEOMETRIES**  
Robotic systems adapt to complex shapes, contours, and tolerances that are difficult to manage manually.
- ▶ **PROCESS FLEXIBILITY**  
Systems designed to accommodate multiple part variants, materials, and finishing requirements.
- ▶ **SEAMLESS INTEGRATION**  
Material removal automation that integrates with upstream and downstream manufacturing processes.

# MATERIAL REMOVAL AUTOMATION SOLUTIONS



## COMMON APPLICATIONS

- ▶ **DEBURRING**  
Robotic deburring systems that remove sharp edges and burrs with precision, supporting tight tolerances and improved part quality.
- ▶ **FINISHING**  
Efficiently automate casting cutting, grinding, buffing, and sealing. Produces accurate results even in harsh foundry environments.
- ▶ **LASER DRILLING & CUTTING**  
High-precision laser drilling automation for applications requiring accuracy, minimal heat input, and repeatable results.
- ▶ **PLASMA CUTTING**  
Automated plasma cutting solutions designed for precision, speed, and improved safety in cutting operations.
- ▶ **SANDING & SURFACE PREP**  
Robotic sanding systems that deliver consistent surface finishes while reducing manual labor and variability.

## AUTOMATION BUILT TO PERFORM

MWES delivers material removal automation solutions that improve quality, productivity, and safety—while supporting long-term scalability and ROI. Whether automating a single operation or integrating material removal into a larger production system, MWES provides solutions built for real-world manufacturing.

## OPTIMIZE YOUR MATERIAL REMOVAL PROCESS

Contact MWES today to discover how our material removal automation solutions can increase efficiency, enhance quality, and keep you ahead of the competition. Let's build what's next.



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