Modular Spray System Cuts Egg Wash Use By 75%, Saves Bakery Over US$62,000 Annually

Problem:
Nonni’s Foods LLC, a producer of premium baked goods, needed to apply an egg wash solution on biscotti prior to baking. The spray system used five air atomizing nozzles to apply the wash to the biscotti on a moving conveyor. The air atomizing nozzles produced excessive overspray and inconsistent spray coating. Product waste rates and maintenance costs were unacceptably high.

Solution:
In order to minimize overspray, reduce the volume of egg wash used and apply a more even coating, an AutoJet® Model MS1550+ Modular Spray System with three PulsaJet® electric spray nozzles was installed. The hydraulic nozzles, equipped with a stainless steel UniJet® spray tip, eliminated the need for compressed air. The nozzles were positioned 10” (254 mm) above the 39.5” (1003 mm) wide conveyor to provide complete coverage on all 10 rows of the extruded strips of biscotti.

The AutoJet system and PulsaJet nozzles immediately increased the operation’s efficiency. The system uses Precision Spray Control (PSC) to apply the egg wash consistently and accurately. Overspray and egg wash consumption have been reduced and product quality has improved.
Results:

After installation of the AutoJet® Modular Spray System with PulsaJet® nozzles, Nonni’s Foods saw instant results. The new system resulted in a 75% decrease in egg wash use going from 40 gallons (151 liters) per week to slightly less than 10 gallons (39 liters). In addition to the egg wash savings, maintenance time and water use decreased, and compressed air use eliminated. The result is an annual savings of over US$62,000, generating a payback period for the new system of just under two months.

A CLOSER LOOK AT THE SYSTEM

AutoJet Model 1550+ Modular Spray System, which features liquid control for proper flow and droplet size, ensures accurate placement of egg wash to maximize coverage and minimize waste.

PulsJet hydraulic automatic spray nozzles help eliminate the need for costly compressed air and deliver egg wash to the target with high efficiency.

UniJet® stainless steel spray tips create a flat spray pattern that provides uniform egg wash coverage.