

Bottom-Up Glue Station APPLICATION Report

Folding Carton Company tests Valco Melton's Bottom-Up Glue Station after existing system failed to perform

Valco Melton's Bottom-Up Gluing Station delivers high-quality gluing

Precision and Consistency Key to Replacing Existing Glue Wheels

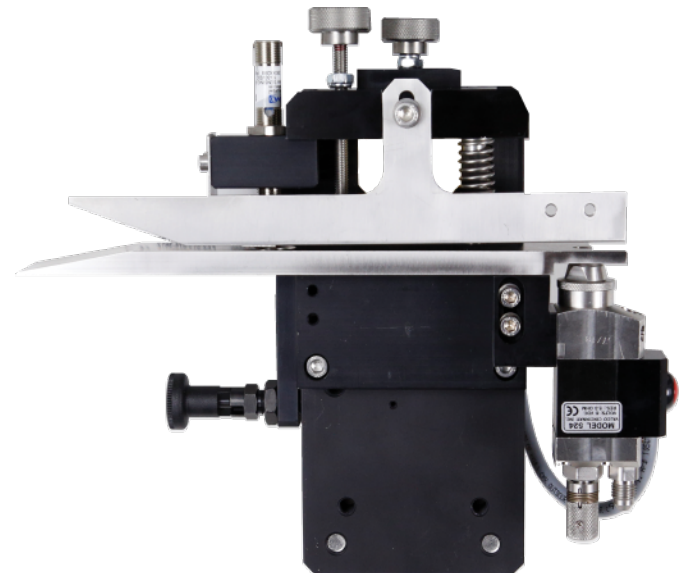
A folding carton company, previously relying on 16 gluing machines from another supplier, faced significant challenges with their non-contact gluing system, which repeatedly failed to meet production requirements. Valco Melton was invited to run a test on their oldest machine, the Media 45, operating at speeds of up to 370 meters per minute, producing approximately 120,000 boxes per hour. Given the small size of the boxes, precision glue application was critical, requiring a nozzle size of 0.4 mm and glue viscosity of 500 mPa.s.

As the system transitioned to higher-speed testing on an Alpina 75, running at an impressive 610 meters per minute and producing 195,000 boxes per hour, it became clear that Valco Melton's Bottom-Up Glue Station was so efficient that a fiber optic cable was necessary to maintain precise control over the glue application. After optimizing the bounce time of the optical fiber photocell, the system handled maximum speed effortlessly, showcasing Valco Melton's ability to meet and exceed high-speed production demands.

Thanks to the contact glue application, the customer didn't need to clean the nozzle after a machine stop. The machine re-started with perfect gluing after a shutdown. The tests at the folding carton company have proven Valco Melton's ability to deliver consistent, high-quality gluing even at high production speeds. Work is now progressing to outfit the entire plant with Valco Melton's bottom-up glue stations, as the customer has committed to expanding the system across more machines.

KEY RESULTS

- Reduced downtime for cleaning by 1.5 hours per day
- Estimated additional production of 70 million cartons annually
- Improved product quality with no glue slinging at high speeds
- Reduced glue waste and contamination



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Features	Valco Melton Contact Bottom-Up Glue Station	Non-Contact Bottom-Up Glue Station	Traditional Glue Wheel
Max Speed (m/min)	Over 620 m/min	360 m/min	Lower - limited by wheel performance
Glue Application	Precise contact with high accuracy	Non-contact, less precise	Glue slinging and over-application
Time Savings from Cleaning	No cleaning required: save 1.5 hours per day	Regular cleaning and system maintenance required	Frequent cleaning required
Waste Reduction	No wastewater contamination	Reduces glue waste, no contamination	High glue and water waste due to cleaning
Double-Glue Prevention	No double-glued cartons	Prevents double gluing, but costly	Prone to double gluing from glue slinging
Glue Application Accuracy	30% improvement over non-contact systems	Less accurate, especially at high speeds	Inconsistent, worsens with wheel wear
Cost Efficiency	Competitive pricing with system integration	Higher Cost due to standalone system	Very high maintenance costs
System Integration	Easily integrates with existing systems	Requires standalone system	Limited integration, works in basic setups

