

Solving Robotic Wear Challenges with Ertalyte® in End-of-Line Packaging Equipment

CUSTOMER OVERVIEW

A global manufacturer of end-of-line robotic packaging systems used across the food and beverage industry for case packing, sealing, and palletizing.

CHALLENGE

The customer approached Lehigh Valley Plastics with a recurring issue on their high-speed robotic systems. Components in the gripper arms and linear guide assemblies, originally machined from UHMW and acetal, were wearing prematurely. This resulted in frequent maintenance shutdowns, inconsistent part performance, and costly downtime on lines that run 24/7.

LEHIGH VALLEY PLASTICS SOLUTION

After reviewing the application requirements and environmental conditions with the customer's engineering team, we recommended Ertalyte® (PET-P). This material offered an ideal combination of dimensional stability, wear resistance, and FDA compliance for their food-grade packaging environment.

We machined prototype components in-house, specifically linear guide blocks and gripping pads, and worked alongside the customer during testing and validation phases to ensure fit and performance exceeded expectations.



WHY ERTALYTE® WAS CHOSEN:

- Dimensional stability for tight-tolerance assemblies and consistent robotic movement
- Low moisture absorption which is ideal for washdown zones and humid production environments
- High wear resistance which outperforms acetal by 3X and UHMW by 5X in cycle testing
- FDA compliant for food contact areas

RESULTS:

- Increased the service life of critical robotic components
- Cut maintenance intervals in half, from every 6 weeks to every 12
- Eliminated binding and misalignment issues under load
- Improved production efficiency, delivering a full ROI within 6 months of replacement.

CUSTOMER FEEDBACK

"Lehigh Valley Plastics helped us identify the right material and supported us from prototyping through production. The Ertalyte parts have significantly improved the uptime and consistency of our robotic packaging systems."