

CHALLENGE

A client in the metal fabrication industry needed to automate the packaging of small, complex wire components coming directly from a CNC forming machine. The process involved picking individual parts, neatly stacking them, placing them into a container, and

ISSUES

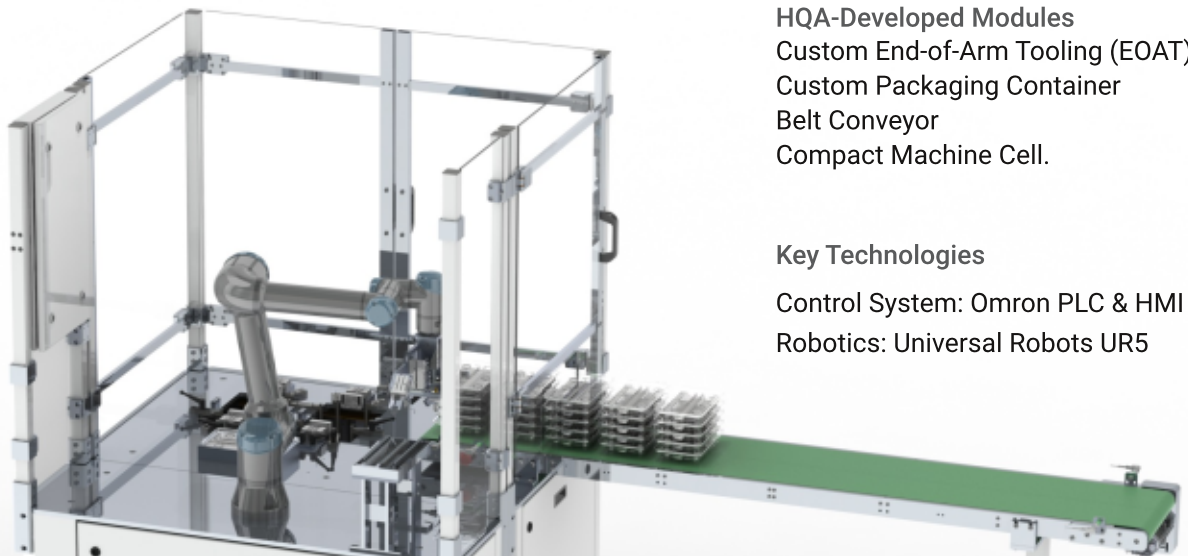
Labor: The tedious, manual process required a dedicated operator, representing a significant labor cost.

Quality & Consistency: Manual handling resulted in inconsistent packaging, affecting product presentation and quality.

Throughput: The manual packaging process was a bottleneck, unable to keep pace with the CNC machine's output, limiting

SOLUTION

HQA engineered a complete, turnkey packaging cell using our modular machine platform and a collaborative robot. The system autonomously takes parts from the CNC outfeed, neatly packages them, and transfers the finished containers to a conveyor. Our engineers also designed a new, custom packaging container for the client to improve product handling and presentation.



HQA-Developed Modules

Custom End-of-Arm Tooling (EOAT)

Custom Packaging Container

Belt Conveyor

Compact Machine Cell.

Key Technologies

Control System: Omron PLC & HMI

Robotics: Universal Robots UR5



RESULTS

Autonomous Operation: The system allows for four hours of completely unattended machine operation.

Labor Requirement: The dedicated material handler was eliminated and re-tasked to a higher-value role.

Product Quality: The new container and automated process ensure perfectly packaged, presentation-ready products every time.

ROI: 16 Months.