

Bakery Reduces Scrap Rate by 80% with Automated Spray System

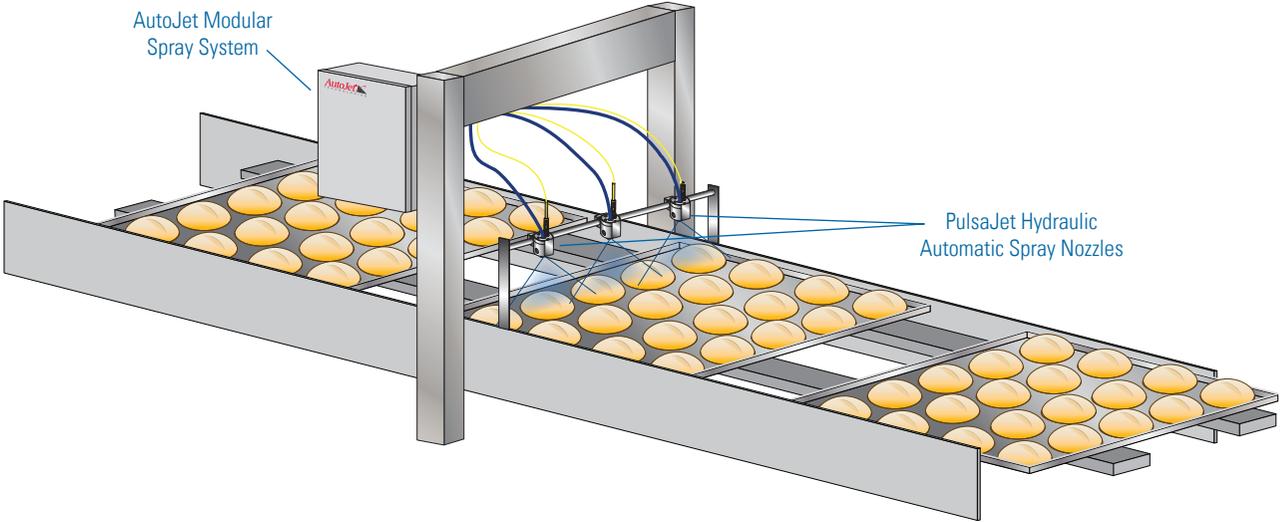


Problem:

Tiosa Supán, the largest commercial bakery in Ecuador and a supplier to major fast food restaurants, had difficulty ensuring that sesame seeds adhered to their products during baking. A spray system used air atomizing nozzles to apply mist to the unbaked dough to get the seeds to stick. However, spray pressure was adjusted manually to control the volume of water applied. At times, too little water was applied, resulting in seeds falling off the rolls. At other times, too much water was applied and prevented the dough from rising properly during baking. Excessive misting and dripping nozzles resulted in puddles of water on the floor which required daily clean up. In addition, shut-off needles and other components from the air atomizing nozzles required frequent maintenance.

Solution:

Spraying Systems Co.'s solution is an AutoJet® Model 1550 Modular Spray System with three hydraulic PulsaJet® automatic spray nozzles. The automated spray system utilizes Precision Spray Control (PSC) rather than pressure adjustments to precisely control the volume of water applied. The system adjusts automatically for variations in line speed, eliminating over- and under-application. When flow rate adjustments are needed for different baked goods, operators use the system control panel.





Bakery Reduces Scrap Rate by 80% with Automated Spray System – Continued

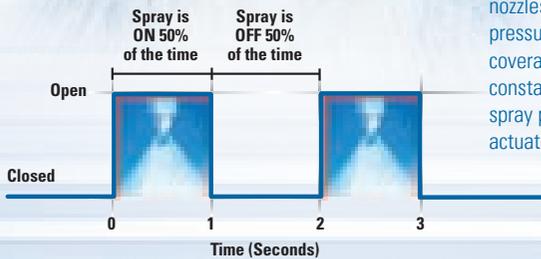
Results:

The AutoJet® Modular Spray System and PulsaJet® nozzles have enabled Tiosa Supán to improve product quality dramatically. Scrap rate has been reduced to just 2% – an improvement of almost 80%. In addition, using hydraulic PulsaJet nozzles instead of air atomizing nozzles has eliminated misting and dripping. Ongoing maintenance downtime has been reduced from 1 hour to just 15 minutes per day.

A CLOSER LOOK AT THE SYSTEM

Three PulsaJet nozzles cover the width of the conveyor.

Precision Spray Control



Precision Spray Control (PSC) involves turning nozzles on and off very quickly to control flow rate. This cycling is so fast that the flow often appears to be constant. With traditional nozzles, flow rate adjustments require a change in liquid pressure, which also changes the nozzle's spray angle/coverage and drop size. With PSC, pressure remains constant enabling flow rate changes without changes in spray performance. PSC requires the use of electrically-actuated spray nozzles and an AutoJet spray controller.

AutoJet Modular Spray System provides easy control of nozzles and cycle times up to 10,000 cycles per minute.



Spraying Systems Co.®
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